ASX Announcement: 13 August 2014

Updated Resources and Reserves

HIGHLIGHTS

- **Total Pilbara Ore Reserves increase to 510.2 Mt**
- **Additional Ore Reserves at McPhee Creek of 10.3 Mt to 188.2 Mt**
- **Horizon 1 Ore Reserves total 79.7 Mt**
- **Total Mineral Resources now at 1,200 Mt**

Atlas Iron Ltd (ASX: AGO) is pleased to provide the following update to its Pilbara Ore Reserve and Mineral Resource statements, effective 30 June 2014.

All tonnes are reported on a dry weight basis. All Mineral Resources and Ore Reserves are quoted after depletion for mining in the period to 30 June 2014.

Atlas Summary Ore Reserves - as at 30 June 2014								
Reserve Classification	**Kt**	**Fe (%)**	**SiO_2 (%)**	**Al_2O_3 (%)**	**P (%)**	**S (%)**	**LOI (%)**	**CaFe (%)**
Proved	95,200	57.8	5.6	2.2	0.11	0.02	8.7	63.3
Probable	415,000	56.0	6.8	3.1	0.10	0.02	9.0	61.6
Total**	**510,200**	**56.4**	**6.6**	**2.9**	**0.10**	**0.02**	**8.9**	**61.9**

Notes: See Notes in Table 1

Atlas Summary Mineral Resource - as at 30 June 2014								
Resource Classification	**Kt**	**Fe (%)**	**SiO_2 (%)**	**Al_2O_3 (%)**	**P (%)**	**S (%)**	**LOI (%)**	**CaFe (%)**
Measured	114,300	57.8	5.4	2.3	0.11	0.02	8.7	63.5
Indicated	669,200	56.2	6.8	3.2	0.11	0.01	8.8	61.8
Inferred	417,500	55.8	7.3	3.7	0.09	0.02	8.3	60.6
Total	**1,201,000**	**56.2**	**6.8**	**3.3**	**0.10**	**0.02**	**8.6**	**61.6**

Notes: See Notes in Table 2

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Reserve and Resource Update

Commentary

Continued resource definition drilling and modelling around existing operations has resulted in additional Standard Fines Ore Reserves (pre-depletion) at Abydos (2.4 Mt), and Wodgina (3.2 Mt). Infill drilling at McPhee Creek (Main Range) has produced an increase in the Indicated Mineral Resource, and also in the Ore Reserve through an increase in the expanded pit design. The Ore Reserve at McPhee Creek has increased by 10.3 Mt due to the Main Range resource model change, the addition of the Crescent Moon orebody into Ore Reserves and changes to the cut-off grade.

The Atlas Value Fines product has been a separate product stream to the Atlas Standard Grade Fines for over 20 months and in the year ending June 2014 Atlas shipped 0.9 Mt (dry basis) of Wodgina Value Fines product. As a result, 3.2 Mt of stockpiled Wodgina Value Fines ore grading 53.3 % Fe is included in the Ore Reserves.

Ore Reserve increases are offset by reductions of 10.7 Mt for mining depletion. This results in an overall Ore Reserve increase of 3.4 Mt to 510.2 Mt, compared to the previous Ore Reserve statement at 30 June 2013.

“Despite Atlas’ constantly increasing mining rate, including a 40% increase over the 2014 financial year, we have continued to grow resources and reserves year-on-year. Atlas is also continuing to increase confidence and understanding of resources and reserves in the Company’s Horizon 2 portfolio, further impoving its future growth options", commented Atlas Managing Director, Ken Brinsden.

For further information please contact:
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Robert Wilson – Chief Development Officer
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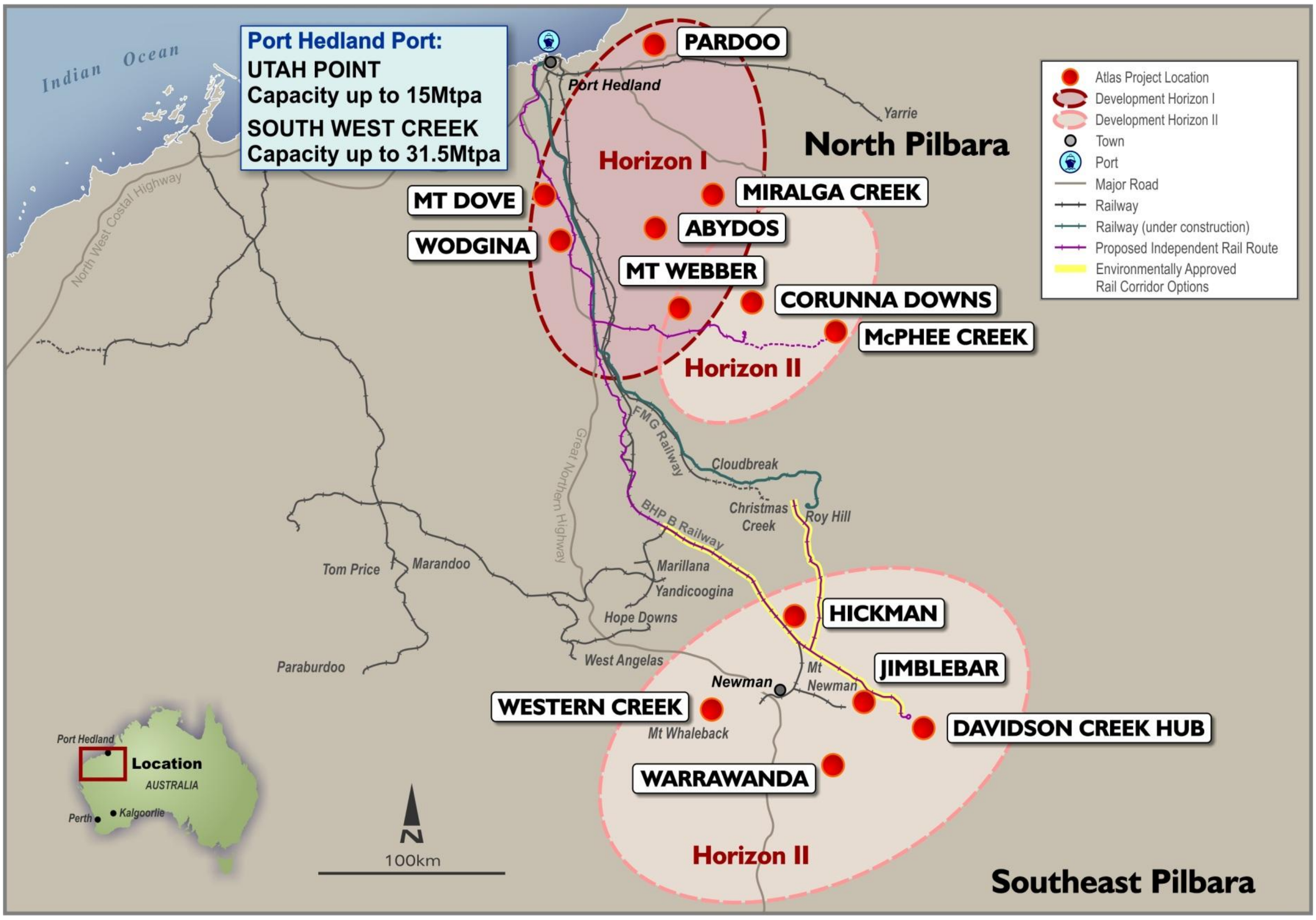
Further details to this Ore Reserve and Mineral Resource upgrade can be found in the attachments following.

Reserve and Resource Update



Atlas Pilbara Project Portfolio - Horizons 1 and 2

Reserve and Resource Update

Table 1 - Ore Reserves

Atlas Standard Fines Ore Reserves - as at 30 June 2014											
	Project Area	Reserve Classification	Kt	Fe (%)	SiO_2 (%)	Al_2O_3 (%)	P (%)	S (%)	LOI (%)	CaFe (%)
Horizon 1	Abydos	Proved	200	58.1	5.2	1.1	0.07	0.01	9.7	64.3
		Probable	11,100	57.2	6.8	2.0	0.05	0.02	9.0	62.8
	Wodgina	Proved	200	56.7	6.4	2.3	0.06	0.06	9.4	62.6
		Probable	13,400	57.1	6.5	1.7	0.08	0.05	9.2	62.9
	Mt Webber**	Proved	33,700	58.0	5.7	1.8	0.09	0.02	8.5	63.4
		Probable	21,100	55.5	8.5	2.5	0.08	0.03	8.5	60.7
	Sub Total	**Proved**	**34,100**	**58.0**	**5.7**	**1.8**	**0.09**	**0.02**	**8.5**	**63.4**
		Probable	**45,600**	**56.4**	**7.5**	**2.1**	**0.07**	**0.03**	**8.8**	**61.9**
	Horizon 1 Total		**79,700**	**57.1**	**6.7**	**2.0**	**0.08**	**0.03**	**8.7**	**62.5**
Horizon 2	McPhee Creek	Proved	29,700	57.1	6.0	1.9	0.13	0.01	9.3	63.0
		Probable	158,500	55.8	7.1	2.6	0.14	0.01	9.4	61.6
	Davidson Creek Hub^	Proved	31,300	58.1	5.0	2.8	0.10	0.01	8.2	63.3
		Probable	207,700	56.2	6.4	3.6	0.08	0.01	8.8	61.6
	Port (Utah Point)	Proved	100	57.1	6.7	1.8	0.07	0.04	9.4	63.0
	Sub Total	**Proved**	**61,100**	**57.7**	**5.5**	**2.4**	**0.11**	**0.01**	**8.7**	**63.2**
		Probable	**366,300**	**56.0**	**6.7**	**3.2**	**0.11**	**0.01**	**9.0**	**61.6**
	Horizon 2 Total		**427,300**	**56.3**	**6.5**	**3.1**	**0.11**	**0.01**	**9.0**	**61.8**
Sub Total		**Proved**	**95,200**	**57.8**	**5.6**	**2.2**	**0.11**	**0.02**	**8.7**	**63.3**
		Probable	**411,900**	**56.1**	**6.8**	**3.1**	**0.10**	**0.01**	**9.0**	**61.6**
Grand Total			**507,000**	**56.4**	**6.5**	**2.9**	**0.10**	**0.01**	**8.9**	**61.9**

Notes:

1. **60% of the Ore Reserves at Mt Webber are subject to Joint Venture interests in the ratio AGO 70% : AJM 30%.
2. ^Davidson Creek Hub incorporates the Davidson Creek, Mirrin Mirrin and Robertson Range project areas.
3. The Ore Reserves are reported at cut-off grades ranging from 48.5% - 54.5% Fe.
4. The Ore Reserves have been estimated in compliance with the JORC 2012 Code.
5. CaFe% is calcined Fe calculated by Atlas using the following formula (Fe%/(100-LOI%))*100.
6. Ore Reserves are reported on a dry weight basis.
7. The presented tonnages and grades are rounded. Total tonnages and grade are summed on the raw data then rounded.

Reserve and Resource Update

Atlas Value Fines Ore Reserves - as at 30 June 2014									
Project Area	**Reserve Classification**	**Kt**	**Fe (%)**	**SiO_2 (%)**	**Al_2O_3 (%)**	**P (%)**	**S (%)**	**LOI (%)**	**CaFe (%)**
Wodgina	Proved								
	Probable	3,200	53.3	10.3	2.9	0.06	0.06	9.2	58.7
Grand Total**		**3,200**	**53.3**	**10.3**	**2.9**	**0.06**	**0.06**	**9.2**	**58.7**

Notes:
1. The Value Fines Ore Reserves are reported at a lower cut-off grade of 50% Fe and upper cut-off grade defined by the Standard Fines lower cut-off.
2. The Ore Reserves have been estimated in compliance with the JORC 2012 Code.
3. CaFe% is calcined Fe calculated by Atlas using the following formula (Fe%/(100-LOI%))*100.
4. Value Fines Ore Reserves are from surveyed ore stocks only and are reported as Probable Ore Reserves in accordance with company marketing policy.
5. Ore Reserves are reported on a dry weight basis.
6. The presented tonnages and grades are rounded. Total tonnages and grade are summed on the raw data then rounded.

Summary of Ore Reserves changes

- Mining depletions totalling 10.7 Mt at Wodgina, Abydos, Pardoo and Mt Dove have been offset by Ore Reserve increases resulting in a net Ore Reserve gain of 3.4 Mt.
- A material change has been identified in the Ore Reserve at McPhee Creek which has increased by 10.3 Mt due to the Main Range resource model change, the addition of the Crescent Moon orebody into Ore Reserves and changes to the cut-off grade. **The material changes at this project are defined in more detail at pages 10-48**.
- Abydos had material Ore Reserve changes since previous publication. The changes include the introduction of 1.9 Mt of new Ore Reserves at Abydos including Cove and Contacios deposits. **The material changes at this project are defined in more detail at pages 49-128**.
- Ore Reserves at Pardoo and Mt Dove are now exhausted.

Reserve and Resource Update

Table 2 - Mineral Resources

Atlas Mineral Resources Table – As at 30 June 2014									
Project Area	**Resource Classification**	**Kt**	**Fe (%)**	**SiO_2 (%)**	**Al_2O_3 (%)**	**P (%)**	**S (%)**	**LOI (%)**	**CaFe (%)**
Pardoo	**Measured**	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	9,000	55.7	7.8	2.3	0.11	0.02	9.2	61.4
Abydos	**Measured**	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	17,100	57.2	6.7	1.8	0.05	0.02	9.2	63.0
	Inferred	5,000	56.5	7.6	1.5	0.06	0.02	9.4	62.4
Wodgina	**Measured**	2,500	56.2	7.2	2.0	0.03	0.12	8.7	61.6
	Indicated	20,800	56.5	7.1	2.0	0.08	0.05	9.2	62.2
	Inferred	17,000	54.0	9.0	3.5	0.06	0.05	9.4	59.6
Mt Webber	**Measured**	35,700	58.3	5.3	1.8	0.10	0.02	8.6	63.7
	Indicated	26,100	55.1	8.7	2.7	0.08	0.03	8.7	60.3
	Inferred	1,500	57.4	7.8	1.3	0.06	0.06	7.1	61.8
McPhee Creek	**Measured**	32,900	57.4	5.6	1.9	0.14	0.01	9.3	63.3
	Indicated	205,000	56.2	6.8	2.4	0.13	0.01	9.4	62.0
	Inferred	9,000	55.0	8.2	2.7	0.08	0.01	9.7	60.9
Corunna Downs	**Measured**	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	20,000	57.3	6.5	1.3	0.12	0.01	8.9	62.9
	Inferred	31,000	57.3	5.7	2.0	0.07	0.01	9.6	63.4
Mid-West	**Measured**	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	12,000	60.0	6.3	2.9	0.06	0.01	3.7	62.3
Hickman	**Measured**	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	70,000	55.4	7.3	4.8	0.16	0.01	7.7	60.0
Western Creek	**Measured**	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	79,000	56.0	6.8	3.9	0.06	0.05	8.7	61.3
Jimblebar	**Measured**	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	41,100	58.1	5.3	4.4	0.17	0.01	6.1	61.9
	Inferred	28,000	55.6	7.2	4.3	0.09	0.03	8.0	60.4
Warrawanda	**Measured**	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	24,000	56.8	6.8	2.7	0.07	0.03	8.6	62.2
Davidson Creek Hub	**Measured**	43,200	57.9	5.2	3.0	0.10	0.01	8.2	63.6
	Indicated	339,100	55.9	6.8	3.7	0.09	0.01	8.7	61.7
	Inferred	94,000	55.8	8.1	3.7	0.10	0.01	7.6	59.5
West Pilbara	**Measured**	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	38,000	53.6	7.5	4.8	0.04	0.01	9.3	59.1
Total	**Measured**	**114,300**	**57.8**	**5.4**	**2.3**	**0.11**	**0.02**	**8.7**	**63.5**
	Indicated	**669,200**	**56.2**	**6.8**	**3.2**	**0.11**	**0.01**	**8.8**	**61.8**
	Inferred	**417,500**	**55.8**	**7.3**	**3.7**	**0.09**	**0.02**	**8.3**	**60.6**
Grand Total		**1,201,000**	**56.2**	**6.8**	**3.3**	**0.10**	**0.02**	**8.6**	**61.6**

Reserve and Resource Update

Notes:

1. Mineral Resources are reported inclusive of Ore Reserves.
2. Mineral Resources are reported on a dry weight basis.
3. Pardoo, Wodgina & Warrawanda Mineral Resources quoted at >53% cut-off grade.
4. Mt Webber, Abydos, Mid-West, Corunna Downs, West Pilbara, Hickman, Western Creek, Jimblebar and Davidson Creek Hub Mineral Resources quoted at >50% cut-off grade.
5. McPhee Creek Mineral Resources quoted at >48.5% Fe cut-off.
6. Mt Webber Mineral Resources are subject to JV interests in ratio AGO 70% : AJM 30% for Ibanez, Fender & Gibson Mineral Resources and does not include the Daltons Mineral Resource.
7. CaFe% is calcined Fe calculated by Atlas using the following formula (Fe%/(100-LOI%))*100.
8. Tonnes are rounded according to their JORC category and grades are carried through unaffected by rounding errors.
9. Pardoo, Wodgina, Abydos, Mt Dove and Mt Webber Mineral Resources depleted by mining up until 30 June 2014.

Summary of Mineral Resource changes

As at 30 June 2014, Atlas Mineral Resources are estimated to contain 1,200 Mt of Direct Shipping Ore (Iron). This represents an increase of approximately 29.0 Mt (~2.5%), compared with the estimate at 30 June 2013 of 1,171 Mt. The change in Mineral Resources includes estimated mining depletion of approximately 16.4 Mt from Pardoo, Wodgina, Abydos, Mt Dove and Mt Webber projects and removal of 2.3 Mt of non-recoverable Mineral Resources at Pardoo, Mt Dove and Wodgina on completion of mining activities. Mineral Resource reductions of 20.0 Mt due to remodeling, density adjustments, cut-off grade changes and updated studies from Pardoo, Wodgina, Western Creek, Jimblebar and McPhee Creek. Mineral Resource increases of 68.1 Mt are a result of exploration drilling at Abydos, Wodgina, Mt Webber, McPhee Creek, Western Creek and Corunna Down's projects.

Atlas Mineral Resources as at 30 June 2014 includes material changes for the Pardoo, Abydos, McPhee Creek, Corunna Downs and Western Creek resource estimates, as against the 30 June 2013 estimate. Consistent with the requirements of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 Edition (the JORC Code 2012) and the ASX Listing Rules, the requisite reporting information in respect of the Mineral Resources estimates for these projects are included in this release.

- Total Mineral Resources now at 1,200 Mt, after 2.5% increase (29.0 Mt).
- Measured and Indicated Mineral Resources increased by 8.0 Mt.
- Inferred Mineral Resources increased by 21.0 Mt.
- McPhee Creek Mineral Resources have decreased by a total of 4.2 Mt. Increase of 1.2 Mt at Crescent Moon and a reduction of 1.5 Mt at Main Range West due to drilling and modelling. Change in cut-off grade reporting for Main Range (from 45% Fe to 48.5% Fe) has reduced Mineral Resources by 4.0 Mt. **The material changes at this project are defined in more detail at page 10-48.**
- Abydos Mineral Resources have decreased by a total of 2.7 Mt. A reduction of 3.5 Mt due to production at Trigg and Mullaloo. Drilling and modelling at Trigg, Contacios and Cove has added Mineral Resources of 0.8 Mt. **The material changes at this project are defined in more detail at pages 49-128.**
- Corunna Downs Mineral Resources increased by 51.0 Mt (first reported in current period, see numerous ASX releases on Atlas website), maiden Mineral Resources at Split Rock, Shark Gully, Runway and Razorback. **The material changes at this project are defined in more detail at page 129-174.**
- Western Creek Mineral Resources have increased by a total of 7.0 Mt as a result of drilling and modelling at Homestead, Western Ridge and Western Creek. **The material changes at this project are defined in more detail at page 175-200.**
- Pardoo Mineral Resources have decreased by a total of 6.0 Mt. A reduction 1.2 Mt due to production at Bobby, Emma and Alice Extension. Updated resource model and technical studies on Floyd reduced Mineral Resources by 3.5 Mt and reclassified to Inferred level. Removal of 1.3 Mt of non-recoverable Mineral Resources from Alice Extension, Bobby and Emma on completion of mining. **The material changes at this project are defined in more detail at page 201-225.**

Reserve and Resource Update

- Wodgina Mineral Resources have reduced by a total of 10.5 Mt. A reduction of 9.8 Mt due to production at Anson, Avro, Constellation, Dragon, and Hercules. Drilling at Avro and Hercules has added Mineral Resources of 1.2 Mt whilst drilling at Constellation, Dragon, and Hornet has reduced resources by 1.0 Mt.
- Mt Webber Mineral Resources have reduced by 0.4 Mt. A reduction of 1.3 Mt due to mining at Ibanez and 0.9 Mt increase at Daltons due to drilling and modelling.
- Mt Dove Mineral Resources have been reduced by 0.6 Mt due to production. Removal of 0.2 Mt of non-recoverable Mineral Resources on completion of mining (completed October 2013).
- Hickman, Western Creek, Jimblebar and Warrawanda Mineral Resources have previously been reported under the Newman Project, now reported separately for transparency.
- Jimblebar Mineral Resources have decreased by 4.0 Mt due to modelling and density adjustment at Jimblebar Range and Caramulla South.
- Other Mineral Resources remain unchanged from 30 June 2013.

Forward Looking Statements

A number of statements in this ASX Announcement relate to the future and are forward looking statements. The words "expect", "estimate", "guidance", "forecast", "should", "projected", "potential", "could", "may", "predict", "plan" and other similar expressions are intended to identify forward looking statements. These statements reflect views only as of the date of this ASX Announcement. These forward looking statements, opinions and estimates are based on assumptions and contingencies that are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward looking statements may be affected by a range of variables that could cause actual results or trends to differ materially. These variations, if adverse, may affect the timing, feasibility or the cost of developing the Company's projects, the estimated cash flows and returns from those projects. Neither the Company, nor any other person makes or gives any representation, assurance or guarantee, that the occurrence of an event expressed or implied in any forward looking statements in this ASX Announcement, will actually occur.

COMPLIANCE WITH THE JORC CODE 2012 ASSESSMENT CRITERIA

This mining Ore Reserves and Mineral Resource statement has been prepared in accordance with the guidelines defined in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code - 2012 Edition. All Atlas Ore Reserves and Mineral Resources are being reported in accordance with the JORC 2012 Code.

Ore Reserve Estimation –Wodgina and Ore Stocks at Mt Dove & Utah Port

The information in this report that relates to Ore Reserve estimations for the Wodgina Project Area, ore stocks at Mt Dove and Utah Port is based on information compiled under the guidance of and audited by Mr Iain Wearing, who is a member of the Australasian Institute of Mining and Metallurgy. Iain Wearing is a full time employee of Atlas Iron Ltd. Iain Wearing has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Iain Wearing consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Reserve and Resource Update

Ore Reserve Estimation –Abydos, Mt Webber and McPhee Creek

The information in this report that relates to Ore Reserve estimations for the Abydos, Mt Webber and McPhee Creek Areas, is based on information compiled under the guidance of and audited by Mr Srinivasa Rao Gadi, who is a member of the Australasian Institute of Mining and Metallurgy. Srinivasa Rao Gadi is a full time employee and shareholder of Atlas Iron Ltd. Srinivasa Rao Gadi has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Srinivasa Rao Gadi consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Ore Reserve Estimation – Davidson Creek Hub (formerly Jigalong-Ferraus Project - Davidson Creek, Robertson Range, Mirrin Mirrin)

The information in this report that relates to Ore Reserve estimations for the Davidson Creek Hub (formerly Jigalong-Ferraus) Project Area is based on information compiled by Mr Jeremy Peters, who is Fellow of the Australasian Institute of Mining and Metallurgy. Jeremy Peters is a full time employee of Snowden Mining Industry Consultants Pty Ltd. Jeremy Peters has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Jeremy Peters consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Atlas states that all material assumptions and technical parameters underpinning the Ore Reserve estimates for the Davidson Creek Hub have not changed since Alan Coopers' report and reserve statement of 24 January 2013

Geological Data, Interpretation and Resource Estimation – Davidson Creek Hub Project (excluding Miji Miji deposit)

The information in this report that relates to Mineral Resource results on Atlas' Davidson Creek Hub Project is based on information compiled by Mr John Graindorge who is a Chartered Professional member of the Australasian Institute of Mining and Metallurgy. John Graindorge is a full time employee of Snowden Mining Industry Consultants Pty Ltd. John Graindorge has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. John Graindorge consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Geological Data, Interpretation and Resource Estimation – Atlas DSO Projects (including Miji Miji deposit at Davidson Creek Hub)

The information in this report that relates to Mineral Resource results on Atlas' DSO Projects other than Davidson Creek Hub is based on information compiled by Mr Steven Warner who is a member of the Australasian Institute of Mining and Metallurgy. Steven Warner is a full time employee and shareholder of Atlas Iron Ltd. Steven Warner has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Steven Warner consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Reserve and Resource Update

MATERIAL CHANGES TO MATERIAL MINING PROJECTS AND DISCLOSURE FOR THE PURPOSE OF ASX LISTING RULES 5.8 AND 5.9 FOR THE MCPHEE CREEK PROJECT

McPhee Creek Ore Reserves Table - as at 30 June 2014											
Location	**COG Fe%**	**Reserve Classification**	**Kt**	**Fe (%)**	**SiO_2 (%)**	**Al_2O_3 (%)**	**P (%)**	**S (%)**	**LOI (%)**	**CaFe (%)**
Main Range	48.5	Proved	29,700	57.1	6.0	1.9	0.13	0.01	9.3	63.0
		Probable	153,800	55.9	7.1	2.4	0.14	0.01	9.3	61.6
Crescent Moon	48.5	Proved								
		Probable	4,800	52.7	6.3	7.2	0.03	0.03	10.9	59.2
Total			**188,200**	**56.0**	**6.9**	**2.5**	**0.14**	**0.01**	**9.4**	**61.8**

McPhee Creek Mineral Resource Table – as at 30 June 2014 (48.5% Fe Cut-Off Grade)										
Location	**Resource Classification**	**Kt**	**Fe (%)**	**SiO_2 (%)**	**Al_2O_3 (%)**	**P (%)**	**S (%)**	**LOI (%)**	**CaFe* (%)**
Main Range	Measured	32,900	57.4	5.6	1.9	0.14	0.01	9.3	63.3
	Indicated	200,000	56.3	6.8	2.3	0.14	0.01	9.3	62.0
	Inferred	4,000	55.3	9.6	1.8	0.11	0.01	9.0	60.7
Main Range West	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	4,000	55.4	7.1	2.6	0.06	0.02	10.1	61.6
Crescent Moon CID	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	5,000	52.8	7.1	6.2	0.03	0.03	10.9	59.3
	Inferred	1,000	52.6	7.4	6.8	0.03	0.03	10.8	59.0
Sub Total	**Measured**	32,900	57.4	5.6	1.9	0.14	0.01	9.3	63.3
	Indicated	205,000	56.2	6.8	2.4	0.13	0.01	9.4	62.0
	Inferred	9,000	55.2	8.3	2.5	0.08	0.01	9.6	61.0
Total		**246,900**	**56.3**	**6.7**	**2.3**	**0.13**	**0.01**	**9.4**	**62.1**

Tonnes are rounded according to resource classification; grades are carried through unaffected by rounding and may result in small discrepancies.

*Calculated calcined Fe grade where CaFe=(Fe%/(100-LOI%))*100

Reserve and Resource Update

McPhee Creek JORC 2012 Compliance Statement for Mineral Resources

Geology and Geological Interpretation

The McPhee Creek Project is located approximately 220km south east of Port Hedland and 30km north of the town of Nullagine, accessed via the Great Northern Highway and Marble Bar Road. The project area is located 5km east of the Marble bar – Nullagine road. The project area contains 3 deposits, the largest being the Main Range deposit with a strike length of 7,300m and varying widths from 60m to 1,000m. Main Range West and the Crescent Moon Channel Iron Deposit (CID) are smaller iron deposits which are also located within the immediate project area. The McPhee Creek project is located entirely within tenement E46/733 (recently converted to mining lease M45/1243), which is 100% Atlas owned. The tenement sits within the Njamal Native title Claim (WC1999/088).

The McPhee Creek Project is situated within Archean rocks of the Kelly Greenstone Belt in the east Pilbara. This terrane consists of the volcanic and sedimentary sequences of the Warrawoona, Gorge Creek and De Grey Groups. Unassigned ultramafic rocks intrude the southern area of the Kelly Greenstone Belt. West of the Kelly Greenstone Belt is the Corunna Downs Granitoid Complex. Abutting to the east is the domal McPhee Greenstone Belt, which is intruded by gabbro and dolerite dykes. To the south of the McPhee Dome lie sediments of the Mosquito Creek Basin. A series of northeast faults occur between the Gorge Creek Group and Warrawoona Groups in the Kelly Greenstone Belt, and form terrane boundaries between the Gorge Creek Group and McPhee Greenstone Belt on the western margin of the McPhee Dome.

The McPhee Creek bedded iron ore deposit lies in the faulted Sandy Creek Syncline within rocks of the Gorge Creek Group. The Gorge Creek Group is further subdivided into the Farrel quartzite and Cleaverville Formation, with the Cleaverville Formation conformably overlying the Farrel quartzite in the core of the faulted Sandy Creek Syncline. The Cleaverville Formation is characterised by thinly bedded iron formation interbedded with ferruginous chert.

To the southeast the various iron formations are faulted against carbonaceous shales and siltstones, massive quartzites and volcanics of the Warrawoona Group. The western margin of the deposit is marked by a package of shale and chert. The shale-chert sequence appears to be conformable with the BIF, and a similar sequence also underlies the BIF to the east.

The structure of the McPhee Creek area is dominated by a northeast trending, upright synform (the Sandy Creek Syncline) and associated folding, truncated by a northeast trending fault system that defines the eastern edge of the Cleaverville Formation. The deposit is preserved in this structural low, the formation of which probably involved several tectonic events. The Main Range deposit is interpreted to be overprinted by extensive, late stage brittle faulting.

Outcrops on the Main Range are typically BIF, massive goethite, canga, banded chert, silcrete and minor hematite. Difficulties in identifying all of the stratigraphy arose due to the overprinting and destruction of original lithological features by the iron mineralisation and the presence of surficial depleted and hydrated zones.

Goethite-haematite iron ore mineralisation on the Main Range & Main Range West is hosted in BIF and in ferruginous laterite/canga. Mineralised outcrops occur along almost the entire western margin of the BIF (approximately 8km) near the contact with the underlying shale and chert. Outcropping mineralisation is also present in the south of the project in the synformal hinge zone. Iron ore mineralisation is predominantly strata bound and follows the BIF sequences, however near surface supergene enrichment and remobilisation has created zones of mineralisation cross cutting stratigraphy orientated sub parallel to a now partially dissected palaeosurface. Areas of the deposit that contain substantial thicknesses of iron ore correspond to areas of complex folding suggesting structural control and iron enrichment in synformal hinges. Northeast trending faults bound and offset the iron ore mineralisation. A major fault zone bounds the eastern extent of mineralisation. A northeast trending fault in the south of the deposit bounds and offset the mineralisation into an eastern and western zone.

The Main Range geological model was generated using a combination of geochemistry of RC holes, lithological logs (RC & DH holes) and down hole geophysical natural gamma logs. A stratigraphic model of the lithology and structure was first constructed to provide a geological framework in which to interpret the mineralisation. The mineralisation was interpreted into an upper zone of depletion and underlying hydrated and primary mineralised zones. The primary mineralisation is further divided into two discrete zones by a Chert marker horizon (MP6) found at a consistent stratigraphic position throughout the deposit. Small, discrete discontinuous pods of mineralisation were modelled separately, generally in the lower BIF (MP2) horizons, as were waste pods that were of sufficient size and continuity.

The stratigraphic model comprises a sequence of banded iron formation, cherts, sulphidic carbonaceous black shales and quartzite basement. The mineralisation model comprises of depleted, hydrated and primary mineralisation zones. The mineralisation zones are modelled generally using greater than 50% Fe and less than 15% SiO_2 cut-off to define ore from waste. The combination of both stratigraphic model and mineralisation models are used for geozone definitions.

The Crescent Moon CID deposit is interpreted to be overlying shales belonging to the Corboy Formation. The mineralisation at Crescent Moon is a channel iron deposit with a strike length of approximately 1500m, width varying between 120m and 150m and depth to approximately 15m. The palaoechannel is believed to have shed off the Main Range and deposited iron rich material in a channel which has now been locally preserved as a mesa following erosion of the surrounding surface. Mineralisation is predominantly goethite enriched.

The latest November 2013 Crescent Moon resource model contains stratigraphy interpreted using the lithological logging, downhole geophysical natural gamma logs and geochemistry of RC holes. The channel iron deposit is interpreted to be overlying basal shales. The mineralisation interpretation is defined by greater than 50% Fe and less than 15% SiO_2 grades. The combinations of the stratigraphic and mineralisation models are used for geozone definition.

The latest December 2013 Main Range West resource model (completed by Atlas) contains stratigraphy generated using the combination of surface geological mapping, logging, geophysical natural gamma logs and geochemistry of RC holes. Mineralisation interpretation is defined by greater than 50% Fe and less than 15% SiO_2 grades. The combinations of the stratigraphic and mineralisation models are used for geozone definition.

Sampling and Sub-sampling

All RC samples collected by Giralia Resources prior to Atlas acquisition involved collecting the samples drilled at 1m intervals, riffle split, with the split fractions then being composited to form 2m composite samples. The 2m composite samples were then re-split by riffle splitting, to reduce the total amount of sample finally sent for analysis. Following Atlas acquisition of the project, 2m sample intervals are collected using cone splitters only.

Samples are directed into a calico bag with the overflow placed directly on the ground in spoil heaps. The calico bags are pre-numbered, with every sample number ending in 00, 20, 40, 60, 80, collected as a field duplicate. The duplicate samples are collected in real time by splitting the two sub samples from the cone splitters. Standards were inserted every 1st, 21st, 41st, 61st and 81st sample. Sample weights are also recorded to monitor the ongoing representativeness of the sample split. The weights are stored in the acquire database.

Sampling of diamond drill core involved sampling at 1m intervals using the whole core. Core sample preparation involved drying, crushing, splitting (riffle) and pulverising to produce a pulped product with the minimum standard of 90% passing 75 micron.

Drilling Techniques

Exploration and Resource Development drilling over the various McPhee Creek prospects has been undertaken by Reverse Circulation drilling employing a 140mm diameter face sampling hammer to collect samples for assay. PQ3 and HQ3 diamond drilling has been used to obtain diamond core samples for density analysis, twinned drillhole analysis against RC drilling and also for Structural, Metallurgical and Geotechnical studies.

Reserve and Resource Update

An initial drill program at Main Range consisted of 337 RC holes and 13 diamond holes and was completed by Giralia Resources. Atlas Iron acquired Giralia Resources in March 2011 in an off market takeover and continued exploration drilling across the project area. A further 355 RC holes, 10 diamond holes and 14 diamond tails had been drilled at Main Range by the end of 2011. This brought drill coverage to a nominal 50m x 100m grid pattern and significantly improved geological knowledge of the deposit.

In 2012 and 2013, Atlas continued exploration and infill drilling within the Main Range deposit area bringing drill coverage to 50mx50m grid pattern to further improve geological knowledge. A further 542 RC, 18 diamond holes and 20 diamond tails (RCD) were drilled by October 2013.

Geological logging conducted by Giralia Resources (prior to Atlas acquisition in March 2011) was conducted by logging at 1m intervals using Microsoft Excel Templates. The logs were sent to the Perth office and managed in a SQL database.

Post Atlas acquisition the Geologist sieves and logs every 2 m interval in alignment with the sampling interval. Logging encompasses the main material types, hardness, lithologies, colour and percentage of chips (approximate lump/fine proportion). The logging is recorded in the field electronically into acQuire field logging data entry objects and on completion the electronic files are sent to Perth and loaded into the centralised acQuire drillhole database which is managed by a full time Database Administrator.

Licenced surveyor MHR Surveyors completed survey pickup on all available drill collars using a Trimble R8 Real Time Kinematic Differential GPS (DGPS_RTK). The DGPS gives an accuracy of +/- 0.05 m for Easting and Northing location and +/- 0.1 m for the RL (height above sea level). The higher accuracy collar surveys are imported into the Atlas drillhole database and are prioritised ahead of the GPS only level surveys.

All reverse circulation and diamond holes were subjected to downhole surveys using a gyroscopic tool. All downhole surveys were completed by ABIMS Pty Ltd utilising a north seeking multi-shot tool which measures azimuth every 5m down hole to an accuracy of +/- 0.2^o and dip to an accuracy of +/- 0.1^o. Down hole geophysical measurements are also collected at the same time and comprise Density/Calliper, Magsus and Natural Gamma recordings taken at 10 cm intervals down hole.

A total of 884 of the total 1,337 RC holes at Main Range contain downhole surveys obtained via gyro. The remaining 453 are a combination of reflex shots, collar shots or were not able to be surveyed due to blockages down hole.

The 43 RC drill holes drilled at Crescent Moon by Giralia Resources for the April 2011 resource model did not have downhole surveys completed and only 1 of the 149 RC holes drilled by Atlas contains downhole gyro surveys. This is deemed as a negligible risk as all holes were drilled vertically and were relatively short depth, any deviations of drillholes (if any) are assumed to be negligible.

A total of 121 of 125 RC holes drilled at Main Range West contained downhole surveys. The remaining 4 RC holes were not surveyed due to hole blockages or stuck rods.

Resource Classification

Mineral Resources have been classified into the Measured, Indicated and Inferred category based on drillhole spacing, nature and quality of the drilling and sampling methods, geological understanding and confidence, grade continuity, QAQC analysis, confidence in the estimate of the mineralised volume, results of the model validation and results of metallurgical test work.

Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. The results of the validation of the block model show good correlation of the input data to the estimated grades.

The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit. Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. The statement relates to global estimates of tonnes and grade.

Measured resources have only been defined at Main Range and occur where the drilling density is at least 50m x 50m (or less), mineralisation displays strong continuity and lacks variability, is within the primary mineralisation zone, is above water table, is not geologically complex, estimation results are excellent.

Indicated material is classified where drill spacing is 50m x 100m (or less), displays good continuity, is either primary or hydrated mineralisation, is not geologically complex, estimation quality is good.

Inferred material is classified where drill spacing is 50m x 100m (or less), mineralisation continuity was poor and geology was considered to be complex, estimation quality is poor.

Sample Analysis Methods

Samples collected by Giralia were sent to Spectrolabs in Geraldton, while samples collected by Atlas were sent to Ultratrace and SGS laboratories (samples collected in 2012/3) in Perth for analysis of the extended iron ore suite of elements. This consists of XRF analysis for Fe, SiO_2, Al_2O_3, P, CaO, K_2O, MgO, MnO, S, TiO_2, Na_2O and a thermo gravimetric measurement for loss on ignition (LOI) at 1000^{o}C. Batches of sample pulps were sent from Spectrolabs to Ultratrace for confirmatory assaying to ensure no analytical issues were present, as Atlas was unfamiliar with the quality of Spectrolabs. No issues were evident from this work and the analyses appeared to be accurate and suitable for use.
Samples collected by Atlas were sent to Ultratrace and SGS laboratories in Perth for analysis of the extended iron ore suite of elements. This consists of XRF analysis for Fe, SiO_2, Al_2O_3, P, CaO, K_2O, MgO, MnO, S, TiO_2, Na_2O and a thermogravimetric measurement for loss on ignition (LOI) at 1000^{o}C.

Samples are dried at 105^{o}C in gas fired ovens for 18-24 hours, samples are then crushed to a nominal -3mm size, pulverised in a LM2 mill until 90% passing 75 micron is achieved. A 66 gram pulp sub-sample is then collected that is fused at 1100^{o}C for 10 minutes and poured into a platinum crucible prior to analysis by XRF.

To ensure quality assurance and control (QAQC) of the sampling and assaying procedure, Atlas submitted field duplicates and standards to the laboratory for analysis. The duplicates and standards are inserted at predefined intervals at a rate of 5% for standards and 5% for duplicates. The laboratory also inserted its own internal standards and pulp repeat analyses at predefined intervals. Sample collection procedures and QAQC protocols employed by Atlas are commensurate with standard industry practices. The use of umpire laboratory was also employed to check the accuracy of laboratory results.

The QAQC data for the McPhee Creek project was reviewed for the Main Range June 2013 resource estimate, the November Crescent Moon and December Main Range West resource updates. These were found to be of reasonable precision and analytical accuracy and are deemed to be suitable for resource estimation purposes and JORC compliancy.

Estimation Methodology

The drillhole data was composited prior to running the estimation process using a 2 m sample interval to minimise any sample bias due to sample length. The compositing was run within the attribute fields to ensure no composite intervals crossed any lithological contacts or grade boundaries.

Variograms were generated to assess the grade continuity of the various elements and as inputs to the kriging algorithm used to interpolate grades. Snowden Supervisor software was used to generate and model variograms as well as conducting statistical analysis.

Reserve and Resource Update

For the latest Main Range Deposit updated by Atlas in June 2013, variography analysis was undertaken for all mineralised zones. The elements that were analysed include all 12 elements, i.e. Fe, SiO_2, Al_2O_3, P, LOI, S, MnO, MgO, K_2O, TiO_2, CaO, Na_2O and geophysical density.

To generate the best experimental variograms the data was first transformed to a normal scores distribution where upon the variogram was modelled and on completion a back transform was applied. The variogram ranges and directions of continuity are consistent with the geological understanding and are considered appropriate.

For the Crescent Moon resource update (November 2013), variography analysis was undertaken for mineralised zones. Sufficient samples were collected in the Atlas infill drill programs conducted 2012-2013 to enable a variogram to be modelled. The elements that were analysed include all 12 elements, ie. Fe, SiO_2, Al_2O_3, P, LOI, S, MnO, MgO, K_2O, TiO_2, CaO, Na_2O and geophysical density.

Variography analysis was not conducted for any resource updates for Main Range West. This was due to the lack of samples to produce a reliable variogram. Hence, the estimation method used to interpolate grades was Inverse Distance.

Block models were constructed in Vulcan (Maptek) and constrained by surfaces and solids. The parent block size was selected based on half the prevalent drill hole spacing and assumed mining bench height and the model was orientated (rotated) to represent the strike of mineralisation and prevailing drilling grid. The sub-block size was selected to more accurately define the mineralised volume.

The volume block model was created using the wireframes of the stratigraphy, mineralisation and topography. A unique geozone code was assigned based on the combination of stratigraphy and mineralisation. The geozone field is used to distinguish the main mineralisation types and un-mineralised areas.
For the Main Range deposit, Atlas estimated Fe, SiO_2, Al_2O_3, P, LOI, CaO, K_2O, MgO, MnO, S, TiO_2 and Na_2O grades and geophysical density using Ordinary Kriging for the mineralised horizons. Waste horizons were estimated by Inverse Distance (power 2) methods.

The preferred estimation parameters were chosen based on neighbourhood search analysis whereby several estimation parameters were tested to optimise the estimation search. This was represented by best kriging efficiency, slope regression values and number of blocks filled. Search ellipses were orientated based on the geometry of the mineralisation with the search ellipses increased by two fold and three fold for second and third search passes for Main Range.

For the December 2013 Crescent Moon deposit, Atlas estimated Fe, SiO_2, Al_2O_3, P, LOI, CaO, K_2O, MgO, MnO, S, TiO_2 and Na_2O grades and geophysical density using Ordinary Kriging for the mineralised CID domain. Waste horizons were estimated by Inverse Distance (power 2) methods. Neighbourhood search analysis was conducted to optimise the estimation search parameters. This was represented by best kriging efficiency, slope of regression values and number of blocks filled. Search ellipses were orientated based on the geometry of the mineralisation.

The in-situ density (inclusive of moisture and porosity) was estimated into the model using geophysical density measurements collected at 10 cm intervals down hole and composited to 2m intervals to match the sampling length. All available drill holes had geophysical measurements collected and a sufficiently good spatial coverage of data across the deposit was achieved. Following compositing of the data, variograms were modelled and geophysical density was estimated into the model utilising ordinary kriging techniques.

To correct the in-situ density estimate to a dry bulk density (accounting for in-situ moisture & porosity), the geophysical density measurements are correlated to dry dimensional core density measurements and a suitable regression factor is determined. The regression analysis involved comparing the dimensional densities of 13 diamond holes (at Main Range) and corresponding geophysical densities of the same hole.

Additionally, a further comparison was conducted to compare the geophysical densities collected at 5 RC holes (at Main Range) and their diamond twinned equivalent. Overall, the regression analysis revealed a 10% reduction to account for moisture and porosity, then a 6% increase to account for hole rugosity in RC holes, i.e. an overall reduction of 4% is applied to the geophysical density to derive the dry bulk density. The regression was necessary as the bulk of the geophysical densities were collected in RC holes throughout the deposit and used to estimate the in-situ density into the model. Thus, the application of the regression factor effectively reports dry tonnes.

At the time of writing, no diamond holes were drilled at Crescent Moon and Main Range West. Thus, a regression factor could not be derived for these deposits.

For Main Range West, 4% regression was applied to the estimated geophysical density and was deemed acceptable as the Main Range deposit was nearby and is of the same bedded style of mineralisation.

For Crescent Moon, a 10% regression was applied to the estimated geophysical density and was deemed acceptable as the mineralisation style at Crescent Moon is a channel iron deposit and to not over-state the total tonnage of the resource.

The estimates were validated using:

- A visual comparison of block grade estimates and the drill hole data
- A global comparison of the average composite grade and estimated grades
- Moving window averages (trend plots) comparing the mean block grades to the composites
- Histogram comparison of the original composite grades and the block estimated grades
- Assessment of correlation coefficients from the input sample data and estimated block grades
- Total assay validation check to ensure closure (sum of elements in each block adds to 100% +/- 2%)
- Global change of support to assess the level of misclassification inherent in the estimate.

The conclusions from the model validation work include:

- Visual comparison of the model grades and the corresponding drillhole grades shows a good correlation.
- A comparison of the global drill hole mean grades and with the mean grade of the block model estimate (for each domain) shows that the block model mean grades are typically within 5-10% of the drillhole means which is a good outcome.
- With the exception of poorly sampled regions, the grade trend plots show a good correlation between the patterns in the block model grades compared with the drillhole grades.
- Total assay validation showed that the blocks maintained closure generally between 98 and 102% with minor proportion outside the threshold due to anomalous sulphur values.
- Assessment of the histograms and correlation coefficients showed that the relationship between elements within the input sample data has been maintained in the block grade estimates and the grade distribution has been maintained in the estimate with an acceptable level of smoothing.
- Global change of support indicates some misclassification is present and suggests some waste material may be presenting as low grade siliceous material within both the hydrated and primary zones for Main Range and Crescent Moon. These are attributed to small internal zones of waste not able to be domained out or selectively mined out. These small internal zones of waste are a reflection of the variability inherent to each resource.

Cut-Off Grade

The criteria for defining mineralised material during the modelling process at McPhee Creek is > 50% Fe and <15% SiO_2, which appears to be a natural grade boundary. These cut-off grades were used to separate mineralised material from waste. In the process of defining the mineralisation a small amount of sub-grade material (<50% Fe) is naturally incorporated within the mineralised mass and cannot be excluded and represents natural dilution that would be incurred during the mining process.

A slightly lower cut-off grade of 48.5% Fe is used for reporting resources at McPhee Creek to account for sub-grade material which is incorporated within the mineralised envelope. The Main Range resource includes a total of 4.0 Mt of material between 48.5% Fe and 50% Fe that will be mined along with the mineralisation and will not be able to be excluded during mining.

Atlas believed that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the proposed large scale open pit mining method and proposed processing methodology to produce a product that will meet Atlas specifications. This cut-off grade methodology is used consistently for reporting of all Mineral Resources at McPhee Creek. The tabulated resources are reported using a 48.5% Fe cut-off grade on a block by block basis.

Mining and Metallurgical methods and parameters and other modifying factors

The McPhee Creek Project is proposed to use conventional open pit mining methodology with selective extraction of ore material using a backhoe configured excavator. This is considered to be appropriate to the style of mineralisation and is applied to similar operations in the area. This allows a selective ore mining approach comprising 5m benches which are mined in two flitches of 2.5m height. The 2.5m flitches are used in order to reduce ore dilution and loss.

Metallurgical information is based on 4,146m of PQ diamond core from the Main Range deposit. The metallurgical drilling coverage is sufficient for the project as a Pre-Feasibility Study level. The Crescent Moon CID deposit has not had any metallurgical assessment to date. The current proposed processing route developed by Atlas Metallurgists and external vendors is a dry three stage crush and wet screen followed by desliming through cyclones, to produce a -9mm +20 micron product. This type of technology is well known and has precedence in current Pilbara iron or operations.

A sulphidic and potentially acid forming carbonaceous shale unit has been identified along the entire footwall position of the Main Range deposit. Waste classification test work has been thoroughly investigated and management strategies developed.

Reserve and Resource Update

McPhee Creek JORC 2012 Compliance Statement for Ore Reserves

Material Assumptions for Ore Reserves

The McPhee Creek project is a greenfield project and has been examined to a Pre-Feasibility Study (PFS) level in June 2014.

The McPhee Creek open pit Ore Reserve estimate is defined by completing pit optimisations and subsequent pit designs based on detailed geotechnical design parameters and practical mining considerations.

The Ore Reserve estimate is based on delivering 15 Mtpa Iron ore fines at 57.0% Fe. A haul road will deliver product to a hub. A rail spur will transport ore from the hub to third party rail to export facilities in Port Hedland.

The projected capital and operating costs developed by external consultants are estimated to a PFS level of confidence.

The iron ore price and exchange rates used in the pit optimisation are derived from the average of three external forecasting analysts. For reasons of commercial sensitivity the assumed iron ore price and exchange rates are not disclosed.

Ore Reserve Classification

Ore Reserves at McPhee Creek are derived from Measured and Indicated Resources. The Mineral Resource estimate reported is inclusive of the Ore Reserves. Inferred Mineral Resource is treated as waste in the pit optimisation and reserve process.

Mining Method

The mining method is conventional drill and blast and load and haul with an excavator and large open pit mining equipment. This is considered to be appropriate for the style of mineralisation and is applied to similar operations in the area.

Based on the geotechnical study recommendations, 9m batter height, 55^0-60^0 batter angles and 5m wide berms at 9m intervals have been incorporated in the pit designs. A 10% gradient and 28m width (including safety windrow) is used on in-pit pit ramps. A minimum mining width of 30m is applied on all benches to cater for safe and efficient working.

Allowance for dilution and ore loss has been applied using block model regularisation. Block model regularisation has been determined to approximate the findings of a 1.8m dilution skin analysis.

Ore Processing

Ore will be processed through a dry three stage crush and wet screen followed by desliming through cyclones, to produce a -9mm - +20µm product. This type of technology is well known and has precedence in current Pilbara iron ore operations.
Based on the metallurgical test work and analysis, a product mass yield is applied to the plant feed.

Cut-off Grade

The cut-off grade for the site is 48.5% Fe and is selected on the basis of the product grade of 57% Fe after processing upgrade of the run of mine ore.

Estimation Methodology

The estimation methodology is described in the Mineral Resources section above.

Reserve and Resource Update

Material Modifying Factors

The McPhee Creek project is a greenfield project to deliver iron ore fines product up-to a rate of 15 Mtpa. A Pre-Feasibility Study (PFS) including Main Range and Crescent Moon Mineral Resources for McPhee Creek was completed in June 2014.

Capital estimates are estimated by external consultants using plant and infrastructure designs to a PFS standard. Operating costs are based on external mining consultant estimates, internal and external cost estimates, and logistic chain negotiations.

Benchmarking against Atlas and other operations has confirmed confidence in the operating and capital cost estimates. Estimates are deemed to be at a PFS level of confidence.

The site is accessed from an unsealed road from Marble Bar. All of the infrastructure required for the operation will be constructed as part of the project. Sufficient land area has been allocated within the leases held by the company. Site infrastructure will include main site access road, pit access ramps, ROM Pad and crusher area, processing plant, stockpile areas, product stockpiling and load out yard, tailing storage facility, waste dumps, mine operations centre, contractors laydown yards, explosives storage and camp.

Mining Lease application has been granted. All relevant government agreements and processes are proceeding and no factors are present to suggest approvals will not be forthcoming within the development schedule of the project.

Discussions pertaining to third-party rail haulage negotiations are progressing.

McPhee Creek tenements are located entirely within the Njamal Native Title claim area. Atlas has a Deed of Agreement with Njamal Native Title group. Atlas is currently in negotiations with the pastoralist to enter into a compensation agreement.

Environmental studies and impacts are ongoing. To date flora and vegetation surveys and baseline and targeted fauna surveys have been completed. Management strategies for Potentially Acid Forming (PAF) material have been contemplated in the PFS. All environmental approvals are expected to be awarded in line with the PFS schedule.

The financial modelling indicates that McPhee Creek will produce a positive NPV at the required discount rate of 11% applied to nominal post tax cashflows.

McPhee Creek Project JORC 2012 Assessment Criteria

CRESCENT MOON RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA CRESCENT MOON MINERAL RESOURCE ESTIMATE – NOVEMBER 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Reverse Circulation (RC) chip samples collected under Giralia Resources supervision was collected at 1m intervals, riffle split, with the split fractions then being composited to form 2m composite samples. The 2m composite samples were then re-split by riffle splitting, to reduce the total amount of sample sent for analysis. • Reverse circulation (RC) chip samples collected under Atlas supervision, were collected at 2m sample intervals via a cone splitter. The 2m samples were sent for analysis by XRF and total LOI by TGA. • One 3.5kg (average) sample taken for each two metre sample length and collected in pre-numbered calico sample bags. • 3.5kg sample was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 25mN by 50mE. • Total of 192 RC holes used for the resource estimate for a total of 5,261m. • No diamond drilling has been completed to date on Crescent Moon.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 2,168 Good (82%), 5 Fair (0.2%) and 2 Poor (0.1%) and un-recorded Giralia Resources samples (17.5%). • To ensure maximum sample recovery and ensure representative samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No twin RC or diamond drillholes have been completed to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling.
Logging	• Geological logging was undertaken for every 1m sample during the 2008 campaign conducted by Giralia Resources. Post Atlas acquisition (March 2011), geological logging was completed at 2m sampled interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • A total of 149 RC were logged in full, totaling 4,352m of drilling or 1,792 RC samples were logged for lithology, mineralisation, chip percent, weathering and colour. • Geophysical data collated from 138 RC holes of a total of 192 holes (natural gamma, gamma density, magnetic susceptibility & resistivity). Not all holes were open at depth which precluded 100% recovery of measurements from all of the drillholes.
Sub-sample techniques and sample preparation	**Sampling technique:** - RC Chip Samples: - ~3.5kg RC chip samples are collected via cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where

	possible. - The sample sizes are considered to be appropriate to correctly represent the mineralisation at Crescent Moon based on the style of mineralisation, the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** - Sample dried at 105°C for 12-24 hrs - Crushed to nominal -3mm - Pulverised to 90% passing at 75µm **Quality Control Procedures**: - Duplicated sample: Samples collected post Atlas acquisition had 5 every 100 samples (1:20). - Certified Reference Material assay standards inserted: 5 in every 100 samples (1:20). - Overall QAQC insertion rate of 1:10. - Sample weights recorded for all samples. - Lab duplicates taken where large samples required splitting down by the lab. - Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality of assay data and laboratory tests	• All samples submitted to SGS Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 0.66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice. • Geophysical gamma density was collected by Geovista Dual Density logging tool (Cesium source, density range 1-3.5g/cc) to ascertain approximate in-situ density values. The density tool is calibrated every 2 weeks using a range of materials with known density and is run down a calibration hole at the commencement of, and regularly during, the collection of data.
Verification of sampling and assaying	• The Competent Person has visited site and inspected the sampling process in the field and also inspected the Laboratory. • Primary data are captured on field Toughbook laptops using acQuire^{tm} software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the

	estimate, apart from resetting below detection values to half positive detection.
Location of data points	• All Collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • Downhole gyroscopic surveys are attempted on all RC holes by ABIMS. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool. Stated accuracy is +/-1^{o} in azimuth and +/-0.1^{o} in inclination. Note that all drill holes were drilled vertically. • QC of the gyro tool involved field calibration using a test stand and also a calibration hole. • The grid system for Crescent Moon is MGA_GDA94 Zone 51. • Topographic data was based on AAM Pty Ltd aerial survey completed in August 2008 on a 1m resolution contours. The datum is GDA94 with projection MGA Zone 51.
Data spacing and distribution	• Drill spacing on an approximate 25m (N-S) by 50m (E-W) grid. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred/indicated resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• The Crescent Moon deposit is interpreted to be a flat lying (mesa shaped) channel iron deposit, overlying basal shales. Drill holes were designed and drilled vertically to define true thickness of geological units.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Crescent Moon is located within Exploration Lease E46/733. • The tenement is 100% owned by Atlas. • The tenement sits within the Njamal Native Title Claim (WC1999/088). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• Initial exploration activities were conducted by Giralia Resources at 100mE by 50mN. Atlas took over the McPhee Creek project in March 2011 and completed an infill drill program in August 2013 at 50mE by 25mN.
Geology	• The Crescent Moon Mineral Resource is a channel iron deposit which overlies a basal shale unit believed to be part of the sandstones, siltstones and shales of the Corboy Formation.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill

	hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Giralia Resources conducted the initial exploration program and first pass drilling.
Further work	• Further infill drilling in areas not drilled due to heritage approval issues. • Diamond drilling may be required to confirm density and provide metallurgical samples for detailed evaluation.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• The logs are entered digitally in the field into acQuire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy ‘Roredata’ using acquire software. • Data for the Crescent Moon Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• There is sufficient confidence in the geological interpretation of the mineral deposit. • Geological interpretation based on geophysical natural gamma data, drillhole lithological logging and geochemical data. • The geology interpretation has a degree of high confidence level using a 25mN x 50mE drill hole spacing. • In the area where there is no drilling, the interpretation is extrapolated half drill hole spacing. • The mineralisation is well constrained within the channel domain. • Some of the mineralisation blobs have limited continuity and is not sufficiently defined by current drill hole spacing. • Geological interpretation based on geophysical natural gamma data, local geological mapping and geochemical data.

	• Wireframes of the stratigraphic units and mineralisation used to generate an empty geological model. • Mineralisation wireframe based on >=50% Fe and <15% SiO2 cut-off grade delineating ore/waste boundary wireframes of the stratigraphic units used to generate an empty geological model.
Dimensions	• The Crescent Moon Mineral Resource has dimensions of approximately 1,600m (East) by 140 m (North) and extends from surface to an average depth of 18m.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (Channel Iron – exposed to surface weathering). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half a drill spacing. • Univariate statistical analysis and variogram modeling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging neighbourhood analysis (QKNA) undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 201200mE to 208000mE and 7607000mN to 7613000mN and elevation from 100mRL to 700mRL. • A single block model to encompass the Crescent Moon Mineral Resource was constructed using a 12.5mN by 25mE by 5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 2.5mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) estimated plus geophysical density. • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2. • A minimum of 16 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 14 for run 2. • Generally the majority of blocks are estimated in run 1. The remaining blocks were 100% estimated for the mineralised geozones 201. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5,5,2 was applied. • All block estimates are based on interpolation into sub-blocks. • Maptek Vulcan software was used to complete the block estimation. • Ordinary Krigging was used to estimate mineralised domains. Inverse Distance (Power 2) was used to estimate waste domains. • No selective mining units were assumed in this estimate.

	• Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL, swath plots to compare grades along slices through the deposit and Change of Support.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • There is no recorded dip data to interpret a water table. All moist/wet samples are due to water injection during drilling to suppress dust. All mineralization is considered to be above water table. • 85.3% of samples logged as dry, 0.01% samples logged as moist and 0.06% of samples logged as wet samples. Note: 14.5% of samples did not have sample condition recorded (Giralia data set).
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised CID and un-mineralised CID. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• Basic metallurgical test work has been conducted on a range of RC composites to evaluate assay by size. Further diamond drilling is recommended to be completed to provide more detailed physical characteristics.
Environmental factors or assumptions	• A total of 2 RC samples intercepted anomalous sulphur values greater than 0.3%. These samples occur deep (70-72m & 106-108m) in MCRC1518 well beneath any mineralised CID.
Bulk density	• Geophysical density measurements have been recorded downhole from the majority of drillholes. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. • Geophysical density is recorded at 10cm increments downhole, which is stored in the acquire drillhole database. • The density measurements are filtered and validated prior to use to remove anomalous recordings. • Geophysical density is estimated into the resource model. Un-estimated blocks (that did not meet the minimum criteria for an estimate to be made were assigned the mean grade of that domain's composited geophysical density data. • A 10% reduction to the geophysical density was applied to produce a dry bulk density value. This reduction is not based on regression to physical core measurements but rather is a conservative approach to approximate the dry bulk density. • Diamond drilling is recommended to provide a more accurate density regression factor for this resource. • This is a bulk commodity project.
Classification	• Mineral Resources have been classified into the inferred/indicated category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality.

	• Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modeling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade. • Resource estimate is suitable for long term mine planning only. • Risk is quantified using change of support and indicates some degree of misclassification will be likely at high cut-off grades.
SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES – Refer to page 45	

MAIN RANGE RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA MAIN RANGE MINERAL RESOURCE ESTIMATE – JUNE 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• RC samples collected in the initial drill program conducted by Giralia Resources in 2010, involved collecting the samples drilled at 1m intervals and then composited into 2m composite samples. The 2m composite samples were then re-split by riffle splitting to reduce the total amount of sample sent for analysis. • Limited QAQC data were collected during the life of the project under Giralia Resource supervision – 2 standards every 100 samples. • Reverse circulation (RC) chip samples collected under Atlas supervision, were collected at 2m sample intervals via a cone splitter. The 2m samples were sent for analysis by XRF and total LOI by TGA. • One 3.5kg (average) sample taken for each two metre sample length and collected in pre-numbered calico sample bags. • 3.5kg sample was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 50mN by 50mE. • RC holes (total of 135,593m for 1,210 holes) – used in estimate. • DDH (total of 16,509.3m for 98 holes) – including diamond tails.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 66.8% Good, 2.59% Fair and 1% Poor, 29.4% sample recovery not recorded. • 41.5% dry, 11.9% moist, 3.18% moist injected, 12.4% wet, 0.5% wet injected, 29.4% sample recovery not recorded. • To ensure maximum sample recovery and ensure representative samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified.
Logging	• Geological logging was undertaken for every 1m sample during the 2008 campaign conducted by Giralia Resources. Post Atlas acquisition (March 2011), geological logging was completed at 2m sampled interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • 39,942 RC samples logged. Logging of every 2m interval (Atlas Iron procedure) corresponding with 2m sample interval. • Core and RC logging is qualitative and quantitative in nature. • RC Logging records the abundance/proportion of specific minerals/material types and lithologies, hardness recorded by physical chip percent measurement, weathering and colour. Additionally diamond core was logged for density (dimensional tray method), geotechnical conditions, RQD and structure and each tray was photographed both wet and dry after meter marking and orientation. • The entire lengths of RC holes were logged on a 2m interval basis, 100% of the drilling was logged. Where no sample was returned due to voids/cavities it

	is recorded as such. Drill core was also logged over its entire length and core recovery recorded. • Geophysical data collated from 1,126 holes (RC & DH) of a total of 1,308 holes (gamma, density, magsus & resistivity). Not all holes were open at depth which precluded 100% coverage of measurements from all of the drillholes.
Sub-sample techniques and sample preparation	• PQ3 and HQ3 diamond core - whole core was sampled at 1m intervals and despatched to the lab where it was dried for 12 hours at 105oC, primary crushed down to 8mm fraction and secondary crushed to 4mm before being further split down using a rotary splitter to produce a sub-sample of approximately 3.5kg before pulverizing in a LM2 mill to a nominal 90% passing 75 micron. A 66g pulp sample is obtained for XRF analysis. • 1:10 of the coarse crushed samples were duplicate sampled by the lab to ensure sample homogeneity and monitor the additional splitting stage performed by the lab and approximately 1:20 pulp samples are duplicated by the lab. • All RC samples were collected on two meter down hole intervals passed through a cone splitter to collect a nominal 4.0kg-6.0kg sample. The majority of samples are reported as dry, however a proportion of below water table samples are reported as being moist or wet. • Where RC samples were considered to be large (>6kg), they were crushed down to 3mm fraction and rotary split down to produce a smaller sample suitable for pulverizing. Coarse duplicates are taken by the lab at a ratio of 1:10 to monitor this process. • Sample weight/split analysis shows that on average at least 10% split ratio is being achieved consistently through the cone splitter primary and duplicate sampling ports. • Duplicate sample analysis show the data has acceptable precision, indicating that the sampling technique is appropriate for the deposit • Diamond twin analysis also shows good precision where core recovery has been sufficient to provide a representative sample of the interval. • The sample sizes were considered to be appropriate to correctly represent the mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent values assay ranges for the primary elements.
Quality of assay data and laboratory tests	• All samples submitted to Ultratrace & Spectrolab Laboratories in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 1050C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, fused at 11000C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • Total LOI (1000oC) is measured by Thermogravimetric methods (TGA). • Atlas inserts commercially available certified reference material (standards) at a set frequency of 1:20 (5% of total samples) within its sample batches. A number of different standards at a range of grades are used to monitor analytical precision of the assay results. • Blanks are not used by Atlas due to the nature of the analysis being a

	complete multi-element suite. • Acceptable levels of precision have been achieved with all standard assays reporting within 2 standard deviations of the certified mean grade for the 12 main elements of interest. • The lab also inserts its own standards at set frequencies and monitors the precision of the XRF analysis. These results also reported well within the specified 2 standard deviations of the mean grades for all 12 main elements of interest. • The Laboratory performs repeat analyses of sample pulps at a rate of 1:20 (5% of all samples) these compare very closely with the original analysis for all elements. • Analysis of field duplicate and lab pulp duplicates and repeats reveals that greater than 80% of pairs have less than 10% difference and the precisions of samples is within acceptable limits and concurs with industry recommended practices. • Atlas sent a selection of pulps to an umpire laboratory (Bureau Veritas, Perth) for verification by an independent laboratory. Comparison of results between laboratories did not reveal any issues and analytical precision was considered acceptable. • Laboratory procedures are in line with industry standards and are appropriate for iron ore analysis. • Geophysical gamma density was collected by Geovista Dual Density logging tool (Cesium source, density range 1-3.5g/cc) to ascertain approximate in-situ density values. The density tool is calibrated every 2 weeks using a range of materials with known density and is run down a calibration hole at the commencement of, and regularly during, the collection of data.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. Drill core and RC chips have been inspected in the field to verify the correlation of mineralised zones with assay results. The Competent Person for this report has visited site and inspected all sampling processes in the field and also inspected the laboratory on a regular basis. • Diamond twin holes have been drilled for comparison with RC drillholes and quantitatively analysed with no issues identified. • All primary data is captured electronically on field Toughbook laptops using acQuiretm software. The software has built in validation routines to prevent data entry errors at the point of entry. Data is also validated prior to export from the Toughbook and again on import into the main corporate acQuire database. • All data is sent to Perth and stored in a secure, centralised acQuire SQL database which is administered by a full database administrator. • Documentation related to data custody, validation and storage are maintained on the company's server. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection level values to half positive detection.
Location of data points	• All collars were surveyed by licensed surveyors (MRH Surveyors, Perth) utilising a RTK GPS system tied into the state survey mark (SSM) network with the expected relative accuracy of 0.05m E, N & RL. Elevation values are in AHD RL. • The grid system for the McPhee Ck Project and the Main Range resource is MGA_GDA94_Z51.

	• 994 Collars were surveyed using differential DGPS_RTK, 16 by GPS • Collars surveyed by Giralia Resources (298 holes) were assumed using DGPS_RTK due to records in the database showing survey data up to 2 decimal places. • Downhole gyroscopic surveys are attempted on all RC and diamond holes by ABIMS geophysical contractors. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool with a stated accuracy of +/-1o in azimuth and +/-0.1o in inclination. QC of the gyro tool involved field calibration using a test stand and also a calibration hole. • Topographic data and imagery collected by Outline Global Pty Ltd based on 10cm resolution RGB imagery. 2m vertical contour interval resolution derived from stereoscopic imagery DTM. Data supplied in projection MGA_GDA94 Zone 51. The quality and resolution of the topographic data is considered to be adequate for resource estimation purposes.
Data spacing and distribution	• RC Drill spacing is on an approximate 50m (N-S) by 50m (E-W) grid, however due to topographic constraints this is sometimes not achievable. • This drill spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate to support an Measured/Inferred/Indicated resource classification under the 2012 JORC code and is suitable for this style of deposit. • Sample compositing has not been applied to the RC samples used in the resource estimate; all RC samples are collected at 2m intervals. Diamond samples were composited to 2m length to match the RC sample length and maintain equal weighting for comparison and estimation purposes. • Geophysical density measurements collected at 10cm increments were composited up to 2m intervals to correspond with the sample length. The compositing process was checked to ensure that no changes to the statistical population had been incurred due to the compositing process.
Orientation of data in relation to geological structure	• The attitude of the Main Range resource is dominantly east dipping from 30-80 degrees and is drilled to grid west with drillholes inclined between -60 and -90 degrees which is slightly oblique to the orientation of the mineralisation. Structural logging of orientated drill core and surface mapping supports the drilling direction and sampling orientation. Due to the varying intersection angles all intercept results are reported as downhole widths and not true widths. • No drilling orientation and sampling bias has been recognized at this time and is not considered to have introduced a sampling bias. • Holes drilled are generally orientated either 310°dipping -60° or vertically (-90 dip).
Sample security	• Chain of custody is managed by Atlas. Pre-numbered calico sample bags are packed into sealed and labeled polyweave bags on site and then placed inside sealed and labeled bulka bags. Samples are delivered to a dispatch point in Port Hedland by Atlas Staff and a consignment number issued by the transport company (TOLL). Samples are transported to the relevant laboratory in Perth by courier. Once received at the laboratory, the consignment of samples is receipted against the sample dispatch documents and a reconciliation report is issued to Atlas for every sample batch. Samples are stored in a secure yard at the lab until analysis. • Sample security was not considered a significant risk to the project.
Audits or reviews	• A detailed audit of the Atlas acQuire drillhole database is performed regularly by independent database management consultants (rOREdata Pty Ltd). The

	last audit was completed in August 2012 and the database is considered to be of a high standard and acceptable for JORC compliant resource estimation activities. • A review of all the resource drillhole data and sampling techniques is carried out internally as part of the resource estimation process.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Main Range is located within Exploration Lease E45/733. • The tenement is 100% owned by Atlas. • The tenement sits within the Njamal Native Title Claim (WC199/088). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• Initial drill program of 342 RC holes for 35,249m and 36 diamond holes (including diamond tails) for 5,408.5m were completed by Giralia Resources.
Geology	• The McPhee Creek bedded iron ore deposit lies in the faulted Sandy Creek Syncline within rocks of the Gorge Creek Group. The Gorge Creek Group has an age estimate of 3020 Ma (Van Kranendonk et al, 2006). The Gorge Creek Group is further subdivided into the Farrel quartzite and Cleaverville Formation, with the Cleaverville Formation conformably overlying the Farrel quartzite in the core of the faulted Sandy Creek Syncline. The Cleaverville Formation is characterised by thinly bedded iron formation interbedded with ferruginous chert (Bagas, 2005). • To the southeast the various iron formations are faulted against carbonaceous shales and siltstones, massive quartzites and volcanics of the Warrawoona Group. The western margin of the deposit is marked by a package of shale and chert. The shale-chert sequence appears to be conformable with the BIF, and a similar sequence also underlies the BIF to the east. • The structure of the McPhee Creek area is dominated by a northeast trending, upright synform (the Sandy Creek Syncline) and associated folding, truncated by a northeast trending fault system that defines the eastern edge of the Cleaverville Formation (Noble and Beeson, 2010). The deposit is preserved in this structural low, the formation of which probably involved several tectonic events. The Main Range deposit is interpreted to be overprinted by extensive, late stage brittle faulting. • Outcrops on the Main Range are typically BIF, massive goethite, canga, banded chert, silcrete and minor hematite. Difficulties in identifying all of the stratigraphy arose due to the overprinting and destruction of original lithological features by the iron mineralisation and the presence of surficial depleted and hydrated zones. • Goethite-haematite iron ore mineralisation on the Main Range & Main Range West is hosted in BIF and in ferruginous laterite/canga. Mineralised outcrops occur along almost the entire western margin of the BIF (approximately 8km) near the contact with the underlying shale and chert. Outcropping mineralisation is also present in the south of the project in the synformal hinge zone. Iron ore mineralisation is predominantly strata bound and follows the BIF sequences, however near surface supergene enrichment and remobilisation has created zones of mineralisation cross cutting stratigraphy orientated sub parallel to a now partially dissected palaeosurface.
Drillhole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 –

	"Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Surface Geological mapping (stratigraphy, mineralisation and structure) of the McPhee Creek project was performed by Atlas Geological personnel and consultants from Jigsaw Pty Ltd. • Routine multi-element analysis of potential deleterious or contaminating substances such as Arsenic, Lead, Zinc and Sulphur is completed for all samples.
Further work	• Additional drilling is required along the eastern margin of Main Range to improve geological knowledge and close of mineralisation in a few locations. • Work related to any potential mining development of the Main Range deposit is dependent on outcomes of Feasibility level mining studies.
SECTION 3- ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• All data is entered digitally in the field into acquire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The data files are then electronically transferred to the Perth office via email where they are loaded into the centralised SQL acQuire drillhole database and undergo further validation routines before being finally accepted. Validation reports are produced for each drillhole and sent back out to the site Geologists for final checking. • Assay files sent electronically from the lab in a secure file format and also in hard copy reports. The assay data undergo numerous checks before being accepted into the database on passing all QAQC rules. • The Atlas acQuire drillhole database is administered by a full-time Geological Database Administrator. Data validation checks are run routinely by the database administrator and database consultancy 'rOREdata' using acQuire software validation routines.
Site visits	• The Competent Person for this report is a full time employee of Atlas Iron and undertakes regular site visits ensuring that industry acceptable standards of the entire process from sampling through the final block model estimate are maintained. Site visits were carried out in October 2012 to inspect the deposit area, RC and diamond logging and sampling practices. Discussions were held with site personnel regarding procedures and a number of minor recommendations were made but nothing was noted that was of a material nature.
Geological interpretation	• There is good confidence in the geological interpretation of the mineral deposit and demonstrated good consistency both on section and between sections.

	• The stratigraphical, structural and mineralisation interpretation has been based on a combination of geophysical, geochemical and lithological data obtained from drillholes plus surface mapping information. • Wireframes of the stratigraphic and mineralisation surfaces are used to generate an empty geological block model. • The overlying hardcap/hydrated zone displays higher variability and lower continuity and as such there is less confidence of the estimation of this zone. • The mineralisation is noted to pinch down in a few isolated locations and lack continuity; there is less confidence in the estimation of these zones. • Mineralisation wireframe based on >50% Fe and <15% SiO_2 cut-off grade delineating ore/waste boundary.
Dimensions	• Mineralisation occurs over an 8km strike length and is exposed in outcrop along the entire western margin of the deposit. The mineralisation has a variable width of 100m to 500m and extends to a maximum depth of 300m below surface in the keel of a synformal structure. A thin, 20-30m thick hydrated layer blankets the entire resource at surface. To the east of the deposit, the mineralisation sits below a more deeply weathered depleted zone and is not exposed at surface.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and mineralisation types (Hydrated or Primary mineralisation). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half a drill spacing. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging neighbourhood analysis (QKNA) undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 0mE to 2,000mE and 0mN to 12,000mN and elevation from 0mRL to 500mRL. • A single block model to encompass the Main Range Mineral Resource was constructed using a 25mN by 25mE by 5mRL parent block size with sub-celling to 5mE by 5mN by 2.5mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) estimated plus geophysical density. • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2. • A minimum of 12 samples and a maximum of 36 samples are required for an

	estimate in run 1, the minimum number of samples reducing to 10 and 6 for run 2 and run 3 respectively. • Generally the majority of blocks are estimated in run 1 and 2. A minor proportion was estimated in run 3. The remaining un-estimated blocks were assigned average composited data from their respective domains. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5,5,2 was applied. • All block estimates are based on interpolation into sub-blocks. • Maptek Vulcan software was used to complete the block estimation. • Ordinary Kriging was used to estimate mineralised (geozone 502, 507, 202 and 207) domain. Inverse Distance (Power 2) was used to estimate waste domains. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs. block grades, global statistical comparisons for each domain, easting, northing and RL, swath plots to compare grades along slices through the deposit and Change of Support.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • The McPhee Creek Main Range deposit contains a water table defined by resistivity data at approximately 400mRL. • Approximately 40% of the resource lies below the water table.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and un-mineralised BIF. This cut-off grade was used to define the mineralised envelope. • The resource is reported at a cut-off grade of 48.5% and includes internal zones of mineralised waste material that would be incorporated during the mining process and not able to be easily separated. • The application of simple desliming processing technology has demonstrated that this cut-off grade will yield good recovery of Atlas product grade material to specification.
Mining factors or assumptions	• Mining is assumed to be similar to the process used at other nearby Atlas deposits by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No other assumptions on mining methodology have been assumed at this stage as no detailed mine planning or production scenarios have been reviewed and are subject to a feasibility level study. • It is a reasonable assumption that this resource will eventually be economically extracted based on its proximal location to existing Atlas projects and infrastructure and also due to its favourable size and grade characteristics which will fit the Atlas product specification.
Metallurgical factors or assumptions	• Metallurgical information is based on a data set including 4,146m of PQ3 drill core from the Main Range deposit. The metallurgical drilling coverage is sufficient for the project at Pre-Feasibility Study level. • The current project processing route is a dry three stage crush and wet screen followed by de-sliming through cyclones, to produce a -9mm -+20µm product. This type of technology is well known and has precedence in current Pilbara

	iron ore operations.
Environmental factors or assumptions	• A thick (20-30m) carbonaceous and sulphidic (pyrite) shale unit has been identified along the entire footwall position of the deposit below the depth of oxidation. The net acid producing potential of this shale has been evaluated by Graeme Campbell and Associates. • The volume of this sulphidic shale within any potential pit is expected to be comfortably encapsulated by inert waste within any waste dump volume based on high level studies completed by Atlas. Mitigation of acid drainage within the pit will need further analysis and a management plan. • Other detailed waste characterisation studies have been undertaken to determine the overall physical and chemical characteristics.
Bulk density	• Dry bulk density has been estimated into the model with the use of geophysical density measurements collected in RC holes and regressed back to dry core dimensional density measurements. • All RC holes are attempted to be downhole surveyed for gamma density however some holes were open to end of hole depth resulting in incomplete data coverage over the deposit. Not all core intervals had 100% complete core recovery and these density measurements were excluded from the regression analysis as they are not representative. • Geophysical density measures the in-situ density inclusive of moisture and porosity. Filtered and cleaned Geophysical density was composited to 2m length and then estimated into the model in a similar fashion to grades and then a regression has been applied to account for the moisture, porosity and hole rughosity present in the readings to derive a dry density. • The regression has been calculated by comparing geophysical measurements in a diamond hole with dry, diamond core dimensional density measurements over the same intervals. Geophysical measurements taken in RC and Diamond Twin holes are also directly compared to account for differences due to hole effect (rugosity). • The use of dimensional tray density techniques is generally believed to be unbiased as it accounts for all material types and avoids material handling and selectivity issues commonly encountered by using more traditional Archimedes style density measurements. • A 4% reduction was applied to geophysical density data to calculate the dry bulk density. This was based on the calculated regression between 13 diamond holes and their corresponding dimensional densities and 5 RC holes and their twinned DH equivalent. • This is a bulk commodity project.
Classification	• Mineral Resources have been classified into the Inferred, Indicated and Measured category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model show good correlation of the input data to the estimated grades. • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.

Audits or reviews	• Atlas have undertaken an internal review of the mineral resource estimate and is satisfied the estimation is valid and of sufficient confidence to support an Indicated/Inferred classification. • The review consisted of numerous checks made throughout the data collection and estimation process. A final peer review including visual checks of blocks versus drillhole grades, global means comparisons, histogram distribution comparisons, swath plots in Easting, Northing and elevation and a change of support analysis was completed. • This mineral resource has not been audited externally. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• The confidence in this resource estimate has been deemed appropriate as a basis for long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • A change of support analysis was undertaken to assess the sensitivity to the grade-tonnage curve in going from sample to block sized support at a range of cut-off grades. This analysis shows that some misclassification of material around the specified cut-off grades can be expected, particularly in the hydrated mineralisation. • The Main Range Mineral Resource Estimate is sufficient for Feasibility level study purposes commensurate with the classification of the resource. • This statement relates to global estimates of tonnes and grade. • There has been no production from the Main Range deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource.
SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES – Refer to page 45	

MAIN RANGE WEST RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA MAIN RANGE WEST MINERAL RESOURCE ESTIMATE – DECEMBER 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• RC samples collected in the initial drill program conducted by Giralia Resources in 2010, involved collecting the samples drilled at 1m intervals and then composited into 2m composite samples. The 2m composite samples were then re-split by riffle splitting to reduce the total amount of sample sent for analysis. • Limited QAQC data were collected during the life of the project under Giralia Resource supervision – 2 standards every 100 samples. • Reverse circulation (RC) chip samples collected under Atlas supervision, were collected at 2m sample intervals via a cone splitter. The 2m samples were sent for analysis by XRF and total LOI by TGA. • One 3-5kg (average) sample taken for each two metre sample length and collected in pre-numbered calico sample bags. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 5 duplicates are taken for every 100 samples (1:20). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 50mN by 50mE. • Total of 125 RC holes used for the resource estimate for a total of 10,123m and 5,062 primary samples.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 3,218 Good (63.6%), 51 Poor (1%) and 164 Fair (3.2 %) and 1,629 no record (32.2%). • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No twin RC or diamond drillholes have been completed to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling.
Logging	• Logging of every 2m interval (Atlas procedure) corresponding with 2m sampled interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Core and RC logging is qualitative and quantitative in nature. • The entire lengths of RC holes were logged on a 2m interval basis, 100% of the drilling was logged. Where no sample was returned due to voids/cavities it is recorded as such. • 98 RC drillholes were logged in full, totaling 6,886m of drilling or 3,443 RC samples were logged for lithology, mineralisation, chip percent, weathering and colour. • Geophysical data collated from 118 RC holes of a total of 125 holes (natural gamma, gamma density, magnetic susceptibility & resistivity). Not all holes were open at depth which precluded 100% recovery of measurements from all of the drillholes.
Sub-sample techniques	• All RC samples were collected on two meter down hole intervals passed through a

	cone splitter to collect a nominal 4.0kg-6.0kg sample. The majority of samples are reported as dry, however a proportion of below water table samples are reported as being moist or wet. • Where RC samples were considered to be large (>6kg), they were crushed down to 3mm fraction and rotary split down to produce a smaller sample suitable for pulverizing. Coarse duplicates are taken by the lab at a ratio of 1:10 to monitor this process. • Sample weight/split analysis shows that on average at least 10% split ratio is being achieved consistently through the cone splitter primary and duplicate sampling ports. • Duplicate sample analysis show the data has acceptable precision, indicating that the sampling technique is appropriate for the deposit • The sample sizes were considered to be appropriate to correctly represent the mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent values assay ranges for the primary elements.
Quality of assay data and laboratory tests	• All Atlas samples submitted to SGS and Ultratrace Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • All Giralia samples were sent to Spectrolab and assay using the same method for all elements minus Na2O • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105OC in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 0.66kg sample that is dried further, fused at 110OC for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Blanks are not used by Atlas due to the nature of the analysis being a complete multi-element suite. • Certified Reference Material assay standards having a good range of values were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice. • Acceptable levels of precision have been achieved with all standard assays reporting within 2 standard deviations of the certified mean grade for the 12 main elements of interest. • The lab also inserts its own standards at set frequencies and monitors the precision of the XRF analysis. These results also reported well within the specified 2 standard deviations of the mean grades for all 12 main elements of interest. • The Laboratory performs repeat analyses of sample pulps at a rate of 1:20 (5% of all samples) these compare very closely with the original analysis for all elements. • Analysis of field duplicate and lab pulp duplicates and repeats reveals that greater than 80% of pairs have less than 10% difference and the precisions of samples is within acceptable limits and concurs with industry recommended practices. • Atlas sent a selection of pulps to an umpire laboratory (Bureau Veritas, Perth) for

	verification by an independent laboratory. Comparison of results between laboratories did not reveal any issues and analytical precision was considered acceptable. • Laboratory procedures are in line with industry standards and are appropriate for iron ore analysis. • Geophysical gamma density was collected by Geovista Dual Density logging tool (Cesium source, density range 1-3.5g/cc) to ascertain approximate in-situ density values, but was not estimated into the model. The density tool is calibrated every 2 weeks using a range of materials with known density and is run down a calibration hole at the commencement of, and regularly during, the collection of data.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. RC chips have been inspected in the field to verify the correlation of mineralised zones with assay results. • The Competent Person for this report has visited site and inspected all sampling processes in the field and also inspected the laboratory on a regular basis. • There are no twinned holes drilled for the Main Range West resource to date. • Primary data are captured on field Toughbook laptops using acQuiretm software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • Documentation related to data custody, validation and storage are maintained on the company's server. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• 61 Collars were surveyed by licensed surveyors using differential RTK_DGPS connected to state survey mark (SSM) network. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. The remaining 64 collars were surveyed using GPS • Downhole gyroscopic surveys are attempted on all RC holes by ABIMS. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool. Stated accuracy is +/-1o in azimuth and +/-0.1o in inclination. 121 holes had downhole surveys completed, 4 holes were not able to be surveyed due to collapse. • QC of the gyro tool involved field calibration using a test stand and also a calibration hole. • The grid system for Main Range West is MGA_GDA94 Zone 51. • High resolution (1m contour interval data) topographic data collected by AAM Pty Ltd
Data spacing and distribution	• RC Drill spacing is on an approximate 50m (N-S) by 50m (E-W) grid, however due to topographic constraints this is sometimes not achievable. • This drill spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification under the 2012 JORC code and is suitable for this style of deposit. • Sample compositing has not been applied to the RC samples used in the resource estimate; all RC samples are collected at 2m intervals • Geophysical density measurements collected at 10cm increments were composited up to 2m intervals to correspond with the sample length. The compositing process was checked to ensure that no changes to the statistical population had been incurred due to the compositing process.
Orientation of data in relation to geological	• The Main Range West resource is dominantly sitting in the hinge of the syncline that plunges approximately 40^0 to NE and SW forming synformal structure along

structure	strike. The majority of drillholes were drilled vertical to intersect the structure/stratigraphy at high angles as much as possible.
Sample security	• Chain of custody is managed by Atlas. Pre-numbered calico sample bags are packed into sealed and labeled polyweave bags on site and then placed inside sealed and labeled bulka bags. Samples are delivered to a dispatch point in Port Hedland by Atlas Staff and a consignment number issued by the transport company (TOLL). Samples are transported to the relevant laboratory in Perth by courier. Once received at the laboratory, the consignment of samples is receipted against the sample dispatch documents and a reconciliation report is issued to Atlas for every sample batch. Samples are stored in a secure yard at the lab until analysis. • Sample security was not considered a significant risk to the project.
Audits or reviews	• A detailed audit of the Atlas acQuire drillhole database is performed regularly by independent database management consultants (rOREdata Pty Ltd). The last audit was completed in August 2012 and the database is considered to be of a high standard and acceptable for JORC compliant resource estimation activities. • A review of all the resource drillhole data and sampling techniques is carried out internally as part of the resource estimation process.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Main Range West is located wholly within Exploration Lease E46/733. This tenement is 100% Atlas owned. • The tenement sits within the Njamal Native Title Claim (WC1999/088). • At the time of reporting, there are no known impediments to obtaining a license to operate in the area and the tenement is in good standing.
Exploration done by other parties	• Giralia Resources Pty Ltd drilled an initial 42 holes at Main Range West on a random pattern.
Geology	• The Main Range West Prospect mimics its nearest neighbour, Main Range, consisting of intercalation of BIFs, chert and shales that plunges at approximately 40^{0} toward NE and SW forming synformal structure along strike. The BIFs and chert unit are underlain by shale that outcrops along the western part of the area and thickens to the north. The Upper and Lower BIF are separated by chert unit. The iron mineralisation is restricted in Upper and Lower BIF. High grade mineralisation was observed in the hinge position of the fold. The goethite mineralisation occurs mostly in the south eastern part of the area with strong enrichment in some places
Drillhole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.

Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Surface Geological (stratigraphical, structural) mapping of the Main Range West prospect completed by Atlas Geologists and Consultants from Jigsaw Pty Ltd. • Routine multi-element analysis of potential deleterious or contaminating substances such as Arsenic, Lead, Zinc and Sulphur is completed for all samples.
Further work	• Infill holes are required to evaluate the zone between southern and centre areas of mineralisation which may result in joining the 2 discrete areas into a single resource. • Additional drilling to test the potential extent of mineralisation in northern mineralisation zone • Further detailed mapping in the area is required to better understand the geology as well as the structures • Estimation performed using ordinary kriging as this method is considered as the best linier unbiased estimator.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Lithology logging codes are standardised across Atlas. The logs are entered digitally in the field into acQuire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy ‘Roredata’ using acquire software. • Data for the Main Range West is stored in the centralised Atlas acQuire drillhole database. • Assay files sent electronically from the lab in a secure file format and also in hard copy reports. The assay data undergo numerous checks before being accepted into the database on passing all QAQC rules. • The Atlas acQuire drillhole database is administered by a full-time Geological Database Administrator. Data validation checks are run routinely by the database administrator and database consultancy ‘rOREdata’ using acQuire software validation routines.
Site visits	• The Competent Person for this report is a full time employee of Atlas Iron and undertakes regular site visits ensuring that industry acceptable standards of the entire process from sampling through the final block model estimate are maintained. Site visits were carried out in June 2013 to inspect the deposit area, RC and diamond logging and sampling practices. Discussions were held with site personnel regarding procedures and a number of minor recommendations were made but nothing was noted that was of a material nature.
Geological interpretation	• There is good confidence in the geological interpretation of the mineral deposit and demonstrated good consistency both on section and between sections. • The stratigraphical, structural and mineralisation interpretation has been based on a combination of geophysical, geochemical and lithological data obtained from drillholes plus surface mapping information. • Wireframes of the stratigraphic and mineralisation surfaces are used to generate an empty geological block model. • The overlying hardcap/hydrated zone displays higher variability and lower continuity and as such there is less confidence of the estimation of this zone. This will likely influence the local estimates rather than the global grade estimate for this

	zone.
Dimensions	• The Main Range West prospect consists of 3 mineralisation zones. The Southern zone measures approximately 250m (NE) by 220m (SE), Central zone measures 190m (NE) by 110m (SE) and Northern zone measures 70m (NE) by 150m (SW).
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half a drill spacing (unless in areas where surface mapping has identified a mineralised/non-mineralised contact in an area without drilling data). • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • The neighbourhood analysis undertaken to optimise estimation parameters, including search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 197250 to 200250mE and 7609000mN to 7612000mN and elevation from 50mRL to 550mRL. • A single block model to encompass the Main Range West was constructed using a 25mN by 25mE by 5mRL parent block size with sub-celling to 5mE by 5mN by 2.5mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Inverse Distance Weighting with power 2 was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO and K_2O) estimated plus geophysical density and chip percentage where possible. • Search directions and ranges determined from neighbourhood analysis used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 3 drill spacing for run 1, 4.5 drill spacing for run 2, and 6 drill spacing for run 3. • A minimum of 12 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 for run 2 and 8 for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5, 5, 2 was applied. • Grade restriction was applied to some of the minor deleterious elements in some domains as a restricted search to limit the influence of extreme/outlier grades from smearing distant blocks by using a tighter search ellipsoid. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff.

	• Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • The water table sits approximately 40m below the surface; approximately 38% of the resource is located below the water table. • 53% of samples logged as dry, 1% as injected, 3% as moist, 2% as moist injected, 2% as wet injected 3% as moist, 7% as wet samples, 2% as wet injected and 32% is not recorded (Giralia Drilling).
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and un-mineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining is assumed to be similar to the process used at other nearby Atlas deposits by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No other assumptions on mining methodology have been assumed at this stage as no detailed mine planning or production scenarios have been reviewed and are subject to a scoping level study. • It is a reasonable assumption that this resource will eventually be economically extracted based on its proximal location to existing Atlas projects and infrastructure and also due to its favourable size and grade characteristics which will fit the Atlas product specification.
Metallurgical factors or assumptions	• Preliminary metallurgical test work conducted on a selection of RC composited samples by Nagrom to evaluate grade by sizing characteristics. • The current project processing route is a dry three stage crush and wet screen followed by desliming through cyclones, to produce a -9mm -+20µm product. This type of technology is well known and has precedence in current Pilbara iron ore operations.
Environmental factors or assumptions	• A number of drill holes intercepted black carbonaceous sulphidic shales with elevated Sulphur content that potentially generate acid. • The high concentration of sulphur (≥ 0.1% S) in the drill holes is mostly associated with the shales and BIF for some extent. • Further work is required to quantify the risk of this material and determine a management strategy.
Bulk density	• Geophysical density measurements have been recorded downhole from the majority of drillholes. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. • Geophysical density is recorded at 10cm increments downhole, which is stored in the acquire drillhole database. • The density measurements are filtered and validated prior to use to remove anomalous recordings. • Geophysical density is estimated into the resource model. Un-estimated blocks (that did not meet the minimum criteria for an estimate to be made) were assigned the mean grade of that domain's composited geophysical density data. • No physical core measurements of dry bulk density have been collected to verify the geophysical results and provide a regression to convert the geophysical density to a dry bulk density. • While physical diamond core density data was not available to complete the density analysis, a regression value of 4% was applied to estimated geophysical density value based on data from the nearby Main Range deposit (which is of similar style).

	• This is a bulk commodity project.
Classification	• Mineral Resources have been classified into the Inferred category based on drillhole intercept spacing, geological confidence, and grade continuity and estimation quality. • Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person’s view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • Atlas have undertaken an internal review of the mineral resource estimate and is satisfied the estimation is valid and of sufficient confidence to support an Inferred classification. • The review consisted of numerous checks made throughout the data collection and estimation process. A final peer review including visual checks of blocks versus drillhole grades, global means comparisons, histogram distribution comparisons, swath plots in Easting, Northing and elevation and a change of support analysis was completed. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The Main Range West Resource Estimate is sufficient for scoping level study purposes commensurate with the classification of the resource. • This statement relates to global estimates of tonnes and grade. • There has been no production from the Main Ranger West deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource.

MCPHEE CREEK JORC 2012 TABLE 1 – SECTION 4

SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES	
Mineral Resource estimate for conversion to Ore Reserves	• The Mineral Resource estimates used are based upon two stratigraphically domained and ordinary kriged Mineral Resource estimates undertaken by Atlas Iron Resource Estimation Department as outlined in Section 1-3. The Mineral Resources used for conversion to Ore Reserves are: - Main Range - Crescent Moon. • A technical description of the Mineral Resource is presented in the preceding sections to this table. These Measured and Indicated Mineral Resources are fully inclusive of the Ore Reserves.
Site visits	• The competent person for this Ore Reserve Statement is a full time employee of Atlas Iron Ltd and has visited site in July 2013. The project is a greenfield site. The competent person inspected the topography, site access and investigated the potential locations of services for mining. • The competent person has visited all operational Atlas Iron sites in the last 6 months.
Study status	• A study has been undertaken to a Pre-Feasibility Study (PFS) level as per internal Atlas Iron guidelines for project studies. The PFS has determined the project to be technically achievable and economically viable and that appropriate modifying factors have been applied. • Both of the Mineral Resources, Main Range and Crescent Moon form part of the McPhee Creek Pre-Feasibility Study of June 2014. • The PFS has assessed a significant number of technical options and alternatives to a standard that satisfies Atlas Iron that McPhee Creek is technically achievable and economically viable.
Cut-off parameters	• The cut-off grade for the site is 48.5% Fe. This cut-off grade is selected on the basis of the required product grade of 57% Fe after processing upgrade of the run of mine ore.
Mining factors or assumptions	• The method used to convert Mineral Resources to Ore Reserves is pit optimisation to identify the economic shell within which a design process is applied to achieve a practical mine design. • The assumed iron ore price and exchange rates used in the pit optimisation are derived from the average of three external forecasting analysts. For reasons of commercial sensitivity the assumed iron ore price and exchange rates are not disclosed. • The mining method is conventional drill and blast and load and haul with an excavator and large open pit mining equipment. This is considered to be appropriate for the style of mineralisation and is applied to similar operations in the Pilbara. • The geotechnical parameters are based on a geotechnical study undertaken as part of the Pre-Feasibility study, which recommended 10m batter heights, 5m berm widths and 55^0 to 60^0 batter angles. • The pit design process utilised the same parameters except that batter heights were reduced to 9m to match blast bench heights. A 10% gradient and 28m width (including safety windrow) is used in pit ramps. • A 30m minimum mining width is applied on all benches except goodbye cuts.

	• Allowance for dilution and ore loss has been applied using block model regularisation. Block model regularisation has been determined to approximate the findings of a 1.8m dilution skin analysis. • Inferred Mineral Resource is treated as waste in the pit optimisation and reserves process. • The major infrastructure required for the McPhee Creek project consists of: - Haul road to deliver product to hub located south of Corruna Downs - Rails spur to connect hub to third party rail to export facilities at Port Hedland - Port infrastructure - Main site access road, pit access ramps, ROM Pad and crusher area, processing plant, stockpile areas, product stockpiling and load out yard, waste dumps, tailing storage facility, mine operations centre, contractors laydown yards, explosives storage and camp.
Metallurgical factors or assumptions	• Metallurgical information is based on a data set including 4146m of PQ drill core from the Main Range deposit. The metallurgical drilling coverage is sufficient for the project at Pre-Feasibility Study level. • Channel Iron material from the Crescent Moon deposit has not had any metallurgical assessment to date. Similar deposits are mined in the region without special processing requirements. Atlas' experience with Channel Iron material at Pardoo is consistent with this. • Analysis and process design of the project was completed by Atlas Metallurgical and Process Engineers and external engineering vendors. The metallurgical interpretation and design supports a reasonable project proposal. • The current project processing route is a dry three stage crush and wet screen followed by desliming through cyclones, to produce a -9mm - +20µm product. This type of technology is well known and has precedence in current Pilbara iron ore operations. • Modifying factors are applied at Reserve level, and the project strategy produces a single product after upgrade through desliming. • A product mass yield is applied to the plant feed and is based on metallurgical test work and analysis. • Pilot plant studies are planned for the next study phase to confirm flowsheet design and confidence.
Environmental	• Environmental studies and impacts are ongoing, to date flora and vegetation surveys and baseline and targeted fauna surveys have been completed. • Areas for waste dumps and rehabilitation strategies have been developed during the PFS. • A Tails Storage Facility will be constructed to hold the process tails from the deslime facility. The TSF will be a single cell design and will not contain any hazardous material. • Management strategies for Potentially Acid Forming (PAF) material have been contemplated in the PFS. • All environmental approvals are expected to be awarded in line with the PFS schedule.
Infrastructure	• The site is accessed from an unsealed road from Marble Bar, all other infrastructure required for the operation will be constructed as part of the project. Sufficient land area has been allocated within the leases held by the company. • The major infrastructure required for the McPhee Creek project consists of: - A haul road to deliver product to a hub located south of Corruna Downs

	- A Rail spur connecting the hub to third party rail to deliver ore to export facilities at Port Hedland - Port infrastructure - Main site access road, pit access ramps, ROM Pad and crusher area, processing plant, stockpile areas, product stockpiling and load out yard, waste dumps, tailing storage facility, mine operations centre, contractors laydown yards, explosives storage and camp, Air Field, general administration facilities and other service facilities.
Costs	• The projected capital costs for the project have been compiled through estimates developed by external consultants with considerable relevant experience. The estimation process includes the design and cost estimation of plant and infrastructure to a PFS standard. • The mining and processing costs are estimated by external consultants and have been benchmarked against other Atlas operations. • The mining cost estimates include provision for recovery of equipment capital costs, all operating costs and contractor margin. • Exchange rate assumptions are based on long term forecasts from independent analysts. • Transport charges are based on contract negotiations assuming road and train combination. • Allowances for royalties are based upon state agreements and contractual agreements with landowners. • Benchmarking against Atlas and other operations has confirmed confidence in the operating and capital cost estimates. Estimates are deemed to be at a PFS level of confidence.
Revenue factors	• Forecast sales prices and exchange rates are based on the average of three external forecasting analysts. For reasons of commercial sensitivity the assumed iron ore price and exchange rates are not disclosed. • In generating the sales price applicable to the Atlas product, the sales price is discounted by: - Fe% grade of the Atlas product - A discount for the quantity of deleterious elements for the normal Atlas product, - Government and other stakeholder royalties, and - Shipping costs
Market assessment	• Established external forecast analysts have provided guidance to assess the long term market and sales of iron ore. • Atlas Iron has sales agreements in place with existing customers to purchase Iron Ore product.
Economic	• The financial modelling indicates that McPhee Creek will produce a positive NPV at the required discount rate of 11% applied to nominal post tax cashflows. • Sensitivity analysis indicates that the projects economics remain secure within typical sensitivity ranges of operating cost, capital cost, iron ore prices and foreign exchange rates.
Social	• McPhee Creek tenements are located entirely within the Njamal Native Title claim area. Atlas has a Deed of Agreement with Njamal Native Title group. • Several surveys for heritage are completed to date covering 80 to 90% of project area, including all the areas critical to major infrastructure and mining. The remainder of the project area will be covered under additional surveys as part of the continuing studies to satisfy the needs of internal and external approvals.

	• McPhee Creek project tenure sits in the area of the Bonney Downs pastoral station. Atlas is currently in negotiations with the pastoralist to enter into a compensation agreement.
Other	• All relevant government agreements and processes are proceeding and no factors are present to suggest approvals will not be forthcoming within the development schedule of the project. • Mining Lease application has been granted • All necessary government approvals are expected to be received within the timeframes anticipated in the PFS. • Discussions pertaining to third-party rail haulage negotiations are progressing.
Classification	• Ore Reserves are based upon material classified as either Measured or Indicated from the Ore Resource estimation modelling. • The Measured and Indicated Mineral Resources within the designed pits have been respectively converted to Proved and Probable Ore Reserves. • The Ore Reserve classification results appropriately reflect the Competent Persons view of the deposits. • No Probable Ore Reserves have been derived from Measured Mineral Resources.
Audits or reviews	• A July 2014 audit by external consultants has found that the procedures used within Atlas to prepare the Ore Reserve estimates are in line with industry standards.
Discussion of relative accuracy/ confidence	• The Ore Reserve estimates have been completed to a minimum of a Pre-Feasibility Study level of confidence. • Bench marking of many mining parameters and costs have been undertaken against 5 years of previous operational data from other Atlas Iron sites. • The accuracy of the estimates will be subject to regular reconciliation and ongoing monitoring.

Reserve and Resource Update

MATERIAL CHANGES TO MATERIAL MINING PROJECTS AND DISCLOSURE FOR THE PURPOSE OF ASX LISTING RULES 5.8 AND 5.9 FOR THE ABYDOS PROJECT

Abydos Ore Reserves Table - as at 30 June 2014										
Location	**COG Fe%**	**Reserve Classification**	**Kt**	**Fe (%)**	**SiO_2 (%)**	**Al_2O_3 (%)**	**P (%)**	**S (%)**	**LOI (%)**	**CaFe* (%)**
Mettams	52.00	Proved								
		Probable	1,400	55.7	7.3	3.0	0.04	0.03	9.5	61.5
Mullaloo	52.00	Proved								
		Probable	1,200	56.8	8.0	1.2	0.05	0.01	9.2	62.5
Trigg	52.00	Proved								
		Probable	4,400	57.7	6.2	1.6	0.06	0.01	9.2	63.6
Scarborough	52.00	Proved								
		Probable	1,000	57.1	5.7	2.3	0.07	0.02	9.8	63.3
Leighton	52.00	Proved								
		Probable	1,200	57.9	5.6	2.0	0.05	0.02	9.1	63.7
Cove	52.00	Proved								
		Probable	1,600	56.7	8.3	2.9	0.03	0.02	7.5	61.2
Contacios	52.00	Proved								
		Probable	300	56.9	6.9	0.5	0.05	0.01	10.2	63.4
Run-of-Mine Ore Stocks		Proved	200	58.1	5.2	1.1	0.07	0.01	9.7	64.3
		Probable								
Final Product Stocks		Proved								
		Probable								
Sub Total		**Proved**	**200**	**58.1**	**5.2**	**1.1**	**0.07**	**0.01**	**9.7**	**64.3**
		Probable	**11,100**	**57.2**	**6.8**	**2.0**	**0.05**	**0.02**	**9.0**	**62.8**
Grand Total			**11,300**	**57.2**	**6.7**	**2.0**	**0.05**	**0.02**	**9.0**	**62.9**

*Calculated calcined Fe grade where CaFe=(Fe%/(100-LOI%))*100

Reserve and Resource Update

Abydos Mineral Resource Table - as at 30 June 2014 (50% Fe Cut-Off Grade)										
Location	**Resource Classification**	**Kt**	**Fe (%)**	**SiO_2 (%)**	**Al_2O_3 (%)**	**P (%)**	**S (%)**	**LOI (%)**	**CaFe* (%)**
Cove	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	1,900	56.7	8.0	2.9	0.03	0.02	7.6	61.4
	Inferred	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
Contacios	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	1,000	57.1	7.0	0.5	0.05	0.01	10.1	63.5
	Inferred	1,000	56.4	7.2	0.7	0.06	0.01	10.1	62.8
Leighton	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	1,500	58.0	5.3	2.1	0.05	0.02	9.1	63.8
	Inferred	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
Mettams	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	1,800	55.5	7.4	3.1	0.04	0.03	9.5	61.3
	Inferred	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
Mullaloo	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	2,700	57.3	7.2	1.1	0.06	0.01	9.4	63.2
	Inferred	1,000	56.8	8.4	1.0	0.05	0.01	9.2	62.5
Sandtrax	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	1,000	56.2	6.7	2.3	0.03	0.02	10.1	62.5
Scarborough	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	2,900	57.0	6.6	1.6	0.06	0.01	9.8	63.2
	Inferred	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
Trigg	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	5,300	57.8	6.1	1.5	0.06	0.01	9.2	63.7
	Inferred	1,000	57.7	7.7	0.6	0.04	0.01	9.0	63.4
Avalon Point	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	1,000	55.7	7.8	2.8	0.11	0.03	8.6	60.9
Sub-Total	**Measured**	**0**	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**	**0.0**	**0.0**
	Indicated	**17,100**	**57.2**	**6.7**	**1.8**	**0.05**	**0.02**	**9.2**	**63.0**
	Inferred	**5,000**	**56.5**	**7.6**	**1.5**	**0.06**	**0.02**	**9.4**	**62.4**
Total		**22,100**	**57.1**	**6.9**	**1.7**	**0.05**	**0.02**	**9.3**	**62.9**

Tonnes are rounded according to resource classification; grades are carried through unaffected by rounding and may result in small discrepancies.

*Calculated calcined Fe grade where CaFe=(Fe%/(100-LOI%))*100

Abydos JORC 2012 Compliance Statement for Mineral Resources

Geology and Geological Interpretation

Atlas's Abydos DSO Project (tenement M45/1179 and E45/2308) is located approximately 110km southeast of the town of Port Hedland within the western part of the East Pilbara Granite-Greenstone Terrane of Western Australia. Access is provided by the Great Northern Highway which runs North-south through the western margin of the project and by the Port Hedland Wittenoom road. The Abydos haul road and mine access tracks run east from the mine site to intersect the Marble Bar Road. The Abydos Project has nine deposits in total, Avalon Point, Contacios, Cove, Leightons, Mettams, Mullaloo, Sandtrax, Scarborough and Trigg.

The Archaean Pilbara Supergroup contains 5 stratigraphic groups of which the Abydos Project Area comprises three: the Warrawoona Group, the Gorge Creek Group and the De Grey Group. The mafic Warrawoona Group forms the basement unit at Abydos and consists of a thick sequence of submarine basalts intruded by co-magmatic dolerite and gabbro. This is unconformably overlain by the Gorge Creek Group which contains Corboy Formation sediments and Cleaverville Formation BIFs, cherts and quartzites. The final group in the sequence is the De Grey Group which contains the Lallah Rookh Sandstone. This thick sequence of coarse sandstone, grit and conglomerate unconformably overlies the Cleaverville Formation. The iron mineralisation which is of economic interest is contained within the enriched BIFs of the Cleaverville Formation.

The formations are grouped together at Abydos into a large, north-east striking greenstone belt which has undergone low temperature and pressure metamorphism to an upper limit of greenschist facies. It forms a wedge-shaped topographic ridge, known as the Lallah Rookh Trend, along which most of the Abydos deposits are located. The thickest part of the wedge is located in the south-west and becomes attenuated to the north-east. The thickening has been attributed to possible isoclinal parasitic folding in the south-west. The attenuation in the north-east is thought to be due to erosion at the unconformity with the Lallah Rookh sediments. Strain and faulting also increases towards the north-east. The belt extends southeast toward Wodgina where it widens out and hosts the Wodgina pegmatites.

The greenstone belt has been compressed between the surrounding granite batholiths to the north and south. This has tilted and overturned the units against the younger Lalla Rookh Sandstone to form a high east-northeast trending ridge. The sediments are relatively competent therefore brittle deformation predominates over ductile deformation. They can be viewed as large 'boudins' set in the more ductile volcanics and granitoids that surround them (Russell, 2012). Structural features are highly complex: there are a number of minor faults and folds at various orientations. These are attributed by Russell, 2012 to the north-south compression from the granite batholiths in combination with north east trending left-lateral wrenching.

The Contacios, Leightons, Mullaloo, Sandtrax, Scarborough and Trigg deposits are located within the Lallah Rookh Trend, which comprises a sequence of banded iron formation (BIF) within the Paddy Market Formation of the George Creek Group. The sequence of BIF within the Paddy Market Formation lies stratigraphically above pebble conglomerates and feldspathic arenites of the George Creek Group, which in turn lie above a thick southerly dippling sequence of high magnesium basalts (Euro Basalt). The Paddy Market Formation (regionally correlated with the Nimingarra & Cleaverville Iron Formation) is unconformably overlain by pebble to boulder conglomerates of the Lallah Rookh Sandstone (De Grey Group. The greenstone terranes are characterised by strike ridges of resistant rock separated by valleys underlain by less resistant units. Surrounding granitic rocks are more deeply eroded and the regions are generally characterized by low hills separated by colluvial and, alluvial sandplain.

Iron mineralisation at the Contacios, Leightons, Mullaloo, Sandtrax, Scarborough and Trigg deposits are hosted within steeply dipping BIFs. Mineralisation close to the surface are characterised by vuggy textures and vitreous goethite which characterise hydrated mineralisation. Beneath the hydrated mineralisation lies primary mineralisation which is predominantly goethite rich with lesser quantities of hematite.

Mineralisation is stratigraphically bound and typically steeply dipping at most of the deposits apart from Mettams, Leightons and Cove which are generally flat lying. Mineralisation has a strike length of between 800m to 1,200m with widths varying between 20m up to a maximum of 140m. Mineralisation occurs at surface in all deposits and extends down to variable depths with the maximum depth of 170m defined at Trigg and Scarborough.

Sampling and Sub-sampling

All available drilling was sampled. The RC sampling methodology prior to January 2011, involved collection of samples drilled over 2m intervals using a cone splitter. Samples were directed into a calico bag with the overflow collected into green plastic bags. The calico bags were pre-numbered, with every 25th and 75th sample a field duplicate. The duplicate sample is collected in real time splitting the two sub samples from the cone splitters. Standards were inserted every 40th and 80th sample.

After January 2011, 2m sample intervals were collected using a cone splitter. Samples were directed into a calico bag with the overflow collected into green plastic bags. The calico bags were pre-numbered, with every sample number ending in 00, 20, 40, 60, 80, collected as a field duplicate. The duplicate sample was collected in real time by splitting the two sub samples from the cone splitter. Standards were inserted every 1st, 21st, 41st, 61st and 81st sample.

The samples were all kept dry (where possible) and are of acceptable quality. Sample weights are also recorded to monitor the ongoing representativeness of the sample split.
The sampling of diamond drill core involved sampling at 1m intervals using the whole core. Core sample preparation involved drying, crushing, splitting (riffle), and pulverising to produce a pulped product with the minimum standard of 90% passing 75 micron.

Drilling Techniques

Exploration and Resource Development drilling over the various Abydos prospects occurred between 2007 and 2014. To date a total of 1,812 drillholes have been completed at the Abydos project totalling 117,792.5m of drilling (1,749 RC holes for 112,690m and 63 DDH for 5,102.5m).

Reverse Circulation drilling employing a 140mm diameter face sampling hammer is used to collect samples for assay. PQ3 diameter diamond drillcore is used to collect cored samples for density analysis, twinned drillhole analysis against RC drilling and metallurgical and geotechnical test work.

The geologist sieves and logs every 2m interval in alignment with the sampling interval. Logging encompasses the main material types, hardness, lithology, colour and percentage of chips (approximate lump/fine proportion). The logging is recorded in the field electronically into acQuire field logging data entry objects and on completion the electronic files are sent to Perth and loaded into the centralised acQuire drillhole database which is managed by a full time Database Administrator.

Drill spacing for the various deposits is as follows:

- Contacios, Leightons, Scarborough and Mettams deposits all contains drilling down to 20mE x 20mN.
- Mullaloo - nominal drill spacing of 20mE x 20mN with local areas of 40mE x 20mN.
- Sandtrax - nominal drill spacing of 40mE x 20mN.
- Trigg - nominal drill spacing of 20mE x 20mN with local areas of 20mE x 10mN.
- Avalon Point - nominal drill spacing of 20mE x 40mN.
- Cove - nominal drill spacing of 20mE x 20mN and local areas of 40mN x 80mE.

Licenced surveyor MHR Surveyors completes a collar pickup on all available drill collars using a Trimble R8 Real Time Kinematic Differential GPS (DGPS). The DGPS gives an accuracy of +/- 0.05 m for Easting and northing location and +/- 0.1 m for the RL (height above sea level).

All available RC and DDH holes are gyroscopically surveyed downhole by ABIMS Pty Ltd utilising a north seeking multi-shot gyroscopic tool which measures azimuth to an accuracy of +/- 0.2° and dip to an accuracy of +/-0.1°. Downhole geophysical measurements are also collected at the same time and comprise Density/Calliper, Magsus, Resistivity and Natural Gamma recordings taken at 10cm intervals downhole. Not all holes were able to be surveyed completely due to blockages in the hole.

Resource Classification

Mineral Resources have been classified into the Indicated and Inferred categories based on drillhole spacing, nature and quality of the drilling and sampling methods, geological understanding and confidence, grade continuity, QAQC analysis, a review of the drillhole database and sampling and logging protocols, confidence in the estimate of the mineralised volume, results of the model validation and results of metallurgical test work.

Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. The results of the validation of the block model show good correlation of the input data to the estimated grades.

The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit. Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. The statement relates to global estimates of tonnes and grade.

Material has been classified as Indicated where the drilling density was at least 20m x 20m (or less), mineralisation showed good continuity and was within the primary mineralised zone, was above the water table and was not geologically complex.

Material has been classified as Inferred where drill spacing is greater than 20m x 20m, lacks continuity or is poddy (only continuous over one drill section), is within the near surface variable hydrated zone, is below the water table or was considered geologically complex.

Sample Analysis Methods

Samples were sent to ALS, SGS and Ultratrace commercial laboratories in Perth for analysis of the extended iron ore suite of elements. This consists of XRF analysis for Fe, SiO_2, Al_2O_3, P, CaO, K_2O, MgO, MnO, S, TiO_2, Na_2O and a thermo gravimetric measurement for loss on ignition (LOI) at 1000^oC.

Samples are dried at 105^oC in gas fired ovens for 18-24 hours, samples are then crushed to a nominal -3mm size, pulverised in a LM2 mill until 90% passing 75micron is achieved. A 66 gram pulp sub-sample is collected that is fused at 1100^oC for 10 minutes and poured into a platinum crucible prior to analysis by XRF.

To ensure quality assurance and control (QAQC) of the sampling and assaying procedure, Atlas submitted field duplicates and standards to the laboratory for analysis. For samples collected prior to January 2011, the duplicates and standards are inserted at predefined intervals at a rate of 2% for standards and 2% for duplicates for an overall insertion rate of 4%. Post January 2011, the duplicates and standards are inserted at predefined intervals at a rate of 5% for standards and 5% for duplicates for an overall insertion rate of 10%. The laboratory also inserted its own internal standards and pulp repeat analyses at predefined intervals. Sample collection procedures and QAQC protocols employed by Atlas are commensurate with standard industry practices.

The QAQC data for the Abydos project was reviewed prior to commencing each resource estimate for Abydos and were found to be of reasonable precision and analytical accuracy and the data is deemed to be acceptable for resource estimation purposes and JORC compliancy.

Estimation Methodology

The drillhole data was composited prior to running the estimation process using a 2m sample interval to minimise any sample bias due to sample length. The compositing was run within the attribute fields to ensure no composite intervals crossed any lithological contacts or grade boundaries.

Variograms were generated to assess the grade continuity of the various elements and as inputs to the kriging algorithm used to interpolate grades. Snowden Supervisor software was used to generate and model variograms and conduct statistical analysis.

The Abydos geological model was generated from regional geological mapping, geochemistry, geophysics and logging data. A stratigraphic model of the lithology and structure was first constructed to provide a geological framework in which to interpret the mineralisation. The mineralisation was interpreted into an upper zone of depletion and underlying hydrated and primary mineralised zones. Small, discrete discontinuous pods of mineralisation were modelled separately as were small zones of internal waste.

The stratigraphic model comprises a sequence of banded iron formation, cherts and shales, whereas the mineralisation model comprises of depleted, hydrated and primary mineralisation zones. The mineralisation zones are modelled generally using greater than 50% Fe and less than 15% SiO_2 cut-off to define ore from waste. The combination of both stratigraphic model and mineralisation models are used for geozone definitions.

Block models were constructed in Vulcan software (Maptek) and constrained by surfaces and solids. The parent block size was selected based on half of drillhole spacing and the model was orientated (rotated) to represent the strike of mineralisation and prevailing drilling grid. The sub-block size was selected to more accurately define the mineralised volume.

- The volume block model was created using the wireframes of the stratigraphy, mineralisation and topography. A unique geozone code was assigned based on the combination of stratigraphy and mineralisation. The geozone field is used to distinguish the main mineralisation types and mineralised areas. A topographic surface of the local topography created from flown aerial survey data captured in 2008 at a 1m contour resolution.

Atlas estimated Fe, SiO_2, Al_2O_3, P, LOI, CaO, K_2O, MgO, MnO, S, TiO_2 and Na_2O grades using Ordinary Kriging for the mineralised horizons. Waste horizons were estimated by Inverse Distance (power 2) methods.

The preferred estimation parameters were chosen based on neighbourhood analysis, whereby several estimation parameters were tested to optimise the estimation search. This was represented by best kriging efficiency, slope of regression values and number of blocks filled. Search ellipses were orientated based on the geometry of the mineralisation with the search ellipses increased by two fold and three fold for second and third search passes. Unfolding was not used for the Abydos resource estimations as the deposits are relatively planar.

Geophysical density measurements have been recorded downhole from the majority of drillholes. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. Geophysical density is recorded at 10cm increments downhole. The density measurements are filtered and validated prior to use to remove anomalous recordings.

The in-situ density (inclusive of moisture and porosity) was estimated into the models using geophysical density measurements collected at 10cm intervals downhole. All available drillholes had geophysical measurements collected and a sufficiently good spatial coverage of data across all of the deposits was achieved. Following compositing of the data, variograms were modelled and geophysical density was estimated into the model utilising ordinary kriging techniques.

To correct the in-situ density estimate to a dry bulk density, the geophysical density measurements are correlated to dry dimensional core density measurements and a suitable regression factor is determined. The regression factor is applied to the geophysical density estimate to derive the dry bulk density value which will account for moisture and porosity. On average a 14% reduction was applied to the geophysical density estimates to derive the dry bulk density for the Abydos resources. The dry bulk density values for Abydos resources range from an average of 2.6 to 2.9 t/m^3 which is felt to be a reasonably conservative estimate. Initial mining reconciliation for the Trigg deposit has shown this value to be reasonably accurate. All tonnages reported Abydos resources are on a 'dry' basis.

The estimates were validated using:

- A visual comparison of block grade estimates and the drillhole data.
- A global comparison of the average composite grades and estimated grades.
- Moving window averages comparing the mean block grades to the composites.
- Histogram comparison of the original composite grades and the block estimated grades.
- Assessment of correlation coefficients from the input sample data and estimated block grades.
- Total assay validation check to ensure closure (sum of elements in each block adds to 100% +/- 2%).
- Global change of support to assess the level of misclassification inherent in the estimate.

The conclusions from the model validation work include:

- Visual comparison of the model grades and the corresponding drillhole grades shows a good correlation.
- A comparison of the global drillhole mean grades and with the mean grades of the block model estimate (for each domain) shows that the block model mean grades are typically within 5-10% of the drilhole means which is a good outcome with the exception of poorly sampled regions.
- The trend plot grades show a good correlation between the block model grades compared with the drillhole grades.
- Total assay validation showed that the blocks maintained closure generally between 98% and 102% for all mineralised domains.
- Assessment of the histograms and correlation coefficients showed that the relationship between elements within the input sample data has been maintained in the block grades estimates and the grade distribution has been maintained in the estimate with an acceptable level of smoothing.

Cut-Off Grade

The criteria for defining mineralised material at Abydos is >50% Fe and <15% SiO2, which appears to be a natural grade boundary. These cut-off grades were used to separate mineralised material from waste. Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the proposed open pit mining method and proposed processing methodology to consistently produce material suitable to meet Atlas product specification. This cut-off grade methodology is used consistently for reporting of all Mineral Resources at Abydos. The tabulated resources are reported using a 50% Fe cut-off grade on a block by block basis.

Mining and Metallurgical methods and parameters and other modifying factors

The Abydos Project utilises a traditional open pit mining methodology with selective extraction of ore material using a backhoe configured excavator. This allows a selective ore mining approach comprising 5m benches which are mined in two flitches of 2.5m height. The 2.5m flitches are used in order to reduce ore dilution and loss. A simple, low cost crush and screening processing route is utilised to produce a single, fines only product at a specified grade. The Abydos Project has been operational since late 2013 and only has a brief production history, with the initial mining focussed on the Trigg Resource. It is a reasonable assumption that the other Abydos resources will eventually be economically extracted based on their proximal location to existing Atlas projects and infrastructure and also due to their favourable size and grade characteristics which will fit the Atlas product specification.

Abydos JORC 2012 Compliance Statement for Ore Reserves

Material Assumptions for Ore Reserves

The Abydos project has been in operation since July 2013. A Life of Mine Plan for Abydos project is completed in May 2014 to reflect new information from resource block models, updated operating cost and updated price assumptions. The Mineral Resource estimates used for conversion to Ore Reserves are based upon seven stratigraphically domained and ordinary kriged Mineral Resources.

The Abydos Ore Reserve estimate is defined by completing pit optimisation and subsequent pit designs based on detailed geotechnical design parameters and practical mining considerations.

The production rates and operating costs have been applied from awarded contracts and tendered rates.

The iron ore price and exchange rates used in the pit optimisation are derived from the average of three external forecasting analysts. For reasons of commercial sensitivity the assumed iron ore price and exchange rates are not disclosed.

Ore Reserve Classification

Ore Reserves at Abydos are derived from Indicated Resources and surveyed stockpiles. The Mineral Resource estimate reported is inclusive of the Ore Reserves. Inferred Mineral Resource is treated as waste in the pit optimisation and reserves process.

Mining Method

The mining method is conventional drill and blast and load and haul with an excavator and large open pit mining equipment. This is considered to be appropriate for the style of mineralisation and is applied to similar operations in the area.

Based on the geotechnical study recommendations, 10m batter height, 60^0 - 70^0 batter angles and 5m wide berms at 10m intervals have been incorporated in the pit designs. A minimum mining width of 25m is applied on all benches to cater for safe and efficient working.

Allowance for dilution and ore loss has been applied using block model regularisation. Block model regularisation has been determined to approximate the findings of a 1.5m dilution skin analysis.

Ore Processing

Ore is processed by a standard dry crushing and screening process which is achieving nameplate throughputs and recoveries in the current operation.

100% process recovery is assumed for all materials as is the case for all other Atlas operations using dry crush and screen process. Within the life of mine schedule for Abydos, the element grades are forecast to stay within the contracted specifications.

The crushing plant is designed to crush ore at a rate of 3.0 million tonnes per annum.

Cut-off Grade

A cut-off grade of 52.0% Fe is applied in the models to achieve a product grade of 57% Fe.

Estimation Methodology

The estimation methodology is described in the Mineral Resources section above.

Material Modifying Factors

Abydos has been an operating mine since July 2013. Inputs for the Ore Reserve estimate are consistent with current operating practices and experience.

The infrastructure required for the mining and processing of the Ore Reserve is in place and operating.

Existing onsite infrastructure including accommodation village, mine operations center, main site access road, pit access ramps, ROM pad and crusher area, stockpile areas, product stockpiling and load out yard, waste dumps, weighbridge area, contractors laydown yard, power station, workshops and explosives storage support the current operation.

A private 59km haul road links the project to the Port Hedland-Marble Bar road for ore haulage to Port Hedland. The production rates and operating costs have been applied from awarded contracts and tendered rates.

Operating costs include allowances for mining, processing, administration, haulage to the port and shipping. Of these, the mining, processing and haulage costs are supplied by competitively tendered contracts and port and shipping costs are developed from existing contracts.

Mining approvals, Native Vegetation Clearing Permit and License to operate have been granted for Abydos Stage1 (Trigg and Mullaloo pits along with other infrastructure).

The necessary applications under Mining Act 1978, Environment Protection and Biodiversity Conservation Act 1999 and the Environmental Protection Act 1986 for Abydos Stage2 (Mettams, Scarborough and Leighton pits along with respective waste dumps) are approved. Further approvals process for mining Cove and Contacios deposits will commence shortly in 2014.

Agreements with all key stakeholders are in place and active.

The financial model indicates that Abydos will produce a positive NPV at the required discount rate of 11.0% applied to nominal post tax cashflows based on a range of assumed long term iron ore prices and exchange rates and capital and operating cost assumptions.

Abydos Project JORC 2012 Table 1 Assessment Criteria

CONTACIOS RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA CONTACIOS MINERAL RESOURCE ESTIMATE – APRIL 2014	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Reverse circulation drilling (RC) to obtain 2.0m sample intervals using a cone splitter. • No samples were taken directly from the splitter return spoil. • Samples collected into pre-numbered calico sample bags for identification prior to laboratory submission. • One 3.5kg (average) sample taken for each two meter sample length and collected in pre-numbered calico sample bags. • Duplicate samples taken at a set frequency of one every twenty samples (5% of total samples) from the cone splitter to monitor sampling representivity. • Samples collected under Atlas Iron protocols and QA/QC procedures according to industry best practice. • Geophysical gamma density measurements collected downhole by ABIMS geophysical contractor using a Geovista Dual Density logging tool (Caesium source, density range 1-4.5g/cc) to ascertain approximate in-situ density values. Tool is regularly calibrated every 2 weeks using a range of known media and a calibration hole.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer bit. • No diamond cored samples were retrieved from the deposit through the use of diamond drilling.
Drill sample recovery	• To ensure maximum sample recovery, prevent sample bias and ensure the representivity of the samples, an Atlas field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery or sources of sample bias or hygiene issues were identified. • Sample recovery, sample condition and moisture content (injected - related to drilling or in-situ - natural) are recorded at the drill site during active drilling by an Atlas Iron geologist to capture accurate and timely information. • At Contacios 4,075 samples were reports as good (98%), 40 fair (1%) and 42 poor (1%). The vast majority (>97%) of samples were reported dry or wet due to the addition of drilling fluids injected into the drillhole. • Poor sample return due to sub-surface voids or cavities is recorded by the field geologist. Sample weights are recorded at the laboratory prior to analysis and very lean samples (< 100g) are excluded from the estimate. No samples were excluded from the Contacios estimate on the basis of sample weight alone. • Atlas is satisfied that the RC holes have taken a sufficiently representative sample of the mineralisation and minimal loss of fines has occurred in the RC drilling resulting in minimal sample bias. • No relationship between sample recovery and grade has been demonstrated.
Logging	• Logging of every 2m interval corresponding with 2m sampled interval. • The entire lengths of RC holes were logged on a 2m interval basis, 100% of the drilling was logged. Where no sample was returned due to voids/cavities it is

	recorded as such. • All holes are logged quantitatively in their entirety for colour, hardness, lithology and material type and quantitatively for chip content (%). • Logging of drillhole samples was done at sufficient detail to meet requirements of resource estimation and mining studies. • Geophysical logging included drillhole diameter (calliper), natural gamma, gamma density, magnetic susceptibility & resistivity. • Downhole geophysical measurements were not recovered from holes drilled in the initial exploration program in 2008. • Hole bridging or collapse at the collar prevented obtaining measurements from seven (of 86) drillholes completed after 2008.
Sub-sample techniques and sample preparation	**Sub-sampling technique:** • Sample size reduced to approximately 3.5Kg using a cone splitter mounted to the side of the drill rig (93% of all samples) or riffle splitter (7% of all samples). • Under correct field conditions cone and riffle splitting methods are considered appropriate and fit for purpose with minimal sample bias. • Duplicate samples are taken at regular intervals (one duplicated sample per 20 drill samples) to check for sample bias. • Sample amount (~3.5Kg) is considered appropriate for the distribution of grain sizes produced by RC drilling. **Laboratory Sample preparation:** • Samples are dried at 105OC in gas fired ovens for 18-24 hour. • Samples are then crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. • Sub-samples are collected to produce a 0.66g sample that is dried further, fused at 1100OC for 10 minutes poured into a platinum crucible prior to analysis by XRF and total LOI by Thermo Gravimetric analysis. • Sample weight/split analysis shows that on average at least 10% split ratio is being achieved consistently through the cone splitter primary and duplicate sampling ports. • Duplicate sample analysis show the data has acceptable precision, indicating that the sampling technique is appropriate for the deposit • The sample sizes were considered to be appropriate to correctly represent the mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent values assay ranges for the primary elements.
Quality of assay data and laboratory tests	• All samples submitted to Ultratrace and SGS Laboratory in Perth and assayed for the extended iron ore suite (24 elements) by XRF and a total LOI by thermogravimetric technique. The method used is designed to measure the total amount of each element in the sample. • Samples were subjected to routine particle sizing analysis by the lab to ensure the pulverizing stage is achieving appropriate particle size for XRF analysis showed acceptable results. This analysis shows that 95% of samples tested returned greater than the 90% passing 75 micron requirement. • Laboratory procedures are in line with industry standards and are appropriate for iron ore analysis. • Samples are dried at 105oC in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using an LM2 mill. • Sub-samples are collected to produce a 66 gram sample that is dried further, fused at 1100oC for 10 minutes, poured into a platinum mould and placed in

	the XRF machine for analysis and reporting. • A total LOI is measured by Thermogravimetric methods (TGA) at 1000oC. • Atlas inserts commercially available certified reference material (standards) at a set frequency of 1:20 (5% of total samples) within its sample batches. A number of different standards at a range of grades are used to monitor analytical precision of the assay results. • Blanks are not used by Atlas due to the nature of the analysis being a complete multi-element suite. • Acceptable levels of precision have been achieved with all standard assays reporting within 2 standard deviations of the certified mean grade for the 12 main elements of interest. • The lab also inserts its own standards at set frequencies and monitors the precision of the XRF analysis. These results also reported well within the specified 2 standard deviations of the mean grades for all 12 main elements of interest. • XRF calibrations are checked once per shift using calibration beads made using exact weights. • The Laboratory performs repeat analyses of sample pulps at a rate of 1:20 (5% of all samples) these compare very closely with the original analysis for all elements. • Analysis of field duplicate and lab pulp duplicates and repeats reveals that greater than 90% of pairs have less than 10% difference and the precisions of samples is within acceptable limits and concurs with industry recommended practices.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. RC chips have been inspected in the field to verify the correlation of mineralised zones with assay results. The Competent Person for this report has visited site and inspected all sampling processes in the field and also inspected the laboratory on a regular basis. • Geological logs are entered digitally in the field into acQuire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. • All data is sent to Perth and stored in the secure, centralised AcQuire SQL database which is managed by a full time database administrator. • Results of known Reference Materials showed that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples show greater than 90% of pairs have less than 10% difference which is considered within acceptable limits and acceptable to current industry best practice. • No duplicated samples from Contacios were submitted to an umpire laboratory for independent verification. • Negative laboratory default values reported for below detection limit results were replaced with a positive number equal to half the analyte detection limit. • No adjustments, corrections or calibrations were made to any assay data used in the estimate apart from replacement of standard default laboratory codes.
Location of data points	• All drillhole collar locations were surveyed by licensed surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. • Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • Downhole gyroscopic surveys were attempted on all RC holes drilled after the

	2008 exploration campaign by ABIMS. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool. Stated accuracy is +/-1o in azimuth and +/-0.1o in inclination. • Data supplied in projection MGA_GDA94 Zone 50. • Drillhole collar locations are checked against either the topographic surface or a surveyed pit surface.
Data spacing and distribution	• Drillholes spaced on a regular grid at approx. 20mE by 20mN spacing. • 4,157 samples assayed at 2m intervals from 86 RC holes representing 8,314m of downhole drillhole depth. • The drillhole spacing and sampling density provides a high level of confidence in the continuity of mineralisation between successive drill traverses sufficient to support the Mineral Resource Classification under the JORC code • Geophysical measurements at 10cm intervals have been composited to a 2.0m interval. Assay data has not been composited.
Orientation of data in relation to geological structure	• RC holes are generally oriented steeply (-60° to -70°) to grid south, some holes have been drilled vertically or to the north due to topographic constraints. • The drillholes have been completed on regularly spaced NS traverses spaced 20m to 40m apart. • The Contacios deposit occupies a narrow elevated and pronounced hardened ridge where the stratigraphy dips very steeply to the north with localised overturning. • No orientation based sampling bias has been identified in the data at this point.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside large sealed bulk carrying bags. Samples are delivered to a dispatch point in Port Hedland by Atlas Iron staff. • Chain of custody is managed by Atlas Iron. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • Sample documentation is checked against the samples received at the lab and the dispatch notes, any issues are reported back to Atlas Iron.
Audits or reviews	• A full audit of the Atlas Iron acQuire drillhole database was completed in January 2014 by independent database management company (Roredata Pty Ltd). • The Atlas Iron acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data quality and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Contacios is located wholly within exploration lease M45/1179. This tenement is 100% Atlas Iron owned. • The tenement sits within the Njamal Native Title Claim (WC1999/088). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• Previous exploration record from the 1960's onwards from a range of companies searching for ultramafic hosted Ni/Cu deposits, Au in shear zones, base metals in VHMS deposits and U in roll front mineralisation copper. E.g. (Sipa Resources 1995 – 1996 and 2000 – 2001)
Geology	• Sequence of heavily weathered Archaean sediments including Banded Iron Formation (BIF) and metamorphosed internal sediments such as shale, chert, quartzite and siltstone.

	• Localised in-situ bedded goethite and hematite enrichment zones with a silicious and chemically variable hard cap developed at surface over primary mineralisation at depth. • Stratigraphy dips very steeply to the north with strong mineralisation localised into discrete, thin and tabular zones extending to depths over 100m.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration	• Surface enrichment mapping and surface structural measurements provided by consultant mapping personnel (2009).
Further work	• Comparison of resource tonnages and grades to actual mines tonnages and mill grades once mining commences (reconciliation work).
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Lithology logging codes are standardised across Atlas Iron. The logs are entered digitally in the field into acQuire logging software on a Toughbook computer via Atlas templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas Iron acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy ‘Roredata’ using acquire software. • Data is stored in the centralised Atlas Iron acQuire drillhole database.
Site visits	• The Competent Person for this report has visited the Contacios drill site in 2013, conducted field geological mapping of the deposit and advised Atlas field geologist on some minor technical issues.
Geological interpretation	• Geological sections were produced on A3 plots at regular easting’s spaced 20m part to assist in producing a valid geological interpretation. • Geological interpretation is based on geophysical natural gamma data, local geological surface mapping, drillhole lithological logging, structural measurements from diamond drill holes and the geochemistry of RC assay data. • Wireframes of the stratigraphic units used to generate an empty geological model. • The overlying hydrated mineralisation is chemically variable than primary

	mineralisation at depth and local estimates in this domain are less robust.
Dimensions	• The Contacios Mineral Resource has dimensions of approximately 650m (striking NE-SW) by 80m (across strike) and extends from surface to a maximum depth of 210m, with an average depth of 100m.
Estimation and modelling techniques	• The block model has been assigned unique mineralisation codes that correspond with the style of mineralisation defined by wireframes created in Vulcan software (1 = waste, 5 = hydrated, 2 = primary mineralisation). • The block model has also been assigned a stratigraphic code based on the stratigraphic interpretation. • For the purpose of creating a stationary estimation domain, the mineralisation was further constrained according to the stratigraphic interpretation (geological zone) by assigning a unique domain code called Geozone. • Raw statistical analysis prior to estimation ensures each Geozone consists of a stationary data set prior to estimation to ensure a robust estimate is performed. • Univariate statistical analysis and variogram modelling has been completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging neighborhood analysis (QKNA) undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • The empty block model extends from 721,130mE to 721,530mE and 7,661,840mN to 7,662,280mN and elevation from 0mRL to 400mRL. • The resource was constructed using a 10mN by 10mE by 2.5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain volume resolution. The parent block size is equal to half the drill spacing to ensure the mineralisation is well represented by the blocks. • The Atlas Iron block model schema has been used with a standard list of variables consistent across all Atlas resource models. • Ordinary Kriging was used to estimate the standard Atlas Iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO and K_2O) estimated plus chop content (%) and geophysical density. • Search directions and ranges were determined from variogram modelling in Supervisor software to constrain the block interpolation. • Neighbourhood search parameters were optimised with important geostatistical parameters (such as Kriging efficiency and slope of regression) to estimate as many of the blocks as possible while minimising conditional bias. • Three search estimation runs are used with progressively less stringent neighbourhood search criteria in each run to ensure a high quality local estimate while estimating as many of the blocks as possible in each Geozone. Generally the majority of blocks are estimated in run 1. • Search radius distances are (50 × 20 × 10m); (70 × 30 × 15m); (90 × 40 × 20m) in Run1, Run2 and Run3 respectively. • A minimum of 12, 10 and 8 samples (maximum of 24) in Run1, Run2 and Run3 respectively. • A maximum of four samples from a single drillhole is permitted. • Block discretisation of 5 × 5 × 2 was applied. • Sub block grades are estimated. • Mineral Resource estimation does not account for any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • Waste and hydrated material was estimated with Inverse Distance Squared (power 2).

	• Standard model validation has been completed using visual and numerical (geostatistical) methods and by a formal peer review process conducted by internal Atlas Iron staff. • Some internal dilution occurs where small intervals (< 6.0m) of internal waste could not be separated into a separate waste Geozone domain. • Block model validation methods used included: • visual checks comparing composited data (raw drill data) to the estimated (block data); • a global statistical comparison for each domain; • the generation of easting, northing and RL swath plots to compare composited to estimated grades along slices through the deposit; • change of support analysis to investigate the degree of smoothing and conditional bias
Moisture	• Geophysical density is estimated on a wet basis (in-situ) however a correction is applied to convert the geophysical density to an equivalent dry bulk density. • The depth to the water table has been determined from the resistivity data • Approximately 17% of the resource sits below the water table at approximately 190mRL. This material is generally associated with deeper drilling has been classified as Inferred due to limited neighbouring assay data. • All tonnages have been estimated as dry tonnages.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary. These cut-off grades were used to separate mineralised material from waste. • Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the open pit mining method and proposed processing methodology to consistently produce material at or above product specification. • Based on the current Atlas shipped product grade specification, a 50% Fe lower cut-off grade is deemed a suitable cut-off to report resources for Abydos. • The tabulated resources were reported using a 50% Fe cut-off grade applied on a block by block basis.
Mining factors or assumptions	• Open cut mining using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• No other metallurgical assumptions have been incorporated into the resource. • No other processing or beneficiation is assumed to occur after pit extraction.
Environmental factors or assumptions	• A risk factor has been applied to blocks showing elevated sulphur values. • The net acid producing potential of these zones has not been determined to date. • Detailed waste characterization studies have not been undertaken
Bulk density	• Geophysical density measurements have been recorded downhole from the majority of drillholes. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. • Geophysical density is recorded at 10cm increments downhole, which is stored in the acquire drillhole database. • Density measurements are validated to remove anomalous recordings and default instrument null readings. • Geophysical density measures the in-situ density inclusive of moisture and porosity. Filtered and cleaned geophysical density was composited to 2m length and then estimated into the model in a similar fashion to grades.

	• Un-estimated blocks (that did not meet the minimum criteria for an estimate to be made) were assigned the mean composited geophysical density value for that domain. • A correction has been applied to convert the wet (in-situ) geophysical density to an equivalent dry bulk density using a regression factor sought from the nearby Scarborough deposit.
Classification	• Mineral Resources have been classified into an Indicated or Inferred category based on drillhole intercept spacing, geological confidence, level of sample support, and estimation quality. • "Satellite" isolated pods of mineralisation discontinuous to the bulk of mineralisation have been classified as Inferred. These generally have insufficient sample support required to for an Indicated classification. • Primary mineralisation with a high level of sample support and high level of estimation quality classified as Indicated. • Near surface, discontinuous zones of hydrated mineralisation given an Inferred classification due to higher geochemical variability and reduced level of confidence in the estimate. • Deeper mineralisation (approximately below the 235mRL) has been given an Inferred classification due to reduced sample support at depth due to fan drilling and selected intercepts at depth. Deeper mineralisation has reduced confidence in the quality of the estimate based on lack of geological confidence and geostatistical parameters.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process at regular intervals and on completion by the Competent Person. • The Atlas database was reviewed in January 2014 and deemed suitable for resource estimation.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • Estimate validation checks of the block model show a good correlation of the input data to the estimated grades. • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit. • The statements relate to global estimates of tonnes and grade. • A change of support analysis was undertaken to assess the sensitivity to the grade-tonnage curve in going from sample to block sized support at a range of cut-off grades. This analysis shows that some misclassification of material around the specified cut-off grades can be expected and is attributed to an expected amount of smoothing incurred by the ordinary kriging process. • The confidence in this resource estimate has been deemed appropriate as a basis for conceptual long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • There has been no production from the Contacios deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource.

SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES – Refer to page 125

COVE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA COVE MINERAL RESOURCE ESTIMATE – JANUARY 2014	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Reverse Circulation (RC) chip samples collected using cone 3745 samples (97.40%) and riffle 32 samples (0.83%) splitting. Direct spear sampling was minor 45 samples (1.17%) and no sample technique reported in 23 cases (0.60%). • One 3-4kg (average) sample taken for each two metre sample length and collected in pre-numbered calico sample bags. • Samples were dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, pre January 2011 (first drilling campaign 17 holes) 2 duplicates ware taken for every 100 samples (1:50). Post January 2011 all other drilling campaign 203 holes) 5 duplicates ware taken for every 100 samples (1:20) • No holes were duplicated for QC analysis. • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 20 by 20m (South West area Indicated resources) and 40mN and 80mE (North East area Inferred resources). • Total of 222 RC holes used for the resource estimate for a total of 7,690m and 3,793 primary samples.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 3,742 Good (97.3%), 68 Fair (1.8%) and 35 Poor (0.9%). • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No twin RC or diamond drillholes have been completed to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling. • Atlas is satisfied that the RC holes have taken a sufficiently representative sample of the mineralisation and minimal loss of fines has occurred in the RC drilling resulting in minimal sample bias. • No relationship between sample recovery and grade has been demonstrated.
Logging	• Logging of every 2m interval corresponding with 2m sampled interval. • The entire lengths of RC holes were logged on a 2m interval basis, 100% of the drilling was logged. Where no sample was returned due to voids/cavities it is recorded as such. • All holes are logged quantitatively in their entirety for colour, hardness, lithology and material type and quantitatively for chip content (%). • Logging of drillhole samples was done at sufficient detail to meet requirements of resource estimation and mining studies.

	• 203 RC drillholes were logged in full; totaling 6,988m of drilling were logged for lithology, mineralisation, chip percent, weathering and colour. • Geophysical data collated from 192 holes of a total of 223 holes (natural gamma, gamma density, magnetic susceptibility, no resistivity collected due to no water level intercepted). Not all holes were open at depth which precluded 100% recovery of measurements from all of the drillholes.
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • 3-4kg RC chip samples are collected via cone splitter (majority), riffle splitter and spear (minority) for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at Cove based on the style of mineralisation (hydrated zone), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** o Sample dried at 105°C for 12-24 hrs o Crushed to nominal -3mm o Pulverised to 90% passing at 75µm **Quality Control Procedures** o **Pre January 2011 (first drilling campaign 17 holes)** o Duplicated sample 2 every 100 samples (1:50). o Certified Reference Material assay standards inserted 2 every 100 samples (1:50). o **Post January 2011(all other drilling campaign 203 holes):** o Duplicated sample: 5 every 100 samples (1:20). o Certified Reference Material assay standards inserted: 5 every 100 samples (1:20). • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab. • Sample weight/split analysis shows that on average at least 10% split ratio is being achieved consistently through the cone splitter primary and duplicate sampling ports. • Duplicate sample analysis show the data has acceptable precision, indicating that the sampling technique is appropriate for the deposit • The sample sizes were considered to be appropriate to correctly represent the mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent values assay ranges for the primary elements.
Quality of assay data and laboratory tests	• Samples were submitted to SGS Laboratory (2746 samples, 71.4%) and Ultratrace Labolatory (1099 samples, 28.6%) in Perth. First drilling campaign (17 drillholes 351 samples, 9%) were assayed for 11 elements by XRF and a total LOI by thermogravimetric technique, Samples submitted from all other campaigns (203 drillholes 3494 samples, 91%) were assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits.

	• Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal - 3mm size by Boyd crusher, then pulverised to 85-90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, then fused at 1100^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, pulp repeats, field duplicates and umpire laboratory analysis are used for quality control. • Umpire laboratory campaigns with another laboratory (Ultratrace-SGS) have been carried out as independent checks of the assay results and these show good precision. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice. • Geophysical gamma density was collected by Geovista Dual Density logging tool (Cesium source, density range 1-4.5g/cc) to ascertain approximate in-situ density values. The density tool is calibrated every 2 weeks using a range of materials with known density and is run down a calibration hole at the commencement of, and regularly during, the collection of data.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. RC chips have been inspected in the field to verify the correlation of mineralised zones with assay results. The Competent Person for this report has visited site and inspected all sampling processes in the field and also inspected the laboratory on a regular basis. • There are no twinned holes drilled for the Abydos Cove resource to date. • Primary data are captured on field Toughbook laptops using acQuire^{tm} software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• 221 from 223 collars were surveyed by licensed surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • Downhole gyroscopic surveys are attempted on all RC holes by ABIMS. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool. Stated accuracy is +/-1^{o} in azimuth and +/-0.1^{o} in inclination. 101 (45.3%) holes had downhole surveys completed, 122 (54.7%) holes were not able to be surveyed due to rehabilitation and collapse. • QC of the gyro tool involved field calibration using a test stand and also a calibration hole. • The grid system for Cove is MGA_GDA94 Zone 50. • The topographic data source was based on AAM Pty Ltd aerial survey in August 2008 for 1m resolution contours. Data supplied in projection MGA_GDA94 Zone 50.

Data spacing and distribution	• Drill spacing on an approximate 20m × 20m grid (southwest part). Additional 19 holes drilled in September 2012 on an approximate 80m × 40m grid (northeast part). This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Indicated (southwest area) and Inferred (northeast area) resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• Stratigraphy trending approximately to 090° (east-west) with majority of drillholes drilled to the south (180°) at -60°. September 2012 drilling oriented approximately to 130° (southeast) with stratigraphy striking closer to NE-SW (045°).
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Cove deposit is located wholly within Mining Lease M45/1179. This tenement is 100% Atlas owned. • The tenement sits within the Njamal Native Title Claim (WC1999/088). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• Previous exploration conducted by Sipa Resources for base metals (Cu, Ni)
Geology	• The Cove deposit occurs in a highly weathered sequence of Archaean sediments predominantly consisting of chert and Banded Iron Formation (BIF) which is locally enriched in goethite-haematite mineralisation at surface. The stratigraphy at Cove is generally flat lying striking approximately to 090° with some gentle to moderate internal folding.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Relationship between mineralisation widths and	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report.

intercept lengths	This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Surface enrichment and structural mapping was completed by Russell (2012). The mapping assisted in defining the major geological contacts and the nature of the stratigraphy. The extents of this mapping did not include northeast areas. • Routine multi-element analysis of potential deleterious or contaminating substances such as Arsenic, Lead, Zinc and Sulphur is completed for all samples.
Further work	• Northeast area (inferred resources) requires an infill program of RC holes to increase confidence in resource • Diamond drillholes to obtain structural, geotechnical, density and metallurgical data. • Ongoing geological mapping, rock chip sampling and follow up exploration RC drilling to the north and west from Cove deposit (south west area).
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• The logs are entered digitally in the field into acQuire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acQuire software. • Data for the Cove Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained. A site visit was carried out in July 2012 to inspect the deposit area, RC logging and sampling processes. Discussions were held with site personnel regarding procedures. A number of minor recommendations were made but no major issues were encountered.
Geological interpretation	• There is sufficient confidence in the geological interpretation of the mineral deposit. • Geological interpretation based on geophysical natural gamma data, local geological surface mapping, drillhole lithological logging and geochemical data. • Wireframes of the stratigraphic units used to generate an empty geological model. • The overlying hardcap, hydrated zone displays higher variability and mixed populations. This will likely influence the local estimates rather than the global grade estimate for this zone.
Dimensions	• The Cove Mineral Resource has dimensions of approximately 230 m (north) by 350 m (east) and hydrated mineralisation extends from surface to a maximum depth of 60m, with an average depth of 15m.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated). Each geological unit is domained and estimated separately using hard boundaries.

	Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half a drill spacing (unless in areas where surface mapping has identified a mineralised/non-mineralised contact in an area without drilling data). • Univariate statistical analysis and variogram modeling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging neighbourhood analysis (QKNA) undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model origin: 716500m (E), 7658800m (N) and 100m (mRL) and extend: 1200m (E), 1000m (N), and 400m (mRL). • A single block model to encompass the Cove Mineral Resource was constructed using a 10mN by 100mE by 5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO and K_2O) estimated plus geophysical density and chip percentage where possible. • Search directions and ranges determined from variogram modeling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacing's for run 1, 3 drill spacing's for run 2, and 5 drill spacing's for run 3. • A minimum of 16 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 14 for run 2 and 12 for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5,5,2 was applied. • Grade restriction was applied to some of the minor deleterious elements in some domains as a restricted search to limit the influence of extreme/outlier grades from smearing distant blocks by using a tighter search ellipsoid. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • Inverse Distance (power 2) estimation was run as a check on the Ordinary Kriged estimate. The estimate produced similar global results between the two methods and reconciled well. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality.

	• Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit and Change of Support.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • No water table encountered. • 87% of samples logged as dry, 12% samples logged as moist injected and less than 1% of samples logged as wet samples.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope. • Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the open pit mining method and proposed processing methodology to consistently produce material at or above product specification. • Based on the current Atlas shipped product grade specification, a 50% Fe lower cut-off grade is deemed a suitable cut-off to report resources for Abydos. • The tabulated resources were reported using a 50% Fe cut-off grade applied on a block by block basis.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No detailed mine planning has been completed as this model represents the maiden Indicated resource. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• Assumed metallurgical characteristics from nearby and geologically similar Mettams deposit • No other metallurgical assumptions have been incorporated into the resource.
Environmental factors or assumptions	• In the northeast area 2 drillholes encountered 2m intervals with elevated sulphide contents above 0.2% S. • No waste geochemistry or physical testing of waste rock has been completed to date, but will form part of a study to be commenced in the near future.
Bulk density	• Geophysical density measurements have been recorded downhole from the majority of drillholes. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. • Geophysical density is recorded at 10cm increments downhole, which is stored in the acQuire drillhole database. • The density measurements are filtered and validated prior to use to remove anomalous recordings. • Geophysical density is estimated into the resource model. Un-estimated blocks (that did not meet the minimum criteria for an estimate to be made) were assigned the mean grade of that domain's composited geophysical density data. • No physical core measurements of dry bulk density have been collected to verify the geophysical results and provide a regression to convert the geophysical density to a dry bulk density however dry bulk density correction has been applied to geophysical density based on dimensional data obtained from nearby Mettams deposit. • Down-hole geophysical density measurements were corrected to a dry bulk density value using a regression value of 14.3% which was sought from the nearby geologically similar Mettams deposit.

	• This is a bulk commodity project.
Classification	• Mineral Resources have been classified into the Indicated (southwest area) and Inferred (northeast area) categories based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade. A change of support analysis was undertaken to assess the sensitivity to the grade-tonnage curve in going from sample to block sized support at a range of cut-off grades. This analysis shows that some misclassification of material around the specified cut-off grades can be expected and is attributed to an expected amount of smoothing incurred by the ordinary kriging process. • The confidence in this resource estimate has been deemed appropriate as a basis for conceptual long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • There has been no production from the Cove deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource.
SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES – Refer to page 125	

LEIGHTONS JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA LEIGHTONS MINERAL RESOURCE ESTIMATE – JULY 2012	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• RC sampling methodology involved the collection of samples drilled over 2m intervals using a cone splitter. • 3.5kg sample (average) was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 2 duplicates are taken for every 100 samples (1:50) for samples collected prior to January 2011. • Post January 2011, duplicates were 5 duplicates were collected for every 100 samples (1:20). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 20mN by 20mE with "scissor drilling" across several profiles resulting in varying spacing between drill holes over different depth. • RC holes (82 holes for 4,946m) – used in estimate. • DDH (6 holes for 439.4m) – suppressed due to no assays.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 90.96% Good, 3.76% Fair, 3.68% Poor, 3.64% Not recorded, 69.48% dry, 0.57% Moist, 0% wet, 24.86% Moist injected, 0.16% Wet injected, 3.64% Not recorded. • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No comparison between twin RC or diamond drillholes was conducted to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling. • Atlas is satisfied that the RC holes have taken a sufficiently representative sample of the mineralisation and minimal loss of fines has occurred in the RC drilling resulting in minimal sample bias. • No relationship between sample recovery and grade has been demonstrated.
Logging	• 2,445 RC samples logged. • Logging of every 2m interval corresponding with 2m sampled interval. • The entire lengths of RC holes were logged on a 2m interval basis, 100% of the drilling was logged. Where no sample was returned due to voids/cavities it is recorded as such. • All holes are logged quantitatively in their entirety for colour, hardness, lithology and material type and quantitatively for chip content (%). • Logging of drillhole samples was done at sufficient detail to meet requirements of resource estimation and mining studies.

	• Geophysical data collected from 38 holes of 88 RC holes (gamma, density, magsus). • Geophysical survey data (gyro) is available for 42 holes.
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • ~3.5kg RC chip samples are collected via cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at Leightons based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** • Sample dried at 105°C for 12-24 hrs • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality Control Procedures** • Duplicated sample (prior to January 2011): 2 every 100 samples (1:50). • Duplicate samples (post January 2011): 5 every 100 samples (1:20). • Certified Reference Material assay standards inserted: o 2 in every 100 samples (1:50) prior to January 2011. o 5 in every 100 samples (1:20) post January 2011. • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab. • Sample weight/split analysis shows that on average at least 10% split ratio is being achieved consistently through the cone splitter primary and duplicate sampling ports. • Duplicate sample analysis show the data has acceptable precision, indicating that the sampling technique is appropriate for the deposit • The sample sizes were considered to be appropriate to correctly represent the mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent values assay ranges for the primary elements.
Quality of assay data and laboratory tests	• All samples submitted to Ultratrace and SGS Laboratory in Perth and assayed for the extended iron ore suite (24 elements) by XRF and a total LOI by thermogravimetric technique. The method used is designed to measure the total amount of each element in the sample. • Samples were subjected to routine particle sizing analysis by the lab to ensure the pulverizing stage is achieving appropriate particle size for XRF analysis showed acceptable results. This analysis shows that 95% of samples tested returned greater than the 90% passing 75 micron requirement. • Laboratory procedures are in line with industry standards and are appropriate for iron ore analysis. • Samples are dried at 105oC in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using an LM2 mill.

	• Sub-samples are collected to produce a 66 gram sample that is dried further, fused at 1100oC for 10 minutes, poured into a platinum mould and placed in the XRF machine for analysis and reporting. • A total LOI is measured by Thermogravimetric methods (TGA) at 1000oC. • Atlas inserts commercially available certified reference material (standards) at a set frequency of 1:20 (5% of total samples) within its sample batches. A number of different standards at a range of grades are used to monitor analytical precision of the assay results. • Blanks are not used by Atlas due to the nature of the analysis being a complete multi-element suite. • Acceptable levels of precision have been achieved with all standard assays reporting within 2 standard deviations of the certified mean grade for the 12 main elements of interest. • The lab also inserts its own standards at set frequencies and monitors the precision of the XRF analysis. These results also reported well within the specified 2 standard deviations of the mean grades for all 12 main elements of interest. • XRF calibrations are checked once per shift using calibration beads made using exact weights. • The Laboratory performs repeat analyses of sample pulps at a rate of 1:20 (5% of all samples) these compare very closely with the original analysis for all elements. • Analysis of field duplicate and lab pulp duplicates and repeats reveals that greater than 90% of pairs have less than 10% difference and the precisions of samples is within acceptable limits and concurs with industry recommended practices. • Atlas sent a selection of pulps to an umpire laboratory (Bureau Veritas, Perth) for verification by an independent laboratory. Comparison of results between laboratories did not reveal any issues and analytical precision was considered acceptable.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. RC chips have been inspected in the field to verify the correlation of mineralised zones with assay results. The Competent Person for this report has visited site and inspected all sampling processes in the field and also inspected the laboratory on a regular basis. • A total of 5 of 5 diamond holes twinned RC holes. • Primary data are captured on field Toughbook laptops using acQuire^{tm} software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• All Collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • Downhole gyroscopic surveys were attempted on all RC and diamond holes. A total of 42 of 88 (RC and DH) holes had downhole gyro survey data. • The grid system for Leightons is MGA_GDA94 Zone 50. • Topographic data was based on AAM Pty Ltd aerial survey completed in August 2008 on a 1m resolution contours. The datum is GDA94 with projection

	MGA Zone 50.
Data spacing and distribution	• Drill spacing on an approximate 20m (N-S) by 20m (E-W) grid. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Indicated resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• The geological interpretation is based on a combination of data from geological mapping and drill hole intersections. • The Leightons resource is interpreted to be a sequence of BIFs and Cherts steeply dipping towards the Northwest. Mineralisation is hosted within a BIF horizon, which is flanked by chert units in both the hanging wall and the footwall (Figure 12.1 and 12.2). Numerous minor parasitic folds are interpreted in the stratigraphy proximal to the mineralisation, and it suggests that the overall structural regime may represent the transition from a fold hinge near the Leightons deposit to steeply dipping fold limbs towards the North. • The majority of drill holes were drilled dipping South (at -60 dip) and as such due to the varying intersection angles, all results are defined as downhole widths.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Leightons is located wholly within Exploration Lease E45/2308. This tenement is 100% Atlas owned. • The tenement sits within the Njamal Native Title Claim (WC1999/008). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• All drilling activity to date has been completed by Atlas.
Geology	• The Leightons Deposit is located within the Lallah Rookh Trend, which comprises a sequence of banded iron formation (BIF) within the Paddy Market Formation lies stratigraphically above pebble conglomerates and feldspathic arenites of the George Creek Group, which in turn lie above a thick southerly dipping sequence of high magnesium basalts (Euro Basalt). The Paddy Market Formation (regionally correlated with the Nimingarra & Cleaverville Iron Formation) is unconformably overlain by pebble to boulder conglomerates of the Lalla Rookh Sandstone (De Grey Group). The physiography consists of two erosional geozones which are strongly controlled by the underlying bedrock. The greenstone terranes are characterized by strike ridges of resistant rock

	separated by valleys underlain by less resistant units. Surrounding granitic rocks are more deeply eroded and the regions are generally characterized by low hills separated by colluvial, alluvial, and eluvial sandplain.
Drillhole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• All exploration activity to date has been completed by Atlas.
Further work	• Further drilling, particularly of hydrated zones, to improve confidence in the hydrated zone estimate.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Geological logging was conducted on a 1m scale (prior to January 2011) and 2m scale (post January 2011), with intervals recorded using the standard Atlas geological log. The log is entered digitally in the field onto a Toughbook computer, and the files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Leightons Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• The geological interpretation is based on a combination of data from geological mapping and drill hole intersections (geochemistry of RC holes). • The Leightons resource is interpreted to be a sequence of BIFs and Cherts steeply dipping towards the Northwest. Mineralisation is hosted within a BIF horizon, which is flanked by chert units in both the hanging wall and the footwall.
Dimensions	• The Leightons Mineral Resource has dimensions of approximately 150m (north) by 250m (east) and extends from surface to a maximum depth of 90m,

	with an average depth of 30m. A thin, 5m thick hydrated layer sits over the top of the entire resource.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half drill spacing. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging Neighbourhood analysis (QKNA) was undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 720500mE to 722100mE and 7660900mN to 7662600mN and elevation from 0mRL to 500mRL. • A single block model to encompass the Leightons Mineral Resource was constructed using a 10mN by 10mE by 5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) and geophysical density into geozone 204 (primary mineralisation) and geozone 504 (hydrated mineralisation). • Inverse Distance was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) and geophysical density into waste geozones (101, 102, 104 and 106). • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Two search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1 and 3 drill spacings for run 2. All blocks were estimated by the end of run 2. • A minimum of 14 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 for run 2. • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5, 5, 2 was applied. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite

	grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • 69.48% dry, 0.57% Moist, 0% wet, 24.86% Moist injected, 0.16% Wet injected, 3.64% not recorded. • The Leightons deposit is located above the water table.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope. • Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the open pit mining method and proposed processing methodology to consistently produce material at or above product specification. • Based on the current Atlas shipped product grade specification, a 50% Fe lower cut-off grade is deemed a suitable cut-off to report resources for Abydos. • The tabulated resources were reported using a 50% Fe cut-off grade applied on a block by block basis.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• Assume similar characteristics as other Abydos deposits. • No other metallurgical assumptions have been incorporated into the resource.
Environmental factors or assumptions	• Significant intersections of sulphur rich material are identified in the chert unit proximal to the base of mineralisation. Consequently, the chert unit is assigned a moderate sulphur risk. Blocks with high estimated sulphur value were assigned as high sulphur risk.
Bulk density	• Downhole geophysical density is sufficient to estimate density into the model. A regression factor of 14.57% was applied post estimation to obtain a dry bulk density. • This is a bulk commodity project.
Classification	• Mineral Resources have been classified as Indicated category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade. The statements relate to global estimates of tonnes and grade. A change of support analysis

	was undertaken to assess the sensitivity to the grade-tonnage curve in going from sample to block sized support at a range of cut-off grades. This analysis shows that some misclassification of material around the specified cut-off grades can be expected and is attributed to an expected amount of smoothing incurred by the ordinary kriging process. • The confidence in this resource estimate has been deemed appropriate as a basis for conceptual long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • There has been no production from the Leightons deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource.
SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES – Refer to page 125	

METTAMS JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA METTAMS MINERAL RESOURCE ESTIMATE – JULY 2012	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• RC sampling methodology prior to January 2011 involved the collection of samples drilled over 2m intervals using a riffle or cone splitter. • Post 2011, RC samples were collected over 2m intervals using only a cone splitter. • 3.5kg sample (average) was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 2 duplicates are taken for every 100 samples (1:50) for samples collected prior to January 2011. • Post January 2011, duplicates were 5 duplicates were collected for every 100 samples (1:20). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 20mN by 20mE. • RC holes (203 holes for 7,351m) – used in estimate. • DDH (12 holes for 522.3m) – suppressed due to no assays.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the riffle/cone splitter. This is recorded as good, fair, poor or no sample. • 3377 Good (91.7%), 111 Fair (3%) and 155 Poor (4.2%), 39 blank/un-recorded (1.1%). • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No comparison between twin RC or diamond drillholes was conducted to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling. • Atlas is satisfied that the RC holes have taken a sufficiently representative sample of the mineralisation and minimal loss of fines has occurred in the RC drilling resulting in minimal sample bias. • No relationship between sample recovery and grade has been demonstrated.
Logging	• Prior to January 2011, geological logging was completed for 1m interval according to Atlas procedure. • Post January 2011, geological logging was completed for 2m interval to coincide with sample interval. • Each 2m sample interval from RC holes is logged and diamond holes are logged in their entirety. • All holes are logged quantitatively in their entirety for colour, hardness, lithology and material type and quantitatively for chip content (%). • Logging of drillhole samples was done at sufficient detail to meet requirements of resource estimation and mining studies. • 2383 RC samples were logged. • Geophysical data collected from 112 RC holes and 8 diamond holes (gamma,

<table>
<tr><td></td><td>density and magsus).</td></tr>
<tr><td>Sub-sample techniques and sample preparation</td><td>Sampling technique:
RC Chip Samples:
~3.5kg RC chip samples are collected via riffle/cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible.
The sample sizes are considered to be appropriate to correctly represent the mineralisation at Mettams based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements.
Sample preparation:
Sample dried at 105°C for 12-24 hrs
Crushed to nominal -3mm
Pulverised to 90% passing at 75µm
Quality Control Procedures
Duplicated sample (prior to January 2011): 2 every 100 samples (1:50).
Duplicate samples (post January 2011): 5 every 100 samples (1:20).
Certified Reference Material assay standards inserted:
2 in every 100 samples (1:50) prior to January 2011.
5 in every 100 samples (1:20) post January 2011.
Overall QAQC insertion rate of 1:10.
Sample weights recorded for all samples.
Lab duplicates taken where large samples required splitting down by the lab.
Lab repeats taken and standards inserted at predetermined level specified by the lab.</td></tr>
<tr><td>Quality of assay data and laboratory tests</td><td>All samples submitted to SGS Laboratory in Perth and assayed for the extended iron ore suite (24 elements) by XRF and a total LOI by thermogravimetric technique. The method used is designed to measure the total amount of each element in the sample.
Samples were subjected to routine particle sizing analysis by the lab to ensure the pulverizing stage is achieving appropriate particle size for XRF analysis showed acceptable results. This analysis shows that 95% of samples tested returned greater than the 90% passing 75 micron requirement.
Laboratory procedures are in line with industry standards and are appropriate for iron ore analysis.
Samples are dried at 105oC in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using an LM2 mill.
Sub-samples are collected to produce a 66 gram sample that is dried further, fused at 1100oC for 10 minutes, poured into a platinum mould and placed in the XRF machine for analysis and reporting.
A total LOI is measured by Thermogravimetric methods (TGA) at 1000oC.
Atlas inserts commercially available certified reference material (standards) at a set frequency of 1:20 (5% of total samples) within its sample batches. A number of different standards at a range of grades are used to monitor analytical precision of the assay results.
Blanks are not used by Atlas due to the nature of the analysis being a complete multi-element suite.
Acceptable levels of precision have been achieved with all standard assays</td></tr>
</table>

	reporting within 2 standard deviations of the certified mean grade for the 12 main elements of interest. • The lab also inserts its own standards at set frequencies and monitors the precision of the XRF analysis. These results also reported well within the specified 2 standard deviations of the mean grades for all 12 main elements of interest. • XRF calibrations are checked once per shift using calibration beads made using exact weights. • The Laboratory performs repeat analyses of sample pulps at a rate of 1:20 (5% of all samples) these compare very closely with the original analysis for all elements. • Analysis of field duplicate and lab pulp duplicates and repeats reveals that greater than 90% of pairs have less than 10% difference and the precisions of samples is within acceptable limits and concurs with industry recommended practices. • Atlas sent a selection of pulps to an umpire laboratory (Bureau Veritas, Perth) for verification by an independent laboratory. Comparison of results between laboratories did not reveal any issues and analytical precision was considered acceptable.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. RC chips have been inspected in the field to verify the correlation of mineralised zones with assay results. The Competent Person for this report has visited site and inspected all sampling processes in the field and also inspected the laboratory on a regular basis. • A total of 8 of 12 diamond holes twinned RC holes, results showed good correlation between methods and confirms no bias due to drilling techniques. • Primary data are captured on field Toughbook laptops using acQuire^{tm} software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• All Collars were surveyed by licensed surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • Downhole gyroscopic surveys were attempted on all RC and diamond holes. A total of 119 of 225 (RC and DH) holes had downhole gyro survey data. • The grid system for Mettams is MGA_GDA94 Zone 50. • Topographic data was based on AAM Pty Ltd aerial survey completed in August 2008 on a 1m resolution contours. The datum is GDA94 with projection MGA Zone 50.
Data spacing and distribution	• Drill spacing on an approximate 20m (N-S) by 20m (E-W) grid. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Indicated resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• The Mettams resource is interpreted to be a sequence of BIFs and Cherts (forming the limbs of a fold) steeply dipping towards the North, with the fold axis striking E-W. • The majority of drill holes were drilled dipping South and as such due to the

	varying intersection angles, all results are defined as downhole widths.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Mettams is located wholly within Exploration Lease E45/2362. This tenement is 100% Atlas owned. • The tenement sits within the Njamal Native Title Claim (WC1999/008). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• All drilling activity to date has been completed by Atlas.
Geology	• The Mettams Deposit is located within the Lallah Rookh Trend, which comprises a sequence of banded iron formation (BIF) within the Paddy Market Formation lies stratigraphically above pebble conglomerates and feldspathic arenites of the George Creek Group, which in turn lie above a thick southerly dipping sequence of high magnesium basalts (Euro Basalt). The Paddy Market Formation (regionally correlated with the Nimingarra & Cleaverville Iron Formation) is unconformably overlain by pebble to boulder conglomerates of the Lalla Rookh Sandstone (De Grey Group). The physiography consists of two erosional geozones which are strongly controlled by the underlying bedrock. The greenstone terranes are characterized by strike ridges of resistant rock separated by valleys underlain by less resistant units. Surrounding granitic rocks are more deeply eroded and the regions are generally characterized by low hills separated by colluvial, alluvial, and eluvial sandplain.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.

Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• No other exploration activities are known to Atlas at this time.
Further work	• No further work is required for this resource estimate.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Geological logging was conducted on a 1m scale (prior to January 2011) and 2m scale (post January 2011), with intervals recorded using the standard Atlas geological log. The log is entered digitally in the field onto a Toughbook computer, and the files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Mettams Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• The geological interpretation is based on the surface mapping plus geochemistry, logging and geophysics collected from RC holes. • The Mettams resource is interpreted to be a sequence of BIFs and Cherts (forming the limbs of a fold) steeply dipping towards the North, with the fold axis striking E-W. • The majority of drill holes were drilled dipping South and as such due to the varying intersection angles, all results are defined as downhole widths.
Dimensions	• The Mettams Mineral Resource has dimensions of approximately 120m (north) by 500m (east) and extends from surface to a maximum depth of 50m, with an average depth of 30m. A thin, 10m thick hydrated layer sits over the top of the entire resource.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half drill spacing. • Univariate statistical analysis and variogram modeling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging Neighbourhood analysis (QKNA) was undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 716180mE to 717680mE and 7659640mN to 7660460mN and elevation from 80mRL to 400mRL. • A single block model to encompass the Mettams Mineral Resource was constructed using a 10mN by 10mE by 5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain volume resolution. The parent

	block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) and geophysical density into geozone 204 (primary mineralisation) and geozone 504 (hydrated mineralisation). • Inverse Distance was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) and geophysical density into waste geozones (101 and 104). • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2, and 5 drill spacings for run 3. • A minimum of 12 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 for run 2 and 6 for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5, 5, 2 was applied. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit.
Moisture	• Tonnages are estimated on an ‘assumed’ dry basis. • 73.7% of samples logged as dry, 22.2% of samples were logged as moist, 0.8% were logged wet and 3.3% were blank/un-recorded. • The Mettams deposit is located above the water table.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope. • Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the open pit mining method and proposed processing methodology to consistently produce material at or above product specification. • Based on the current Atlas shipped product grade specification, a 50% Fe lower cut-off grade is deemed a suitable cut-off to report resources for Abydos. • The tabulated resources were reported using a 50% Fe cut-off grade applied

	on a block by block basis.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• Assume similar characteristics as other Abydos deposits. • No other metallurgical assumptions have been incorporated into the resource.
Environmental factors or assumptions	• There are no zones identified as sulphur risk in the Mettams deposit. • There are no known environmental factors of concern with this resource.
Bulk density	• Downhole geophysical density is sufficient to estimate density into the model. A regression factor of 14.33% was applied post estimation to obtain a dry bulk density. • This is a bulk commodity project.
Classification	• Mineral Resources have been classified as Indicated category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade. The statements relate to global estimates of tonnes and grade. A change of support analysis was undertaken to assess the sensitivity to the grade-tonnage curve in going from sample to block sized support at a range of cut-off grades. This analysis shows that some misclassification of material around the specified cut-off grades can be expected and is attributed to an expected amount of smoothing incurred by the ordinary kriging process. • The confidence in this resource estimate has been deemed appropriate as a basis for conceptual long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • There has been no production from the Mettams deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource.
SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES – Refer to page 125	

MULLALOO JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA MULLALOO MINERAL RESOURCE ESTIMATE – DECEMBER 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Reverse circulation (RC) chip samples collected at 2m sample intervals via a cone splitter. The 2m sample was sent for analysis. • One 3.5kg (average) sample taken for each two metre sample length and collected in pre-numbered calico sample bags. • 3.5kg sample was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Drill spacing is dominantly 20mN by 20mE with local areas of 20mN by 40mE. • Total of 202 RC holes used for the resource estimate for a total of 17,339m.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 4,654 Good (90%), 436 Fair (5%) and 154 Poor (1.8%) and 323 un-recorded (3%) samples. • To ensure maximum sample recovery and ensure representative samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No twin RC or diamond drill holes have been completed to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling. • No relationship between sample recovery and grade has been demonstrated.
Logging	• Logging of every 2m interval corresponding with 2m sampled interval. • The entire lengths of RC holes were logged on a 2m interval basis, 100% of the drilling was logged. Where no sample was returned due to voids/cavities it is recorded as such. • All holes are logged quantitatively in their entirety for colour, hardness, lithology and material type and quantitatively for chip content (%). • Logging of drillhole samples was done at sufficient detail to meet requirements of resource estimation and mining studies. • A total of 202 RC were logged in full, totaling 17,339m of drilling were logged for lithology, mineralisation, chip percent, weathering and colour. • Geophysical data collated from 133 RC holes of a total of 202 holes (natural gamma, gamma density, magnetic susceptibility & resistivity). Not all holes were open at depth which precluded 100% recovery of measurements from all of the drill holes.
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • ~3.5kg RC chip samples are collected via cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at Mullaloo based on the style of mineralisation, the

	thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** • Sample dried at 105°C for 12-24 hrs • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality Control Procedures** • **Duplicated sample:** • Samples collected (prior January 2011) at a rate of 2 every 100 samples (1:40). • Samples collected (post January 2011) at a rate of 5 every 100 samples (1:20). • **Standard samples:** • Certifield Reference Material assay standards inserted (prior January 2011) at a rate of 2 in every 100 samples (1:40). • Certified Reference Material assay standards inserted (post January 2011) at a rate of 5 in every 100 samples (1:20). • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality of assay data and laboratory tests	• All samples submitted to SGS Laboratory in Perth and assayed for the extended iron ore suite (24 elements) by XRF and a total LOI by thermogravimetric technique. The method used is designed to measure the total amount of each element in the sample. • Samples were subjected to routine particle sizing analysis by the lab to ensure the pulverizing stage is achieving appropriate particle size for XRF analysis showed acceptable results. This analysis shows that 95% of samples tested returned greater than the 90% passing 75 micron requirement. • Laboratory procedures are in line with industry standards and are appropriate for iron ore analysis. • Samples are dried at 105oC in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using an LM2 mill. • Sub-samples are collected to produce a 66 gram sample that is dried further, fused at 1100oC for 10 minutes, poured into a platinum mould and placed in the XRF machine for analysis and reporting. • A total LOI is measured by Thermogravimetric methods (TGA) at 1000oC. • Atlas inserts commercially available certified reference material (standards) at a set frequency of 1:20 (5% of total samples) within its sample batches. A number of different standards at a range of grades are used to monitor analytical precision of the assay results. • Blanks are not used by Atlas due to the nature of the analysis being a complete multi-element suite. • Acceptable levels of precision have been achieved with all standard assays reporting within 2 standard deviations of the certified mean grade for the 12 main elements of interest. • The lab also inserts its own standards at set frequencies and monitors the precision of the XRF analysis. These results also reported well within the

	specified 2 standard deviations of the mean grades for all 12 main elements of interest. • XRF calibrations are checked once per shift using calibration beads made using exact weights. • The Laboratory performs repeat analyses of sample pulps at a rate of 1:20 (5% of all samples) these compare very closely with the original analysis for all elements. • Analysis of field duplicate and lab pulp duplicates and repeats reveals that greater than 90% of pairs have less than 10% difference and the precisions of samples is within acceptable limits and concurs with industry recommended practices. • Atlas sent a selection of pulps to an umpire laboratory (Bureau Veritas, Perth) for verification by an independent laboratory. Comparison of results between laboratories did not reveal any issues and analytical precision was considered acceptable. • Geophysical gamma density was collected by Geovista Dual Density logging tool (Cesium source, density range 1-3.5g/cc) to ascertain approximate in-situ density values. The density tool is calibrated every 2 weeks using a range of materials with known density and is run down a calibration hole at the commencement of, and regularly during, the collection of data.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. RC chips have been inspected in the field to verify the correlation of mineralised zones with assay results. The Competent Person for this report has visited site and inspected all sampling processes in the field and also inspected the laboratory on a regular basis. • Primary data are captured on field Toughbook laptops using acQuiretm software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• All Collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • Downhole gyroscopic surveys are attempted on all RC holes by ABIMS. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool. Stated accuracy is +/-1o in azimuth and +/-0.1o in inclination. Note that all drill holes were drilled vertically. • QC of the gyro tool involved field calibration using a test stand and also a calibration hole. • The grid system for Mullaloo is MGA_GDA94 Zone 50. • Topographic data was based on AAM Pty Ltd aerial survey completed in August 2008 on a 1m resolution contours. The datum is GDA94 with projection MGA Zone 50.
Data spacing and distribution	• Drill spacing on an approximate 20m (N-S) by 20m (E-W) grid with local areas of 20m (N-S) by 40m (E-W). • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred/indicated resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.

Orientation of data in relation to geological structure	• The Mullaloo deposit is interpreted to be a sequence of BIFs and cherts steeply dipping to the North. Drill holes were drilled dipping south.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drill hole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Mullaloo is located within Exploration Lease M45/1179. • The tenement is 100% owned by Atlas. • The tenement sits within the Njamal Native Title Claim (WC99/08).
Exploration done by other parties	• All drill campaigns were conducted by Atlas.
Geology	• The Mullaloo deposit is a sequence of BIFs and cherts steeply dipping to the north. Mineralisation occurs only in the hanging wall BIF surrounded by a footwall and hanging wall chert.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• All drill campaigns conducted under Atlas supervision. • No other exploration activities are known by Atlas.
Further work	• Further infill drilling to improve orebody and geological knowledge.

SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Lithology logging codes are standardised across Atlas. The logs are entered digitally in the field into acQuire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy ‘Roredata’ using acquire software. • Data for the Mullaloo deposit is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• There is sufficient confidence in the geological interpretation of the mineral deposit. • Geological interpretation based on geophysical natural gamma data, drill hole lithological logging and geochemical data. • Wireframes of the stratigraphic units used to generate an empty geological model.
Dimensions	• The Mullaloo Mineral Resource has dimensions of approximately 800m (East) by 90m (North) and extends from surface to an average depth of 100m.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and mineralisation type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drill hole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half drill spacing. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging neighbourhood analysis (QKNA) undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 718500mE to 721000mE and 7660000mN to 7661500mN and elevation from 80mRL to 400mRL. • A single block model to encompass the Mullaloo Mineral Resource was constructed using a 10mN by 10mE by 5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) estimated plus geophysical density. • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to

	ensure robust estimates while minimising conditional bias. • Two search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2. • A minimum of 12 samples and a maximum of 48 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 for run 2. • Generally the majority of blocks are estimated in run 1 & 2. The remaining blocks were assigned the average grades/density from their respective domains. • A maximum of 6 samples from any one drill is allowed. • Block discretisation of 5, 5, and 2 was applied. • All block estimates are based on interpolation into sub-blocks. • Maptek Vulcan software was used to complete the block estimation. • Ordinary Kriging was used to estimate mineralised (geozone 204 & 504) domain. Inverse Distance (Power 2) was used to estimate waste domains. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL, swath plots to compare grades along slices through the deposit and Change of Support.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • There is no recorded dip data to interpret a water table. All moist/wet samples are due to water injection during drilling to suppress dust. All mineralisation is considered to be above water table. • 53.2% of samples logged as dry, 41.5% samples logged as moist and 1.5% of samples logged as wet samples. Note: 3.8% of samples did not have sample condition recorded.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and un-mineralised BIF. This cut-off grade was used to define the mineralised envelope. • Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the open pit mining method and proposed processing methodology to consistently produce material at or above product specification. • Based on the current Atlas shipped product grade specification, a 50% Fe lower cut-off grade is deemed a suitable cut-off to report resources for Abydos. • The tabulated resources were reported using a 50% Fe cut-off grade applied on a block by block basis.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• A total of 9 diamond holes have been drilled and metallurgical test work has been conducted. • A metallurgical test work program for physical properties and beneficiation was completed by Amdel Mineral Laboratories in Perth in September 2008. • Test work included UCI, CWI, AI analysis, loose and compacted bulk density determinations, size by size analysis and material handling test work by TUNRA.

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Environmental factors or assumptions	• A total of 14 RC samples intercepted anomalous sulphur values greater than 0.3%. These samples occur deep (beyond 118m) in waste material.
Bulk density	• Geophysical density measurements have been recorded downhole from the majority of drill holes. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. • Geophysical density is recorded at 10cm increments downhole, which is stored in the acquire drill hole database. • The density measurements are filtered and validated prior to use to remove anomalous recordings. • Geophysical density is estimated into the resource model. Un-estimated blocks (that did not meet the minimum criteria for an estimate to be made were assigned the mean grade of that domain's composited geophysical density data. • This is a bulk commodity project.
Classification	• Mineral Resources have been classified into the inferred/indicated category based on drill hole intercept spacing, geological confidence, grade continuity and estimation quality. • Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modeling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade. The statements relate to global estimates of tonnes and grade. A change of support analysis was undertaken to assess the sensitivity to the grade-tonnage curve in going from sample to block sized support at a range of cut-off grades. This analysis shows that some misclassification of material around the specified cut-off grades can be expected and is attributed to an expected amount of smoothing incurred by the ordinary kriging process. • The confidence in this resource estimate has been deemed appropriate as a basis for conceptual long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • There has only been minor production from the Mullaloo deposit which does not provide enough data for comparison of relative accuracy and confidence on this estimated mineral resource.

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SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES – Refer to page 125

SANDTRAX JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA SANDTRAX MINERAL RESOURCE ESTIMATE – JUNE 2012	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Reverse Circulation (RC) chip samples collected via cone splitter. Majority of samples are 2m in length with a minor proportion 1m in length. • One 6kg (average) sample taken for each two metre sample length and collected in pre-numbered calico sample bags. • 4kg sample (average) was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 2 duplicates are taken for every 100 samples (1:50). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 20mN by 40mE. • Total of 33 RC holes used for the resource estimate for a total of 1,546m and 780 samples.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 658 Good (84%), 95 Fair (12%) and 27 Poor (4%). • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No twin RC or diamond drillholes have been completed to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling. • No relationship between sample recovery and grade has been demonstrated.
Logging	• Logging of every 1m interval according to Atlas procedure. • This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • 33 RC drillholes were logged in full, totaling 1,546m of drilling or 780 RC samples were logged for lithology, mineralisation, chip percent, weathering and colour. • No geophysical data was collected (natural gamma, gamma density, magnetic susceptibility & resistivity).
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • ~4kg RC chip samples are collected via cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at Sandtrax based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges

	for the primary elements. **Sample preparation:** • Sample dried at 105°C for 12-24 hrs • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality Control Procedures** • Duplicated sample: 2 every 100 samples (1:50). • Certified Reference Material assay standards inserted: 2 in every 100 samples (1:50). • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality of assay data and laboratory tests	• All samples submitted to Ultratrace and ALS Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. • The Competent Person has visited site and inspected the sampling process in the field and also inspected the Laboratory. • There are no twinned holes drilled for the Abydos Sandtrax resource to date. • Primary data are captured on field Toughbook laptops using acQuire^{tm} software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• All Collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • All holes did not have downhole gyroscopic surveys completed. • The grid system for Sandtrax is MGA_GDA94 Zone 50.

	• Topographic data was based on AAM Pty Ltd aerial survey completed in August 2008 on a 1m resolution contours. The datum is GDA94 with projection MGA Zone 50.
Data spacing and distribution	• Drill spacing on an approximate 20m (N-S) by 40m (E-W) grid. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• The Sandtrax resource is interpreted to be sitting in a BIF unit with its orientation unknown due to the lack of detailed geological mapping. As such, due to the varying intersection angles of the RC holes, all results are defined as downhole widths.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Sandtrax is located wholly within Exploration Lease E45/2308. This tenement is 100% Atlas owned. • The tenement sits within the Njamal Native Title Claim (WC1999/008). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• All drilling activity to date has been completed by Atlas.
Geology	• The Sandtrax Deposit is located within the Lallah Rookh Trend, which comprises a sequence of banded iron formation (BIF) within the Paddy Market Formation of the George Creek Group. The sequence of BIF within the Paddy Market Formation lies stratigraphically above pebble conglomerates and feldspathic arenites of the George Creek Group, which in turn lie above a thick southerly dipping sequence of high magnesium basalts (Euro Basalt). The Paddy Market Formation (regionally correlated with the Nimingarra & Cleaverville Iron Formation) is unconformably overlain by pebble to boulder conglomerates of the Lalla Rookh Sandstone (De Grey Group). The physiography consists of two erosional geozones which are strongly controlled by the underlying bedrock. The greenstone terranes are characterised by strike ridges of resistant rock separated by valleys underlain by less resistant units. Surrounding granitic rocks are more deeply eroded and the regions are generally characterized by low hills separated by colluvial, alluvial, and eluvial sandplain.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill

	hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• No other exploration data is known to Atlas.
Further work	• Infill drilling is recommended to improve orebody knowledge within the current 20mx40m drill spacing. • Collect downhole geophysical density data. • Diamond drilling for density regression analysis.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Geological logging was conducted on a 1m scale, and intervals are recorded using the standard Atlas geological log. The log is entered digitally in the field onto a Toughbook computer, and the files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Sandtrax Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• Geological interpretation based on the geochemistry of RC holes. The Sandtrax deposit is hosted by a BIF unit. • The overlying hardcap, hydrated zone displays higher variability and mixed populations. This will likely influence the local estimates rather than the global grade estimate for this zone.
Dimensions	• The Sandtrax Mineral Resource has dimensions of approximately 60m (north) by 370m (east) and extends from surface to a maximum depth of 50m, with an average depth of 30m. A thin, 5m thick hydrated layer sits over the top of the entire resource.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using

	hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half drill spacing. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Neighbourhood analysis was undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 726980mE to 727600mE and 7663830mN to 7664120mN and elevation from 140mRL to 510mRL. • A single block model to encompass the Sandtrax Mineral Resource was constructed using a 10mN by 20mE by 5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Inverse Distance was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O). Geophysical density was assigned 2.55, 2.65 and 2.22 for geozones 201, 501 and 101 respectively. • Search directions are chosen to reflect the orientation of the orebody. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2, and 5 drill spacings for run 3. • A minimum of 12 samples and a maximum of 24 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 for run 2 and 8 for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 4, 4, 2 was applied. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit.
Moisture	• Tonnages are assigned on an 'assumed' dry basis. • 99% of samples logged as dry.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope.

	• Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the open pit mining method and proposed processing methodology to consistently produce material at or above product specification. • Based on the current Atlas shipped product grade specification, a 50% Fe lower cut-off grade is deemed a suitable cut-off to report resources for Abydos. • The tabulated resources were reported using a 50% Fe cut-off grade applied on a block by block basis.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• No diamond holes to enable metallurgical test work. • Assume similar characteristics as other Abydos deposits.
Environmental factors or assumptions	• No environmental issues have been identified to date and no assumptions have been made.
Bulk density	• An assumed dry bulk density of 2.55 for primary mineralised blocks (201), 2.65 for hydrated mineralised blocks (501) and 2.22 for waste blocks (101) was applied due to the lack of downhole geophysical data. • No diamond core measurements were available to enable density regression analysis. • This is a bulk commodity project.
Classification	• Mineral Resources have been classified as Inferred category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade. The statements relate to global estimates of tonnes and grade. A change of support analysis was undertaken to assess the sensitivity to the grade-tonnage curve in going from sample to block sized support at a range of cut-off grades. This analysis shows that some misclassification of material around the specified cut-off grades can be expected and is attributed to an expected amount of smoothing incurred by the ordinary kriging process. • The confidence in this resource estimate has been deemed appropriate as a basis for conceptual long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • There has been no production from the Sandtrax deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource.

SCARBOROUGH JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA SCARBOROUGH MINERAL RESOURCE ESTIMATE – DECEMBER 2012	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• RC sampling methodology prior to January 2011 involved the collection of samples drilled over 2m intervals using a riffle or cone splitter. • Post 2011, RC samples were collected over 2m intervals using only a cone splitter. • 3.5kg sample (average) was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 2 duplicates are taken for every 100 samples (1:50) for samples collected prior to January 2011. • Post January 2011, duplicates were 5 duplicates were collected for every 100 samples (1:20). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 20mN by 20mE. • RC holes (123 holes for 15,035m) – used in estimate. • DDH (6 holes for 633.7m) – suppressed due to no assays.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the riffle/cone splitter. This is recorded as good, fair, poor or no sample. • 6845 Good (91%), 385 Fair (5%) and 286 Poor (4%). • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No comparison between twin RC or diamond drillholes was conducted to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling. • No relationship between sample recovery and grade has been demonstrated.
Logging	• Prior to January 2011, geological logging was completed for 1m interval according to Atlas procedure. • Post January 2011, geological logging was completed for 2m interval to coincide with sample interval. • Each 2m sample interval from RC holes is logged and diamond holes are logged in their entirety. • All holes are logged quantitatively in their entirety for colour, hardness, lithology and material type and quantitatively for chip content (%). • Logging of drillhole samples was done at sufficient detail to meet requirements of resource estimation and mining studies. • 7518 RC samples were logged. • Geophysical data collected from 79 RC holes of 123 RC holes (gamma, density and magsus).
Sub-sample techniques	**Sampling technique:**

and sample preparation	• RC Chip Samples: • ~3.5kg RC chip samples are collected via riffle/cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at Scarborough based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** • Sample dried at 105°C for 12-24 hrs • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality Control Procedures** • Duplicated sample (prior to January 2011): 2 every 100 samples (1:50). • Duplicate samples (post January 2011): 5 every 100 samples (1:20). • Certified Reference Material assay standards inserted: o 2 in every 100 samples (1:50) prior to January 2011. o 5 in every 100 samples (1:20) post January 2011. • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality of assay data and laboratory tests	• All samples submitted to Ultratrace and ALS Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 80% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. RC chips have been inspected in the field to verify the correlation of mineralised zones with assay results. The Competent Person for this report has visited site and inspected all sampling processes in the field and also inspected the laboratory on a regular basis. • A total of 4 of 5 diamond holes twinned RC holes. • Primary data are captured on field Toughbook laptops using acQuire^{tm}

Reserve and Resource Update

	software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• All Collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • Downhole gyroscopic surveys were attempted on all RC and diamond holes. A total of 86 of 123 RC holes had downhole gyro survey data. • The grid system for Scarborough is MGA_GDA94 Zone 50. • Topographic data was based on AAM Pty Ltd aerial survey completed in August 2008 on a 1m resolution contours. The datum is GDA94 with projection MGA Zone 50.
Data spacing and distribution	• Drill spacing on an approximate 20m (N-S) by 20m (E-W) grid. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred and Indicated resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• The Scarborough resource is interpreted to be a folded anticlinal sequence of BIFs and cherts with the fold axis orientated N-S. The majority of drilling is orientated -60 degrees dipping to the West. As such, due to the varying intersection angles, all results are defined as downhole widths.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Scarborough is located wholly within Mining Lease M45/1179. This tenement is 100% Atlas owned. • The tenement sits within the Njamal Native Title Claim (WC1999/008). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• All drilling activity to date has been completed by Atlas.
Geology	• The Scarborough Deposit is located within the Lallah Rookh Trend, which comprises a sequence of banded iron formation (BIF) within the Paddy Market Formation lies stratigraphically above pebble conglomerates and feldspathic

	arenites of the George Creek Group, which in turn lie above a thick southerly dipping sequence of high magnesium basalts (Euro Basalt). The Paddy Market Formation (regionally correlated with the Nimingarra & Cleaverville Iron Formation) is unconformably overlain by pebble to boulder conglomerates of the Lalla Rookh Sandstone (De Grey Group). The physiography consists of two erosional geozones which are strongly controlled by the underlying bedrock. The greenstone terranes are characterized by strike ridges of resistant rock separated by valleys underlain by less resistant units. Surrounding granitic rocks are more deeply eroded and the regions are generally characterized by low hills separated by colluvial, alluvial, and eluvial sandplain.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• All exploration activity to date has been completed by Atlas.
Further work	• Further diamond drilling and density analysis to characterize density of very deep mineralisation.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Geological logging was conducted on a 1m scale (prior to January 2011) and 2m scale (post January 2011), with intervals recorded using the standard Atlas geological log. The log is entered digitally in the field onto a Toughbook computer, and the files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Scarborough Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• Geological interpretation based on the geochemistry of RC holes. The Scarborough deposit is hosted by a BIF unit with a chert unit on the hanging

	wall and footwall side of the BIF unit. • The overlying hardcap, hydrated zone displays higher variability and mixed populations. This will likely influence the local estimates rather than the global grade estimate for this zone.
Dimensions	• The Scarborough Mineral Resource has dimensions of approximately 420m (north) by 100m (east) and extends from surface to a maximum depth of 260m, with an average depth of 60m. A thin, 10m thick hydrated layer sits over the top of the entire resource.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half drill spacing. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging Neighbourhood analysis (QKNA) was undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 720500mE to 721420mE and 7660980mN to 7661800mN and elevation from -50mRL to 500mRL. • A single block model to encompass the Scarborough Mineral Resource was constructed using a 10mN by 10mE by 5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) and geophysical density into geozone 204 (primary mineralisation). • Inverse Distance was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) and geophysical density into geozone 504 (hydrated mineralisation). • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2, and 5 drill spacings for run 3. • A minimum of 12 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 for run 2 and 8 for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5, 5, 2 was applied. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation.

	• No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • 41% of samples logged as dry, 42% of samples were logged as moist injected (driller injected to suppress dust), 5% of samples were logged as moist and 12% were logged wet. • Water table sits is located at ~170mRL and is based on the position of samples (dry/moist/wet) collected. It is subject to considerable uncertainty due to the lack of resistivity data or bore hole data. Approximately 38.5% of the resource is located beneath the water table. The resource beneath the water table has been classified as Inferred
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope. • Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the open pit mining method and proposed processing methodology to consistently produce material at or above product specification. • Based on the current Atlas shipped product grade specification, a 50% Fe lower cut-off grade is deemed a suitable cut-off to report resources for Abydos. • The tabulated resources were reported using a 50% Fe cut-off grade applied on a block by block basis.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• Assume similar characteristics as other Abydos deposits. • No other metallurgical factors or assumptions have been made.
Environmental factors or assumptions	• Sulphur rich materials have been identified in both the chert units (geozone 101 & 106). Consequently both chert units are assigned a moderate sulphur risk.
Bulk density	• Downhole geophysical density is sufficient to estimate density into the model. A regression factor of 11.53% was applied post estimation to obtain a dry bulk density. • This is a bulk commodity project.
Classification	• Mineral Resources have been classified as Inferred and Indicated category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral

	Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade. The statements relate to global estimates of tonnes and grade. A change of support analysis was undertaken to assess the sensitivity to the grade-tonnage curve in going from sample to block sized support at a range of cut-off grades. This analysis shows that some misclassification of material around the specified cut-off grades can be expected and is attributed to an expected amount of smoothing incurred by the ordinary kriging process. • The confidence in this resource estimate has been deemed appropriate as a basis for conceptual long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • There has been no production from the Scarborough deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource.
SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES – Refer to page 125	

TRIGG JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA TRIGG MINERAL RESOURCE ESTIMATE – SEPTEMBER 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Reverse Circulation (RC) chip samples collected via cone splitter. • One 4kg (average) sample taken for each two metre sample length and collected in pre-numbered calico sample bags. • 4kg sample was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 5 duplicates are taken for every 100 samples (1:20). • No RC holes were duplicated in their entirety for QC analysis • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice. • RC samples mostly cone split (71.79% of total). The remaining 28.21% were split as follows: 25.87% riffle split, 0.93% speared, 1.41% unspecified. QQ plots showed bias in the speared samples so these were excluded from the validated database and therefore the estimation.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 20mN by 20mE, with some areas 20mE by 10mN. • Total of 483 RC holes used for the resource estimate for a total of 36, 394m and 18, 070 primary samples. There were 488 RC holes in the dataset, but 5 were suppressed on the basis of being water bores, or hole abandoned and re-drilled, or distance of hole from deposit. • DDH (total of 27 holes for 2, 497.6mm) – suppressed due to no assays or due to different drilling technique. Drilled for metallurgical and geotechnical purposes, with 4 holes drilled for QAQC.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the splitter. This is recorded as good, fair, poor or no sample. • 15, 395 Good (85.03%), 2, 039 Fair (11.26%), 433 Poor (2.39%), 239 not recorded (1.32%) mainly due to no sample return. • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • Four pairs of RC/diamond twin drillholes have been completed to assess sample bias. • No relationship between sample recovery and grade has been demonstrated.
Logging	• Logging of every 2m interval (Atlas procedure) corresponding with 2m sampled interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. Samples collected prior to Jan 2011 were logged every 1m. Changes to the logging intervals are attributed to a revision of the Atlas logging procedure in January 2011. • Each 2m sample interval from RC holes is logged and diamond holes are

	logged in their entirety. • All holes are logged quantitatively in their entirety for colour, hardness, lithology and material type and quantitatively for chip content (%). • Logging of drillhole samples was done at sufficient detail to meet requirements of resource estimation and mining studies. • 488 RC drill holes were logged in full, totaling 36, 789m of drilling. Lithology, mineralization, weathering and colour were recorded. Holes drilled after or during January 2011 were also logged for chip percent. • 27 diamond holes were logged in full, totaling 2, 497.6m. • Geophysical data collated from 186 holes of a total 515 holes (natural gamma, gamma density, magnetic susceptibility & resistivity). Not all holes were open at depth which precluded 100% recovery of measurements from all of the drillholes. Many drill holes had collapsed at or near surface, making any downhole measurements impossible. Prior to 2010, it was not standard practice to downhole survey every hole.
Sub-sample techniques and Sample Preparation	**Sampling technique:** • RC Chip Samples: • ~4kg RC chip samples are collected via cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at Trigg based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. • Diamond QAQC samples taken using cut core or whole core using a diamond saw/hammer and pick and sent for analysis of the regular iron ore suite **Sample preparation:** • Sample dried at 105°C for 12-24 hours • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality Control Procedures:** • Samples collected prior to January 2011 had 2 duplicated samples every 100 samples (1:50). Due to a revision of the logging procedure, samples collected post January 2011 had 5 duplicates taken every 100 samples (1:20). • Certified Reference Material assay standards inserted: 5 in every 100 samples (1:20). • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality of assay data and laboratory tests	• Samples submitted to Ultratrace (17, 959 samples), SGS (619 samples) and ALS (322 samples) Laboratories in Perth and assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 0.66kg sample that is dried further, fused at 110OC for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA).

	• Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice. • Geophysical gamma density was collected by Geovista Dual Density logging tool (Cesium source, density range 1-3.5g/cc) to ascertain approximate in-situ density values. A regression factor was then applied to convert these to dry bulk density as recorded in the model. The density tool is calibrated every 2 weeks using a range of materials with known density and is run down a calibration hole at the commencement of, and regularly during, the collection of data.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. RC chips have been inspected in the field to verify the correlation of mineralised zones with assay results. The Competent Person for this report has visited site and inspected all sampling processes in the field and also inspected the laboratory on a regular basis. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection. • There are 12 pairs of RC/diamond twins, four pairs of which have assay results.
Location of data points	• All Collars pre 2013 were surveyed by licensed surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. 2013 collars were surveyed by licensed Atlas mine surveyors using a differential RTK_DGPS. All holes were picked up by DGPS.. All 2011 to 2013 holes were pegged using a differential RTK_DGPS. • Downhole gyroscopic surveys are attempted on all RC holes by ABIMS. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool. Stated accuracy is +/-1o in azimuth and +/-0.1o in inclination. 296 holes had downhole surveys completed, 219 holes were not surveyed due to collapse or blockages, or drilling date (prior to 2010 it was not standard practice to downhole survey every hole). • QC of the gyro tool involved field calibration using a test stand and also a calibration hole. • The grid system for Trigg is MGA_GDA94 Zone 50. • Topographic data collected by AAM Pty on a 1m resolution. Aerial survey flown in August 2008. Data supplied in projection MGA_GDA94 Zone 50.
Data spacing and distribution	• Drill spacing on an approximate 20m (N-S) by 20m (E-W) grid, with some areas drilled to 10m (N-S) by 20m (E-W). • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred/Indicated resource classification applied under the 2012 JORC code. • Samples are typically collected at 2m intervals. There were 77 samples collected at 1m, and 1 sample collected at 3m intervals.
Orientation of data in	• The geological structure is interpreted to be sub vertical beds consisting of

relation to geological structure	BIFs, cherts and shales with local parasitic folding. The units are very steeply dipping at the north eastern end of the deposit. As you move south west down strike, the dip shallows and parts of the stratigraphy become pseudo-horizontal within an overall vertical trend. These structural irregularities (or 'kinks') in the stratigraphy can be attributed to parasitic folding on the limb of the major synclinal structure. • Strike is east-west, and dip is variable depending on when you are in the sequence. • The drilling direction is predominantly to the south (180°) and at a dip of -60°. A smaller proportion of holes are vertical or dipping north (000°) due to topographical constraints, and/or attempting maximum drill hole coverage. Dip can also vary if the holes were targeting potential mineralized material at depth.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Trigg is located wholly within mining lease M45/1179. The lease is owned by Atlas. • The tenement sits within the Njamal People Native Title Claim (WC1999/008). • At the time of reporting, mining is operational at the Abydos mine site and within the Trigg resource area. The tenement is in good standing.
Exploration done by other parties	• All exploration activities were undertaken under Atlas supervision.
Geology	• Abydos is regionally located in an Archean Greenstone belt, wedged between granitic batholiths. The Greenstone belt is dominated by mafic volcano-sediments with lesser epiclastic sediments, cherts and BIFs. The BIF and chert sequences have been assigned to the Cleaverville formation. • Local geology has been interpreted as a steeply dipping sequence of siltstone (SLST), followed by an upper mineralised BIF (upper BIF, BIFU), then an upper chert (CHERTU) which is not mineralised, another BIF unit (BIF) which is the main mineralised unit, another chert unit (lower chert, CHERTL) which is not mineralised, and finally another BIF unit (lower BIF, BIFL) which is only partially mineralised.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill

	hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Geological mapping completed by three consultants. John Crossing (Compass Geological Pty Ltd) in 2008 at a scale of 1:10, 000. David Archer in November 2012 at a scale of 1:2500. Sheldon Coates in September 2008 at a scale of 1:2000. • Routine multi-element analysis of potential deleterious or contaminating substances such as Arsenic, Lead, Zinc and Sulphur is completed for all samples. • 21 samples were submitted to Pontifrex and Associates Pty Ltd in January 2008 for mineralogical analysis by polished sections and XRD. • Hydrological studies were completed by RPS Aquaterra in 2012, with the installation of three water supply production bores and five observation bores in the vicinity of the Trigg pit. • Metallurgical samples from 4 of the diamond drill holes at Trigg were submitted for analysis to Amdel Mineral Laboratories in September 2008. Tests performed were UCS, CWi, Ai, and core in-situ density. • Materials handling properties were also tested by TUNRA Bulk Solids Handling Research Associates in March 2011.
Further work	• The deposit is currently being mined. • 193 outstanding planned RC drill holes from the 2013 drill program are intended be drilled in 2014. It is of paramount importance that a complete suite of downhole geophysics is performed on any future holes. • Further hydrogeological studies are planned to better define the water table and its intersection with mineralized material.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Lithology logging codes are standardised across Atlas. The logs are entered digitally in the field into acQuire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acQuire software. • Data for the Trigg Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this resource) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are

	maintained. • Site visits have been carried out at Abydos to inspect the deposit area, RC logging and sampling processes. Discussions were held with site personnel regarding procedures.
Geological interpretation	• There is sufficient confidence in the geological interpretation of the mineral deposit. • Geological interpretation based on geophysical natural gamma data, local geological surface mapping, drillhole lithological logging and geochemical data. • Wireframes of the stratigraphic units used to generate an empty geological model. • The overlying hardcap, hydrated zone displays higher variability and mixed populations. This will likely influence the local estimates rather than the global grade estimate for this zone.
Dimensions	• The Trigg Resource has dimensions of approximately 1.2km (east) by 40-140m (north) and extends from surface to a maximum depth of 170m, with an average depth of 80m. • A hydrated layer (25m average thickness) sits over the top of the entire resource.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half a drill spacing. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor v8 software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging Neighbourhood Analysis (QKNA) undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 717670mE to 719090mE and 7660220mN to 7660850mN and elevation from 80mRL to 400mRL. • A single block model to encompass the Trigg Mineral Resource was constructed using a 10mN by 10mE by 2.5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO and K_2O) estimated plus geophysical density. • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2.5 drill spacings for run 1, 4.5 drill spacings for run 2, and 6.5 drill spacings for run 3. • The minimum number of samples for run 1 was 14 or 12 (depending on domain), with a maximum of 24. The minimum number of samples for run 2

	was reduced to 12 or 10 respectively, and 8 for run 3. The maximum for runs 2 and 3 is also 24. • A maximum of 4 samples from any one drill hole is allowed. • Block discretisation of 5x5x2 was applied. • Grade restriction was applied to some of the minor deleterious elements in some domains as a restricted search to limit the influence of extreme/outlier grades from smearing distant blocks by using a tighter search ellipsoid. Restrictions were applied to P, S, MgO, and K_2O in geozone 100; K_2O in geozone 101; S, CaO and MnO in geozone 107; and MnO in geozone 108. No restrictions were considered necessary in mineralized domains. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan (version 8.2) software was used to complete the block estimation. • Ordinary Kriging was used to estimate mineralized (hydrated and primary) domains, except for domain 200 which had insufficient data to perform variography or an OK estimate. Mean composite grades were assigned to these blocks. • Inverse Distance (power 2) estimation was used to estimate waste domains. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit, and Change of Support.
Moisture	• A water table level of 200mRL was applied to the Trigg model. • At the time of writing (Dec 2013), there are 11 bores or RC holes in or around Trigg that are being monitored for water level. More hydro work is planned to better define the water table. • 11% of the mineralised material lies below the water table. • Sample moisture is recorded by the geologist for each RC sample. 78.39% of samples logged as dry, 18.66% samples logged as moist or moist injected and 1.63% of samples logged as wet samples.
Cut-off parameters	• The criteria for mineralised material is ≥50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope. • Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the open pit mining method and proposed processing methodology to consistently produce material at or above product specification. • Based on the current Atlas shipped product grade specification, a 50% Fe lower cut-off grade is deemed a suitable cut-off to report resources for Abydos. • The tabulated resources were reported using a 50% Fe cut-off grade applied on a block by block basis.
Mining factors or assumptions	• Mining is by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • Detailed mine planning and approvals have been completed and mining has commenced at Trigg. This model represents a resource update.

Reserve and Resource Update

Metallurgical factors or assumptions	• A metallurgical test work program for physical properties and beneficiation was completed by Amdel Mineral Laboratories in Perth in September 2008 from 39 samples collected from 4 diamond holes. • Test work included UCI, CWI, AI analysis, loose and compacted bulk density determinations, size by size analysis and material handling test work by TUNRA.
Bulk density	• Geophysical density measurements have been recorded downhole from 186 out of 515 drill holes. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. • Geophysical density is recorded at 10cm increments downhole, which is stored in the acQuire drillhole database. • The density measurements are filtered and validated prior to use to remove anomalous recordings. • Geophysical density is estimated into the resource model. Un-estimated blocks (that did not meet the minimum criteria for an estimate to be made) were assigned the mean grade of that domain's composited geophysical density data. • 15 out of 27 diamond holes were measure for dry bulk density, for a total of 677 measurements on a per core tray basis. A comparison was conducted between dry bulk density and downhole geophysical density to determine a regression factor which can be applied to the estimated geophysical density to account for porosity and moisture. A comparison was also made between the geophysical density of a diamond hole and its RC twin to investigate if there was a need for a correction factor relating to hole rugosity. • Only 4 diamond holes have both geophysical and dry bulk density for comparison. The calculated regression from these data was geophysical density/1.1408. • This is a bulk commodity project.
Classification	• The Trigg Mineral Resource has been classified into the Inferred/Indicated categories based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry Standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates.

	• The statements relate to global estimates of tonnes and grade. The statements relate to global estimates of tonnes and grade. A change of support analysis was undertaken to assess the sensitivity to the grade-tonnage curve in going from sample to block sized support at a range of cut-off grades. This analysis shows that some misclassification of material around the specified cut-off grades can be expected and is attributed to an expected amount of smoothing incurred by the ordinary kriging process. • The confidence in this resource estimate has been deemed appropriate as a basis for long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • There has only been minor production from the Trigg deposit which provided some preliminary data for comparison of relative accuracy and confidence on this estimated mineral resource.
SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES – Refer to page 125	

AVALON POINT RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA AVALON POINT MINERAL RESOURCE ESTIMATE – OCTOBER 2012	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Reverse Circulation (RC) chip samples collected via riffle splitter. • One 6kg (average) sample taken for each two metre sample length and collected in pre-numbered calico sample bags. • 6kg sample was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 40mN by 20mE. • Total of 41 RC holes used for the resource estimate for a total of 1,955m and 981 samples.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the riffle splitter. This is recorded as good, fair, poor or no sample. • 940 Good (95.8%), 26 Fair (2.7%) and 15 Poor (1.5%). • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No twinned RC or diamond drillholes have been completed to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling. • No relationship between sample recovery and grade has been demonstrated.
Logging	• Logging of every 2m interval (Atlas procedure) corresponding with 2m sampled interval • All holes are logged quantitatively in their entirety for colour, hardness, lithology and material type and quantitatively for chip content (%). • Logging of drillhole samples was done at sufficient detail to meet requirements of resource estimation and mining studies.
Sub-sample techniques and sample preparation	**Sampling technique:** RC Chip Samples: ~6kg RC chip samples are collected via cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. **Sample preparation:** Sample dried at 105°C for 12-24 hrs Crushed to nominal -3mm Pulverised to 90% passing at 75µm
Quality of assay data and laboratory tests	• Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a

	0.66g sample that is dried further, fused at 110^{O}C for 10 minutes poured into a platinum mould prior to XRF analysis and reporting. • LOI is measured by Thermogravimetric methods (TGA). • A total of 40 Certified Reference Material's (standards) were assayed by insertion at predefined intervals by Atlas. This is equal to an average rate of one standard per 25 field samples. The results highlight that sample assay values are accurate and precise. • A total of 21 field duplicates were analysed for sample bias, equal to an average rate of one field duplicate to 50 routine samples (every 25th and 75th sample). The field duplicates did not show sample bias. • A total of 49 lab pulp repeats were completed by Ultratrace laboratories, these show that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits.
Verification of sampling and assaying	• Primary data are captured on field Toughbook laptops using acQuire^{tm} software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate.
Location of data points	• All Collars were surveyed using differential RTK_DGPS. • Downhole gyroscopic surveys were attempted on all RC holes at 10m or 5m intervals. • The grid system for Avalon Point is MGA_GDA94 Zone 50.
Data spacing and distribution	• Drill collars spaced approximately 20m apart on EW traverses spaced 40m apart. Drillholes oriented -60° to 270° (west) • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• The majority of drillholes at Avalon Point dip to the west (270°) at -60°. Folding of the stratigraphy is interpreted to be very steep to isoclinal in the western part of Avalon Point separated by a moderately dipping antiformal structure in the central to eastern part of the prospect.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a dispatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Avalon Point is located wholly within Exploration Lease E45/2728. This tenement is 100% Atlas owned.

	• The tenement sits within the Njamal Native Title Claim (WC1999/088). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• Prior to Atlas identifying surficial Fe enrichment, Dynasty Metals held rights to explore for gold on tenement E45/2728. The mineralisation is continuous into a BBHP owned tenement to the south.
Geology	• Sequence of alternating Archaean sediments and Banded Iron Formation (BIF) of the Pincunah Trend in the Gorge Creek Group heavily weathered to ferruginous saprolite draped in a chemical variable hard-cap. BIF units preferentially enriched in secondary Fe oxides and hydroxides.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• No other substantive exploration data is known to Atlas.
Further work	• Mineralisation is open to the north and further drilling along-strike of current mineralisation is expected to increase the current resource
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Lithology logging codes are standardised across Atlas. The logs are entered digitally in the field into acQuire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software.
Site visits	• The author of this report has not made a site visit to Avalon Point.
Geological interpretation	• There is sufficient confidence in the geological interpretation of the mineral deposit. • Geological interpretation based on drillhole lithological logging and geochemical data. • Wireframes of the stratigraphic units used to generate an empty geological model.

Reserve and Resource Update

Dimensions	• The Avalon Point Mineral Resource has dimensions of approximately 200 m (north) by 200 m (east) and extends from surface to a maximum depth of 90m, with an average depth of 40m.
Estimation and modeling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and un-mineralised BIF. This cut-off grade was used to define the mineralised envelope. Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half a drill spacing (unless in areas where surface mapping has identified a mineralised/non-mineralised contact in an area without drilling data). • A single block model to encompass the Avalon Point Mineral Resource was constructed using a 20mN by 10mE by 5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes used to define the stratigraphic interpretation. • Inverse Distance Squared (ID^2) was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO and K_2O) for both waste and mineralised domains. • A minimum of 10 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to eight for run 2 and six for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5 × 5 × 2 was applied. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Block model validation methods used were visual checks comparing composite grades Vs block grades and easting, northing and RL swath plots to compare grades along slices through the deposit.
Moisture	• Tonnages are estimated on an ‘assumed’ dry basis. • Intersection of the water table was not reported during drilling.
Cut-off parameters	• Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the open pit mining method and proposed processing methodology to consistently produce material at or above product specification. • Based on the current Atlas shipped product grade specification, a 50% Fe lower cut-off grade is deemed a suitable cut-off to report resources for Abydos. • The tabulated resources were reported using a 50% Fe cut-off grade applied on a block by block basis.

Reserve and Resource Update

Mining factors or assumptions	• Conventional open pit mining in 5m benches on 2.5m flitches is assumed from the nearby Abydos Project methodology.
Metallurgical factors or assumptions	• Assume similar characteristics as other Abydos deposits. • No other metallurgical factors or assumptions have been made.
Environmental factors or assumptions	• No environmental factor or assumptions are known at this time.
Bulk density	• Default density values of 2.6 and 2.7 have been applied to waste and mineralised material respectively. These are based on dimensional data analysis from other nearby prospects at Abydos.
Classification	• Mineral resource has been classified into the Inferred category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The confidence in this resource estimate has been deemed appropriate as a basis for conceptual long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • There has been no production from the Avalon Point deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource.

ABYDOS JORC 2012 TABLE 1 – SECTION 4

SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES	
Mineral Resource estimate for conversion to Ore Reserves	• The Mineral Resource estimates used are based upon seven stratigraphically domained and ordinary kriged Mineral Resource estimates undertaken by Atlas Iron's Resource Estimation department as outlined in Section 1-3. The Mineral Resources used for conversion to Ore Reserves are: - Trigg - Mullaloo - Scarborough - Leighton - Mettams - Contacios - Cove. • A technical description of the Mineral Resource is presented in the preceding sections to this table.The Mineral Resource estimate reported is inclusive of the Ore Reserves.
Site visits	• The Competent Person for this Ore Reserve Statement is a full time employee of Atlas Iron Ltd and visit the site on a regular basis. • The most recent visit was on 4th June 2014.
Study status	• Abydos project has been an operating mine since July 2013. • A Life of Mine Plan for Abydos project is completed in May 2014 to reflect new resource model and updated operating assumptions (costs and metal prices). • The Life of Mine Plan is used as basis for reporting Ore Reserves in accordance with JORC (2012) guidelines.
Cut-off parameters	• The cut-off grade applied for Abydos deposits is 52.0% Fe based on target product grades.
Mining factors or assumptions	• The method used to convert Mineral Resources to Ore Reserves is pit optimisation to identify the economic shell within which a design process is applied to achieve a practical mine design. • The assumed iron ore price and exchange rates are derived from the average of three external forecasting analysts. For reasons of commercial sensitivity the assumed iron ore price and exchange rates are not disclosed. • The mining method is conventional drill and blast and load and haul with an excavator and large open pit mining equipment. This is considered to be appropriate for the style of mineralisation and is applied to similar operations in the area. • The geotechnical parameters are based on the recommendations from a geotechnical study with 10m batter height, 60^0- 70^0 batter angles and 5m wide berms at 10m intervals incorporated in the pit designs. • A 10% gradient and 23m width (including safety windrow) is used for in-pit pit ramps. • A 25m minimum mining width is applied on all benches except good bye cuts. • Allowance for dilution and ore loss has been applied using block model regularisation. Block model regularisation has been determined to approximate the findings of a 1.5m dilution skin analysis. • Inferred Mineral Resource is treated as waste in the pit optimisation and reserves process. • The existing site infrastructure caters for the current mining method. Internal haul

	roads will be constructed based on pit development sequence in the Life of Mine schedule.
Metallurgical factors or assumptions	• Ore is processed by a standard dry crushing and screening process. This is considered to be appropriate for the type of mineralisation and is well tested technology in other Atlas operations. • No metallurgical domaining has been applied. • 100% process recovery is assumed for all materials as is the case for all other Atlas operations using dry crush and screen process. • Within the life of mine schedule for Abydos, the element grades are forecast to stay within the contracted specifications.
Environmental	• Mining approvals, Native Vegetation Clearing Permit and License to operate have been granted for Abydos Stage1 (Trigg and Mullaloo pits along with other infrastructure). • The necessary applications under Mining Act 1978, Environment Protection and Biodiversity Conservation Act 1999, Environmental Protection Act 1986 for Abydos Stage2 (Mettams, Scarborough and Leighton pits along with respective waste dumps) are approved • Approval process for Cove and Contacios pits is commencing shortly. • The application and submission relating to these permissions include an assessment of waste rock characterisation and information relating to environment baseline surveys and impact assessment. • A consultant report on Soil and Waste material characterisation for Abydos Stage 1 & Stage 2 has recognized the Abydos project mine waste and low grade ore as non-acid forming. • No tailings will be produced by the Abydos project.
Infrastructure	• Existing onsite infrastructure including accommodation village, mine operations center, main site access road, pit access ramps, ROM pad and crusher area, stockpile areas, product stockpiling and load out yard, waste dumps, weighbridge area, contractors laydown yard, power station, workshops and explosives storage support the current operation. • A private 59km haul road links the project to the Marble Bar road for ore haulage to Port Hedland.
Costs	• Abydos has been an operating mine since July 2013 and the majority of the Capital has already been spent. Remaining capital is predominantly for mine closure, pit access and pre-stripping and was priced as part of the contract tender process. • Mine closure costs have been estimated by external consultants who are specialists in the field. • The production rates and operating costs have been applied from awarded contracts and tendered rates. • Operating costs include allowances for mining, processing, administration, haulage to the port and shipping. Of these, the mining, processing and haulage costs are supplied by competitively tendered contracts and port and shipping costs are developed from existing contracts. • The application of product quality penalties are based on historic and current prices for existing customers. • Allowances have been made for royalties payable including Government and private parties.
Revenue factors	• Forecast sales price and exchange rates are based on the average of three external forecasting analysts. For reasons of commercial sensitivity the assumed iron ore price is not disclosed. • In generating the sales price applicable to the Atlas product, the sales price is

	discounted by: - Fe% grade of the Atlas product - A discount for the quantity of deleterious elements for the normal Atlas product - Government and other stakeholder royalties - Shipping costs. • Within the life of mine schedule for Abydos, the element grades of ore to be sold are forecast to stay within the contracted specifications.
Market assessment	• Established external forecast analysts have provided guidance to assess the long term market and sales of Iron Ore. • Atlas Iron has sales agreements in place with existing customers.
Economic	• The financial model indicates that Abydos will produce a positive NPV at the required discount rate of 11.0% applied to nominal post tax cashflows. • Sensitivity analysis indicates that the project's economics remain secure within typical sensitivity ranges of operating cost, iron ore price and foreign exchange rates.
Social	• Abydos project tenements lie within the native title claims of Njamal and Warrarn. • Atlas has a Deed of Agreement with Njamal Native Title group. • A native title and pastoral agreements was also signed by Atlas, Strelley and Coongan Pastoral Station and Warrarn Native Title party. • A potential significant rock shelter is located beneath the Scarborough pit. Related studies are progressing to identify the appropriate practice to provide minimal risk or damage. • Atlas is in the process of submitting a Section 18 application for the potential heritage site.
Other	• There is no identified material naturally occurring risks that could impact on the project or Ore Reserves. • The project is located within mining tenements M45/1179 and M45/1241. M45/1179 is held by Atlas and M45/1241 is held / managed by Global Advanced Metals (GAM) Wodgina Pty Ltd. Atlas has tenement access agreement with GAM to proceed with mining on M45/1241. • Mining approvals, Native Vegetation Clearing Permit and License to operate have been granted for Abydos Stage1 (Trigg and Mullaloo pits along with other infrastructure). • The necessary applications under Mining Act 1978, Environment Protection and Biodiversity Conservation Act 1999 and the Environmental Protection Act 1986 for Abydos Stage2 (Mettams, Scarborough and Leighton pits along with respective waste dumps) mining are approved. • Environmental and Heritage studies have been completed for Cove and Contacios pits, approval process will commence shortly. • Atlas will continue to engage with the Main Roads Department of Western Australia, the Department of Regional Development and Lands, the Department of Water, the Town of Port Hedland and the Shire of East Pilbara in relation to the Project and haulage.
Classification	• Ore Reserves are based upon material classified as either Measured or Indicated from the Mineral Resource estimation modelling. • The Measured and Indicated Mineral Resources within the designed pits have been respectively converted to Proved and Probable Ore Reserves. • The Ore Reserve classification results appropriately reflect the Competent Persons view of the deposits. • No Probable Ore Reserves have been derived from Measured Mineral Resources.

Audits or reviews	• A July 2014 audit by external consultants has found that the procedures used within Atlas to prepare the Ore Reserve estimates are in line with industry standards.
Discussion of relative accuracy/ confidence	• The Ore Reserve has been completed to a minimum of a Feasibility study standard, with a corresponding level of confidence. • The accuracy of the estimates will be subject to regular reconciliation and ongoing monitoring.

Reserve and Resource Update

MATERIAL CHANGES TO MATERIAL MINING PROJECTS AND DISCLOSURE FOR THE PURPOSE OF ASX LISTING RULES 5.8 AND 5.9 FOR THE CORUNNA DOWNS PROJECT

Corunna Downs Mineral Resource Table - As at 30 June 2014 (50% Fe Cut-Off Grade)										
Location	Resource Classification	Kt	Fe (%)	SiO_2 (%)	Al_2O_3 (%)	P (%)	S (%)	LOI (%)	CaFe* (%)
Split Rock	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	20,000	57.3	6.5	1.3	0.12	0.01	8.9	62.9
	Inferred	5,000	56.2	7.1	2.1	0.12	0.01	9.1	61.8
Runway	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	11,000	57.9	5.1	1.9	0.04	0.01	9.6	64.0
Razorback	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	6,000	57.1	5.5	1.8	0.05	0.01	10.0	63.4
Shark Gully	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	9,000	57.3	5.8	2.2	0.09	0.02	9.6	63.4
Sub-Total	**Measured**	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	20,000	57.3	6.5	1.3	0.12	0.01	8.9	62.9
	Inferred	31,000	57.3	5.7	2.0	0.07	0.01	9.6	63.4
Total		**51,000**	**57.3**	**6.0**	**1.7**	**0.09**	**0.01**	**9.3**	**63.2**

Tonnes are rounded according to resource classification; grades are carried through unaffected by rounding and may result in small discrepancies.

*Calculated calcined Fe grade where CaFe=(Fe*100)/(100-LOI)

Corruna Downs JORC 2012 Compliance Statement for Mineral Resources

Geology and Geological Interpretation

The Corunna Downs project is located approximately 170km southeast of the town of Port Hedland and 40km southwest of Marble Bar in Western Australia. The Corunna Downs Project is situated between Atlas' Mt Webber and McPhee Creek Projects. The project can be accessed by the Woodstock-Hillside road travelling southwest out of Marble Bar.

The Corunna Downs Project comprises 7 exploration licences which were purchased from Gondwana Resource Ltd in 2012. The reported Corruna Downs resources lie within tenement E45/3321 and E45/2585 (100% owned by Atlas Iron). The Panorama and Corunna Downs pastoral leases overlap the project tenure. The Project area is subject to native title claimant group of the Njamal aboriginal people (WC 1999/088).

The Corunna Downs Project is located in the East Pilbara Craton at the boundary between the southeastern portion of the East Pilbara Granite-Greenstone Terrane (EPGGT) and the northeastern part of the Hamersley Basin.

Reserve and Resource Update

The Archaean greenstones of the Eastern Pilbara region have been intruded by a series of large domical granitoid intrusions now composed of gneissic granitoid and migmatite. The region exhibits some of the best rock exposure of any granite-greenstone terrane in Australia.

The East Pilbara granite-greenstone terrane, like most Archaean granite-greenstone terranes, consists of a lower greenstone sequence dominated by mafic volcanics deposited upon an unknown basement. The mafic volcanic sequence grades irregularly upward into felsic volcanics and sediments, and may also be stratigraphically repeated at higher levels.

The extensive greenstone package is assigned to the Pilbara Supergroup and includes metamorphosed mafic to ultramafic rocks, felsic to intermediate volcanics, amphibolite, clastic sediments (sandstone, shale and siltstone), mafic to ultramafic intrusive sills, chert and Banded Iron-Formation. By sheer volume granitoid complexes dominate the regions structure. Significant volumes of granite were intruded into the greenstone sequence over an extended period of time resulting in a protracted period of deformation and low to medium grade metamorphism. Granitoid rocks constitute 60% of the region and occur as domical structures up to 120km across and separated by greenstones in synclinal keels.

Metamorphic grades vary from widespread greenschist facies to amphibolite or hornblende-hornfels facies along the contacts with granitic complexes. Cleavage in the greenstone synclines is sub-vertical, curving around the granitoid complexes and passing from one greenstone belt to another, usually sub parallel to the granitoid-greenstone contact but also extending into the margins of the granitoid complexes.

Overlying the EPGGT is volcanic and sedimentary rocks of the late Achaean Fortescue Group (Mount Bruce Supergroup)

The Corunna Downs project is located within the banded iron-formation and chert sequences of the Cleaverville Formation of the Gorge Creek Group. The area between the Shaw and Corunna Downs Granitoid Complexes is divided into the western Coongan greenstone belt, and the eastern Kelly greenstone belt. The boundary between these two greenstone belts is a fault that pre-dates deposition of the Cleaverville Formation.

Locally, the greenschist facies volcano-sedimentary rocks comprising the Coongan and Kelly greenstone belts area assigned to the Warrawoona Group of the Pilbara Supergroup. The Warrawoona is further subdivided into several subgroups but is predominantly made up of mafic to ultramafic rocks and felsic to intermediate volcanics with minor amounts of clastic and chemical sediments (sandstone, shale and siltstone, chert).

Unconformably overlying the Warrawoona Group is the interbedded package of sedimentary rocks of Cleaverville Formation of the Gorge Creek Group, in which the Corunna Downs resources are located. The geology is dominated by metamorphosed banded iron-formation and interbedded ferruginous chert. The packages of sediments are interbedded with the underlying volcanic rocks of the Kelly and Coongan greenstones. Iron rich laterites are variably developed on top of the plateau.

Rocks of the Cleaverville Formation are deformed and offset by NNE and NNW faults. To the north, the rocks of the Cleaverville Formation and Warrawoona Group are unconformably overlain by rocks of the Mount Roe Basalt, the basal unit of the Fortescue Group.

Iron mineralisation at Corunna Downs typically features successive macrobands of goethite-hematite rich, high grade (>55 wt% Fe) ore zones associated with neighbouring jaspilitic BIF units and banded chert and shale. Mineralisation generally outcrops or is near surface where it is characterised by vuggy textures and vitreous goethite typical of hydrated mineralisation. Beneath the hydrated mineralisation lies the zone of primary enriched BIF which is predominately goethite rich with lesser quantities of haematite.

The Corunna Downs geological models were generated using a combination of geochemistry of RC holes, lithological logs (RC & DH holes) and down hole geophysical natural gamma logs. A stratigraphic model of the lithology and structure was first constructed to provide a geological framework in which to interpret the mineralisation. The mineralisation was interpreted into an upper zone of depletion and underlying hydrated and primary mineralised zones.

The stratigraphic model comprises a sequence of banded iron formation, cherts and sulphidic carbonaceous black shales. The mineralisation model comprises of depleted, hydrated and primary mineralisation zones. The mineralisation zones are modelled generally using greater than 50% Fe and less than 15% SiO_2 cut-off to define ore from waste. The combination of both stratigraphic model and mineralisation models are used for geozone definitions.

Sampling and Sub Sampling

All RC chip samples were collected at 2 m sampling intervals through a cone splitter. The samples are deemed to be of acceptable quality. Sample weights are also recorded to monitor the ongoing representativeness of the sample split. The weights are stored in the acquire database.

Samples are directed into a calico bag with the overflow placed directly on the ground in spoil heaps. The calico bags are pre-numbered, with every sample number ending in 00, 20, 40, 60, 80, collected as a field duplicate. The duplicate samples are collected in real time by splitting the two sub samples from the cone splitters. Standards were inserted every 1^{st}, 21^{st}, 41^{st}, 61^{st} and 81^{st} sample. Sample weights are also recorded to monitor the ongoing representativeness of the sample split.

Drilling Techniques

Exploration and Resource Development drilling over the various Corunna Downs prospects occurred during 2013 and 2014. . Drilling of the Split Rock, Runway, Shark Gully and Razorback resources has been by a 140mm Reverse Circulation (RC) face sampling hammer and all samples are split by a cone splitter. To date, a total of 384 RC drillholes have been completed at The Corunna Downs Project totalling 45,546m, 2 diamond tails totalling 300.2m and 12 diamond drillholes (PQ3 and HQ3) totalling 2,227.3m. The Split Rock resource has been drilled out to a final drill spacing of 40mN x 40mE and the Shark Gully, Razorback and Runway deposits drilled at 80mN x 40mE spacing. Shark Gully, Razorback and Runway currently remain open along strike and require further extensional and infill drilling to upgrade and close out resources.

The Geologist sieves and logs every 2 m interval in alignment with the sampling interval. Logging encompasses the main material types, hardness, lithologies, colour and percentage of chips (approximate lump/fine proportion). The logging is recorded in the field electronically into acQuire field logging data entry objects and on completion the electronic files are sent to Perth and loaded into the centralised acQuire drillhole database which is managed by a full time Database Administrator.

Licenced surveyor MHR Surveyors completed survey pickup on all available drill collars using a Trimble R8 Real Time Kinematic Differential GPS (DGPS_RTK). The DGPS gives an accuracy of +/- 0.05 m for Easting and Northing location and +/- 0.1 m for the RL (height above sea level). The higher accuracy collar surveys are imported into the Atlas drillhole database and are prioritised ahead of the GPS only level surveys.

All reverse circulation and diamond holes were subjected to downhole surveys using a gyroscopic tool. All downhole surveys were completed by ABIMS Pty Ltd utilising a north seeking multi-shot tool which measures azimuth every 5m down hole to an accuracy of +/- 0.2^o and dip to an accuracy of +/- 0.1^o. Down hole geophysical measurements are also collected at the same time and comprise Density/Calliper, Magsus and Natural Gamma recordings taken at 10 cm intervals down hole.

Sample Analysis Methods

Samples collected by Atlas were sent to SGS laboratories in Perth for analysis of the extended iron ore suite of elements. This consists of XRF analysis for Fe, SiO_2, Al_2O_3, P, CaO, K_2O, MgO, MnO, S, TiO_2, Na_2O and a thermo gravimetric measurement for loss on ignition (LOI) at 1000^oC. The sample preparation of RC samples involved weighing, oven drying, pulverization of the entire sample to a grind size of 90% passing 75 micron. A pulp sub-sample was collected and formed into a fused bead for XRF determinations on the iron ore suite of elements and a LOI by thermogravimetric techniques.

Batches of sample pulps were sent from SGS to Ultratrace (Bereau Veritas) Perth for confirmatory assaying to ensure no analytical issues were present. No issues were evident from this work and the analyses appeared to be accurate and suitable for use.

To ensure quality assurance and control (QAQC) of the sampling and assaying procedure, Atlas submitted field duplicates and standards to the laboratory for analysis. The duplicates and standards are inserted at predefined intervals at a rate of 5% for standards and 5% for duplicates. The laboratory also inserted its own internal standards and pulp repeat analyses at predefined intervals. Sample collection procedures and QAQC protocols employed by Atlas are commensurate with standard industry practices. The use of umpire laboratory was also employed to check the accuracy of laboratory results.

The QAQC data for the Corunna Downs project was reviewed for the Split Rock, Runway, Shark Gully and Razorback resource estimates. These were found to be of acceptable precision and analytical accuracy and are deemed to be suitable for resource estimation purposes and JORC compliancy.

Estimation Methodology

The drillhole data was composited prior to running the estimation process using a 2m sample interval to minimise any sample bias due to sample length. The compositing was run within the attribute fields to ensure no composite intervals crossed any lithological contacts or grade boundaries.

Variograms were generated to assess the grade continuity of the various elements and as inputs to the kriging algorithm used to interpolate grades. Snowden Supervisor software was used to generate and model variograms as well as conducting statistical analysis.

Variographic analysis was undertaken for all mineralised geozones for each of the Corunna Downs resources. The elements that were analysed include all 12 elements, i.e. Fe, SiO_2, Al_2O_3, P, LOI, S, MnO, MgO, K_2O, TiO_2, CaO, Na_2O and geophysical density.

To generate the best experimental variograms the data was first transformed to a normal scores distribution where upon the variogram was modelled and on completion a back transform was applied. The variogram ranges and directions of continuity are consistent with the geological understanding and are considered appropriate.

Block models were constructed in Vulcan (Maptek) and constrained by surfaces and solids. The parent block size was selected based on half the prevalent drill hole spacing and assumed mining bench height and the model was orientated (rotated) to represent the strike of mineralisation and prevailing drilling grid. The sub-block size was selected to more accurately define the mineralised volume and also to be of smaller size than the selective mining unit (SMU) used in the reserve model to ensure that some dilution is incurred during the regularisation process.

The volume block model was created using the wireframes of the stratigraphy, mineralisation and topography. A unique geozone code was assigned based on the combination of stratigraphy and mineralisation. The geozone field is used to distinguish the main mineralisation types and un-mineralised areas.

For the Split Rock, Shark Gully, Runway and Razorback deposits, Atlas estimated Fe, SiO_2, Al_2O_3, P, LOI, CaO, K_2O, MgO, MnO, S, TiO_2 and Na_2O grades and geophysical density using Ordinary Kriging for the mineralised horizons. Waste horizons were estimated by Inverse Distance (power 2) methods.

The preferred estimation parameters were chosen based on neighbourhood search analysis whereby several estimation parameters were tested to optimise the estimation search. This was represented by best kriging efficiency, slope regression values and number of blocks filled. Search ellipses were orientated based on the geometry of the mineralisation with the search ellipses increased by two fold and three fold for second and third search passes.

The in-situ density (inclusive of moisture and porosity) was estimated into the model using geophysical density measurements collected at 10 cm intervals down hole and composted to 2m to match the sample length. All available drill holes had geophysical measurements collected and a sufficiently good spatial coverage of data across each deposit was achieved. Following compositing of the data, variograms were modelled and geophysical density was estimated into the model utilising ordinary kriging techniques.

To correct the in-situ density estimate to a dry bulk density (accounting for in-situ moisture & porosity), the geophysical density measurements are correlated to dry dimensional core density measurements and a suitable regression factor is determined. The regression analysis involved comparing the dimensional densities of 5 diamond holes (at Split Rock) and corresponding geophysical densities of the same hole

Additionally, a further comparison was conducted to compare the geophysical densities collected at 5 RC holes (at Split Rock) and their diamond twinned equivalent. Overall, the regression analysis suggests a 4.7% reduction to account for moisture, porosity and hole rugosity be applied to the geophysical density to derive the dry bulk density. The regression was necessary as the bulk of the geophysical densities were collected in RC holes throughout the deposit and used to estimate the in-situ density into the model. Thus, the application of the regression factor effectively reports dry tonnes.

At the time of writing, no diamond holes were drilled at Shark Gully, Runway or Razorback. Thus, a deposit specific density regression factor could not be derived. For these deposits the same regression factor applied to the Split Rock resource was used as it is of the same bedded style of mineralisation.

The estimates were validated using:

- A visual comparison of block grade estimates and the drillhole data.
- A global comparison of the average composite grades and estimated grades.
- Moving window averages comparing the mean block grades to the composites.
- Histogram comparison of the original composite grades and the block estimated grades.
- Assessment of correlation coefficients from the input sample data and estimated block grades.
- Total assay validation check to ensure closure (sum of elements in each block adds to 100% +/- 2%).
- Global change of support to assess the level of misclassification inherent in the estimate.

The conclusions from the model validation work include:

- Visual comparison of the model grades and the corresponding drillhole grades shows a good correlation.
- A comparison of the global drillhole mean grades and with the mean grades of the block model estimate (for each domain) shows that the block model mean grades are typically within 5-10% of the drilhole means which is a good outcome with the exception of poorly sampled regions.
- The trend plot grades show a good correlation between the block model grades compared with the drillhole grades.
- Total assay validation showed that the blocks maintained closure generally between 98% and 102% for all mineralised domains.
- Assessment of the histograms and correlation coefficients showed that the relationship between elements within the input sample data has been maintained in the block grades estimates and the grade distribution has been maintained in the estimate with an acceptable level of smoothing.

Cut-Off Grade

The criteria for defining mineralised material at Corunna Downs is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary. These cut-off grades were used to separate mineralised material from waste. Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the proposed open pit mining method and proposed processing methodology to consistently produce material suitable to meet Atlas product specification. This cut-off grade methodology is used consistently for reporting of all Mineral Resources at Corunna Downs. The tabulated resources are reported using a 50% Fe cut-off grade on a block by block basis.

Mining and Metallurgical methods and parameters and other modifying factors

The Corunna Downs Project is currently at Scoping level study and is subject to a pre-feasibility level study to determine mining and processing methods. It is currently proposed to use conventional open pit mining methodology, similar to other nearby Atlas projects, with selective extraction of ore material using a backhoe configured excavator. This allows a selective ore mining approach comprising 5m benches which are mined in two flitches of 2.5m height. The 2.5m flitches are used in order to reduce ore dilution and loss.

It is expected that a simple, low cost crush and screening processing route is utilised to produce a single, fines only product at a specified grade. It is a reasonable assumption that the Corunna Downs resources will eventually be economically extracted based on their proximal location to existing Atlas projects and infrastructure and also due to their favourable size and grade characteristics which will fit the Atlas product specification.

JORC (2012) - TABLE 1 – SPLIT ROCK RESOURCE

JORC CODE 2012 EDITION – TABLE 1 CORUNNA DOWNS SPLIT ROCK RESOURCE – DECEMBER 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Reverse circulation (RC) drilling was used to obtain 2.0m down hole interval samples. The samples were passed through a cone splitter to collect a nominal 4.0-6.0kg sample (approximately 10% split ratio) into pre-numbered calico bags. • 3 RC holes subjected to sample weight and split analysis to ensure the minimum 10% split ratio is being consistently achieved plus these holes were also duplicate sampled to check sampling representivity over the entire length of the holes. • 4 HQ3 diamond twin holes were sampled at 1m intervals, with the whole core submitted to the laboratory for comparison back to RC samples. • Duplicate samples taken at a set frequency of one every twenty samples (5% of total samples) from the cone splitter to monitor sampling representivity. • Geophysical gamma density measurements collected downhole by ABIMS geophysical contractor using a Geovista Dual Density logging tool (Cesium source, density range 1-3.5g/cc) to ascertain approximate in-situ density values. Tool is regularly calibrated every 2 weeks using a range of known media and a calibration hole.
Drilling techniques	• Reverse Circulation drilling employing a 140mm diameter face sampling hammer. A nominal drillhole spacing of 40mN x 40mE has been completed for this resource update. A total of 134 RC holes for 19,360m have been drilled. • 5 HQ3 diamond drillholes for 1,187m have been drilled. HQ3 diamond core runs are orientated by Reflex orientation tool.
Drill sample recovery	• RC sample recovery is logged at the drill site by the geologist based on the volume of sample returned from the cone splitter. This is recorded as either good, fair, poor or no sample recovered. Of the total 9,680 RC samples collected, 9,513 (98.3%)were recorded as Good, 70 (0.7%) were recorded as fair, 91 (0.9%) were recorded as poor and 6 (0.1%) were recorded as No Sample return • All samples are weighed at the laboratory to continually monitor and record sample size. 3 RC holes were duplicate sampled for every interval down hole and also had the entire sample volume presenting to

	the splitter weighed to ensure appropriate sample split ratio was achieved through the splitter and the samples were of a representative size. • To ensure maximum sample recovery and representivity of the samples, the field geologist was present during drilling, continuously monitoring the sampling process. Any issues were immediately rectified. • 4 HQ3 diamond twin holes have been used for comparison to RC holes to check for any bias introduced by the drilling technique. The diamond core and RC results compare closely for the top 80m of the holes, however poor recovery was experienced in the diamond holes below this depth due to the friable nature of the material and the sample was deemed to not be representative of the interval and therefore a valid comparison could not be made. Below 80m depth, the RC holes consistently show slightly lower Fe grade and higher contaminant grades than the diamond holes indicating that the diamond drilling may be washing out fines during the drilling process and preferentially upgrading the sample. • Atlas is satisfied that the RC holes have taken a sufficiently representative sample of the mineralisation and minimal loss of fines has occurred in the RC drilling resulting in minimal sample bias. • No relationship between sample recovery and grade has been demonstrated.
Logging	• Logging of every 2m interval corresponding with 2m sampled interval. This level of detail is supportive and appropriate for Mineral Resource estimation, mining and metallurgical studies for a bulk commodity such as iron ore. • Core and RC logging is qualitative and quantitative in nature. • RC Logging records the abundance/proportion of specific minerals/material types and lithologies, hardness recorded by physical chip percent measurement, weathering and colour. Additionally diamond core was logged for density (dimensional tray method), geotechnical conditions, RQD and structure and each tray was photographed both wet and dry after meter marking and orientation. • The entire lengths of RC holes were logged on a 2m interval basis, 100% of the drilling was logged. Where no sample was returned due to voids/cavities it is recorded as such. Drill core was also logged over its entire length and core recovery recorded. • All holes were downhole geophysical logged (or attempted) for Natural Gamma, Resistivity, Gamma Density, Calliper and Magnetic Susceptibility. Not all holes were open at depth which precluded 100% coverage of measurements from all of the drillholes.
Sub-sample techniques and sample preparation	• HQ3 diamond core - whole core was sampled at 1m intervals and despatched to the lab where it was dried for 12 hours at 105oC, primary crushed down to 8mm fraction and secondary crushed to 4mm before being further split down using a rotary splitter to produce a sub-sample of approximately 3.5kg before pulverizing in a LM2 mill to a nominal 90% passing 75 micron. A 77g pulp sample is obtained for XRF analysis. • 1:10 of the coarse crushed samples were duplicate sampled by the lab to ensure sample homogeneity and monitor the additional splitting stage performed by the lab and approximately 1:20 pulp samples are duplicated by the lab.

	• All RC samples were collected on two meter down hole intervals passed through a cone splitter to collect a nominal 4.0kg-6.0kg sample. The majority of samples are reported as dry, however a proportion of below water table samples are reported as being moist or wet. Of the 9,680 RC samples collected 5,175 (53%) reported as dry, 1,043 (11%) moist and 3,456 (36%) as wet and 6 no samples. • Where RC samples were considered to be large (>6kg), they were crushed down to 3mm fraction and rotary split down to produce a smaller sample suitable for pulverizing. Coarse duplicates are taken by the lab at a ratio of 1:10 to monitor this process. • Sample weight/split analysis shows that on average at least 10% split ratio is being achieved consistently through the cone splitter primary and duplicate sampling ports. • Duplicate sample analysis show the data has acceptable precision, indicating that the sampling technique is appropriate for the deposit • Diamond twin analysis also shows good precision where core recovery has been sufficient to provide a representative sample of the interval. • The sample sizes were considered to be appropriate to correctly represent the mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent values assay ranges for the primary elements.
Quality of assay data and laboratory tests	• All samples submitted to SGS Laboratory in Perth and assayed for the extended iron ore suite (24 elements) by XRF and a total LOI by thermogravimetric technique. The method used is designed to measure the total amount of each element in the sample. • Samples were subjected to routine particle sizing analysis by the lab to ensure the pulverizing stage is achieving appropriate particle size for XRF analysis showed acceptable results. This analysis shows that 95% of samples tested returned greater than the 90% passing 75 micron requirement. • Atlas inserts commercially available certified reference material (standards) at a set frequency of 1:20 (5% of total samples) within its sample batches. A number of different standards at a range of grades are used to monitor analytical precision of the assay results. • Blanks are not used by Atlas due to the nature of the analysis being a complete multi-element suite. • Acceptable levels of precision have been achieved with all standard assays reporting within 2 standard deviations of the certified mean grade for the 12 main elements of interest. • The lab also inserts its own standards at set frequencies and monitors the precision of the XRF analysis. These results also reported well within the specified 2 standard deviations of the mean grades for all 12 main elements of interest. • The Laboratory performs repeat analyses of sample pulps at a rate of 1:20 (5% of all samples) these compare very closely with the original analysis for all elements. • Analysis of field duplicate and lab pulp duplicates and repeats reveals that greater than 90% of pairs have less than 10% difference and the precisions of samples is within acceptable limits and concurs with industry recommended practices. • Atlas sent a selection of pulps to an umpire laboratory (Bureau Veritas,

	Perth) for verification by an independent laboratory. Comparison of results between laboratories did not reveal any issues and analytical precision was considered acceptable. • Laboratory procedures are in line with industry standards and are appropriate for iron ore analysis.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. Drill core and RC chips have been inspected in the field to verify the correlation of mineralised zones with assay results. The Competent Person for this report has visited site and inspected all sampling processes in the field and also inspected the laboratory on a regular basis. • 4 HQ3 diamond twin holes have been drilled for comparison with RC drillholes and quantitatively analysed with no issues identified. • All primary data is captured electronically on field Toughbook laptops using acQuiretm software. The software has built in validation routines to prevent data entry errors at the point of entry. Data is also validated prior to export from the Toughbook and again on import into the main corporate acQuire database. • All data is sent to Perth and stored in a secure, centralised acQuire SQL database which is administered by a full database administrator. • Documentation related to data custody, validation and storage are maintained on the company's server. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection level values to half positive detection.
Location of data points	• All collars were surveyed by licensed surveyors (MRH Surveyors, Perth) utilising a RTK GPS system tied into the state survey mark (SSM) network with the expected relative accuracy of 0.05m E, N & RL. Elevation values are in AHD RL. • The grid system for the Corunna Downs Project and the Split Rock resource is MGA_GDA94_Z50. • Downhole gyroscopic surveys are attempted on all RC and diamond holes by ABIMS geophysical contractors. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool with a stated accuracy of +/-1o in azimuth and +/-0.1o in inclination. QC of the gyro tool involved field calibration using a test stand and also a calibration hole. • Topographic data and imagery collected by Outline Global Pty Ltd based on 10cm resolution RGB imagery. 2m vertical contour interval resolution derived from stereoscopic imagery DTM. Aerial survey flown on the 16th March 2013. Data supplied in projection MGA_GDA94 Zone 50. The quality and resolution of the topographic data is considered to be adequate for resource estimation purposes.
Data spacing and distribution	• RC Drill spacing is on an approximate 40m (N-S) by 40m (E-W) grid, however due to topographic constraints this is sometimes not achievable. • This drill spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred/Indicated resource classification under the 2012 JORC code and is suitable for this style of deposit. • Sample compositing has not been applied to the RC samples used in the resource estimate; all RC samples are collected at 2m intervals.

	Diamond samples were composited to 2m length to match the RC sample length and maintain equal weighting for comparison purposes, no diamond sample/assays were used in this estimate or for reporting of significant intercepts. • Geophysical density measurements collected at 10cm increments were composited up to 2m intervals to correspond with the sample length. The compositing process was checked to ensure that no changes to the statistical population had been incurred due to the compositing process.
Orientation of data in relation to geological structure	• The attitude of the Split Rock resource is predominantly steeply west dipping from 70-80 degrees and is drilled to grid east with drillholes inclined between -60 and -90 degrees which is slightly oblique to the orientation of the mineralisation. Structural logging of orientated drill core and surface mapping supports the drilling direction and sampling orientation. Due to the varying intersection angles all intercept results are reported as downhole widths and not true widths. • No drilling orientation and sampling bias has been recognized at this time and is not considered to have introduced a sampling bias.
Sample security	• Chain of custody is managed by Atlas. Pre-numbered calico sample bags are packed into sealed and labelled polyweave bags on site and then placed inside sealed and labelled bulka bags. Samples are delivered to a dispatch point in Port Hedland by Atlas Staff and a consignment number issued by the transport company (TOLL). Samples are transported to the relevant laboratory in Perth by courier. Once received at the laboratory, the consignment of samples is receipted against the sample dispatch documents and a reconciliation report is issued to Atlas for every sample batch. Samples are stored in a secure yard at the lab until analysis. • Sample security was not considered a significant risk to the project.
Audits or reviews	• A detailed audit of the Atlas acQuire drillhole database is performed regularly by independent database management consultants (rOREdata Pty Ltd). The last audit was completed in August 2012 and the database is considered to be of a high standard and acceptable for JORC compliant resource estimation activities. • A review of all the resource drillhole data and sampling techniques is carried out internally as part of the resource estimation process
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• The Split Rock resource is located wholly within Exploration Lease E45/3321. The tenement is 100% Atlas owned. • The tenement sits within the Njamal Native Title Claim (WC1999/088). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• 7 open hole percussion drill holes completed by Geotechnics Australia Ltd (1972), no intersections of DSO grade mineralisation, area determined to not be prospective. • Rock chip sampling, geological mapping and geophysical surveys completed by Gondwana Resources Pty Ltd (2010), recognized presence of near surface zones of DSO grade iron mineralisation.
Geology	• The Corunna Downs Split Rock BIF-hosted iron ore resource is hosted by the ca. 3.02 Ga Cleaverville formation (Gorge Creek group, De Grey Supergroup). The prospect is located in the Kelly greenstone belt within

	the East Pilbara terrane of Western Australia, approximately 170km southwest of Port Hedland. The N-S trending Kelly greenstone belt is bound by the Corunna Downs and Shaw granitoid complexes. The Split Rock resource features successive macrobands of goethite-hematite rich, high grade (>55 wt% Fe) ore zones associated with neighbouring jaspilitic BIF units and banded chert and shale.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced Reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Atlas previously reported deposit information for Split Rock including a Mineral Resource Estimate (see Atlas ASX release, Maiden Resource at Corunna Downs, 24 July 2013). • Surface Geological mapping (stratigraphy, mineralisation and structure) of the Split Rock prospect was performed by Atlas Geological personnel and Digirock consultants. • Routine multi-element analysis of potential deleterious or contaminating substances such as Arsenic, Lead, Zinc and Sulphur is completed for all samples. • Geologists from the Centre for Exploration Targeting (CET), University of Western Australia (UWA) are completing research studies on the Corunna Downs Project with focus on the controls on mineralisation. The nature and timing of mineralisation events is also being evaluated through isotopic and geochemical analysis. • Preliminary Metallurgical test work based on RC composite samples from a selection of holes has been performed by SGS Lakefield Oretest Pty Ltd. The aim of this test work was to determine preliminary characteristics of the deposit such as particle size distribution, abrasion index, bulk density, moisture and asbestiform mineral analysis.
Further work	• 5 Geotechnical PQ3 diamond drill holes were recently completed to determine pit design parameters. All diamond core has been geotechnically logged and the holes scanned by televiewer. Results of this analysis are pending at the time of this release.

	• 4 of the HQ3 diamond hole sample bulk residues are to be used for bulk materials flow testing, transportable moisture limit and dust extinction level tests. Additional diamond drilling is planned to provide more definitive metallurgical physical properties data such as Cwi, UCS, Ai, bulk density and moisture. • Hydrogeology studies to determine dewatering requirements are currently being scoped. • Waste classification samples have been collected to assess the nature of potentially acid forming (PAF) sulphidic carbonaceous shale material. • A selection of drillholes will be left open for use in subterranean fauna studies. • No further RC infill or extensional drilling is planned to be completed on Split Rock as the mineralisation is effectively closed off in all directions except for at depth in a few locations, but this is felt to be too deep and problematic to drill and would realistically be beyond the maximum depth limit of most optimal pits based on the lateral extents of the resource and ore body orientation. • Work related to any potential mining development of the Split Rock deposit is dependent on outcomes of scoping level mining studies.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• All data is entered digitally in the field into acquire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The data files are then electronically transferred to the Perth office via email where they are loaded into the centralised SQL acQuire drillhole database and undergo further validation routines before being finally accepted. Validation reports are produced for each drillhole and sent back out to the site Geologists for final checking. • Assay files sent electronically from the lab in a secure file format and also in hard copy reports. The assay data undergo numerous checks before being accepted into the database on passing all QAQC rules. • The Atlas acQuire drillhole database is administered by a full-time Geological Database Administrator. Data validation checks are run routinely by the database administrator and database consultancy ‘rOREdata’ using acQuire software validation routines.
Site Visits	• The Competent Person for this report is a full time employee of Atlas Iron and undertakes regular site visits ensuring that industry acceptable standards of the entire process from sampling through the final block model estimate are maintained. Site visits were carried out in June and October 2013 to inspect the deposit area, RC and diamond logging and sampling practices. Discussions were held with site personnel regarding procedures and a number of minor recommendations were made but nothing was noted that was of a material nature.
Geological interpretation	• There is good confidence in the geological interpretation of the mineral deposit and demonstrated good consistency both on section and between sections. • The stratigraphical, structural and mineralisation interpretation has been based on a combination of geophysical, geochemical and lithological data obtained from drillholes plus surface mapping information. • Wireframes of the stratigraphic and mineralisation surfaces are used to generate an empty geological block model.

	• The overlying hardcap/hydrated zone displays higher variability and lower continuity and as such there is less confidence of the estimation of this zone. • The mineralisation is noted to pinch down in a few isolated locations and lack continuity; there is less confidence in the estimation of these zones.
Dimensions	• The Split Rock resource has dimensions of approximately 900m (N-S) along strike and 150m (E-W) across strike and extends from surface to a maximum depth of 230m, with an average depth of approximately 150m. A thin, 10-15m thick hydrated layer blankets the entire resource at surface. Thin bands (5-10m thick) of unmineralised to weakly mineralised jaspilite and shale are seen internal to the mineralisation and have been domained out where thick and continuous enough.
Estimation and modelling techniques	• Mineralisation was domained according to stratigraphy and mineralisation style (hydrated or primary). Each geological unit was domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half drill hole spacing and surface mapping has been used to constrain the extents of mineralisation at surface. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative kriging neighbourhood analysis (QKNA) undertaken to optimize estimation parameters, including search parameters, number of samples (minimum and maximum) and block discretization. • No assumptions have been made regarding the modelling of selective mining units apart from the use of 5m parent cell heights to correspond with current mining bench heights used by Atlas at other projects. • No assumptions regarding correlation between variables has been made, however it has been noted during statistical analysis that Fe and Phosphorous show some correlation and SiO2 and Al2O3 are correlated in most mineralised domains. • Block model extends from 775880mE to 776680mE and 7622760mN to 7623960mN and elevation from 100mRL to 500mRL. • A single block model to encompass the Split Rock Mineral Resource was constructed using a 20mN by 20mE by 5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks and appropriate sample support is maintained. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. These domains are used to control the resource estimates. • All estimation was completed within separate domains using hard boundaries. • Ordinary Kriging was used to estimate the standard Atlas Iron suite of elements (Fe, SiO2, Al2O3, P, MnO, LOI, S, TiO2, MgO, CaO, K2O, Na2O) plus geophysical density and chip percent where possible. • Waste domains were estimated by inverse distance (power 2) method where enough data was present, with un-estimated blocks assigned

	mean grades for the specific domain. • Search directions and ranges determined from variogram modelling were used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates whilst minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacing's for run 1, 3 drill spacing's for run 2 and 4 drill spacing's for run 3. • A minimum of 12 samples and a maximum of 30 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 for run 2 and 8 for run 3. A maximum of 4 samples from any one drill hole is allowed per estimate. • A block discretisation of 5, 5, 2 was applied to align with the parent cell block size. • Generally a high proportion of blocks (>90%) were estimated in run 1. • Grade restriction search routines were applied to some of the minor deleterious elements in some domains to limit the influence of extreme/outlier grades from smearing distant blocks. • All block estimates are based on interpolation into parent block volumes. • Mineral resource estimate does not include any form of dilution, apart from where small intervals of internal waste could not be adequately domained out. • Maptek Vulcan software was used to complete the block estimation. • Standard model and estimation validation has been completed using visual and numerical methods and formal peer review by appropriately qualified internal staff. • Kriging efficiency and slope of regression statistics were used to quantify the estimation results were to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades to block grades, global statistical comparisons for each domain, total assay closure check, swath plot comparisons produced along easting's, northings and elevations and a change of support analysis was completed. • This resource estimate was compared to the previous estimate completed in July 2013 to understand changes between the models due to the infill drilling. The two models compared well with the updated estimate reporting similar volume, tones and grade, demonstrating the robust nature of the resource.
Moisture	• Tonnages are estimated on a dry basis. • The water table sits approximately 60m below the ground surface; approximately 40% of the resource is located below water table.
Cut-off parameters	• The criteria used for domaining mineralised material is >50% Fe, which appears to be a natural grade boundary for this deposit between mineralised and unmineralised BIF. • Based on the current Atlas shipped product grade specification, a 50% Fe lower cut-off grade is deemed a suitable cut-off to report resources for Split Rock.
Mining factors or assumptions	• Mining is assumed to be similar to the process used at other nearby Atlas deposits by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No other assumptions on mining methodology have been assumed at

	this stage as no detailed mine planning or production scenarios have been reviewed and are subject to a scoping level study. • It is a reasonable assumption that this resource will eventually be economically extracted based on its proximal location to existing Atlas projects and infrastructure and also due to its favourable size and grade characteristics which will fit the Atlas product specification.
Metallurgical factors or assumptions	• Preliminary Metallurgical test work based on RC composite samples from a selection of holes has been performed by SGS Lakefield Oretest Pty Ltd. The aim of this test work was to determine preliminary characteristics of the deposit such as particle size distribution, abrasion index, bulk density, moisture and asbestiform mineral analysis.
Environmental Factors or assumptions	• A thick (20-30m) carbonaceous and sulphidic (pyrite) shale unit has been identified along the entire footwall position of the deposit below the depth of oxidation. The net acid producing potential of this shale has not been determined to date, however samples have been collected and the test work is anticipated to commence shortly by Graeme Campbell and Associates. • The volume of this sulphidic shale within any potential pit is expected to be comfortably encapsulated by inert waste within any waste dump volume based on high level studies completed by Atlas. Mitigation of acid drainage within the pit will need further analysis. • Other detailed waste characterisation studies have not been undertaken but are anticipated to be completed during 2014.
Bulk density	• Dry bulk density has been estimated into the model with the use of geophysical density measurements collected in RC holes and regressed back to dry core dimensional density measurements. • All RC holes are attempted to be downhole surveyed for gamma density however some holes were open to end of hole depth resulting in incomplete data coverage over the deposit. Not all core intervals had 100% complete core recovery and these density measurements were excluded from the regression analysis as they are not representative. • Geophysical density measures the in-situ density inclusive of moisture and porosity. Filtered and cleaned Geophysical density was composited to 2m length and then estimated into the model in a similar fashion to grades and then a regression has been applied to account for the moisture, porosity and hole rugosity present in the readings to derive a dry density. • The regression has been calculated by comparing geophysical measurements in a diamond hole with dry, diamond core dimensional density measurements over the same intervals. Geophysical measurements taken in RC and Diamond Twin holes are also directly compared to account for differences due to hole effect (rugosity). • The use of dimensional tray density techniques is generally believed to be unbiased as it accounts for all material types and avoids material handling and selectivity issues commonly encountered by using more traditional Archimedes style density measurements. • 1,007 tray dimensional density measurements were determined from 5 HQ3 diamond holes (1,187m core) for the analysis. • A density regression of 4.7% reduction to geophysical density to derive the dry bulk density has been applied globally to this resource. • The resulting dry bulk density of 2.76t/m3 for the mineralisation

	compares consistently with Atlas's other nearby deposits such as Abydos and is felt to be a realistic determination of the density. • This is a bulk commodity project.
Classification	• Mineral resources have been classified by the Competent Person into the Inferred and Indicated categories based on RC drillhole spacing (40m x 40m), geological interpretation confidence, diamond core vs RC comparison, QAQC and overall data quality and confidence, grade continuity and resultant estimation statistical quality. • Mineral resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model show good correlation of the input data to the estimated grades. • The geological model and mineral resource estimation appropriately reflect the Competent Persons view of the deposit and appropriate account has been taken of all relevant factors. • All near surface hydrated mineralisation has been given an Inferred classification due to its known inherent variability. All mineralisation below the 260mRL (150m depth) has been kept at an Inferred classification due to limited RC drilling coverage, sparse geophysical density measurements and generally wet drilling conditions. Where the mineralisation pinches down and lacks continuity and shows increased complexity has also been given an Inferred classification. • An Indicated classification has been applied to areas of consistent RC drilling density, sufficient coverage of geophysical and core density data, confidence in QAQC of input data, strong geological and mineralisation continuity, mostly above water table (above 150m depth) or where RC drilling has been kept relatively dry and have confident estimation results. • The results of this updated resource compare well with the previous Split Rock resource estimate and show consistency of grade and tonnages.
Audits or reviews	• Atlas have undertaken an internal review of the mineral resource estimate and is satisfied the estimation is valid and of sufficient confidence to support an Indicated/Inferred classification. • The review consisted of numerous checks made throughout the data collection and estimation process. A final peer review including visual checks of blocks versus drillhole grades, global means comparisons, histogram distribution comparisons, swath plots in Easting, Northing and elevation and a change of support analysis was completed. • This mineral resource has not been audited externally. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• The confidence in this resource estimate has been deemed appropriate as a basis for long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • A change of support analysis was undertaken to assess the sensitivity to the grade-tonnage curve in going from sample to block sized support at a range of cut-off grades. This analysis shows that some misclassification

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	of material around the specified cut-off grades can be expected. • The Split Rock Resource Estimate is sufficient for scoping level study purposes commensurate with the classification of the resource. • This statement relates to global estimates of tonnes and grade. • There has been no production from the Split Rock deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource.

JORC (2012) - TABLE 1 – RUNWAY RESOURCE

JORC CODE 2012 EDITION – TABLE 1 CORUNNA DOWNS RUNWAY RESOURCE – MAY 2014	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Reverse circulation (RC) drilling was used to obtain 2.0m down hole interval samples. The samples were passed through a cone splitter to collect a nominal 4.0-6.0kg sample (approximately 10% split ratio) into pre-numbered calico bags. • Duplicate samples taken at a set frequency of one every twenty samples (5% of total samples) from the cone splitter to monitor sampling representivity. • Geophysical gamma density measurements collected downhole by ABIMS geophysical contractor using a Geovista Dual Density logging tool (Caesium source, density range 1-4.5g/cc) to ascertain approximate in-situ density values. Tool is regularly calibrated every 2 weeks using a range of known media and a calibration hole.
Drilling techniques	• Reverse Circulation drilling employing a 140mm diameter face sampling hammer. A nominal drillhole spacing of 80mN x 40mE has been completed for this resource update. A total of 39 RC holes for 4,466m have been drilled.
Drill sample recovery	• RC sample recovery is logged at the drill site by the geologist based on the volume of sample returned from the cone splitter. This is recorded as either good, fair, poor or no sample recovered. Of the total 2,233 RC samples collected, 2,211 (99%) were recorded as Good, 8 (0.4%) were recorded as fair and 14 (0.6%) were recorded as poor. • All samples are weighed at the laboratory to continually monitor and record sample size. 3 RC holes were duplicate sampled for every interval down hole and also had the entire sample volume presenting to the splitter weighed to ensure appropriate sample split ratio was achieved through the splitter and the samples were of a representative size. • To ensure maximum sample recovery and representivity of the samples, an experienced Atlas geologist was present during drilling, continuously monitoring the sampling process. Any issues were immediately rectified. • Atlas is satisfied that the RC holes have taken a sufficiently representative sample of the mineralisation and minimal loss of fines has occurred in the RC drilling resulting in minimal sample bias. • No relationship between sample recovery and grade has been demonstrated.
Logging	• Logging of every 2m interval corresponding with 2m sampled interval. This level of detail is supportive and appropriate for Mineral Resource estimation, mining and metallurgical studies for a bulk commodity such as iron ore. • RC logging is qualitative and quantitative in nature. • RC Logging records the abundance/proportion of specific minerals/material types and lithology's, hardness recorded by physical chip percent measurement, weathering and colour.

	• The entire lengths of RC holes were logged on a 2m interval basis, 100% of the drilling was logged. Where no sample was returned due to voids/cavities it is recorded as such. • 38 of 39 holes were downhole geophysically logged (or attempted) for Natural Gamma, Resistivity, Gamma Density, Calliper and Magnetic Susceptibility. Not all holes were open at depth which precluded 100% coverage of measurements from all of the drillholes.
Sub-sampling techniques and sample preparation	• All RC samples were collected on two meter down hole intervals passed through a cone splitter to collect a nominal 4.0kg-6.0kg sample. The majority of samples are reported as dry, however a proportion of below water table samples are reported as being moist or wet. Of the 2,233 RC samples collected 1,172 (52.5%) reported as dry, 271 (12.1%) moist and 738 (33.1%) as wet and 52 (2.3%) as wet injected during drilling. • Where RC samples were considered to be large (>6kg), they were crushed down to 3mm fraction and riffle split down to produce a smaller sample suitable for pulverizing. Coarse duplicates are taken by the lab at a ratio of 1:10 to monitor this process. • Sample weight/split analysis shows that on average at least 10% split ratio is being achieved consistently through the cone splitter primary and duplicate sampling ports. • Duplicate sample analysis show the data has acceptable precision, indicating that the sampling technique is appropriate for the deposit • The sample sizes were considered to be appropriate to correctly represent the mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent values assay ranges for the primary elements.
Quality of assay data and laboratory tests	• All samples submitted to SGS Laboratory in Perth and assayed for the extended iron ore suite (24 elements) by XRF and a total LOI by thermogravimetric technique. The method used is designed to measure the total amount of each element in the sample. • Samples were subjected to routine particle sizing analysis by the lab to ensure the pulverizing stage is achieving appropriate particle size for XRF analysis showed acceptable results. This analysis shows that 95% of samples tested returned greater than the 90% passing 75 micron requirement. • Laboratory procedures are in line with industry standards and are appropriate for iron ore analysis. • Samples are dried at 105^{o}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using an LM2 mill. • Sub-samples are collected to produce a 66 gram sample that is dried further, fused at 1100^{o}C for 10 minutes, poured into a platinum mould and placed in the XRF machine for analysis and reporting. • A total LOI is measured by Thermogravimetric methods (TGA) at 1000^{o}C. • Atlas inserts commercially available certified reference material (standards) at a set frequency of 1:20 (5% of total samples) within its sample batches. A number of different standards at a range of grades are used to monitor analytical precision of the assay results. • Blanks are not used by Atlas due to the nature of the analysis being a complete multi-element suite. • Acceptable levels of precision have been achieved with all standard assays reporting within 2 standard deviations of the certified mean grade for the 12 main

	elements of interest. • The lab also inserts its own standards at set frequencies and monitors the precision of the XRF analysis. These results also reported well within the specified 2 standard deviations of the mean grades for all 12 main elements of interest. • XRF calibrations are checked once per shift using calibration beads made using exact weights. • The Laboratory performs repeat analyses of sample pulps at a rate of 1:20 (5% of all samples) these compare very closely with the original analysis for all elements. • Analysis of field duplicate and lab pulp duplicates and repeats reveals that greater than 90% of pairs have less than 10% difference and the precisions of samples is within acceptable limits and concurs with industry recommended practices. • Atlas sent a selection of pulps to an umpire laboratory (Bureau Veritas, Perth) for verification by an independent laboratory. Comparison of results between laboratories did not reveal any issues and analytical precision was considered acceptable.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. RC chips have been inspected in the field to verify the correlation of mineralised zones with assay results. The Competent Person for this report has visited site and inspected all sampling processes in the field and also inspected the laboratory on a regular basis. • 4 HQ3 diamond twin holes have been drilled for comparison with RC drillholes and quantitatively analysed with no issues identified, indicating that the assays of RC samples are reliable. This work was conducted on the nearby Split Rock deposit. • All primary data is captured electronically on field Toughbook laptops using acQuire^{tm} software. The software has built in validation routines to prevent data entry errors at the point of entry. Data is also validated prior to export from the Toughbook and again on import into the main corporate acQuire database. • All data is sent to Perth and stored in a secure, centralised acQuire SQL database which is administered by a full database administrator. • Documentation related to data custody, validation and storage are maintained on the company's server. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection level values to half positive detection.
Location of data points	• All collars 2 were surveyed by licensed surveyors (MRH Surveyors, Perth) utilising a RTK GPS system tied into the state survey mark (SSM) network with the expected relative accuracy of 0.05m E, N & RL. Elevation values are in AHD RL. • The grid system for the Corunna Downs Project and the Runway resource is MGA_GDA94_Z50. • Downhole gyroscopic surveys are attempted on all RC and diamond holes by ABIMS geophysical contractors. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool with a stated accuracy of +/-1^{o} in azimuth and +/-0.1^{o} in inclination. QC of the gyro tool involved field calibration using a test stand and also a calibration hole. • Topographic data and imagery collected by Outline Global Pty Ltd based on 10cm resolution RGB imagery. 2m vertical contour interval resolution derived from stereoscopic imagery DTM. Aerial survey flown on the 16th March 2013. Data supplied in projection MGA_GDA94 Zone 50. The quality and resolution of the topographic data is considered to be adequate for resource estimation purposes
Data spacing and	• RC Drill spacing is on an approximate 80m (N-S) by 40m (E-W) grid, however due

distribution	to topographic constraints this is sometimes not achievable. • This drill spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification under the 2012 JORC code and is suitable for this style of deposit. • Sample compositing has not been applied to the RC samples used in the resource estimate; all RC samples are collected at 2m intervals. • Geophysical density measurements collected at 10cm increments were composited up to 2m intervals to correspond with the sample length. The compositing process was checked to ensure that no changes to the statistical population had been incurred due to the compositing process.
Orientation of data in relation to geological structure	• The attitude of the Runway resource is predominantly moderately west dipping from 40-50 degrees and is drilled to grid east with drillholes inclined at -60 degrees which is slightly oblique to the orientation of the mineralisation. Surface mapping supports the drilling direction and sampling orientation. Due to the varying intersection angles all intercept results are reported as downhole widths and not true widths. • No drilling orientation and sampling bias has been recognized at this time and is not considered to have introduced a sampling bias.
Sample security	• Chain of custody is managed by Atlas. Pre-numbered calico sample bags are packed into sealed and labelled polyweave bags on site and then placed inside sealed and labelled bulka bags. Samples are delivered to a dispatch point in Port Hedland by Atlas Staff and a consignment number issued by the transport company. Samples are transported to the relevant laboratory in Perth by courier. Once received at the laboratory, the consignment of samples is receipted against the sample dispatch documents and a reconciliation report is issued to Atlas for every sample batch. Samples are stored in a secure yard at the lab until analysis. • Sample security was not considered a significant risk to the project.
Audits or reviews	• An audit of the Atlas acQuire drillhole database is performed regularly by independent database management consultants (rOREdata Pty Ltd). The last audit was completed in January 2014 and reported the database to be of a good standard and acceptable for JORC compliant resource estimation activities. • A review of all the resource drillhole data and sampling techniques is carried out internally as part of the resource estimation process on a routine basis. • An external audit of Atlas' drilling, sampling, logging, assaying and data transfer procedures has been performed by John Graindorge (Principal Consultant) of Snowden's Mining Industry Consultants in March/April 2014, the final report is pending at the time of this release. This audit entailed a laboratory inspection and a 2 day site visit to Corunna Downs to inspect all field practices and procedures. No significant issues were revealed during the audit that would be material to the outcomes presented in this release.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• The Runway resource is located wholly within Exploration Lease E45/2585. The tenement is 100% Atlas owned. • The tenement sits within the Njamal Native Title Claim (WC1999/088). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• 7 open hole percussion drill holes completed by Geotechnics Australia Ltd (1972), no intersections of DSO grade mineralisation were reported, area determined to not be prospective. • Rock chip sampling, geological mapping and geophysical surveys completed by

	Gondwana Resources Pty Ltd (2010), recognized presence of near surface zones of DSO grade iron mineralisation.
Geology	• The Corunna Downs Runway BIF-hosted iron ore resource is hosted by the ca. 3.02 Ga Cleaverville formation (Gorge Creek group, De Grey Supergroup). The prospect is located in the Kelly greenstone belt within the East Pilbara terrane of Western Australia, approximately 170km southwest of Port Hedland. The N-S trending Kelly greenstone belt is bound by the Corunna Downs and Shaw granitoid complexes. The Runway resource features successive macrobands of goethite-hematite rich, high grade (>55 wt% Fe) ore zones associated with neighbouring jaspilitic BIF units and banded chert and shale. • The Runway deposit is bounded to the west by a N-S trending fault, interpreted to be a normal fault. The fault zone is in the order of several metres in thickness.
Drill hole Information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
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Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Atlas previously reported deposit information and exploration updates for the Runway Prospect (see Atlas ASX releases, 9th December, 2013 and 31st Jan 2014). • Surface Geological mapping (stratigraphy, mineralisation and structure) of the Runway prospect was performed by Atlas Geological personnel. • Routine multi-element analysis of potential deleterious or contaminating substances such as Arsenic, Lead, Zinc and Sulphur is completed for all samples. • Geologists from the Centre for Exploration Targeting (CET), University of Western Australia (UWA) are completing research studies on the Corunna Downs Project with focus on the controls on mineralisation. The nature and timing of mineralisation events is also being evaluated through isotopic and geochemical analysis. • Preliminary Metallurgical test work based on RC composite samples from a selection of holes at the nearby and geologically similar Split Rock resource, have been performed by SGS Lakefield Oretest Pty Ltd. The aim of this test work was to determine preliminary characteristics of the deposit such as particle size distribution, abrasion index, bulk density, moisture and asbestiform mineral analysis.
Further work	• 5 HQ3 diamond drillholes are currently being drilled at Runway (at time of release) to enable bulk density analysis, geophysical density regression, structural,

	stratigraphical and mineralogical understanding. • Hydrogeology studies to determine dewatering requirements are currently being scoped. • Waste classification samples have been collected to assess the nature of potentially acid forming (PAF) sulphidic carbonaceous shale material. • A selection of drillholes will be left open for use in subterranean fauna studies. • Further RC extensional drilling is underway at the time of this release to close of mineralisation to the north, assay results are pending. This drilling is intended to define the ultimate dimensions and size of the deposit. • Infill RC drilling to bring the drillhole spacing down to 40mN by 40mE is planned to increase the confidence in the estimation.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• All data is entered digitally in the field into acquire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The data files are then electronically transferred to the Perth office via email where they are loaded into the centralised SQL acQuire drillhole database and undergo further validation routines before being finally accepted. Validation reports are produced for each drillhole and sent back out to the site geologists for final checking. • Assay files sent electronically from the lab in a secure file format and also in hard copy reports. The assay data undergo numerous checks before being accepted into the database on passing all QAQC rules. • The Atlas acQuire drillhole database is administered by a full-time geological database administrator. Data validation checks are run routinely by the database administrator and database consultancy 'rOREdata' using acQuire software validation routines.
Site visits	• The Competent Person for this report is a full time employee of Atlas Iron and undertakes regular site visits ensuring that industry acceptable standards of the entire process from sampling through the final block model estimate are maintained. Site visits were carried out in June and October 2013 and April 2014 to inspect the deposit area, RC and diamond logging and sampling practices. Discussions were held with site personnel regarding procedures and a number of minor recommendations were made but nothing was noted that was of a material nature. • John Graindorge (Principal Consultant) Snowdens Mining Industry Consultants visited site in April 2014 to complete an external audit of Atlas' drilling, sampling, QAQC, logging procedures. No significant issues were revealed during the audit that would be material to the outcomes presented in this release.
Geological interpretation	• There is good confidence in the geological interpretation of the mineral deposit and demonstrated good consistency both on section and between sections. • The stratigraphical, structural and mineralisation interpretation has been based on a combination of geophysical, geochemical and lithological data obtained from drillholes plus surface mapping information. • Wireframes of the stratigraphic and mineralisation surfaces are used to generate an empty geological block model. • The overlying hardcap/hydrated zone displays higher variability and lower continuity and as such there is less confidence of the estimation of this zone. • The exact position and nature of the western bounding fault zone which constrains the mineralisation is not fully defined as yet, there is less confidence is the geological interpretation in the proximity of this zone.

Dimensions	• The Runway resource has dimensions of approximately 650m (N-S) along strike and 250m (E-W) across strike and extends from surface to a maximum depth of ~ 180m, with an average depth of approximately 100m. A thin, 10-15m thick hydrated layer blankets the entire resource at surface. Thin bands (5-10m thick) of unmineralised to weakly mineralised jaspilite and shale are seen internal to the mineralisation and have been domained out where thick and continuous enough.
Estimation and modelling techniques	• Mineralisation was domained according to stratigraphy and mineralisation style (hydrated or primary). Each geological unit was domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half drill hole spacing and surface mapping has been used to constrain the extents of mineralisation at surface. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative kriging neighbourhood analysis (QKNA) undertaken to optimize estimation parameters, including search parameters, number of samples (minimum and maximum) and block discretization. • No assumptions have been made regarding the modelling of selective mining units apart from the use of 5m parent cell heights to correspond with current mining bench heights used by Atlas at other projects. • No assumptions regarding correlation between variables has been made, however it has been noted during statistical analysis that Fe and Phosphorous show some correlation and SiO_2 and Al_2O_3 are correlated in most mineralised domains. • Block model extends from 777380mE to 778420mE and 7627720mN to 7629240mN and elevation from -100mRL to 700mRL. • A single block model to encompass the Runway Mineral Resource was constructed using a 40mN by 20mE by 5mRL parent block size with sub-celling to 5mE by 5mN by 2.5mRL for domain resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks and appropriate sample support is maintained. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. These domains are used to control the resource estimates. • All estimation was completed within separate domains using hard boundaries. • Ordinary Kriging was used to estimate the standard Atlas Iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, K_2O, Na_2O) plus geophysical density and chip percent where possible. • Hydrated and Waste domains were estimated by inverse distance (power 2) method where enough data was present, with un-estimated blocks assigned mean grades for the specific domain. • Search directions and ranges determined from variogram modelling were used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates whilst minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacing's for run 1, 3 drill spacing's for run 2 and 4 drill spacing's for run 3. • The orientation of the search ellipse varied for each block based on Maptek

	Vulcan's 'Dynamic Anisotropy function, which applies a bearing, dip and plunge to each block based on its position relative to a defined stratigraphic surface. • A minimum of 12 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 for run 2 and 8 for run 3. A maximum of 4 samples from any one drill hole is allowed per estimate. • A block discretisation of 5, 5, 2 was applied to align with the parent cell block size. • Generally a high proportion of blocks (>80%) were estimated in run 1. • Grade restriction search routines were applied to some of the minor deleterious elements in some domains to limit the influence of extreme/outlier grades from smearing distant blocks (S, CaO and MnO). • All block estimates are based on interpolation into parent block volumes. • Mineral resource estimate does not include any form of dilution, apart from where small intervals of internal waste could not be adequately domained out. • Maptek Vulcan software was used to complete the block estimation. • Standard model and estimation validation has been completed using visual and numerical methods and formal peer review by appropriately qualified internal staff. • Kriging efficiency and slope of regression statistics were used to qualify the estimation results were to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades to block grades, global statistical comparisons for each domain, swath plot comparisons produced along easting's, northings and elevations, total assay closure balance and a change of support analysis
Moisture	• Tonnages are estimated on a dry basis. • The water table sits approximately 40m below the ground surface; approximately 50% of the resource is located below water table.
Cut-off parameters	• The criteria used for domaining mineralised material is >50% Fe, which appears to be a natural grade boundary for this deposit between mineralised and unmineralised BIF. • Based on the current Atlas shipped product grade specification, a 50% Fe lower cut-off grade is deemed a suitable cut-off to report resources for Runway. • The tabulated resources were reported using a 50% Fe cut-off grade applied on a block by block basis.
Mining factors or assumptions	• Mining is assumed to be similar to the process used at other nearby Atlas deposits by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No other assumptions on mining methodology have been assumed at this stage as no detailed mine planning or production scenarios have been reviewed and are subject to a scoping level study. • It is a reasonable assumption that this resource will eventually be economically extracted based on its proximal location to existing Atlas projects and infrastructure and also due to its favourable size and grade characteristics which will fit the Atlas product specification.
Metallurgical factors or assumptions	• Preliminary Metallurgical test work based on RC composite samples from a selection of holes from Corunna Downs has been performed by SGS Lakefield Oretest Pty Ltd. The aim of this test work was to determine preliminary characteristics of the deposit such as particle size distribution, abrasion index, bulk density, moisture and asbestiform mineral analysis.
Environmental factors or assumptions	• A carbonaceous and sulphidic (pyrite) shale unit has been identified along the entire footwall position of the deposit below the depth of oxidation. The net acid producing potential of this shale has not been determined to date, however

	samples have been collected and the test work is anticipated to commence shortly by Outback Ecology Pty Ltd. • The volume of this sulphidic shale within any potential pit is expected to be comfortably encapsulated by inert waste within any waste dump volume based on high level studies completed by Atlas. Mitigation of acid drainage within the pit will need further analysis. • Detailed waste characterisation studies have not been undertaken but are anticipated to be completed during 2014/5.
Bulk density	• Dry bulk density has been estimated into the model with the use of geophysical density measurements collected in RC holes and regressed back to dry core dimensional density measurements. As no drillcore from Runway was available for this purpose, the regression results from the nearby and geologically similar Split Rock deposit were utilised. • All RC holes are attempted to be downhole surveyed for gamma density however some holes were open to end of hole depth resulting in incomplete data coverage over the deposit. Not all core intervals had 100% complete core recovery and these density measurements were excluded from the regression analysis as they are not representative. • Geophysical density measures the in-situ density inclusive of moisture and porosity. Filtered and cleaned Geophysical density was composited to 2m length and then estimated into the model in a similar fashion to grades and then a regression has been applied to account for the moisture, porosity and hole rugosity present in the readings to derive a dry density. • The regression has been calculated by comparing geophysical measurements in a diamond hole with dry, diamond core dimensional density measurements over the same intervals. Geophysical measurements taken in RC and Diamond Twin holes are also directly compared to account for differences due to hole effect (rugosity). • The use of dimensional tray density techniques is generally believed to be unbiased as it accounts for all material types and avoids material handling and selectivity issues commonly encountered by using more traditional Archimedes style density measurements. • 1,007 tray dimensional density measurements were determined from 5 HQ3 diamond holes (1,187m core) for the analysis. • A density regression of 4.7% reduction to geophysical density to derive the dry bulk density has been applied globally to this resource. • The resulting dry bulk density of 2.83t/m^3 for the Runway mineralisation compares consistently with nearby deposits such as Split Rock (2.78t/m^3) and is felt to be a realistic determination of the in situ density. • This is a bulk commodity project.
Classification	• Resources were classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition). • Mineral resources have been classified by the Atlas Competent Person into the Inferred category based on RC drillhole spacing (80m x 40m), geological interpretation confidence, QAQC and overall data quality and confidence, grade continuity and resultant estimation statistical quality. • Mineral resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation.

	• The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model show good correlation of the input data to the estimated grades. • The geological model and mineral resource estimation appropriately reflect the Competent Persons view of the deposit and appropriate account has been taken of all relevant factors.
Audits or reviews	• Atlas have undertaken an internal review of the mineral resource estimate and is satisfied the estimation is valid and of sufficient confidence to support an Inferred classification. • The review consisted of numerous checks made throughout the data collection and estimation process. A final peer review including visual checks of blocks versus drillhole grades, global means comparisons, histogram distribution comparisons, total assay closure checks, swath plots in Easting, Northing and elevation and a change of support analysis was completed. • This mineral resource has not been audited externally. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/ confidence	• The confidence in this resource estimate has been deemed appropriate as a basis for conceptual long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • A change of support analysis was undertaken to assess the sensitivity to the grade-tonnage curve in going from sample to block sized support at a range of cut-off grades. This analysis shows that some misclassification of material around the specified cut-off grades can be expected and is attributed to an expected amount of smoothing incurred by the ordinary kriging process. • The Runway Resource Estimate is sufficient for scoping level study purposes commensurate with the classification of the resource. • This statement relates to global estimates of tonnes and grade. • There has been no production from the Runway deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource.

Reserve and Resource Update

JORC (2012) - TABLE 1 – RAZORBACK RESOURCE

JORC CODE 2012 EDITION – TABLE 1 CORUNNA DOWNS RAZORBACK RESOURCE - MAY 2014 SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Reverse circulation (RC) drilling was used to obtain 2.0m down hole interval samples. The samples were passed through a cone splitter to collect a nominal 4.0-6.0kg sample (approximately 10% split ratio) into pre-numbered calico bags. • Duplicate samples taken at a set frequency of one every twenty samples (5% of total samples) from the cone splitter to monitor sampling representivity. • Geophysical gamma density measurements collected downhole by ABIMS geophysical contractor using a Geovista Dual Density logging tool (Caesium source, density range 1-4.5g/cc) to ascertain approximate in-situ density values. Tool is regularly calibrated every 2 weeks using a range of known media and a calibration hole.
Drilling techniques	• Reverse Circulation drilling employing a 140mm diameter face sampling hammer. A nominal drillhole spacing of 80mN x 20mE has been completed for this resource update. A total of 17 RC holes for 2,180m have been drilled.
Drill sample recovery	• RC sample recovery is logged at the drill site by the geologist based on the volume of sample returned from the cone splitter. This is recorded as either good, fair, poor or no sample recovered. Of the total 1,090 RC samples collected, 1,077 (98.8%) were recorded as Good, no samples were recorded as fair and 13 (1.2%) were recorded as poor. • All samples are weighed at the laboratory to continually monitor and record sample size. Sample weights indicated good levels of sample recovery with an average sample weight of 5163g. • To ensure maximum sample recovery and representivity of the samples, an experienced Atlas geologist was present during drilling, continuously monitoring the sampling process. Any issues were immediately rectified. • Atlas is satisfied that the RC holes have taken a sufficiently representative sample of the mineralisation and minimal loss of fines has occurred in the RC drilling resulting in minimal sample bias. • No relationship between sample recovery and grade has been demonstrated.
Logging	• Logging of every 2m interval corresponding with 2m sampled interval. This level of detail is supportive and appropriate for Mineral Resource estimation, mining and metallurgical studies for a bulk commodity such as iron ore. • RC logging is qualitative and quantitative in nature. • RC Logging records the abundance/proportion of specific minerals/material types and lithology's, hardness recorded by physical chip percent measurement, weathering and colour. • The entire lengths of RC holes were logged on a 2m interval basis, 100% of the drilling was logged. Where no sample was returned due to voids/cavities it is recorded as such. • All 17 holes were downhole geophysically logged (or attempted) for Natural Gamma, Resistivity, Gamma Density, Calliper and Magnetic Susceptibility. Not all holes were open at depth which precluded 100% coverage of measurements from all of the drillholes.
Sub-sampling techniques and sample preparation	• All RC samples were collected on two metre downhole intervals passed through a cone splitter to collect a nominal 4.0kg-6.0kg sample. The majority of samples are reported as dry, however a proportion of below water table samples are reported

	as being moist or wet. Of the 1,090 RC samples collected 807 (74%) reported as dry, and 283 (26%) as moist or wet due to drilling below the water table. • Where RC samples were considered to be large (>6kg), they were crushed down to 3mm fraction and riffle split down to produce a smaller sample suitable for pulverizing. Coarse duplicates are taken by the lab at a ratio of 1:10 to monitor this process. • Sample weight/split analysis shows that on average at least 10% split ratio is being achieved consistently through the cone splitter primary and duplicate sampling ports. • Duplicate sample analysis show the data has acceptable precision, indicating that the sampling technique is appropriate for the deposit • The sample sizes were considered to be appropriate to correctly represent the mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent values assay ranges for the primary elements.
Quality of assay data and laboratory tests	• All samples submitted to SGS Laboratory in Perth and assayed for the extended iron ore suite (24 elements) by XRF and a total LOI by thermogravimetric technique. The method used is designed to measure the total amount of each element in the sample. • Samples were subjected to routine particle sizing analysis by the lab to ensure the pulverizing stage is achieving appropriate particle size for XRF analysis showed acceptable results. This analysis shows that 95% of samples tested returned greater than the 90% passing 75 micron requirement. • Laboratory procedures are in line with industry standards and are appropriate for iron ore analysis. • Samples are dried at 105^{o}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using an LM2 mill. • Sub-samples are collected to produce a 66 gram sample that is dried further, fused at 1100^{o}C for 10 minutes, poured into a platinum mould and placed in the XRF machine for analysis and reporting. • A total LOI is measured by Thermogravimetric methods (TGA) at 1000^{o}C. • Atlas inserts commercially available certified reference material (standards) at a set frequency of 1:20 (5% of total samples) within its sample batches. A number of different standards at a range of grades are used to monitor analytical precision of the assay results. • Blanks are not used by Atlas due to the nature of the analysis being a complete multi-element suite. • Acceptable levels of precision have been achieved with all standard assays reporting within 2 standard deviations of the certified mean grade for the 12 main elements of interest. • The lab also inserts its own standards at set frequencies and monitors the precision of the XRF analysis. These results also reported well within the specified 2 standard deviations of the mean grades for all 12 main elements of interest. • XRF calibrations are checked once per shift using calibration beads made using exact weights. • The Laboratory performs repeat analyses of sample pulps at a rate of 1:20 (5% of all samples) these compare very closely with the original analysis for all elements. • Analysis of field duplicate and lab pulp duplicates and repeats reveals that greater than 90% of pairs have less than 10% difference and the precisions of samples is

	within acceptable limits and concurs with industry recommended practices. • Atlas sent a selection of pulps to an umpire laboratory (Bureau Veritas, Perth) for verification by an independent laboratory. Comparison of results between laboratories did not reveal any issues and analytical precision was considered acceptable.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. RC chips have been inspected in the field to verify the correlation of mineralised zones with assay results. The Competent Person for this report has visited site and inspected all sampling processes in the field and also inspected the laboratory on a regular basis. • 4 HQ3 diamond twin holes have been drilled for comparison with RC drillholes and quantitatively analysed with no issues identified indicating that the assays of RC samples are reliable. This work was conducted on the nearby and geologically similar Split Rock deposit. • All primary data is captured electronically on field Toughbook laptops using acQuire^{tm} software. The software has built in validation routines to prevent data entry errors at the point of entry. Data is also validated prior to export from the Toughbook and again on import into the main corporate acQuire database. • All data is sent to Perth and stored in a secure, centralised acQuire SQL database which is administered by a full database administrator. • Documentation related to data custody, validation and storage are maintained on the company's server. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection level values to half positive detection.
Location of data points	• All collars were surveyed by licensed surveyors (MRH Surveyors, Perth) utilising a RTK GPS system tied into the state survey mark (SSM) network with the expected relative accuracy of 0.05m E, N & RL. Elevation values are in AHD RL. • The grid system for the Corunna Downs Project and the Razorback resource is MGA_GDA94_Z50. • Downhole gyroscopic surveys are attempted on all RC and diamond holes by ABIMS geophysical contractors. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool with a stated accuracy of +/-1^{o} in azimuth and +/-0.1^{o} in inclination. QC of the gyro tool involved field calibration using a test stand and also a calibration hole. • Topographic data and imagery collected by Outline Global Pty Ltd based on 10cm resolution RGB imagery. 2m vertical contour interval resolution derived from stereoscopic imagery DTM. Aerial survey flown on the 16th March 2013. Data supplied in projection MGA_GDA94 Zone 50. The quality and resolution of the topographic data is considered to be adequate for resource estimation purposes
Data spacing and distribution	• RC Drill spacing is on an approximate 80m (N-S) by 40m (E-W) grid, however due to topographic constraints this is sometimes not achievable. • This drill spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification under the 2012 JORC code and is suitable for this style of deposit. • Sample compositing has not been applied to the RC samples used in the resource estimate; all RC samples are collected at 2m intervals. • Geophysical density measurements collected at 10cm increments were composited up to 2m intervals to correspond with the sample length. The compositing process was checked to ensure that no changes to the statistical population had been incurred due to the compositing process.
Orientation of data in	• The attitude of the Razorback resource is predominantly steeply west dipping from

relation to geological structure	70-80 degrees and is drilled to grid east with drillholes inclined at -60 degrees which is slightly oblique to the orientation of the mineralisation. Surface mapping supports the drilling direction and sampling orientation. Due to the varying intersection angles all intercept results are reported as downhole widths and not true widths. • No drilling orientation and sampling bias has been recognized at this time and is not considered to have introduced a sampling bias.
Sample security	• Chain of custody is managed by Atlas. Pre-numbered calico sample bags are packed into sealed and labelled polyweave bags on site and then placed inside sealed and labelled bulka bags. Samples are delivered to a dispatch point in Port Hedland by Atlas Staff and a consignment number issued by the transport company. Samples are transported to the relevant laboratory in Perth by courier. Once received at the laboratory, the consignment of samples is receipted against the sample dispatch documents and a reconciliation report is issued to Atlas for every sample batch. Samples are stored in a secure yard at the lab until analysis. • Sample security was not considered a significant risk to the project.
Audits or reviews	• An audit of the Atlas acQuire drillhole database is performed regularly by independent database management consultants (rOREdata Pty Ltd). The last audit was completed in January 2014 and reported the database to be of a good standard and acceptable for JORC compliant resource estimation activities. • A review of all the resource drillhole data and sampling techniques is carried out internally as part of the resource estimation process on a routine basis. • An external audit of Atlas' drilling, sampling, logging, assaying and data transfer procedures has been performed by John Graindorge (Principal Consultant) of Snowden's Mining Industry Consultants in March/April 2014, the final report is pending at the time of this release. This audit entailed a laboratory inspection and a 2 day site visit to Corunna Downs to inspect all field practices and procedures. No significant issues were revealed during the audit that would be material to the outcomes presented in this release.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• The Razorback resource is located wholly within Exploration Lease E45/3321. The tenement is 100% Atlas owned. • The tenement sits within the Njamal Native Title Claim (WC1999/088). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• 7 open hole percussion drill holes completed by Geotechnics Australia Ltd (1972), no intersections of DSO grade mineralisation were reported, area determined to not be prospective. • Rock chip sampling, geological mapping and geophysical surveys completed by Gondwana Resources Pty Ltd (2010), recognized presence of near surface zones of DSO grade iron mineralisation.
Geology	• The Corunna Downs Razorback BIF-hosted iron ore resource is hosted by the ca. 3.02 Ga Cleaverville formation (Gorge Creek group, De Grey Supergroup). The prospect is located in the Kelly greenstone belt within the East Pilbara terrane of Western Australia, approximately 170km southwest of Port Hedland. The N-S trending Kelly greenstone belt is bound by the Corunna Downs and Shaw granitoid complexes. The Razorback resource features successive macrobands of goethite-hematite rich, high grade (>55 wt% Fe) ore zones associated with neighbouring jaspilitic BIF units and banded chert and shale.
Drill hole Information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves

	and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Atlas previously reported deposit information and exploration updates for the Razorback Prospect (see Atlas ASX releases, 9th December, 2013 and 31st Jan 2014). • Surface Geological mapping (stratigraphy, mineralisation and structure) of the Razorback prospect was performed by Atlas Geological personnel. • Routine multi-element analysis of potential deleterious or contaminating substances such as Arsenic, Lead, Zinc and Sulphur is completed for all samples. • Geologists from the Centre for Exploration Targeting (CET), University of Western Australia (UWA) are completing research studies on the Corunna Downs Project with focus on the controls on mineralisation. The nature and timing of mineralisation events is also being evaluated through isotopic and geochemical analysis. • Preliminary Metallurgical test work based on RC composite samples from a selection of holes at the nearby and geologically similar Split Rock resource, have been performed by SGS Lakefield Oretest Pty Ltd. The aim of this test work was to determine preliminary characteristics of the deposit such as particle size distribution, abrasion index, bulk density, moisture and asbestiform mineral analysis.
Further work	• HQ3 diamond drillholes are planned to be drilled at the Razorback Deposit during 2014 to enable bulk density analysis, geophysical density regression, structural, stratigraphical and mineralogical understanding. • Hydrogeology studies to determine dewatering requirements are currently being scoped. • Waste classification samples have been collected to assess the nature of potentially acid forming (PAF) sulphidic carbonaceous shale material. • A selection of drillholes will be left open for use in subterranean fauna studies. • Further RC extensional drilling is underway at the time of this release to close off mineralisation to the north. This drilling is intended to define the ultimate dimensions and size of the deposit. • Infill RC drilling to bring the drillhole spacing down to 40mN by 20mE is planned to increase the confidence in the estimation.
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Database integrity	• All data is entered digitally in the field into acquire logging software on a

	Toughbook computer via templates and lookup tables with enforced data validation rules. The data files are then electronically transferred to the Perth office via email where they are loaded into the centralised SQL acQuire drillhole database and undergo further validation routines before being finally accepted. Validation reports are produced for each drillhole and sent back out to the site geologists for final checking. • Assay files sent electronically from the lab in a secure file format and also in hard copy reports. The assay data undergo numerous checks before being accepted into the database on passing all QAQC rules. • The Atlas acQuire drillhole database is administered by a full-time geological database administrator. Data validation checks are run routinely by the database administrator and database consultancy 'rOREdata' using acQuire software validation routines.
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Dimensions	• The Razorback resource has dimensions of approximately 350m (N-S) along strike and 150m (E-W) across strike and extends from surface to a maximum depth of ~ 180m, with an average depth of approximately 100m. A thin, 10-15m thick hydrated layer blankets the entire resource at surface. Thin bands (5-10m thick) of unmineralised to weakly mineralised jaspilite and shale are seen internal to the mineralisation and have been domained out where thick and continuous enough.
Estimation and modelling techniques	• Mineralisation was domained according to stratigraphy and mineralisation style (hydrated or primary). Each geological unit was domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half drill hole spacing and

	surface mapping has been used to constrain the extents of mineralisation at surface. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative kriging neighbourhood analysis (QKNA) undertaken to optimize estimation parameters, including search parameters, number of samples (minimum and maximum) and block discretization. • No assumptions have been made regarding the modelling of selective mining units apart from the use of 5m parent cell heights to correspond with current mining bench heights used by Atlas at other projects. • No assumptions regarding correlation between variables has been made, however it has been noted during statistical analysis that Fe and Phosphorous show some correlation and SiO_2 and Al_2O_3 are correlated in most mineralised domains. • Block model extends from 776400mE to 777300mE and 7623300mN to 7624220mN and elevation from 0mRL to 600mRL. • A single block model to encompass the Razorback Mineral Resource was constructed using a 40mN by 10mE by 5mRL parent block size with sub-celling to 5mE by 5mN by 2.5mRL for domain resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks and appropriate sample support is maintained. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. These domains are used to control the resource estimates. • All estimation was completed within separate domains using hard boundaries. • Ordinary Kriging was used to estimate the standard Atlas Iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, K_2O, Na_2O) plus geophysical density and chip percent where possible. • Hydrated and Waste domains were estimated by inverse distance (power 2) method where enough data was present, with un-estimated blocks assigned mean grades for the specific domain. • Search directions and ranges determined from variogram modelling were used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates whilst minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacing's for run 1, 3 drill spacing's for run 2 and 4 drill spacing's for run 3. • A minimum of 12 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 for run 2 and 8 for run 3. A maximum of 4 samples from any one drill hole is allowed per estimate. • A block discretisation of 5, 5, 2 was applied to align with the parent cell block size. • Generally a high proportion of blocks (>80%) were estimated in run 1. • Grade restriction search routines were applied to some of the minor deleterious elements in some domains to limit the influence of extreme/outlier grades from smearing distant blocks (S, CaO and MnO). • All block estimates are based on interpolation into parent block volumes. • Mineral resource estimate does not include any form of dilution, apart from where small intervals of internal waste could not be adequately domained out. • Maptek Vulcan software was used to complete the block estimation.

	• Standard model and estimation validation has been completed using visual and numerical methods and formal peer review by appropriately qualified internal staff. • Kriging efficiency and slope of regression statistics were used to qualify the estimation results were to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades to block grades, global statistical comparisons for each domain, swath plot comparisons produced along easting's, northings and elevations, total assay closure balance and a change of support analysis was completed.
Moisture	• Tonnages are estimated on a dry basis. • The water table sits approximately 70m below the ground surface; approximately 40% of the resource is located below water table.
Cut-off parameters	• The criteria used for domaining mineralised material is >50% Fe, which appears to be a natural grade boundary for this deposit between mineralised and unmineralised BIF. • Based on the current Atlas shipped product grade specification, a 50% Fe lower cut-off grade is deemed a suitable cut-off to report resources for Razorback. • The tabulated resources were reported using a 50% Fe cut-off grade applied on a block by block basis.
Mining factors or assumptions	• Mining is assumed to be similar to the process used at other nearby Atlas deposits by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No other assumptions on mining methodology have been assumed at this stage as no detailed mine planning or production scenarios have been reviewed and are subject to a scoping level study. • It is a reasonable assumption that this resource will eventually be economically extracted based on its proximal location to existing Atlas projects and infrastructure and also due to its favourable size and grade characteristics which will fit the Atlas product specification.
Metallurgical factors or assumptions	• Preliminary Metallurgical test work based on RC composite samples from a selection of holes at Corunna Downs has been performed by SGS Lakefield Oretest Pty Ltd. The aim of this test work was to determine preliminary characteristics of the deposit such as particle size distribution, abrasion index, bulk density, moisture and asbestiform mineral analysis.
Environmental factors or assumptions	• A carbonaceous and sulphidic (pyrite) shale unit has been identified along the entire footwall position of the deposit below the depth of oxidation. The net acid producing potential of this shale has not been determined to date, however samples have been collected and the test work is anticipated to commence shortly by Outback Ecology Pty Ltd. • The volume of this sulphidic shale within any potential pit is expected to be comfortably encapsulated by inert waste within any waste dump volume based on high level studies completed by Atlas. Mitigation of acid drainage within the pit will need further analysis. • Detailed waste characterisation studies have not been undertaken but are anticipated to be completed during 2014/5.
Bulk density	• Dry bulk density has been estimated into the model with the use of geophysical density measurements collected in RC holes and regressed back to dry core dimensional density measurements. As no drill core from Razorback was available for this purpose, the regression results from the nearby and geologically similar Split Rock deposit were utilised. • All RC holes are attempted to be downhole surveyed for gamma density however some holes were open to end of hole depth resulting in incomplete data coverage

	over the deposit. Not all core intervals had 100% complete core recovery and these density measurements were excluded from the regression analysis as they are not representative. • Geophysical density measures the in-situ density inclusive of moisture and porosity. Filtered and cleaned Geophysical density was composited to 2m length and then estimated into the model in a similar fashion to grades and then a regression has been applied to account for the moisture, porosity and hole rugosity present in the readings to derive a dry density. • The regression has been calculated by comparing geophysical measurements in a diamond hole with dry, diamond core dimensional density measurements over the same intervals. Geophysical measurements taken in RC and Diamond Twin holes are also directly compared to account for differences due to hole effect (rugosity). • The use of dimensional tray density techniques is generally believed to be unbiased as it accounts for all material types and avoids material handling and selectivity issues commonly encountered by using more traditional Archimedes style density measurements. • 1,007 tray dimensional density measurements were determined from 5 HQ3 diamond holes (1,187m core) for the analysis. • A density regression of 4.7% reduction to geophysical density to derive the dry bulk density has been applied globally to this resource. • The resulting dry bulk density of 2.72t/m^3 for the Razorback mineralisation compares consistently with nearby deposits such as Split Rock (2.78t/m^3) and is felt to be a realistic determination of the in situ density. • This is a bulk commodity project.
Classification	• Resources were classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition). • Mineral resources have been classified by the Atlas Competent Person into the Inferred category based on RC drillhole spacing (80m x 20m), geological interpretation confidence, QAQC and overall data quality and confidence, grade continuity and resultant estimation statistical quality. • Mineral resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model show good correlation of the input data to the estimated grades. • The geological model and mineral resource estimation appropriately reflect the Competent Persons view of the deposit and appropriate account has been taken of all relevant factors.
Audits or reviews	• Atlas have undertaken an internal review of the mineral resource estimate and is satisfied the estimation is valid and of sufficient confidence to support an Inferred classification. • The review consisted of numerous checks made throughout the data collection and estimation process. A final peer review including visual checks of blocks versus drillhole grades, global means comparisons, histogram distribution comparisons, total assay closure checks, swath plots in Easting, Northing and elevation and a change of support analysis was completed.

	• This mineral resource has not been audited externally. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/ confidence	• The confidence in this resource estimate has been deemed appropriate as a basis for conceptual long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • A change of support analysis was undertaken to assess the sensitivity to the grade-tonnage curve in going from sample to block sized support at a range of cut-off grades. This analysis shows that some misclassification of material around the specified cut-off grades can be expected and is attributed to an expected amount of smoothing incurred by the ordinary kriging process. • The Razorback Resource Estimate is sufficient for scoping level study purposes commensurate with the classification of the resource. • This statement relates to global estimates of tonnes and grade. • There has been no production from the Razorback deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource.

JORC (2012) - TABLE 1 – SHARK GULLY RESOURCE

JORC CODE 2012 EDITION – TABLE 1 CORUNNA DOWNS SHARK GULLY RESOURCE - MAY 2014	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Reverse circulation (RC) drilling was used to obtain 2.0m down hole interval samples. The samples were passed through a cone splitter to collect a nominal 4.0-6.0kg sample (approximately 10% split ratio) into pre-numbered calico bags. • Duplicate samples taken at a set frequency of one every twenty samples (5% of total samples) from the cone splitter to monitor sampling representivity. • Geophysical gamma density measurements collected downhole by ABIMS geophysical contractor using a Geovista Dual Density logging tool (Caesium source, density range 1-4.5g/cc) to ascertain approximate in-situ density values. Tool is regularly calibrated every 2 weeks using a range of known media and a calibration hole.
Drilling techniques	• Reverse Circulation drilling employing a 140mm diameter face sampling hammer. A nominal drillhole spacing of 80mN x 40mE has been completed for this resource update. A total of 33 RC holes for 2,950m have been drilled.
Drill sample recovery	• RC sample recovery is logged at the drill site by the geologist based on the volume of sample returned from the cone splitter. This is recorded as either good, fair, poor or no sample recovered. Of the total 1,475 RC samples collected, 1,455 (98.6%) were recorded as Good, 7 (0.47%) were recorded as fair, 8 (0.54%) were recorded as poor and 5 (0.34%) were recorded as no sample return. • All samples are weighed at the laboratory to continually monitor and record sample size. • To ensure maximum sample recovery and representivity of the samples, an experienced Atlas geologist was present during drilling, continuously monitoring the sampling process. Any issues were immediately rectified. • Atlas is satisfied that the RC holes have taken a sufficiently representative sample of the mineralisation and minimal loss of fines has occurred in the RC drilling resulting in minimal sample bias. • No relationship between sample recovery and grade has been demonstrated.
Logging	• Logging of every 2m interval corresponding with 2m sampled interval. This level of detail is supportive and appropriate for Mineral Resource estimation, mining and metallurgical studies for a bulk commodity such as iron ore. • RC logging is qualitative and quantitative in nature. • RC Logging records the abundance/proportion of specific minerals/material types and lithology's, hardness recorded by physical chip percent measurement, weathering and colour. • The entire lengths of RC holes were logged on a 2m interval basis, 100% of the drilling was logged. Where no sample was returned due to voids/cavities it is recorded as such. • 30 of 33 holes were downhole geophysically logged (or attempted) for Natural Gamma, Resistivity, Gamma Density, Calliper and Magnetic Susceptibility. Not all holes were open at depth which precluded 100% coverage of measurements from all of the drillholes.
Sub-sampling techniques and sample preparation	• All RC samples were collected on two meter down hole intervals passed through a cone splitter to collect a nominal 4.0kg-6.0kg sample. The majority of samples are reported as dry, however a proportion of below water table samples are reported as being moist or wet. Of the 1,475 RC samples collected 708 (48%) reported as

	dry, 259 (17.6%) moist and 418 (28.3%) as wet and 85 (5.8%) as wet injected during drilling. 5 samples were reported as no sample returned. • Where RC samples were considered to be large (>6kg), they were crushed down to 3mm fraction and riffle split down to produce a smaller sample suitable for pulverizing. Coarse duplicates are taken by the lab at a ratio of 1:10 to monitor this process. • Sample weight/split analysis shows that on average at least 10% split ratio is being achieved consistently through the cone splitter primary and duplicate sampling ports. • Duplicate sample analysis show the data has acceptable precision, indicating that the sampling technique is appropriate for the deposit • The sample sizes were considered to be appropriate to correctly represent the mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent values assay ranges for the primary elements.
Quality of assay data and laboratory tests	• All samples submitted to SGS Laboratory in Perth and assayed for the extended iron ore suite (24 elements) by XRF and a total LOI by thermogravimetric technique. The method used is designed to measure the total amount of each element in the sample. • Samples were subjected to routine particle sizing analysis by the lab to ensure the pulverizing stage is achieving appropriate particle size for XRF analysis showed acceptable results. This analysis shows that 95% of samples tested returned greater than the 90% passing 75 micron requirement. • Laboratory procedures are in line with industry standards and are appropriate for iron ore analysis. • Samples are dried at 105^{o}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using an LM2 mill. • Sub-samples are collected to produce a 66 gram sample that is dried further, fused at 1100^{o}C for 10 minutes, poured into a platinum mould and placed in the XRF machine for analysis and reporting. • A total LOI is measured by Thermogravimetric methods (TGA) at 1000^{o}C. • Atlas inserts commercially available certified reference material (standards) at a set frequency of 1:20 (5% of total samples) within its sample batches. A number of different standards at a range of grades are used to monitor analytical precision of the assay results. • Blanks are not used by Atlas due to the nature of the analysis being a complete multi-element suite. • Acceptable levels of precision have been achieved with all standard assays reporting within 2 standard deviations of the certified mean grade for the 12 main elements of interest. • The lab also inserts its own standards at set frequencies and monitors the precision of the XRF analysis. These results also reported well within the specified 2 standard deviations of the mean grades for all 12 main elements of interest. • XRF calibrations are checked once per shift using calibration beads made using exact weights. • The Laboratory performs repeat analyses of sample pulps at a rate of 1:20 (5% of all samples) these compare very closely with the original analysis for all elements. • Analysis of field duplicate and lab pulp duplicates and repeats reveals that greater than 90% of pairs have less than 10% difference and the precisions of samples is

	within acceptable limits and concurs with industry recommended practices. • Atlas sent a selection of pulps to an umpire laboratory (Bureau Veritas, Perth) for verification by an independent laboratory. Comparison of results between laboratories did not reveal any issues and analytical precision was considered acceptable.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. RC chips have been inspected in the field to verify the correlation of mineralised zones with assay results. The Competent Person for this report has visited site and inspected all sampling processes in the field and also inspected the laboratory on a regular basis. • 4 HQ3 diamond twin holes have been drilled for comparison with RC drillholes and quantitatively analysed with no issues identified indicating that the assays of RC samples are reliable. This work was conducted on the nearby Split Rock deposit. • All primary data is captured electronically on field Toughbook laptops using acQuire^{tm} software. The software has built in validation routines to prevent data entry errors at the point of entry. Data is also validated prior to export from the Toughbook and again on import into the main corporate acQuire database. • All data is sent to Perth and stored in a secure, centralised acQuire SQL database which is administered by a full database administrator. • Documentation related to data custody, validation and storage are maintained on the company's server. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection level values to half positive detection.
Location of data points	• All collars were surveyed by licensed surveyors (MRH Surveyors, Perth) utilising a RTK GPS system tied into the state survey mark (SSM) network with the expected relative accuracy of 0.05m E, N & RL. Elevation values are in AHD RL. • The grid system for the Corunna Downs Project and the Shark Gully resource is MGA_GDA94_Z50. • Downhole gyroscopic surveys are attempted on all RC and diamond holes by ABIMS geophysical contractors. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool with a stated accuracy of +/-1^{o} in azimuth and +/-0.1^{o} in inclination. QC of the gyro tool involved field calibration using a test stand and also a calibration hole. • Topographic data and imagery collected by Outline Global Pty Ltd based on 10cm resolution RGB imagery. 2m vertical contour interval resolution derived from stereoscopic imagery DTM. Aerial survey flown on the 16th March 2013. Data supplied in projection MGA_GDA94 Zone 50. The quality and resolution of the topographic data is considered to be adequate for resource estimation purposes
Data spacing and distribution	• RC Drill spacing is on an approximate 80m (N-S) by 40m (E-W) grid, however due to topographic constraints this is sometimes not achievable. • This drill spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification under the 2012 JORC code and is suitable for this style of deposit. • Sample compositing has not been applied to the RC samples used in the resource estimate; all RC samples are collected at 2m intervals. • Geophysical density measurements collected at 10cm increments were composited up to 2m intervals to correspond with the sample length. The compositing process was checked to ensure that no changes to the statistical population had been incurred due to the compositing process.
Orientation of data in	• The Shark Gully resource is situated in the core of a northeast-southwest trending

relation to geological structure	synform which plunges gently to the southwest. • Drilling is oriented to grid east with drillholes inclined at -60 degrees which intersects the mineralisation at an oblique angle. Due to the varying intersection angles all intercept results are reported as downhole widths and not true widths. • No drilling orientation and sampling bias has been recognized at this time and is not considered to have introduced a sampling bias.
Sample security	• Chain of custody is managed by Atlas. Pre-numbered calico sample bags are packed into sealed and labelled polyweave bags on site and then placed inside sealed and labelled bulka bags. Samples are delivered to a dispatch point in Port Hedland by Atlas Staff and a consignment number issued by the transport company. Samples are transported to the relevant laboratory in Perth by courier. Once received at the laboratory, the consignment of samples is receipted against the sample dispatch documents and a reconciliation report is issued to Atlas for every sample batch. Samples are stored in a secure yard at the lab until analysis. • Sample security was not considered a significant risk to the project.
Audits or reviews	• An audit of the Atlas acQuire drillhole database is performed regularly by independent database management consultants (rOREdata Pty Ltd). The last audit was completed in January 2014 and reported the database to be of a good standard and acceptable for JORC compliant resource estimation activities. • A review of all the resource drillhole data and sampling techniques is carried out internally as part of the resource estimation process on a routine basis. • An external audit of Atlas' drilling, sampling, logging, assaying and data transfer procedures has been performed by John Graindorge (Principal Consultant) of Snowden's Mining Industry Consultants in March/April 2014, the final report is pending at the time of this release. This audit entailed a laboratory inspection and a 2 day site visit to Corunna Downs to inspect all field practices and procedures. No significant issues were revealed during the audit that would be material to the outcomes presented in this release.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• The Shark Gully resource is located wholly within Exploration Lease E45/2585. The tenement is 100% Atlas owned. • The tenement sits within the Njamal Native Title Claim (WC1999/088). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• 7 open hole percussion drill holes completed by Geotechnics Australia Ltd (1972), no intersections of DSO grade mineralisation were reported, area determined to not be prospective. • Rock chip sampling, geological mapping and geophysical surveys completed by Gondwana Resources Pty Ltd (2010), recognized presence of near surface zones of DSO grade iron mineralisation.
Geology	• The Corunna Downs Runway BIF-hosted iron ore resource is hosted by the ca. 3.02 Ga Cleaverville formation (Gorge Creek group, De Grey Supergroup). The prospect is located in the Kelly greenstone belt within the East Pilbara terrane of Western Australia, approximately 170km southwest of Port Hedland. The N-S trending Kelly greenstone belt is bound by the Corunna Downs and Shaw granitoid complexes. The Shark Gully resource features successive macrobands of goethite-hematite rich, high grade (>55 wt% Fe) ore zones associated with neighbouring jaspilitic BIF units and banded chert and shale. • The Shark Gully resource is interpreted to be a mineralised northeast-southwest trending synformal structure, which outcrops at surface and plunges to the southwest.

Drill hole Information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Atlas previously reported deposit information and exploration updates for the Shark Gully Prospect (see Atlas ASX releases, 9th December, 2013 and 31st Jan 2014). • Surface Geological mapping (stratigraphy, mineralisation and structure) of the Shark Gully prospect was performed by Atlas Geological personnel. • Routine multi-element analysis of potential deleterious or contaminating substances such as Arsenic, Lead, Zinc and Sulphur is completed for all samples. • Geologists from the Centre for Exploration Targeting (CET), University of Western Australia (UWA) are completing research studies on the Corunna Downs Project with focus on the controls on mineralisation. The nature and timing of mineralisation events is also being evaluated through isotopic and geochemical analysis. • Preliminary Metallurgical test work based on RC composite samples from a selection of holes at the nearby and geologically similar Split Rock resource, have been performed by SGS Lakefield Oretest Pty Ltd. The aim of this test work was to determine preliminary characteristics of the deposit such as particle size distribution, abrasion index, bulk density, moisture and asbestiform mineral analysis.
Further work	• 3 HQ3 diamond drillholes are planned to be drilled at Shark Gully (at time of release) to enable bulk density analysis, geophysical density regression, structural, stratigraphical and mineralogical understanding. • Hydrogeology studies to determine dewatering requirements are currently being scoped. • Waste classification samples have been collected to assess the nature of potentially acid forming (PAF) sulphidic carbonaceous shale material. • A selection of drillholes will be left open for use in subterranean fauna studies. • Further RC extensional drilling is planned to be completed to close off mineralisation to the north. This drilling is intended to define the ultimate dimensions and size of the deposit. • Infill RC drilling to bring the drillhole spacing down to 40mN by 40mE is planned to increase the confidence in the estimation.

SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• All data is entered digitally in the field into acquire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The data files are then electronically transferred to the Perth office via email where they are loaded into the centralised SQL acQuire drillhole database and undergo further validation routines before being finally accepted. Validation reports are produced for each drillhole and sent back out to the site geologists for final checking. • Assay files sent electronically from the lab in a secure file format and also in hard copy reports. The assay data undergo numerous checks before being accepted into the database on passing all QAQC rules. • The Atlas acQuire drillhole database is administered by a full-time geological database administrator. Data validation checks are run routinely by the database administrator and database consultancy 'rOREdata' using acQuire software validation routines.
Site visits	• The Competent Person for this report is a full time employee of Atlas Iron and undertakes regular site visits ensuring that industry acceptable standards of the entire process from sampling through the final block model estimate are maintained. Site visits were carried out in June and October 2013 and April 2014 to inspect the deposit area, RC and diamond logging and sampling practices. Discussions were held with site personnel regarding procedures and a number of minor recommendations were made but nothing was noted that was of a material nature. • John Graindorge (Principal Consultant) Snowdens Mining Industry Consultants visited site in April 2014 to complete an external audit of Atlas' drilling, sampling, QAQC, logging procedures. No significant issues were revealed during the audit that would be material to the outcomes presented in this release.
Geological interpretation	• There is good confidence in the geological interpretation of the mineral deposit and demonstrated good consistency both on section and between sections. • The stratigraphical, structural and mineralisation interpretation has been based on a combination of geophysical, geochemical and lithological data obtained from drillholes plus surface mapping information. • Wireframes of the stratigraphic and mineralisation surfaces are used to generate an empty geological block model. • The overlying hardcap/hydrated zone displays higher variability and lower continuity and as such there is less confidence of the estimation of this zone.
Dimensions	• The Shark Gully resource has dimensions of approximately 650m (NE-SW) along strike and 200m (NE-SW) across strike and extends from surface to a maximum depth of ~ 150m, with an average depth of approximately 100m. A thin, 10-15m thick hydrated layer blankets the entire resource at surface. Thin bands (5-10m thick) of unmineralised to weakly mineralised jaspilite and shale are seen internal to the mineralisation and have been domained out where thick and continuous enough.
Estimation and modelling techniques	• Mineralisation was domained according to stratigraphy and mineralisation style (hydrated or primary). Each geological unit was domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half drill hole spacing and surface mapping has been used to constrain the extents of mineralisation at surface.

	• Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative kriging neighbourhood analysis (QKNA) undertaken to optimize estimation parameters, including search parameters, number of samples (minimum and maximum) and block discretization. • No assumptions have been made regarding the modelling of selective mining units apart from the use of 5m parent cell heights to correspond with current mining bench heights used by Atlas at other projects. • No assumptions regarding correlation between variables has been made, however it has been noted during statistical analysis that Fe and Phosphorous show some correlation and SiO_2 and Al_2O_3 are correlated in most mineralised domains. • Block model extends from 776000mE to 777260mE and 7625000mN to 7626120mN and elevation from 200mRL to 600mRL. • A single block model to encompass the Shark Gully Mineral Resource was constructed using a 40mN by 20mE by 5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks and appropriate sample support is maintained. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. These domains are used to control the resource estimates. • All estimation was completed within separate domains using hard boundaries. • Ordinary Kriging was used to estimate the standard Atlas Iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, K_2O, Na_2O) plus geophysical density and chip percent where possible. • Waste domains were estimated by inverse distance (power 2) method where enough data was present, with un-estimated blocks assigned mean grades for the specific domain. • Search directions and ranges determined from variogram modelling were used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates whilst minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 3 drill spacing's for run 1, 4 drill spacing's for run 2 and 5 drill spacing's for run 3. • The orientation of the search ellipse varied for each block based on Maptek Vulcan's 'Dynamic Anisotropy function, which applies a bearing, dip and plunge to each block based on its position relative to a defined stratigraphic surface. • A minimum of 12 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 for run 2 and 8 for run 3. A maximum of 4 samples from any one drill hole is allowed per estimate. • A block discretisation of 5, 5, 2 was applied to align with the parent cell block size. • Generally a high proportion of blocks (>80%) were estimated in run 1. • No grade restriction search routines were applied. • All block estimates are based on interpolation into parent block volumes. • Mineral resource estimate does not include any form of dilution, apart from where small intervals of internal waste could not be adequately domained out. • Maptek Vulcan software was used to complete the block estimation. • Standard model and estimation validation has been completed using visual and

	numerical methods and formal peer review by appropriately qualified internal staff. • Kriging efficiency and slope of regression statistics were used to qualify the estimation results were to the desired level of quality for ordinary kriged domains. • Block model validation methods used were visual checks comparing composite grades to block grades, global statistical comparisons for each domain, swath plot comparisons produced along easting's, northings and elevations, total assay closure balance and a change of support analysis
Moisture	• Tonnages are estimated on a dry basis. • The water table sits approximately 40m below the ground surface; approximately 65% of the resource is located below water table.
Cut-off parameters	• The criteria used for domaining mineralised material is >50% Fe, which appears to be a natural grade boundary for this deposit between mineralised and unmineralised BIF. • Based on the current Atlas shipped product grade specification, a 50% Fe lower cut-off grade is deemed a suitable cut-off to report resources for Shark Gully. • The tabulated resources were reported using a 50% Fe cut-off grade applied on a block by block basis.
Mining factors or assumptions	• Mining is assumed to be similar to the process used at other nearby Atlas deposits by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No other assumptions on mining methodology have been assumed at this stage as no detailed mine planning or production scenarios have been reviewed and are subject to a scoping level study. • It is a reasonable assumption that this resource will eventually be economically extracted based on its proximal location to existing Atlas projects and infrastructure and also due to its favourable size and grade characteristics which will fit the Atlas product specification.
Metallurgical factors or assumptions	• Preliminary Metallurgical test work based on RC composite samples from a selection of holes at Corunna Downs has been performed by SGS Lakefield Oretest Pty Ltd. The aim of this test work was to determine preliminary characteristics of the deposit such as particle size distribution, abrasion index, bulk density, moisture and asbestiform mineral analysis.
Environmental factors or assumptions	• A carbonaceous and sulphidic (pyrite) shale unit has been identified along the entire footwall position of the deposit below the depth of oxidation. The net acid producing potential of this shale has not been determined to date, however samples have been collected and the test work is anticipated to commence shortly by Outback Ecology Pty Ltd. • The volume of this sulphidic shale within any potential pit is expected to be comfortably encapsulated by inert waste within any waste dump volume based on high level studies completed by Atlas. Mitigation of acid drainage within the pit will need further analysis. • Detailed waste characterisation studies have not been undertaken but are anticipated to be completed during 2014/5.
Bulk density	• Dry bulk density has been estimated into the model with the use of geophysical density measurements collected in RC holes and regressed back to dry core dimensional density measurements. As no drillcore from Shark Gully was available for this purpose, the regression results from the nearby and geologically similar Split Rock deposit were utilised. • All RC holes are attempted to be downhole surveyed for gamma density however some holes were open to end of hole depth resulting in incomplete data coverage over the deposit. Not all core intervals had 100% complete core recovery and

	these density measurements were excluded from the regression analysis as they are not representative. • Geophysical density measures the in-situ density inclusive of moisture and porosity. Filtered and cleaned Geophysical density was composited to 2m length and then estimated into the model in a similar fashion to grades and then a regression has been applied to account for the moisture, porosity and hole rugosity present in the readings to derive a dry density. • The regression has been calculated by comparing geophysical measurements in a diamond hole with dry, diamond core dimensional density measurements over the same intervals. Geophysical measurements taken in RC and Diamond Twin holes are also directly compared to account for differences due to hole effect (rugosity). • The use of dimensional tray density techniques is generally believed to be unbiased as it accounts for all material types and avoids material handling and selectivity issues commonly encountered by using more traditional Archimedes style density measurements. • 1,007 tray dimensional density measurements were determined from 5 HQ3 diamond holes (1,187m core) for the analysis. • A density regression of 4.7% reduction to geophysical density to derive the dry bulk density has been applied globally to this resource. • The resulting dry bulk density of 2.76t/m^3 for the shark Gully mineralisation compares consistently with nearby deposits such as Split Rock (2.78t/m^3) and is felt to be a realistic determination of the in situ density. • This is a bulk commodity project.
Classification	• Resources were classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition). • Mineral resources have been classified by the Atlas Competent Person into the Inferred category based on RC drillhole spacing (80m x 40m), geological interpretation confidence, QAQC and overall data quality and confidence, grade continuity and resultant estimation statistical quality. • Mineral resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model show good correlation of the input data to the estimated grades. • The geological model and mineral resource estimation appropriately reflect the Competent Persons view of the deposit and appropriate account has been taken of all relevant factors.
Audits or reviews	• Atlas have undertaken an internal review of the mineral resource estimate and is satisfied the estimation is valid and of sufficient confidence to support an Inferred classification. • The review consisted of numerous checks made throughout the data collection and estimation process. A final peer review including visual checks of blocks versus drillhole grades, global means comparisons, histogram distribution comparisons, total assay closure checks, swath plots in Easting, Northing and elevation and a change of support analysis was completed. • This mineral resource has not been audited externally.

	• Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/ confidence	• The confidence in this resource estimate has been deemed appropriate as a basis for conceptual long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • A change of support analysis was undertaken to assess the sensitivity to the grade-tonnage curve in going from sample to block sized support at a range of cut-off grades. This analysis shows that some misclassification of material around the specified cut-off grades can be expected and is attributed to an expected amount of smoothing incurred by the ordinary kriging process. • The Shark Gully Resource Estimate is sufficient for scoping level study purposes commensurate with the classification of the resource. • This statement relates to global estimates of tonnes and grade. • There has been no production from the Shark Gully deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource.

MATERIAL CHANGES TO MATERIAL MINING PROJECTS AND DISCLOSURE FOR THE PURPOSE OF ASX LISTING RULES 5.8 AND 5.9 FOR THE WESTERN CREEK PROJECT

Western Creek Mineral Resource Table - As at 30 June 2014 (50% Fe Cut-Off Grade)										
Location	**Resource Classification**	**Kt**	**Fe (%)**	**SiO_2 (%)**	**Al_2O_3 (%)**	**P (%)**	**S (%)**	**LOI (%)**	**CaFe* (%)**
Western Creek	Measured	0.0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	22,000	55.6	6.8	4.0	0.07	0.03	8.8	61.0
Western Ridge	Measured	0.0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	47,000	55.9	7.0	4.0	0.06	0.07	8.7	61.3
Homestead	Measured	0.0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	10,000	57.0	5.9	3.1	0.08	0.02	8.1	62.1
Sub-Total	**Measured**	**0**	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**	**0.0**	**0.0**
	Indicated	**0**	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**	**0.0**	**0.0**
	Inferred	**79,000**	**56.0**	**6.8**	**3.9**	**0.06**	**0.05**	**8.7**	**61.3**
Total		**79,000**	**56.0**	**6.8**	**3.9**	**0.06**	**0.05**	**8.7**	**61.3**

Tonnes are rounded according to resource classification; grades are carried through unaffected by rounding and may result in small discrepancies.

*Calculated calcined Fe grade where CaFe=(Fe%/(100-LOI%))*100

Western Creek JORC 2012 Compliance Statement for Mineral Resources

Geology and Geological Interpretation

The Western Creek direct Project comprises three deposits, Homestead, Western Creek and Western Ridge. All deposits within the Western Creek Project are 100% owned by Atlas. The Western Ridge deposit was first discovered by Giralia Resources and Western Creek was first discovered by Warwick Resources with both later acquired by Atlas Iron. The Homestead deposit was discovered by Atlas in 2013 and is a recent addition to Western Creek Project Resources in this reporting period.

The Western Creek Project area is dominated by the Jeerinah, Marra Mamba and West Angela Formations. The Marra Mamba Formation forms the base of the Hamersley Group and is divided into three members; Nammuldi Member, MacLeod Member and Mount Newman Member. The Marra Mamba is characterised by chert, ferruginous chert and banded iron formation with minor shale. The Jeerinah formation is characterised by interbedded mudstone, siltstone and chert with minor felsic tuff, dolomite and sandstone.

Mineralisation is hosted within the Mt Newman member and to a lesser extent, the Nammuldi member which form part of the Marra Mamba iron formation. The stratigraphy undulates gently along the strike of the deposit with the majority of mineralisation hosted within the Mt Newman member.

Mineralisation at the Homestead deposit is hosted within BIF material, most likely representing the Mt Newman member of the Marra Mamba iron formation. Very minor mineralisation occurs as wedges of mineralised detritus hosted within the palaeo-valley infill material. Mineralisation outcrops for 450m along strike and up to 100m across strike in the central zone of the deposit. This outcrop comprises hydrated Mount Newman hosted mineralisation and can be correlated from surface to a maximum depth of ~50m in drill holes. Mineralisation broadly defines the limbs of an anticline structure, with stratiform mineralisation dipping towards the south in the western part of the orebody and towards the north in the eastern part of the orebody.

The Western Creek deposit occurs as a near horizontal sheet of iron enrichment, 2.5km long and between 200 and 300m wide, hosted within the Nammuldi member and the Mt Newman member of the Marra Mamba iron formation. The main body of iron mineralisation usually lies from 10 to 20m below surface, but locally extends from surface to a depth of up to 60m.

The Western Ridge deposit occurs as a near horizontal sheet of iron enrichment. The deposit comprises two large zones of mineralisation, north and south, with smaller pods of mineralisation in between. The northernmost zone is ~1.2km along strike and 800m wide, whilst the southern zone of mineralisation is ~700m along strike and 400m across strike. Iron mineralisation is generally flat lying and extends from surface extending to depths of up to 60m below the surface.

The Western Creek resources contain a geological model generated from local scale geological mapping, geochemistry, geophysics and logging data. A stratigraphic model of the lithology and structure was first constructed to provide a geological framework in which to interpret the mineralisation. The mineralisation was interpreted into an upper zone of depletion and underlying hydrated and primary mineralised zones. Small, discrete discontinuous pods of mineralisation were modelled separately.

The stratigraphic sequence comprises Jeerinah formation, Nammuldi member, Macleod member, Mount Newman member and West Angela member, whereas the mineralisation model comprises of depleted, hydrated and primary mineralisation zones. The mineralisation zones are modelled generally using greater than 50% Fe and less than 15% SiO_2 cut-off to define ore from waste. The combination of both stratigraphic model and mineralisation models are used for geozone definitions.

Sampling and Sub-Sampling

Samples collected prior to Atlas acquisition at Western Ridge by Giralia were taken at 2m intervals passed through a riffle splitter.

All RC chip samples collected by Atlas and Warwick were sampled at 2m intervals through a cone splitter. The samples are deemed to be of acceptable quality. Sample weights are also recorded to monitor the ongoing representativeness of the sample split. The weights are stored in the acquire database. The samples were all kept dry (where possible) and are deemed to be of acceptable quality.

The RC sampling methodology prior to January 2011, involved collection of samples drilled over 2m intervals using a cone splitter. Samples were directed into a calico bag with the overflow collected into green plastic bags. The calico bags were pre-numbered, with every 25th and 75th sample a field duplicate. The duplicate sample is collected in real time splitting the two sub samples from the riffle/cone splitters. Standards were inserted every 40th and 80th sample, while blanks were inserted every 41st and 81st sample.

After January 2011, 2m sample intervals were collected using a cone splitter. Samples were directed into a calico bag with the overflow collected into green plastic bags. The calico bags were pre-numbered, with every sample number ending in 00, 20, 40, 60, 80, collected as a field duplicate. The duplicate sample was collected in real time by splitting the two sub samples from the cone splitter. Standards were inserted every 1st, 21st, 41st, 61st and 81st sample.

Drilling Techniques

Exploration drilling over the various Western Creek prospects occurred between 1992 and 2012. To date a total of 426 drillholes have been completed at the Western Creek project totalling 29,798m of drilling. Drilling has been by Reverse Circulation (RC) utilising a 140mm diameter face sampling hammer and samples split by cone splitter (Atlas and Warwick) or by riffle splitter (Giralia).

- Drill spacing over the various deposits is:

- Homestead – at approximately 100mE x 50mN.
- Western Creek – at approximately 80mE x 40mN.
- Western Ridge – at approximately 150mE x 50mN.

The geologist sieves and logs every 2m interval in alignment with the sampling interval. Logging encompasses the main material types, hardness, lithologies, colour and percentage of chips (approximate lump/fine proportion). The logging is recorded in the field electronically into acQuire field logging data entry objects and on completion the electronic files are sent to Perth and loaded into the centralised acQuire drillhole database which is managed by a full time Database Administrator.

Licenced surveyor MHR Surveyors completes a collar pickup on all available drill collars using a Trimble R8 Real Time Kinematic Differential GPS (DGPS). The DGPS gives an accuracy of +/- 0.05 m for Easting and northing location and +/- 0.1 m for the RL (height above sea level).

All available holes are gyroscopically surveyed downhole by ABIMS Pty Ltd utilising a North seeking multi-shot tool which measures azimuth to an accuracy of +/- 0.2° and dip to an accuracy of +/-0.1°. Downhole geophysical measurements are also collected at the same time and comprise Density/calliper, Magsus, Resistivity and Natural Gamma with recordings taken at 10cm intervals downhole.

Resource Classification

Mineral Resources at Western Creek have been classified into the Inferred category only, based on wide drillhole spacing, nature and quality of the historical drilling and sampling methods, geological understanding and confidence, grade continuity, QAQC analysis, lack of diamond drilling and deposit specific density information, overall confidence in the estimate of the mineralised volume and results of the model validation.

Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. The results of the validation of the block model show good correlation of the input data to the estimated grades.

The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit. Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. The statement relates to global estimates of tonnes and grade.

Sample Analysis Methods

Samples collected by Giralia were sent Spectrolabs in Geraldton and samples collected by Warwick were sent to Ultratrace commercial laboratories in Perth for analysis of the extended iron ore suite of elements. This consists of XRF analysis for Fe, SiO_2, Al_2O_3, P, CaO, K_2O, MgO, MnO, S, TiO_2, Na_2O and a thermo gravimetric measurement for loss on ignition (LOI) at 1000^{o}C.

Samples collected by Atlas were sent to SGS laboratories in Perth for analysis of the extended iron ore suite of elements. This consists of XRF analysis for Fe, SiO_2, Al_2O_3, P, CaO, K_2O, MgO, MnO, S, TiO_2, Na_2O and a thermo gravimetric measurement for loss on ignition (LOI) at 1000^{o}C. The sample preparation of RC samples involved weighing, oven drying, pulverization of the entire sample to a grind size of 90% passing 75 micron. A pulp sub-sample was collected and formed into a fused bead for XRF determinations on the iron ore suite of elements and a LOI by thermogravimetric techniques.

To ensure quality assurance and control (QAQC) of the sampling and assaying procedure, Atlas submitted field duplicates and standards to the laboratory for analysis. For samples collected prior to January 2011, the duplicates and standards are inserted at predefined intervals at a rate of 2% for standards and 2% for duplicates for an overall insertion rate of 4%. Post January 2011, the duplicates and standards are inserted at predefined intervals at a rate of 5% for standards and 5% for duplicates for an overall insertion rate of 10%. The laboratory also inserted its own internal standards and pulp repeat analyses at predefined intervals. Sample collection procedures and QAQC protocols employed by Atlas are commensurate with standard industry practices.

The QAQC data for the Western Creek project area was reviewed prior to commencing the resource estimates for Western Creek deposits and were found to be of reasonable precision and analytical accuracy and is deemed to be acceptable for resource estimation purposes and JORC compliancy. The level of QAQC inserted in the Giralia and Warwick drilling was at lower levels than Atlas prescribes and as such there is some associated risk with this information due to this factor.

Estimation Methodology

The drillhole data was composited prior to running the estimation process using a 2m sample interval to minimise any sample bias due to sample length. The compositing was run within the attribute fields to ensure no composite intervals crossed any lithological contacts or grade boundaries.

Variograms were generated to assess the grade continuity of the various elements and as inputs to the kriging algorithm used to interpolate grades. Snowden Supervisor software was used to generate and model variograms and conduct statistical analysis.

Variographic analysis was undertaken for all mineralised geozones for each of the Corunna Downs resources. The elements that were analysed include all 12 elements, i.e. Fe, SiO_2, Al_2O_3, P, LOI, S, MnO, MgO, K_2O, TiO_2, CaO, Na_2O and geophysical density.

To generate the best experimental variograms the data was first transformed to a normal scores distribution where upon the variogram was modelled and on completion a back transform was applied. The variogram ranges and directions of continuity are consistent with the geological understanding and are considered appropriate.

Block models were constructed in Vulcan software (Maptek) and constrained by surfaces and solids. The parent block size was selected based on half of drillhole spacing and the model was orientated (rotated) to represent the strike of mineralisation and prevailing drilling grid. The sub-block size was selected to more accurately define the mineralised volume.

The volume block model was created using the wireframes of the stratigraphy, mineralisation and topography. A unique geozone code was assigned based on the combination of stratigraphy and mineralisation. The geozone field is used to distinguish the main mineralisation types and mineralised areas.

For the Western Creek, Western Ridge and Homestead resources, Atlas estimated Fe, SiO_2, Al_2O_3, P, LOI, CaO, K_2O, MgO, MnO, S, TiO_2 and Na_2O grades using Ordinary Kriging for the mineralised horizons. Waste horizons were estimated by Inverse Distance (power 2) methods.

The preferred estimation parameters were chosen based on neighbourhood analysis, whereby several estimation parameters were tested to optimise the estimation search. This was represented by best kriging efficiency, slope regression values and number of blocks filled. Search ellipses were orientated based on the geometry of the mineralisation with the search ellipses increased by two fold and three fold for second and third search passes.

- Geophysical density measurements have been recorded downhole from the majority of Atlas drillholes. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. Geophysical density is recorded at 10cm increments downhole. The density measurements are filtered and validated prior to use to remove anomalous recordings.

Due to the lack of downhole geophysical density data collected in historical drillholes, a global density of $2.7t/m^3$ was required to be assigned to the Western Creek and Western Ridge deposits. The limited downhole geophysical density data collected at the Homestead deposit was composited and was assigned to the block model according to their respective geozones. All tonnages reported are on a 'dry' basis, this is a bulk commodity project. No diamond drilling has been performed at the Western Creek Project and as such there is some associated risk with the density estimate and reported tonnage. Atlas believes that it has taken a conservative approach to applying density to these resources and that the tonnage predictions are satisfactory given the Inferred level of classification.

The estimates were validated using:

- A visual comparison of block grade estimates and the drillhole data.
- A global comparison of the average composite grades and estimated grades.
- Moving window averages comparing the mean block grades to the composites.
- Histogram comparison of the original composite grades and the block estimated grades.
- Assessment of correlation coefficients from the input sample data and estimated block grades.
- Total assay validation check to ensure closure (sum of elements in each block adds to 100% +/- 2%).

The conclusions from the model validation work include:

- Visual comparison of the model grades and the corresponding drillhole grades shows a good correlation.
- A comparison of the global drillhole mean grades and with the mean grades of the block model estimate (for each domain) shows that the block model mean grades are typically within 5-10% of the drilhole means which is a good outcome with the exception of poorly sampled regions.
- The trend plot grades show a good correlation between the block model grades compared with the drillhole grades.
- Total assay validation showed that the blocks maintained closure generally between 98% and 102% for all mineralised domains.
- Assessment of the histograms and correlation coefficients showed that the relationship between elements within the input sample data has been maintained in the block grades estimates and the grade distribution has been maintained in the estimate with an acceptable level of smoothing.

Cut-Off Grade

The criteria for defining mineralised material at Western Creek is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary. These cut-off grades were used to separate mineralised material from waste. Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the assumed open pit mining method and assumed processing methodology to consistently produce material suitable to meet Atlas product specification. This cut-off grade methodology is used consistently for reporting of all Mineral Resources at Western Creek. The tabulated resources are reported using a 50% Fe cut-off grade on a block by block basis.

Mining and Metallurgical methods and parameters and other modifying factors

The Western Creek Project has not been subject to any level of mining study and as such all mining and metallurgical methods and parameters are assumed from other nearby operations which are extracting similar material.

It is currently assumed that conventional open pit mining methods would be utilised, similar to other nearby Atlas projects, with selective extraction of ore material using a backhoe configured excavator. This allows a selective ore mining approach comprising 5m benches which are mined in two flitches of 2.5m height. The 2.5m flitches are used in order to reduce ore dilution and loss.

It is expected that a simple, low cost crush and screening processing route is utilised to produce a single, fines only product at a specified grade. It is a reasonable assumption that the Western Creek resources will eventually be economically extracted based on their proximal location to existing projects and infrastructure and also due to their favourable size and grade characteristics which will fit the Atlas product specification.

Western Creek Project JORC 2012 Table 1 Assessment Criteria

HOMESTEAD RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA HOMESTEAD MINERAL RESOURCE ESTIMATE – MARCH 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	**Atlas** • Reverse Circulation (RC) chip samples collected via cone splitter. • One 6kg (average) sample taken for each two metre sample length and collected in pre-numbered calico sample bags. • 6kg sample was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 5 duplicates are taken for every 100 samples (5%). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice. **Giralia** • Reverse Circulation (RC) chip samples collected via riffle splitter. • To monitor the representivity of the sample, 4 duplicates are taken for every 100 samples (4%). • Sampling protocols implemented by Warwick resources are not well documented
Drilling techniques	• Reverse Circulation (RC) drilling • Drill spacing on a variable grid ranging from approximately 100m (E-W) by 50m (N-S) • Total of 114 RC holes extracted from the Atlas database • 39 holes drilled by Giralia, 75 holes drilled by Atlas • 114 holes used for the resource estimate for a total of 112675m • 5634 samples logged, 5633samples analysed.
Drill sample recovery	**Atlas** • RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 4123 Good (73%), 78 Fair (1.4%), 39 Poor (<1%). 1394 • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. **Giralia** • (24.7%) Not Recorded (Giralia).

	• No twin RC or diamond drillholes have been completed to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling.
Logging	**Atlas** • Logging of every 2m interval (Atlas procedure) corresponding with 2m sampled interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • 75 Atlas RC drillholes were logged in full, totaling 8484m of drilling. • Samples were logged for lithology, mineralisation, chip percent, weathering and colour. **Giralia** • Logging codes are different to Atlas and consequently logging was not utilized significantly in the current resource estimate.
Sub-sample techniques	**Atlas** **Sampling technique:** • RC Chip Samples: • ~6kg RC chip samples are collected via cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Quality Control Procedures** • Duplicated sample: 5 every 100 samples • Certified Reference Material assay standards inserted: 5 in every 100 samples • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab. **Sample preparation:** • Sample dried at 105°C for 12-24 hrs • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Giralia** **Sampling technique:** • RC chip samples are collected via riffle splitter **Quality Control Procedures:** • Duplicated sample: 4 every 100 samples
Quality of assay data and laboratory tests	**Atlas** • Atlas Samples were submitted to SGS Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a

	0.66g sample that is dried further, fused at 1100°C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards and field duplicates analysis (Atlas drilling ony) are used for quality control. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice. **Giralia** • Giralia samples were submitted to Spectrolabs in Geraldton. The precise methodology of the analyses conducted is unknown but is considered to be similar to that at SGS.
Verification of sampling and assaying	**Atlas** • Significant intersections have been independently verified by alternative company personnel. • The Competent Person has inspected the Laboratory. • There are no twinned holes drilled to date. • Atlas Primary data are captured on field Toughbook laptops using acQuire software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection. **Giralia** • The veracity of Giralia drilling data is less certain than that for Atlas drilling.
Location of data points	**Atlas** • 52 Atlas hole Collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. **Giralia** • Giralia hole collars were picked up by handheld GPS. • The grid system is MGA_GDA94 Zone 50. • All holes not picked up by DGPS have had their collars registered onto the topographic surface.
Data spacing and distribution	• Drill spacing on a grid approximately 100m (E-W) by 50m (N-S) • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Sample Security	**Atlas** • Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis.

	• The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch. **Giralia** • Sample security protocols for Giralia drilling are not documented.
Orientation of data in relation to geological structure	• Drilling is orientated appropriately for the morphology of the deposit and is not coincident with bedding plane.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Homestead is located within Exploration Lease E52/1912. Atlas owns 100% of the Iron rights to the tenement. • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• Exploration drilling has been undertaken by Giralia resources until Atlas Iron took over Giralia resources in 2011.
Geology	• Marra Mamba formation stratigraphy with mineralisation hosted in Marra Mamba Mt Newman BIF.
Drillhole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Drilling by Giralia Resources in 2008 and 2010.
Further work	• Reduce drill spacing to 50x50m to further define geology and increase robustness of mineral resource estimate. • Undertake diamond drilling for the purpose of bulk density analysis and twin analysis of RC holes to evaluate drilling bias. • Undertake down hole surveys to provide hole trajectory information and geophysical densities

	• Undertake Variography • Undertake and Ordinary Kriged estimate • RTK-DGPS all drill collars.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	**Atlas** • Lithology logging codes are standardised across Atlas. The logs are entered digitally in the field into acQuire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data is stored in the centralised Atlas acQuire drillhole database. **Giralia** • Giralia resources data have been incorporated into the Atlas acQuire drillhole database although the veracity of the data is not as conclusive as for Atlas drill holes.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• There is sufficient confidence in the geological interpretation of the mineral deposit. • Geological interpretation based on local geological surface mapping, drillhole lithological logging and geochemical data. • Wireframes of the stratigraphic units used to generate an empty geological model. • The overlying hardcap, hydrated zone displays higher variability and mixed populations. This will likely influence the local estimates rather than the global grade estimate for this zone.
Dimensions	• The Mineral Resource comprises two zones of mineralisation with dimensions of over 1.4km along strike, 200m across strike and 50m depth.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half a drill spacing • Univariate statistical analysis completed with Snowden Supervisor software • Block model: 1300m (N), 3150m (E) and 500m (mRL) • Parent blocks: 50m(x) x 25m(y) x 5m(z) • Sub-blocks: 2.5m(x) x 2.5m(y) x 1.25m(z) • The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes.

	• Inverse distance squared was used to estimate the standard Atlas iron suite of elements (Fe, SiO2, Al2O3, P, MnO, LOI, S, TiO2, MgO, CaO and K2O • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2, and 5 drill spacings for run 3. • A minimum of 12 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 for run 2 and 8 for run 3 (depending on domain). • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5,5,2 was applied. • Grade restriction was applied to some of the minor deleterious elements (MnO and CaO) in some domains as a restricted search to limit the influence of extreme/outlier grades from smearing distant blocks by using a tighter search ellipsoid. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit and Change of Support.
Moisture	• Tonnages are estimated on an ‘assumed’ dry basis. • The water table is at 590mRL based on resistivity measurements. ~80% of the resource is located below the water table. • Where moisture data is recorded 2245 samples were logged as dry and 1604 were logged as moist or wet.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No detailed mine planning has been completed as this model represents the maiden Inferred resource. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• No metallurgical test work has been undertaken.
Bulk density	• Global values applied to each geozone • No bulk density from core or geophysical density from down holes logs are available.
Classification	• Whole deposit is Inferred (3) • Mineral Resources have been classified into the Inferred category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • Mineral Resource classification has appropriately taken into account the data

	spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Resource estimate is suitable for long term mine planning only. • Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade.

WESTERN CREEK RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA WESTERN CREEK MINERAL RESOURCE ESTIMATE – JUNE 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	**Atlas sampling** • Reverse Circulation (RC) chip samples collected via cone splitter. • One 6kg (average) sample taken for each two metre sample length and collected in pre-numbered calico sample bags. • 6kg sample was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 5 duplicates are taken for every 100 samples (1:20). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice. **Warwick sampling** • Sampling protocols implemented by Warwick resources are not well documented • Reverse Circulation (RC) chip samples collected; splitting technique not recorded.
Drilling techniques	• Reverse Circulation (RC) drilling. • Nominal drill spacing of 80mE by 40mN. • Total of 96 RC holes used for the resource estimate for a total of 7,149m and 3,947primary samples. • No Diamond drill holes
Drill sample recovery	**Atlas** • RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 1565 Good (39%), 48 Fair (1%) 23 Poor (<1%) and 2338 not recorded (59%). • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No twin RC or diamond drillholes have been completed to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling. **Warwick** • Sample recovery and monitoring protocols implemented by Warwick resources are not well documented.
Logging	**Atlas** • Logging of every 2m interval (Atlas procedure) corresponding with 2m sampled interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • 32 Atlas RC drillholes were logged in full, totalling 3347m of drilling. samples were logged for lithology, mineralisation, chip percent, weathering and colour. • No Geophysical data were collected. **Warwick and BHP**

	• 4158 RC samples were geologically logged. • Logging codes for BHP and Warwick samples are different to Atlas and consequently logging was not utilized significantly in the current resource estimate.
Sub-sample techniques	**Atlas Drilling** **Sampling technique:** • RC Chip Samples: • ~6kg RC chip samples are collected via cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** • Sample dried at 105°C for 12-24 hrs • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality Control Procedures** • Duplicated sample: 5 every 100 samples (1:20). • Certified Reference Material assay standards inserted: 5 in every 100 samples (1:20). • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. Lab repeats taken and standards inserted at predetermined level specified by the lab. **Warwick drilling** • RC Chip Samples: • Sampling protocols and splitting methods unknown. **Quality Control Procedures** • No sample duplicates • Certified Reference Material assay standards inserted: 4 in every 100 samples (1:25) in 2008 drilling and 2 in every 100 samples (1:50) in the 2009 drill program
Quality of assay data and laboratory tests	• All samples (both Atlas and Warwick) were submitted to Ultratrace Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 0.66g sample that is dried further, fused at 110^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards and field duplicates analysis (Atlas drilling only) are used for quality control. • Certified Reference Material assay standards having a good range of values,

	were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice.
Verification of sampling and assaying	**Atlas drilling** • Significant intersections have been independently verified by alternative company personnel. • The Competent Person has inspected the Laboratory. • There are no twinned holes drilled to date. • Atlas Primary data are captured on field Toughbook laptops using acQuire™ software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection. **Warwick drilling** • The veracity of Warwick drilling data is less certain than that for Atlas drilling. • Warwick data has been incorporated and stored in the secure, centralised Atlas acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	**Atlas drilling** • All 32 Atlas hole Collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. **Warwick/BHP** • Warwick and BHP hole collars were picked up by a field assistant using a back-pack mounted DGPS or a handheld GPS. The accuracy of these devices is significantly lower than RTK-DGPS. • Downhole gyroscopic surveys were not attempted. • The grid system is MGA_GDA94 Zone 50.
Data spacing and distribution	• Drill spacing on an approximate 80m (E-W) by 40m (N-S) grid. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Sample Security	**Atlas Drilling** • Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a dispatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch. **Warwick Drilling** • Sample security protocols for Warwick drilling are not documented.
Orientation of data in	• The attitude of the Western Creek resource is predominantly flat lying and is

relation to geological structure	drilled to grid east with drillholes inclined between -50 and -90 degrees which is slightly oblique to the orientation of the mineralisation.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Western Creek is located wholly within Exploration Lease E52/2300 and E52/1260. Atlas owns the Iron rights to these tenements. • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• Exploration drilling has been undertaken by BHP in the early 1990s and by Warwick resources in 2008 and 2009 until Atlas Iron took over Warwick resources.
Geology	• Jeerinah, Marra Mamba and Wittenoom formation stratigraphy with mineralisation hosted in Marra Mamba BIF.
Drilhole infomration	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Drilling by Warwick Resources and BHP
Further work	• Reduce drill spacing to 40x40m to further define geology and increase robustness of mineral resource estimate. • Undertake diamond drilling for the purpose of bulk density analysis and twin analysis of RC holes to evaluate drilling bias. • Undertake down hole surveys to provide hole trajectory information and geophysical densities • RTK-DGPS all drill collars. • Better topo data
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	**Atlas**

	• Lithology logging codes are standardised across Atlas. The logs are entered digitally in the field into acQuire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data is stored in the centralised Atlas acQuire drillhole database. **Warwick** • Warwick resources data have been incorporated into the Atlas acQuire drillhole database although the veracity of the data is not as conclusive as for Atlas drill holes.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• There is sufficient confidence in the geological interpretation of the mineral deposit. • Geological interpretation based on, local geological surface mapping, drillhole lithological logging and geochemical data. • Wireframes of the stratigraphic units used to generate an empty geological model. • The overlying hardcap, hydrated zone displays higher variability and mixed populations. This will likely influence the local estimates rather than the global grade estimate for this zone.
Dimensions	• The Mineral Resource has dimensions of approximately 200 m (north) by 2400m (east) and extends from surface to a maximum depth of 60m, with an average depth of 30-40m. A thin, hydrated layer sits over the top of the entire resource. • Block model: 1800m (N), 3950m (E) and 450m (mRL) • Parent blocks: 50m(x) x 25m(y) x 5m(z) • Sub-blocks: 5m(x) x 5m(y) x 2.5m(z)
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half a drill spacing (unless in areas where surface mapping has identified a mineralised/non-mineralised contact in an area without drilling data). • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging neighbourhood analysis (QKNA) undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends: 1800m (N), 3950m (E) and 450m (mRL) • Parent blocks: 50m(x) x 25m(y) x 5m(z) • Sub-blocks: 5m(x) x 5m(y) x 2.5m(z) • The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks.

	• The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO and K_2O) estimated plus geophysical density and chip percentage where possible. • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2, and 5 drill spacings for run 3. • A minimum of 12 samples and a maximum of 30 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 for run 2 and 8 for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5,5,2 was applied. • Grade restriction was applied to some of the minor deleterious elements (MnO) in some domains as a restricted search to limit the influence of extreme/outlier grades from smearing distant blocks by using a tighter search ellipsoid. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit and Change of Support.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • The water table sits at a depth of 590mRL approximately 40m below the surface; approximately 7% of the resource is located below the water table. • 37% of samples logged as dry, 2% samples logged as moist and 2% of samples logged as wet samples. 3% of samples had water injected. Whilst 59% of samples had no record.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No detailed mine planning has been completed as this model represents the maiden Inferred resource. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• No metallurgical test work has been undertaken.
Bulk density	• Global values applied to each geozone. Mineralised material has been

	assigned a global bulk density of 2.8. Waste material has been assigned a global bulk density of 2.7. • No bulk density from core or geophysical density from down hole logs are available.
Classification	• Whole deposit is Inferred (3) • Mineral Resources have been classified into the Inferred category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• The confidence in this resource estimate has been deemed appropriate as a basis for conceptual long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade.

WESTERN RIDGE RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA WESTERN RIDGE MINERAL RESOURCE ESTIMATE – OCTOBER 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	**Atlas** • Reverse Circulation (RC) chip samples collected via cone splitter. • One 6kg (average) sample taken for each two metre sample length and collected in pre-numbered calico sample bags. • 6kg sample was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 5 duplicates are taken for every 100 samples (1:20). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice. **Giralia** • Sampling protocols implemented by Giralia resources are not well documented • Reverse Circulation (RC) chip samples collected; splitting techniques were riffle splitter or spear sampling.
Drilling techniques	• Reverse Circulation (RC) drilling. • Nominal drill spacing of 50mN by 150mE (not all holes drilled on grid pattern). • Total of 157 RC holes extracted from the Atlas database, • 144 holes used for the resource estimate for a total of 8631m • 4317 primary samples. • No Diamond drill holes.
Drill sample recovery	**Atlas** • RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 629 Good (>99%), 1 Poor (<1%) • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No twin RC or diamond drillholes have been completed to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling. **Giralia** • Sample recovery and monitoring protocols implemented by Giralia resources are not well documented.
Logging	**Atlas** • Logging of every 2m interval (Atlas procedure) corresponding with 2m sampled interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • 24 Atlas RC drillholes were logged in full, totaling 1260m of drilling. • Samples were logged for lithology, mineralisation, chip percent, weathering and colour. • Geophysical data were collected from 15 holes but the distribution and amount of data is considered insufficient for use in the current resource estimate.

	Giralia • Logging codes are different to Atlas and consequently logging was not utilized significantly in the current resource estimate.
Sub-sample techniques	**Atlas Drilling** **Sampling technique:** • RC Chip Samples: • ~6kg RC chip samples are collected via cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** • Sample dried at 105°C for 12-24 hrs • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality Control Procedures** • Duplicated sample: 5 every 100 samples (1:20). • Certified Reference Material assay standards inserted: 5 in every 100 samples (1:20). • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab. **Giralia** • RC Chip Samples: • Sampling protocols unknown • Riffle splitting for 3687 sample • Spear sampling for 403 samples • Quality Control Procedures • Field duplicates at a rate of 4% • Standards at a rate of 4% - note: no certified values are available for the standards inserted.
Quality of assay data and laboratory tests	• Atlas Samples were submitted to SGS Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 0.66g sample that is dried further, fused at 1110^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards and field duplicates analysis (Atlas drilling only are used for quality control). • Certified Reference Material assay standards having a good range of values,

	were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice. • Giralia samples were submitted to Spectrolabs in Geraldton. The precise methodology of the analyses conducted is unknown but is considered to be similar to that at SGS.
Verification of sampling and assaying	**Atlas** • Significant intersections have been independently verified by alternative company personnel. • The Competent Person has inspected the Laboratory. • There are no twinned holes drilled to date. • Atlas Primary data are captured on field Toughbook laptops using acQuire^{tm} software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection. **Giralia** • The veracity of Giralia drilling data is less certain than that for Atlas drilling. • Giralia data has been incorporated and stored in the secure, centralised Atlas acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	**Atlas** • All 24 Atlas hole Collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. **Giralia** • Giralia hole collars were picked up by a licensed surveyor. • Downhole gyroscopic surveys were attempted on 15 of 157 holes. • The grid system is MGA_GDA94 Zone 50.
Data spacing and distribution	• Drill spacing on an approximate 150m (E-W) by 50m (N-S) grid. • The drill spacing in some of the initial Giralia drill programs follows topographically accessible areas rather than a set grid pattern. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Sample Security	**Atlas** • Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.

	Giralia • Sample security protocols for Giralia drilling are not documented.
Orientation of data in relation to geological structure	• The attitude of the Western Ridge resource is predominantly flat lying with predominantly vertical drillholes. • A small minority of holes dip -60 towards the north or north east.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Western Ridge is located within Exploration Lease E52/1604 and E52/1483. Atlas owns the Iron rights to these tenements. • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• Exploration drilling has been undertaken Giralia resources in 2008 until Atlas Iron took over Giralia resources.
Geology	• Jeerinah, Marra Mamba and Wittenoom formation stratigraphy with mineralisation hosted in Marra Mamba BIF.
Drillhole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Historical drilling by Giralia Resources.
Further work	• Reduce drill spacing to 50x50m to further define geology and increase robustness of mineral resource estimate. • Undertake diamond drilling for the purpose of bulk density analysis and twin analysis of RC holes to evaluate drilling bias. • Undertake down hole surveys to provide hole trajectory information and geophysical densities.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	**Atlas**

	• Lithology logging codes are standardised across Atlas. The logs are entered digitally in the field into acQuire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data is stored in the centralised Atlas acQuire drillhole database. **Giralia** • Giralia resources data have been incorporated into the Atlas acQuire drillhole database although the veracity of the data is not as conclusive as for Atlas drill holes.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• There is sufficient confidence in the geological interpretation of the mineral deposit. • Geological interpretation based on, local geological surface mapping, drillhole lithological logging and geochemical data. • Wireframes of the stratigraphic units and mineralization used to generate an empty geological model. • The overlying hardcap, hydrated zone displays higher variability and mixed populations. This will likely influence the local estimates rather than the global grade estimate for this zone.
Dimensions	• The Mineral Resource comprises two major zones with dimensions of approximately • 1800 m (north) by 1200m (east) and extends from surface to a maximum depth of 60m. • 400 m (north) by 700m (east) and extends from surface to a maximum depth of 60m. • A thin, hydrated layer sits over the top of both zones of mineralisation. • Block model: 2100m (N), 1725m (E) and 450m (mRL) • Parent blocks: 75m(x) x 25m(y) x 5m(z) • Sub-blocks: 5m(x) x 5m(y) x 2.5m(z)
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half a drill spacing (unless in areas where surface mapping has identified a mineralised/non-mineralised contact in an area without drilling data). • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging neighbourhood analysis (QKNA) undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model: 2100m (N), 1725m (E) and 450m (mRL) • Parent blocks: 75m(x) x 25m(y) x 5m(z)

	• Sub-blocks: 5m(x) x 5m(y) x 2.5m(z) • The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO2, Al2O3, P, MnO, LOI, S, TiO2, MgO, CaO and K2O • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2, and 5 drill spacings for run 3. • A minimum of 12 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 for run 2 and either 8 or 6 for run 3 (depending on domain). • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5,5,2 was applied. • Grade restriction was applied to some of the minor deleterious elements (MnO and CaO) in some domains as a restricted search to limit the influence of extreme/outlier grades from smearing distant blocks by using a tighter search ellipsoid. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit and Change of Support.
Moisture	• Tonnages are estimated on an ‘assumed’ dry basis. • The water table is assumed to sit at a depth of 590mRL. None of the resource is located below the water table. • Where moisture data is recorded (630 samples from Atlas drilling only) all samples were logged as dry
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No detailed mine planning has been completed as this model is an Inferred resource. • No assumptions on mining methodology have been made.

Metallurgical factors or assumptions	• No metallurgical test work has been undertaken.
Bulk density	• Global values applied to each geozone. Mineralised material has been assigned a global bulk density of 2.8. Waste material has been assigned a global bulk density of 2.7. Overlying detrital waste material has been assigned a density of 2.6. • No bulk density from core or geophysical density from down holes logs are available.
Classification	• Whole deposit is Inferred (3) • Mineral Resources have been classified into the Inferred category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade. • The confidence in this resource estimate has been deemed appropriate as a basis for conceptual long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling.

MATERIAL CHANGES TO MATERIAL MINING PROJECTS AND DISCLOSURE FOR THE PURPOSE OF ASX LISTING RULES 5.8 AND 5.9 FOR THE PARDOO ROJECT

Pardoo Mineral Resource Table, As at 30 June 2014 (53% Fe Cut-Off Grade)										
Location	**Resource Classification**	**Kt**	**Fe (%)**	**SiO_2 (%)**	**Al_2O_3 (%)**	**P (%)**	**S (%)**	**LOI (%)**	**CaFe* (%)**
Clare	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0	0.0
	Inferred	1000	55.2	8.2	1.5	0.12	0.01	10.12	61.4
Floyd	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0	0.0
	Inferred	6,000	55.8	7.0	2.5	0.11	0.01	9.79	61.9
Isobel	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0	0.0
	Inferred	1000	54.9	11.3	1.3	0.08	0.05	7.4	59.3
Willy	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0	0.0
	Inferred	1000	56.7	9.8	1.4	0.02	0.10	5.78	60.2
Sub-Total	**Measured**	**0**	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**	**0.0**	**0.0**
	Indicated	**0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	Inferred	**9,000**	**55.7**	**7.8**	**2.3**	**0.11**	**0.02**	**9.2**	**61.4**
Total		**9,000**	**55.7**	**7.8**	**2.3**	**0.11**	**0.02**	**9.2**	**61.4**

Tonnes are rounded according to resource classification; grades are carried through unaffected by rounding and may result in small discrepancies.

*Calculated calcined Fe grade where CaFe=(Fe%/(100-LOI%))*100

<u>Pardoo JORC 2012 Compliance Statement for Mineral Resources</u>

Geology and Geological Interpretation

Atlas's Pardoo Project is located adjacent to the Ridley Range approximately 75kms east of the town of Port Hedland. The Pardoo project is situated adjacent to the Port Hedland to Broome Highway. The Pardoo Project has been operated consistently by Atlas Iron from 2008 through to late 2013 where mining has occurred from numerous deposits, these being Connie, Alice East, Alice West, Alice Extension, South Limb, Bobby, Glenda, Emma, Olivia and Chloe. Mining activities were completed at the end of 2013 with all Ore Reserves totally exhausted. Non-recoverable resources remaining on completion of mining have been removed from the projects resources.

The Pardoo project area covers a series of hills and ranges (Ord and Ridley Ranges) which are exposed and dissected by a well-developed dendritic pattern of ephemeral watercourses. The large De Grey and Strelley Rivers truncate the eastern margin of the ranges. The vegetation is dominated by spinifex, scattered eucalypt and acacia shrubland consistent with the semi-arid environment of the Pilbara.

Rocks exposed in the Pardoo project area are representative of the Cleaverville Formation (formerly the Nimingarra Formation), belonging to the Gorge Creek Group of the De Grey Supergroup. The Pardoo project predominantly overlies rocks of the Ord Greenstone Belt. Fine grained clastic and chemical metasedimentary rocks of the Gorge Creek Group occur throughout the Pardoo project and are assigned to the Cleaverville Formation. The Cleaverville Formation consists of banded iron formation ("BIF"), jaspilite, banded chert, shale, mudstone and minor tuff, variolitic basalt and volcaniclastic components. Metamorphosed variolitic high magnesium basalt and ultramafic schist occur locally as small outcrops in topographiclly subdued regions. The ultramafic schists may be correlated with ultramafic/mafic intrusions that have intruded areas of structural complexity and along contacts with banded iron formation units.

The Ord-Ridley BIF Member, consists of brecciated jasperoidal chert, goethite and magnetite, banded cream chert and magnetite, banded jasperoidal chert and magnetite, banded black chert and magnetite, a distinctly thickly banded unit of jasperoidal chert and magnetite and a lower unit of banded black to translucent chert, magnetite and carbonaceous siltstone.

Iron mineralisation at most of the Pardoo deposits are hosted within steeply dipping BIFs. Mineralisation close to the surface are characterised by vuggy textures and vitreous goethite which characterise hydrated mineralisation. Beneath the hydrated mineralisation lies primary mineralisation which is predominantly goethite rich with lesser quantities of hematite.

Mineralisation is stratigraphically bound and typically steeply dipping at most of the deposits apart from Connie which is a flat lying CID. Mineralisation has a short strike length of between 800m to 1,500m with widths varying between 20m up to a maximum of 120m. Mineralisation occurs at surface in all deposits and extends down to variable depths with the maximum depth of approximately 150m.

The Pardoo geological models were generated from regional geological mapping, geochemistry, geophysics and logging data. A stratigraphic model of the lithology and structure was first constructed to provide a geological framework in which to interpret the mineralisation. The mineralisation was interpreted into an upper zone of depletion and underlying hydrated and primary mineralised zones. Small, discrete discontinuous pods of mineralisation were modelled separately as were small zones of internal waste.

The stratigraphic model comprises a sequence of banded iron formation, cherts and shales, whereas the mineralisation model comprises of depleted, hydrated and primary mineralisation zones. The mineralisation zones are modelled generally using greater than 50% Fe and less than 15% SiO_2 cut-off to define ore from waste. The combination of both stratigraphic model and mineralisation models are used for geozone definitions.

Sampling and Sub-sampling

All available drilling was sampled. The RC sampling methodology prior to January 2011, involved collection of samples drilled over 2m intervals generally using a cone splitter and on occasions a riffle splitter. Samples were directed into a calico bag with the overflow collected into green plastic bags. The calico bags were pre-numbered, with every 25th and 75th sample a field duplicate. The duplicate sample is collected in real time splitting the two sub samples from the cone splitters. Standards were inserted every 40th and 80th sample.

After January 2011, 2m sample intervals were collected using a cone splitter. Samples were directed into a calico bag with the overflow collected into green plastic bags. The calico bags were pre-numbered, with every sample number ending in 00, 20, 40, 60, 80, collected as a field duplicate. The duplicate sample was collected in real time by splitting the two sub samples from the cone splitter. Standards were inserted every 1st, 21st, 41st, 61st and 81st sample.

The samples were all kept dry (where possible) and are of acceptable quality. Sample weights are also recorded to monitor the ongoing representativeness of the sample split.

The sampling of diamond drill core involved sampling at 1m intervals using the whole core. Core sample preparation involved drying, crushing, splitting (riffle), and pulverising to produce a pulped product with the minimum standard of 90% passing 75 micron.

Drilling Techniques

Exploration and Resource Development drilling over the various Pardoo prospects occurred between 2007 and 2013. To date a total of 1,812 drillholes have been completed at the Pardoo project totalling 117,792.5m of drilling (4,401 RC holes for 216,762m and 69 DDH for 4,732.5m).

Reverse Circulation drilling employing a 140mm diameter face sampling hammer is used to collect samples for assay. PQ3 diameter diamond drillcore is used to collect cored samples for density analysis, twinned drillhole analysis against RC drilling and metallurgical and geotechnical test work.

The geologist sieves and logs every 2m interval in alignment with the sampling interval. Logging encompasses the main material types, hardness, lithology, colour and percentage of chips (approximate lump/fine proportion). The logging is recorded in the field electronically into acQuire field logging data entry objects and on completion the electronic files are sent to Perth and loaded into the centralised acQuire drillhole database which is managed by a full time Database Administrator.

Drill spacing for the various Pardoo deposits has generally been taken down to nominal 20mE x 20mN spacing to account for the limited strike length and widths of mineralisation. The Floyd deposit is drilled to 40mN x 40mE with areas of wider spaced drilling up to 40mN x 80mE.

Licenced surveyor MHR Surveyors completes a collar pickup on all available drill collars using a Trimble R8 Real Time Kinematic Differential GPS (DGPS). The DGPS gives an accuracy of +/- 0.05 m for Easting and northing location and +/- 0.1 m for the RL (height above sea level).

All available RC and DDH holes are gyroscopically surveyed downhole by ABIMS Pty Ltd utilising a north seeking multi-shot gyroscopic tool which measures azimuth to an accuracy of +/- 0.2° and dip to an accuracy of +/-0.1°. Downhole geophysical measurements are also collected at the same time and comprise Density/Calliper, Magsus, Resistivity and Natural Gamma recordings taken at 10cm intervals downhole. Not all holes were able to be surveyed completely due to blockages in the hole. Holes drilled prior to 2010 were generally not routinely surveyed downshole.

Resource Classification

Remaining Mineral Resources have been classified into the Inferred category based on drillhole spacing, nature and quality of the drilling and sampling methods, geological understanding and confidence, grade continuity, QAQC analysis, a review of the drillhole database and sampling and logging protocols, confidence in the estimate of the mineralised volume, results of the model validation and results of metallurgical, geotechnical and hydrological test work.

Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. The results of the validation of the block model show good correlation of the input data to the estimated grades.

The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit. Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. The statement relates to global estimates of tonnes and grade.

The Floyd resource has been re-modelled and the estimate updated during the reporting period. This has resulted in an overall reduction in size and confidence compared to the previously stated historically produced resource. A revised geological model and density reduction has reduced the estimate tonnage by 3.5 Mt and all of the previously Indicated classified mineralisation has been reclassified to an Inferred level of confidence based on

Atlas' current understanding of the deposit and associated risks with the resource and information that were not originally considered by the historical estimate.

Material has been classified as Inferred where drill spacing is greater than 20m x 20m, lacks continuity or is poddy (only continuous over one drill section), is within the near surface variable hydrated zone, is below the water table or was considered geologically complex.

Sample Analysis Methods

Samples were sent to ALS, Genalysis and Ultratrace commercial laboratories in Perth for analysis of the extended iron ore suite of elements. This consists of XRF analysis for Fe, SiO_2, Al_2O_3, P, CaO, K_2O, MgO, MnO, S, TiO_2, Na_2O and a thermo gravimetric measurement for loss on ignition (LOI) at 1000^oC.

Samples are dried at 105^oC in gas fired ovens for 18-24 hours, samples are then crushed to a nominal -3mm size, pulverised in a LM2 mill until 90% passing 75micron is achieved. A 66 gram pulp sub-sample is collected that is fused at 1100^oC for 10 minutes and poured into a platinum crucible prior to analysis by XRF.

To ensure quality assurance and control (QAQC) of the sampling and assaying procedure, Atlas submitted field duplicates and standards to the laboratory for analysis. For samples collected prior to January 2011, the duplicates and standards are inserted at predefined intervals at a rate of 2% for standards and 2% for duplicates for an overall insertion rate of 4%. Post January 2011, the duplicates and standards are inserted at predefined intervals at a rate of 5% for standards and 5% for duplicates for an overall insertion rate of 10%. The laboratory also inserted its own internal standards and pulp repeat analyses at predefined intervals. Sample collection procedures and QAQC protocols employed by Atlas are commensurate with standard industry practices.

The QAQC data for the Pardoo project was reviewed prior to commencing each resource estimate for Pardoo and were found to be of reasonable precision and analytical accuracy and the data is deemed to be acceptable for resource estimation purposes and JORC compliancy.

Estimation Methodology

The drillhole data was composited prior to running the estimation process using a 2m sample interval to minimise any sample bias due to sample length. The compositing was run within the attribute fields to ensure no composite intervals crossed any lithological contacts or grade boundaries.

Variograms were generated to assess the grade continuity of the various elements and as inputs to the kriging algorithm used to interpolate grades. Snowden Supervisor software was used to generate and model variograms and conduct statistical analysis.

Block models were constructed in Vulcan software (Maptek) and constrained by surfaces and solids. The parent block size was selected based on half of drillhole spacing and the model was orientated (rotated) to represent the strike of mineralisation and prevailing drilling grid. The sub-block size was selected to more accurately define the mineralised volume.

- The volume block model was created using the wireframes of the stratigraphy, mineralisation and topography. A unique geozone code was assigned based on the combination of stratigraphy and mineralisation. The geozone field is used to distinguish the main mineralisation types and mineralised areas. A topographic surface of the local topography created from flown aerial survey data captured in 2008 at a 2m contour resolution.
- Atlas estimated Fe, SiO_2, Al_2O_3, P, LOI, CaO, K_2O, MgO, MnO, S, TiO_2 and Na_2O grades using Ordinary Kriging for the mineralised horizons. Waste horizons were estimated by Inverse Distance (power 2) methods.

The preferred estimation parameters were chosen based on neighbourhood analysis, whereby several estimation parameters were tested to optimise the estimation search. This was represented by best kriging efficiency, slope of regression values and number of blocks filled. Search ellipses were orientated based on the geometry of the mineralisation with the search ellipses increased by two fold and three fold for second and third search passes. Unfolding was not used for the Pardoo resource estimations as the deposits are relatively planar.

- Geophysical density measurements have been recorded downhole from the majority of drillholes. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. Geophysical density is recorded at 10cm increments downhole. The density measurements are filtered and validated prior to use to remove anomalous recordings.

The in-situ density (inclusive of moisture and porosity) was estimated into the models using geophysical density measurements collected at 10cm intervals downhole. All available drillholes had geophysical measurements collected and a sufficiently good spatial coverage of data across all of the deposits was achieved. Following compositing of the data, variograms were modelled and geophysical density was estimated into the model utilising ordinary kriging techniques.

To correct the in-situ density estimate to a dry bulk density, the geophysical density measurements are correlated to dry dimensional core density measurements and a suitable regression factor is determined. The regression factor is applied to the geophysical density estimate to derive the dry bulk density value which will account for moisture and porosity. On average a 10% reduction was applied to the geophysical density estimates to derive the dry bulk density for the Pardoo resources. The dry bulk density values for Pardoo resources range from an average of 2.6 to 2.9 t/m^3 which is felt to be a reasonably conservative estimate.

The estimates were validated using:

- A visual comparison of block grade estimates and the drillhole data.
- A global comparison of the average composite grades and estimated grades.
- Moving window averages comparing the mean block grades to the composites.
- Histogram comparison of the original composite grades and the block estimated grades.
- Assessment of correlation coefficients from the input sample data and estimated block grades.
- Total assay validation check to ensure closure (sum of elements in each block adds to 100% +/- 2%).

The conclusions from the model validation work include:

- Visual comparison of the model grades and the corresponding drillhole grades shows a good correlation.
- A comparison of the global drillhole mean grades and with the mean grades of the block model estimate (for each domain) shows that the block model mean grades are typically within 5-10% of the drilhole means which is a good outcome with the exception of poorly sampled regions.
- The trend plot grades show a good correlation between the block model grades compared with the drillhole grades.
- Total assay validation showed that the blocks maintained closure generally between 98% and 102% for all mineralised domains.
- Assessment of the histograms and correlation coefficients showed that the relationship between elements within the input sample data has been maintained in the block grades estimates and the grade distribution has been maintained in the estimate with an acceptable level of smoothing.

Cut-Off Grade

The criteria for defining mineralised material during interpretation and estimation at Pardoo is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary. These cut-off grades were used to separate mineralised material from waste. A slightly higher cut-off grade of 53% Fe is used for reporting all Pardoo resources as the deposits are generally of a low grade nature compared to other Atlas projects and the higher cut-off grade reports material closer to current Atlas product specification.

Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the proposed open pit mining method and proposed processing methodology to consistently produce material suitable to meet Atlas product specification. This cut-off grade methodology is used consistently for reporting of all Mineral Resources at Pardoo. The tabulated resources are reported using a 53% Fe cut-off grade on a block by block basis.

Mining and Metallurgical methods and parameters and other modifying factors

The Pardoo Project utilised a conventional open pit mining methodology with selective extraction of ore material using a backhoe configured excavator. This allows a selective ore mining approach comprising 5m benches which are mined in two flitches of 2.5m height. The 2.5m flitches are used in order to reduce ore dilution and loss. A simple, low cost crush and screening processing route is utilised to produce a single, fines only product at a specified grade. The Pardoo Project has been operational since 2008 and was completed in late 2013 and has a long production history. High level reconciliation results performed on a quarterly basis indicated that the in-situ tonnage and grade variances were within acceptable accuracy ranges for Indicated Resource estimates at the time of mining.

It is a reasonable assumption that the other remaining Pardoo resources may eventually be economically extracted based on their proximal location to existing Atlas projects and infrastructure and also due to their favourable size and grade characteristics which will fit the Atlas product specification. Further studies and additional drilling are required to improve the confidence in resource estimates and support any future upgrades of remaining resources.

PARDOO PROJECT JORC 2012 TABLE 1 ASSESSMENT CRITERIA

FLOYD AND CLARE RESOURCE JORC 2012 TABLE 1

FLOYD & CLARE RESOURCE ESTIMATE – MAY 2013 JORC 2012 TABLE 1	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Methodology involved cone or riffle splitting taken every two metre sample length, and collected into calico sample bags. • Samples collected into pre-numbered calico sample bags for identification prior to laboratory submission. • One 3.5kg (average) sample taken for each two meter sample length and collected in pre-numbered calico sample bags.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer bit. • RC holes (total of 14,272m for 193 holes) – used in estimate. • PQ3 DDH (total of 319.5m for 4 holes) – suppressed due to no assays.
Drill sample recovery	• To ensure maximum sample recovery, prevent sample bias and ensure the representivity of the samples, an Atlas field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery or sources of sample bias or hygiene issues were identified. • Sample recovery, sample condition and moisture content (injected - related to drilling or in-situ - natural) are recorded at the drill site during active drilling by an Atlas Iron geologist to capture accurate and timely information. • 60% good, 26% fair and 11% poor (4% not recorded). • 31% dry, 23% moist, 4% moist injected, 31% wet, 6% wet injected (4% not recorded). • Atlas is satisfied that the RC holes have taken a sufficiently representative sample of the mineralisation and minimal loss of fines has occurred in the RC drilling resulting in minimal sample bias. • No relationship between sample recovery and grade has been demonstrated
Logging	• 3313 RC and diamond sample intervals logged. • Logging on a 1m scale (practice discontinued in January 2011 when intervals are logged in 2m intervals to correspond with the sample interval). • All holes are logged quantitatively in their entirety for colour, hardness, lithology and material type and quantitatively for chip content (%). • Logging of drillhole samples was done at sufficient detail to meet requirements of resource estimation and mining studies. • No geophysical data collated (gamma, density, magsus or resistivity).
Sub-sample techniques and sample preparation	• Sample size reduced to approximately 3.5Kg using a riffle splitter mounted to the side of the drill rig. • Under correct field conditions cone and riffle splitting methods are considered appropriate and fit for purpose with minimal sample bias. • Sample amount (~3.5Kg) is considered appropriate for the distribution of grain sizes Produced by RC drilling. **Laboratory Sample preparation:**

	• Samples are dried at 105^{O}C in gas fired ovens for 18-24 hour. • Samples are then crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. • Sub-samples are collected to produce a 0.66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum crucible prior to analysis by XRF and total LOI by Thermo Gravimetric analysis. • Duplicate sample analysis show the data has acceptable precision, indicating that the sampling technique is appropriate for the deposit • The sample sizes were considered to be appropriate to correctly represent the mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent values assay ranges for the primary elements.
Quality of assay data and laboratory tests	• All samples submitted to Ultratrace and ALS Laboratory in Perth and assayed for the extended iron ore suite (24 elements) by XRF and a total LOI by thermogravimetric technique. The method used is designed to measure the total amount of each element in the sample. • Samples were subjected to routine particle sizing analysis by the lab to ensure the pulverizing stage is achieving appropriate particle size for XRF analysis showed acceptable results. This analysis shows that 95% of samples tested returned greater than the 90% passing 75 micron requirement. • Laboratory procedures are in line with industry standards and are appropriate for iron ore analysis. • Samples are dried at 105oC in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using an LM2 mill. • Sub-samples are collected to produce a 66 gram sample that is dried further, fused at 1100oC for 10 minutes, poured into a platinum mould and placed in the XRF machine for analysis and reporting. • A total LOI is measured by Thermogravimetric methods (TGA) at 1000oC. • Atlas inserts commercially available certified reference material (standards) at a set frequency of 1:20 (5% of total samples) within its sample batches. A number of different standards at a range of grades are used to monitor analytical precision of the assay results. • Blanks are not used by Atlas due to the nature of the analysis being a complete multi-element suite. • Acceptable levels of precision have been achieved with all standard assays reporting within 2 standard deviations of the certified mean grade for the 12 main elements of interest. • The lab also inserts its own standards at set frequencies and monitors the precision of the XRF analysis. These results also reported well within the specified 2 standard deviations of the mean grades for all 12 main elements of interest. • XRF calibrations are checked once per shift using calibration beads made using exact weights. • The Laboratory performs repeat analyses of sample pulps at a rate of 1:20 (5% of all samples) these compare very closely with the original analysis for all elements. • Analysis of field duplicate and lab pulp duplicates and repeats reveals that greater than 90% of pairs have less than 10% difference and the precisions of samples is within acceptable limits and concurs with industry recommended practices.

Reserve and Resource Update

Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. RC chips have been inspected in the field to verify the correlation of mineralised zones with assay results. The Competent Person for this report has visited site and inspected all sampling processes in the field and also inspected the laboratory on a regular basis. • Geological logs are entered digitally in the field into acQuire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. • All data is sent to Perth and stored in the secure, centralised AcQuire SQL database which is managed by a full time database administrator. • Results of known Reference Materials showed that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples show greater than 90% of pairs have less than 10% difference which is considered within acceptable limits and acceptable to current industry best practice. • Standards from Ultratrace and ALS laboratories were found to be acceptable. • Negative laboratory default values reported for below detection limit results were replaced with a positive number equal to half the analyte detection limit. • No adjustments, corrections or calibrations were made to any assay data used in the estimate apart from replacement of standard default laboratory codes.
Location of data points	• All drillhole collar locations were surveyed by licensed surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. • Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • 193 collars were surveyed using differential DGPS_RTK. • 4 collars were surveyed by GPS only (PDDH041, PDPIEZ23, PDPIEZ19 and PDRC3093). • Data supplied in projection MGA_GDA94 Zone 50. • Drillhole collar locations are checked against either the topographic surface or a surveyed pit surface.
Data spacing and distribution	• Drill spacing on an approximate 40m by 40m grid with spacing thinning to approximate 80m x 40m spacing to the east of the deposit. • The drillhole spacing and sampling density provides a high level of confidence in the continuity of mineralisation between successive drill traverses sufficient to support the Mineral Resource Classification under the JORC code.
Orientation of data in relation to geological structure	• Holes are drilled perpendicular to the local stratigraphy. Holes are angled to cross cut stratigraphy with holes drilled at either -60^{o} or -70^{o} to the north.
Sample Security	• Samples are packed into sealed polyweave bags and then placed inside large sealed bulk carrying bags. Samples are delivered to a dispatch point in Port Hedland by Atlas Iron staff. • Chain of custody is managed by Atlas Iron. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • Sample documentation is checked against the samples received at the lab and the dispatch notes, any issues are reported back to Atlas Iron.
Audits or reviews	• An audit of the Atlas AcQuire database was completed in August 2012 by an independent party. The Atlas AcQuire database was deemed to be robust and fit for purpose.

	• A review of the data quality and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Lease E45/2330. This tenement is 100% Atlas owned. • The tenement sits within the Ngarla Native Title Claim (WC99/26). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• All Exploration completed by Atlas. Drilling commenced in September 2006.
Geology	• Regionally, the Floyd deposit lies within the Ord Range Greenstone Belt that is comprised predominantly of the Nimingarra Iron Formation'. • Locally, Floyd mineralisation is hosted by a BIF unit that sits conformably overlying a chert unit and underlying a shale unit. Two un-conformable transported units overlie the sequence. These contain no mineralisation. • The resource model has been domained into geozones based on stratigraphy and mineralisation.
Drillhole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• No other work is known to Atlas at this time.
Further work	• Further RC drilling to maintain the 40x40m drill spacing throughout the deposit. • Exclude all speared samples and redrill holes using a cone splitter. • 5x diamond holes drilled for QAQC, geotech, met and stratigraphic purposes. Dimensional density data to be collected for all diamond holes • Downhole surveys and geophysics to be completed on all new drill holes. • Resource re-modelled using new data.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Lithology logging codes are standardised across Atlas Iron. The logs are entered digitally in the field into acQuire logging software on a Toughbook computer via Atlas templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas Iron acQuire

	database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data is stored in the centralised Atlas Iron acQuire drillhole database.
Site Visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• Geological interpretation based on local geological mapping and geochemical data. • Wireframes of the stratigraphic units used to generate an empty geological model. • Drill coverage to ~40m x 40m through Clare and the western half of Floyd and 80m x 40m to the east of the deposit. • Mineralisation wireframe based on >50% Fe and <15% SiO_2 cut-off grade delineating ore/waste boundary.
Dimensions	• Block model: 2,440m (E), 840m (N) and 300m (mRL). • Parent blocks: 20m(x) x 20m(y) x 5m (z). • Sub-blocks: 2.5m(x) x 2.5m(y) x 1.25m (z).
Estimation and modelling techniques	• The block model has been assigned unique mineralisation codes that correspond with the style of mineralisation defined by wireframes created in Vulcan software (1 = waste, 5 = hydrated, 2 = primary mineralisation). • The block model has also been assigned a stratigraphic code based on the stratigraphic interpretation. • For the purpose of creating a stationary estimation domain, the mineralisation was further constrained according to the stratigraphic interpretation (geological zone) by assigning a unique domain code called Geozone. • Raw statistical analysis prior to estimation ensures each Geozone consists of a stationary data set prior to estimation to ensure a robust estimate is performed. • Univariate statistical analysis and variogram modelling has been completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging neighborhood analysis (QKNA) undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • The Atlas Iron block model schema has been used with a standard list of variables consistent across all Atlas resource models. • Ordinary Kriging was used to estimate the standard Atlas Iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO and K_2O) estimated • Search directions and ranges were determined from variogram modelling in Supervisor software to constrain the block interpolation. • Neighbourhood search parameters were optimised with important geostatistical parameters (such as Kriging efficiency and slope of regression) to estimate as many of the blocks as possible while minimising conditional bias. • Three search estimation runs are used with progressively less stringent neighbourhood search criteria in each run to ensure a high quality local estimate while estimating as many of the blocks as possible in each Geozone. Generally the majority of blocks are estimated in run 1. • A minimum of 12, 10 and 8 samples (maximum of 24) in Run1, Run2 and Run3 respectively.

	• A maximum of four samples from a single drillhole is permitted. • Block discretisation of 5 × 5 × 2 was applied. • Sub block grades are estimated at parent cell size. • Mineral Resource estimation does not account for any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • Waste and hydrated material was estimated with Inverse Distance Squared (power 2). • Standard model validation has been completed using visual and numerical (geostatistical) methods and by a formal peer review process conducted by internal Atlas Iron staff. • Some internal dilution occurs where small intervals (< 6.0m) of internal waste could not be separated into a separate waste Geozone domain. • Block model validation methods used included: - visual checks comparing composited data (raw drill data) to the estimated (block data); - a global statistical comparison for each domain; - the generation of easting, northing and RL swath plots to compare composited to estimated grades along slices through the deposit;
Moisture	• The water table is coded in the resource model at -3m RL. The water table is extremely variable with rainfall and dewatering at Bobby (DSO pit ~1km wsw of Floyd). It will be necessary to study further once dewatering at Bobby ceases.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary. These cut-off grades were used to separate mineralised material from waste. • Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the open pit mining method and proposed processing methodology to consistently produce material at or above product specification. • Based on the current Atlas shipped product grade specification, a 53% Fe lower cut-off grade is deemed a suitable cut-off to report resources for Pardoo. • The tabulated resources were reported using a 53% Fe cut-off grade applied on a block by block basis.
Mining factors or assumptions	• Open cut mining using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• No metallurgical test work completed at Floyd. • Assume similar metallurgical characteristics as other nearby and geologically similar Pardoo deposits.
Environmental factors or assumptions	• No environmental factors or assumptions are known at this time.
Bulk density	• A bulk density of 2.6g/cc was assigned to mineralised material. This value is based on current understanding and basic reconciliation data at Pardoo.
Classification	• Mineral Resources have been classified into an Inferred category based on drillhole intercept spacing, geological confidence, level of sample support, and estimation quality.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process at regular intervals and on completion by the Competent Person.

Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • Estimate validation checks of the block model show a good correlation of the input data to the estimated grades. • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit. • The statements relate to global estimates of tonnes and grade. There has been no production from the Floyd deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource. • Resource estimate is suitable for long term mine planning only. **Low confidence in the original dataset due to the following reasons:** • No geophysical logging • No downhole surveys • High proportion of samples collected by spear, scoop and grab (54%) • Poor correlation between diamond hole grades and twinned RC hole grades • Bias observed between samples analysed by different laboratories (Ultratrace and ALS).

ISOBEL RESOURCE JORC 2012 TABLE 1

Isobel Resource Estimate – June 2009 JORC 2012 TABLE 1	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• RC sampling methodology included using both a riffle and cone splitter. • Reverse circulation drilling (RC) to obtain 2.0m sample intervals using a cone splitter. • Samples collected into pre-numbered calico sample bags for identification prior to laboratory submission. • One 3.5kg (average) sample taken for each two meter sample length and collected in pre-numbered calico sample bags. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 2 duplicates are taken for every 100 samples (1:50) for samples collected prior to January 2011. • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 40m by 20m. • RC holes (154 holes for 7,374m) – used in estimate. • PQ3 DDH (1 holes for 50m)
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the riffle/cone splitter. This is recorded as good, fair, poor or no sample. • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery or sources of sample bias or hygiene issues were identified. • No comparison between twin RC or diamond drillholes was conducted to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling. • Atlas is satisfied that the RC holes have taken a sufficiently representative sample of the mineralisation and minimal loss of fines has occurred in the RC drilling resulting in minimal sample bias. • No relationship between sample recovery and grade has been demonstrated.
Logging	• Prior to January 2011, geological logging was completed for 1m interval according to Atlas procedure. • Post January 2011, geological logging was completed for 2m interval to coincide with sample interval. • The entire lengths of RC holes were logged on a 2m interval basis, 100% of the drilling was logged. Where no sample was returned due to voids/cavities it is recorded as such. • All holes are logged quantitatively in their entirety for colour, hardness, lithology and material type and quantitatively for chip content (%). • Logging of drillhole samples was done at sufficient detail to meet requirements of resource estimation and mining studies.

Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • RC chip samples are collected via riffle/cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at Isobel based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hour. • Samples are then crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. • Sub-samples are collected to produce a 0.66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum crucible prior to analysis by XRF and total LOI by Thermo Gravimetric analysis. **Quality Control Procedures:** • Duplicated sample (prior to January 2011): 2 every 100 samples (1:50). • Duplicate samples (post January 2011): 5 every 100 samples (1:20). • Certified Reference Material assay standards inserted: o 2 in every 100 samples (1:50) prior to January 2011. o 5 in every 100 samples (1:20) post January 2011. • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality of assay data and laboratory tests	• All samples submitted to Ultratrace, ALS and Gen Analysis laboratories are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Certified Reference Material assay standards having a good range of values were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise.
Verification of sampling and assaying	• The Competent Person has visited site and inspected the sampling process in the field and also inspected the Laboratory. Significant intersections have been independently verified by alternative company personnel. RC chips have been inspected in the field to verify the correlation of mineralised zones with assay results • Primary data are captured on field Toughbook laptops using acQuire^{tm} software. The software has validation routines to prevent data entry errors.

	• All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• All drillhole collar locations were surveyed by licensed surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. • Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • A total of 135 of 155 collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • Downhole gyroscopic surveys were attempted on all RC and diamond holes. A total of 41 of 155 (RC and DH) holes had downhole gyro survey data. • The grid system for Isobel is MGA_GDA94 Zone 50. • Topographic data is of unknown source and its accuracy cannot be stated.
Data spacing and distribution	• Drill spacing on an approximate 40m by 20m. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• Holes are drilled perpendicular to the local stratigraphy. Holes are angled to cross cut stratigraphy with holes drilled at either -60^{o} or -70^{o} to the east. • The Isobel resource is interpreted to contain a fault zone consisting of two normal thrust faults with a displacement of around 10m within the southern end of the main body of mineralisation.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Isobel is located wholly within Exploration Lease E45/2330. • The tenement is 100% owned by Atlas. • The tenement sits within the Ngarla Native Title Claim (WC99/26). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• All Exploration completed by Atlas. Drilling commenced in September 2006.
Geology	• Regionally, the Isobel deposit lies within the Ord Range Greenstone Belt that is

	comprised predominantly of the Nimingarra Iron Formation'. • Locally, Isobel mineralisation is hosted by a BIF unit. • The Isobel resource is interpreted to contain a fault zone consisting of two normal thrust faults with a displacement of around 10m within the southern end of the main body of mineralisation.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• All drilling has been completed under Atlas supervision.
Further work	• Infill drilling may be required in the area with insufficient drilling coverage to improve both orebody and geological knowledge.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Prior to January 2011, geological logging was completed for 1m interval according to Atlas procedure. Post January 2011, geological logging was completed for 2m interval to coincide with sample interval. The log is entered digitally in the field onto a Toughbook computer, and the files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Isobel Resource is stored in the centralised Atlas acQuire drill hole database.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• The Isobel resource is interpreted to contain a fault zone consisting of two normal thrust faults with a displacement of around 10m within the southern end of the main body of mineralisation.
Dimensions	• Block model origin : 7758500mN x 718700mE x -70mRL • Block model extents 750m (E), 2000m (N) and 1400m (mRL).

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	• Parent blocks: 20m(x) x 20m(y) x 5m (z). • Sub-blocks: 2.5m(x) x 2.5m(y) x 1.25m (z). • Model rotated 135 degrees.
Estimation and modelling techniques	• A single block model to encompass the Isobel Mineral Resource was constructed using a 20mN by 20mE by 5mRL parent block size. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Inverse distance (power 2) was used to estimate the standard Atlas Iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO and K_2O). • Search directions were determined based on orientation of geology and mineralisation. • Mineral Resource estimation does not account for any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • Waste material was estimated with Inverse Distance Squared (power 2). • Standard model validation has been completed using visual and numerical (geostatistical) methods and by a formal peer review process conducted by internal Atlas Iron staff. • Some internal dilution occurs where small intervals (< 6.0m) of internal waste could not be separated into a separate waste Geozone domain. • Block model validation methods used included: - visual checks comparing composited data (raw drill data) to the estimated (block data); - a global statistical comparison for each domain; - the generation of easting, northing and RL swath plots to compare composited to estimated grades along slices through the deposit; • change of support analysis to investigate the degree of smoothing and conditional bias
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • The water table has not been accurately recorded; however it is believed to be located at 0m RL. There appears to be no issues with the sample quality. • All tonnages have been estimated as dry tonnages
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary. These cut-off grades were used to separate mineralised material from waste. • Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the open pit mining method and proposed processing methodology to consistently produce material at or above product specification. • Based on the current Atlas shipped product grade specification, a 53% Fe lower cut-off grade is deemed a suitable cut-off to report resources for Pardoo. • The tabulated resources were reported using a 53% Fe cut-off grade applied on a block by block basis.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• No other metallurgical assumptions have been incorporated into the resource. • No other processing or beneficiation is assumed to occur after pit extraction
Environmental factors or	• A risk factor has been applied to blocks showing elevated sulphur values.

assumptions	• The net acid producing potential of these zones has not been determined to date. • Detailed waste characterization studies have not been undertaken.
Bulk density	• A global density of 2.5t/m^3 was applied to the mineralised material based on understanding from nearby and geologically similar deposits. • This is a bulk commodity project.
Classification	• Mineral Resources have been classified as Inferred category based on drillhole intercept spacing, geological confidence and grade continuity and estimation quality.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process at regular intervals and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • Estimate validation checks of the block model show a good correlation of the input data to the estimated grades. • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit. • The statements relate to global estimates of tonnes and grade. The confidence in this resource estimate has been deemed appropriate as a basis for conceptual long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • There has been no production from the Isobel deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource.

WILLY RESOURCE JORC 2012 TABLE 1

Willy Resource Estimate – January 2012 JORC 2012 TABLE 1	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• RC sampling methodology included using both a riffle and cone splitter, and where required, scoops and spear samples. • Samples collected into pre-numbered calico sample bags for identification prior to laboratory submission. • One 3.5kg (average) sample taken for each two meter sample length and collected in pre-numbered calico sample bags. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 2 duplicates are taken for every 100 samples (1:50) for samples collected prior to January 2011. After January 2011 5 duplicate were inserted every 100 samples (1:20) • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 40m by 20m, up to 20m by 20m in the south western zone of mineralization. • RC holes (291 holes for 15524m) – used in estimate. • DDH (1 holes for 41.3m)
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the riffle/cone splitter. This is recorded as good, fair, poor or no sample. • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No comparison between twin RC or diamond drillholes was conducted to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling. • Atlas is satisfied that the RC holes have taken a sufficiently representative sample of the mineralisation and minimal loss of fines has occurred in the RC drilling resulting in minimal sample bias. • No relationship between sample recovery and grade has been demonstrated.
Logging	• Prior to January 2011, geological logging was completed for 1m interval according to Atlas procedure. • Post January 2011, geological logging was completed for 2m interval to coincide with sample interval. • All holes are logged quantitatively in their entirety for colour, hardness, lithology and material type • This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies.
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples • RC chip samples are collected via riffle/cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible.

	• The sample sizes are considered to be appropriate to correctly represent the mineralisation at Willy based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** • Samples are dried at $105^{O}C$ in gas fired ovens for 18-24 hour. • Samples are then crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. • Sub-samples are collected to produce a 0.66g sample that is dried further, fused at $1100^{O}C$ for 10 minutes poured into a platinum crucible prior to analysis by XRF and total LOI by Thermo Gravimetric analysis. **Quality Control Procedures** • Duplicated sample (prior to January 2011): 2 every 100 samples (1:50). • Duplicate samples (post January 2011): 5 every 100 samples (1:20). • Certified Reference Material assay standards inserted: o 2 in every 100 samples (1:50) prior to January 2011. o 5 in every 100 samples (1:20) post January 2011. • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality of assay data and laboratory tests	• All samples were submitted to Genalysis, Ultratrace and ALS Laboratory in Perth • Samples drilled in later drill programs are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. Samples from some drill programs were only assayed for a reduced iron ore suite. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at $105^{O}C$ in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, fused at $1100^{O}C$ for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. • The Competent Person has visited site and inspected the sampling process in the field and also inspected the Laboratory. • 1 diamond hole twinned an RC hole. • Primary data are captured on field Toughbook laptops using acQuire™ software.

	The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• All drillhole collar locations were surveyed by licensed surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. • Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • 279 collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS. • Downhole gyroscopic surveys were attempted on 37 RC holes. • The grid system is MGA_GDA94 Zone 50.
Data spacing and distribution	• Drill spacing on an approximate 40m by 20m (20m by 20m in some locations) on a rotated grid pattern. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification applied under the 2012 JORC code.
Orientation of data in relation to geological structure	• Whilst the Willy resource is known to be hosted by a sequence of BIFs and Cherts of the Nimmingarra Formation, no stratigraphic model has been developed as part of the current resource estimate.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a dispatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Willy is located wholly within Mining Lease M45/2330. • The tenement is 100% owned by Atlas. • The tenement sits within the Ngarla Native Title Claim (WC99/26). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• No prior exploration has been conducted by other parties.
Geology	• Regionally, the Willy deposit lies within the Ord Range Greenstone Belt that is comprised predominantly of the Nimingarra Iron Formation'. Locally, Willy mineralisation is hosted by a BIF unit. • No geological or stratigraphic model has been produced for the current resource estimate.

Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• A maiden Resource estimate was produced by CSA in November 2008. • All drilling has been completed under Atlas supervision.
Further work	• Complete geophysical logs on holes to confirm density and position of water table • Develop a geological interpretation of the orebody.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Prior to January 2011, geological logging was completed for 1m interval according to Atlas procedure. Post January 2011, geological logging was completed for 2m interval to coincide with sample interval. The log is entered digitally in the field onto a Toughbook computer, and the files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Willy Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• No geological interpretation has been undertaken on the Willy deposit and the estimate only comprises a mineralisation model.
Dimensions	• The Willy Mineral Resource comprises three zones 100m, 420m and 180m along strike. Each zone has a width of approximately 30 to 70m and is on average 150m thick.
Estimation and modelling techniques	• Mineralisation was domained according to type (ore or waste). Each geological unit is domained and estimated using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces.

	• Interpretation does not extend mineralisation more than half drill spacing. • Univariate statistical analysis was completed with Vulcan software and used to define the spatial continuity of all elements within the mineralised domains. • Block model extends from 0mE to 2000mE and 0mN to 750mN and elevation from 0mRL to 140mRL. • The model rotation was 135 degrees • A single block model to encompass the Willy Mineral Resource was constructed using a 10mN by 20mE by 5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Inverse distance squared was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) in both waste and mineralized geozones. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2, and 5 drill spacings for run 3. • A minimum of 12 samples and a maximum of 24 samples are required for an estimate in run 1, the minimum number of samples reducing to 8 for run 2 and 4 for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 4, 4, 2 was applied. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Block model validation methods used were visual checks comparing composite grades vs block grades and global statistical comparisons for each domain.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • The position of the water table is unconfirmed as has been reported at 0mRL.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary. These cut-off grades were used to separate mineralised material from waste. • Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the open pit mining method and proposed processing methodology to consistently produce material at or above product specification. • Based on the current Atlas shipped product grade specification, a 53% Fe lower cut-off grade is deemed a suitable cut-off to report resources for Pardoo. • The tabulated resources were reported using a 53% Fe cut-off grade applied on a block by block basis.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No assumptions on mining methodology have been made.
Metallurgical factors or	• No other metallurgical assumptions have been incorporated into the resource.

assumptions	
Environmental factors or assumptions	• No Sulphur Risk or Fibre Risk have been investigated or applied to this model
Bulk density	• A global density of 2.7t/m3 has been applied to the Willy resource. • This is a bulk commodity project.
Classification	• The Willy Resource has been classified as Inferred based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • Estimate validation checks of the block model show a good correlation of the input data to the estimated grades. • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit. • The statements relate to global estimates of tonnes and grade. • The confidence in this resource estimate has been deemed appropriate as a basis for conceptual long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • There has been no production from the Willy deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource.

Reserve and Resource Update

All the following Atlas projects, Ore Reserves and Mineral Resources have not materially changed since they were last reported, however these have been compiled in accordance with the guidelines defined in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code – 2012 Edition, and have been released to the ASX for completeness.

Mt Webber Project

Mt Webber Ore Reserves Table - As at 30 June 2014										
Location	**COG Fe%**	**Reserve Classification**	**Kt**	**Fe (%)**	**SiO_2 (%)**	**Al_2O_3 (%)**	**P (%)**	**S (%)**	**LOI (%)**	**CaFe* (%)**
Ibanez	53.5	Proved	12,800	57.8	5.6	1.9	0.08	0.02	8.9	63.4
		Probable	6,000	55.5	8.1	2.7	0.07	0.03	8.7	60.8
Fender	53.5	Proved	4,600	58.1	5.6	2.2	0.11	0.02	8.3	63.4
		Probable	3,600	55.4	8.0	3.2	0.08	0.03	8.7	60.7
Gibson	50.0	Proved	2,900	57.4	6.3	1.9	0.09	0.03	8.7	62.9
		Probable	3,000	54.6	9.6	2.8	0.08	0.03	8.6	59.7
Dalton	50.0	Proved	12,600	58.6	5.6	1.5	0.10	0.02	8.3	63.8
		Probable	8,600	55.9	8.7	1.9	0.08	0.03	8.3	60.9
Run-of-Mine Ore Stocks		Proved	600	55.5	8.9	2.6	0.07	0.03	8.2	60.4
		Probable	-	-	-	-	-	-	-	-
Sub Total		**Proved**	**33,700**	**58.0**	**5.7**	**1.8**	**0.09**	**0.02**	**8.5**	**63.4**
		Probable	**21,100**	**55.5**	**8.5**	**2.5**	**0.08**	**0.03**	**8.5**	**60.7**
Total**			**54,800**	**57.1**	**6.8**	**2.1**	**0.09**	**0.02**	**8.5**	**62.4**

**60% of the Ore Reserves at Mt Webber are subject to Joint Venture interests in the ratio AGO 70% : AJM 30%.

Calculated calcined Fe grade where CaFe=(Fe%/(100-LOI%))*100

Reserve and Resource Update

Mt Webber Mineral Resource Table - As at 30 June 2014 (50% Fe Cut-Off Grade)									
Location	**Resource Classification**	**Kt**	**Fe (%)**	**SiO_2 (%)**	**Al_2O_3 (%)**	**P (%)**	**S (%)**	**LOI (%)**	**CaFe* (%)**
Ibanez	Measured	14,400	57.7	5.5	1.9	0.09	0.03	8.9	63.4
	Indicated	9,100	54.5	8.8	2.9	0.07	0.03	8.9	59.8
	Inferred	500	57.2	6.9	1.4	0.07	0.05	7.7	61.9
Fender	Measured	5,100	58.2	5.4	2.2	0.11	0.02	8.4	63.5
	Indicated	5,400	54.4	8.7	3.5	0.08	0.03	9.0	59.8
	Inferred	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
Gibson	Measured	3,100	57.9	5.7	1.8	0.10	0.03	8.7	63.4
	Indicated	3,000	54.7	9.5	2.8	0.08	0.03	8.6	59.8
	Inferred	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
Daltons	Measured	13,100	59.0	5.0	1.5	0.10	0.02	8.3	64.3
	Indicated	8,500	56.1	8.4	1.9	0.08	0.03	8.3	61.2
	Inferred	1,000	57.6	8.3	1.2	0.06	0.06	6.8	61.8
Sub Total	**Measured**	**35,700**	**58.3**	**5.3**	**1.8**	**0.10**	**0.02**	**8.6**	**63.7**
	Indicated	**26,100**	**55.1**	**8.7**	**2.7**	**0.08**	**0.03**	**8.7**	**60.3**
	Inferred	**1,500**	**57.4**	**7.8**	**1.3**	**0.06**	**0.06**	**7.1**	**61.8**
Total		**63,300**	**56.9**	**6.8**	**2.2**	**0.09**	**0.03**	**8.6**	**62.3**

Tonnes are rounded according to resource classification; grades are carried through unaffected by rounding and may result in small discrepancies.

*Calculated calcined Fe grade where CaFe=(Fe%/(100-LOI%))*100

Mt Webber JORC 2012 Mineral Resources summary

Geology and Geological Interpretation

The Mt Webber direct shipping ore (DSO) Project is comprised of four resources, Ibanez, Fender, Gibson and Daltons. The Ibanez, Fender and Gibson deposits are under a 70:30 Joint Venture with Altura Mining Limited (70% AGO: 30% AJM), whilst the 100% acquisition of Daltons Joint Venture iron rights from Haoma Mining was completed in June 2012.

The Mount Webber Project is located within the East Pilbara Granite Greenstone Terrain of the Pilbara Craton. The greenstones are Archean in age and exhibit complex folding and faulting as a result of being ‘squeezed’ between two large granitoid complexes: the Shaw Granitoid Complex lies to the east, and the Yule Granitoid Complex lies to the west. Regional shearing also occurs between the complexes in the form of the Mulgandinnah Shear Zone. The Mount Webber Project lies to the east of the main shear zone and as such is flanked to the east and south by the Shaw Granitoid Complex.

The greenstones are volcano-sedimentary in origin and are stratigraphically grouped as the Pilbara Supergroup. There are a number of different sub groups within the Pilbara Supergroup, of which four are found in the Mount Webber Project Area: Gorge Creek, Sulphur Springs, De Grey and Warrawoona Groups. Ibanez lies within the Sulphur Springs Group, specifically the Pincunah Member of the Kangaroo Caves Formation. The Pincunah Member was formerly known as the Pincunah Hills Formation and assigned to the Gorge Creek Group, but was re-classified to the Sulphur Springs Group.

The Pincunah Member is Archean. It consists of Banded Iron Formation (BIF), chert, tuff, shale and siltstone. It overlies the Warrawoona Group mafics and ultramafics and the contact is an unconformity. Occasionally, Corboy Formation sediments are found sandwiched between the two groups. The stratigraphy is tightly folded into north east trending folds that are increasingly open to the south east and north-west. To the south west of Ibanez there is a decollement fault which cuts through the Warrawoona Group mafics and thrusts them up over themselves.

The terrain of Mt Webber is rugged, consisting of steep sided hills and mesas containing weathering resistant BIFs and cherts of the Pincunah Member, separated by valleys containing pelitic sediments and mafic-ultramafics of the Warrawoona Group. Generally, outcrop is excellent, with minimal overburden. Mostly the cover consists of scree and shallow colluviums. For the most part, outcropping lithologies are oxidised and extensive lateritisation occurs over most of the areas of iron enrichment hosted by the Pincunah Member. There are a few small areas of thin transported laterite present.

The Pincunah Member is stratigraphically highest up the sequence in the Ibanez, Fender, Gibson and Daltons areas. The BIFs and cherts that comprise it form topographic highs which are associated with the mineralised prospect areas. The hills are steep sided with flat-topped summits at approximately 400m RL.

The upper most stratigraphical unit is a thin shale unit, which is not laterally extensive (approximately 20 m by 120 m at its widest part) and is only found locally preserved in the northern portion of the main body of Ibanez. Below this lies the Upper BIF, which is the main mineralised unit and outcrops at the surface. Alternating chert and BIF units lie beneath this. The basement is undefined as it does not outcrop, nor is it intersected by any of the drilling.

The local structure/stratigraphy has resulted in the prevailing topography, with topographic highs correlating with broadly synformal structures, and the valleys correlated with eroded antiformal fold hinges. The synformal structures host the mineralised BIF and have been thickened by intraformational folding, which have also increased permeability and the degree of mineralisation. Local scale, surface outcrops indicate steeply dipping bedding orientation, however lithological and structural interpretation from orientated diamond drillholes shows that this is not persistent with depth and the overall structure is a relatively flat lying synformal shape.

Mt Webber has three areas of iron enrichment that occur in the synclinal fold closures where the Pincunah Member BIFs are thickened by extensive intraformational folding. The largest areas of high-grade enrichment occur on the westernmost (Ibanez) and easternmost synclines (Fender, Gibson, Daltons). The eastern zone is divided into two prospects, Fender in the south and Gibson/Daltons to the north, which is separated by a low-grade ‘neck’. Gibson extends off the tenement to the northeast and adjoins the Daltons resource. Both Ibanez and Fender are striking in a NE direction; Ibanez is the larger of the two named deposits with a strike length of 900m and varying widths from 20m at its southernmost tip to 600m within the centre of the deposit. Fender’s strike length is 1.4km with a strike width averaging 100m throughout.

Stratigraphically, the area is comprised of a sequence of folded BIF, chert and shale horizons with mineralisation predominantly restricted to the BIF units. Iron enrichment is predominantly goethite with minor hematite which has replaced silica in the BIF to varying degrees. The bulk of the mineralisation is constrained mostly to within upper BIF unit which is overlain by well-developed hydrated zone (hardcap) that varies in depth from 10m to 30m. Some of the mineralisation also occurs within a lower BIF horizon, stratigraphically separated by a thin chert unit. This mineralisation is poddy and not laterally consistent, but only constitutes a minor portion of the overall resource.

Iron enrichment in the Pincunah Member is found at all stratigraphic levels in the formation with a distinct orientation to the bedding of the BIF. The mineralisation varies in size from lenses 10-15m wide up to zones several hundred metres wide and over a kilometre long. These enrichment zones occur at Ibanez, Fender, Gibson and Dalton’s prospects.

The bedded mineralisation comprises of a predominately goethite with minor goethite-martite mineralisation formed by supergene leaching and replacement of banded iron formation protore. The deposits are defined beneath an area of surface enrichment often developed as a vitreous hydrated (hardcap). This is a degenerated zone caused by weathering and containing localised clay and carbonates. Beneath the hardcap lies a complex zone of primary mineralisation comprising intermixed hard massive bands with friable, biscuity and locally powdery material.

The Mt Webber geological model was generated from regional geological mapping, geochemistry, geophysics and logging data. A stratigraphic model of the lithology and structure was first constructed to provide a geological framework in which to interpret the mineralisation. The mineralisation was interpreted into an upper zone of depletion and underlying hydrated and primary mineralised zones. Small, discrete discontinuous pods of mineralisation were modelled separately, generally in the lower BIF horizons.

The stratigraphic model comprises a sequence of banded iron formation, cherts, shales and dolerite intrusions, whereas the mineralisation model comprises of depleted, hydrated and primary mineralisation zones. The mineralisation zones are modelled generally using greater than 50% Fe and less than 15% SiO_2 cut-off to define ore from waste. The combination of both stratigraphic model and mineralisation models are used for geozone definitions.

Drilling Techniques

Exploration and Resource Development drilling over the various Mt Webber prospects occurred between 2009 and 2014. To date a total of 1,111 drillholes have been completed at the Mt Webber project totalling 61,000m of drilling (1,085 RC holes for 59,560m and 26 PQ3 DDH for 1,440m). The Ibanez deposit has been drilled out to a final drill spacing of 20m x 40m and Fender/Gibson taken down to 20m x 20m during 2011/12. The Daltons resource is drilled down to a 40m x 40m spaced resolution.

RC drilling has been performed using a 140mm diameter face sampling hammer and all samples are split by cone splitter. Diamond drillholes have been drilled at PQ3 diameter and have been used for density determinations, comparison with RC drilling results and metallurgical/geotechnical test work purposes.

The geologist sieves and logs every 2m interval in alignment with the sampling interval. Logging encompasses the main material types, hardness, lithologies, colour and percentage of chips (approximate lump/fine proportion). The logging is recorded in the field electronically into acQuire field logging data entry objects and on completion the electronic files are sent to Perth and loaded into the centralised acQuire drillhole database which is managed by a full time Database Administrator.

Reserve and Resource Update

Licenced surveyor MHR Surveyors completes a collar pickup on all available drill collars using a Trimble R8 Real Time Kinematic Differential GPS (DGPS). The DGPS gives an accuracy of +/- 0.05 m for Easting and northing location and +/- 0.1 m for the RL (height above sea level).

All available holes are gyroscopically surveyed downhole by ABIMS Pty Ltd utilising a north seeking multi-shot tool which measures azimuth to an accuracy of +/- 0.2° and dip to an accuracy of +/-0.1°. Downhole geophysical measurements are also collected at the same time and comprise Density/Calliper, Magsus and Natural Gamma recordings taken at 10cm intervals downhole.

Sampling and sub-sampling

All RC chip samples were collected at 2m sampling intervals through a cone splitter. The samples were all kept dry (all mineralisation located above water table) and of acceptable quality. Sample weights are also recorded to monitor the ongoing representativeness of the sample split. The weights are stored in the acquire database.

The RC sampling methodology prior to January 2011, involved collection of samples drilled over 2m intervals using a cone splitter. Samples were directed into a calico bag with the overflow collected into green plastic bags. The calico bags were pre-numbered, with every 25th and 75th sample a field duplicate. The duplicate sample is collected in real time splitting the two sub samples from the riffle/cone splitters. Standards were inserted every 40th and 80th sample, while blanks were inserted every 41st and 81st sample.

After January 2011, 2m sample intervals were collected using a cone splitter. Samples were directed into a calico bag with the overflow collected into green plastic bags. The calico bags were pre-numbered, with every sample number ending in 00, 20, 40, 60, 80, collected as a field duplicate. The duplicate sample was collected in real time by splitting the two sub samples from the cone splitter. Standards were inserted every 1st, 21st, 41st, 61st and 81st sample.

Sample analysis method

Samples collected by Atlas were sent to Ultratrace and SGS laboratories in Perth for analysis of the extended iron ore suite of elements. This consists of XRF analysis for Fe, SiO_2, Al_2O_3, P, CaO, K_2O, MgO, MnO, S, TiO_2, Na_2O and a thermo gravimetric measurement for loss on ignition (LOI) at 1000°C. The sample preparation of RC samples involved weighing, oven drying, pulverization of the entire sample to a grind size of 90% passing 75 micron. A pulp sub-sample was collected and formed into a fused bead for XRF determinations on the iron ore suite of elements and a LOI by thermogravimetric techniques.

To ensure quality assurance and control (QAQC) of the sampling and assaying procedure, Atlas submitted field duplicates and standards to the laboratory for analysis. For samples collected prior to January 2011, the duplicates and standards are inserted at predefined intervals at a rate of 2% for standards and 2% for duplicates for an overall insertion rate of 4%. Post January 2011, the duplicates and standards are inserted at predefined intervals at a rate of 5% for standards and 5% for duplicates for an overall insertion rate of 10%. The laboratory also inserted its own internal standards and pulp repeat analyses at predefined intervals. Sample collection procedures and QAQC protocols employed by Atlas are commensurate with standard industry practices.

The QAQC data for the Mt Webber project was reviewed prior to commencing the resource estimates for Wodgina and were found to be of reasonable precision and analytical accuracy and is deemed to be acceptable for resource estimation purposes and JORC compliancy.

Estimation methodology

The drillhole data was composited prior to running the estimation process using a 2m sample interval to minimise any sample bias due to sample length. The compositing was run within the attribute fields to ensure no composite intervals crossed any lithological contacts or grade boundaries.

Variograms were generated to assess the grade continuity of the various elements and as inputs to the kriging algorithm used to interpolate grades. Snowden Supervisor software was used to generate and model variograms and conduct statistical analysis.

Variographic analysis was undertaken for all mineralised geozones for each of the Mt Webber resources. The elements that were analysed include all 12 elements, i.e. Fe, SiO_2, Al_2O_3, P, LOI, S, MnO, MgO, K_2O, TiO_2, CaO, Na_2O and geophysical density.

To generate the best experimental variograms the data was first transformed to a normal scores distribution where upon the variogram was modelled and on completion a back transform was applied. The variogram ranges and directions of continuity are consistent with the geological understanding and are considered appropriate.

Block models were constructed in Vulcan software (Maptek) and constrained by surfaces and solids. The parent block size was selected based on half of drillhole spacing and the model was orientated (rotated) to represent the strike of mineralisation and prevailing drilling grid. The sub-block size was selected to more accurately define the mineralised volume.

The volume block model was created using the wireframes of the stratigraphy, mineralisation and topography. A unique geozone code was assigned based on the combination of stratigraphy and mineralisation. The geozone field is used to distinguish the main mineralisation types and mineralised areas.

Atlas estimated Fe, SiO_2, Al_2O_3, P, LOI, CaO, K_2O, MgO, MnO, S, TiO_2 and Na_2O grades using Ordinary Kriging for the mineralised horizons. Waste horizons were estimated by Inverse Distance (power 2) methods.

The preferred estimation parameters were chosen based on neighbourhood analysis, whereby several estimation parameters were tested to optimise the estimation search. This was represented by best kriging efficiency, slope regression values and number of blocks filled. Search ellipses were orientated based on the geometry of the mineralisation with the search ellipses increased by two fold and three fold for second and third search passes for Ibanez, and one and a half fold and two fold for Fender-Gibson-Daltons for the second and third search passes.

The Mt Webber host stratigraphy sits in a broad open syncline with parasitic folding evident along the length of the structure. Atlas elected to use the Vulcan unfolding process to address the impact of folding on the modelling of variograms and the estimation of grades for all mineralised domains The waste zones were estimated separately using Inverse Distance methodology with no unfolding applied.

- Geophysical density measurements have been recorded downhole from the majority of drillholes. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. Geophysical density is recorded at 10cm increments downhole. The density measurements are filtered and validated prior to use to remove anomalous recordings.

The in-situ density (inclusive of moisture and porosity) was estimated into the models using geophysical density measurements collected at 10cm intervals downhole. All available drillholes had geophysical measurements collected and a sufficiently good spatial coverage of data across all of the deposits was achieved. Following compositing of the data, variograms were modelled and geophysical density was estimated into the model utilising ordinary kriging techniques.

To correct the in-situ density estimate to a dry bulk density, the geophysical density measurements are correlated to dry dimensional core density measurements and a suitable regression factor is determined. The regression analysis revealed that an 8% reduction needed to be applied to the geophysical density estimate to derive the dry bulk density values which will account for moisture and porosity. All tonnages reported are on a ‘dry’ basis, this is a bulk commodity project.

The estimates were validated using:

- a visual comparison of block grade estimates and the drillhole data.
- a global comparison of the average composite grade and estimated grades.

- moving window averages comparing the mean block grades to the composites.
- histogram comparison of the original composite grades and the block estimated grades.
- assessment of correlation coefficients from the input sample data and estimated block grades.
- total assay validation check to ensure closure (sum of elements in each block adds to 100% +/- 2%).
- global change of support to assess the level of misclassification inherent in the estimate.

The conclusions from the model validation work include:

- visual comparison of the model grades and the corresponding drillhole grades shows a good correlation.
- a comparison of the global drillhole mean grades and with the mean grade of the block model estimate (for each domain) shows that the block model mean grades are typically within 5-10% of the drillhole means.
- with the exception of poorly sampled regions, the grade trend plots show a good correlation between the patterns in the block model grades compared with the drillhole grades
- total assay validation showed that the blocks maintained closure generally between 98 and 102% for all mineralised domains.
- assessment of the histograms and correlation coefficients showed that the relationship between elements within the input sample data has been maintained in the block grade estimates and the grade distribution has been maintained in the estimate with an acceptable level of smoothing
- The unfolding process appears to have successfully captured the folded grade distribution spatially.

Resource Classification

Mineral Resources have been classified into the Measured, Indicated and Inferred category based on drillhole spacing, nature and quality of the drilling and sampling methods, geological understanding and confidence, grade continuity, QAQC analysis, confidence in the estimate of the mineralised volume, results of the model validation and results of metallurgical test work.

Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. The results of the validation of the block model show good correlation of the input data to the estimated grades. The resource classification scheme adopted by Atlas for the Mt Webber Project resource estimates is outlined as follows:

- Where the drilling density was 40mE by 40mN (or less), primary mineralisation within the upper BIF was classified as Measured.
- Where drilling density was 40mE by 40mN (or less), hydrated mineralisation with the upper BIF was classified as Indicated.
- Isolated pods of mineralisation with the lower BIF were classified as Inferred.

The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit. Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. The statement relates to global estimates of tonnes and grade.

Cut-Off Grade

The criteria for defining mineralised material at Mt Webber is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary. These cut-off grades were used to separate mineralised material from waste. Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the proposed open pit mining method and proposed processing methodology to consistently produce material suitable to meet Atlas product specification. This cut-off grade methodology is used consistently for reporting of all Mineral Resources at Mt Webber. The tabulated resources are reported using a 50% Fe cut-off grade on a block by block basis.

Mining and Metallurgical methods and parameters and other modifying factors

The Mt Webber Project commenced mining activities in March 2014 and utilises a conventional open pit mining methodology with selective extraction of ore material using a backhoe configured excavator. This allows a selective ore mining approach comprising 5m benches which are mined in two flitches of 2.5m height. The 2.5m flitches are used in order to reduce ore dilution and loss.

A simple, low cost crush and screening processing route is utilised at Mt Webber to produce a single, fines only product at a specified grade. The Mt Webber Project has only been operational since March 2014 and has a limited production history, with mining occurring over the Ibanez resource to date. Limited reconciliation data is available with initial mining activity restricted to the upper levels of the hydrated mineralisation.

Mt Webber JORC 2012 - Ore Reserves summary

Material Assumptions for Ore Reserves

A Definitive Feasibility Study (DFS) for Mt Webber Stage1 3 Mtpa including Ibanez and Fender Mineral Resources was completed in January 2013. The DFS for Mt Webber Stage2, expansion to 6 Mtpa is completed as an addendum to original DFS in February 2014 and extends to Dalton and Gibson Mineral Resources.

The Mt Webber Ore Reserve estimate is defined by completing pit optimisations and subsequent pit designs based on detailed geotechnical design parameters and practical mining considerations.

The production rates and operating costs have been applied from awarded contracts and tendered rates.

The iron ore price and exchange rates used in the pit optimisation are derived from the average of three external forecasting analysts. For reasons of commercial sensitivity the assumed iron ore price and exchange rates are not disclosed.

Ore Reserve Classification

Ore Reserves at Mt Webber are derived from Measured and Indicated Resources and surveyed stockpiles.The Mineral Resource estimate reported is inclusive of the Ore Reserves. Inferred Mineral Resource is treated as waste in the pit optimisation and reserves process.

Mining Method

The mining method is conventional drill and blast and load and haul with an excavator and large open pit mining equipment. This is considered to be appropriate for the style of mineralisation and is applied to similar operations in the area.

Based on the geotechnical study recommendations, 10m batter height, 70^0 batter angles and 5m wide berms at 10m intervals have been incorporated in the pit designs. A 10% gradient and 23m width (including safety windrow) is used on in-pit pit ramps. A minimum mining width of 25m is applied on all benches to cater for safe and efficient working.

Allowance for dilution and ore loss has been applied using block model regularisation. Block model regularisation has been determined to approximate the findings of a 1.5m dilution skin analysis.

Ore Processing

Ore is processed by a standard dry crushing and screening process. This is considered to be appropriate for the type of mineralisation and is well tested technology in other Atlas operations.

100% process recovery is assumed for all materials as is the case for all other Atlas operations using dry crush and screen process. Within the life of mine schedule for Mt Webber, the element grades are forecast to stay within the contracted specifications.

The plant is designed to crush at a rate of 3 Mtpa and will be upgraded to 6 Mtpa in late 2014.

Cut-off Grade

The cut-off grade for the Ibanez and Fender deposits is 53.5% Fe and the cut-off grade for the Dalton and Gibson deposits is 50.0% Fe based on target product grades.

Material Modifying Factors

The DFS for Mt Webber Stage2, expansion to 6 Mtpa is completed as an addendum to original DFS in February 2014. The DFS supports the Ore Reserve estimates.

The construction of accommodation village, mine operations centre, water and communications, weigh-bridge, commissioning of primary crusher is complete. Road construction and upgrade to Marble Bar – Woodstock road is in progress.

Ore Haulage is targeted to commence during the September 2014 quarter, following the road construction and upgrades.

Mine construction was recently completed and remaining capital cost is predominantly for mine closure, pit access and pre-stripping. The remaining mining related costs are priced as part of the contract tender process and mine closure costs have been estimated by external consultants who specialise in the field.

Operating costs include allowances for mining, processing, administration, haulage to the port and shipping. The mining, processing and haulage costs are supplied by competitively tendered contracts while the port and shipping costs are developed from existing contracts.

Mining approvals, Native Vegetation Clearing Permit and License to operate have been granted for Mt Webber Stage1 and Stage2.

All necessary environmental approvals have been obtained under the Environmental Protection and Biodiversity Conservation Act (1999), Environmental Protection Act (1986) and Mining Act (1978).

Contractual agreements with all key stakeholders are in place and active. These agreements include agreement with Njamal Native Title group and Joint operating agreement with Altura Mining Limited (Altura).

The financial modelling indicates that Mt Webber will produce a positive NPV at the required discount rate of 11% applied to nominal post tax cashflows.

Mt Webber Project JORC 2012 Table 1 Assessment Criteria

IBANEZ RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA IBANEZ MINERAL RESOURCE ESTIMATE – FEBRUARY 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• RC sampling methodology prior to January 2011 involved the collection of samples drilled over 2m intervals using a riffle splitter. • Post 2011, RC samples were collected over 2m intervals using only a cone splitter. • 3.5kg sample (average) was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 2 duplicates are taken for every 100 samples (1:50) for samples collected prior to January 2011. • Post January 2011, duplicates were 5 duplicates were collected for every 100 samples (1:20). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 40m by 20m on a rotated grid. • RC holes (583 holes for 29,552m) – used in estimate. • DDH (13 holes for 760.6m) – suppressed due to no assays.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the riffle/cone splitter. This is recorded as good, fair, poor or no sample. • 8,032 Good (53.1%), 5,234 Fair (34.6%) and 901 Poor (6%), 950 blank/un-recorded (6.3%). • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No comparison between twin RC or diamond drillholes was conducted to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling.
Logging	• Prior to January 2011, geological logging was completed for 1m interval according to Atlas procedure. • Post January 2011, geological logging was completed for 2m interval to coincide with sample interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • 9,644 RC samples were logged. • Geophysical data collected from 428 of 595 RC holes and 13 diamond holes (gamma, density and magsus).
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • ~3.5kg RC chip samples are collected via riffle/cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible.

	• The sample sizes are considered to be appropriate to correctly represent the mineralisation at Ibanez based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements.
	Sample preparation:
	• Sample dried at 105°C for 12-24 hrs
	• Crushed to nominal -3mm
	• Pulverised to 90% passing at 75µm
	Quality Control Procedures
	• Duplicated sample (prior to January 2011): 2 every 100 samples (1:50).
	• Duplicate samples (post January 2011): 5 every 100 samples (1:20).
	• Certified Reference Material assay standards inserted:
	  ○ 2 in every 100 samples (1:50) prior to January 2011.
	  ○ 5 in every 100 samples (1:20) post January 2011.
	• Overall QAQC insertion rate of 1:10.
	• Sample weights recorded for all samples.
	• Lab duplicates taken where large samples required splitting down by the lab.
	• Lab repeats taken and standards inserted at predetermined level specified by the lab.

Quality of assay data and laboratory tests	• All samples submitted to Ultratrace and ALS Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice. • Geophysical gamma density was collected by Geovista Dual Density logging tool (Cesium source, density range 1-3.5g/cc) to ascertain approximate in-situ density values. The density tool is calibrated every 2 weeks using a range of materials with known density and is run down a calibration hole at the commencement of, and regularly during, the collection of data.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. • The Competent Person has visited site and inspected the sampling process in the field and also inspected the Laboratory. • A total of 9 of 13 diamond holes twinned RC holes. • Primary data are captured on field Toughbook laptops using acQuire^{tm}

	software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• All Collars were surveyed by licensed surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • Downhole gyroscopic surveys were attempted on all RC and diamond holes. A total of 440 of 595 (RC and DH) holes had downhole gyro survey data. • The grid system for Ibanez is MGA_GDA94 Zone 50. • Topographic data was based on AAM Pty Ltd aerial survey completed in August 2008 on a 1m resolution contours. The datum is GDA94 with projection MGA Zone 50.
Data spacing and distribution	• Drill spacing on an approximate 40m by 20m on a rotated grid pattern. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support a Measure, Inferred and Indicated resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• The Ibanez resource is interpreted to be a gently undulating folded sequence of BIFs and Cherts. The majority of drilling is dipping towards the NW at -60 degrees dip. A minor proportion is drilled either vertically or dipping towards the SE. As such, due to the varying intersection angles, all results are defined as downhole widths.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Ibanez is located wholly within Exploration Lease E45/2268-I. The Ibanez Deposit is part of Mt Webber DSO Joint Venture project with Altura Mining Limited (Altura), with the equity proportion between Atlas and Altura being 70:30. • The tenement sits within the Njamal Native Title Claim (WC1999/008). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• Geological mapping was completed by John Cross from Compass Geological Pty Ltd in August 2008.

Reserve and Resource Update

Geology	• Stratigraphically, the Mt Webber area contains weathering resistant BIF's and cherts of the Pincunah Member, separated by valleys containing pelitic sediments and marif-ultramafics of the Warrawoona Group. The Pincunah Member is stratigraphically highest up the sequence in the Ibanez Areas. The BIF's and cherts that comprise it form topographic highs which are associated with the mineralised prospect area.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Geological mapping was completed by John Cross from Compass Geological Pty Ltd in August 2008. • All drilling have been completed under Atlas supervision.
Further work	• Infill drilling may be required in the area with insufficient drilling coverage to improve both orebody and geological knowledge.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Prior to January 2011, geological logging was completed for 1m interval according to Atlas procedure. Post January 2011, geological logging was completed for 2m interval to coincide with sample interval. The log is entered digitally in the field onto a Toughbook computer, and the files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Ibanez Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• The Ibanez resource is interpreted to be a gently undulating folded sequence of BIFs and Cherts. Mineralisation is predominantly hosted in the Upper BIF unit with smaller proportions hosted in the Lower BIF unit.

	• Geological interpretation based on geophysical natural gamma data, drillhole lithological logging and geochemical data. • Wireframes of the stratigraphic units used to generate an empty geological model.
Dimensions	• The Ibanez Mineral Resource has dimensions of approximately 630m (north) by 760m (east) and extends from surface to a maximum depth of 90m, with an average depth of 50m. A thin, 15m thick hydrated layer sits over the top of the entire resource.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half drill spacing. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging Neighbourhood analysis (QKNA) was undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 0mE to 1200mE and 0mN to 1800mN and elevation from 0mRL to 250mRL. • A single block model to encompass the Ibanez Mineral Resource was constructed using a 20mN by 10mE by 5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) and geophysical density into geozone 202, 204 (primary mineralisation) and geozone 504 (hydrated mineralisation). • Inverse Distance was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) and geophysical density into waste geozones (101-105). • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2, and 5 drill spacings for run 3. • A minimum of 24 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 12 for run 2 and 10 for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5, 5, 2 was applied. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution.

	• Maptek Vulcan software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • None of the drill holes intersect water table, therefore it is assumed that the Ibanez deposit is located above the water table. • 91.8% of samples logged as dry, 0.8% of samples were logged as moist or moist injected, 1.1% were logged wet or wet injected and 6.3% were blank/un-recorded.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• Metallurgical test work has been commenced by Engenium Pty Ltd using core samples from diamond drill hole. Test work is specified to give basic details of size by assay, bulk density (loose material), moisture and abrasion index.
Environmental factors or assumptions	• Blocks with an estimated block grade greater than 0.1% S have been flagged as moderate risk.
Bulk density	• Downhole geophysical density is sufficient to estimate density into the model. • A regression factor of 8% was applied post estimation to obtain a dry bulk density. • This is a bulk commodity project.
Classification	• Mineral Resources have been classified as Measured, Indicated and Inferred category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • A change of support study indicates that some degree of misclassification will be present in the hydrated zone at high cut-off grades.

<table>
<tr><td></td><td>A conditional simulation study was conducted by Atlas in 2014 on Fe grades at the Ibanez deposit. The study showed that at a reporting cut-off grade of 54% Fe there is less than 5% difference in the tonnes above cut-off and the contained metal when going from a wider spaced drilling grid to a short spaced grid.
The statements relate to global estimates of tonnes and grade.</td></tr>
<tr><td colspan="2">SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES – Refer to page 257</td></tr>
</table>

FENDER RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA FENDER MINERAL RESOURCE ESTIMATE – FEBRUARY 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• RC sampling methodology prior to January 2011 involved the collection of samples drilled over 2m intervals using a riffle splitter. • Post 2011, RC samples were collected over 2m intervals using only a cone splitter. • 3.5kg sample (average) was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 2 duplicates are taken for every 100 samples (1:50) for samples collected prior to January 2011. • Post January 2011, duplicates were 5 duplicates were collected for every 100 samples (1:20). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 40m by 20m on a rotated grid. • RC holes (total of 23,817m for 408 holes) – used in estimate. • DDH (total of 529m for 11 holes) – suppressed due to no assays.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the riffle/cone splitter. This is recorded as good, fair, poor or no sample. • 59% Good, 16% Fair and 4% Poor and 21% not recorded • 76% dry, 0% moist, 1% moist injected, 2% wet injected and 21% not recorded • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No comparison between twin RC or diamond drillholes was conducted to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling.
Logging	• 7,396 RC samples logged. • Logging of every 2m interval (Atlas Iron procedure) corresponding with 2m sample interval. • This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Geophysical data collated from 241 holes.
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • ~3.5kg RC chip samples are collected via riffle/cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at Ibanez based on the style of mineralisation (massive

	goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements.
	Sample preparation:
	• Sample dried at 105°C for 12-24 hrs
	• Crushed to nominal -3mm
	• Pulverised to 90% passing at 75µm
	Quality Control Procedures
	• Duplicated sample (prior to January 2011): 2 every 100 samples (1:50).
	• Duplicate samples (post January 2011): 5 every 100 samples (1:20).
	• Certified Reference Material assay standards inserted:
	  o 2 in every 100 samples (1:50) prior to January 2011.
	  o 5 in every 100 samples (1:20) post January 2011.
	• Overall QAQC insertion rate of 1:10.
	• Sample weights recorded for all samples.
	• Lab duplicates taken where large samples required splitting down by the lab.
	• Lab repeats taken and standards inserted at predetermined level specified by the lab..

Quality of assay data and laboratory tests	• All samples submitted to Ultratrace and ALS Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. • The Competent Person has visited site and inspected the sampling process in the field and also inspected the Laboratory. • Atlas QAQC checks and Standards from laboratories were found to be acceptable. • Primary data are captured on field Toughbook laptops using acQuire^{tm} software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• All Collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using

	differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • 412 Collars (including diamond holes) were surveyed using differential DGPS_RTK and 7 collar using GPS. • Downhole gyroscopic surveys were attempted on all RC and diamond holes. • The grid system for Fender is MGA_GDA94 Zone 50. • Topographic data was based on AAM Pty Ltd aerial survey completed in August 2008 on a 1m resolution contours. The datum is GDA94 with projection MGA Zone 50.
Data spacing and distribution	• Drill spacing on an approximate 40m by 20m and 20m x 20m rotated grid pattern. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support a Measure, Inferred and Indicated resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• The Fender resource is interpreted to be a gently undulating folded sequence of BIFs and Cherts. The majority of drilling is dipping towards the NW at -60 degrees dip. A minor proportion is drilled either vertically or dipping towards the SE. As such, due to the varying intersection angles, all results are defined as downhole widths.
Sample Security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• The deposit tenement lease is E45/2268-I for Fender – Gibsons and E45/2186 for Daltons. • The Fender Deposit is part of Mt Webber DSO Joint Venture project with Altura Mining Limited (Altura), with the equity proportion between Atlas and Altura being 70:30. • The tenement sits within the Njamal Native Title Claim (WC1999/008). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• Geological mapping was done by John Crossing from Compass Geological Pty Ltd in August 2008.
Geology	• Stratigraphically, the Mt Webber area contains weathering resistant BIF's and cherts of the Pincunah Member, separated by valleys containing pelitic sediments and marif-ultramafics of the Warrawoona Group. The Pincunah Member is stratigraphically highest up the sequence in the Ibanez Areas. The

	BIF's and cherts that comprise it form topographic highs which are associated with the mineralised prospect area. • Hematite – goethite enrichment mineralisation within BIF formation sitting within the synformal structures that consisting of hydrated and primary mineralisation type.
Drillhole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• No other work is known to Atlas
Further work	• Infill drilling may be required in the area with insufficient drilling coverage to improve both orebody and geological knowledge.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Prior to January 2011, geological logging was completed for 1m interval according to Atlas procedure. Post January 2011, geological logging was completed for 2m interval to coincide with sample interval. The log is entered digitally in the field onto a Toughbook computer, and the files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Ibanez Resource is stored in the centralised Atlas acQuire drillhole database.
Site Visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• The geology interpretation has a degree of high confidence level using a 40m drill hole spacing. • In the area where there is no drilling, the interpretation is extrapolated half drill hole spacing. • The mineralisation is well constrained within certain geological domains.

	• Some of the mineralisation blobs have limited continuity and is not sufficiently defined by current drill hole spacing. • Geological interpretation based on geophysical natural gamma data, local geological mapping and geochemical data. • Wireframes of the stratigraphic units used to generate an empty geological model. • Drill coverage to 40m x 20m to 20m X 20m. • Mineralisation wireframe based on >=50% Fe and <15% SiO_2 cut-off grade delineating ore/waste boundary.
Dimensions	• The Fender mineralisation extent is approximately 0.7 km along strike. The width of mineralisation varies from 35m at the southwestern tip corner to 150m across the gut of mineralisation with maximum thickness 75m exposed from the surface.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half a drill spacing (unless in areas where surface mapping has identified a mineralised/non-mineralised contact in an area without drilling data). • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging neighbourhood analysis (QKNA) undertaken to optimise estimation parameters. • Block model extends from 737180mE to 738380mE and 7615135mN to 7617335mN and elevation from 100mRL to 500mRL. • A single block model to encompass the Fender Mineral Resource was constructed using a 10mN by 10mE by 5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO and K_2O) estimated plus geophysical density and chip percentage where possible. • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • The Dynamic Anisotropy technique from Maptek is used to define the orientation of the search ellipse • A minimum of 12 samples and a maximum of 24 samples are set with all blocks being estimated using 24 samples • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5,5,2 was applied. • Grade restriction was applied to some of the minor deleterious elements in some domains as a restricted search to limit the influence of extreme/outlier grades from smearing distant blocks by using a tighter search ellipsoid.

	• All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek's Vulcan version 8.3 software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit and Change of Support. Grades in mineralised domains were estimated using Ordinary Kriging whereas waste domains were estimated using Inverse Distance Weighting method.
Moisture	• None of the drill holes intersected water tables therefore; it is assumed that all material in the block model sits above the water table. The reported resource is assumed in dry tonnes condition. No moisture determination method was implemented prior to estimation.
Cut-off parameters	• The resource was reported using 50% Fe cut-off grade to be in accordance with the cut-off grades used for modeling. • This cut-off grade is also chosen in accordance with the standard Atlas product grade specifications.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• Metallurgical test work has been commenced by Engenium Pty Ltd using core samples from diamond drill hole. Test work is specified to give basic details of size by assay, bulk density (loose material), moisture and abrasion index.
Environmental factors or assumptions	• There are no known environmental factors or assumptions with this resource.
Bulk density	• The bulk density was estimated using geophysical density data. • Geophysical density measurements have been recorded downhole from the majority of drillholes. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. • Geophysical density is recorded at 10cm increments downhole, which is stored in the acquire drillhole database. • The density measurements are filtered and validated prior to use to remove anomalous recordings. • Geophysical density is estimated into the resource model. Un-estimated blocks (that did not meet the minimum criteria for an estimate to be made were assigned the mean grade of that domain's composited geophysical density data. • A comparison between geophysical and dimensional density data has shown that geophysical density has 8% higher values from dimensional density. • Since dimensional density is correlated well with the density measurement obtained from Archimedean method, the dimensional density was considered more accurate therefore, the estimated density was regressed to 8% as a modifying factors. • This is a bulk commodity project.

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Classification	• Mineral Resources have been classified as Measured, Indicated and Inferred category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit. • The mineral resource was classified into three categories, ie. Measured, Indicated and Inferred. • The material in the area where the mineralisation has a good continuity and confidence in underlying data, good understanding in shape, structures and geology is classified as Measured. • All of the hydrated material that exhibits variation in grade in the current drill hole is classified as Indicated. • Any mineralisation blobs that have discontinued mineralisation is classified Inferred.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy / confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade. • Resource estimate is suitable for long term mine planning only. • Risk is quantified using change of support.
SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES – Refer to page 257	

DALTONS-GIBSON JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA DALTONS - GIBSON RESOURCE ESTIMATE – MARCH 2014	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Reverse Circulation (RC) chip samples collected via cone splitter. • One 3.5kg (average) sample taken for each two metre sample length and collected in pre-numbered calico sample bags. • 3.5kg sample was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 5 duplicates are taken for every 100 samples (1:20). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 40mNE by 40mSE for Daltons and 40mNE by 20mSE for Gibson. • Total of 224 RC holes used for the resource estimate for a total of 15,885m and 7,940 primary samples.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 7,085 Good (89.2%), 657 Fair (8.3%) and 198 Poor (2.5%). • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • One twin diamond drillholes have been completed to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling.
Logging	• Logging of every 2m interval (Atlas procedure) corresponding with 2m sampled interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • 224 RC drillholes were logged in full, totalling 15,885m of drilling or 7,940 RC samples were logged for lithology, mineralisation, some of the chip percent, weathering and colour. • Geophysical data collated from 219 RC holes of a total of 224 holes (natural gamma, gamma density, magnetic susceptibility & resistivity). Not all holes were open at depth which precluded 100% recovery of measurements from all of the drillholes.
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • 3 – 4kg RC chip samples are collected via cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at Daltons-Gibson based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements.

	Sample preparation: • Sample dried at 105°C for 12-24 hours • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality Control Procedures:** • Duplicated sample: 5 every 100 samples (1:20). • Certified Reference Material assay standards inserted: 5 in every 100 samples (1:20). • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality of assay data and laboratory tests	• All samples submitted to SGS (4,946 samples, 62.3%), Ultratrace (2,261 samples 28.5%) and ALS (733 samples, 9.2%) Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105OC in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, fused at 1100OC for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Umpire laboratory campaigns with another laboratory (Ultratrace) have been carried out as independent checks of the assay results and these show good precision. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice. • Geophysical gamma density was collected by Geovista Dual Density logging tool (Cesium source, density range 1-3.5g/cc) to ascertain approximate in-situ density values. The density tool is calibrated every 2 weeks using a range of materials with known density and is run down a calibration hole at the commencement of, and regularly during, the collection of data.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. • The Competent Person has visited site and inspected the sampling process in the field and also inspected the Laboratory. • There are one twinned holes drilled for the Daltons-Gibson resource. • Primary data are captured on field Toughbook laptops using acQuiretm software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the

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	estimate, apart from resetting below detection values to half positive detection.
Location of data points	• 218 collars were surveyed by licensed surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • Downhole gyroscopic surveys are attempted on all RC holes by ABIMS. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool. Stated accuracy is +/-1o in azimuth and +/-0.1o in inclination. All 224 holes had downhole surveys completed. • QC of the gyro tool involved field calibration using a test stand and also a calibration hole. • The grid system for Daltons-Gibson is MGA_GDA94 Zone 50. • LiDAR Topographic data collected by AAM Pty Ltd with 1m contour spacing. Data supplied in projection MGA_GDA94 Zone 50.
Data spacing and distribution	• Drill spacing on an approximate 40m (NE-SW) by 40m (NW-SE) grid for Daltons and 40m (NE-SW) by 20m (NW-SE) for Gibson • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• The attitude of the Daltons - Gibson resource is generally a gently undulated deposit striking to the northeast and is drilled to grid northwest - southeast with drillholes inclined -60 degrees mostly to the southeast. Some drillholes in the northwestern part were drilled toward northwest to get the maximum coverage of the sloping tip of the mineralisation
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in January 2014 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out both internally and externally. The latest external data Audit was done by Snowden
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Daltons and Gibson are located within Mining Lease M45/1197 and M45/1209 respectively. Daltons is 100% Atlas owned after the acquisition Joint Venture iron rights from Haoma Mining Limited in June 2012, whereas Gibson is under 70 : 30 Joint Venture with Altura Mining Limited (70% AGO : 30% AJM). • The tenement sits within the Njamal Native Title Claim (WC1999/088). • At the time of reporting, there are no known impediments to obtaining a license to operate in the area and the tenement is in good standing.
Exploration done by other parties	• Daltons was initially owned by a joint venture of Giralia Resources Pty Ltd (Giralia) and Haoma Mining Ltd (Haoma). Giralia was taken over by Atlas in February 2011 whereas Haoma iron right was 100% acquired by Atlas in June

	2012.
Geology	• The Daltons-Gibson BIF-hosted iron ore resource is hosted by the Archean thought to be ≥ 3240Ma in age Pincunah Member consisting BIF, chert, tuff, shale and siltstone. The prospect is located in the East Pilbara Granite Greenstone Terrain of the Pilbara Craton. The greenstones are Archean in age (3600-2800Ma) and exhibit complex folding and faulting as a result of being 'squeezed' between two large granitoid complexes: the Shaw Granitoid Complex lies to the east, and the Yule Granitoid Complex lies to the west. The prospect lies to the east of the main shear zone and as such is flanked to the east and south by the Shaw Granitoid Complex. The Daltons - Gibson resource features the bedded mineralisation comprises of a predominately goethite with minor goethite-martite mineralisation formed by supergene leaching and replacement of banded iron formation protore. The deposits are defined beneath an area of surface enrichment often developed as a vitreous hydrated (hardcap). This is a degenerated zone caused by weathering and containing localised clay and carbonates. Beneath the hardcap lies a complex zone of primary mineralisation comprising intermixed hard massive bands with friable, biscuity and locally powdery material.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Surface Geological (stratigraphical, structural) mapping of the Gibson-Daltons prospect completed by Compass Geological Pty Ltd contract Geologists. • One diamond drill hole was drilled for Metallurgical purpose. The test work was done by Engenium • Routine multi-element analysis of potential deleterious or contaminating substances such as Arsenic, Lead, Zinc and Sulphur is completed for all samples.
Further work	• Further work has been planned at Daltons North
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Lithology logging codes are standardised across Atlas. The logs are entered digitally in the field into acQuire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The files are

	then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Daltons-Gibson Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained. A site visit was carried out on 11 June 2013 to inspect the deposit area, RC logging and sampling processes. Discussions were held with site personnel regarding procedures. A number of minor recommendations were made but no major issues were encountered.
Geological interpretation	• There is sufficient confidence in the geological interpretation of the mineral deposit. • Geological interpretation based on geophysical natural gamma data, local geological surface mapping, drillhole lithological logging and geochemical data. • Wireframes of the stratigraphic units used to generate an empty geological model. • The overlying hardcap, hydrated zone displays higher variability and mixed populations. This will likely influence the local estimates rather than the global grade estimate for this zone.
Dimensions	• The Daltons-Gibson Mineral Resource has dimensions of approximately 700 m (northeast) by 450 m (southeast) and extends from surface to a maximum depth of 75m, with an average depth of 60m. A thin, 15m thick hydrated layer sits over the top of the entire resource.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half a drill spacing (unless in areas where surface mapping has identified a mineralised/non-mineralised contact in an area without drilling data). • Univariate statistical analysis and variogram modeling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging neighbourhood analysis (QKNA) undertaken to optimise estimation parameters. • Block model extends from 737180mE to 738380mE and 7615135mN to 7617335mN and elevation from 100mRL to 500mRL. • A single block model to encompass the Daltons-Gibson Mineral Resource was constructed using a 20mN by 20mE by 5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements

	(Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO and K_2O) estimated plus geophysical density and chip percentage where possible. • Search directions and ranges determined from variogram modeling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • The Local Varying Anisotropy (LVA) technique from Maptek is used to define the orientation of the search ellipse • One search estimation run is sufficient to get a 100% block estimated • A minimum of 12 samples and a maximum of 24 samples are set with all blocks being estimated using 24 samples • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5,5,2 was applied. • Grade restriction was applied to some of the minor deleterious elements in some domains as a restricted search to limit the influence of extreme/outlier grades from smearing distant blocks by using a tighter search ellipsoid. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek's Vulcan version 9 software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit and Change of Support.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • All resource sits above water table • 95% of samples logged as dry, 2% samples logged as moist and 3% of samples logged as wet samples.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No detailed mine planning has been completed as this model represents the maiden Inferred resource. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• Metallurgical test work has been commenced by Engenium Pty Ltd using core samples from diamond drill hole. Test work is specified to give basic details of size by assay, bulk density (loose material), moisture and abrasion index.
Environmental factors or assumptions	• The sulphur risk has been coded in the block model • Any blocks >0.1% have been flagged in the block model • Waste geochemistry or physical testing of waste rock has been completed
Bulk density	• Geophysical density measurements have been recorded downhole from the majority of drillholes. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. • Geophysical density is recorded at 10cm increments downhole, which is stored in the acquire drillhole database.

	• The density measurements are filtered and validated prior to use to remove anomalous recordings. • Geophysical density is estimated into the resource model. Un-estimated blocks (that did not meet the minimum criteria for an estimate to be made) were assigned the mean grade of that domain's composited geophysical density data. • Physical core measurements of dry bulk density have been collected at Ibanez to verify the geophysical results and provide a regression to convert the geophysical density to a dry bulk density. • An 8% reduction to estimated geophysical density is applied based on density analysis applied at Ibanez • This is a bulk commodity project.
Classification	• Mineral Resources have been classified into the Measured, Indicated and Inferred category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modeling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade. • Change of Support results indicate some degree of misclassification will be likely in the hydrated zone of the deposit.
SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES – Refer to page 257	

MT WEBBER JORC 2012 TABLE 1 – SECTION 4

SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES	
Mineral Resource estimate for conversion to Ore Reserves	• The Mineral Resource estimates used are based upon three stratigraphically domained and ordinary kriged Mineral Resource estimates undertaken by Atlas Iron's Resource Estimation department as outlined in Section 1-3. The Mineral Resources used for conversion to Ore Reserves are: - Ibanez - Dalton-Gibson - Fender. • A technical description of the Mineral Resource is presented in the preceding sections to this table. The Mineral Resource estimate reported is inclusive of the Ore Reserves.
Site visits	• The Competent Person for this Ore Reserve Statement is a full time employee of Atlas Iron Ltd and visit the site on a regular basis. The most recent visit was on 5th June 2014.
Study status	• All three Mineral Resources, Ibanez, Fender and Dalton -Gibson, form part of the Mt Webber Stage2 6 Mtpa Feasibility Study of February 2014, which is an addendum to the Atlas Iron approved Mt Webber Stage 1 3 Mtpa Feasibility Study of January 2013. • Mt Webber Stage 1 is a 3 Mtpa project including the Ibanez and Fender Resources only. • Mt Webber Stage 2 is an expansion or addendum to Stage 1. It includes an increase to 6 Mtpa and the addition of the Dalton and Gibson Resources. • Since 2012, the Mt Webber Stage 1 and Stage 2 Feasibility Studies have jointly considered and assessed a significant number of technical options and alternatives to satisfy Atlas Iron that the Mt Webber project is technically achievable and economically viable. • Haulage of first production from Stage 1 is targeted to commence during the September 2014 Quarter.
Cut-off parameters	• The cut-off grade for the Ibanez and Fender deposits is 53.5% Fe and the cut-off grade for the Dalton and Gibson deposit is 50.0 %Fe based on target product grades.
Mining factors or assumptions	• The method used to convert Mineral Resources to Ore Reserves is pit optimisation to identify the economic shell within which a design process is applied to achieve a practical mine design. • The assumed iron ore price and exchange rates are derived from the average of three external forecasting analysts. For reasons of commercial sensitivity the assumed iron ore price and exchange rates are not disclosed. • The mining method is conventional drill and blast and load and haul with an excavator and large open pit mining equipment. This is considered to be appropriate for the style of mineralisation and is applied to similar operations in the area. • The geotechnical parameters are based on the recommendations from a geotechnical study with10m batter heights, 70^0 batter angle and 5m wide berms at 10m intervals incorporated in the pit design. • A 10% gradient and 23m width (including safety windrow) is used on in-pit pit ramps. • A 25m minimum mining width is applied on all benches except good bye cuts. • Allowance for dilution and ore loss has been applied using block model regularisation. Block model regularisation has been determined to approximate the findings of a 1.5m dilution skin analysis. • Inferred Mineral Resource is treated as waste in the pit optimisation and reserves process. • The major infrastructure required for the total Mt Webber project consists of a main site

	access road, pit access ramps, ROM pad and crusher area, stockpile areas, product stockpiling and load out yard, waste dumps, weighbridge area, mine operations centre, contractors laydown yard, explosives storage and camp or accommodation. • The Marble Bar and Woodstock public road is being upgraded and sealed by Atlas Iron. An upgrade to the intersection with Great Northern Highway is also being constructed.
Metallurgical factors or assumptions	• No Ore is located below the ground water table and the processing of the ore will therefore be by a standard dry crushing and screening process. This is considered to be appropriate for the type of mineralisation and is well tested technology in other Atlas operations. • Metallurgical testwork has been undertaken to confirm plant design and throughput. • The Mt Webber plant is a standard crushing and screening plant and as such a 100% process recovery is assumed for all plant feed. • Within the life of mine schedule for Mt Webber, the element grades are forecast to stay within the contracted specifications.
Environmental	• Mining approvals, Native Vegetation clearing Permit and license to operate have been granted for Mt Webber Stage1 and Stage2. • All necessary environmental approvals have been obtained under the Environmental Protection and Biodiversity Conservation Act (1999), Environmental Protection Act (1986) and Mining Act (1978). • The applications and submissions relating to these permissions include an assessment of waste rock characterisation and information relating to environment baseline surveys and impact assessment. • A consultant report on Soil and Waste material characterisation has recognized the Mt Webber project mine waste and low grade ore as non-acid forming. • No tailings will be produced by the Mt Webber project.
Infrastructure	• The major infrastructure required for the total Mt Webber project consists of a main site access road, pit access ramps, ROM pad and crusher area, stockpile areas, product stockpiling and load out yard, waste dumps, weighbridge area, mine operations center, contractors laydown yard, power station, workshops, explosives storage and camp. • The construction of accommodation village, mine operations centre, water and communications, weighbridge, commissioning of primary crusher is complete. • Upgrades to main access road and the Marble Bar – Woodstock road will be complete by end of July 2014. • Sufficient allocation of land has been planned and made available for the provision of all appropriate infrastructures, including site access.
Costs	• Mine construction was recently completed and the remaining capital cost is predominantly for mine closure, pit access and pre-stripping. The remaining mining related costs are priced as part of the contract tender process and mine closure costs have been estimated by external consultants who specialise in the field. • The production rates and operating costs have been applied from awarded contracts and tendered rates and independently reviewed by external consultants. • Operating costs include allowances for mining, processing, administration, haulage to the port and shipping. The mining, processing and haulage costs are supplied by competitively tendered contracts while the port and shipping costs are developed from existing contracts. • The application of product quality penalties are based on historic and current prices for existing customers. • Allowances have been made for royalties payable including Government and private parties.
Revenue factors	• Forecast sales price and exchange rates are based on the average of three external forecasting analysts. For reasons of commercial sensitivity the assumed iron ore price is

	not disclosed. • In generating the sales price applicable to the Atlas product, the sales price is discounted by: - Fe% grade of the Atlas product - A discount for the quantity of deleterious elements for the normal Atlas product - Government and other stakeholder royalties - Shipping costs. • Within the life of mine schedule for Mt Webber, the element grades of ore to be sold are forecast to stay within the contracted specifications.
Market assessment	• Established external forecast analysts have provided guidance to assess the long term market and sales of Iron Ore. • Atlas Iron has sales agreements in place with existing customers to purchase DSO Iron Ore product.
Economic	• The financial modelling indicates that Mt Webber will produce a positive NPV at the required discount rate of 11.0% applied to nominal post tax cashflows. • Sensitivity analysis indicates that the project's economics remain secure within typical sensitivity ranges of operating cost, iron ore price and foreign exchange rates.
Social	• Mt Webber project tenure sits in the area of the Hillside/Panorama pastoral stations, with whom Atlas has entered into a pastoral compensation agreement. • Mt Webber tenements are located entirely within the Njamal Native Title claim area. Atlas has a Deed of Agreement with Najamal Native Title group.
Other	• There is no identified material naturally occurring risks that could impact on the project or Ore Reserves. • Atlas has entered into a Joint operating agreement with Altura Mining Limited (Altura) on tenement M45/1209 (Ibanez, Fender and Gibson only. Atlas 70%, Altura 30%). • Atlas purchased Haoma Mining's 25% interest in the iron ore rights on M45/1197 (Dalton only, excluding Gibson). • Atlas purchased E45/3437 from Gondwana Resources to accommodate major infrastructure for Mt Webber. • Atlas will continue to engage with the Main Roads Department of Western Australia, the Department of Regional Development and Lands, the Department of Water, the Town of Port Hedland and the Shire of East Pilbara in relation to the project and haulage.
Classification	• Ore Reserves are based upon material classified as either Measured or Indicated from the Ore Resource estimation modelling. • The Measured and Indicated Mineral Resources within the designed pits have been respectively converted to Proved and Probable Ore Reserves. • The Ore Reserve classification results appropriately reflect the Competent Persons view of the deposits. • No Probable Ore Reserves have been derived from Measured Mineral Resources.
Audits or reviews	• A July 2014 audit by external consultants has found that the procedures used within Atlas to prepare the Ore Reserve estimates are in line with industry standards.
Discussion of relative accuracy/ confidence	• The Ore Reserve estimates have been completed to a minimum of a Feasibility Study standard with a corresponding level of confidence. • The accuracy of the estimates will be subject to regular reconciliation and ongoing monitoring.

Wodgina Project

Wodgina Ore Reserves Table - As at 30 June 2014										
Location	**COG Fe%**	**Reserve Classification**	**Kt**	**Fe (%)**	**SiO_2 (%)**	**Al_2O_3 (%)**	**P (%)**	**S (%)**	**LOI (%)**	**CaFe* (%)**
Avro	54.50	Proved	-	-	-	-	-	-	-	-
		Probable	900	57.3	7.3	1.2	0.03	0.08	7.9	62.3
Constellation	54.50	Proved	-	-	-	-	-	-	-	-
		Probable	600	57.2	6.3	1.7	0.03	0.11	8.6	62.5
Dragon	54.50	Proved	-	-	-	-	-	-	-	-
		Probable	1,600	56.7	7.0	1.8	0.03	0.12	8.5	61.9
Hercules	54.00	Proved	-	-	-	-	-	-	-	-
		Probable	10,300	57.2	6.3	1.7	0.09	0.03	9.4	63.1
Run-of-Mine Ore Stocks		Proved	200	56.9	6.1	2.3	0.06	0.07	9.4	62.8
		Probable	-	-	-	-	-	-	-	-
Final Product Stocks		Proved	100	56.1	7.6	2.2	0.07	0.03	9.5	62.0
		Probable	-	-	-	-	-	-	-	-
Sub Total		**Proved**	**200**	**56.7**	**6.4**	**2.3**	**0.06**	**0.06**	**9.4**	**62.6**
		Probable	**13,400**	**57.1**	**6.5**	**1.7**	**0.08**	**0.05**	**9.2**	**62.9**
Total			**13,600**	**57.1**	**6.5**	**1.7**	**0.08**	**0.05**	**9.2**	**62.9**

Wodgina Value Fines Ore Reserves Table - As at 30 June 2014										
Location	**COG Fe%**	**Reserve Classification**	**Kt**	**Fe (%)**	**SiO_2 (%)**	**Al_2O_3 (%)**	**P (%)**	**S (%)**	**LOI (%)**	**CaFe* (%)**
Run-of-Mine Ore Stocks		Proved								
		Probable	3,000	53.3	10.3	2.9	0.06	0.06	9.1	58.7
Final Product Stocks		Proved								
		Probable	200	53.7	10.1	2.8	0.07	0.03	9.5	59.4
Sub Total		**Proved**								
		Probable	**3,200**	**53.3**	**10.3**	**2.9**	**0.06**	**0.06**	**9.2**	**58.7**
Total			**3,200**	**53.3**	**10.3**	**2.9**	**0.06**	**0.06**	**9.2**	**58.7**

*Calculated calcined Fe grade where CaFe= (Fe%/(100-LOI%))*100

Reserve and Resource Update

Wodgina Mineral Resource Table - As at 30 June 30 2014 (53% Fe Cut-Off Grade)										
Location	**Resource Classification**	**Kt**	**Fe (%)**	**SiO_2 (%)**	**Al_2O_3 (%)**	**P (%)**	**S (%)**	**LOI (%)**	**CaFe* (%)**
Avro	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	2,100	56.2	8.2	1.7	0.03	0.09	8.2	61.2
	Inferred	1,600	54.6	8.5	3.4	0.06	0.06	8.9	60.0
Constellation	Measured	500	56.3	6.8	2.1	0.03	0.13	8.9	61.8
	Indicated	700	56.3	7.4	1.8	0.03	0.09	8.8	61.7
	Inferred	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
Dragon	Measured	2,000	56.2	7.3	1.9	0.03	0.12	8.6	61.6
	Indicated	700	56.3	7.8	1.9	0.05	0.09	8.3	61.4
	Inferred	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
Electra	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	700	54.6	6.7	3.9	0.07	0.05	10.3	60.9
	Inferred	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
Hercules	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	15,000	56.8	6.9	1.8	0.09	0.04	9.4	62.7
	Inferred	1,000	55.1	8.8	2.1	0.10	0.06	9.4	60.8
Hornet	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	1,600	54.9	8.3	3.8	0.06	0.05	8.7	60.1
	Inferred	1,000	54.3	7.6	4.4	0.09	0.04	9.4	59.9
Navajo	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	7,000	52.9	9.7	4.0	0.05	0.06	9.7	58.6
Wodgina South	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	6,000	54.8	8.6	3.1	0.07	0.04	9.2	60.4
Sub-Total	**Measured**	2,500	56.2	7.2	2.0	0.03	0.12	8.7	61.6
	Indicated	20,800	56.5	7.1	2.0	0.08	0.05	9.2	62.2
	Inferred	17,000	54.0	9.0	3.5	0.06	0.05	9.4	59.6
Total		**40,300**	**55.4**	**7.9**	**2.6**	**0.07**	**0.05**	**9.3**	**61.1**

Tonnes are rounded according to resource classification; grades are carried through unaffected by rounding and may result in small discrepancies.

*Calculated calcined Fe grade where CaFe= (Fe%/(100-LOI%))*100

Wodgina JORC 2012 Mineral Resources summary

Geology and Geological Interpretation

The Wodgina Project is located approximately 130km south of Port Hedland in the Pilbara region of Western Australia. Access is south from Port Hedland via the Great Northern Highway towards Newman. The identified resources at Wodgina span two mining leases, M45/923 and M45/351. The tenements are owned by Global Advanced Metals (GAM) with Atlas Iron purchasing 100% of the Iron rights on these Tenements. These tenements sit within the Kariyarra Native Title Claim (WC1999/003).

The Wodgina DSO Project comprises nine separate deposits, these being Anson, Avro, Constellation, Dragon, Electra, Hercules, Hornet, Navajo and Wodgina South. Mining commenced at Anson in 2010 and has progressed onto Dragon, Avro, Constellation and Hercules which are all at various stages of completion.

The Wodgina greenstone belt is located in the East Pilbara Granite–Greenstone Terrain. The East Pilbara Granite-Greenstone Terrane (EPGGT) is separated from the West Pilbara Granite-Greenstone Terrane (WPGGT) by the Mallina Basin.

The Wodgina stratigraphy is assigned to the Gorge Creek Group (within the Pilbara Supergroup). The Gorge Creek Group contains the Cleaverville Formation which consists of the BIF and chert sequences that host the iron mineralisation at Wodgina.

Cleaverville Formation sediments sit unconformably on the mafic volcanics of the Warrawoona Group over most of the area, but are interpreted to overlie Corboy Formation sediments in the south. They are dominated by finegrained sediments, which include siltstones, BIF's, and cherts with sandstones occurring near the base. The fine-grained sediments are metamorphosed over most of the area to a mixture of metasiltstones and banded iron quartzites. The sandstones are mostly recrystallised to banded quartzite. Metamorphism has involved the recrystallisation of fine cherty silica to form thin quartzite bands, and some of the siltstones are recrystallised to paramphibolite. Bedding within the banded quartzite displays an angular relationship to the contact with the BIF's and to bedding within the BIF's, suggesting the contact is largely faulted and/or unconformable.

The morphology of the Cleaverville Formation varies from thin attenuated hills along the flanks of the Greenstone Belt to large irregularly shaped areas of structural thickening in the nose of large folds. These areas constitute the bulk of extensive plateaus in the area, which on average are about 100m above the surrounding plains. Typically the ferruginous cherts and BIF's, and their metamorphic equivalents, are oxidised and are locally iron enriched at surface. They are the host rock for economic iron deposits in the area.

The stratigraphy modelled in the Wodgina region consists of inter-bedded Cleaverville Formation BIFs, cherts and shales. The units are folded into broad shallow synclinal folds, with parasitic folding occurring within the limbs. The local stratigraphy of the Wodgina Project area can be broken into five units as follows:

- CV1 – Lowest mineralised BIF in the sequence. This is frequently not mineralised, with sporadic low grade mineralisation.
- CV2 – Interbedded shale and chert, which overly CV1 banded iron formation (BIF). This unit is devoid of mineralisation.
- CV3 – Well mineralised BIF. This is the main mineralised unit in the sequence and is geologically similar to CV5.
- CV4 – Poorly mineralised BIF. This unit is generally thinner than the other BIF units (although thickness of all units is variable) at approximately 10-15m thick. It is characterised by the variability in grades, in combination with higher silica (≥15% SiO_2) and lower Fe (≤50% Fe). Much of the internal waste is contained within this stratigraphy.
- CV5 – Well mineralised BIF. This is the highest geological unit in the sequence and is similar to CV3.

Reserve and Resource Update

Iron mineralisation typically occurs within the CV3 and CV5 units throughout all the deposits within the Wodgina Project area. The CV5 unit (highest BIF unit in the sequence) typically contains hydrated mineralisation whereas primary mineralisation is hosted predominantly in the CV3 BIF unit.

The Cleaverville Formation has locally undergone in situ iron enrichment, where the host BIF-chert sequence has been thickened by strong folding, enhancing permeability and allowing the enrichment of iron in large fold noses. Fe enrichment generally occurs in the hinges of synformal structures, where the geology effectively acts like a bucket which contains the mineralisation.

In-situ lateritisation of the host meta-BIF and meta-chert, involving complete chemical weathering and decomposition of the host rocks, produces a lateritic hardcap.

The principal styles of iron mineralisation at Wodgina as follows:

1. In situ iron enrichment of iron rich sediments hosted by meta BIF and meta cherts of the Cleaverville Formation
2. Lateritisation of the host meta-BIF and cherts to produce lateritic hardcap
3. Transported laterite which forms a series of 'mesas' capped with transported iron derived from erosion of laterite hardcap and/or iron enrichment. The clastic iron fragments are cemented by iron oxides deposited by groundwater.

The iron mineralisation as massive, vuggy, fissile or platy goethite dominated ore types with an irregular basal profile. This crustal style of iron enrichment is likely to be the product of supergene replacement of banded iron formations, cherts and turbidites during regolith development associated with the Hamersley surface.

The Wodgina geological model was generated from regional geological mapping, geochemistry, geophysics and logging data. A stratigraphic model of the lithology and structure was first constructed to provide a geological framework in which to interpret the mineralisation. The mineralisation was interpreted into an upper zone of depletion and underlying hydrated and primary mineralised zones. Small, discrete discontinuous pods of mineralisation were modelled separately.

The stratigraphic model comprises a sequence of banded iron formation, cherts and shales, whereas the mineralisation model comprises of depleted, hydrated and primary mineralisation zones. The mineralisation zones are modelled generally using greater than 50% Fe and less than 15% SiO_2 cut-off to define ore from waste. The combination of both stratigraphic model and mineralisation models are used for geozone definitions.

Drilling techniques

Exploration and Resource Development drilling for DSO iron over the various Wodgina prospects has been undertaken by Atlas between 2007 and 2014. To date a total of 3,964 drillholes have been completed at the Wodgina project totalling 224,875.2m of drilling (3,880 RC holes for 218,635m and 84 DDH for 6,240.2m).

RC drilling has been performed using a 140mm diameter face sampling hammer and all samples are split by cone splitter. Diamond drillholes have been drilled at PQ3 diameter and have been used for density determinations, comparison with RC drilling results and metallurgical/geotechnical test work purposes.

- Drill spacing over the various Wodgina resources is approximately:
- Avro - nominal drill spacing of 20mE x 20mN with areas of 40mE x 80mN
- Constellation - nominal drill spacing of 20mE x 20mN.
- Dragon - nominal drill spacing of 20mE x 20mN.
- Electra - nominal drill spacing of 20mE x 20mN.
- Hercules - nominal drill spacing of 20mE x 20mN with areas of 40mN x 80mE.
- Hornet – nominal drill spacing of 40mE x 40mN with areas of 20mN x 20mE.

- Navajo – nominal drill spacing of 80mE x 40mN with areas of 40mN x 40mE.
- Wodgina South – nominal drill spacing of 40mE x 40mN with areas of 80mE x 40mN.

The geologist sieves and logs every 2m interval in alignment with the sampling interval. Logging encompasses the main material types, hardness, lithologies, colour and percentage of chips (approximate lump/fine proportion). The logging is recorded in the field electronically into acQuire field logging data entry objects and on completion the electronic files are sent to Perth and loaded into the centralised acQuire drillhole database which is managed by a full time Database Administrator.

Licenced surveyor MHR Surveyors completes a collar pickup on all available drill collars using a Trimble R8 Real Time Kinematic Differential GPS (DGPS). The DGPS gives an accuracy of +/- 0.05 m for Easting and northing location and +/- 0.1 m for the RL (height above sea level).

All available holes are gyroscopically surveyed downhole by ABIMS Pty Ltd utilising a north seeking multi-shot tool which measures azimuth to an accuracy of +/- 0.2° and dip to an accuracy of +/-0.1°. Downhole geophysical measurements are also collected at the same time and comprise Density/Calliper, Magsus, Resistivity and Natural Gamma recordings taken at 10cm intervals downhole.

Sampling and sub-sampling

The RC sampling methodology prior to January 2011, involved collection of samples drilled over 2m intervals using a cone splitter. Samples were directed into a calico bag with the overflow collected into green plastic bags. The calico bags were pre-numbered, with every 25th and 75th sample a field duplicate. The duplicate sample is collected in real time splitting the two sub samples from the riffle/cone splitters. Standards were inserted every 40th and 80th sample, while blanks were inserted every 41st and 81st sample.

After January 2011, 2m sample intervals were collected using a cone splitter. Samples were directed into a calico bag with the overflow collected into green plastic bags. The calico bags were pre-numbered, with every sample number ending in 00, 20, 40, 60, 80, collected as a field duplicate. The duplicate sample was collected in real time by splitting the two sub samples from the cone splitter. Standards were inserted every 1st, 21st, 41st, 61st and 81st sample.

The samples were all kept dry (where possible) and are of acceptable quality. Sample weights are also recorded to monitor the ongoing representativeness of the sample split. The weights are stored in the acQuire database.

Sample analysis method

Samples collected by Atlas were sent to ALS, Ultratrace and SGS laboratories in Perth for analysis of the extended iron ore suite of elements. This consists of XRF analysis for Fe, SiO_2, Al_2O_3, P, CaO, K_2O, MgO, MnO, S, TiO_2, Na_2O and a thermo gravimetric measurement for loss on ignition (LOI) at 1000^{o}C. The sample preparation of RC samples involved weighing, oven drying, pulverization of the entire sample to a grind size of 90% passing 75 micron. A pulp sub-sample was collected and formed into a fused bead for XRF determinations on the iron ore suite of elements and a LOI by thermogravimetric techniques.

To ensure quality assurance and control (QAQC) of the sampling and assaying procedure, Atlas submitted field duplicates and standards to the laboratory for analysis. For samples collected prior to January 2011, the duplicates and standards are inserted at predefined intervals at a rate of 2% for standards and 2% for duplicates for an overall insertion rate of 4%. Post January 2011, the duplicates and standards are inserted at predefined intervals at a rate of 5% for standards and 5% for duplicates for an overall insertion rate of 10%. The laboratory also inserted its own internal standards and pulp repeat analyses at predefined intervals. Sample collection procedures and QAQC protocols employed by Atlas are commensurate with standard industry practices.

The QAQC data for the Wodgina project was reviewed prior to commencing the resource estimates for Wodgina and were found to be of reasonable precision and analytical accuracy and is deemed to be acceptable for resource estimation purposes and JORC compliancy.

Estimation methodology

The drillhole data was composited prior to running the estimation process using a 2m sample interval to minimise any sample bias due to sample length. The compositing was run within the attribute fields to ensure no composite intervals crossed any lithological contacts or grade boundaries.

Variograms were generated to assess the grade continuity of the various elements and as inputs to the kriging algorithm used to interpolate grades. Snowden Supervisor software was used to generate and model variograms and conduct statistical analysis.

Variographic analysis was undertaken for all mineralised geozones for each of the Wodgina resources. The elements that were analysed include all 12 elements, i.e. Fe, SiO_2, Al_2O_3, P, LOI, S, MnO, MgO, K_2O, TiO_2, CaO, Na_2O and geophysical density.

To generate the best experimental variograms the data was first transformed to a normal scores distribution where upon the variogram was modelled and on completion a back transform was applied. The variogram ranges and directions of continuity are consistent with the geological understanding and are considered appropriate.

Block models were constructed in Vulcan software (Maptek) and constrained by surfaces and solids. The parent block size was selected based on half of drillhole spacing and the model was orientated (rotated) to represent the strike of mineralisation and prevailing drilling grid. The sub-block size was selected to more accurately define the mineralised volume.

The volume block model was created using the wireframes of the stratigraphy, mineralisation and topography. A unique geozone code was assigned based on the combination of stratigraphy and mineralisation. The geozone field is used to distinguish the main mineralisation types and mineralised areas.

Atlas estimated Fe, SiO_2, Al_2O_3, P, LOI, CaO, K_2O, MgO, MnO, S, TiO_2 and Na_2O grades using Ordinary Kriging for the mineralised horizons. Waste horizons were estimated by Inverse Distance (power 2) methods.

The preferred estimation parameters were chosen based on neighbourhood analysis, whereby several estimation parameters were tested to optimise the estimation search. This was represented by best kriging efficiency, slope regression values and number of blocks filled. Search ellipses were orientated based on the geometry of the mineralisation with the search ellipses increased by two fold and three fold for second and third search passes.

- Geophysical density measurements have been recorded downhole from the majority of drillholes. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. Geophysical density is recorded at 10cm increments downhole. The density measurements are filtered and validated prior to use to remove anomalous recordings.

The in-situ density (inclusive of moisture and porosity) was estimated into the models using geophysical density measurements collected at 10cm intervals downhole. All available drillholes had geophysical measurements collected and a sufficiently good spatial coverage of data across all of the deposits was achieved. Following compositing of the data, variograms were modelled and geophysical density was estimated into the model utilising ordinary kriging techniques.
To correct the in-situ density estimate to a dry bulk density, the geophysical density measurements are correlated to dry dimensional core density measurements and a suitable regression factor is determined. The regression factor is applied to the geophysical density estimate to derive the dry bulk density value which will account for moisture and porosity. All tonnages reported are on a 'dry' basis, this is a bulk commodity project.

The estimates were validated using:

- A visual comparison of block grade estimates and the drillhole data.
- A global comparison of the average composite grades and estimated grades.

- Moving window averages comparing the mean block grades to the composites.
- Histogram comparison of the original composite grades and the block estimated grades.
- Assessment of correlation coefficients from the input sample data and estimated block grades.
- Total assay validation check to ensure closure (sum of elements in each block adds to 100% +/- 2%).
- Global change of support to assess the level of misclassification inherent in the estimate.

The conclusions from the model validation work include:

- Visual comparison of the model grades and the corresponding drillhole grades shows a good correlation.
- A comparison of the global drillhole mean grades and with the mean grades of the block model estimate (for each domain) shows that the block model mean grades are typically within 5-10% of the drilhole means which is a good outcome with the exception of poorly sampled regions.
- The trend plot grades show a good correlation between the block model grades compared with the drillhole grades.
- Total assay validation showed that the blocks maintained closure generally between 98% and 102% for all mineralised domains.
- Assessment of the histograms and correlation coefficients showed that the relationship between elements within the input sample data has been maintained in the block grades estimates and the grade distribution has been maintained in the estimate with an acceptable level of smoothing.

Resource Classification

Mineral Resources have been classified into the Measured, Indicated and Inferred category based on drillhole spacing, nature and quality of the drilling and sampling methods, geological understanding and confidence, grade continuity, QAQC analysis, confidence in the estimate of the mineralised volume, results of the model validation and results of metallurgical test work.

Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. The results of the validation of the block model show good correlation of the input data to the estimated grades.

The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit. Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. The statement relates to global estimates of tonnes and grade.

Material has been classified as Measured where the drill spacing was at least 20m x 20m (or less), displayed strong continuity, was within the primary mineralised zone and not hydrated, was not geologically complex. Diamond core density has been measured to reliably confirm the dry bulk density estimate and resulting tonnages reported.

Material has been classified as Indicated where the drilling density was 20m x 20m (or up to 40mN x 20mE), mineralisation showed moderately good continuity and was within the primary or hydrated mineralised zone and was not geologically complex. Diamond core density has been measured to reliably confirm the dry bulk density estimate and resulting tonnages reported.

Reserve and Resource Update

Material has been classified as Inferred where drill spacing is 20m x 20m (or greater), displays low continuity or is poddy (only continuous over one to two drill section), is within the near surface variable hydrated zone or was considered geologically complex.

Cut-off grade and basis for selection

The criteria for defining mineralised material during interpretation and estimation at Wodgina is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary. These cut-off grades were used to separate mineralised material from waste. A slightly higher cut-off grade of 53% Fe is used for reporting all Wodgina resources as the deposits are generally of a lower grade compared to other Atlas projects and the higher cut-off grade reports material closer to current Atlas product specification.

Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the proposed open pit mining method and proposed processing methodology to consistently produce material suitable to meet Atlas product specification. This cut-off grade methodology is used consistently for reporting of all Mineral Resources at Wodgina. The tabulated resources are reported using a 53% Fe cut-off grade on a block by block basis.

Mining and Metallurgical methods and parameters and other modifying factors

The Wodgina Project utilises a conventional open pit mining methodology with selective extraction of ore material using a backhoe configured excavator. This allows a selective ore mining approach comprising 5m benches which are mined in two flitches of 2.5m height. The 2.5m flitches are used in order to reduce ore dilution and loss. A slightly larger 6.0m bench with mining from two 3.0m flitches is utilised at the Hercules deposit.

A simple, low cost crush and screening processing route is utilised at Wodgina to produce a single, fines only product at a specified grade. Activities at the Wodgina project have been ongoing since 2009 and the project has a recorded production history, with mining occurring over the Anson, Avro, Dragon, Constellation and Hercules resources to date. Remaining Mineral Resources at Anson are considered non-material and have been removed from the Mineral Resource table.

Wodgina JORC 2012 - Ore Reserves summary

Material Assumptions for Ore Reserves

Wodgina project has been in operation since June 2010. A Life of Mine Plan for Wodgina project was completed in June 2014, to reflect new resource block models, updated operating costs and updated price assumptions. The Mineral Resource estimates used for conversion to Ore Reserves are based upon four stratigraphically domained and ordinary kriged Mineral Resources.

The Wodgina Ore Reserves estimate is defined by completing pit optimisation and subsequent pit designs based on detailed geotechnical parameters and practical mining considerations.

The production rates and operating cost have been applied from awarded contracts and tendered rates.

The iron ore price and exchange rates used in the pit optimisation are derived from the average of three external forecasting analysts. For reasons of commercial sensitivity the assumed iron ore price and exchange rates are not disclosed.

Ore Reserve Classification

Ore Reserves at Wodgina are derived from Measured and Indicated Resources and surveyed stockpiles. Within the design, indicated resource has been reported as Probable Ore Reserves and 2.3 Mt of Measured Mineral Resource has been reported as Probable Ore Reserves.

The Mineral Resource estimate reported is inclusive of the Ore Reserves. Inferred Mineral Resource is treated as waste in the reserve reporting process.

Mining Method

The mining method is conventional drill and blast and load and haul with an excavator and large open pit mining equipment. This is considered to be appropriate for the style of mineralisation and is applied to similar operations in the area.

Based on the geotechnical study recommendations, 10m batter height, 60^0 - 70^0 batter angles and 5m wide berms at 10m intervals have been incorporated in all pit designs excepting Hercules. Hercules has the same batter angle, but 12m batter height and 6m wide berms.

A 10% gradient and 23m width (including safety windrow) is used on in-pit pit ramps. A minimum mining width of 25m is applied on all benches to cater for safe and efficient working.

Allowance for dilution and ore loss has been applied using block model regularisation. Block model regularisation has been determined to approximate the findings of a 1.5m dilution skin analysis.

Ore Processing

Ore is processed by a standard dry crushing and screening process. This is considered to be appropriate for the type of mineralisation and is well tested technology in other Atlas operations. Operations have been continuing since 2010 and the crusher performance is well established and reflected in ore reserve parameters.

100% process recovery is assumed for all materials as is the case for all other Atlas operations using dry crush and screen process. Within the life of mine schedule for Wodgina, the element grades are forecast to stay within the contracted specifications.

Cut-off Grade

The cut-off grade for the Avro, Dragon and Constellation deposits is 54.5% Fe and the cut-off grade for Hercules deposit is 54.0% Fe based on target product grades.

Material modifying factors

Wodgina has been an operating mine since June 2010. Inputs for the Ore Reserve estimate are consistent with current operating practices and experience.

The infrastructure required for the mining and processing of the Ore Reserve is in place and operating. Existing onsite infrastructure including accommodation village, mine operations centre, main site access road, pit access ramps, ROM pad and crusher area, stockpile areas, product stockpiling and load out yard, waste dumps, weighbridge area, contractors laydown yard, power station, workshops and explosives storage support the current operation.

Operating costs includes allowance for mining, processing, administration, haulage to the port and shipping. Of these, the mining, processing and haulage costs are supplied by competitively tendered contracts and port and shipping costs are developed from existing contracts.

Mining approvals, permits and licenses are granted for the operations. All necessary environmental approvals have been obtained under the Environment Protection and Biodiversity Conservation Act 1999, Environmental Protection Act 1998.

Reserve and Resource Update

Contractual agreements with all key stakeholders are in place and active. These agreements include agreement with Kariyarra Native Title Group and infrastructure sharing agreement with Global Advanced Metals Wodgina Pty Ltd (GAM), allowing Atlas access to the GAM mine infrastructure and iron ore rights over their tenements.

The financial modelling indicates that Wodgina will produce a positive NPV at the required discount rate of 11% applied to nominal post tax cashflows.

Wodgina Project JORC 2012 Table 1 Assessment Criteria

AVRO RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA AVRO MINERAL RESOURCE ESTIMATE – DECEMBER 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Reverse Circulation (RC) chip samples collected via cone splitter. • One 3kg (average) sample taken for each two metre sample length and collected in pre-numbered calico sample bags. • 3kg sample was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 5 duplicates are taken for every 100 samples (1:20). • No RC holes were duplicated for QC analysis. • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer and Diamond Core (DDH) drilling using a 83mm diameter core barrel. • The majority of the deposit sits where drill spacing is approximately 20m by 20m. Along the northern extents of the deposit the drill spacing is 80m x 40m. • RC holes (total of 20,398 for 311 holes) – used in estimate. • DDH (total of 1107.6m for 13 holes).
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 5,094 Good (49.9%), 4,279 Fair (41.9%) and 827 Poor (8.1%). • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered.
Logging	• Post January 2011 - Logging of every 2m interval (Atlas procedure) corresponding with 2m sampled interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Pre January 2011 – The intervals logged were defined by lithological units. • 311 RC drillholes were logged in full, totalling 20,398m of drilling or 5,775 RC samples were logged for lithology, mineralisation, chip percent, weathering and colour. • 13 DDH holes were logged in full totalling 1107.6m of drilling and 338 DDH logged intervals • Geophysical data collated from 165 RC holes of a total of 311 RC holes (natural gamma, gamma density, magnetic susceptibility & resistivity). Not all holes were open at depth which precluded 100% recovery of measurements from all of the drillholes.
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • ~3kg RC chip samples are collected via cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where

	possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at Avro based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** • Sample dried at 105°C for 12-24 hrs • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality Control Procedures:** • Duplicated sample: 5 every 100 samples (1:20). • Certified Reference Material assay standards inserted: 5 in every 100 samples (1:20). • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality of assay data and laboratory tests	• 1,604 samples were submitted to ALS Laboratory (15.7%), 2,067 to SGS Laboratory (20.3%) and 6,530 to Ultratrace (64%). All laboratories are in Perth. • All submitted samples are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105OC in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 0.66g sample that is dried further, fused at 110oC for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • An umpire laboratory campaign began in 2013 with a second laboratory independently checking the assay results. Until this began in 2013, there were no umpire laboratory checks completed for assaying laboratories. • Certified Reference Material assay standards having a good range of values were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that for Fe greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice. • Geophysical gamma density was collected by Geovista Dual Density logging tool (Cesium source, density range 1-3.5g/cc) to ascertain approximate in-situ density values and this was estimated into the Avro resource model. The density tool is calibrated every 2 weeks using a range of materials with known density and is run down a calibration hole at the commencement of, and regularly during, the collection of data.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel.

	• The Competent Person has visited Atlas' sites and inspected the sampling process in the field and also inspected the Laboratory. • There are no twinned RC holes drilled for the Avro resource to date. • Primary data are captured on field Toughbook laptops using acQuiretm software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• All collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • Downhole gyroscopic surveys are attempted on all RC holes by ABIMS. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool. Stated accuracy is +/-1o in azimuth and +/-0.1o in inclination. All holes had downhole surveys. • QC of the gyro tool involved field calibration using a test stand and also a calibration hole. • The grid system for Avro is MGA_GDA94 Zone 50. • Aerial Topographic data collected by AAM Pty on a 1m resolution. Aerial survey flown in August 2008. Data supplied in projection MGA_GDA94 Zone 50.
Data spacing and distribution	• The majority of the deposit is covered by a drill spacing of approximately 20mN by 20mE. Along the northern extents of the deposit the drill spacing is 80m x 40m. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred and Indicated resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• The local geology at Avro consists of a sequence of sedimentary units (predominately BIFs and shales) that have undergone two deformation sequences. The first phase of deformation folded lithological units into a syncline with parasitic folds that are shallow and open in the north and tighter in the south east. A second phase of deformation folded the deposit along a SW-NE fold axis resulting in the northern limb of the fold striking north-south and the southern limb striking east-west. • Along the north-south (northern) striking section of the Avro deposit drillholes were inclined at either -60^o or -90^o oriented to the west (270^o). In the east-west (southern) section of the Avro deposit drillholes were inclined at either -60^o or -90^o oriented either to the north (000^o) or to the south (180^o). • No orientation based sampling bias has been identified in the data at this point.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.

Reserve and Resource Update

Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Avro is located wholly within Mining Lease M45/923. This tenement is owned by Global Advanced Metals (GAM) and Atlas has purchased 100% iron ore rights. • The tenement sits within the Kariyarra Native Title Claim (WC 1999/003). • At the time of reporting, mining is operational at the Wodgina mine site and within the Avro resource area. The tenement is in good standing.
Exploration done by other parties	• No iron ore exploration has been completed by other parties at Avro.
Geology	• Wodgina is regionally located in an Archean Greenstone belt, wedged between granitic batholiths. The Greenstone belt is dominated by mafic volcano-sediments with lesser epiclastic sediments, cherts and BIFs. The BIF and chert sequences have been assigned to the Cleaverville formation. Local geology at Avro has been interpreted as a conformable sequence of a lower unmineralised BIF unit, an overlying Chert/shale unit (also unmineralised). A second BIF unit containing primary mineralisation that is overlain by a siliceous BIF unit (contains lower grade mineralisation) and an uppermost BIF unit that contains both primary and hydrated mineralisation. There is a mafic basement to the sequence characterised by elevated MgO, Na_2O and Al_2O_3.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Geological mapping completed by two consultants. John Crossing (Compass Geological Pty Ltd) completed mapping in 2008 at a scale of 1:5000 with more detailed mapping at 1:2500 where required. • David Archer was contracte to map the Wodgina region in 2009 the mapping was completed at a scale of 1:2500.

	• No rock chip assays were collected at Avro during preliminary mapping. A drillhole campaign was designed based solely on mapped surface enrichment. • Routine multi-element analysis of potential deleterious or contaminating substances such as Arsenic, Lead, Zinc and Sulphur is completed for all samples.
Further work	• No further resource definition work is planned. This resource is currently being mined.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Lithology logging codes are standardised across Atlas. The logs are entered digitally in the field into acQuire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Avro Resource is stored in the centralised Atlas acQuire drillhole database.
Site Visits	• Steven Warner (Competent Person for this resource update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained. Site visits have been carried out at Wodgina to inspect the deposit area, RC logging and sampling processes. Discussions were held with site personnel regarding procedures.
Geological interpretation	• There is sufficient confidence in the geological interpretation of the mineral deposit. • Geological interpretation based on geophysical natural gamma data, local geological surface mapping, drillhole lithological logging and geochemical data. • Wireframes of the stratigraphic units were used to generate an empty geological model. • The overlying hydrated zone (hardcap) displays higher variability and mixed populations. This will likely influence the local estimates rather than the global grade estimate for this zone.
Dimensions	• The Avro Mineral Resource has dimensions of approximately 1 km (northwest-southeast) by 170 m (southwest-northeast) and extends from surface to a maximum depth of 85m, with an average depth of ~50m. An approximately 20m thick hydrated layer sits over the top of the entire resource.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half a drill spacing. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging neighbourhood analysis (QKNA) undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 671400mE to 672800mE and 7653700mN to 7655200mN and elevation from 100mRL to 500mRL. • A single block model to encompass the Avro Mineral Resource was

	constructed using a 10mN by 10mE by 2.5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, K_2O and Na_2O) estimated plus geophysical density into hydrated and primary geozones. • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2, and 6 drill spacings for run 3. • A minimum of 14 samples and a maximum of 24 samples are required for an estimate in run 1, the minimum number of samples reducing to 12 for run 2 and 10 for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5,5,2 was applied. • Grade restriction was applied to some of the minor deleterious elements in some domains as a restricted search to limit the influence of extreme/outlier grades from smearing distant blocks by using a tighter search ellipsoid. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • The selective mining unit at Avro is 5m x 10m x 2.5m. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL trend (swath) plots to compare grades along slices through the deposit and Change of Support.
Moisture	• Tonnages are estimated on an ‘assumed’ dry basis. • The water table sits at approximately 230m RL; 100% of the resource is located above the water table. • Sample moisture is recorded by the geologist for each RC sample. This is recorded as dry, moist, wet and water injected. • Samples were recorded as 9901 Dry (97%), 4 Moist (0.0%), 15 Wet (0.1%) wet and 280 water injected (2.8%).
Cut-off parameters	• The criteria for mineralised material is ≥50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining is by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • Detailed mine planning and approvals have been completed and mining has

	commenced at Avro. This model represents a resource update.
Metallurgical factors or assumptions	• Comminution test work on iron ore samples completed by SGS Lakefield Oretest Pty Ltd in February 2012 (Job Number 10883A). • Test work included UCI, CWI, AI analysis, loose and compacted bulk density determinations, size by size analysis and material handling testwork by TUNRA.
Environmental factors or assumptions	• Waste geochemistry analysis was completed at Avro in 2011 by Graeme Campbell (Graeme Campbell & Associates Pty Ltd). Studies showed that there is a negligible PAF risk at Avro and no other elements were noted to be of concern.
Bulk density	• Geophysical density measurements have been recorded downhole from the majority of drillholes. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. • Geophysical density is recorded at 10cm increments downhole and is stored in the acquire drillhole database. • The density measurements are filtered and validated prior to use to remove anomalous recordings. • Geophysical density is estimated into the resource model. Un-estimated blocks (that did not meet the minimum criteria for an estimate to be made) were assigned the mean grade of that domain's composited geophysical density data. • 406 physical core measurements of dry bulk density have been collected to verify the geophysical results and provide a regression to convert the geophysical density to a dry bulk density. • For a realistic regression for geophysical densities in RC drill holes to be converted to a dry bulk density value, the overall density regression for RC holes is for geophysical density to be reduced by 2.75%. • This is a bulk commodity project.
Classification	• Mineral Resources have been classified into the Inferred and Indicated resource categories based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model show good correlation of the input data to the estimated grades. • Limited mining completed to date and only preliminary reconciliation is available at the time of classifying the resource. • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person. • The updated infill model has been compared to previous estimates of the resource and compare favourably, with no material changes to tonnes or grade

	noted to the estimate.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade. • Initial production reconciliation data suggest lower recoveries of hydrated mineralisation compared to model predictions. Recovery is improving as mining progresses into primary mineralisation.
SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES – Refer to page 325	

CONSTELLATION RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA CONSTELLATION MINERAL RESOURCE ESTIMATE – SEPTEMBER 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• RC sample chips and fines directed into a cyclone and collected using a cone (98.5%) or riffle splitter (1.0%). • Only a very minor amount of samples were taken directly from the sample drillhole spoil without splitting (spear or scoop method - 0.5%). These were not removed from the estimate during data validation due to the very small proportion compared to the total sample population. • One 3.5kg (average) sample taken for each two meter sample length and collected in pre-numbered calico sample bags. • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer used to collect samples for assay. • Eight PQ3 diamond drillholes used in density analysis and structural interpretation although no cored samples were submitted for assay.
Drill sample recovery	• RC sample recovery is recorded by an Atlas geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. At Constellation 3,017 samples were reports as good (50.0%), 2,378 fair (39.4%) and 635 poor (10.6%). • Sample moisture content, either injected (related to drilling) or in-situ is recorded at the rig site by the geologist. 98.5% of samples were reported dry with the remainder reported as wet or moist injected. • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. No significant sample recovery issues were encountered. • No significant sample recovery issues were encountered. • Six samples were removed from the estimate due to very lean sample weights (<100g) due to cavity intersection or poor sample return at the hole collar.
Logging	• Logging of every 2m interval (Atlas procedure) corresponding with 2m sampled interval for lithology and colour. • Geophysical logging included drillhole diameter (caliper), natural gamma, gamma density, magnetic susceptibility & resistivity. Drillhole bridging or collapse at the collar prevented obtaining downhole measurements, geophysical measurements were successfully taken from 166 of 207 RC holes and eight diamond drillholes. • Lithological and structural logging, down-hole geophysical measurements and dimensional density data taken from the cored samples.
Sub-sample techniques and sample preparation	**Sub-sampling technique:** • Sample size reduced to approximately 3.5Kg using a cone splitter mounted to the side of the drill rig (93% of all samples) or riffle splitter (7% of all samples). • Under correct field conditions cone and riffle splitting methods are considered appropriate and fit for purpose with minimal sample bias. • Duplicate samples are taken at regular intervals (one duplicated sample per 20 drill samples) to check for sample bias.

	• Sample amount (~3.5Kg) is considered appropriate for the distribution of grain sizes produced by RC drilling. **Laboratory Sample preparation:** • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hour. • Samples are then crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. • Sub-samples are collected to produce a 0.66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum crucible prior to analysis by XRF and total LOI by Thermo Gravimetric analysis.
Quality of assay data and laboratory tests	• XRF analysis is total (complete digestion of sample) and considered appropriate to the type of sample (RC chip and fines). • Certified reference materials (standards) having a range of values were inserted at predefined intervals at a rate of no less than one per 20 filed samples by Atlas Iron staff to monitor accuracy of laboratory results. Analyses of known reference materials that fall two standard deviations from accepted reference value are flagged for review and possible re-assay. • Duplicate samples taken at regular intervals (one per 20) to check for sampling bias. • Sample weights recorded at the laboratory. • Total assay calculated to identify analytical errors. • Lab duplicates taken where large samples (>3.5kg) required splitting down by the lab.
Verification of sampling and assaying	• Results of known reference materials showed that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples show greater than 90% of pairs have less than 10% difference which is considered within acceptable limits and acceptable to current industry best practice. • No samples from Constellation were submitted to an umpire laboratory for independent verification. • Negative laboratory default values reported for below detection limit results were replaced with a positive number equal to half the analyte detection limit. • No adjustments, corrections or calibrations were made to any assay data used in the estimate apart from replacement of standard default laboratory codes. • Diamond drillholes generally twinned an existing RC hole providing verification of lithology and important structural data to assist in the stratigraphic interpretation.
Location of data points	• All Collars were surveyed by licensed surveyors, MHR Surveyors or by qualified mine site based surveyors using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • Downhole gyroscopic surveys are attempted on all RC holes by ABIMS. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool. Stated accuracy is +/-1^{o} in azimuth and +/-0.1^{o} in inclination. • Data supplied in projection MGA_GDA94 Zone 50. • Drillhole collar locations are checked against the topographic or current pit surface.
Data spacing and distribution	• Drillholes spaced on a regular grid at approx. 20mE by 20mN spacing. • 6,030 samples assayed at 2m intervals from 207 RC holes representing 12,063m of downhole drillhole depth. • The drillhole and sampling density provides a high level of confidence in the

	continuity of mineralisation between successive drill traverses and quality of the estimate.
Orientation of data in relation to geological structure	• RC holes are generally oriented -60° to grid south, with some holes drilled to grid north, the resource includes some vertical drillholes. • The geological interpretation at Constellation consists of an E-W striking sequence of BIF and non mineralised shale/siltstone interbeds that are very tightly folded into an antiformal structure to the south. The antiformal structure is expressed at surface by an incised valley. The geological interpretation to the north of Constellation consists of gently folded to sub-horizontal stratigraphy hosting BIF units preferentially enriched in Fe mineralisation. • No orientation based sampling bias has been identified in the data at this point.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside large sealed bulk carrying bags. Samples are delivered to a dispatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • Sample documentation is checked against the samples received at the lab and the dispatch notes, any issues are reported back to Atlas.
Audits or reviews	• An audit of the Atlas AcQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data quality and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Constellation is located wholly within exploration lease M45/0923. This tenement is owned by Global Advanced Metals with Atlas securing 100% of the iron ore rights.
Exploration done by other parties	• Previous exploration for copper, base metals and gold by Sipa Resources 1995 – 1996 and 2000 – 2001. Various other resource companies have explored in the Wodgina region prior to Sipa Resources for a range of commodities.
Geology	• Regionally the Wodgina Project is located within the East Pilbara Granite – Greenstone Terrain of the Pilbara Craton. • Deposit hosted in a strongly weathered sequence of Archaean sediments including, shale, sandstone, quartzite, siltstone chert and banded Iron Formation (BIF). • Localised in-situ goethite and hematite enrichment zones of BIF units. Hydrated and chemically variable hard cap developed over primary mineralisation.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between	• No exploration results have been reported in this release, therefore there are no

mineralisation widths and intercept lengths	relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Surface enrichment mapping and surface structural measurements provided by Archer (2009).
Further work	• Ongoing in pit grade control drilling and geological mapping. • Comparison of resource tonnages and grades to actual mines tonnages and mill grades (reconciliation work).
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Lithology logging codes are standardised across Atlas. The logs are entered digitally in the field into acQuire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • All data is electronically sent to Perth and stored in the secure, centralised AcQuire SQL database which is managed by a full time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acQuire software. • Data is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained. A site visit was carried out in July 2012 to inspect the deposit area, RC logging and sampling processes. Discussions were held with site personnel regarding procedures. A number of minor recommendations were made but no major issues were encountered.
Geological interpretation	• Geological interpretation based on geophysical natural gamma data, local geological surface mapping, drillhole lithological logging, structural measurements from diamond drill holes and the geochemistry of RC assay data. • Wireframes of the stratigraphic units used to generate an empty geological model. • The overlying hydrated mineralisation displays more chemically variability than primary mineralisation at depth and local estimates in this domain are less robust.
Dimensions	• The Constellation Mineral Resource has dimensions of approximately 280m (north) by 440m (east) and extends from surface to a maximum depth of 75m, with an average depth of 55m.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half a drill spacing (unless in areas where surface mapping has identified a mineralised/non-

	mineralised contact in an area without drilling data). • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging neighborhood analysis (QKNA) undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 672,800mE to 673,800mE and 7,654,400mN to 7,655,000mN and elevation from 0mRL to 500mRL. • A single block model to encompass the Constellation Mineral Resource was constructed using a 10mN by 10mE by 2.5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain volume resolution. The parent block size is equal to half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes (1 = waste, 5 = hydrated, 2 = primary mineralisation). • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO and K_2O) estimated plus geophysical density. As and B were also estimated. • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation neighborhood search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with less stringent neighborhoods each run. Generally the majority of blocks are estimated in run 1. • In run1 search ellipses typically cover 2.5 drill spacing's (50 × 50m), 4.5 drill spacing's for run 2 (90 × 90m), and 6.5 drill spacing's for run 3 (130 × 130m). • Local varying anisotropy was applied to each cell using additional bearing, dip and plunge variables to correct sample search directions to the orientation of interpreted stratigraphic contacts • A minimum of 12 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 for run 2 and eight for run 3. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5 × 5 × 2 was applied. • Sub block grades are estimated. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • Waste material was estimated with Inverse Distance Squared (power 2). • Standard model validation has been completed using visual and numerical (geostatistical) methods and by a formal peer review process conducted by internal Atlas staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used included: - visual checks comparing composited data (raw drill data) to the estimated (block data); - a global statistical comparison for each domain; - the generation of easting, northing and RL swath plots to compare

	composited to estimated grades along slices through the deposit; - change of support analysis to investigate the degree of smoothing and conditional bias
Moisture	• Tonnages are based on density values corrected to a diamond core dry bulk density • Limited data was available on the depth to water table which has been placed at the 210mRL which is below the current resource depth based on nearby hydrogeological data. • The vast majority of samples were reported dry indicating no interception of the water table
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Open cut mining using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• Comminution test work on iron ore samples completed by SGS Lakefield Oretest Pty Ltd in February 2012. • Test work included UCI, CWI, AI analysis, loose and compacted bulk density determinations, size by size analysis and material handling testwork by TUNRA.
Environmental factors or assumptions	• Waste geochemistry analysis was completed at Constellation in 2011/12 by Graeme Campbell (Graeme Campbell & Associates Pty Ltd). Studies showed that there is a negligible PAF risk at Constellation, however elevated levels of arsenic and boron are noted throughout the Constellation deposit. • All waste material to be encapsulated to prevent As and Boron dissolving from the mine waste dumps into meteoric water and entering the drainage system and water table at Wodgina. • A waste management strategy for contaminated Constellation material has been approved by the regulatory authorities.
Bulk density	• Geophysical density measurements have been recorded downhole from the majority of drillholes. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. • Geophysical density is recorded at 10cm increments downhole, which is stored in the acQuire drillhole database. • Density measurements are validated to remove anomalous recordings and default instrument null readings. • Geophysical density is estimated into the resource model. Un-estimated blocks (that did not meet the minimum criteria for an estimate to be made) were assigned the mean composited geophysical density value for that domain. • Physical density measurements of cored samples provide a regression to convert the geophysical density to a dry bulk density. • Twinned diamond drillholes provide data used to correct cored geophysical density measurements to RC geophysical measurements. • Density regression calculations indicate geophysical density measurements need to be reduced by 1.6% to correct to an equivalent dry bulk density.
Classification	• Mineral Resources have been classified into a Measured, Indicated or Inferred category based on drillhole intercept spacing, geological confidence, level of sample support, and estimation quality. • Isolated small pods of mineralisation with reduced drillhole support have been classified as Inferred.

	• Primary mineralisation with a high level of sample support and high level of estimation quality classified as Measured. • Near surface hydrated mineralisation with a high level of sample support given an Indicated classification due to higher geochemical variability and reduced level of confidence in the estimate. • Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process at regular intervals and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • Estimate validation checks of the block model show a good correlation of the input data to the estimated grades. • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit. • The statements relate to global estimates of tonnes and grade. • Mine production reconciliation data suggests that lower recoveries of hydrated mineralisation compared to model predictions has been encountered. Recovery is improving as mining progresses into primary mineralisation and is within expected tolerances for the relevant classification applied.
SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES – Refer to page 325	

DRAGON JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA DRAGON MINERAL RESOURCE ESTIMATE – JUNE 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Reverse Circulation (RC) chip samples collected via cone splitter. • One 3.5kg (average) sample taken for each two metre sample length and collected in pre-numbered calico sample bags. • 3.5kg sample was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 5 duplicates are taken for every 100 samples (1:20). • 3 RC holes were duplicated in their entirety for QC analysis (WDGC0431-0433). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice. • Samples mostly cone split (96.4% of total). The remaining 3.6% were speared or riffle split. This proportion was deemed sufficiently low to include all samples of all sample methods in the estimate.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 20mN by 20mE, with one area (‘Stage 1’ in the pit design) 10mN by 10mE. • Total of 502 RC holes used for the resource estimate for a total of 28, 483m and 14, 246 primary samples. • 19 PQ3 diamond drill holes totaling 1,329.1m have been drilled over the deposit.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 4, 127 Good (28.97%), 8, 322 Fair (58.42%), 1, 793 Poor (12.59%), 4 not recorded (0.03%) mainly due to no sample return. • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No twin RC or diamond drillholes have been completed for the purpose of assessing sample bias due to preferential loss/gain of fine/coarse material or due to the drilling techniques.
Logging	• Logging of every 2m interval (Atlas procedure) corresponding with 2m sampled interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. Samples collected prior to Jan 2011 were logged every 1m. Changes to the logging intervals are attributed to a revision of the Atlas logging procedure in January 2011. • 502 RC drill holes were logged in full, totaling 28, 483m of drilling. Lithology, mineralization, weathering and colour were recorded. Holes drilled after or during January 2011 were also logged for chip percent. • 19 diamond holes were logged in full, totaling 1, 329.1m. All diamond holes were suppressed in estimate due to no assay results (they were drilled for density,

	structure, geotechnical and metallurgical purposes). • Geophysical data collated from 207 holes of a total 521 holes (natural gamma, gamma density, magnetic susceptibility & resistivity). Not all holes were open at depth which precluded 100% recovery of measurements from all of the drillholes. Many drill holes had collapsed at or near surface, making any downhole measurements impossible.
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • ~3.5kg RC chip samples are collected via cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at Dragon based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** • Sample dried at 105°C for 12-24 hrs • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality Control Procedures:** • Samples collected prior to January 2011 had 2 duplicated samples every 100 samples (1:50). Due to a revision of the logging procedure, samples collected post January 2011 had 5 duplicates taken every 100 samples (1:20). • Certified Reference Material assay standards inserted: 5 in every 100 samples (1:20). • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality of assay data and laboratory tests	• Samples submitted to Ultratrace (9, 488 samples), SGS (3, 058 samples) and ALS (1, 700 samples) Laboratories in Perth and assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105OC in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 0.66kg sample that is dried further, fused at 110OC for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice. • Geophysical gamma density was collected by Geovista Dual Density logging tool

	(Cesium source, density range 1-3.5g/cc) to ascertain approximate in-situ density values, and was estimated into the model prior to applying a script to convert to dry bulk density. The density tool is calibrated every 2 weeks using a range of materials with known density and is run down a calibration hole at the commencement of, and regularly during, the collection of data. • Three RC holes had duplicates taken for every 2m interval down the hole to ensure a representative sample was obtained through the cone splitter. Results showed no major issues with sample representivity.
Verification of sampling and assaying	• The Competent Person has visited site and inspected the sampling process in the field and also inspected the Laboratory. • Primary data are captured on field Toughbook laptops using acQuire software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection. • There was one twinned pair of RC holes drilled at the Dragon deposit. There are 6 pairs of RC/diamond twins.
Location of data points	• All Collars pre 2013 were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. 2013 collars were surveyed by licensed Atlas mine surveyors using a differential RTK_DGPS. One hole was picked up by GPS. All 2011 to 2013 holes were pegged using a differential RTK_DGPS. • Downhole gyroscopic surveys are attempted on all RC holes by ABIMS. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool. Stated accuracy is +/-1o in azimuth and +/-0.1o in inclination. 232 holes had downhole surveys completed, 289 holes were not able to be surveyed due to collapse or blockages. • QC of the gyro tool involved field calibration using a test stand and also a calibration hole. • The grid system for Dragon is MGA_GDA94 Zone 50. • Topographic data collected by AAM Pty on a 1m resolution. Aerial survey flown in August 2008. Data supplied in projection MGA_GDA94 Zone 50.
Data spacing and distribution	• Drill spacing on an approximate 20m (N-S) by 20m (E-W) grid, with one area (Stage 1 mining area) drilled to 10m (N-S) by 10m (E-W). • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred/Indicated/Measured resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals, and 9 samples were taken at 1m intervals.
Orientation of data in relation to geological structure	• The geological structure is interpreted to be a tight syncline consisting of BIFs, cherts and shales with local parasitic folding. The syncline is flat lying with no plunge, the hinge striking east/west, parallel to the strike of the beds. The drilling direction is predominantly to the south (180°) and at a dip of -60°. A smaller proportion of holes are vertical or dipping north (000°) due to topographical constraints, and attempting maximum drill hole coverage. • The Mining Stage 1 drill holes (10x10m spacing) are all vertical, except on the northern margin where they dip 60 degrees to the north to attempt maximum coverage due to the topography.

Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Dragon is located wholly within mining lease M45/923. The lease is owned by Global Advanced Metals (GAM) and Atlas has purchased the iron ore rights. • The tenement sits within the Kariyarra People Native Title Claim (WC1999/003). • At the time of reporting, mining is operational at the Wodgina mine site and within the Dragon resource area. The tenement is in good standing.
Exploration done by other parties	• All DSO iron exploration activities have been undertaken under Atlas supervision.
Geology	• Wodgina is regionally located in an Archean Greenstone belt, wedged between granitic batholiths. The Greenstone belt is dominated by mafic volcano-sediments with lesser epiclastic sediments, cherts and BIFs. The BIF and chert sequences have been assigned to the Cleaverville formation. Local geology at Dragon has been interpreted as a conformable sequence of a lower unmineralised BIF unit, an overlying chert/shale unit (also unmineralised). A second BIF unit containing primary mineralisation that is overlain by a siliceous BIF unit (contains lower grade mineralisation) and an uppermost BIF unit that contains both primary and hydrated mineralisation. There is a mafic basement to the sequence characterised by elevated MgO, Na_2O and Al_2O_3.This unit has been assigned to the Warrawoona Group mafics, and the contact with the Cleaverville is unconformable.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.

Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Geological mapping completed by two consultants. John Crossing (Compass Geological Pty Ltd) completed mapping in 2008 at a scale of 1:5000 with more detailed mapping at 1:2500 where required. • Consultants were contracted to map the Wodgina region in 2009 at a scale of 1:2500. • No rock chip assays were collected at Dragon during preliminary mapping. A drillhole campaign was designed based solely on mapped surface enrichment. • Routine multi-element analysis of potential deleterious or contaminating substances such as Arsenic, Lead, Zinc and Sulphur is completed for all samples.
Further work	• No further work is planned at the time of writing (Dec 2013). The deposit is currently being mined.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• The logs are entered digitally in the field into acQuire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acQuire software. • Data for the Dragon Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this resource) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained. • Site visits have been carried out at Wodgina to inspect the deposit area, RC logging and sampling processes. Discussions were held with site personnel regarding procedures.
Geological interpretation	• There is sufficient confidence in the geological interpretation of the mineral deposit. • Geological interpretation based on geophysical natural gamma data, local geological surface mapping, drillhole lithological logging and geochemical data. • Wireframes of the stratigraphic units used to generate an empty geological model. • The overlying hard cap, hydrated zone displays higher variability and mixed populations. This will likely influence the local estimates rather than the global grade estimate for this zone.
Dimensions	• The Dragon Resource has dimensions of approximately 800m (east) by 350m (north) and extends from surface to a maximum depth of 80m, with an average depth of 60m. • A hydrated layer (20m average thickness) sits over the top of the entire resource.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half a drill spacing.

	• Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging Neighbourhood Analysis (QKNA) undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 672600mE to 673720mE and 7654000mN to 7654520mN and elevation from 100mRL to 400mRL. • A single block model to encompass the Dragon Mineral Resource was constructed using a 10mN by 10mE by 2.5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO and K_2O) estimated plus geophysical density. • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2.5 drill spacings for run 1, 4.5 drill spacings for run 2, and 6.5 drill spacings for run 3. • The minimum number of samples for run 1 was 12, with a maximum of 24. The minimum number of samples for run 2 was reduced to 10, and 8 for run 3. The maximum for runs 2 and 3 is also 24. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5,5,2 was applied. • Grade restriction was applied to some of the minor deleterious elements in some domains as a restricted search to limit the influence of extreme/outlier grades from smearing distant blocks by using a tighter search ellipsoid. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan (version 8.2) software was used to complete the block estimation. • Ordinary Kriging was used to estimate mineralized (hydrated and primary) domains, except for domain 201 which had insufficient data to perform variography or an OK estimate. Mean composite grades were assigned to these blocks. • Inverse Distance (power 2) estimation was used to estimate waste domains. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit,

	and Change of Support.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • There is no recorded dip data to interpret a water table. All moist/wet samples are due to water injection during drilling to suppress dust. • The entire resource sits above the water table. • Sample moisture is recorded by the geologist for each RC sample. 97.16% of samples logged as dry, 2.33% samples logged as moist and 0.46% of samples logged as wet samples.
Cut-off parameters	• The criteria for mineralised material is ≥50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining is by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • Detailed mine planning and approvals have been completed and mining has commenced at Dragon. This model represents a resource update.
Metallurgical factors or assumptions	• A comprehensive metallurgical test work program for physical properties and beneficiation was completed by SGS Lakefield Oretest Pty Ltd in Perth from 10 samples collected from 4 diamond holes. The testwork was completed between October 2010 and January 2011. • Testwork included UCI, CWI, AI analysis, loose and compacted bulk density determinations, size by size analysis and material handling testwork by TUNRA.
Environmental factors or assumptions	• A small percentage of deeper RC holes intercepted anomalous sulphur values >0.3%. The majority of blocks with >0.3%S lie outside the current planned pit design (dra_pit_-c_df_v11.00t) and are mostly constrained within the stratigraphical units CV2 (chert/shale) and CV1 (lower most BIF). • Waste geochemistry analysis was completed at Dragon in 2011 by Graeme Campbell (Graeme Campbell & Associates Pty Ltd). Studies showed that there is a negligible PAF risk at Dragon.
Bulk density	• Geophysical density measurements have been recorded downhole from 207 out of 521 drill holes. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. • Geophysical density is recorded at 10cm increments downhole, which is stored in the acQuire drillhole database. • The density measurements are filtered and validated prior to use to remove anomalous recordings. • Geophysical density is estimated into the resource model. Un-estimated blocks (that did not meet the minimum criteria for an estimate to be made) were assigned the mean grade of that domain's composited geophysical density data. • 5 out of 19 diamond holes were measured for dimensional dry bulk density, for a total of 736 measurements on a whole core tray basis. A comparison was conducted between dry bulk density and downhole geophysical density to determine a regression factor which can be applied to the estimated geophysical density to account for porosity and moisture. • Only 2 diamond holes were available which had both geophysical and dry bulk density for comparison and regression calculations to obtain the dry bulk density. The calculated regression was not applied due to the small amount of data available for calculating it, which suggested a high regression percentage be applied, which was in disparity to other Wodgina deposits. The downhole geophysical density was therefore taken as the dry bulk density with no regression applied. • This is a bulk commodity project.

Reserve and Resource Update

Classification	• Mineral Resources have been classified into the Inferred/Indicated/Measured categories based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry Standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • Estimate validation checks of the block model show a good correlation of the input data to the estimated grades. • The statements relate to global estimates of tonnes and grade. • Mine production reconciliation data suggests that lower recoveries of hydrated mineralisation compared to model predictions has been encountered. Recovery is improving as mining progresses into primary mineralisation and is within expected tolerances for the relevant classification applied.
SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES – Refer to page 325	

NAVAJO JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA NAVAJO MINERAL RESOURCE ESTIMATE – JULY 2012	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• RC sampling methodology prior to January 2011 involved the collection of samples drilled over 2m intervals using a riffle or cone splitter. • 3.5kg sample (average) was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 2 duplicates are taken for every 100 samples (1:50). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 40mN by 80mE. • RC holes (84 holes for 4,378m) – used in estimate. • No Diamond holes have been drilled to date.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the riffle/cone splitter. This is recorded as good, fair, poor or no sample. • 326 Good (57.7%), 1269 Fair (14.9%) and 591 Poor (27.4%). • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No twin RC or diamond drillholes have been completed to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling.
Logging	• Geological logging was completed for 2m interval according to Atlas procedure. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • 2189 RC samples were logged. • Geophysical data collected from 5 of 84 RC holes (Cal, Gpdens, Magsus and Natgam).
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • ~4kg RC chip samples are collected via riffle/cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at Navajo based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** • Sample dried at 105°C for 12-24 hrs • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm

	Quality Control Procedures • Duplicated sample: 2 every 100 samples (1:50). • Certified Reference Material assay standards inserted: • 2 in every 100 samples (1:50) prior to January 2011. • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality of assay data and laboratory tests	• All samples submitted to Ultratrace and ALS Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Certified Reference Material assay standards having a good range of values were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 80% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. • The Competent Person has visited site and inspected the sampling process in the field and also inspected the Laboratory. • Primary data are captured on field Toughbook laptops using acQuire^{tm} software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in a secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• All Collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • Downhole gyroscopic surveys were attempted on a selection of RC and diamond holes. A total of 3 of 84 (RC) holes contain downhole gyro survey data. • The grid system for Navajo is MGA_GDA94 Zone 50. • Topographic data was based on AAM Pty Ltd aerial survey completed in August 2008 on a 1m resolution contours. The datum is GDA94 with projection MGA Zone 50.
Data spacing and	• Drill spacing on an approximate 40m (N-S) by 80m (E-W) grid.

distribution	• This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• The geological structure is interpreted to be a synform consisting of BIFs, cherts and shales with local parasitic folding. The syncline is flat lying with no plunge, the hinge striking east/west, parallel to the strike of the beds. The drilling direction is predominantly to the south (180°) and at a dip of -60°. A smaller proportion of holes are vertical or dipping north (000°) due to topographical constraints.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Navajo is located wholly within Mining Lease M45/923. This tenement is 100% Atlas owned. • The tenement sits within the Kariyarra Native Title Claim (WC1999/003). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• All drilling activity to date has been completed by Atlas.
Geology	• Regionally the Wodgina Project is located within the East Pilbara Granite – Greenstone Terrain of the Pilbara Craton. • Deposit hosted in a strongly weathered sequence of Archaean sediments including, shale, sandstone, quartzite, siltstone chert and banded Iron Formation (BIF). • Localised in-situ goethite and hematite enrichment zones of BIF units. Hydrated and chemically variable hard cap developed over primary mineralisation.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Relationship between	• No exploration results have been reported in this release, therefore there are

mineralisation widths and intercept lengths	no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• All exploration activity to date has been completed by Atlas.
Further work	• Infill RC drilling to improve orebody knowledge. • Twin diamond drill holes to test the accuracy of the current resource. • Metallurgical test work to evaluate potential beneficiation of the ore.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Geological logging was conducted on a 2m scale with intervals recorded using the standard Atlas geological log. The log is entered digitally in the field onto a Toughbook computer, and the files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Navajo Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• The geological interpretation is based on the surface mapping plus geochemistry, logging collected from RC holes. • A stratigraphic interpretation has not been incorporated into the resource model.
Dimensions	• The Navajo Mineral Resource has dimensions of approximately 500m (north) by 700m (east) and extends from surface to a maximum depth of 30m, with an average depth of 20m. A thin, 15m thick hydrated layer sits over the top of the entire resource.
Estimation and modelling techniques	• Mineralisation was domained according to mineralisation types (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional mineralisation surfaces. • Interpretation does not extend mineralisation more than half drill spacing. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging Neighbourhood analysis (QKNA) was undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 0mE to 1000mE and 0mN to 1000mN and elevation from 0mRL to 400mRL. • A single block model to encompass the Navajo Mineral Resource was constructed using a 20mN by 40mE by 5mRL parent block size with sub-celling

	to 5mE by 5mN by 2.5mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes as defined by the wireframes. Codes 501 was used for hydrated mineralisation, 201 was used for primary mineralisation and 101 was code for waste material (<50% Fe). • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) into geozone 201 (primary mineralisation) and geozone 501 (hydrated mineralisation). • Inverse Distance was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) into waste geozone (101). • Due to the lack of downhole geophysical density data, a global mean of 2.6t/m^3 was applied to mineralised geozones 201 and 501. Waste blocks (geozone 101) were assigned a global mean of 2.5t/m^3. • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2, and 5 drill spacings for run 3. • A minimum of 8 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 6 for run 2 and 4 for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5, 5, 2 was applied. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit.
Moisture	• Tonnages are estimated on an ‘assumed’ dry basis. • 95.9% of samples logged as dry, 3.4% of samples were logged as moist, 0.4% were logged moist injected and 0.3% were logged as wet. • The Navajo deposit is located above the water table which is located at the 210mRL.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope.

Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• No specific metallurgical test work has been performed on the Navajo deposit to date. • Metallurgical characteristics are assumed from nearby and geologically similar deposits.
Environmental factors or assumptions	• There are no zones identified as sulphur risk in the Navajo deposit and no other problematic waste materials have been identified.
Bulk density	• No dimensional density (obtained from diamond core) was available to enable density regression analysis. • Downhole geophysicsal density has not been collected from a sufficient number of drillholes to attempt an estimate of the in-situ density. • A global mean density of 2.6t/m3 was applied to both the hydrated and primary mineralised zones. All waste material has been assigned a mean density of 2.5t/m3. • This is a bulk commodity project.
Classification	• Mineral Resources have been classified as Inferred category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person’s view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade. • No mining has been completed at Navajo to date.

WODGINA SOUTH JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA WODGINA SOUTH MINERAL RESOURCE ESTIMATE – MARCH 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• RC sampling methodology prior to January 2011 involved the collection of samples drilled over 2m intervals using a riffle or cone splitter. • Post 2011, RC samples were collected over 2m intervals using only a cone splitter. • 3.3kg sample (average) was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 2 duplicates are taken for every 100 samples (1:50) for samples collected prior to January 2011. • Post January 2011, duplicates were 5 duplicates were collected for every 100 samples (1:20). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 40mN by 40mE and 40mN by 80mE in one prospect (Fairchild). • Note that Wodgina South consist a group of deposits (Proctor, Short, Viking, WG5, Fairchild, WG8, Viscount, Conquest and WG9). • RC holes (193 holes for 8,234m) used in estimate and 9 holes were not used for estimation due to its locations being outside area of interest (model coverage). • No DDH have been drilled to date.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the riffle/cone splitter. This is recorded as good, fair, poor or no sample. • 74% Good, 14% Fair and 10% Poor, 2% blank/un-recorded. • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered.
Logging	• Prior to January 2011, geological logging was completed for 1m interval according to Atlas procedure. • Post January 2011, geological logging was completed for 2m interval to coincide with sample interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • 4,117 RC samples were logged. • Geophysical data collected from 60 of 201 RC holes (gamma, density, magsus and resistivity).
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • ~3.3kg RC chip samples are collected via riffle/cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible.

	• The sample sizes are considered to be appropriate to correctly represent the mineralisation at Wodgina South based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** • Sample dried at 105°C for 12-24 hrs • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality Control Procedures** • Duplicated sample (prior to January 2011): 2 every 100 samples (1:50). • Duplicate samples (post January 2011): 5 every 100 samples (1:20). • Certified Reference Material assay standards inserted: • 2 in every 100 samples (1:50) prior to January 2011. • 5 in every 100 samples (1:20) post January 2011. • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality of assay data and laboratory tests	• All samples submitted to Ultratrace, ALS and SGS Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. • The Competent Person has visited site and inspected the sampling process in the field and also inspected the Laboratory. • Primary data are captured on field Toughbook laptops using acQuire^{tm} software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• 160 collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using

	differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • 41 collars collected via GPS level accuracy only. • Downhole gyroscopic surveys were attempted on all RC holes. A total of 105 of 203 (RC) holes had downhole gyro survey data. • The grid system for Wodgina South is MGA_GDA94 Zone 50. • Topographic data was based on AAM Pty Ltd aerial survey completed in August 2008 on a 1m resolution contours. The datum is GDA94 with projection MGA Zone 50.
Data spacing and distribution	• Drill spacing on an approximate 40m (N-S) by 40m (E-W) and 40m (N-S) by 80m (E-W). • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• The Wodgina South resource is interpreted to be a gently undulating folded sequence of BIFs and Cherts overlying quartzite and Mafic unit belonging to the Warrawoona Group. • The majority of drill holes were drilled dipping South and with minor proportion drilled vertically. As such due to the varying intersection angles, all results are defined as downhole widths.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Wodgina South is located wholly within Exploration Lease E45/2175. This tenement is 100% Atlas owned. • The tenement sits within the Kariyarra People Native Title Claim (WC1999/03). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• All drilling activity to date has been completed by Atlas.
Geology	• The Wodgina South deposits consist of a basal unit of mafics belonging to the Warrawoona Group. Sitting above the mafic unit is a quartzite unit. Overlying this are BIFs and Cherts of the Cleaverville Formation. The overall geological structure is a folded stratigraphy with moderate to gentle dips.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore

	Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• All exploration activity to date has been completed by Atlas.
Further work	• Infill drilling is warranted to fill in the gaps between mineralisation. • Some mineralisation is not properly closed off. • Undertake various density measurement method including dimensional density and Archimedean method. • GPS hole collars need to be picked up using DGPS. • Beneficiation test work to determine upgradability.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Geological logging was conducted on a 1m scale (prior to January 2011) and 2m scale (post January 2011), with intervals recorded using the standard Atlas geological log. The log is entered digitally in the field onto a Toughbook computer, and the files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Wodgina South Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• The geological interpretation is based on surface mapping, geochemistry, lithological logging and downhole geophysics collected from RC holes. • The Wodgina South resource is interpreted to be a gently undulating folded sequence of BIFs and Cherts overlying quartzite and Mafic unit belonging to the Warrawoona Group. Mineralisation occurs in the Upper and Lower BIF units separated by a chert horizon. • The majority of drill holes were drilled dipping South and as such due to the varying intersection angles, all results are defined as downhole widths.
Dimensions	• The Wodgina South Mineral Resource consists of multiple prospects (Proctor, Short, Viking, WG5, Fairchild, WG8, Viscount, Conquest and WG9). The

	largest deposit (Viscount) has dimensions of approximately 280m (north) by 380m (east) and extends from surface to a maximum depth of 30m, with an average depth of 20m.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half drill spacing. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging Neighbourhood analysis (QKNA) was undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 670700mE to 673100mE and 7650600mN to 7652400mN and elevation from 0mRL to 500mRL. • A single block model to encompass the Wodgina South Mineral Resource was constructed using a 20mN by 20mE by 5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) into geozone 503 (hydrated mineralisation). • Inverse Distance was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) into waste geozones (101-103). • A global density of 2.4t/m^3 was assigned into geozone 503 due to the lack of geophysical density data. • A global density of 2.3t/m^3 was assigned into waste geozones (101-103). • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2, and 5 drill spacings for run 3. • A minimum of 12 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 for run 2 and 8 for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5, 5, 2 was applied. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical

	methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • 72% of samples logged as dry, 10% of samples were logged as moist, 15% moist injected, 0.4% wet injected, 1% wet and 1.6% not recorded. • None of the drill holes intersected the water tables therefore it is assumed that all material in the block model sits above the water table. The reported resource is assumed in dry tonnes conditions. No moisture determination was implemented prior to estimation.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• No specific metallurgical test work has been performed on the Navajo deposit to date. • Metallurgical characteristics are assumed from nearby and geologically similar deposits.
Environmental factors or assumptions	• Moderate risk has been assigned to blocks with an estimated S grade greater than 0.1%. For anything below 0.1%, BIF is considered no risk compared to chert unit which is assigned as low risk as well as basement which is thought to be mafic unit.
Bulk density	• A global density of $2.4t/m^3$ was assigned to mineralised blocks. • This is a bulk commodity project.
Classification	• Mineral Resources have been classified as Inferred category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The results of the validation of the block model show good correlation of the input data to the estimated grades. • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade. • No mining has been completed at Wodgina South to date.

HERCULES JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA HERCULES MINERAL RESOURCE ESTIMATE – APRIL 2014	
SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Reverse Circulation (RC) chip samples collected via cone splitter. • One 3.5kg (average) sample taken for each two metre sample length and collected in pre-numbered calico sample bags. • 3.5kg sample was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 5 duplicates are taken for every 100 samples (1:20). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice. • Samples mostly cone split (99.92% of total). The remaining 0.08% was speared samples, of which only 59% of these (13 total samples) occur in mineralized material. This was deemed sufficiently low to include all samples in the estimate.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 20mN by 20mE. • Total of 1, 268 RC holes used for the resource estimate for a total of 65, 786m and 32, 894 primary samples (note – this is not the total number of holes drilled. Some holes excluded from the estimate).
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 27, 988 Good (85.09%); 4, 050 Fair (12.31%), 820 Poor (2.49%), 36 not recorded (0.11%). • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No twin RC or diamond drillholes have been completed for the purpose of assessing sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling.
Logging	• Logging of every 2m interval (Atlas procedure) corresponding with 2m sampled interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. Samples collected prior to Jan 2011 were logged every 1m. Changes to the logging intervals are attributed to a revision of the Atlas logging procedure in January 2011. • 1, 274 RC drill holes were logged in full, totaling 65, 896 m of drilling (or 33, 284 RC samples). Logging records lithology, mineralisation, weathering and colour. Holes drilled after or during January 2011 were also logged for chip percent. Note that 6 of the RC holes were suppressed in the estimate due to abandonment at shallow depths, or loss of metal down the hole. 20 diamond holes were logged in full, totaling 1459.2m. All diamond holes were suppressed in estimate due to no assay results (they were drilled for geotechnical and

	metallurgical purposes). • Geophysical data (natural gamma, gamma density, magnetic susceptibility & resistivity) collated from 1, 120 holes of a total of 1, 294 holes, both diamond and RC. Not all holes were open at depth which precluded 100% recovery of measurements from all of the drillholes. • RC drilling was completed on 19th March 2014. This concludes the RC infill program at Hercules, with no further drilling planned at this stage.
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • ~3.5kg RC chip samples are collected via cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at Hercules based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** • Sample dried at 105°C for 12-24 hours • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality Control Procedures** • Samples collected prior to January 2011 had 2 duplicated samples every 100 samples (1:50). Due to a revision of the logging procedure, samples collected post January 2011 had 5 duplicates taken every 100 samples (1:20). • Certified Reference Material assay standards inserted: 5 in every 100 samples (1:20). • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples where possible. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality of assay data and laboratory tests	• All samples submitted to Ultratrace Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 0.66g sample that is dried further, fused at 110^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Certified Reference Material assay standards having a good range of values were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than

	90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice. • Geophysical gamma density was collected by Geovista Dual Density logging tool (Cesium source, density range 1-3.5g/cc) to ascertain approximate in-situ density values, but was not estimated into the model. The density tool is calibrated every 2 weeks using a range of materials with known density. • Six RC holes (WDGC0542-0544 and WDGC0550-0552) had duplicates taken for every 2m interval down the hole to ensure a representative sample was obtained through the cone splitter. Results showed no discernable issues with sample representivity.
Verification of sampling and assaying	• The Competent Person has visited site and inspected the sampling process in the field and also inspected the Laboratory. • Primary data are captured on field Toughbook laptops using acQuire^{tm} software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire^{tm} SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection. • There are no twinned RC holes drilled for the Hercules resource to date. 15 of the diamond holes were twinned with RC holes, but the diamond holes were not sampled for assay purposes.
Location of data points	• All collars pre 2013 were surveyed by licensed surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. 2013-2014 collars were surveyed by licensed Atlas mine surveyors using a differential RTK_DGPS. One hole was picked up by GPS but was suppressed due to abandonment at shallow depth so not used in estimate anyway. 12 holes drilled in 2013 were destroyed by production (mining earthworks) prior to pick up. However still deemed OK to use as all holes in this program pegged using DGPS. • Downhole gyroscopic surveys are attempted on all RC holes by ABIMS. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool. Stated accuracy is +/-1^{o} in azimuth and +/-0.1^{o} in inclination. 1, 125 holes had downhole surveys completed, 169 holes were not able to be surveyed due to collapse or blockages. • QC of the gyro tool involved field calibration using a test stand. • The grid system for Hercules is MGA_GDA94 Zone 50. • Topographic data collected by AAM Pty Ltd on 9th June 2013. Aerial survey data captured from a fixed wing aircraft and supplied in projection MGA_GDA94 Zone 50. Vertical accuracy for the dataset is 0.07m RMS, and horizontal accuracy 0.20m RMS. Data was supplied in 25cm contours in Vulcan arch_d format. Due to the high resolution, the data had to be filtered in order for a surface to be created. A filter of 0.1m minimum deviation from line was applied using Vulcan 8.2.
Data spacing and distribution	• Drill spacing on an approximate 20m (N-S) by 20m (E-W) grid • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred/Indicated resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals, with 1 sample collected at a 1m interval due to hole depth being an odd number of meters.
Orientation of data in	• The geological structure is interpreted to be a shallow syncline consisting of

relation to geological structure	BIFs, cherts and shales with local parasitic folding. The syncline is flat lying with no plunge, the hinge striking north/south, parallel to the strike of the beds. The drilling direction is predominantly to the west (270°) and at a dip of 60°. A smaller proportion of holes are vertical or dipping east due to topographical constraints, and attempting maximum drill hole coverage.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed bulka bags. Samples are delivered to a dispatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to Ultratrace laboratory in Perth by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard prior to analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire^{tm} drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Hercules is located within mining leases M45/923 and M45/351. The leases are owned by Global Advanced Metals (GAM) and Atlas has purchased the iron ore rights. • The tenement sits within the Kariyarra People Native Title Claim (WC1999/003). • At the time of writing, mining is operational at the Wodgina mine site and within the Hercules resource area. The tenement is in good standing.
Exploration done by other parties	• All exploration activities were undertaken under Atlas supervision.
Geology	• The Hercules BIF-hosted iron ore resource is hosted within the Cleaverville Formation sediments. The prospect is located in the Wodgina Greenstone Belt between the Pilbara Well Greenstone Belt and the Abydos Greenstone Belt. The Wodgina Greenstone Belt has a synclinal keel shape and comprises a lower mafic sequence (assigned to the Warrawoona Group) which is unconformably overlain by a coarse clastic sequence of both the Corboy and Cleaverville Formations. It appears that the Corboy Formation sediments are missing from the sequence at Hercules and the Cleaverville Formation lies directly (and unconformably) on the Warrawoona Group basement.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Relationship between mineralisation widths and	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report.

intercept lengths	This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced Reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• In 2009, regional geological mapping was conducted by David Archer around the Wodgina Tantalum mine at a scale of 1:2500. The objective of the mapping program was to determine the extent of the iron enrichment, to differentiate between bedded iron enrichment and laterite development and to develop an understanding of the local lithostructural settings within the Wodgina Greenstone Belt. • In 2008, John Crossing (Compass Geological Pty Ltd) completed mapping of the Wodgina region to a scale of 1:5000, with more detailed mapping at 1:2500 where required. • 42 metallurgical samples from 20 of the diamond drill holes at Hercules were submitted for analysis to SGS Lakefield Oretest Pty Ltd. • Routine multi-element analysis of potential deleterious or contaminating substances such as Arsenic, Lead, Zinc and Sulphur is completed for all samples.
Further Work	• No further drilling is planned at Hercules at the time of writing. • The deposit is currently being mined.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Lithology logging codes are standardised across Atlas. The logs are entered digitally in the field into acQuire^{tm} logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acQuire^{tm} software. • Data for the Hercules Resource is stored in the centralised Atlas acQuire^{tm} drillhole database.
Site Visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• There is sufficient confidence in the geological interpretation of the mineral deposit. • Geological interpretation based on geophysical natural gamma data, local geological surface mapping, drillhole lithological logging and geochemical data. • Wireframes of the stratigraphic units used to generate an empty geological model. • The overlying hardcap, hydrated zone displays higher variability and mixed populations. This will likely influence the local estimates rather than the global grade estimate for these zones.
Dimensions	• The Hercules Resource has dimensions of approximately 1, 800 m (north) by 800 m (east) and extends from surface to a maximum depth of 85m, with an

	average depth of ~50m. A hydrated layer (20m average thickness) sits over the top of the entire resource.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half a drill spacing unless sufficient evidence for its continuity. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor 8.0 software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging Neighbourhood Analysis (QKNA) undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 670400mE to 672400mE and 7656000mN to 7659200mN and elevation from 0mRL to 402mRL. • A single block model to encompass the Hercules Mineral Resource was constructed using a 10mN by 10mE by 3mRL parent block size with sub-celling to 5mE by 5mN by 1.5mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO and K_2O) estimated plus geophysical density. • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2.5 drill spacings for run 1, 4.5 drill spacings for run 2, and 6.5 drill spacings for run 3. (50x50x20 for run 1, 90x90x30 for run 2, 130x130x40 for run 3). • The minimum number of samples for run 1 ranges from 12-18, with a maximum of 48. The minimum number of samples for run 2 reduces to 10-16 (depending on domain) and 8-10 (depending on domain) for run 3. The maximums for runs 2 and 3 are also 48 samples. • A maximum of 4 samples from any one drill hole is allowed. • Block discretisation of 5,5,2 was applied. • Grade restriction was applied to some of the minor deleterious elements in some domains as a restricted search to limit the influence of extreme/outlier grades from smearing distant blocks by using a tighter search ellipsoid. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan (version 9.0) software was used to complete the block estimation. • Ordinary Kriging was used to estimate mineralised (hydrated and primary) domains, except for domain 201 which had insufficient data to perform variography or an OK estimate. Mean composite grades were assigned to

	these blocks and the classification downgraded to Inferred. • Inverse Distance (power 2) estimation was used to estimate waste domains. • Vulcan 9.0's anisotropy model method was used during estimation of mineralised domains. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit, and Change of Support.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • Downhole resistivity data and geologist's comments were used to interpret the depth of the water table. These data consistently suggest a flat lying water table of average level at 215m RL. • The vast majority of the mineralisation sits above the water table, excepting 4.9 Kt of Inferred material which lies below. The current base of pit design is well above the water table. • Most moist/wet samples are due to water injection during drilling to suppress dust. • 97% (31, 930) of samples logged as dry, 2% (695) samples logged as moist, and 1% (211) of samples logged as wet samples.
Cut-off parameters	• The criteria for mineralised material is ≥50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining is by open pit using conventional backhoe excavator methods with ore being mined in 6m benches on 3m flitches (hence the parent block z-dimension of 3m) • At the time of writing, this deposit is being mined, as this resource is an update to the previous (December 2013) resource.
Metallurgical factors or assumptions	• A comprehensive metallurgical test work program for physical properties and beneficiation was completed by SGS Lakefield Oretest Pty Ltd from 42 samples collected from all 20 diamond holes
Environmental Factors or Assumptions	• A small percentage of deeper RC holes intercepted anomalous sulphur values >0.3%. All blocks with >0.3%S lie outside the current planned pit design (her_pit-_c_df_v12.00t) and are mostly constrained within the stratigraphical units CV2 (chert/shale) and CV1 (lower-most BIF). • Waste geochemistry testing of waste rock has been completed by GCA (Graeme Campbell and Associates Pty Ltd) in October 2012. Waste rock geochemistry was defined as NAF (Non-Acid Forming).
Bulk density	• Geophysical density measurements have been recorded downhole from the majority of drillholes (1, 120 out of 1, 294 holes). Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. • Geophysical density is recorded at 10cm increments downhole, which is stored in the acQuire^{tm} drillhole database. • The density measurements are filtered and validated prior to use to remove anomalous recordings. • Geophysical density is estimated into the resource model. Un-estimated blocks

	(that did not meet the minimum criteria for an estimate to be made) were assigned the mean grade of that domain's composited geophysical density data. • 18 out of 20 diamond holes were measure for dry bulk density. A comparison was conducted between dry bulk density and downhole geophysical density to determine a regression factor which can be applied to the estimated geophysical density to account for porosity and moisture. • Downhole geophysical density collected from 5 RC and their diamond hole twins were compared to account for hole effect (hole rugosity) as RC holes typically have irregular walls compared to diamond holes and inherently produce slightly lower geophysical density measurements. As the bulk of the geophysical density measurements are collected in RC holes and then used in the estimation, the hole effect needs to be accounted for. This was included in the regression calculations applied to convert geophysical density to dry bulk density in the block model. An overall regression of 2.9% was applied to convert geophysical density to dry bulk density. • This is a bulk commodity project.
Classification	• Mineral Resources have been classified into the Inferred/Indicated categories based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model show good correlation of the input data to the estimated grades. • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry Standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade.
SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES – Refer to page 325	

ELECTRA JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA ELECTRA MINERAL RESOURCE ESTIMATE – FEBRUARY 2010	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**

Sampling techniques	• Reverse Circulation (RC) chip samples collected via riffle/cone splitter. Where sample weights were deemed insufficient, the RC reject pile was speared to boost sample weight.
	• One 2.1kg (average) sample taken for each two metre sample length and collected in pre-numbered calico sample bags.
	• 2.1kg (average) sample was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA.
	• Quality of sampling continuously monitored by field geologist during drilling.
	• To monitor the representivity of the sample:
	  o Samples collected prior to January 2011 - 2 duplicates are taken for every 100 samples (1:50).
	  o Samples collected post January 2011 - 5 duplicates are taken for every 100 samples (1:20).
	• Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.

Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 20mN by 20mE. • Total of 90 RC holes used for the resource estimate for a total of 3,830m.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the riffle/cone splitter. This is recorded as good, fair, poor or no sample. • 343 Good (19.7%), 1,063 Fair (61.1%), 334 Poor (19.2%). • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No twin RC or diamond drillholes have been completed for the purpose of assessing sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling. Twins were drilled but not for this purpose.
Logging	• Logging of every 2m interval (Atlas procedure) corresponding with 2m sampled interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. Samples collected prior to Jan 2011 were logged every 1m. Changes to the logging intervals are attributed to a revision of the Atlas logging procedure in January 2011. • 89 RC drill holes were logged in full, totaling 3,480m of drilling. Lithology, mineralisation, weathering and colour were recorded. Holes drilled after or during January 2011 were also logged for chip percent. • No downhole geophysical density data was collected at Electra.
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • ~2.1kg (average) RC chip samples are collected via riffle/cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible.

	• The sample sizes are considered to be appropriate to correctly represent the mineralisation at Electra based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** • Sample dried at 105°C for 12-24 hrs • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality Control Procedures:** • Samples collected prior to January 2011 had 2 duplicated samples every 100 samples (1:50). Due to a revision of the logging procedure, samples collected post January 2011 had 5 duplicates taken every 100 samples (1:20). • Certified Reference Material assay standards inserted: 5 in every 100 samples (1:20). • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality of assay data and laboratory tests	• Samples submitted to Ultratrace (1,331 samples) and ALS (409 samples) laboratories in Perth and assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105OC in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, fused at 1100OC for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 80% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice.
Verification of sampling and assaying	• The Competent Person has visited site and inspected the sampling process in the field and also inspected the Laboratory. • Primary data are captured on field Toughbook laptops using acQuire software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• All 90 RC collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network.

	Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • Downhole gyroscopic surveys are attempted on all RC holes by ABIMS if the holes were angled and exceeded 40m depth. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool. Stated accuracy is +/-1o in azimuth and +/-0.1o in inclination. 11 holes had downhole surveys completed. • The grid system for Electra is MGA_GDA94 Zone 50. • Drill collars were validated against the latest high resolution topographic data.
Data spacing and distribution	• Drill spacing at 20mE x 20mN. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred/Indicated/Measured resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• The majority of drill holes were drilled vertically with a smaller proportion of holes drilled angled therefore intercepts of bedding and mineralisation thickness represents apparent thickness.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Electra is located across mining lease M45/923 and M45/383. The lease is owned by Global Advanced Metals (GAM) and Atlas has purchased the iron ore rights. • The tenement sits within the Kariyarra People Native Title Claim (WC1999/003).
Exploration done by other parties	• All exploration activities were undertaken under Atlas supervision.
Geology	• Wodgina is regionally located in an Archean Greenstone belt, wedged between granitic batholiths. The Greenstone belt is dominated by mafic volcano-sediments with lesser epiclastic sediments, cherts and BIFs. The BIF and chert sequences have been assigned to the Cleaverville formation.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore

	Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Geological mapping completed by two consultants. John Crossing (Compass Geological Pty Ltd) completed mapping in 2008 at a scale of 1:5000 with more detailed mapping at 1:2500 where required. • David Archer was contracted to map the Wodgina region in 2009 at a scale of 1:2500.
Further work	• Diamond drill holes to enable accurate analysis of dry bulk density. • Diamond and RC twin holes will be necessary to validate the current RC results and quantify any potential sample bias. • Improvement in geological knowledge through surface and in-pit mapping. Currently there is a lack of detailed understanding of the geology at the Electra resource.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Lithology logging codes are standardised across Atlas. The logs are entered digitally in the field into acQuire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acQuire software. • Data for the Dragon Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this resource) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained. • Site visits have been carried out at Wodgina to inspect the deposit area, RC logging and sampling processes. Discussions were held with site personnel regarding procedures.
Geological interpretation	• No geological model has been incorporated into the resource. • The overlying hardcap, hydrated zone displays higher variability and mixed populations. This will likely influence the local estimates rather than the global grade estimate for this zone.
Dimensions	• The dimensions of the resource are unknown as the resource estimate was produced using Surpac software. At the time of writing, Atlas is using Vulcan software. • At Electra, four separate zones of iron mineralisation have been modeled (split into an eastern and western area). In each area there is an upper and lower

	zone which is defined by a significant increase in MnO in the lower zone. The upper zone appears reasonably hydrated with elevated levels of Al_2O3, TiO_2, CaO, MgO and Na_2O compared with the lower zones.
Estimation and modelling techniques	• Mineralisation was domained according type (hydrated mineralisation). Drillhole sample data was flagged using domain codes generated from three dimensional mineralisation polygons. • Interpretation does not extend mineralisation more than half drill spacing. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging Neighbourhood Analysis (QKNA) undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 672900mE to 673300mE and 7654800mN to 7655200mN and elevation from 200mRL to 600mRL. • A single block model to encompass the Electra Mineral Resource was constructed using a 10mN by 10mE by 5mRL parent block size with sub-celling to 5mE by 5mN by 2.5mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) into geozone 501-504. Inverse Distance (power 2) estimation was used to estimate waste domains. • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • A total of 3 runs were used to estimate mineralised geozones 501-504. The search distance was increased by 1.5x for each subsequent estimation pass in mineralisation and 2x in waste. • The minimum number of samples for run 1 was 12. The minimum number of samples for run 2 was reduced to 8, and 2 for run 3. • A maximum of 4 samples from any one drillhole is allowed. • Block discretisation of 5,5,2 was applied. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Surpac software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • The entire resource sits above the water table. • All samples collected were dry.

Cut-off parameters	• The criteria for mineralised material is ≥50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and un-mineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining is by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches.
Metallurgical factors or assumptions	• No diamond holes have been completed and no specific metallurgical testing has been perfomred. • Metallurgical understanding applied from nearby and geologicaly similar deposits at Wodgina.
Environmental factors or assumptions	• No environmental factors or assumptions are known at this time.
Bulk density	• No downhole geophysical density was collected at Electra. • A global density of 2.9t/m3 was assigned to mineralised geozones (501-504). • This is a bulk commodity project.
Classification	• Mineral Resources have been classified into the Inferred/Indicated/Measured categories based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The mineral resource estimation appropriately reflects the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry Standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade.

HORNET JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA HORNET MINERAL RESOURCE ESTIMATE – APRIL 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Samples taken using cone (92.9%) and riffle splitting (6.8%), direct spear/scoop sampling (0.1%) and not reported (0.2%). • Samples collected directly from drill spoil (spear/scoop) excluded from estimate. • 2.1Kg (average) of sample collected at 2m intervals into pre-numbered calico bags. • To monitor the representivity of the sample, 5 duplicates are taken for every 100 samples (1:20). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• 91 reverse circulation drillholes with a 140mm diameter face sampling hammer used in estimate (total of 5,926 m depth). • Nominal drill spacing of 40mN by 40mE. • No cored (DDH) samples retrieved from Hornet.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 2348 good (79.1%), 438 fair (14.8%), 178 poor (6%), 4 (0.1%) not reported. • Sample moisture content, either injected (related to drilling) or in-situ is recorded at the rig site by the geologist. • 1388 dry (46.8%), 8 moist (0.3%), 1357 moist injected (45.7%), 210 wet injected (7.1%), 1 wet (0.03%), 4 not reported (0.1%). • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No twin RC or diamond drillholes have been completed to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling.
Logging	• All 91 RC samples logged for lithology and sample condition. • Logging at 2.0m intervals (Atlas Iron procedure) corresponding to sample interval. Geophysical data collated from 48 of 74 RC holes (gamma, density, magnetic susceptibility & resistivity).
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • ~2.1kg (average) RC chip samples are collected via riffle/cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at Hornet based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** • Sample dried at 105°C for 12-24 hrs

	• Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality Control Procedures:** • Samples collected prior to January 2011 had 2 duplicated samples every 100 samples (1:50). Due to a revision of the logging procedure, samples collected post January 2011 had 5 duplicates taken every 100 samples (1:20). • Certified Reference Material assay standards inserted: 5 in every 100 samples (1:20). • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality control of assay data and laboratory tests	• Samples submitted to SGS (2258 samples) and SGS (698 samples) laboratories in Perth and assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Certified Reference Material assay standards having a good range of values were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice.
Verification of sampling and assaying	• The Competent Person has visited site and inspected the sampling process in the field and also inspected the Laboratory. • Primary data are captured on field Toughbook laptops using acQuire software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• 72 Collars were surveyed using differential DGPS_RTK. Two collars surveyed using GPS only these could not be located following drill site rehabilitation. • Downhole gyroscopic surveys are attempted on all RC holes drilled in 2012 by ABIMS. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool. Stated accuracy is +/-1^{o} in azimuth and +/-0.1^{o} in inclination. 45 holes had downhole surveys completed, 5 holes were not able to be surveyed due to collapse. • QC of the gyro tool involved field calibration using a test stand and also a calibration hole.

Reserve and Resource Update

	• Topography surface was used to validate collar points.
Data spacing and distribution	• Drill spacing on an approximate 40m by 40m grid. Some collar positions relocated due to topographical restrictions to site access. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification applied under the 2012 JORC code.
Orientation of data in relation to geological structure	• Stratigraphy trending approximately to 015° (north-south) with majority of drillholes drilled to the west (270°) at -60°.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a dispatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas AcQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas AcQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate (Hornet Resource Estimation Checklist in Appendix 3).
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Hornet is located across mining lease M45/923. The lease is owned by Global Advanced Metals (GAM) and Atlas has purchased the iron ore rights. • The tenement sits within the Kariyarra People Native Title Claim (WC1999/003).
Exploration done by other parties	• Previous exploration for copper, base metals and gold by Sipa Resources 1995 – 1996 and 2000 – 2001. Various other resource companies have explored in the Wodgina region prior to Sipa Resources.
Geology	• Strongly weathered sequence of Archaean sediments including, sandstone, quartzite, siltstone chert and banded Iron Formation (BIF). • Localised in-situ goethite and hematite enrichment zones of BIF units. Hydrated and chemically variable hard cap developed over primary mineralisation.
Drillhole infomration	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no

	exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• No other substantive exploration has been performed to Atlas' knowledge.
Recommendations for further work	• Infill RC drilling to a 20 × 20m spaced pattern. • Collection of orientated cored samples to obtain metallurgical, physical and geotechnical measurements and to add support to the geological interpretation.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Lithology logging codes are standardised across Atlas. The logs are entered digitally in the field into AcQuire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas AcQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Hornet resource is stored in the centralized Atlas acquire drillhole database.
Site visits	• Steven Warner (Competent Person for this resource) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained. • Site visits have been carried out at Wodgina to inspect the deposit area, RC logging and sampling processes. Discussions were held with site personnel regarding procedures.
Geological interpretation	• Geological interpretation based on geophysical natural gamma data, local geological mapping and drillhole geochemical data. • Wireframes and surfaces representing different stratigraphic units created using geological mapping provided by Archer (2009), geophysical and geochemical data. • Mineralisation domained into primary and hydrated types based on drillhole geochemistry. • Drill Coverage to 40m × 40m. • Mineralisation wireframe based on $\geq$50% Fe and <15% SiO_2 cut-off grade delineating ore/waste boundary.
Dimensions	• The Hornet Mineral Resource has dimensions of approximately 540m (north) by 390m (east) and extends from surface to a maximum depth of 70m, with an average depth of 40m. A thin, 15m thick hydrated layer sits over the top of the entire resource.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half a drill spacing (unless in areas where surface mapping has identified a mineralised/non-mineralised contact in an area without drilling data). • Univariate statistical analysis and variogram modeling completed with Snowden Supervisor software and used to define the spatial continuity of all elements

	within the mineralised domains. • Quantitative Kriging neighborhood analysis (QKNA) undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 0mE to 1160mE and 0mN to 860mN and elevation from 0mRL to 400mRL. • A single block model to encompass the Hornet Mineral Resource was constructed using a 20mN by 20mE by 5mRL parent block size with sub-celling to 2.5mE by 2.5mN by 1.25mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) estimated plus geophysical density and chip percentage where possible. • Search directions and ranges determined from variogram modeling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacing's for run 1, 3 drill spacing's for run 2, and 5 drill spacing's for run 3. • A minimum of 12 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 for run 2 and 8 for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5 × 5 × 2 was applied. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • Inverse Distance (power 2) estimation was run on waste material. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit.
Moisture	• Water table depth coded into the resource at 210mRL based on drillhole dip data from the nearby Hercules deposit.
Cut-off parameters	• The criteria for mineralised material is ≥50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and non mineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No other mining factos or assumption are made for this resource.
Metallurgical factors or assumptions	• No metallurgical testwork has been completed for this deposit and no factors or assumptions are made at this time.
Environmental factors or	• Mineral fibres were identified in sample spoil of WDRC2470 later identified as

assumptions	amosite a potentially harmful fibrous mineral. The occurrence of the amosite had been interpreted to exist in Warrawoona mafics and sediments. A fibre risk has been assigned to the Warrawoona formation in the Hornet resource.
Bulk density	• Cored samples not collected from Hornet to obtain dimensional (density) measurements. • Dry bulk density correction applied to geophysical density based on dimensional data obtained from nearby Hercules deposit. • This is a bulk commodity project.
Classification	• Mineral Resources have been classified as Measured, Indicated and Inferred category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade.

WODGINA JORC 2012 TABLE 1 – SECTION 4

SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES	
Mineral Resource estimate for conversion to Ore Reserves	• The Mineral Resource estimates used are based upon four stratigraphically domained and ordinary kriged Mineral Resource estimates undertaken by Atlas Iron's Resource Estimation department as outlined in Section 1-3. • The Mineral Resources used for conversion to Ore Reserves are: - Avro - Dragon - Constellation - Hercules. • A technical description of the Mineral Resource is presented in the preceding sections to this table.The Mineral Resource estimate reported is inclusive of the Ore Reserves.
Site visits	• The Competent Person for this Ore Reserve Statement is a full time employee of Atlas Iron Ltd and visit the site on a regular basis.
Study status	• Wodgina project is an operating mine since June 2010. • A Life of Mine Plan for Wodgina project is completed in June 2014 to reflect new information (Mineral Resource estimates) and operating assumptions (costs and metal prices). • The Life of Mine Plan is used as basis for reporting Ore Reserves in accordance with JORC (2012) guidelines.
Cut-off parameters	• The cut-off grade for Avro, Dragon and Constellation deposits is 54.5% Fe and the cut-off grade for Hercules deposit is 54.0% Fe based on target product grades.
Mining factors or assumptions	• The method used to convert Mineral Resources to Ore Reserves is based upon pit optimisation to identify the economic shell within which a design process is applied to achieve a practical mine design. • The assumed iron ore price and exchange rates used in the pit optimisation are derived from the average of three external forecasting analysts. For reasons of commercial sensitivity the assumed iron ore price and exchange rates are not disclosed. • The mining method is conventional drill and blast and load and haul with an excavator and large open pit mining equipment. This is considered to be appropriate for the style of mineralisation and is applied to similar operations in the area. • The geotechnical parameters are based on the recommendations from a geotechnical study with 10m batter height, 60^0-70^0 batter angles and 5m wide berms at 10m intervals incorporated in the pit deisgns excepting Hercules. Hercules has the same batter angle, but 12m batter height and 6m wide berms. • A 10% gradient and 23m width (including safety windrow) is used for in-pit pit ramps. • A 25m minimum mining width is applied on all benches except good bye cuts. • Allowance for dilution and ore loss has been applied using block model regularisation. Block model regularisation has been determined to approximate a 1.5m dilution skin analysis. • Inferred Mineral Resource is treated as waste in the pit optimisation and reserves process.
Metallurgical factors or assumptions	• Ore is processed by a standard dry crushing and screening process. This is considered to be appropriate for the type of mineralisation and is well tested technology in other Atlas operations. Operations have been continuing since 2010 and the crusher performance is well established and reflected in ore reserve

	parameters. • Metallurgical samples are domained by mineralisation type, hydrated, goethitic or hematitic, except for Hercules which is domained to mineralisation boundaries. • 100% process recovery is assumed for all materials as is the case for all other Atlas operations using dry crush and screen process. • Within the life of mine schedule for Wodgina, the element grades are forecast to stay within the contracted specifications.
Environmental	• Mining approvals, Native Vegetation Clearing Permit and License to operate have been granted for Wodgina. • All necessary environmental approvals have been obtained under the Environment Protection and Biodiversity Conservation Act 1999, Environmental Protection Act 1986. • The application and submission relating to these permissions include an assessment of waste rock characterisation and information relating to environment baseline surveys and impact assessment. • A consultant report on Soil and Waste material characterisation has recognized the Wodgina project mine waste and low grade ore as non-acid forming, however elevated levels of arsenic and boron are noted throughout the Constellation deposit. • A waste management strategy for contaminated Constellation material has been approved by the regulatory authorities. • No tailings will be produced by the Wodgina project.
Infrastructure	• In February 2008, Atlas entered into an infrastructure sharing agreement with Global Advanced Metals Wodgina Pty Ltd (GAM), allowing Atlas access to the GAM mine infrastructure and iron ore rights over their tenements. • Existing onsite infrastructure including accommodation village, mine operations centre, main site access road, pit access ramps, ROM pad and crusher area, stockpile areas, product stockpiling and load out yard, waste dumps, weighbridge area, contractors laydown yard, power station, workshops and explosives storage support the current operation.
Costs	• Wodgina has been an operating mine since June 2010 and the majority of the capital has already been spent. Remaining capital is predominantly for mine closure, pit access and pre-stripping. Pit access and pre-stripping was priced as part of the contract tender process. Mine closure cost estimates are based on a consultant closure plan. • The production rates and operating costs have been applied from awarded contracts and tendered rates. • Operating costs include allowances for mining, processing, administration, haulage to the port and shipping. Of these, the mining, processing and haulage costs are supplied by competitively tendered contracts and port and shipping costs are developed from existing contracts. • The application of product quality penalties are based on historic and current prices for existing customers. • Allowances have been made for royalties payable including Government and private parties.
Revenue factors	• Forecast sales prices and exchange rates are based on the average of three external forecasting analysts. For reasons of commercial sensitivity the assumed iron ore price and exchange rates are not disclosed. • In generating the sales price applicable to the Atlas product, the sales price is discounted by: - Fe% grade of the Atlas product

	- A discount for the quantity of deleterious elements for the normal Atlas product - Government and other stakeholder royalties - Shipping costs. • Within the life of mine schedule for Wodgina, the element grades of ore to be sold are forecast to stay within the contracted specifications.
Market assessment	• Established external forecast analysts have provided guidance to assess the long term market and sales of Iron Ore. • Atlas Iron has sales agreements in place with existing customers.
Economic	• The financial model indicates that Wodgina will produce a positive NPV at the required discount rate of 11.0% applied to nominal post tax cash flows. • Sensitivity analysis indicates that the project's economics remain secure within typical sensitivity ranges of operating cost, iron ore price and foreign exchange rates.
Social	• Atlas Operations at Wodgina commenced in June 2010. • The Wodgina project lies within the Native Title claim of the Kariyarra people.A State Deed was signed by Atlas and the Kariyarra Native Title Group.
Other	• There is no identified material naturally occurring risks that could impact on the project or Ore Reserves. • In February 2008, Atlas entered into an infrastructure sharing agreement with Global Advanced Metals Wodgina Pty Ltd (GAM), allowing Atlas access to the GAM mine infrastructure and iron ore rights over their tenements. • All material legal agreements, marketing arrangements and government approvals are in place and active for the existing operation.
Classification	• Ore Reserves are based upon material classified as either Measured or Indicated from the Ore Resource estimation modelling. • Within the pit design, Indicated resource has been reported as Probable Ore Reserves and 2.3 Mt of Measured Mineral Resource has been reported as Probable Ore Reserves. • The Ore Reserve classification results appropriately reflect the Competent Persons view of the deposits.
Audits or reviews	• A July 2014 audit by external consultants has found that the procedures used within Atlas to prepare the Ore Reserve estimates are in line with industry standards.
Discussion of relative accuracy/ confidence	• The Ore Reserve has been completed to a minimum of a Feasibility study standard, with a corresponding level of confidence. • The accuracy of the estimates will be subject to regular reconciliation and ongoing monitoring and external studies.

Hickman Project

Hickman Mineral Resource Table - As at 30 June 2014 (50% Fe Cut-Off Grade)										
Location	**Resource Classification**	**Kt**	**Fe**	**SiO_2**	**Al_2O_3**	**P**	**S**	**LOI**	**CaFe***
			(%)	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**
Shoemaker	**Measured**	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	40,000	55.3	6.8	4.5	0.17	0.01	8.5	60.4
Hale-Bopp	**Measured**	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	11,000	55.4	8.3	5.3	0.15	0.02	6.4	59.2
Halley	**Measured**	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	10,000	56.1	7.1	5.6	0.16	0.02	6.4	59.9
Levy	**Measured**	0.0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	9,000	55.2	8.2	5.1	0.12	0.03	7.1	59.4
Sub-Total	**Measured**	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	70,000	55.4	7.3	4.8	0.16	0.01	7.7	60.0
Total		**70,000**	**55.4**	**7.3**	**4.8**	**0.16**	**0.01**	**7.7**	**60.0**

Tonnes are rounded according to resource classification; grades are carried through unaffected by rounding and may result in small discrepancies.

*Calculated calcined Fe grade where CaFe=(Fe*100)/(100-LOI)

Hickman JORC 2012 for Mineral Resources summary

Geology and Geological Interpretation

The Hickman Project comprises four deposits, Halley, Levy, Hale-Bopp and Shoemaker. All deposits within the Hickman Project area are 100% owned by Atlas.

The Hickman tenement is located at the eastern end of the Hamersley Province, Western Australia. The stratigraphy is predominantly of the Boolgeeda Formation and the Wittenoom Formation.

The tenements cover a volcano-sedimentary sequence belonging to the Hamersley Group of the Proterozoic Hamersley Basin. These volcano-sediments are folded into a series of long, narrow northwest trending folds. On the three smaller tenements ferruginous fine sediments of the Boolgeeda Formation dominate, and Woogarra Formation rhyolitic volcanics are exposed in the core of anticlines.

Over these tenements the folding is relatively open and dips are generally less than 45 degrees. To the southwest of the tenements a larger anticline exposes the underlying Weeli Wolli and Brockman Iron Formation in its core. These were not mapped.

Northeast of these tenements and along the south-western margins of E47/2052 banded cherts and dolomites ascribed to the Wittenoom Formation are exposed as isolated hills surrounded by low lying areas of Quaternary cover. The presence of Wittenoom Group sediments in close proximity to Boolgeeda FM sediments suggest that a major fault separates them, obscured by Quaternary overburden.

The folds are disrupted by several northwest to WNW trending steep reverse faults, and by later cross-cutting northeast trending structures with predominantly sinistral (left lateral) displacement. Several dolerite dykes have intruded along the NE trending faults and fractures, and numerous quartz veins follow both structural trends.

The Boolgeeda Formation sediments comformably overlie the Woongarra rhyolite. The basal portion of the formation typically consists of a layer of jasper and jaspilite with occasional interbeds of ignimbritic tuff and banded chert. The jasper interfingers with overlying ferruginous shales and can occur as interbeds in the shale up to 100m above the base of the sequence. If not for the presence of the thick rhyolite at the top of the Woongarra Fm, the basal contact would appear gradational. Sometimes ferruginous shale directly overlies the rhyolite and when this occurs there are usually abundant disharmonic and often rootless isoclinal folds (slump structures) present. These are thought to have resulted from the gravity sliding of unconsolidated Boolgeeda sediments along the sloping surface of the hard rhyolite. These folds are absent from the tuffs and jaspilites. The tuff varies from lithic to crystal lithic tuff and often displays eutaxitic (or fiamme) texture indicative of the flattening of vesicles or pumiceous clasts in an ignimbritic flow. It typically occurs as thin interbeds with a maximum thickness of a few metres.

The Boolgeeda Formation can be sub-divided into 11 units (BG1-BG11) as previously defined by Atlas Iron. Iron mineralisation at Hickman consists of hematite-martite and goethite ores. The high grade mineralisation is generally limited to the upper (BG9) and lower (BG4) BIF units with the thinner middle (BF6) BIF unit containing sub-economic DSO grade material.

Many of the areas of enrichment and associated canga form clusters within the Boolgeeda Formation that parallel the Woongarra volcanics contact. This distribution suggest that palaeotopography and iron enrichment may have originally been controlled to some extent by the anticlinal folds, perhaps with the anticlines being relatively high ground on the flanks of which the canga accumulated as areas of iron enrichment in the Boolgeeda Formation were progressively eroded. Also it seems that the contact provided a more permeable zone than the fine sediments of the Boolgeeda Formation.

The Hickman geological models were generated using the combination of the drillhole logging, geochemistry, downhole geophysical data and regional geological mapping. A stratigraphic model of the lithology and structure was first constructed to provide a geological framework in which to interpret the mineralisation. The mineralisation was interpreted into an upper zone of depletion and underlying hydrated and primary mineralised zones. Small, discrete discontinuous pods of mineralisation were modelled separately.

The stratigraphic model comprises a sequence of banded iron formation, cherts and shales (belonging to the Boolgeeda Formation), whereas the mineralisation model comprises of depleted, hydrated and primary mineralisation zones. The mineralisation zones are modelled generally using greater than 50% Fe and less than 15% SiO_2 cut-off to define ore from waste. The combination of both stratigraphic model and mineralisation models are used for geozone definitions.

Drilling techniques

Exploration drilling over the various Hickman prospects occurred between 2010 and 2012. To date a total of 181 drillholes have been completed at the Hickman project totalling 16,856m of drilling. Drilling of the Halley, Levy, Hale-Bopp and Shoemaker resources has been by a 140mm Reverse Circulation (RC) face sampling hammer and all samples are split by a cone splitter.

Drill spacing at Halley, Levy & Hale-Bopp is approximately 800mE x 40mN with local areas of 200mE x 50mN on a rotated grid. Shoemaker drill spacing is approximately 200mE x 50mN on a rotated grid.

The geologist sieves and logs every 2m interval in alignment with the sampling interval. Logging encompasses the main material types, hardness, lithologies, colour and percentage of chips (approximate lump/fine proportion). The logging is recorded in the field electronically into acQuire field logging data entry objects and on completion the electronic files are sent to Perth and loaded into the centralised acQuire drillhole database which is managed by a full time Database Administrator.

Licenced surveyor MHR Surveyors completes a collar pickup on all available drill collars using a Trimble R8 Real Time Kinematic Differential GPS (DGPS). The DGPS gives an accuracy of +/- 0.05 m for Easting and northing location and +/- 0.1 m for the RL (height above sea level).

All available holes are gyroscopically surveyed downhole by ABIMS Pty Ltd utilising a North seeking multi-shot tool which measures azimuth to an accuracy of +/- 0.2° and dip to an accuracy of +/-0.1°. Downhole geophysical measurements are also collected at the same time and comprise Density/Calliper, Magsus and Natural Gamma recordings taken at 10cm intervals downhole.

Sampling and sub-sampling

All RC chip samples were collected at 2 m sampling intervals through a cone splitter. The samples are deemed to be of acceptable quality. Sample weights are also recorded to monitor the ongoing representativeness of the sample split. The weights are stored in the acquire database.

The RC sampling methodology prior to January 2011, involved collection of samples drilled over 2m intervals using a riffle/cone splitter. Samples were directed into a calico bag with the overflow collected into green plastic bags. The calico bags were pre-numbered, with every 25th and 75th sample a field duplicate. The duplicate sample is collected in real time splitting the two sub samples from the riffle/cone splitters. Standards were inserted every 40th and 80th sample, while blanks were inserted every 41st and 81st sample.

After January 2011, 2m sample intervals were collected using a cone splitter. Samples were directed into a calico bag with the overflow collected into green plastic bags. The calico bags were pre-numbered, with every sample number ending in 00, 20, 40, 60, 80, collected as a field duplicate. The duplicate sample was collected in real time by splitting the two sub samples from the cone splitter. Standards were inserted every 1st, 21st, 41st, 61st and 81st sample.

The samples were all kept dry (where possible) and are of acceptable quality. Sample weights are also recorded to monitor the ongoing representativeness of the sample split. The weights are stored in the acQuire database.

All drillhole information is stored in the Atlas acQuire drillhole database. The database is managed by a full-time Database Administrator. The database undergoes regular audits and checks to maintain its validity and overall JORC compliancy.

Sample analysis methods

Samples collected by Atlas were sent to Ultratrace and SGS laboratories in Perth for analysis of the extended iron ore suite of elements. This consists of XRF analysis for Fe, SiO_2, Al_2O_3, P, CaO, K_2O, MgO, MnO, S, TiO_2, Na_2O and a thermo gravimetric measurement for loss on ignition (LOI) at 1000^oC. The sample preparation of RC samples involved weighing, oven drying, pulverization of the entire sample to a grind size of 90% passing 75 micron. A pulp sub-sample was collected and formed into a fused bead for XRF determinations on the iron ore suite of elements and a LOI by thermogravimetric techniques.

To ensure quality assurance and control (QAQC) of the sampling and assaying procedure, Atlas submitted field duplicates and standards to the laboratory for analysis. For samples collected prior to January 2011, the duplicates and standards are inserted at predefined intervals at a rate of 2% for standards and 2% for duplicates for an overall insertion rate of 4%. Post January 2011, the duplicates and standards are inserted at predefined intervals at a rate of 5% for standards and 5% for duplicates for an overall insertion rate of 10%. The laboratory also inserted its own internal standards and pulp repeat analyses at predefined intervals. Sample collection procedures and QAQC protocols employed by Atlas are commensurate with standard industry practices.

The QAQC data for the Hickman project was reviewed prior to commencing the resource estimates for Hickman and were found to be of reasonable precision and analytical accuracy and is deemed to be acceptable for resource estimation purposes and JORC compliancy.

Estimation methodology

The drillhole data was composited prior to running the estimation process using a 2m sample interval to minimise any sample bias due to sample length. The compositing was run within the attribute fields to ensure no composite intervals crossed any lithological contacts or grade boundaries.

Variograms were generated to assess the grade continuity of the various elements and as inputs to the kriging algorithm used to interpolate grades. Snowden Supervisor software was used to generate and model variograms and conduct statistical analysis.

Variographic analysis was undertaken for all mineralised geozones for the Shoemaker resources. The elements that were analysed include all 12 elements, i.e. Fe, SiO_2, Al_2O_3, P, LOI, S, MnO, MgO, K_2O, TiO_2, CaO, Na_2O and geophysical density.

To generate the best experimental variograms the data was first transformed to a normal scores distribution where upon the variogram was modelled and on completion a back transform was applied. The variogram ranges and directions of continuity are consistent with the geological understanding and are considered appropriate.

Block models were constructed in Vulcan software (Maptek) and constrained by surfaces and solids. The parent block size was selected based on half of drillhole spacing and the model was orientated (rotated) to represent the strike of mineralisation and prevailing drilling grid. The sub-block size was selected to more accurately define the mineralised volume.

The volume block model was created using the wireframes of the stratigraphy, mineralisation and topography. A unique geozone code was assigned based on the combination of stratigraphy and mineralisation. The geozone field is used to distinguish the main mineralisation types and mineralised areas.

Atlas estimated Fe, SiO_2, Al_2O_3, P, LOI, CaO, K_2O, MgO, MnO, S, TiO_2 and Na_2O grades using Ordinary Kriging for Shoemaker deposit for the mineralised horizons. Waste horizons were estimated by Inverse Distance (power 2) methods.

For Halley, Levy and Hale-Bopp, Atlas estimated Fe, SiO_2, Al_2O_3, P, LOI, CaO, K_2O, MgO, MnO, S, TiO_2 and Na_2O grades using Inverse distance (power 2) method for mineralised and waste domains.

The preferred estimation parameters were chosen based on neighbourhood analysis, whereby several estimation parameters were tested to optimise the estimation search. This was represented by best kriging efficiency, slope regression values and number of blocks filled. Search ellipses were orientated based on the geometry of the mineralisation with the search ellipses increased by two fold and three fold for second and third search passes.

- Geophysical density measurements have been recorded downhole from the majority of drillholes. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. Geophysical density is recorded at 10cm increments downhole. The density measurements are filtered and validated prior to use to remove anomalous recordings.

The in-situ density (inclusive of moisture and porosity) was estimated into the model using geophysical density measurements collected at 10 cm intervals down hole and composted to 2m to match the sample length. All available drill holes had geophysical measurements collected and a sufficiently good spatial coverage of data across each deposit was achieved. Following compositing of the data, variograms were modelled and geophysical density was estimated into the model utilising ordinary kriging techniques.

No diamond drill holes have been drilled at the Hickman deposits to enable density regression analysis to produce a regression factor that can be applied to the estimated geophysical density to account for moisture and porosity. This is a bulk commodity project.

The estimates were validated using:

- A visual comparison of block grade estimates and the drillhole data.
- A global comparison of the average composite grades and estimated grades.
- Moving window averages comparing the mean block grades to the composites.
- Histogram comparison of the original composite grades and the block estimated grades.
- Assessment of correlation coefficients from the input sample data and estimated block grades.
- Total assay validation check to ensure closure (sum of elements in each block adds to 100% +/- 2%).

The conclusions from the model validation work include:

- Visual comparison of the model grades and the corresponding drillhole grades shows a good correlation.
- A comparison of the global drillhole mean grades and with the mean grades of the block model estimate (for each domain) shows that the block model mean grades are typically within 5-10% of the drilhole means which is a good outcome with the exception of poorly sampled regions.
- The trend plot grades show a good correlation between the block model grades compared with the drillhole grades.
- Total assay validation showed that the blocks maintained closure generally between 98% and 102% for all mineralised domains.
- Assessment of the histograms and correlation coefficients showed that the relationship between elements within the input sample data has been maintained in the block grades estimates and the grade distribution has been maintained in the estimate with an acceptable level of smoothing.

Resource Classification

Mineral Resources have been classified into the inferred category based on drillhole spacing, nature and quality of the drilling and sampling methods, geological understanding and confidence, grade continuity, QAQC analysis, confidence in the estimate of the mineralised volume, results of the model validation and lack of metallurgical test work.

Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. The results of the validation of the block model show good correlation of the input data to the estimated grades.

The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit. Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. The statement relates to global estimates of tonnes and grade.

Material has been classified as Inferred for all Hickman resources due to the current wide spaced drilling (200mE x 50mN or greater). Mineralisation and geology demonstrate good continuity and geological understanding is high.

Reserve and Resource Update

Lack of diamond core to produce density information adds some uncertainty to the tonnage calculation and Metallurgical characteristics are currently poorly understood which add risk to the project.

Cut-Off Grade

The criteria for defining mineralised material at Hickman is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary. These cut-off grades were used to separate mineralised material from waste. Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for an assumed open pit mining method and processing methodology to produce material suitable to be blended with Atlas product from other locations. This cut-off grade methodology is used consistently for reporting of all Mineral Resources at Hickman. The tabulated resources are reported using a 50% Fe cut-off grade on a block by block basis.

Mining and Metallurgical methods and parameters and other modifying factors

The Hickman Project is currently at Inferred Classification and is not under any level of study as such no determination of mining and processing methods has been made. It is currently assumed that a conventional open pit mining methodology, similar to other Atlas projects, with selective extraction of ore material using a backhoe configured excavator.

Boolgeeda formation mineralisation typically features relatively high Alumina and Phosphorous levels which on its own could prove difficult to achive a suitable product specification. Based on the current Hickman grade specifications and the relatively small volumes presented it felt that it could be accommodated within the Atlas product specification via blending with other Atlas material. Further metallurgical test work is still to be performed to determine if wet screen/ de-slime technology could reduce the alumina and phosphorous content to more favourable levels with acceptable recoveries.

Hickman Project JORC 2012 Table 1 Assessment Criteria

HALLEY, LEVY AND HALE-BOPP RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA (HALLEY, LEVY AND HALE-BOPP COMBINED) MINERAL RESOURCE ESTIMATE – NOVEMBER 2011	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• RC sampling methodology involved the collection of samples drilled over 2m intervals using cone splitter. • 2.5kg sample (average) was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 2 duplicates are taken for every 100 samples (1:50) for samples collected prior to January 2011. • Post January 2011, duplicates were 5 duplicates were collected for every 100 samples (1:20). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 80m by 40m and 200m by 50m on a rotated grid. • RC holes (97 holes for 8,242m) drilled in Halley, Levy, Hale-Bopp deposits – Used in estimate. • No diamond holes have been completed to date.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the riffle/cone splitter. This is recorded as good, fair, poor or no sample. • 74% Good and dry. • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No comparison between twin RC or diamond drillholes was conducted to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling.
Logging	• Prior to January 2011, geological logging was completed for 1m interval according to Atlas procedure. • Post January 2011, geological logging was completed for 2m interval to coincide with sample interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • 4,121 RC samples were logged. • Geophysical data collected from 79 of 97 RC holes (gamma, density, magsus and resistivity).
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • ~2.5kg RC chip samples are collected via cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at Hickman based on the style of mineralisation

	(massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** • Sample dried at 105°C for 12-24 hrs • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality Control Procedures:** • Duplicated sample (prior to January 2011): 2 every 100 samples (1:50). • Duplicate samples (post January 2011): 5 every 100 samples (1:20). • Certified Reference Material assay standards inserted: o 2 in every 100 samples (1:50) prior to January 2011. o 5 in every 100 samples (1:20) post January 2011. • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality of assay data and laboratory tests	• All samples submitted to Ultratrace in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. • The Competent Person has visited site and inspected the sampling process in the field and also inspected the Laboratory. • Primary data are captured on field Toughbook laptops using acQuire^{tm} software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• All 97 RC collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates.

Reserve and Resource Update

	• Downhole gyroscopic surveys were attempted on all RC. A total of 79 of 97 holes had downhole gyro survey data. • The grid system for Hickman is MGA_GDA94 Zone 50. • Topographic data was souced from the latest available aerial survey on a 10m resolution contours. The level of confidence in topography is poor due to the low resolution available for resource estimation purposes. The datum is GDA94 with projection MGA Zone 50.
Data spacing and distribution	• Drill spacing on an approximate 80m by 40m and 200m by 50m rotated grid. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• The Hickman resource is interpreted to be a sequence of BIFs, cherts and shales gently folded forming the Boolgeeda Iron Formation. Figure 6.1 shows the geological interpretation. • All drill holes were drilled dipping NE and as such intercepts of bedding thickness are defined as downhole widths.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• The Hickman deposits (Halley, Levy and Hale-Bopp) are located on Exploration Lease E47/2052 and E47/2053. This tenement is 100% Atlas owned. • The tenement sits within the Nyiyaparli People Native Title Claim (WC2005/006). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• All drilling activity to date has been completed by Atlas.
Geology	• The Hickman deposits (Halley, Levy and Hale-Bopp) are located at the eastern end of the Hamersley Province in Western Australia. The deposits are stratigraphically hosted within the Boolgeda Formation's BIF units.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill

	hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• All exploration activity to date has been completed by Atlas.
Further work	• Infill drilling to improve orebody knowledge and close off mineralisation at the boundaries and at depth. • Local geological and structural mapping of the deposits to aid orebody knowledge. • Diamond drill holes for twinning, calibration, structure, core density measurements and stratigraphy.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Geological logging was conducted on a 1m scale (prior to January 2011) and 2m scale (post January 2011), with intervals recorded using the standard Atlas geological log. The log is entered digitally in the field onto a Toughbook computer, and the files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• The geological interpretation is based on the geochemistry of RC holes, gamma data and regional geological mapping. The Hickman resources are interpreted to be a sequence of BIFs, cherts and shales gently folded forming the Boolgeeda Iron Formation.
Dimensions	• The Hickman Project area consist of the Halley, Levy and Hale-Bopp deposits. • Halley deposit: 780mE by 580mN with an average depth of 60m. • Levy deposit: 1070mE by 340mN with an average depth of 30m. • Hale-Bopp: 1370mE by 200mN with an average depth of 40m..
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half drill spacing.

	• Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Neighbourhood analysis was undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 773000mE to 795400mE and 7440000mN to 7450320mN and elevation from 200mRL to 600mRL. • A single block model to encompass the Halley, Levy and Hale-Bopp deposits and was constructed using a 20mN by 40mE by 5mRL parent block size with sub-celling to 20mE by 10mN by 2.5mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Inverse Distance was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) and geophysical density into blocks of the geozone 500 series. All mineralisation at Hickman is considered hydrated mineralisation. • Inverse Distance was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) and geophysical density into waste geozones (101-110). • Search directions are chosen to reflect the orientation of the orebody. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2, and 5 drill spacings for run 3. • A minimum of 12 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 8 for run 2 and 4 for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 4, 4, 2 was applied. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • 3.9% of samples were logged wet. • Water table not assigned due to lack of sufficient data. • The Hickman deposits (Halley, Levy and Hale-Bopp) sit above the water table.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears

	to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• No testwork has been completed on these resources
Environmental factors or assumptions	• There are no zones identified as sulphur risk in the Halley, levy and Hale-Bopp deposits.
Bulk density	• No diamond holes have been drilled to date to enable density regression analysis. • This is a bulk commodity project.
Classification	• Mineral Resources have been classified as Inferred category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The results of the validation of the block model shows good correlation of the input data to the estimated grades. • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade. • The confidence in this resource estimate has been deemed appropriate as a basis for conceptual long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling.

SHOEMAKER RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA SHOEMAKER MINERAL RESOURCE ESTIMATE – AUGUST 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Reverse Circulation (RC) chip samples collected via cone splitter. • One 6kg (average) sample taken for each two metre sample length and collected in pre-numbered calico sample bags. • 6kg sample was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 5 duplicates are taken for every 100 samples (1:20). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer • Nominal drill hole spacing 200mSE by 50mNE • RC holes (total of 6,836m for 65 holes) – used in estimate. • No diamond drill holes drilled
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • 3, 183 Good (93.1%), 186 Fair (5.4%), 47 Poor (1.4%) and 1 Not Recorded • No significant sample recovery issues were encountered. • No twin RC or diamond drillholes have been completed to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling.
Logging	• Logging of every 2m interval (Atlas procedure) corresponding with 2m sampled interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • 53 RC drillholes were logged in full, totalling 3,116m drilling or 1,558 RC samples were logged for lithology, mineralisation, chip percent, weathering and colour. • Geophysical data collated from 60 RC holes of a total of 65 holes (gamma, density, magsus & resistivity). Not all holes were open at depth which precluded 100% recovery of measurements from all of the drillholes.
Sub-sample techniques	**Sampling technique:** • RC Chip Samples: • ~6kg RC chip samples are collected via cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at Shoemaker based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. • RC chip samples with cone splitter • 24.7% dry, 16% moist, 23.4% moist injected, 35.7% wet, 0.1% wet injected and

	0.1% not recorded **Sample Preparation:** • Sample dried at 105°C for 12-24 hrs • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality control procedure:** • Duplicated sample: 5 every 100 samples (1:20). • Certified Reference Material assay standards inserted: 5 in every 100 samples (1:20). • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality of assay data and laboratory tests	• All samples submitted to SGS Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{0}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 0.66g sample that is dried further, fused at 110^{0}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Three RC holes were duplicate sampled completely and analysed to ensure a representative sample was obtained through the cone splitter. Results showed no discernable issues with sample representivity and all duplicate samples were within 10% of the original sample value. • Umpire laboratory campaigns with another laboratory (Ultratrace) have been carried out as independent checks of the assay results and these show good precision. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice. • Geophysical gamma density was collected by Geovista Dual Density logging tool (Cesium source, density range 1-3.5g/cc) to ascertain approximate in-situ density values, but was not estimated into the model. The density tool is calibrated every 2 weeks using a range of materials with known density and is run down a calibration hole at the commencement of, and regularly during, the collection of data.
Verification of sampling and assaying	• There are no twinned holes drilled for the Shoemaker resource to date. • Primary data are captured on field Toughbook laptops using acQuiretm software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the

	estimate, apart from resetting below detection values to half positive detection.
Location of data points	• 17 Collars were surveyed using differential DGPS_RTK, 48 collars were surveyed using GPS • Downhole gyroscopic surveys are attempted on all RC holes by ABIMS. Readings are taken at 5m intervals downhole using a SPT north seeking gyroscopic survey tool. Stated accuracy is +/-1o in azimuth and +/-0.1o in inclination. 45 holes had downhole surveys completed, 5 holes were not able to be surveyed due to collapse. • QC of the gyro tool involved field calibration using a test stand and also a calibration hole. • The grid system for Shoemaker is MGA_GDA94 Zone 50. • Aerial Topographic data collected by Outline Global Pty Ltd based on 10cm resolution RGB imagery. 5m DTM automatically derived from stereoscopic imagery. 2m vertical contour interval resolution derived from DTM.
Data spacing and distribution	• Drill spacing on an approximate 200m (SE) by 50m (NE) grid. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• The attitude of the Shoemaker resource is predominantly southerly dipping from 30-50 degrees and is drilled mostly toward NE and SW with drillholes inclined -60 degrees
Sample Security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The laboratory receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Shoemaker deposit is located within Exploration Lease E47/2054. This tenement is 100% Atlas owned. • At the time of reporting, there are no known impediments to obtaining a license to operate in the area and the tenement is in good standing
Exploration done by other parties	• No other exploration is known to have been performed other than by Atlas.
Geology	• Packages of Banded Iron Formation (BIF), shales and chert sequences • Mineralisation is hosted by BIF with goethite enrichment zones • Two different style of mineralisation are identified, i.e. primary zones and weathered, hydrated zones
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information

	relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Surface Geological (stratigraphical, structural) mapping of the Shoemaker prospect completed by both contract and Atlas Geologists. • Rock chip assays determined by XRF analysis and total LOI by TGA, completed by Ultra Trace and SGS laboratories Perth. Rock chip assays are only indicative of Iron enrichment and are not used for estimation purposes. • Routine multi-element analysis of potential deleterious or contaminating substances such as Arsenic, Lead, Zinc and Sulphur is completed for all samples.
Further work	• Infill drilling to 100m by 50m meter spacing • Collars need to be picked up by DGPS • Diamond drill holes for twinning, core density measurement and stratigraphy need to be drilled • Drilling at northern flank is warranted to chase the continuity of the mineralisation. • Some of the sections especially northwestern sections have not properly closed off mineralisation
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Lithology logging codes are standardised across Atlas. The logs are entered digitally in the field into acQuire logging software on a Toughbook computer via templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Shoemaker Resource is stored in the centralised Atlas acQuire drillhole database
Geological interpretation	• Geological interpretation based on geophysical natural gamma data, local geological mapping and geochemical data. • Wireframes of the stratigraphic units used to generate an empty geological model. • Drill coverage to 200m x 50m. • Mineralisation wireframe based on ≥50% Fe and <15% SiO_2 cut-off grade delineating ore/waste boundary.

Dimensions	• Mineralisation extends 1.5km along strike and 100 – 400 m across strike
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half a drill spacing (unless in areas where surface mapping has identified a mineralised/non-mineralised contact in an area without drilling data). • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging neighbourhood analysis (QKNA) undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretization • Block extends 7440960mE to 7442660mE and 793240mE to 796240mE and elevation from 100mRL to 300mRL. • A single block model to encompass the Sheomaker Resource was constructed using a 100mN by 25mE by 5mRL parent block size with sub-celling to 5mE by 5mN by 2.5mRL for domain volume resolution. The block model is rotated 120 degrees. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO and K_2O) estimated plus geophysical density and chip percentage where possible. • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2, and 5 drill spacings for run 3. • A minimum of 12 to 16 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 14 to 10 for run 2 and 12 to 8 for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5,5,2 was applied. • Grade restriction was applied to some of the minor deleterious elements in some domains as a restricted search to limit the influence of extreme/outlier grades from smearing distant blocks by using a tighter search ellipsoid. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • Inverse Distance (power 2) estimation was run as a check on the Ordinary Kriged estimate. The estimate produced similar global results between the two methods and reconciled well. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical

	methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit and Change of Support.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • The water table sits approximately 30m below the surface; approximately 68% of the resource is located below the water table. • 25% of samples logged as dry, 39% samples logged as moist and 36% of samples logged as wet samples.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No detailed mine planning has been completed as this model represents the maiden Inferred resource. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• Test work has not been completed. • No other metallurgical factors or assumptions are known at this time.
Bulk density	• Geophysical density measurements have been recorded downhole from the majority of drillholes. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. • Geophysical density is recorded at 10cm increments downhole, which is stored in the acquire drillhole database. • The density measurements are filtered and validated prior to use to remove anomalous recordings. • Geophysical density is estimated into the resource model. Un-estimated blocks (that did not meet the minimum criteria for an estimate to be made) were assigned the mean grade of that domain's composited geophysical density data. • No physical core measurements of dry bulk density have been collected to verify the geophysical results and provide a regression to convert the geophysical density to a dry bulk density and therefore the geophysical density estimate shall not be used in this resource until physical core dry bulk density information becomes available. • Bulk density is kriged using geophysical density data
Classification	• Mineral Resources have been classified into the Inferred category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model shows good correlation of the input data to the estimated grades

	• The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Resource estimate is suitable for long term mine planning only. • The 48 hole location may not be accurate due to GPS pick-up • Density values may not be accurate since it not validated with core density measurement • Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade. • The confidence in this resource estimate has been deemed appropriate as a basis for conceptual long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling.

Jimblebar Project

Jimblebar Mineral Resources - As at 30 June 2014 (50% Fe Cut-Off Grade)										
Location	**Resource Classification**	**Kt**	**Fe (%)**	**SiO_2 (%)**	**Al_2O_3 (%)**	**P (%)**	**S (%)**	**LOI (%)**	**CaFe* (%)**
McCameys North*	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	41,100	58.1	5.3	4.4	0.17	0.01	6.1	61.9
	Inferred	6,000	54.1	6.3	6.5	0.20	0.01	8.3	59.0
Jimblebar Range	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	13,000	57.5	7.0	2.1	0.06	0.04	8.1	62.5
Caramulla South	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	9,000	53.8	8.1	6.1	0.05	0.03	7.7	58.3
Sub-Total	**Measured**	**0**	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**	**0.0**	**0.0**
	Indicated	**41,100**	**58.1**	**5.3**	**4.4**	**0.17**	**0.01**	**6.1**	**61.9**
	Inferred	**28,000**	**55.6**	**7.2**	**4.3**	**0.09**	**0.03**	**8.0**	**60.4**
Total		**69,100**	**57.1**	**6.1**	**4.4**	**0.13**	**0.02**	**6.9**	**61.3**

*McCameys North reported at 53% Fe cut-off grade

Tonnes are rounded according to resource classification; grades are carried through unaffected by rounding and may result in small discrepancies.

Calculated calcined Fe grade where CaFe=(Fe%/(100-LOI%))*100

<u>Jimblebar JORC 2012 Mineral Resources summary</u>

Geology and Geological Interpretation

The Jimblebar Project has three deposits, Caramulla South, Jimblebar Range and McCamey's North. All deposits within the Jimblebar Project area are 100% owned by Atlas. The Caramulla South and Jimblebar Range deposits were first identified by Warwick Resource and subsequently acquired by Atlas Iron. The McCameys North depsot was first discovered by Atlas.

The Jimblebar tenement is located at the eastern end of the Hamersley Province, Western Australia. The stratigraphy covers Archaean granitoid-greenstone sequences of the Sylvania Inlier, the Fortescue Group and Hamersley Group with quaternary and recent cover.

In the Jimblebar area the host stratigraphy for each of the deposits is different and is comprised of three different iron formations. The McCameys deposit is located within Boolgeeda Iron Formation stratigraphy, the Caramulla South deposit is located within Marra Mamba Iron Formation stratigraphy and the Jimblebar Range deposit is located in Archaean BIF units of the Sylvania inlier.

Conformably overlying the Wongarra Volcanics volcanic units is a package of BIF's, cherts and shales of the Boolgeeda Iron Formation, which dominate the McCamey's project area. Immediately overlying the Woongarra Volcanics are 5-10m of chaotically folded and brecciated BIF's commonly jaspilitic; overlain in turn by a finely laminated, blocky chert and BIF unit approximately 50m thick, and 30-40m of calcareous/dolomitic shales that exhibit patchy surficial limonite and calcrete development. A series of cherts, BIF's and shales make up the remainder of the unit, with an estimated overall thickness of 250m. A total thickness of up to 340m has been inferred for the Boolgeeda Formation in this location.

The Boolgeeda Formation can be broken down into 11 units (BG1-BG11). Iron mineralisation at McCameys North consists of hematite-martite and goethite ores. The high grade mineralisation is generally limited to the upper (BG9) and lower (BG4) BIF units with the thinner middle (BF6) BIF unit containing sub-economic DSO grade material.

The Caramulla South area is dominated by the Jeerinah, Marra Mamba and West Angela Formations. The Marra Mamba Formation forms the base of the Hamersley Group and is divided into three members; Nammuldi Member, MacLeod Member and Mount Newman Member. The Marra Mamba is characterised by chert, ferruginous chert and banded iron formation with minor shale. The Jeerinah formation is characterised by interbedded mudstone, siltstone and chert with minor felsic tuff, dolomite and sandstone. Mineralisation at Caramulla South is hosted within the Mt Newman member and to a lesser extent, the Nammuldi member which form part of the Marra Mamba iron formation. The stratigraphy undulates gently along the strike of the deposit with the majority of mineralisation hosted within the Mt Newman member.

The Jimblebar Range deposit is hosted by Achaean BIF's, cherts and shales of the Sylvania Inlier.

The Jimblebar geological models were generated from a combination of regional geological mapping, geochemistry, geophysics and logging data. A stratigraphic model of the lithology and structure was first constructed to provide a geological framework in which to interpret the mineralisation. The mineralisation was interpreted into an upper zone of depletion and underlying hydrated and primary mineralised zones. Small, discrete discontinuous pods of mineralisation were modelled separately.

At McCameys North the stratigraphic model comprises a sequence of banded iron formation, cherts and shales belonging to the Boolgeeda Formation. The mineralisation model comprises of depleted, hydrated and primary mineralisation zones. The mineralisation zones are modelled generally using greater than 50% Fe and less than 15% SiO_2 cut-off to define ore from waste. The combination of both stratigraphic model and mineralisation models are used for geozone definitions.

At Caramulla South the stratigraphic model comprises Jeerinah formation, Nammuldi member, Macleod member, Mount Newman member and West Angela member, whereas the mineralisation model comprises of depleted, hydrated and primary mineralisation zones. The mineralisation zones are modelled generally using greater than 50% Fe and less than 15% SiO_2 cut-off to define ore from waste. The combination of both stratigraphic model and mineralisation models are used for geozone definitions.

At Jimblebar Range the geological model has only been broadly defined to distinguish between the various lithologies, the stratigraphically sequence is presently poorly understood and does not show strong lateral continuity and as such may not necessarily be accurately presented in the estimation.

Drilling Techniques

Exploration drilling over the various Jimblebar prospects occurred between 2008 and 2012. To date a total of 453 drillholes have been completed at the Jimblebar project totalling 37,292.8m of drilling (446 RC holes for 36,342m and 7 PQ3 DDH for 950.8m).

The geologist sieves and logs every 2m interval in alignment with the sampling interval. Logging encompasses the main material types, hardness, lithologies, colour and percentage of chips (approximate lump/fine proportion). The logging is recorded in the field electronically into acQuire field logging data entry objects and on completion the electronic files are sent to Perth and loaded into the centralised acQuire drillhole database which is managed by a full time Database Administrator.

All drillhole information is stored in the Atlas acQuire drillhole database. The database is managed by a full-time Database Administrator. The database undergoes regular audits and checks to maintain its validity and overall JORC compliancy.

- Drill spacing at Caramulla South is approximately 200mE x 100mN and local areas of 80mE x 40mN. McCamey's North drill spacing is at 200mE x 50mN and locally down to 100mE x 50mN. Jimblebar Range is drilled to a nominal spacing of 80mN x 40mE.

Licenced surveyor MHR Surveyors completes a collar pickup on all available drill collars using a Trimble R8 Real Time Kinematic Differential GPS (DGPS). The DGPS gives an accuracy of +/- 0.05 m for Easting and northing location and +/- 0.1 m for the RL (height above sea level).

All available holes are gyroscopically surveyed downhole by ABIMS Pty Ltd utilising a North seeking multi-shot tool which measures azimuth to an accuracy of +/- 0.2° and dip to an accuracy of +/-0.1°. Downhole geophysical measurements are also collected at the same time and comprise Density/Calliper, Magsus and Natural Gamma recordings taken at 10cm intervals downhole.

Sampling and Sub-Sampling

All RC chip samples collected by Atlas and Warwick were sampled at 2m intervals through a cone splitter. The samples are deemed to be of acceptable quality. Sample weights are also recorded to monitor the ongoing representativeness of the sample split. The weights are stored in the acquire database. The samples were all kept dry (where possible) and are deemed to be of acceptable quality.

The RC sampling methodology prior to January 2011, involved collection of samples drilled over 2m intervals using a riffle/cone splitter. Samples were directed into a calico bag with the overflow collected into green plastic bags. The calico bags were pre-numbered, with every 25^{th} and 75^{th} sample a field duplicate. The duplicate sample is collected in real time splitting the two sub samples from the riffle/cone splitters. Standards were inserted every 40^{th} and 80^{th} sample, while blanks were inserted every 41^{st} and 81^{st} sample.

After January 2011, 2m sample intervals were collected using a cone splitter. Samples were directed into a calico bag with the overflow collected into green plastic bags. The calico bags were pre-numbered, with every sample number ending in 00, 20, 40, 60, 80, collected as a field duplicate. The duplicate sample was collected in real time by splitting the two sub samples from the cone splitter. Standards were inserted every 1^{st}, 21^{st}, 41^{st}, 61^{st} and 81^{st} sample.

The samples were all kept dry (where possible) and are of acceptable quality. Sample weights are also recorded to monitor the ongoing representativeness of the sample split. The weights are stored in the acQuire database.

All drillhole information is stored in the Atlas acQuire drillhole database. The database is managed by a full-time Database Administrator. The database undergoes regular audits and checks to maintain its validity and overall JORC compliancy.

Sample Analysis Methods

Samples were sent to SGS and Ultratrace commercial laboratories in Perth for analysis of the extended iron ore suite of elements. This consists of XRF analysis for Fe, SiO_2, Al_2O_3, P, CaO, K_2O, MgO, MnO, S, TiO_2, Na_2O and a thermo gravimetric measurement for loss on ignition (LOI) at 1000^oC. The sample preparation of RC samples involved weighing, oven drying, pulverization of the entire sample to a grind size of 90% passing 75 micron. A pulp sub-sample was collected and formed into a fused bead for XRF determinations on the iron ore suite of elements and a LOI by thermogravimetric techniques.

To ensure quality assurance and control (QAQC) of the sampling and assaying procedure, Atlas submitted field duplicates and standards to the laboratory for analysis. For samples collected prior to January 2011, the duplicates and standards are inserted at predefined intervals at a rate of 2% for standards and 2% for duplicates for an overall insertion rate of 4%. Post January 2011, the duplicates and standards are inserted at predefined intervals at a rate of 5% for standards and 5% for duplicates for an overall insertion rate of 10%. The laboratory also inserted its own internal standards and pulp repeat analyses at predefined intervals. Sample collection procedures and QAQC protocols employed by Atlas are commensurate with standard industry practices.

Reserve and Resource Update

The QAQC data for the Jimblebar project was reviewed prior to commencing the resource estimates for Jimblebar and were found to be of reasonable precision and analytical accuracy and is deemed to be acceptable for resource estimation purposes and JORC compliancy. The level of QAQC inserted in the Warwick drilling was at lower levels than Atlas prescribes and as such there is some associated risk with this information due to this factor.

Estimation Methodology

The drillhole data was composited prior to running the estimation process using a 2m sample interval to minimise any sample bias due to sample length. The compositing was run within the attribute fields to ensure no composite intervals crossed any lithological contacts or grade boundaries.

Variograms were generated to assess the grade continuity of the various elements and as inputs to the kriging algorithm used to interpolate grades. Snowden Supervisor software was used to generate and model variograms and conduct statistical analysis.

Variographic analysis was undertaken for all mineralised geozones for the Shoemaker resources. The elements that were analysed include all 12 elements, i.e. Fe, SiO_2, Al_2O_3, P, LOI, S, MnO, MgO, K_2O, TiO_2, CaO, Na_2O and geophysical density.

To generate the best experimental variograms the data was first transformed to a normal scores distribution where upon the variogram was modelled and on completion a back transform was applied. The variogram ranges and directions of continuity are consistent with the geological understanding and are considered appropriate.

Block models were constructed in Vulcan software (Maptek) and constrained by surfaces and solids. The parent block size was selected based on half of drillhole spacing and the model was orientated (rotated) to represent the strike of mineralisation and prevailing drilling grid. The sub-block size was selected to more accurately define the mineralised volume.

The volume block model was created using the wireframes of the stratigraphy, mineralisation and topography. A unique geozone code was assigned based on the combination of stratigraphy and mineralisation. The geozone field is used to distinguish the main mineralisation types and mineralised areas.

Atlas estimated Fe, SiO_2, Al_2O_3, P, LOI, CaO, K_2O, MgO, MnO, S, TiO_2 and Na_2O grades using Ordinary Kriging for the mineralised horizons for Caramulla South and McCamey's North. Waste horizons were estimated by Inverse Distance (power 2) methods. For the Jimblebar Range resource, grades were estimated using Inverse Distance (power 2) method across mineralised and waste horizons.

The preferred estimation parameters were chosen based on neighbourhood analysis, whereby several estimation parameters were tested to optimise the estimation search. This was represented by best kriging efficiency, slope regression values and number of blocks filled. Search ellipses were orientated based on the geometry of the mineralisation with the search ellipses increased by two fold and three fold for second and third search passes.

- Geophysical density measurements have been recorded downhole from the majority of drillholes at McCamey's North. Geophysical downhole logging contractor ABIMS has been contracted to provide data collection and data validation services for the project. Geophysical density is recorded at 10cm increments downhole. The density measurements are filtered and validated prior to use to remove anomalous recordings.

Geophysical density was estimated into the resource model at McCamey's North. However, due to the absence of downhole geophysical density data at Caramulla South and Jimblebar Range, a global density of 2.7t/m^3 was applied to mineralised geozones. All tonnages reported are on a 'dry' basis, this is a bulk commodity project.

The estimates were validated using:

- A visual comparison of block grade estimates and the drillhole data.
- A global comparison of the average composite grades and estimated grades.

- Moving window averages comparing the mean block grades to the composites.
- Histogram comparison of the original composite grades and the block estimated grades.
- Assessment of correlation coefficients from the input sample data and estimated block grades.
- Total assay validation check to ensure closure (sum of elements in each block adds to 100% +/- 2%).

The conclusions from the model validation work include:

- Visual comparison of the model grades and the corresponding drillhole grades shows a good correlation.
- A comparison of the global drillhole mean grades and with the mean grades of the block model estimate (for each domain) shows that the block model mean grades are typically within 5-10% of the drilhole means which is a good outcome with the exception of poorly sampled regions.
- The trend plot grades show a good correlation between the block model grades compared with the drillhole grades.
- Total assay validation showed that the blocks maintained closure generally between 98% and 102% for all mineralised domains.
- Assessment of the histograms and correlation coefficients showed that the relationship between elements within the input sample data has been maintained in the block grades estimates and the grade distribution has been maintained in the estimate with an acceptable level of smoothing.

Resource Classification

Mineral Resources have been classified into the Indicated and Inferred category based on drillhole spacing, nature and quality of the drilling and sampling methods, geological understanding and confidence, grade continuity, QAQC analysis, confidence in the estimate of the mineralised volume, results of the model validation and results of metallurgical test work.

Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. The results of the validation of the block model show good correlation of the input data to the estimated grades.

The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit. Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. The statement relates to global estimates of tonnes and grade.

All Mineralisation has been classified as Inferred for the Caramulla South and Jimblebar Range resources due to the current wide spaced drilling (80mE x 40mN or greater). Mineralisation and geology demonstrate moderately good continuity and geological understanding is moderately well understood. Limited diamond core to produce density information adds some uncertainty to the tonnage calculation which add risk to the project.

Mineralisation has been classified as Indicated for the McCameys North resource where the drill spacing is at 100mE x 50mN (at least) and mineralisation and geology demonstrate good continuity and geological understanding is well understood, mineralisation is not hydrated and near surface or below the water table. Mineralisation at McCameys is classified as Inferred where drill spacing is 200mE x 50mN (or greater) and mineralisation and geology show poor to moderate continuity, is in the hydrated zone or below water table. Metallurgical characteristics are currently poorly understood which add risk to the project.

Cut-Off Grade

The criteria for defining mineralised material at Jimblebar is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary. These cut-off grades were used to separate mineralised material from waste. Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for an assumed open pit mining method and processing methodology to produce material suitable to meet Atlas product specifications. The tabulated resources are reported using a 50% Fe cut-off grade on a block by block basis for Caramulla South and Jimblebar Range and using a 53% Fe cut-off for McCameys North.

Mining and Metallurgical methods and parameters and other modifying factors

The Jimblebar Project is currently at an Indicated and Inferred Classification and is not under any level of study as such no determination of mining and processing methods has been made. It is currently assumed that a conventional open pit mining methodology, similar to other Atlas projects, with selective extraction of ore material using a backhoe configured excavator.

It is expected that a simple, low cost crush and screening processing route is utilised to produce a single, fines only product at a specified grade. It is a reasonable assumption that the Jimblebar resources will eventually be economically extracted based on their proximal location to existing projects and infrastructure and also due to their favourable size and grade characteristics which will fit the Atlas product specification.

Boolgeeda formation mineralisation typically features relatively high Alumina and Phosphorous levels which on its own could prove difficult to market. Based on the current Jimblebar grade specifications and the relatively small volumes presented it could easily be accommodated within the Atlas product specification via blending with other Atlas material from other sources. Further metallurgical test work is still to be performed to determine if wet screen/ de-slime technology could reduce the alumina and phosphorous content to more favourable levels with acceptable recoveries achieved.

Jimblebar Project JORC 2012 Table 1 Assessment Criteria

CARAMULLA SOUTH RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA CARAMULLA SOUTH MINERAL RESOURCE ESTIMATE – OCTOBER 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	**Atlas** • Reverse Circulation (RC) chip samples collected via cone splitter. • One 6kg (average) sample taken for each two metre sample length and collected in pre-numbered calico sample bags. • 6kg sample was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 2 duplicates are taken for every 100 samples (2%). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice. **Warwick** • Sampling protocols implemented by Warwick resources are not well documented • Reverse Circulation (RC) chip samples collected; splitting techniques were understood to be cone splitter (pers. Comm. Warwick geologist).
Drilling techniques	• Reverse Circulation (RC) drilling, Aircore (AC) drilling and Diamond (DD) drilling. • Drill spacing on a variable grid ranging from approximately 80m (E-W) by 40m (N-S) to 200m (E-W) by 100m (N-S) • Total of 159 RC holes extracted from the Atlas database or which 97 were RC holes used in the current estimate. • 97 holes used for the resource estimate for a total of 4485m • 2523 samples logged, 2086 samples analysed. • Three Diamond drill holes, not used in estimate
Drill sample recovery	**Atlas** • RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 359 Good (>99%), 27 Fair (1%), 5 Poor (<1%). 2132 (84.5%) Not Recorded. • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No twin RC or diamond drillholes have been completed to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling. **Warwick** • Sample recovery and monitoring protocols implemented by Warwick resources are not well documented.
Logging	**Atlas** • Logging of every 1m interval (Atlas procedure) corresponding with 2 logged samples per 2m sampled interval. This level of detail supports appropriate

	Mineral Resource estimation, mining studies and metallurgical studies. • 20 Atlas RC drillholes were logged in full, totaling 1382m of drilling. • Samples were logged for lithology, mineralisation, chip percent, weathering and colour. **Warwick** • Logging codes are different to Atlas and consequently logging was not utilized significantly in the current resource estimate.
Sub-sample techniques	**Atlas Drilling** **Sampling technique:** • RC Chip Samples: • ~6kg RC chip samples are collected via cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** • Sample dried at 105°C for 12-24 hrs • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality Control Procedures** • Duplicated sample: 2 every 100 samples (2%). • Certified Reference Material assay standards inserted: 2 in every 100 samples (2%). • Overall QAQC insertion rate of 1:20. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab. **Warwick** • RC Chip Samples: • Sampling protocols unknown • Cone splitting for all Warwich Samples (pers. Comm former Warwick geologist) • Quality Control Procedures • Field duplicates at a rate of 2% • Standards at a rate of 2%
Quality of assay data and laboratory tests	• Atlas Samples were submitted to Ultratrace Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 0.66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards and field duplicates analysis (Atlas drilling only) are used for quality control. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set

	levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 90% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice.
Verification of sampling and assaying	**Atlas** • Significant intersections have been independently verified by alternative company personnel. • The Competent Person has inspected the Laboratory. • There are no twinned holes drilled to date. • Atlas Primary data are captured on field Toughbook laptops using acQuire software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection. **Warwick** • The veracity of Warwick drilling data is less certain than that for Atlas drilling. • Warwick data has been incorporated and stored in the secure, centralised Atlas acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	**Atlas** • All Atlas hole Collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. **Warwick** • Warwick hole collars were not picked up by a licensed surveyor. The methodology remains uncertain but a conservative approach is taken and the accuracy is assumed to be equivalent to a handheld GPS. • Downhole gyroscopic surveys were attempted on 15 of 157 holes. • The grid system is MGA_GDA94 Zone 51.
Data spacing and distribution	• Drill spacing on a variable grid ranging from approximately 80m (E-W) by 40m (N-S) to 200m (E-W) by 100m (N-S) • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Sample Security	**Atlas** • Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch. **Warwick** • Sample security protocols for Warwick drilling are not documented.
Orientation of data in	• The attitude of the Caramulla South resource is predominantly flat lying and is

relation to geological structure	drilled with predominantly vertical drillholes. • A small minority of holes dip -60 towards the south
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Caramulla South is located within Exploration Lease E52/1823. Atlas owns 100% of the Iron rights to the tenement. • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• Exploration drilling has been undertaken Warwick resources in 2007 and 2008 until Atlas Iron took over Warwick resources in 2009.
Geology	• Marra Mamba formation stratigraphy with mineralisation hosted in Marra Mamba Mt Newman BIF.
Drillhole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Drilling by Warwick Resources.
Further work	• Reduce drill spacing to 40x40m to further define geology and increase robustness of mineral resource estimate. • Undertake diamond drilling for the purpose of bulk density analysis and twin analysis of RC holes to evaluate drilling bias. • Undertake down hole surveys to provide hole trajectory information and geophysical densities • RTK-DGPS all drill collars.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	**Atlas** • Lithology logging codes are standardised across Atlas. The logs are entered digitally in the field into acQuire logging software on a Toughbook computer via

	templates and lookup tables with enforced data validation rules. The files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data is stored in the centralised Atlas acQuire drillhole database. **Warwick** • Warwick resources data have been incorporated into the Atlas acQuire drillhole database although the veracity of the data is not as conclusive as for Atlas drill holes.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• There is sufficient confidence in the geological interpretation of the mineral deposit. • Geological interpretation based on local geological surface mapping, drillhole lithological logging and geochemical data. • Wireframes of the stratigraphic units used to generate an empty geological model. • The overlying hardcap, hydrated zone displays higher variability and mixed populations. This will likely influence the local estimates rather than the global grade estimate for this zone.
Dimensions	• The Mineral Resource comprises three major zones with dimensions of approximately • 1000 m (east) by 100m (north) and extends from surface to a maximum depth of 80m. • 400 m (east) by 200m (north) and extends from surface to a maximum depth of 80m. • 600 m (east) by 250m (north) and extends from surface to a maximum depth of 80m. • A thin, hydrated layer sits over the top of both zones of mineralisation. • Block model: 900m (N), 4300m (E) and 250m (mRL) • Parent blocks: 25m(x) x 50m(y) x 5m(z) • Sub-blocks: 5m(x) x 5m(y) x 2.5m(z)
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half a drill spacing • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging neighbourhood analysis (QKNA) undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model: 900m (N), 4300m (E) and 250m (mRL) • Parent blocks: 25m(x) x 50m(y) x 5m(z) • Sub-blocks: 5m(x) x 5m(y) x 2.5m(z) • The parent block size is half the drill spacing to ensure the mineralisation is well

	represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO2, Al2O3, P, MnO, LOI, S, TiO2, MgO, CaO and K2O • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2, and 5 drill spacings for run 3. • A minimum of 12 or 10 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 or 8 for run 2 and either 8 or 6 for run 3 (depending on domain). • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5,5,2 was applied. • Grade restriction was applied to some of the minor deleterious elements (MnO and CaO) in some domains as a restricted search to limit the influence of extreme/outlier grades from smearing distant blocks by using a tighter search ellipsoid. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit and Change of Support.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • The water table is assumed to sit at a depth of 430mRL. None of the resource is located below the water table. • Where moisture data is recorded (391 samples) 389 samples were logged as dry and 2 were logged as moist.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No detailed mine planning has been completed as this model represents the maiden Inferred resource. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• No metallurgical test work has been undertaken. • No factors or assumptions are known at this time.

Bulk density	• Global values applied to each geozone. Mineralised material has been assigned a global bulk density of 2.7. Waste material has been assigned a global bulk density of 2.6. Overlying detrital waste material has been assigned a density of 2.6. • No bulk density from core or geophysical density from down holes logs are available.
Classification	• Whole deposit is Inferred • Mineral Resources have been classified into the Inferred category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Resource estimate is suitable for long term mine planning only. • Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade.

JIMBLEBAR RANGE RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA JIMBLEBAR RANGE MINERAL RESOURCE ESTIMATE – SEPTEMBER 2012	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Sampling protocols implemented by Warwick resources are not well documented • Reverse Circulation (RC) chip samples collected; splitting techniques are understood to be cone splitter (pers. Comm. Pip Darvall – former Warwick geologist).
Drilling techniques	• Reverse Circulation (RC) drilling. • Lines drilled orientated northeast – south west with a nominal spacing of ~80m between lines (although this is quite variable) • Total of 72 holes extracted from the Atlas database of which 70 were RC holes used in the estimate, • 70 holes used for the resource estimate for a total of 4987m • 2639 samples drilled, 2357 samples analysed. • Two Diamond drill holes, not used in estimate
Drill sample recovery	• Sample recovery and monitoring protocols implemented by Warwick resources are not well documented.
Logging	• Logging codes are different to Atlas and have not been translated into Atlas logging codes.
Sub-sample techniques	• RC Chip Samples: • Sampling protocols unknown • Cone splitting for all Warwick Samples (pers. Comm former Warwick geologist) • Quality Control Procedures • Field duplicates at a rate of 2% • Standards at a rate of 2%
Quality of assay data and laboratory tests	• Samples were submitted to Ultratrace Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105OC in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 0.66g sample that is dried further, fused at 1100OC for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards and field duplicates analysis were used for quality control. • Certified Reference Material assay standards were inserted by Warwick and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that the precision of samples is within acceptable limits, which concurs with industry best practice.

Verification of sampling and assaying	• Warwick data has been incorporated and stored in the secure, centralised Atlas acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• Warwick hole collars were not picked up by a licensed surveyor. • A DGPS was used for collar pick-ups by Warwick staff • A conservative approach is taken and the accuracy is assumed to be equivalent to a handheld GPS. • Downhole gyroscopic surveys not attempted. • The grid system is MGA_GDA94 Zone 51.
Data spacing and distribution	• Drill spacing on an approximate 80m line spacing with ~40m spaced holes on section (spacings are variable). • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification applied under the 2012 JORC code. • Samples are typically collected at 2m intervals.
Sample Security	• Sample security protocols for Warwick drilling are not documented.
Orientation of data in relation to geological structure	• The attitude of the Jimblebar Range resource is predominantly flat lying to gently dipping and is drilled in lines of vertical holes which strike north west-south east • A small minority of holes dip -60 towards the north west or south east
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Jimblebar Range is located within Exploration Lease E52/1772. Atlas owns 100% of the Iron rights to the tenement which it took over when Atlas Iron merged with Warwick Resources in 2009. • At the time of reporting, there are no known impediments to obtaining a license to operate in the area and the tenement is in good standing.
Exploration done by other parties	• Exploration drilling has been undertaken by Warwick resources in 2008 until Atlas Iron took over Warwick resources in 2009.
Geology	• BIF, Chert and Shale Sequences of the Archaean Sylvania Inlier
Drillhole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.

Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Drilling by Warwick Resources. • Mapping and rock chip samples taken by Warwick Resources. • Aerial survey flown by AAM pty ltd in May 2008.
Further work	• Reduce drill spacing to further define geology and increase robustness of mineral resource estimate. • Undertake diamond drilling for the purpose of bulk density analysis and twin analysis of RC holes to evaluate drilling bias. • Undertake down hole surveys to provide hole trajectory information and geophysical densities • RTK-DGPS all drill collars.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Warwick resources data have been incorporated into the Atlas acQuire drillhole database although the veracity of the data is not as conclusive as for Atlas drill holes.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and ensures industry standards of the resource estimation process. • No site visits were undertaken during the drilling of the Jimblebar Range deposit and this presents a risk to the model.
Geological interpretation	• There is sufficient confidence in the geological interpretation of the mineral deposit. • Geological interpretation based on, local geological surface mapping, drillhole lithological logging and geochemical data. • Wireframes of the stratigraphic units used to generate an empty geological model. • The overlying hardcap, hydrated zone displays higher variability and mixed populations. This will likely influence the local estimates rather than the global grade estimate for this zone.
Dimensions	• The Mineral Resource comprises two major zones with dimensions of approximately: • 700m (along strike) by 100m (across strike) and extends from surface to a maximum depth of 80m. • 600m (along strike) by 100m (across strike) and extends from surface to a maximum depth of 80m. • A thin, hydrated layer sits over the top of both zones of mineralisation. • Block model: 1100m (x), 2100m (y) and 300m (mRL) • Parent blocks: 25m(x) x 50m(y) x 5m(z) • Sub-blocks: 5m(x) x 5m(y) x 2.5m(z)
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Inverse distance squared estimation technique applied to all estimated domains. • Block model: 1100m (x), 2100m (y) and 300m (mRL) • Parent blocks: 25m(x) x 50m(y) x 5m(z)

	• Sub-blocks: 5m(x) x 5m(y) x 2.5m(z) • The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Inverse distance squared was used to estimate the standard Atlas iron suite of elements (Fe, SiO2, Al2O3, P, MnO, LOI, S, TiO2, MgO, CaO and K2O) • Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover approximately 2 drill spacings for run 1, 3 drill spacings for run 2, and 5 drill spacings for run 3. • A minimum of 12 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 for run 2 and 8 for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5,5,2 was applied. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • The water table is assumed to sit at a nominal depth of 460mRL. None of the resource is located below the water table. • No moisture data were recorded during drilling.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No detailed mine planning has been completed as this model represents the maiden Inferred resource. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• No metallurgical test work has been undertaken.
Bulk density	• Global values applied to each geozone. Mineralised material has been assigned a global bulk density of 2.7. Waste material has been assigned a global bulk density of 2.6. Overlying detrital waste material has been assigned a density of 2.6. • No bulk density from core or geophysical density from down holes logs are available.

Reserve and Resource Update

Classification	• Whole deposit is Inferred (3) • Mineral Resources have been classified into the Inferred category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Resource estimate is suitable for long term mine planning only. • Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade.

McCAMEY'S NORTH JORC TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA MCCAMEY'S NORTH MINERAL RESOURCE ESTIMATE – JUNE 2011	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• RC sampling methodology involved the collection of samples drilled over 2m intervals using cone splitter. • 2.0kg sample (average) was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 2 duplicates are taken for every 100 samples (1:50) for samples collected prior to January 2011. • Post January 2011, duplicates were 5 duplicates were collected for every 100 samples (1:20). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Drill spacing is mainly 50mN by 100mE with local patches of 50mN by 200mE. • RC holes (235 holes for 22,096m) – used in estimate. • No DDH have been drilled to date.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 519 Good (15.7%), 2,442 Fair (74.2%) and 330 Poor (10.0%). • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No comparison between twin RC or diamond drillholes was conducted to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling.
Logging	• Geological logging was completed for 2m interval to coincide with sample interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • 10,699 RC samples were logged. • Geophysical data collected from 189 of 235 RC holes (gamma, density, magsus and resistivity).
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • ~2.0kg RC chip samples are collected via cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at McCamey's North based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:**

	• Sample dried at 105°C for 12-24 hrs
	• Crushed to nominal -3mm
	• Pulverised to 90% passing at 75µm
	Quality Control Procedures
	• Duplicated sample (prior to January 2011): 2 every 100 samples (1:50).
	• Duplicate samples (post January 2011): 5 every 100 samples (1:20).
	• Certified Reference Material assay standards inserted:
	    o 2 in every 100 samples (1:50) prior to January 2011.
	    o 5 in every 100 samples (1:20) post January 2011.
	• Overall QAQC insertion rate of 1:10.
	• Sample weights recorded for all samples.
	• Lab duplicates taken where large samples required splitting down by the lab.
	• Lab repeats taken and standards inserted at predetermined level specified by the lab.

Quality of assay data and laboratory tests	• All samples submitted to Ultratrace Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 80% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. • The Competent Person has visited site and inspected the sampling process in the field and also inspected the Laboratory. • Primary data are captured on field Toughbook laptops using acQuire^{tm} software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• All 235 collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • Downhole gyroscopic surveys were attempted on all RC where possible. A total of 146 of 235 RC holes had downhole gyro survey data. • The grid system for McCamey's North is MGA_GDA94 Zone 51.

	• Topographic data was based on the latest available aerial survey in the GIS database on a 2m resolution contours. The datum is GDA94 with projection MGA Zone 51.
Data spacing and distribution	• Drill spacing is mainly 50mN by 100mE with local patches of 50mN by 200mE. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred and Indicated resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• The McCamey's North resource lies within a sequence of BIFs, cherts and shales gently folded, known as the Boolgeeda Iron Formation. • The majority of drill holes were drilled dipping South with a small proportion drilled vertically. As such, due to the varying intersection angles, intercepts of bedding thickness are defined as downhole widths.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• McCamey's North is located wholly within Exploration Lease E52/2303. This tenement is 100% Atlas owned. • The tenement sits within the Nyiyaparli People Native Title Claim (WC2005/006). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• All drilling activity to date has been completed by Atlas.
Geology	• The geological interpretation is based on gamma data and regional geological mapping. • The McCamey's North resource lies within a sequence of BIFs, cherts and shales gently folded, known as the Boolgeeda Iron Formation. Figure 6.4 shows the geological interpretation.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation

	methods relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• All exploration activity to date has been completed by Atlas.
Further work	• Recommendation for closure of mineralisation and/or sterilization holes at depth. • Infill drilling of areas from 100m x 50m to 50m x 50m. • Diamond drill holes for orebody knowledge, geophysical data and core density data. Local geological and structural mapping to improve orebody knowledge.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Geological logging was conducted on 2m scale, with intervals recorded using the standard Atlas geological log. The log is entered digitally in the field onto a Toughbook computer, and the files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy ‘Roredata’ using acquire software. • Data for the McCamey’s North Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• The geological interpretation is based on logging data, geochemistry, natural gamma data and regional geological mapping. • The McCamey’s North resource lies within a sequence of BIFs, cherts and shales gently folded, known as the Boolgeeda Iron Formation. • Wireframes of the stratigraphic units used to generate an empty geological model. • Mineralisation wireframes based on 50% Fe and <15% SiO_2 cut-off grade delineating ore/waste boundaries.
Dimensions	• The McCamey’s North Mineral Resource consists of 4 major pods with the main pod approximately 1000mE by 400mN in width; remaining 3 pods are approximately 900mE by 100mN, 700mE by 150mN and 400mE by 200mN.
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half drill spacing. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all

	elements within the mineralised domains. • Quantitative Kriging Neighbourhood analysis (QKNA) was undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 209550mE to 214050mE and 7414800mN to 7417000mN and elevation from 300mRL to 600mRL. • A single block model to encompass the McCamey's North Mineral Resource was constructed using a 25mN by 50mE by 5mRL parent block size with sub-celling to 5mE by 5mN by 2.5mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) and geophysical density into geozone 204, 208 & 209 (primary mineralisation) and geozone 504, 506, 507, 508, 509 & 510 (hydrated mineralisation). • Inverse Distance was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) and geophysical density into waste geozones (10, 103-111). • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2, and 5 drill spacings for run 3. • A minimum of 14 samples and a maximum of 48 samples are required for an estimate in run 1, the minimum number of samples reducing to 8 for run 2 and 4 for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 10 samples from any one drill is allowed. • Block discretisation of 4, 4, 2 was applied. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • 80.3% of samples logged as dry, 3.0% of samples were logged as moist, 15.7% were logged wet. • The majority of the resource (74%) lies above the water table.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears

	to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope. • Resources are reported on an block by block basis at a 53% Fe cut-off grade.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No other assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• No metallurgical test work has been completed and no assumptions are made.
Environmental factors or assumptions	• There are no zones identified as sulphur risk in the McCamey's North deposit and no other environmental factors are known at this time.
Bulk density	• Geophysical density data is sufficient with relatively moderate coverage. • No diamond core was available for density regression analysis. • Estimated density within the resource is high risk due to the lack of calibration/adjustment. • This is a bulk commodity project.
Classification	• Mineral Resources have been classified as Inferred and Indicated category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade. • The confidence in this resource estimate has been deemed appropriate as a basis for conceptual long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling.

Warrawanda Project

Warrawanda Mineral Resource Table - As at 30 June 2014 (53% Fe Cut-Off Grade)										
Location	**Resource Classification**	**Kt**	**Fe**	**SiO_2**	**Al_2O_3**	**P**	**S**	**LOI**	**CaFe***
			(%)	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**
Wishbone	**Measured**	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	24,000	56.8	6.8	2.7	0.07	0.03	8.6	62.2
Total		**24,000**	**56.8**	**6.8**	**2.7**	**0.07**	**0.03**	**8.6**	**62.2**

Tonnes are rounded according to resource classification; grades are carried through unaffected by rounding and may result in small discrepancies.

*Calculated calcined Fe grade where CaFe=(Fe%/(100-LOI%))*100

<u>Warrawanda JORC 2012 Mineral Resources summary</u>

Geology and Geological Interpretation

The Warrawanda Project contains one deposit known as the Wishbone deposit and is 100% owned by Atlas. The Wishbone Prospect lies within the Woggaginna Greenstone Belt of the Sylvania Inlier. The Sylvania Inlier comprises mostly Archaean granitoids (older than 2750 Ma) which have intruded greenstones including the Woggaginna belt. The rocks of these greenstone belts were deposited near exposed granitoid basement, and form layered sequences of low to medium grade metavolcanics, mafic intrusions, and metasedimentary rocks. To the north-west, the Sylvania Inlier is unconformably overlain by mafic volcanics, felsic volcanics and intrusive rocks, carbonates, clastic metasedimentary rocks, and banded iron-formation, all of which were deposited in the late Archaean to early Proterozoic (2750-2300 Ma) Hamersley Basin.

Lying within the Woggaginna Greenstone Belt, the Wishbone prospect, so named because the morphology resembles a skeletal wishbone, consist of numerous steeply dipping BIF's interbeded with metavolcanics, metasediments and ultramafics, intruded by dolerite sills and granitoids. The BIF's are up to 60m thick, with varying degrees of iron enrichment. This enrichment has been modelled to a depth of up to 80m and has been separated into four domains of enrichment. The two northern domains strike at approximately 140 degrees before terminating at what is interpreted to be a shear zone which separates Wishbone north from Wishbone south. An abundance of quartz float scattered on the surface indicates the presence of this shear zone as does the morphology of the units either side which imply a sinistral sense of movement with associated drag folding adjacent to the shear zone. The southern domains of the Wishbone prospect appear slightly folded and, from regional magnetics, are believed to be cut by a large scale fault to the south. Minor faults are also interpreted to cut the prospect in numerous locations and are perpendicular to strike.

The Wishbone geological model was generated using a combination of geochemistry of RC holes, lithological logs (RC & DH holes) and surface mapping. A stratigraphic model of the lithology and structure was first constructed to provide a geological framework in which to interpret the mineralisation. The mineralisation was interpreted into an upper zone of depletion and underlying hydrated and primary mineralised zones.

The stratigraphic model comprises a sequence of banded iron formation, cherts and dolerite intrusions. The mineralisation model comprises of depleted, hydrated and primary mineralisation zones. The mineralisation zones are modelled generally using greater than 50% Fe and less than 15% SiO_2 cut-off to define ore from waste. The combination of both stratigraphic model and mineralisation models are used for geozone definitions.

Drilling Techniques

Exploration drilling at the Wishbone deposit occurred during 2008-2011. To date a total of 257 RC holes have been completed totalling 19,600m. No diamond holes have been drilled to date.

- Reverse Circulation drilling employing a 140mm diameter face sampling hammer is used to collect samples for assay. Drill spacing at Wishbone has been completed to a nominal drill spacing of 80m x 40m with local areas of 60m x 30m.

The geologist sieves and logs every 2m interval in alignment with the sampling interval. Logging encompasses the main material types, hardness, lithologies, colour and percentage of chips (approximate lump/fine proportion). The logging is recorded in the field electronically into acQuire field logging data entry objects and on completion the electronic files are sent to Perth and loaded into the centralised acQuire drillhole database which is managed by a full time Database Administrator.

Licenced surveyor MHR Surveyors completes a collar pickup on all available drill collars using a Trimble R8 Real Time Kinematic Differential GPS (DGPS). The DGPS gives an accuracy of +/- 0.05 m for Easting and northing location and +/- 0.1 m for the RL (height above sea level).

No downhole surveys or downhole geophysical density data has been collected for drill holes at the Wishbone deposit.

All drillhole information is stored in the Atlas acQuire drillhole database. The database is managed by a full-time Database Administrator. The database undergoes regular audits and checks to maintain its validity and overall JORC compliancy.

Sampling and Sub-Sampling

All available drilling has been sampled and the entire lengths of drillholes have been sampled. The RC sampling methodology prior to January 2011, involved collection of samples drilled over 2m intervals using a riffle/cone splitter. Samples were directed into a calico bag with the overflow collected into green plastic bags. The calico bags were pre-numbered, with every 25th and 75th sample a field duplicate. The duplicate sample is collected in real time splitting the two sub samples from the riffle/cone splitters. Standards were inserted every 40th and 80th sample, while blanks were inserted every 41st and 81st sample.

After January 2011, 2m sample intervals were collected using a cone splitter. Samples were directed into a calico bag with the overflow collected into green plastic bags. The calico bags were pre-numbered, with every sample number ending in 00, 20, 40, 60, 80, collected as a field duplicate. The duplicate sample was collected in real time by splitting the two sub samples from the cone splitter. Standards were inserted every 1st, 21st, 41st, 61st and 81st sample.

The samples were all kept dry (where possible) and are deemed to be of acceptable quality. Sample weights are also recorded to monitor the ongoing representativeness of the sample split. The weights are stored in the acQuire database.

Sample Analysis Methods

Samples were sent to Ultratrace commercial laboratories in Perth for analysis of the extended iron ore suite of elements. This consists of XRF analysis for Fe, SiO_2, Al_2O_3, P, CaO, K_2O, MgO, MnO, S, TiO_2, Na_2O and a thermo gravimetric measurement for loss on ignition (LOI) at 1000^oC.

Samples are dried at 105^oC in gas fired ovens for 18-24 hours, samples are then crushed to a nominal -3mm size, pulverised in a LM2 mill until 90% passing 75micron is achieved. A 66 gram pulp sub-sample is collected that is fused at 1100^oC for 10 minutes and poured into a platinum crucible prior to analysis by XRF.

To ensure quality assurance and control (QAQC) of the sampling and assaying procedure, Atlas submitted field duplicates and standards to the laboratory for analysis. For samples collected prior to January 2011, the duplicates and standards are inserted at predefined intervals at a rate of 2% for standards and 2% for duplicates for an overall insertion rate of 4%. Post January 2011, the duplicates and standards are inserted at predefined intervals at a rate of 5% for standards and 5% for duplicates for an overall insertion rate of 10%. The laboratory also inserted its own internal standards and pulp repeat analyses at predefined intervals. Sample collection procedures and QAQC protocols employed by Atlas are commensurate with standard industry practices.

The QAQC data for the Warrawanda project was reviewed prior to commencing the resource estimates for Warrawanda and were found to be of reasonable precision and analytical accuracy and is deemed to be acceptable for resource estimation purposes and JORC compliancy.

Estimation Methodology

The drillhole data was composited prior to running the estimation process using a 2m sample interval to minimise any sample bias due to sample length. The compositing was run within the attribute fields to ensure no composite intervals crossed any lithological contacts or grade boundaries.

Variograms were generated to assess the grade continuity of the various elements and as inputs to the kriging algorithm used to interpolate grades. Snowden Supervisor software was used to generate and model variograms and conduct statistical analysis.

Variographic analysis was undertaken for all mineralised geozones for each of the Corunna Downs resources. The elements that were analysed include all 12 elements, i.e. Fe, SiO_2, Al_2O_3, P, LOI, S, MnO, MgO, K_2O, TiO_2, CaO, Na_2O and geophysical density.

To generate the best experimental variograms the data was first transformed to a normal scores distribution where upon the variogram was modelled and on completion a back transform was applied. The variogram ranges and directions of continuity are consistent with the geological understanding and are considered appropriate.

The Wishbone geological model was generated from regional geological mapping, geochemistry, geophysics and logging data. A stratigraphic model of the lithology and structure was first constructed to provide a geological framework in which to interpret the mineralisation. The mineralisation was interpreted into an upper zone of depletion and underlying hydrated and primary mineralised zones. Small, discrete discontinuous pods of mineralisation were modelled separately as were small zones of internal waste.

The stratigraphic model comprises a sequence of banded iron formation, cherts and shales and dolerite intrusions, whereas the mineralisation model comprises of depleted, hydrated and primary mineralisation zones. The mineralisation zones are modelled generally using greater than 50% Fe and less than 15% SiO_2 cut-off to define ore from waste. The combination of both stratigraphic model and mineralisation models are used for geozone definitions.

Block models were constructed in Vulcan software (Maptek) and constrained by surfaces and solids. The parent block size was selected based on half of drillhole spacing and the model was orientated (rotated) to represent the strike of mineralisation and prevailing drilling grid. The sub-block size was selected to more accurately define the mineralised volume.

The volume block model was created using the wireframes of the stratigraphy, mineralisation and topography. A unique geozone code was assigned based on the combination of stratigraphy and mineralisation. The geozone field is used to distinguish the main mineralisation types and mineralised areas.

Atlas estimated Fe, SiO_2, Al_2O_3, P, LOI, CaO, K_2O, MgO, MnO, S, TiO_2 and Na_2O grades using Ordinary Kriging for the mineralised horizons. Waste horizons were estimated by Inverse Distance (power 2) methods.

The preferred estimation parameters were chosen based on neighbourhood analysis, whereby several estimation parameters were tested to optimise the estimation search. This was represented by best kriging efficiency, slope regression values and number of blocks filled. Search ellipses were orientated based on the geometry of the mineralisation with the search ellipses increased by two fold and three fold for second and third search passes.

Due to the lack of diamond drillholes and downhole geophysical density data collected at the Wishbone deposit, a globally assigned density of 2.8t/m^3 was applied to all mineralised blocks (hydrated and primary mineralisation). This density value was derived from other; similar nearby deposits that Atlas has information on. All tonnages reported are on a 'dry' basis, this is a bulk commodity project.

The estimates were validated using:

- A visual comparison of block grade estimates and the drillhole data.
- A global comparison of the average composite grades and estimated grades.
- Moving window averages comparing the mean block grades to the composites.
- Histogram comparison of the original composite grades and the block estimated grades.
- Assessment of correlation coefficients from the input sample data and estimated block grades.
- Total assay validation check to ensure closure (sum of elements in each block adds to 100% +/- 2%).
- Global change of support to assess the level of misclassification inherent in the estimate.

The conclusions from the model validation work include:

- Visual comparison of the model grades and the corresponding drillhole grades shows a good correlation.
- A comparison of the global drillhole mean grades and with the mean grades of the block model estimate (for each domain) shows that the block model mean grades are typically within 5-10% of the drilhole means which is a good outcome with the exception of poorly sampled regions.
- The trend plot grades show a good correlation between the block model grades compared with the drillhole grades.
- Total assay validation showed that the blocks maintained closure generally between 98% and 102% for all mineralised domains.
- Assessment of the histograms and correlation coefficients showed that the relationship between elements within the input sample data has been maintained in the block grades estimates and the grade distribution has been maintained in the estimate with an acceptable level of smoothing.

Resource Classification

Mineral Resources have been classified into the Measured, Indicated and Inferred category based on drillhole spacing, nature and quality of the drilling and sampling methods, geological understanding and confidence, grade continuity, QAQC analysis, confidence in the estimate of the mineralised volume, results of the model validation and results of metallurgical test work.

Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. The results of the validation of the block model show good correlation of the input data to the estimated grades.

The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit. Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. The statement relates to global estimates of tonnes and grade.

All mineralisation has been classified as Inferred due to current relatively wide spaced drilling of 80m x 40m (or greater), mineralisation displays moderately good continuity and is considered geologically complex due to folding and intrusive units cutting the mineralisation. Lack of diamond drilling data to confirm the density estimate is the highest risk to the estimate in regards to predicting tonnages, however Atlas feels that the applied density is realistic and not overstated based on its understanding of the mineralisation and observations from other nearby deposits with similar characteristics.

Cut-Off Grade

The criteria for defining mineralised material at Warrawanda is >50% Fe and <15% SiO2, which appears to be a natural grade boundary. These cut-off grades were used to separate mineralised material from waste. Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the proposed open pit mining method and proposed processing methodology to consistently produce material suitable to meet Atlas product specification. This cut-off grade methodology is used consistently for reporting of all Mineral Resources at Warrawanda. The tabulated resources are reported using a 50% Fe cut-off grade on a block by block basis.

Mining and Metallurgical methods and parameters and other modifying factors

The Warrawanda Project is assumed to use conventional open pit mining methodology with selective extraction of ore material using a backhoe configured excavator. This allows a selective ore mining approach comprising 5m benches which are mined in two flitches of 2.5m height. The 2.5m flitches are used in order to reduce ore dilution and loss.

A simple, low cost crush and screening processing route is utilised to produce a single, fines only product at a specified grade. It is a reasonable assumption that the Warrawanda Project resources will eventually be economically extracted based on their proximal location to existing Atlas projects and infrastructure and also due to their favourable size and grade characteristics which will fit the Atlas product specification.

Warrawanda Project JORC 2012 Table 1 Assessment Criteria

WISHBONE RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA WISHBONE MINERAL RESOURCE ESTIMATE – SEPTEMBER 2011	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• Reverse circulation (RC) drilling was used to obtain 2.0m down hole interval samples. The samples were passed through a cone splitter to collect a nominal 4.0-6.0kg sample (approximately 10% split ratio) into pre-numbered calico bags • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 2 duplicates are taken for every 100 samples (1:50) for samples collected prior to January 2011. • Post January 2011, duplicates were 5 duplicates were collected for every 100 samples (1:20). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 80m by 40m & 60m by 30m. • RC holes (257 holes for 19,600m) – used in estimate. • No DDH have been drilled to date.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 3152 Good (30.8%), 1056 Fair (10.3%) and 453 Poor (4.4%), 5566 blank/un-recorded (54.4%). • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No comparison between twin RC or diamond drillholes was conducted to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling. • Atlas is satisfied that the RC holes have taken a sufficiently representative sample of the mineralisation and minimal loss of fines has occurred in the RC drilling resulting in minimal sample bias. • No relationship between sample recovery and grade has been demonstrated.
Logging	• Prior to January 2011, geological logging was completed for 1m interval according to Atlas procedure, but sampled on 2m intervals. • Post January 2011, geological logging was completed for 2m interval to coincide with sample interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • RC Logging records the abundance/proportion of specific minerals/material types and lithologies, hardness recorded by physical chip percent measurement, weathering and colour. • The entire lengths of RC holes were logged on a 2m interval basis, 100% of the drilling was logged. Where no sample was returned due to voids/cavities it is recorded as such. • 10,227 RC samples were logged.

	• No geophysical data have been completed for the Wishbone prospect. • No downhole surveys have been completed for the Wishbone prospect.

Sub-sample techniques and sample preparation	**Sampling technique:**
	• RC Chip Samples:
	• ~2.6kg RC chip samples are collected via cone splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible.
	• The sample sizes are considered to be appropriate to correctly represent the mineralisation at Wishbone based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements.
	Sample preparation:
	• Sample dried at 105°C for 12-24 hrs
	• Crushed to nominal -3mm
	• Pulverised to 90% passing at 75µm
	Quality Control Procedures
	• Duplicated sample (prior to January 2011): 2 every 100 samples (1:50).
	• Duplicate samples (post January 2011): 5 every 100 samples (1:20).
	• Certified Reference Material assay standards inserted:
	  o 2 in every 100 samples (1:50) prior to January 2011.
	  o 5 in every 100 samples (1:20) post January 2011.
	• Overall QAQC insertion rate of 1:10.
	• Sample weights recorded for all samples.
	• Lab duplicates taken where large samples required splitting down by the lab.
	• Lab repeats taken and standards inserted at predetermined level specified by the lab.

Quality of assay data and laboratory tests	• All samples submitted to Ultratrace Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that 80% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice. • Laboratory procedures are in line with industry standards and are appropriate for iron ore analysis.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel.

	• The Competent Person has visited site and inspected the sampling process in the field and also inspected the Laboratory. • Primary data are captured on field Toughbook laptops using acQuire[tm] software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • Documentation related to data custody, validation and storage are maintained on the company's server. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection level values to half positive detection.
Location of data points	• All Collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • No downhole surveys have been completed at the Wishbone prospect. • The grid system for Wishbone is MGA_GDA94 Zone 51. • Topographic data was based on Landgate survey completed in 2007 on a 10m resolution contours. The datum is GDA94 with projection MGA Zone 51.
Data spacing and distribution	• Drill spacing on an approximate 80m by 40m & 60m by 30m grid. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• No geological interpretation available. However, the current understanding of the Wishbone deposit represents a series of thin waste bands which are conformable to stratigraphy. These bands were modeled along strike, however due to inconsistent logging have been assigned as "waste". The geochemistry suggests a mafic rock, possibly dolerite. Minor shales, ultramafic and clay horizons have been observed. • The majority of drill holes were drilled dipping Southwest with a small proportion drilled either vertically or dipping towards the East. As such, due to the varying intersection angles, all results are defined as downhole widths.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Wishbone is located within Exploration Lease E52/1815 and E52/1771. These tenement is 100% Atlas owned.

	• The tenement sits within the Nyiyaparli People Native Title Claim (WC2005/006). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• Initial exploration drilling conducted by Warrick in 2008 and 2009.
Geology	• The Wishbone Prospect lies within the Woggaginna Greenstone Belt of the Sylvania Inlier. The Sylvania Inlier comprises mostly Archaean granitoids which have intruded greenstones including the Woggaginna belt. The rocks of these greenstone belts were deposits near exposed granitoid basement, and form layered sequences of low to medium grade metavolcanics, mafic intrusions, and metasedimentary rocks. To the NW, the Sylvania Inlier is unconformably overlain by mafic volcanics, felsic volcanics and intrusive rocks, carbonates, clastic metasedimentary rocks and banded iron formation. Three phases of deformation have been recorded in the literature. The earliest deformation (D1g) was accompanied by greenschist-facies metamorphism and is believed to have formed a layer-parallel foliation. Tight, NW facing folds were the result of a second deformation event (D2g). A third deformation (D3g) is thought to have produced open, upright folds that plunge steeply to the south and refold (D2g) structures (Tyler, 1991).
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• Initial exploration drilling conducted by Warrick in 2008 and 2009.
Further work	• Local geological mapping. • Program to collate geophysical density data. • Diamond drill holes for orebody knowledge, geophysical data & core density data. • Twinned holes to verify Warrick drill holes.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Geological logging was conducted on a 1m scale (prior to January 2011) and 2m scale (post January 2011), with intervals recorded using the standard Atlas geological log. The log is entered digitally in the field onto a Toughbook

	computer, and the files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Wishbone Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• Current understanding of the Wishbone deposit represents a series of thin mineralisation bands which are conformable to stratigraphy. These bands were modeled along strike. The geochemistry suggests a mafic rock, possibly dolerite. Cross cutting mineralisation in various locations.
Dimensions	• The Wishbone Mineral Resource strikes NW to SE and has dimensions of approximately 3000m (NW) and 280m (SE) and extends from surface to a maximum depth of 90m, with an average depth of 50m. A thin, 10m thick hydrated layer sits over the top of the entire resource.
Estimation and modelling techniques	• Mineralisation was domained according to type (hydrated or primary). Each mineralised unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional mineralisation surfaces. • Interpretation does not extend mineralisation more than half drill spacing. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Kriging Neighbourhood analysis (QKNA) was undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 0mE to 3600mE and 0mN to 3400mN and elevation from 0mRL to 300mRL. • A single block model to encompass the Wishbone Mineral Resource was constructed using a 20mN by 40mE by 5mRL parent block size with sub-celling to 10mE by 5mN by 1mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Ordinary Kriging was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) into geozone 201-204 (primary mineralisation) and geozone 501-504 (hydrated mineralisation). • Inverse Distance was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) into waste geozones (101). • Search directions and ranges determined from variogram modelling used to constrain the block interpolation. Estimation search strategies have sought to ensure robust estimates while minimising conditional bias.

	• Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2, and 5 drill spacings for run 3. • A minimum of 20 samples and a maximum of 48 samples are required for an estimate in run 1, the minimum number of samples reducing to 16 for run 2 and 10 for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 6 samples from any one drill is allowed. • Block discretisation of 5, 5, 2 was applied. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Kriging Efficiency and Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • 39.8% of samples logged as dry, 2.5% of samples were logged as moist, 3.3% were logged wet and 54.4% were blank/un-recorded. • The majority of the Wishbone deposit (72%) lies above the water table believed to be at 586mRL (40m below surface).
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised and un-mineralised material. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• A globally assigned density of 2.8t/m3 has been assigned to all mineralisation based on information from nearby deposits. • No other metallurgical factors or assumptions have been made or are know at this time.
Environmental factors or assumptions	• Blocks with estimated S grades greater or equal to 0.3% have been flagged as high risk. The blocks identified with elevated S values are waste blocks.
Bulk density	• Due to the lack of geophysical density collected, a global density of 2.80t/m^3 was applied to mineralised blocks (hydrated and primary mineralisation). • This is a bulk commodity project.
Classification	• Mineral Resources have been classified as Inferred category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally.

	• The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade. The confidence in this resource estimate has been deemed appropriate as a basis for long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • There has been no production from the Wishbone deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource.

Reserve and Resource Update

West Pilbara Project

West Pilbara Mineral Resources - As at 30 June 2014 (50% Fe Cut-Off Grade)										
Location	Resource Classification	Kt	Fe (%)	SiO_2 (%)	Al_2O_3 (%)	P (%)	S (%)	LOI (%)	CaFe* (%)
Anthiby Well CID	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	38,000	53.6	7.5	4.8	0.04	0.01	9.3	59.1
Sub-Total	**Measured**	**0**	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**	**0.0**	**0.0**
	Indicated	**0**	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**	**0.0**	**0.0**
	Inferred	**38,000**	**53.6**	**7.5**	**4.8**	**0.04**	**0.01**	**9.3**	**59.1**
Total		**38,000**	**53.6**	**7.5**	**4.8**	**0.04**	**0.01**	**9.3**	**59.1**

Tonnes are rounded according to resource classification; grades are carried through unaffected by rounding and may result in small discrepancies.

*Calculated calcined Fe grade where CaFe=(Fe%/(100-LOI%))*100

West Pilbara JORC 2012 Mineral Resources summary

Geology and Geological Interpretation

The West Pilbara Project contains one deposit, Anthiby Well channel iron deposit. The West Pilbara Project was initially discovered by Giralia Resources and in March 2011, Atlas subsequently acquired the project and has 100% ownership.

The Anthiby Well area is situated within shelf facies rocks of the Ashburton Basin and lies along the southern margin of the Hamersley Basin. Rocks of the Lower Proterozoic Wyloo Group (Beasley River Quartzite, Cheela Springs Basalt, The Mount McGrath Formation, Duck Creek Dolomite and the Ashburton Formation) occur in the area, which unconformably overlies the Mount Bruce Supergroup (Turee Creek Group, Hamersley Group, Fortescue Group) with the contact between the two Groups considered to be tectonic.

Major overall west-northwest trending structures are recognised through the Basin with a general dextral sense of late movement. Some of the structures appear to be thrusts/reverse faults whilst others are shears (as in the Neerambah Complex) forming shear-link patterns, considered to have been subjected to reactivated phases of movement over a long time period.

Exploration license E08/1712 (Anthiby Well) covers the east-west trending belt of shelf facies rocks within the Lower Proterozoic Wyloo Group.

The formations that outcrop in the area represent a transition from shallow water volcanism to deep-water sedimentation and include the Cheela Springs Basalt, the Mount McGrath Formation, the Ashburton Formation and the Duck Creek Dolomite. The tenement straddles the contact between the Mount McGrath Formation and the Cheela Springs Basalt. This contact zone is bounded to the north by Fortescue and Hamersley Group sediments and to the south by Ashburton Formation.

The project area contains a cluster of channel iron deposits (CID) located at the western and eastern parts of tenement. The Western CID mesas are elongated north south with the largest 1800m long and up to 400m wide. The Eastern CID mesas range from circular to east west trending deposits. The largest (East 3) is approximately 2km long and up to 400m wide. The mesas occur up to 40m above the plain surface, are typically undulating and partially incised by drainages. Visible in surface exposures of CID material are characteristic fossil wood fragments.

Reserve and Resource Update

Drilling intersected pisolitic-goethite/limonite±maghemite CID from surface. Maximum thickness of CID (>50% Fe) is 32m. Typically the higher grade CID (>50% Fe) lies at or near surface with the lower grade (>40% Fe) more siliceous CID (SCID) lying below. Below the SCID drilling intersected predominantly clay rich zones where the Fe grades are very low. The CID Fe mineralisation at Anthiby Well is low and P and S, but high in Al_2O_3.

The West Pilbara, Anthiby Well CID resource does not contain an underlying geological model. The mineralisation zones are modelled generally using greater than 50% Fe and less than 15% SiO_2 cut-off to define ore from waste. A further >40% Fe was used to delineate a SCID unit.

Drilling Techniques

Exploration drilling over the West Pilbara's Anthiby Well CID deposit occurred between 1988 and 2010 completed by Giralia Resources. To data a total of 863 drill holes have been completed at the Anthiby Well CID deposit totalling 44,230.9m (including 5 PQ3 diamond holes for 1,536.5m). Drilling of the Anthiby Well CID has been by a 140mm Reverse Circulation (RC) face sampling hammer and all samples are split by a riffle splitter. Diamond drilling has been at PQ3 diameter.

- Current drill spacing at the Anthiby Well CID deposit is at a nominal drill spacing of 200mE x 100mN with local areas of 100mE x 200mN.

Geological logging conducted by Giralia Resources was logged at 1m intervals using Microsoft Excel templates. The logs were sent to the Perth office and managed in a SQL based database.

All drillhole information is stored in the Atlas acQuire drillhole database. The database is managed by a full-time Database Administrator. The database undergoes regular audits and checks to maintain its validity and overall JORC compliancy.

None of the collar locations has been surveyed by licensed surveyors using accurate methods such as DGPS. The collar locations are based on hand held GPS coordinates, with the elevations corrected to better fit the topography. The lack of accurate survey adds risk to the resource estimate; however this is thought to be minor.

No downhole surveys have been conducted to date at the Anthiby Well CID deposit.

Sampling and Sub-Sampling

The Giralia Resources RC sampling procedure involved collected the samples drill at 1m intervals, riffle split, with the split fractions then being composited to form 2m composite samples. The 2m composite samples were then re-split by riffle splitting to reduce the total amount of sample sent for analysis.
To ensure sample precision and accuracy, Giralia Resources inserted a standard and a duplicate every 50 samples for an overall rate of 4%.

Sample Analysis Methods

Samples were sent to Spectrolab commercial laboratories in Geraldton for analysis of the extended iron ore suite of elements. This consists of XRF analysis for Fe, SiO_2, Al_2O_3, P, CaO, K_2O, MgO, MnO, S, TiO_2, Na_2O and a thermo gravimetric measurement for loss on ignition (LOI) at 1000^{o}C. The sample preparation of RC samples involved weighing, oven drying, pulverization of the entire sample to a grind size of 90% passing 75 micron. A pulp sub-sample was collected and formed into a fused bead for XRF determinations on the iron ore suite of elements and a LOI by thermogravimetric techniques.

To ensure quality assurance and control (QAQC) of the sampling and assaying procedure, Giralia Resources submitted field duplicates and standards to the laboratory for analysis. The duplicates and standards are inserted at predefined intervals at a rate of 2% for standards and 2% for duplicates for an overall insertion rate of 4%. The laboratory also inserted its own internal standards and pulp repeat analyses at predefined intervals. Sample collection procedures and QAQC protocols employed by Giralia Resources are commensurate with standard industry practices.

The QAQC data for the West Pilbara project area was reviewed prior to commencing the resource estimates for West Pilbara's Anthiby Well CID deposit and were found to be of reasonable precision and analytical accuracy and is deemed to be acceptable for resource estimation purposes and JORC compliancy.

Estimation Methodology

The drillhole data was composited prior to running the estimation process using a 2m sample interval to minimise any sample bias due to sample length. The compositing was run within the attribute fields to ensure no composite intervals crossed any lithological contacts or grade boundaries.

Variograms were generated to assess the grade continuity of the various elements and as inputs to the kriging algorithm used to interpolate grades. Snowden Supervisor software was used to generate and model variograms and conduct statistical analysis.

Variographic analysis was undertaken for all mineralised geozones for the Anthiby Well CID resource. The elements that were analysed include 6 elements, i.e. Fe, SiO_2, Al_2O_3, P, LOI and S.

To generate the best experimental variograms the data was first transformed to a normal scores distribution where upon the variogram was modelled and on completion a back transform was applied. The variogram ranges and directions of continuity are consistent with the geological understanding and are considered appropriate.

Block models were constructed in Datamine software. The parent block sizes 50m (Easting) by 50m (Northing) by 50 (Elevation) with sub-block celling was used to honour the geometric shapes.

The volume block model was created using the wireframes of the mineralisation, topography and waste. The block models were cut to the mineralised wireframes and all the blocks outside of the wireframes and mesa limiting solids were discarded. The blocks are coded according to their location relative to the wireframe surfaces using the same coding as in the sample flagging.

Giralia Resources estimated Fe, SiO_2, Al_2O_3, P, LOI and S grades using Ordinary Kriging for the mineralised horizons (CID and SCID). Waste horizons were estimated by Inverse Distance method. Inverse distance squared was also carried out at the same time as a check.

The preferred estimation parameters were chosen based on neighbourhood analysis, whereby several estimation parameters were tested to optimise the estimation search. This was represented by best kriging efficiency, slope regression values and number of blocks filled. Search ellipses were orientated based on the geometry of the mineralisation with the search ellipses increased by two times the first pass for the second pass and twenty times the first pass for the third pass.

Due to the lack of downhole geophysical density data collected at the Anthiby Well CID deposit , a global density of 2.75t/m^3 and 2.7t/m^3 was applied to the mineralised CID (>50% Fe) and siliceous CID (>45% Fe) horizons. The density values were derived from a limited number of density determinations performed by Giralia resources. All tonnages reported are on a 'dry' basis, this is a bulk commodity project.

The estimates were validated using:

- A visual comparison of block grade estimates and the drillhole data.
- Statistical comparison between the original composite grades and the estimated block grades.
- Moving window averages comparing the mean block grades to the composites.
- Histogram comparison of the original composite grades and the block estimated grades.

The conclusions from the model validation work include:

- Visual comparison of the model grades and the corresponding drillhole grades shows a good correlation.

- A comparison of the global drillhole mean grades and with the mean grades of the block model estimate (for each domain) shows that the block model mean grades are typically within 5-10% of the drillhole means which is a good outcome with the exception of poorly sampled regions.

- The trend plot grades show a good correlation between the block model grades compared with the drillhole grades.

- Assessment of the histograms showed that the relationship between elements within the input sample data has been maintained in the block grades estimates and the grade distribution has been maintained in the estimate with an acceptable level of smoothing.

Resource Classification

All Mineral Resources at West Pilbara project have been classified into the Inferred category based on the wide drillhole spacing of 200mE x 100mN (or greater), nature and quality of the drilling and sampling methods used by Giralia Resources at the time, basic level of geological understanding and confidence, grade continuity, QAQC analysis, confidence in the estimate of the mineralised volume and results of the model validation.

Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. The results of the validation of the block model show good correlation of the input data to the estimated grades.

The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit. Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. The statement relates to global estimates of tonnes and grade.

Cut-Off Grade

The criteria for defining mineralised material at the West Pilbara project is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary. These cut-off grades were used to separate mineralised material from waste. Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the proposed open pit mining method and proposed processing methodology to consistently produce material suitable to meet Atlas product specification. This cut-off grade methodology is used consistently for reporting of all Mineral Resources at the West Pilbara Project. The tabulated resources are reported using a 50% Fe cut-off grade on a block by block basis.

Mining and Metallurgical methods and parameters and other modifying factors

It is currently assumed that conventional open pit mining methodology, similar to other Atlas projects, with selective extraction of ore material using a backhoe configured excavator. This allows a selective ore mining approach comprising 5m benches which are mined in two flitches of 2.5m height. The 2.5m flitches are used in order to reduce ore dilution and loss.

It is expected that a simple, low cost crush and screening processing route is utilised to produce a single, fines only product at a specified grade. It is a reasonable assumption that the West Pilbara resources will eventually be economically extracted based on their proximal location to existing/proposed projects and infrastructure. The current grade characteristics will need further evaluation to determine if the material can be upgraded to better fit the Atlas product specification or as a standalone product which will require blending with other Atlas product to improve its specifications.

West Pilbara Project JORC 2012 Table 1 Assessment Criteria

ANTHIBY WELL CID RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA ANTHIBY WELL CID MINERAL RESOURCE ESTIMATE – DECEMBER 2009	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• RC sampling methodology involved the collection of samples drilled over 1m intervals using a riffle splitter, with the split fractions then being composited to form 2m composite samples. The 2m composite samples were then re-split by riffle splitting, to reduce the total amount of sample sent for analysis. • Samples were dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • To monitor the representivity of the sample, duplicates were inserted by Giralia Resources.
Drilling techniques	• Drill spacing is predominantly 100mN by 200mE with some areas containing 200mN by 100mE drill spacing. • A total of 87 RC holes were used in estimate. Drill holes were scattered throughout 6 mesas which encompass the Anthiby Well project area. • No diamond holes have been completed to date.
Drill sample recovery	• Sample weights were not recorded. • No comparison between twin RC or diamond drillholes was conducted to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling.
Logging	• Logging of every 1m interval (Giralia procedure) corresponding with 1m sample interval. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • None of the drill holes within the dataset contain downhole geophysical data. • None of the drill holes within the dataset were downhole surveyed. All holes were drilled vertically.
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • RC chip samples are collected via riffle splitter for each 1m interval drilled and composited to 2m into a pre-numbered calico bag. The 2m composited samples were then re-split by riffle splitting, to reduce the total amount of sample sent for analysis. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at Anthiby Well based on the style of mineralisation, the thickness and consistency of intersections. **Sample preparation:** • Sample dried at 105°C for 12-24 hrs • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality Control Procedures** • Duplicated sample inserted according to Giralia Resources procedure. • Certified Reference Material assay standards inserted according to Giralia Resources procedure. • Sample weights not recorded for any samples.

	• Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality of assay data and laboratory tests	• All samples submitted to Spectrolab Laboratory in Geraldton are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards and field duplicates analysis are used for quality control. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Giralia Resources and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that all pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. • The Competent Person has not visited site and inspected the sampling process in the field and has not inspected the Spectrolabs Laboratory. • Primary data was initially collected by Giralia Resources. Atlas acquired the project in March 2011. • All data is sent to Perth and stored in the secure, centralised SQL database which is managed by a full time database administrator.
Location of data points	• At the time of the Mineral resource estimate, none of the collar locations had yet been surveyed by licensed surveyors. The collar locations are based on hand held GPS coordinates, with the elevations corrected to better fit the topography. • None of the drill holes within the dataset used for the estimation contain down hole surveys. All holes were drilled vertically. • A 10m resolution topographic surface DTM was provided by Giralia. This topographic surface has been manipulated by CSA, in consultation with Giralia to better fit the collar location and physically mapped mesa top edge boundaries. The source of the topography is unknown. • The grid system for Anthiby Well is MGA_GDA94 Zone 50.
Data spacing and distribution	• Drill spacing is predominantly 100mN by 200mE with some areas containing 200mN by 100mE drill spacing. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification applied under the 2004 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological	• The Anthiby Well project contains a cluster of Channel Iron Deposits mesas (CID) located at the western and eastern parts of tenement. The Western CID

structure	mesas are elongated North-South. The drill spacing here is 200mN by 100mE. The Eastern CID mesas range from circular to East-West trending deposits. The drill spacing here is 100mN by 200mE. • All 87 holes used in the estimation were drilled vertically. Drilling intercepts below the CID mesas indicate clay rich zones.
Sample security	• Chain of custody is managed by Giralia Resources. • Samples are transported to the relevant Geraldton laboratory by courier. • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Anthiby Well is located wholly within Exploration Lease E08/1712. This tenement is 100% Atlas owned. • The tenement sits within the Puutu Kunti Kurrama and Pinkura Native Title Claim (WC2005/004). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• All drilling activity has been completed by Giralia Resources. Atlas acquired the project in March 2011. No further work has been completed by Atlas to date.
Geology	• The project area contains a cluster of Channel Iron Deposit mesas (CID) located at the western and eastern parts of tenement. The Western CID mesas are elongated north-south with the largest (West 2) 1800m long and up to 400m wide. The Eastern CID mesas range from circular to east-west trending deposits. The mesas occur up to 40m above the plain surface, are typically undulating and partially incised by drainages. Visible in surface exposures of CID material are characteristic fossil wood fragments.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – “Sampling techniques”, “Drilling Techniques” and “Drill Sample Recovery”.
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.

Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• All drilling activity has been completed by Giralia Resources. Atlas acquired the project in March 2011. No further work has been completed by Atlas to date.
Further work	• Collect all drill collars accurately using DGPS. • Infill RC drilling to improve both geological and orebody knowledge. • Collect downhole geophysical (gamma, density, magsus and resistivity). • Diamond drill holes to enable dry bulk density to be obtained. • Diamond twin drilling to confirm RC drilling results. • Topographic survey to improve resolution.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Logging of every 1m interval (Giralia procedure) corresponding with 1m sample interval. • Geological logging was conducted on a 1m scale with intervals recorded using the standard Giralia Resource geological log. The log is entered digitally in the field onto a Toughbook computer, and the files are then transferred to the Perth office electronically via email. Atlas acquired the project in March 2011 and began migrating the data into the Atlas acQuire database. A full-time database administrator was responsible for the migration of data. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Anthiby Well Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• No site visits have been taken since Atlas acquisition of the project. No further work has been completed in the project area since Atlas acquisition in March 2011.
Geological interpretation	• Giralia Resource provided sectional interpretations of the mineralised zones. Wireframe solids were created by CSA Global using Datamine software. • No mention was made regarding any geological interpretation according to the CSA Global resource report. • All drill holes were drilled vertically and as such intercept of mineralisation are considered true mineralisation thickness.
Dimensions	• The project area contains a cluster of Channel Iron Deposit mesas (CID) located at the western and eastern parts of tenement. The Western CID mesas are elongated north-south with the largest (West 2) 1800m long and up to 400m wide. The Eastern CID mesas range from circular to east west trending deposits.
Estimation and modelling techniques	• Mineralisation was domained according type (CID or SCID). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional mineralisation surfaces and solids. • Univariate statistical analysis and variogram modelling completed with GeoAccess Professional software and used to define the spatial continuity of all elements within the mineralised domains. • Block model extends from 467800mE to 478000mE and 7473250mN to 7476850mN and elevation from 240mRL to 340mRL. • A single block model to encompass the Anthiby Well Mineral Resource was constructed using a 50mN by 50mE by 5mRL parent block size with sub-celling to 5mE by 5mN by 1mRL for domain volume resolution. • The block model has been assigned unique mineralisation codes that

	correspond with the geological domain as defined by the wireframes and solids. • Ordinary Kriging was used to estimate elements (Fe, SiO_2, Al_2O_3, P, LOI and S) into mineralised CID domain (>50% Fe) and Siliceous CID (>40% Fe). Inverse distance squared was also carried out at the same time as a check. • Estimation method for waste material (<40% Fe) was not mentioned in the CSA Global resource report. • Variography analysis was conducted for Fe and P in the CID & SCID material. The parameters obtained from the Fe modelling were also used to estimate the associated contaminant elements, other than P. • A minimum number of 6 and a maximum of 24 samples were required for a block estimate to be made. A maximum of 5 samples from any one drill hole were used per block estimate blocks further from data. The second search dimensions were twice those of the first search with all other parameters identical. A third search pass with dimensions twenty times for first was utilized to ensure all blocks were estimated. • Datamine software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, easting, northing and RL swath plots to compare grades along slices through the deposit.
Moisture	• Tonnages are estimated on an ‘assumed’ dry basis. • No data was available to enable the water table (if any) to be determined.
Cut-off parameters	• The criteria for mineralised material is >50% Fe. A further >40% Fe was used to defined SCID unit.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No other assumptions on mining methodology have been made.
Metallurgical factors or assumptions	• No metallurgical testwork has been completed to date and no other assumptions or factors are known.
Environmental factors or assumptions	• There are no zones identified as sulphur risk in the Anthiby Well deposit and no other environmental factors or assumptions are known.
Bulk density	• A global density of $2.75t/m^3$ was assigned to CID (>50% Fe) material. • A global density of $2.7t/m^3$ was assigned to SCID (>40% Fe) material. • No information was available detailing the density value assigned to waste (<40% Fe) material. • This is a bulk commodity project.
Classification	• The Anthiby Well Resource has previously been classified as Inferred category and reported under the 2004 JORC code by CSA Global (on behalf of Giralia). • No further on ground work has been completed by Atlas since acquisition of the project apart from auditing the original resource estimation and reproducing it to Atlas standards and reporting under the JORC 2012 standards. • Mineral resources have been classified by the Competent Person into the Inferred and Indicated categories based on RC drillhole spacing (100mN x 200mE), geological interpretation confidence, QAQC, sampling methodology and overall data quality and confidence, grade continuity and resultant estimation statistical quality. • Mineral resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation.

	• The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model show good correlation of the input data to the estimated grades. • The geological model and mineral resource estimation appropriately reflect the Competent Persons view of the deposit and appropriate account has been taken of all relevant factors.
Audits or reviews	• This mineral resource has not been audited externally. • Atlas have undertaken an internal review of the mineral resource estimate and is satisfied the estimation is valid and of sufficient confidence to support an Inferred classification.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The confidence in this resource estimate has been deemed appropriate as a basis for long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • There has been no production from the Anthiby Well deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource. • The statements relate to global estimates of tonnes and grade.

Reserve and Resource Update

Mid-West Project

Mid West Mineral Resource Table - As at 30 June 2014 (50% Fe Cut-Off Grade)										
Location	**Resource Classification**	**Kt**	**Fe**	**SiO_2**	**Al_2O_3**	**P**	**S**	**LOI**	**CaFe***
			(%)	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**
Weld Range	Measured								
	Indicated								
	Inferred	5,000	64.1	3.3	2.7	0.05	0.01	1.6	65.1
Beebyn	Measured								
	Indicated								
	Inferred	7,000	57.2	8.4	3.0	0.07	0.01	5.2	60.4
Sub-Total	**Measured**								
	Indicated								
	Inferred	12,000	60.0	6.3	2.9	0.06	0.01	3.7	62.3
Total		**12,000**	**60.0**	**6.3**	**2.9**	**0.06**	**0.01**	**3.7**	**62.3**

Tonnes are rounded according to resource classification; grades are carried through unaffected by rounding and may result in small discrepancies.

*Calculated calcined Fe grade where CaFe=(Fe%/(100-LOI%))*100

<u>Mid-West JORC 2012 Mineral Resources summary</u>

Geology and Geological Interpretation

The Mid-West Project is comprised of two deposits, Weld Range and Beebyn. All deposits within the Mid-West Project area are owned 100% owned by Atlas.

Weld Range is located in the Murchison Province which is in the northwest of the granite-greenstone terrain of the Yilgarn Craton. The province contains six major stratigraphic components which are made up of two greenstone belts, consisting of metavolcanic-metasedimentary sequences, and four suites of granitoids. The two greenstone belts, the Luke Creek Group and the overlying Mount Farmer Group, together form the Murchison Supergroup, Watkins and Hickman. From the Lake Creek Group the most important unit contained in it relating to iron enrichment for Weld Range is the Windanning Formation as the iron enrichment appears to be restricted to it.

During the evolution of the Murchison Province there has been five major phases of deformation recognised. These range from early recumbent folding and possible thrusting to tight isoclinal folding to finally extensive systems of shear zones and fault generation. Metamorphism for the province ranges from prehnite-pumpellyite to granulite facies. However the most common form of metamorphism is greenschist or lower amphibolites facies.

The Weld Range area is marked physiographic feature, 3-5km wide, 40km long, within which there is good exposure of metabasalts showing mainly doleritic and minor basaltic and gabbroic textures. Such exposures occur between ridges defined by weathered, steeply dipping beds of banded iron-formation which form less than 10% of the thickness of the sequence.

The Beebyn project is located in the Archaean Meekatharra-Wydgee greenstone belt of the Murchison Province of Western Australia. The northern area of the tenement overlies an approximately 5km long segment of the Weld Range. The Weld Range is a NE trending range composed of banded iron formations intruded by dolerite and gabbro. South of the Weld Range there are extensive areas of cover. Near the southern boundary of the tenement NNE trending outcrops of basalt (both tholeiitic and high magnesium basalt) and zones of talc carbonate and talc chlorite schist are present. East and south east of the Weld Range biotite to porphyritic monzogranite occurs.

At Weld Range, the tenement contains jaspitic BIF, of the Windanning Formation, dolerite and alluvial cover. The area consists of two main outcropping prospects named Little Wilgie Mia which are considered to be one main BIF unit. There is also two parallel iron enriched BIFs which lie proximal to the main outcropping BIF. Mineralisation is considered to be a combination of goethite and hematite which have been created through the supergene enrichment of BIF. The outcropping strike lengths of the various mineralised lens vary from a few metres to 520m with thickness's up to 70m. The strike of the deposit is NE and SW with the dip generally being 80^{o} to the SE. There is a portion of the Little Wilgie Mia lens which has a dip of approximately 80^{o} to the NW. From drilling the depth of the BIF is in excess of 80m vertically in the main prospect.

At Beebyn, mineralisation occurs within a massive BIF unit. The deposit comprises four iron enriched zones dipping almost vertically and trending NE-SW. The host BIF unit extends to the south-east out of Giralia's tenement into Midwest-Sinosteel JV ground, where it hosts a similar but significantly larger hematite-goethite resource. The mineralised zones have been defined on the basis of their iron content alone and do not appear to have distinctive lithological or structural characteristics.

The Beebyn resource is interpreted to be hosted within a steeply SE dipping massive BIF unit approximately 20-25m wide. The mineralisation zones are modelled generally using greater than 50% Fe and less than 15% SiO_2 cut-off to define ore from waste.

The Beebyn resource does not contain a geological model and only comprises a mineralisation model. This is due to a lack of understanding of the geology to date. The mineralisation zones are modelled generally using greater than 50% Fe and less than 15% SiO_2 cut-off to define ore from waste.

Drilling Techniques

All RC drilling of the Mid-West Project has been by a 140mm Reverse Circulation (RC) face sampling hammer and all samples are split by a riffle splitter. No diamond drilling has been completed to date.

Drilling at Weld Range by Atlas Iron Ltd consist of 14 RC holes for a total of 1,131m with drill spacing varying from 60m x 60m to 60m x 30m. The majority of the holes were drilled with an inclination of -60^{o} and an azimuth 330^{o}. Drilling was restricted to disturbed ground in accordance with the submitted program of works (POW) and focused on the main BIF unit. For the estimation process 6 RC holes drilled by Commercial Minerals, which was encompassed by the small open pit, were used to boost the data available.

Drilling activity at Beebyn was undertaken by Giralia Resources during 2007. A total of 44 RC holes for 3,691m were drilled across four deposits.

- Current drill spacing at Weld Range is at a nominal spacing of 60m x 60m with local areas drilled down to 60m x 30m. Beebyn has been drilled to a nominal drill spacing of 100m x 20m.

Geological logging conducted by Giralia Resources was logged at 1m intervals using Microsoft Excel templates. The logs were sent to the Perth office and managed in a SQL based database.
Geological logging at Weld Range by Atlas was completed at 1m intervals using Microsoft Excel templates. The logs were sent to the Perth office and managed in a SQL based database. A total of 1,131 RC samples were logged.

Licenced surveyor MHR Surveyors completes a collar pickup on all available drill collars using a Trimble R8 Real Time Kinematic Differential GPS (DGPS). The DGPS gives an accuracy of +/- 0.05 m for Easting and northing location and +/- 0.1 m for the RL (height above sea level).

All available holes from the Weld Range and Beebyn deposit were downhole surveyed (where possible) using an Eastman and Reflex camera respectively.

Downhole geophysical data was not collected at the Weld Range or Beebyn deposits.

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All drillhole information is now stored in the Atlas acQuire drillhole database. The database is managed by a full-time Database Administrator. The database undergoes regular audits and checks to maintain its validity and overall JORC compliancy.

Sampling and Sub-Sampling

The Giralia RC sampling methodology involved the collection of samples drilled over 1m intervals using a riffle splitter, with the split fractions then being composited to form 2m composite samples. The 2m composite samples were then re-split by riffle splitting, to reduce the total amount of samples sent for analysis.

Atlas sampling methodology at Weld Range involved the collection of 2m sample interval passed directly through a rig mounted riffle splitter. No further sample reduction stage was required.

Sample Analysis Methods

Atlas samples were sent to Ultratrace and SGS commercial laboratories in Perth for analysis of the extended iron ore suite of elements. This consists of XRF analysis for Fe, SiO_2, Al_2O_3, P, CaO, K_2O, MgO, MnO, S, TiO_2, Na_2O and a thermo gravimetric measurement for loss on ignition (LOI) at 1000^{o}C. Giralia samples were sent to Spectrolabs commercial laboratory n Geraldton for analysis of Fe, SiO_2, Al_2O_3, P, CaO, K_2O, MgO, MnO, S, TiO_2, Na_2O and a thermo gravimetric measurement for loss on ignition (LOI) at 1000^{o}C. . The sample preparation of RC samples involved weighing, oven drying, pulverization of the entire sample to a grind size of 90% passing 75 micron. A pulp sub-sample was collected and formed into a fused bead for XRF determinations on the iron ore suite of elements and a LOI by thermogravimetric techniques.

To ensure quality assurance and control (QAQC) of the sampling and assaying procedure, Atlas submitted field duplicates and standards to the laboratory for analysis. For samples collected prior to January 2011, the duplicates and standards are inserted at predefined intervals at a rate of 2% for standards and 2% for duplicates for an overall insertion rate of 4%. The laboratory also inserted its own internal standards and pulp repeat analyses at predefined intervals. Sample collection procedures and QAQC protocols employed by Atlas are commensurate with standard industry practices.

To ensure quality assurance and control (QAQC) of the sampling and assaying procedure, Giralia Resources submitted field duplicates and standards to the laboratory for analysis. The duplicates and standards are inserted at predefined intervals at a rate of 2% for standards and 2% for duplicates for an overall insertion rate of 4%. The laboratory also inserted its own internal standards and pulp repeat analyses at predefined intervals. Sample collection procedures and QAQC protocols employed by Giralia Resources are commensurate with standard industry practices.

The QAQC data for the Mid-West project was reviewed prior to commencing the resource estimates for Mid-West were found to be of reasonable precision and analytical accuracy and is deemed to be acceptable for resource estimation purposes and JORC compliancy.

Estimation Methodology

The drillhole data was composited prior to running the estimation process using a 2m sample interval to minimise any sample bias due to sample length. The compositing was run within the attribute fields to ensure no composite intervals crossed any lithological contacts or grade boundaries.

For the Weld Range estimation, variograms were generated to assess the grade continuity of the various elements and as inputs to the kriging algorithm used to interpolate grades. Snowden Supervisor software was used to generate and model variograms as well as conduct statistical analysis for the Weld Range deposits respectively.

Block model for the Weld Range deposit was constructed using Surpac software using a 40mN x 20mE x 10mRL parent block size and sub-blocks of 10mN x 20mE x 5mRL. The sub-block size was selected to more accurately

Reserve and Resource Update

define the mineralised volume. The Weld Range resource model was first produced by Atlas Iron in 2009 and is now first reported under the revised 2012 JORC code.

Block model for the Beebyn deposit was constructed using Datamine software using a 10mN x 10mE x 5mRL parent blocks size and sub-blocks of 2.5mN x 2.5mE x 2.5mRL. The sub-block size was selected to more accurately define the mineralised volume. The Beebyn resource model was first produced by Giralia 2007 and is now first reported under the 2012 JORC code.

The volume block model was created using the wireframes of the mineralisation, topography and stratigraphy (where modelled). The block models were cut to the mineralised wireframes and all the blocks outside of the wireframes and topography limiting solids were discarded. The blocks are coded according to their location relative to the wireframe surfaces using the same coding as in the sample flagging.

Giralia Resources estimated Fe, SiO_2, Al_2O_3, P, LOI and S grades using Inverse Distance methods for the mineralised horizons. Waste horizons were estimated by Inverse Distance method.

Atlas estimated Fe, SiO_2, Al_2O_3, P, LOI and S grades using Ordinary Kriging for the mineralised domains at Weld Range.

The preferred estimation parameters were chosen based on neighbourhood analysis, whereby several estimation parameters were tested to optimise the estimation search. This was represented by best kriging efficiency, slope regression values and number of blocks filled. Search ellipses were orientated based on the geometry of the mineralisation with the search ellipses increased by two times the first pass for the second pass and twenty times the first pass for the third pass.

- Due to the lack of downhole geophysical density data collected at both the Weld Range and Beebyn deposits, a global assigned mean density was applied to mineralised domains (>50% Fe). A global density of 3.77t/m^3 and 3.0t/m^3 was applied to mineralised domains at Weld Range and Beebyn respectively. All tonnages reported are on a 'dry' basis, this is a bulk commodity project.

The estimates were validated using:

- A visual comparison of block grade estimates and the drillhole data.
- A global comparison of the average composite grades and estimated grades.
- Histogram comparison of the original composite grades and the block estimated grades was completed for the Weld Range deposit.

The conclusions from the model validation work include:

- Visual comparison of the model grades and the corresponding drillhole grades shows a good correlation.
- A comparison of the global drillhole mean grades and with the mean grades of the block model estimate (for each domain) shows that the block model mean grades are typically within 5-10% of the drilhole means which is a good outcome with the exception of poorly sampled regions.
- Assessment of the histograms showed that the relationship between elements within the input sample data has been maintained in the block grades estimates and the grade distribution has been maintained in the estimate with an acceptable level of smoothing.

Resource Classification

All Mineral Resources at the Weld Range Project have been classified into the Inferred category based on the current drillhole spacing, nature and quality of the drilling and sampling methods, geological understanding and confidence, grade continuity, QAQC analysis, confidence in the estimate of the mineralised volume and results of the model validation.

Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. The results of the validation of the block model show good correlation of the input data to the estimated grades.

The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit. Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. The statement relates to global estimates of tonnes and grade.

Cut-Off Grade

The criteria for defining mineralised material at the Mid-West project is >50% Fe and <15% SiO2, which appears to be a natural grade boundary. These cut-off grades were used to separate mineralised material from waste. Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the assumed open pit mining method and assumed processing methodology to consistently produce material suitable to meet Atlas product specification. This cut-off grade methodology is used consistently for reporting of all Mineral Resources at the Mid-West Project. The tabulated resources are reported using a 50% Fe cut-off grade on a block by block basis.

Mining and Metallurgical methods and parameters and other modifying factors

It is currently assumed that conventional open pit mining methodology, similar to other Atlas projects, with selective extraction of ore material using a backhoe configured excavator. This allows a selective ore mining approach comprising 5m benches which are mined in two flitches of 2.5m height. The 2.5m flitches are used in order to reduce ore dilution and loss.

It is expected that a simple, low cost crush and screening processing route is utilised to produce a single, fines only product at a specified grade. It is a reasonable assumption that the Mid-West resources will eventually be economically extracted based on their proximal location to existing/proposed projects and infrastructure.

Mid-West Project JORC 2012 Table 1 Assessment Criteria

WELD RANGE (WILGIE MIA) RESOURCE JORC 2012 TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA WELD RANGE (WILGIE MIA) MINERAL RESOURCE ESTIMATE – DECEMBER 2009	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• RC sampling methodology prior to January 2011 involved the collection of samples drilled over 2m intervals using a riffle splitter. Where samples exceeded 5.0kg it was then split down to a smaller sample. • 3.5kg sample (average) was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • To monitor the representivity of the sample, 2 duplicates are taken for every 100 samples (1:50) for samples collected prior to January 2011. • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling conducted by Layne Drilling Services in September 2008. • Drill spacing varies from 60m by 60m to 60m by 30m. • RC holes (14 holes for 1,131m) – drilled by Atlas. • Extra 6 RC holes drilled by Commercial Minerals were added to the existing 14 holes to boost data set for the estimation process. • No DDH was completed.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the riffle splitter. This is recorded as good, fair, poor or no sample. • 504 Good (88.7%), 22 Fair (3.9%) and 42 Poor (7.4%). • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No comparison between twin RC or diamond drillholes was conducted to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling. • No evidence of analysis comparing Atlas samples with Commercial Minerals to see bias (if any) in grades.
Logging	• Geological logging was completed for 1m interval according to Atlas procedure. This level of detail supports appropriate Mineral Resource estimation, mining studies and metallurgical studies. • 113 RC samples were logged. • Geophysical data was not collected for any of the RC holes (Atlas). • No downhole survey data was collected for any of the RC holes (Atlas).
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • ~3.8kg RC chip samples are collected via riffle splitter for each 2m interval drilled in a pre-numbered calico bag. Samples are kept dry where possible. • The sample sizes are considered to be appropriate to correctly represent the mineralisation at Wilgie Mia based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of

	intersections, the sampling methodology and percent value assay ranges for the primary elements. **Sample preparation:** • Sample dried at 105°C for 12-24 hrs • Crushed to nominal -3mm • Pulverised to 90% passing at 75µm **Quality Control Procedures** • Duplicated sample (prior to January 2011): 2 every 100 samples (1:50). • Certified Reference Material assay standards inserted: o 2 in every 100 samples (1:50) prior to January 2011. • Overall QAQC insertion rate of 1:10. • Sample weights recorded for all samples. • Lab duplicates taken where large samples required splitting down by the lab. • Lab repeats taken and standards inserted at predetermined level specified by the lab.
Quality of assay data and laboratory tests	• All samples submitted to Ultratrace Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards and field duplicates analysis are used for quality control. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that all pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.
Location of data points	• All Collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • Downhole gyroscopic surveys were not completed for any of the RC holes. • The grid system for Wilgie Mia is MGA_GDA94 Zone 50. • No data was available detailing the source and resolution of the topographic data used in the estimation.
Data spacing and distribution	• Drill spacing varies from 60m by 60m to 60m by 30m. • RC Samples are collected at 2m intervals.

	• This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate for an Inferred resource classification applied under the 2012 JORC code.
Orientation of data in relation to geological structure	• The Wilgie Mia resource does not contain a geological model. This is due to a lack of understanding of the geology to date. More RC infill drilling is required to improve geological knowledge. • The 14 RC holes (drilled by Atlas) were drilled dipping North-West. • No data was available regarding the orientation of the 6 RC holes (drilled by Commercial Minerals).
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Wilgie Mia is located wholly within Mining Lease M20/118. This tenement is 100% Atlas owned. • The tenement sits within the Wajarri Yamtji Native Title Claim (WC2004/010). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• 14 RC holes drilled by Atlas. • Extra 6 RC holes drilled by Commercial Minerals – included in the estimate to boost dataset.
Geology	• Weld range is located in the Murchison Province which is in the northwest of the granitegreenstone terrain of the Yilgarn Craton. The province contains six major stratigraphic components which are made up of two greenstone belts, consisting of metavolcanic–metasedimentary sequences, and four suites of granitoids. The two greenstone belts, the Luke Creek Group and the overlying Mount Farmer Group, together form the Murchison Supergroup, Watkins and Hickman. From the Lake Creek Group the most important unit contained in it relating to iron enrichment for Weld Range is the Windanning Formation as the iron enrichment appears to be restricted to it. • During the evolution of the Murchison Province there has been five major phases of deformation recognised. These range from early recumbent folding and possible thrusting to tight isoclinals folding to finally extensive systems of shear zones and fault generation. Metamorphism for the province ranges from prehnite- pumpellyite to granulite facies. However the most common form of metamorphism is greenschist or lower amphibolitesfacies.
Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore

	Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• 14 RC holes drilled by Atlas. • Extra 6 RC holes drilled by Commercial Minerals – included in the estimate to boost dataset.
Further work	• Infill drilling to improve both geological and orebody knowledge. • Diamond drill holes to obtain dimensional density and enable density regression analysis. • Local geological mapping. • Collect downhole survey and geophysical data.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Geological logging was conducted on a 1m scale with intervals recorded using the standard Atlas geological log. The log is entered digitally in the field onto a Toughbook computer, and the files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Wilgie Mia Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• No site visits have been taken recently by the CP as there has been no activity.
Geological interpretation	• No geological model has been completed for the Wilgie Mia deposit. • The 14 RC holes (drilled by Atlas) were drilled dipping North-West. • No data was available regarding the orientation of the 6 RC holes (drilled by Commercial Minerals).
Dimensions	• The Wilgie Mia Mineral Resource is generally 40m wide with a defined strike from mapping of approximately 450m and a nominal depth of 80m.
Estimation and modelling techniques	• All interpretation and estimation completed using Surpac 6.1.2 software package. • Mineralisation was domained as primary mineralisation (where >50% Fe) and waste (<50% Fe) using hard boundaries. • All interpretations completed on a local grid. The block model is rotated and on a local grid. • Interpretation extends more than half drill spacing. This is considered risky as it

	increases the volume and tonnage of the resource. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • No supporting documentation of Quantitative Kriging Neighbourhood analysis (QKNA) was undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 7800mE to 8400mE and 18800mN to 19200mN and elevation from 400mRL to 600mRL. The block model is rotated. • A single block model to encompass the Wilgie Mia Mineral Resource was constructed using a 40mN by 20mE by 10mRL parent block size with sub-celling to 20mE by 10mN by 5mRL for domain volume resolution. • Ordinary Kriging was used to estimate elements (Fe, SiO_2, Al_2O_3, P, LOI and S) into the primary mineralised domain. • No information was available documenting the estimation method of waste (<50% Fe) material. • A global density of 3.77t/m^3 was assigned to the primary mineralised domain. • No information was available documenting the value of the assigned density to waste material. • Any information documenting search direction/distance and variogram parameters used in the estimation was vague and in Surpac format. Note that, Atlas uses Vulcan software package for modelling and estimation. Atlas attempted in March 2014 to reproduce the initial Surpac model using Vulcan, however due to the lack of information documenting the creation of the Surpac model, it was deemed too difficult and inaccurate to reproduce it using Vulcan. • For the Surpac Model, Block discretisation of 3, 3, 3 was applied. • For the first estimation pass a minimum number of 3 and a maximum of 15 samples were generally required for a block estimate to be made. A maximum of 6 samples from any one drill hole were used per block estimate, with no octant based searching utilised. A second search pass was employed to estimate blocks further from data with an increased search distance of 2.5 times. There was no change to the minimum and maximum amount of samples used in the estimation and the amount of samples used from one hole was the same as the first pass. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain, long and cross section swath plots to compare grades along slices through the deposit. • No selective mining units were assumed in this estimate.
Moisture	• No resistivity data was available to define the location of the water table. • Tonnages are estimated on an ‘assumed’ dry basis. • 92.1% of samples logged as dry, 5.8% of samples were logged as moist and 2.1% were logged wet.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining assumed to be by open pit using conventional backhoe excavator methods with ore being mined in 5m benches on 2.5m flitches. • No other assumptions on mining methodology have been made.
Metallurgical factors or	• No metallurgical factors or assumptions are known or made at this time.

assumptions	
Environmental factors or assumptions	• There are no zones identified as sulphur risk in the Wilgie Mia deposit. • No environmental factors or assumptions are known or made at this time
Bulk density	• A global density of 3.77t/m^3 was assigned to primary mineralised domain. • This is a bulk commodity project.
Classification	• The Weld Range Resource has been classified as Inferred category based on the 2012 JORC code. However this must be taken with caution due to the over-extrapolated mineralisation, sparse drill spacing and lack of downhole geophysical density data. The current model is very conceptual and further work is required to improve both geological and orebody knowledge. • An Inferred resource classification has been assigned to the Weld Range deposit under the 2012 JORC code. The following is a list of issues which add uncertainty to the Weld Range Resource: • Lack of detail as to the source and resolution of the topographic data used in the estimation. • The current drill spacing is very sparse. • Mineralisation is over-extrapolated to surface (mapped BIF unit), at depth where no drill hole information is available and beyond half drill spacing along strike. The resource has grossly overstated the volume and tonnage. • No geological model has been incorporated into the resource due to the lack of geological understanding. • No geophysical density has been collected to enable estimate of in situ density. • No dimensional density (obtained from DDH) has been collected to enable density regression analysis to determine dry bulk density. • Mmineral resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. • The results of the validation of the block model show good correlation of the input data to the estimated grades. • The geological model and mineral resource estimation appropriately reflect the Competent Persons view of the deposit and appropriate account has been taken of all relevant factors.
Audits or reviews	• This mineral resource has not been audited externally. • Atlas have undertaken an internal review of the mineral resource estimate and is satisfied the estimation is valid and of sufficient confidence to support an Inferred classification.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The confidence in this resource estimate has been deemed appropriate as a basis for long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • There has been no production from the Weld Range deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource. • The statements relate to global estimates of tonnes and grade.

Davidson Creek Hub Project (Miji Miji Deposit only)

Davidson Creek Hub Mineral Resources - As at 30 June 2014 (50% Fe Cut-Off Grade)										
	Resource Classification	Kt	Fe (%)	SiO_2 (%)	Al_2O_3 (%)	P (%)	S (%)	LOI (%)	CaFe* (%)
Miji Miji	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Inferred	32,800	56.4	8.0	4.2	0.10	0.01	6.3	60.2
Robertson Range**	Measured	27,900	58.5	5.0	2.8	0.11	0.01	7.8	63.5
	Indicated	47,100	55.9	7.7	4.1	0.10	0.02	7.3	60.3
	Inferred	15,100	56.0	8.1	3.4	0.12	0.02	7.5	60.5
Davidson Creek**	Measured	15,300	56.9	5.7	3.3	0.07	0.01	9.0	62.5
	Indicated	224,000	55.7	6.7	3.8	0.08	0.02	8.9	61.2
	Inferred	34,900	55.7	8.0	3.0	0.10	0.01	8.4	60.8
Mirrin Mirrin**	Measured	0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
	Indicated	68,000	56.4	6.5	3.2	0.10	0.01	8.8	61.9
	Inferred	11,500	53.9	8.7	4.4	0.10	0.01	8.9	59.2
Sub- Total	**Measured**	43,200	57.9	5.2	3.0	0.10	0.01	8.2	63.6
	Indicated	339,100	55.9	6.8	3.7	0.09	0.01	8.7	61.7
	Inferred	94,300	55.8	8.1	3.7	0.10	0.01	7.6	59.5
Total		**476,300**	**56.0**	**6.9**	**3.7**	**0.09**	**0.01**	**8.4**	**61.4**

Tonnes are rounded according to resource classification; grades are carried through unaffected by rounding and may result in small discrepancies.

*Calculated calcined Fe grade where CaFe=(Fe%/(100-LOI%))*100

** Robertson Range, Davidson Creek and Mirrin Mirrin Resources signed off by Snowdens Mining Industry Consultants, John Graindorge. See Competent Persons Statement for relevant Mineral Resource Estimates.

<u>Miji Miji JORC 2012 Mineral Resources summary</u>

Geology and Geological Interpretation

Atlas' Davidson Creek Hub Project is located 120km east of Newman Township in the Southeast Pilbara. The Davidson Creek Project was acquired in part in 2009 through the takeover of Warwick Resource Pty Ltd whereby Atlas assumed a joint venture arrangement with Hannan's Reward (Errawarra PtyLtd) where Atlas has the right to explore for iron ore. The remainder of the project was acquired by Atlas through the takeover of FerrAus Pty Ltd (Australian Manganese Pty Ltd) in October of 2011. The Davidson Creek Project comprises four deposits, three of which were previously identified by FerrAus, the fourth deposit, Miji Miji was identified by Atlas Iron.

The surface geology at the Miji Miji deposit is dominated by thick Quaternary cover sequences that obscure underlying mineralisation. The limited outcrop in the area occurs as a low north-west to south-east trending rise on the south-eastern bounds of the deposit. Along the northern side of the hill, a fine grained sedimentary-volcanic sequence belonging to the Fortescue Group is exposed.

Unconformably overlying the Fortescue Group, a coarse grained pebble conglomerate containing large chert fragments marks the unconformity surface along the ridge of the hill and is inferred as belonging to the Stag Arrow Formation of the Manganese Subgroup. A sequence of massive to banded grey-blue cherts and coarse grained sandstones of the same formation appear to drape the north-eastern side and southern sides with varying dips. Along the northern side, the cherts and sandstones predominantly dip (30-50 degrees) to the north/north-east; along the southern side of the hill the cherts and sandstones dip to the south.

To the north of the Miji Miji deposit, the Marra Mamba Iron Formation is located beneath recent cover. Drilling intersected the Macleod unit and Mt Newman Member (which is host to the mineralisation). At the Miji Miji deposit, the Macleod predominantly consists of massive multi-coloured cherts with lesser shale, and a cherty BIF that is often weakly mineralised as it grades upwards towards the Mt Newman contact. Interbedded carbonaceous shales with minor pyritic material are common in the Macleod unit and have widely been used as a marker lithology to terminate drilling at Miji Miji and other deposits within the Davidson Creek Project. The Mt Newman Member is observed as a cherty BIF with finely laminated beds of hematite. It is highly weathered and contains large amount of clay material near the base of cover and proximal to faulting. The maximum thickness of the unit inferred from drill results is 120 metres. The contact between Macleod and Mt Newman has been interpreted as an average dip of approximately 30^{o}N.

Mineralisation is hosted by two units in the Miji Miji deposit; the West Angeles Member and the Mt Newman Member. The majority of mineralisation is hosted by the Mt Newman Member. Mineralisation hosted in both stratigraphic units is divided into primary and hydrated mineralisation styles. Primary mineralisation is dominated by finely bedded haematite that is sometimes in specular form. Adjacent to structures and closer to the surface the bedded haematite mineralisation contains large amounts of fine material, mostly ferruginous shales and clay. Goethite occurs in lesser amounts, most commonly within the hydrated zone where it is predominantly massive.

Primary mineralisation is dominated by finely bedded haematite that is sometimes in specular form. Adjacent to structures and closer to the surface the bedded haematite mineralisation contains large amounts of fine material, mostly ferruginous shales and clay. Goethite occurs in lesser amounts, most commonly within the hydrated zone where it is predominantly massive.

The Miji Miji geological models were generated using a combination of geochemistry of RC holes, lithological logs and down hole geophysical natural gamma logs. A stratigraphic model of the lithology and structure was first constructed to provide a geological framework in which to interpret the mineralisation. The mineralisation was interpreted into an upper zone of depletion and underlying hydrated and primary mineralised zones.

The stratigraphic model comprises a sequence of banded iron formation, cherts and shales. The mineralisation model comprises of depleted, hydrated and primary mineralisation zones. The mineralisation zones are modelled generally using greater than 50% Fe and less than 15% SiO_2 cut-off to define ore from waste. The combination of both stratigraphic model and mineralisation models are used for geozone definitions.

Drilling Techniques

Exploration drilling over the Miji Miji prospect occurred during 2012 and 2013. Drilling of the Miji Miji deposit has been by a 140mm Reverse Circulation (RC) face sampling hammer and all samples are split by a cone splitter. To date, a total of 205 RC drillholes have been completed at the Miji Miji deposit, totalling 28,038m, no diamond drillholes have been completed on this deposit. The Miji Miji deposit has been drilled out to a nominal drill spacing of 50mN x 200mE on a rotated drilling grid.

The Geologist sieves and logs every 2 m interval in alignment with the sampling interval. Logging encompasses the main material types, hardness, lithologies, colour and percentage of chips (approximate lump/fine proportion). The logging is recorded in the field electronically into acQuire field logging data entry objects and on completion the electronic files are sent to Perth and loaded into the centralised acQuire drillhole database which is managed by a full time Database Administrator.

Licenced surveyor MHR Surveyors completed survey pickup on all available drill collars using a Trimble R8 Real Time Kinematic Differential GPS (DGPS_RTK). The DGPS gives an accuracy of +/- 0.05 m for Easting and Northing location and +/- 0.1 m for the RL (height above sea level). The higher accuracy collar surveys are imported into the Atlas drillhole database and are prioritised ahead of the GPS only level surveys.

All reverse circulation holes were subjected to downhole surveys using a gyroscopic tool. All downhole surveys were completed by ABIMS Pty Ltd utilising a north seeking multi-shot tool which measures azimuth every 5m down hole to an accuracy of +/- 0.2^o and dip to an accuracy of +/- 0.1^o. Down hole geophysical measurements are also collected at the same time and comprise Density/Calliper, Magsus and Natural Gamma recordings taken at 10 cm intervals down hole. Not all holes were able to be surveyed due to caving in near the top of the hole in recent unconsolidated sediments.

Sampling and Sub Sampling

All RC chip samples were collected at 2 m sampling intervals through a cone splitter. The samples are deemed to be of acceptable quality. Sample weights are also recorded to monitor the ongoing representativeness of the sample split. The weights are stored in the acquire database.

Samples are directed into a calico bag with the overflow placed directly on the ground in spoil heaps. The calico bags are pre-numbered, with every sample number ending in 00, 20, 40, 60, 80, collected as a field duplicate. The duplicate samples are collected in real time by splitting the two sub samples from the cone splitters. Standards were inserted every 1st, 21st, 41st, 61st and 81st sample. Sample weights are also recorded to monitor the ongoing representativeness of the sample split.

Sample Analysis Methods

Samples collected by Atlas were sent to SGS laboratories in Perth for analysis of the extended iron ore suite of elements. This consists of XRF analysis for Fe, SiO_2, Al_2O_3, P, CaO, K_2O, MgO, MnO, S, TiO_2, Na_2O and a thermo gravimetric measurement for loss on ignition (LOI) at 1000^oC. The sample preparation of RC samples involved weighing, oven drying, pulverization of the entire sample to a grind size of 90% passing 75 micron. A pulp sub-sample was collected and formed into a fused bead for XRF determinations on the iron ore suite of elements and a LOI by thermogravimetric techniques.

Batches of sample pulps were sent from SGS to Ultratrace (Bereau Veritas) Perth for confirmatory assaying to ensure no analytical issues were present. No issues were evident from this work and the analyses appeared to be accurate and suitable for use.

To ensure quality assurance and control (QAQC) of the sampling and assaying procedure, Atlas submitted field duplicates and standards to the laboratory for analysis. The duplicates and standards are inserted at predefined intervals at a rate of 5% for standards and 5% for duplicates. The laboratory also inserted its own internal standards and pulp repeat analyses at predefined intervals. Sample collection procedures and QAQC protocols employed by Atlas are commensurate with standard industry practices. The use of umpire laboratory was also employed to check the accuracy of laboratory results.

The QAQC data for the Miji Miji deposit was reviewed for the resource estimate. These were found to be of acceptable precision and analytical accuracy and are deemed to be suitable for resource estimation purposes and JORC compliancy.

Estimation Methodology

The drillhole data was composited prior to running the estimation process using a 2m sample interval to minimise any sample bias due to sample length. The compositing was run within the attribute fields to ensure no composite intervals crossed any lithological contacts or grade boundaries.

Variograms were attempted for each of the mineralised domains, however due to the wide drill spacing; acceptable variograms could not be produced at this time. Snowden Supervisor software was used to generate and model variograms as well as conducting statistical analysis.

Block models were constructed in Vulcan (Maptek) and constrained by surfaces and solids. The parent block size was selected based on half the prevalent drill hole spacing and assumed mining bench height and the model was orientated (rotated) to represent the strike of mineralisation and prevailing drilling grid. The sub-block size was selected to more accurately define the mineralised volume and also to be of smaller size than the selective mining unit (SMU) used in the reserve model to ensure that some dilution is incurred during the regularisation process.

The volume block model was created using the wireframes of the stratigraphy, mineralisation and topography. A unique geozone code was assigned based on the combination of stratigraphy and mineralisation. The geozone field is used to distinguish the main mineralisation types and un-mineralised areas.

For the Miji Miji deposit, Atlas estimated Fe, SiO_2, Al_2O_3, P, LOI, CaO, K_2O, MgO, MnO, S, TiO_2 and Na_2O grades and geophysical density using Inverse Distance (power 2) methods for the mineralised horizons. Waste horizons were also estimated by Inverse Distance (power 2) methods.

At the time of writing, no diamond holes have been drilled at Miji Miji. Thus, a deposit specific density could not be derived. For this deposit a global mean density of approximately 2.9 t/m^3 from the nearby, and geologically similar Davidson Creek deposit was assigned as it is of the same bedded style of mineralisation.

The estimates were validated using:

- A visual comparison of block grade estimates and the drillhole data.
- A global comparison of the average composite grades and estimated grades.
- Moving window averages comparing the mean block grades to the composites.
- Histogram comparison of the original composite grades and the block estimated grades.
- Assessment of correlation coefficients from the input sample data and estimated block grades.
- Total assay validation check to ensure closure (sum of elements in each block adds to 100% +/- 2%).

The conclusions from the model validation work include:

- Visual comparison of the model grades and the corresponding drillhole grades shows a good correlation.
- A comparison of the global drillhole mean grades and with the mean grades of the block model estimate (for each domain) shows that the block model mean grades are typically within 5-10% of the drillhole means which is a good outcome with the exception of poorly sampled regions.
- The trend plot grades show a good correlation between the block model grades compared with the drillhole grades.
- Total assay validation showed that the blocks maintained closure generally between 98% and 102% for all mineralised domains.
- Assessment of the histograms and correlation coefficients showed that the relationship between elements within the input sample data has been maintained in the block grades estimates and the grade distribution has been maintained in the estimate with an acceptable level of smoothing.

Resource Classification

Mineral Resources have been classified into the Inferred category based on drillhole spacing, nature and quality of the drilling and sampling methods, geological understanding and confidence, grade continuity, QAQC analysis, confidence in the estimate of the mineralised volume, results of the model validation and results of metallurgical test work.

Reserve and Resource Update

Mineral Resource classification has appropriately taken into account the data spacing, distribution, continuity, reliability, quality and quantity of data. The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. The definition of mineralised zones is based on a high level of geological understanding producing a robust model of mineralised domains. The results of the validation of the block model show good correlation of the input data to the estimated grades.

The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit. Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. The statement relates to global estimates of tonnes and grade.

All mineralisation has been classified as Inferred where drill spacing is 200mE x 50mN (or greater), mineralisation displays moderately good continuity and geological interpretation is considered to be complex with numerous cross cutting faults terminating the mineralisation.

Cut-Off Grade

The criteria for defining mineralised material at Miji Miji abd the Davidson Creek Project is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary. These cut-off grades were used to separate mineralised material from waste. Atlas believes that the cut-off grade is reasonable for the style of iron mineralisation, is suitable for the proposed open pit mining method and proposed processing methodology to consistently produce material suitable to meet Atlas product specification. This cut-off grade methodology is used consistently for reporting of all Mineral Resources at Davidson Creek. The tabulated resources are reported using a 50% Fe cut-off grade on a block by block basis.

Mining and Metallurgical methods and parameters and other modifying factors

The Davidson Creek Project is currently completed a Feasibility Level study, however the Miji Miji resource is currently excluded from this study, owing to its later timing of discovery and Inferred resource classification status. It is currently proposed that the Davidson Creek project would be mined by conventional open pit mining methodology, similar to other Atlas projects, with selective extraction of ore material using a backhoe configured excavator.

It is expected that beneficiation would be required to produce a single, fines only product at a specified grade. It is a reasonable assumption that the Davidson Creek Miji Miji resource will eventually be economically extracted based on its proximal location to existing projects and infrastructure and also due to their favourable size and grade characteristics which will fit the Atlas product specification.

JORC (2012) - TABLE 1 - MIJI MIJI RESOURCE

MIJI MIJI MINERAL RESOURCE JORC TABLE 1

JORC 2012 TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA DAVIDSON CREEK HUB MIJI MIJI MINERAL RESOURCE ESTIMATE – MARCH 2013	
SECTION 1 - SAMPLING TECHNIQUES AND DATA	
CRITERIA	**EXPLANATION**
Sampling techniques	• RC samples were collected over 2m intervals using only a cone splitter. • 3.3kg sample (average) was dried, crushed and pulverised (total prep) to produce a sub sample for analysis for XRF and total LOI by TGA. • Quality of sampling continuously monitored by field geologist during drilling. • To monitor the representivity of the sample, 2 duplicates are taken for every 100 samples (1:50) for samples collected prior to January 2011. • Post January 2011, duplicates were 5 duplicates were collected for every 100 samples (1:20). • Sampling carried out under Atlas protocols and QAQC procedures as per industry best practice.
Drilling techniques	• Reverse Circulation (RC) drilling employing a 140mm diameter face sampling hammer. • Nominal drill spacing of 50m by 200m on a rotated grid. • RC holes (205 holes for 28,038m) – used in estimate. • No diamond drill holes.
Drill sample recovery	• RC sample recovery is recorded by the geologist and is based on how much of the sample is returned from the cone splitter. This is recorded as good, fair, poor or no sample. • 98% Good 1% Fair and <1% Poor, <1% blank/un-recorded. • To ensure maximum sample recovery and the representivity of the samples, the field geologist is present during drilling and monitors the sampling process. Any identified issues are immediately rectified. • No significant sample recovery issues were encountered. • No comparison between twin RC or diamond drillholes was conducted to assess sample bias due to preferential loss/gain of fine/coarse material or due to wet drilling. • Atlas is satisfied that the RC holes have taken a sufficiently representative sample of the mineralisation and minimal loss of fines has occurred in the RC drilling resulting in minimal sample bias.
Logging	• Logging of every 2m interval corresponding with 2m sampled interval. This level of detail is supportive and appropriate for Mineral Resource estimation, mining and metallurgical studies for a bulk commodity such as iron ore. • RC Logging records the abundance/proportion of specific minerals/material types and lithologies, hardness recorded by physical chip percent measurement, weathering and colour. • The entire lengths of RC holes were logged on a 2m interval basis, 100% of the drilling was logged. Where no sample was returned due to voids/cavities it is recorded as such. • 5,808 RC samples were logged. • Geophysical data collected from 34 of 205 RC holes (gamma, density and magsus).
Sub-sample techniques and sample preparation	**Sampling technique:** • RC Chip Samples: • ~3.3kg RC chip samples are collected via cone splitter for each 2m interval

	drilled in a pre-numbered calico bag. Samples are kept dry where possible.
	• The sample sizes are considered to be appropriate to correctly represent the mineralisation at Miji Miji based on the style of mineralisation (massive goethite/hematite), the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements.
	Sample preparation:
	• Sample dried at 105°C for 12-24 hrs
	• Crushed to nominal -3mm
	• Pulverised to 90% passing at 75µm
	Quality Control Procedures
	• Duplicated sample (prior to January 2011): 2 every 100 samples (1:50).
	• Duplicate samples (post January 2011): 5 every 100 samples (1:20).
	• Certified Reference Material assay standards inserted:
	  o 2 in every 100 samples (1:50) prior to January 2011.
	  o 5 in every 100 samples (1:20) post January 2011.
	• Overall QAQC insertion rate of 1:10.
	• Sample weights recorded for all samples.
	• Lab duplicates taken where large samples required splitting down by the lab.
	• Lab repeats taken and standards inserted at predetermined level specified by the lab.

Quality of assay data and laboratory tests	• All samples submitted to SGS Laboratory in Perth are assayed for the full iron ore suite by XRF (24 elements) and a total LOI by thermogravimetric technique. • Laboratory procedures are in line with industry standards and appropriate for iron ore deposits. • Samples are dried at 105^{O}C in gas fired ovens for 18-24 hours before being crushed to a nominal -3mm size by Boyd crusher, then pulverised to 90% passing 75 micron using a LM2 mill. Sub-samples are collected to produce a 66g sample that is dried further, fused at 1100^{O}C for 10 minutes poured into a platinum mould and placed in the XRF machine for analysing and reporting. • LOI is measured by Thermogravimetric methods (TGA). • Certified Reference Material assay standards, field duplicates and umpire laboratory analysis are used for quality control. • Certified Reference Material assay standards having a good range of values, were inserted at predefined intervals by Atlas and randomly by the lab at set levels. Results highlight that sample assay values are accurate and precise. • Analysis of field duplicate and lab pulp repeat samples reveals that greater than 75% of pairs have less than 10% difference and the precision of samples is within acceptable limits, which concurs with industry best practice.
Verification of sampling and assaying	• Significant intersections have been independently verified by alternative company personnel. • The Competent Person has visited site and inspected the sampling process in the field and also inspected the Laboratory. • Primary data are captured on field Toughbook laptops using acQuire^{tm} software. The software has validation routines to prevent data entry errors. • All data is sent to Perth and stored in the secure, centralised acQuire SQL database which is managed by a full time database administrator. • No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection values to half positive detection.

Location of data points	• 205 collars were surveyed by licenced surveyors (MHR Surveyors, Perth) using differential RTK_DGPS connected to state survey mark (SSM) network. Elevation values are in AHD RL. Expected accuracy is +/- 30mm for easting, northing and elevation coordinates. • Downhole gyroscopic surveys were attempted on all RC holes. However, these were generally unsuccessful due to the collapse of holes soon after drilling. Consequently little downhole survey and geophysical data was collected. • The grid system for Miji Miji is MGA_GDA94 Zone 51. • Topographic data was provided by Southern Geoscience Consultants as part of their 2007 local gravity survey. The resolution of the topography is considered to be adequate for the purpose of the resource estimation given the lack of topographical features at the Miji Miji deposit. The datum is GDA94 with projection MGA Zone 51.
Data spacing and distribution	• Drill spacing on an approximate 50m by 200m rotated grid. • This drill spacing is sufficient to establish the degree of geological and grade continuity appropriate to support an Inferred resource classification applied under the 2012 JORC code. • Samples are collected at 2m intervals.
Orientation of data in relation to geological structure	• The Mji Miji resource lies in the Marra Mamba formation with mineralisation hosted in Mt Newman and West Angela members. Each member is moderately dipping to the NE and is buried beneath an average of 40m cover. All RC holes were drilled vertically and as such intercepts of bedding thickness are defined as downhole widths.
Sample security	• Samples are packed into sealed polyweave bags and then placed inside sealed Bulka bags. Samples are delivered to a despatch point in Port Hedland by Atlas staff. • Chain of custody is managed by Atlas. • Samples are transported to the relevant Perth laboratory by courier (TOLL). • Once received at the laboratory, samples are stored in a secure yard until analysis. • The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.
Audits or reviews	• An audit of the Atlas acQuire drillhole database was completed in August 2012 by independent database management company (Roredata Pty Ltd). • The Atlas acQuire database is considered to be of sufficient quality to carry out resource estimation. • A review of the data and sampling techniques is carried out internally as part of each resource estimate.
SECTION 2 - REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	• Miji Miji is located wholly within Exploration Lease E52/1813. This tenement is 100% Atlas owned. • The tenement sits within the Nyiyaparli People Native Title Claim (WC2005/006). • At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration done by other parties	• 45 holes drilled by Hannan's Reward (Errawarra Pty Ltd) in 2008. • Detailed Airborne Mag_survey conducted by Ferraus in 2009. • Mapping conducted by Atlas in 2010.
Geology	• The Mji Miji resource lies in the Marra Mamba formation with mineralisation hosted in Mt Newman and West Angela members. Each member is moderately dipping to the NE and is buried beneath an average of 40m cover.

Drill hole information	• No exploration results are reported in this release, therefore there is no drill hole information to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Data aggregation methods	• No exploration results are reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Ore Reserves and Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling Techniques" and "Drill Sample Recovery".
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Diagrams	• No exploration results have been reported in this release, therefore there is no exploration diagrams included in this report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Balanced reporting	• No exploration results have been reported in this release, therefore there are no exploration results to report. This section is not relevant to this report on Ore Reserves and Mineral Resources.
Other substantive exploration data	• 45 holes drilled by Hannan's Reward(Errawarra Pty Ltd) in 2008. • Detailed Airborne Mag_survey conducted by Ferraus in 2009. • Mapping conducted by Atlas in 2010.
Further work	• Implement a ~50x50m spaced drill program. • Increase the amount of downhole geophysical density data measurements. • Implement a diamond drilling program and conduct density analysis on core.
SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES	
Database integrity	• Geological logging was conducted on a 2m scale, with intervals recorded using the standard Atlas geological log. The log is entered digitally in the field onto a Toughbook computer, and the files are then transferred to the Perth office electronically via email where they are further validated before being loaded into the Atlas acQuire database by a full-time database administrator. • Assay files sent electronically from the lab in a secure file format and also in hard copy reports. The assay data undergo numerous checks before being accepted into the database on passing all QAQC rules. • Data validation checks are run by the database administrator and database management consultancy 'Roredata' using acquire software. • Data for the Miji Miji Resource is stored in the centralised Atlas acQuire drillhole database.
Site visits	• Steven Warner (Competent Person for this update) is a full time employee of Atlas and undertakes regular site visits ensuring industry standards of the resource estimation process from sampling through final block model are maintained.
Geological interpretation	• The geological interpretation is based on the geochemistry of RC holes and geological logging. • The Miji Miji resource lies in the Marra Mamba formation with mineralisation hosted in Mt Newman and West Angela members. Each member is moderately dipping to the NE and is buried beneath an average of 40m cover.
Dimensions	• The Miji Miji Mineral Resource contains 3 pods of mineralisation. The largest pod has dimensions of approximately 310mN by 1,850mE. The orebody dips to the NE with a maximum depth of 120m and an average depth of 90m. A thin,

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	10m thick hydrated layer sits over the top of the entire resource. The hydrated mineralisation is overlain by thick cover (approximately 40m).
Estimation and modelling techniques	• Mineralisation was domained according to lithology and type (hydrated or primary). Each geological unit is domained and estimated separately using hard boundaries. Drillhole sample data was flagged using domain codes generated from three dimensional stratigraphical and mineralisation surfaces. • Interpretation does not extend mineralisation more than half drill spacing. • Univariate statistical analysis and variogram modelling completed with Snowden Supervisor software and used to define the spatial continuity of all elements within the mineralised domains. • Quantitative Neighbourhood analysis was undertaken to optimise estimation parameters, including block size, search parameters, number of samples (minimum and maximum) and block discretisation. • Block model extends from 0mE to 5000mE and 0mN to 11000mN and elevation from 0mRL to 500mRL. • A single block model to encompass the Miji Miji Mineral Resource was constructed using a 100mN by 50mE by 5mRL parent block size with sub-celling to 5mE by 5mN by 2.5mRL for domain volume resolution. The parent block size is half the drill spacing to ensure the mineralisation is well represented by the blocks. • The standard Atlas Block Model schema has been used with standard attributes populated. • The block model has been assigned unique mineralisation codes that correspond with the geological domain as defined by the wireframes. • Inverse Distance was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) into geozone 203 and 204 (primary mineralisation) & geozone 503 and 504 (hydrated mineralisation). • Inverse Distance was used to estimate the standard Atlas iron suite of elements (Fe, SiO_2, Al_2O_3, P, MnO, LOI, S, TiO_2, MgO, CaO, Na_2O and K_2O) into waste geozones (101-106). • Search directions are chosen to reflect the orientation of the orebody. • Three search estimation runs are used with initial short search runs. The search ellipses typically cover 2 drill spacings for run 1, 3 drill spacings for run 2, and 5 drill spacings for run 3. • A minimum of 12 samples and a maximum of 36 samples are required for an estimate in run 1, the minimum number of samples reducing to 10 for run 2 and 8 for run 3. • Generally the majority of blocks are estimated in run 1. • A maximum of 4 samples from any one drill is allowed. • Block discretisation of 5, 5, 2 was applied. • All block estimates are based on interpolation into sub-blocks. • Mineral Resource estimation does not include any form of dilution. • Maptek Vulcan software was used to complete the block estimation. • No selective mining units were assumed in this estimate. • Standard model validation has been completed using visual and numerical methods and formal peer review by internal staff. • Slope of Regression statistics were used to quantitatively measure estimation quality to the desired level of quality. • Block model validation methods used were visual checks comparing composite grades vs block grades, global statistical comparisons for each domain,

	easting, northing and RL swath plots to compare grades along slices through the deposit.
Moisture	• Tonnages are estimated on an 'assumed' dry basis. • 66% of samples logged as dry, 4% of samples were logged as moist, 0.2% were logged as moist injected, 1% logged as wet injected and 28% logged as wet. • The Miji Miji deposit contains a water table inferred at ~530mRL defined by drilling intercepts of wet material. The entire Miji Miji deposit lies beneath the water table.
Cut-off parameters	• The criteria for mineralised material is >50% Fe and <15% SiO_2, which appears to be a natural grade boundary between mineralised BIF and unmineralised BIF. This cut-off grade was used to define the mineralised envelope.
Mining factors or assumptions	• Mining would be by open pit using conventional backhoe excavator methods • No assumptions on mining methodology have been made or applied to this mineral resource estimate.
Metallurgical factors or assumptions	• No metallurgical factors or assumptions are known or applied to the resource estimate at this time.
Environmental factors or assumptions	• Blocks with estimated Sulphur grades greater than 0.2% have been assigned as a moderate PAF risk. • It is assumed that no environmental factors exist that could prohibit any potential mining development at the Miji Miji deposit
Bulk density	• A global density of 2.9t/m^3 was assigned to all mineralised blocks (data sourced from nearby Davidson Creek deposit) due to the lack of diamond core measrements and insufficient geophysical density data collected. • This is a bulk commodity project.
Classification	• Mineral Resources have been classified as Inferred category based on drillhole intercept spacing, geological confidence, grade continuity and estimation quality. • The input data is comprehensive in its coverage of the mineralisation and does not misrepresent in-situ mineralisation. • The results of the validation of the block model shows good correlation of the input data to the estimated grades • The geological model and mineral resource estimation appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• This mineral resource has not been audited externally. • The process for geological modelling, estimation, and reporting of Mineral Resources is Industry standard. • Internal peer reviews are conducted throughout the estimation process and on completion by the Competent Person.
Discussion of relative accuracy/confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The confidence in this resource estimate has been deemed appropriate as a basis for long term planning and mine design and is not necessarily sufficient for shorter term planning and scheduling. • There has been no production from the Miji Miji deposit to provide comparison of relative accuracy and confidence on this estimated mineral resource. • The statements relate to global estimates of tonnes and grade.