# MEDIA RELEASE 28 July 2015

# **Calibre Deposit Drilling Update**

20.0m at 2.25 g/t gold and 0.36% copper

20.0m at 1.70 g/t gold and 0.12% copper

# **Highlights**

- Calibre 2015 Reverse-Circulation Drilling Programme exceeded its objectives by:
  - o significantly expanding the deposit size;
  - o increasing the deposit grade, and, in addition;
  - o identifying a new high grade gold (with copper) zone extending outside the bulls-eye magnetic anomaly.
- New high grade gold (with copper) zone defined:
  - o in excess of 450m in strike length;
  - o over a significant horizontal width (up to 160m);
  - o open along strike, down dip and across width.
- Magnetic trend associated with the northern high grade gold zone traceable for a further 3.5km to the north of the current drilling, providing significant exploration upside.
- Significant gold and copper mineralisation at Calibre now drill intersected over a total strike length of 1km and up to 480m across strike and remains open in all directions.
- Calibre Exploration Target materially increased in both size, grade and metal.

# CALIBRE REVERSE-CIRCULATION DRILLING PROGRAMME – ASSAY RESULTS AND UPDATE

#### Overview

The Company has received assay results for Reverse Circulation (RC) drillholes up to, and including, 15ACC0032 at its Calibre prospect (refer to Tables 1 and 2). In total thirty-two RC drillholes were completed at Calibre testing significant regions of the prospect area both on and off the Calibre bulls-eye magnetic anomaly (refer to Figures 1 to 6).



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ASX: AZY

#### **Corporate Directory**

Stephen Power Executive Chairman

Roger Mason Managing Director

Mark Rodda

Peter Buck

Non-Executive Director

Non-Executive Director

Gary Johnson

Non-Executive Director

#### **Company Background**

Listed on ASX April 2011 following successful completion of A\$10M IPO.

Citadel Project acquired from Centaurus Metals April 2011 for shares/options upon IPO completion.

North Telfer Project acquired from Paladin Energy May 2011 pursuant to an agreement.

Corker high grade precious and base metal deposit discovered April 2012.

Calibre gold-copper-silver-tungsten deposit discovered November 2012.

Paterson Project acquired from Yandal Investments (a Mark Creasy company) September 2013 for shares.

JORC 2012 Mineral Resources for the Calibre and Magnum deposits announced February 2015

#### **Company Projects**

Citadel Project covering 1,111km² of prospective granted exploration licences in the World-Class underexplored Proterozoic Paterson Province of Western Australia.

Citadel Project is located approximately 75km north of Newcrest's Telfer gold-copper-silver mine and includes the gold-copper-silver± tungsten Magnum and Calibre deposits and the high grade polymetallic Corker deposit.

North Telfer Project covering an additional 1,253km² of prospective granted exploration licences located approximately 20km north of the Telfer mine.

Paterson Project covering an additional 1,624km² of prospective granted exploration licences and 151km² of exploration licence applications located as close as 5km from the Telfer mine.



Significant gold-copper-silver±tungsten mineralisation at Calibre has now been intersected over a total strike length of 1km and up to 480m across strike and remains open in all directions making it a very large mineralised system. With such a large system, it is entirely conceivable that further higher grade zones await discovery and that the newly discovered higher grade zones may be substantially expanded. Mineralisation is primary sulphide in nature which, from previous metallurgical testing, indicates standard mineral processing and treatment options will be available.

#### High Grade Gold (with Copper) Zone

Drilling beyond the northern limits of the more intense Calibre bulls-eye magnetic anomaly has identified a new high grade gold (with copper) zone in excess of 450m in strike length extending north from the edge of the Calibre bulls-eye magnetic anomaly. The high-grade gold mineralisation has been intersected over a significant horizontal width (up to 160m) and is open along strike, down dip and perpendicular to strike.

evaluation of re-processed aeromagnetic data has identified a magnetic trend associated with the higher grade mineralisation which extends a further 3.5km from the northern limit of the existing RC drilling (Figure 2). This "linear" magnetic trend widens and displays a conceptual structural mineralisation target position from north of drillhole 15ACC0024 over a distance of 1.2km (Figure 2). This 4.0km long (total length) "linear" magnetic trend appears to be a candidate for a significant thrust fault which has been disrupted by cross-faults providing an ideal conduit environment for the gold and copper mineralising fluids, including the potential to develop high-grade Telfer Reef style gold mineralisation.

Across the Magnum Dome region, copper mineralisation has been consistently associated with higher intensity magnetic anomalies (due to the association of copper with the magnetic sulphide pyrrhotite). However, the gold and importantly very high-grade gold mineralisation, is only weakly magnetic (due to the association between gold with bismuth and pyrite, both non-magnetic, and lesser pyrrhotite). Therefore, the weakening magnetic signature north along strike from the RC drill defined mineralisation could potentially be indicative of increasing gold mineralisation.

# **Assays**

Assays for the balance of the drillholes have now been received, assay highlights include (refer also to Tables 1 and 2 and Figures 1 and 3 to 6):

# 15ACC0032:

- 33.0m at 1.47 g/t gold, 0.26% copper, 1.11 g/t silver and 0.04% tungsten from 109.0m downhole, including;
  - 20.0m at 2.25 g/t gold, 0.36% copper, 1.74 g/t silver and 0.02% tungsten from 109.0m downhole, also including;
    - 4.0m at 5.06 g/t gold, 0.68% copper, 3.50 g/t silver and 0.05% tungsten from 115.0m downhole;
    - 3.0m at 4.50 g/t gold, 0.78% copper and 3.80 g/t silver from 126.0m downhole, also including;
      - o 1.00m at 9.33 g/t gold, 1.14% copper and 5.70 g/t silver from 127.0m downhole.



#### 15ACC0030:

- 50.0m at 1.20 g/t gold, 0.08% copper, 0.21 g/t silver and 0.04% tungsten from 107.0m downhole, including;
  - 20.0m at 1.70 g/t gold, 0.12% copper, 0.29 g/t silver and 0.05% tungsten from 107.0m downhole, also including;
    - o 6.0m at 2.22 g/t gold, 0.25% copper, 0.83 g/t silver and 0.12% tungsten from 107.0m downhole;
    - 3.0m at 3.13 g/t gold, 0.17% copper and 0.27 g/t silver from 124.0m downhole, also including;
      - o 1.00m at 7.25 g/t gold and 0.06% copper from 124.0m downhole.
  - o 2.0m at 3.62 g/t gold, 0.15% copper and 0.17% tungsten from 142.0m downhole.

#### 15ACC0025:

- 4.0m at 2.23 g/t gold, 0.29% copper, 1.58 g/t silver and 0.01% tungsten from 97.0m downhole, including;
  - o 2.0m at 3.48 g/t gold, 0.29% copper, 1.85 g/t silver and 0.01% tungsten from 97.0m downhole.
- 12.0m at 1.27 g/t gold, 0.08% copper, 0.23 g/t silver and 0.01% tungsten from 115.0m downhole, including;
  - 5.0m at 1.97 g/t gold, 0.14% copper, 0.40 g/t silver and 0.01% tungsten from 115.0m downhole, also including;
    - o 1.00m at 4.50 g/t gold, 0.46% copper and 2.00 g/t silver from 116.0m downhole.

Note that drillholes 15ACC0013, 15ACC0026 and 15ACC0031 were abandoned in the Aircore "precollar" and did not reach the Proterozoic basement and so were ineffective (i.e. did not test the gold-copper mineralisation).

# **Calibre Deposit – Revised Exploration Target:**

The Calibre Exploration Target reported on the  $28^{th}$  July 2014 (Corporate Presentation) has been revised to focus on the  $\geq 1.0$  g/t gold opportunity. The Calibre target area is rapidly growing into a very large scale gold-copper-silver-tungsten mineral system with the potential for further substantial growth and also to provide a large scale open pit  $\pm$  underground mining opportunity. The revised Exploration Target is partially co-incident with the region corresponding with the Calibre JORC Code (2012 Edition) Mineral Resource ( $23^{rd}$  February 2015) which was reported at a substantially lower cut-off grade.

Following the completion of the 2015 Phase 1 RC drilling programme the Company has revised the previous Exploration Target for the Calibre gold-copper-silver-tungsten deposit based on a 1 g/t gold cut-off grade scenario as follows:



#### Gold Exploration Target - Cut-off grade 1.0 g/t gold:

Tonnage Range = 143 to 257 million tonnes

Grade Range = 1.00 to 1.24 g/t gold and 0.13 to 0.15% copper

The revised Calibre Exploration Target has been derived on the basis of interpretations of ten diamond drillholes and thirty-two RC drillholes, including geological, structural and assay data, in conjunction with magnetic (both ground, airborne and "downhole"), surface and downhole electromagnetic data, and related geological and geophysical models. A detailed explanation of the basis for the Calibre Exploration Target can be found in the "Notes" section at the back of this announcement. The potential quantity and grade is conceptual in nature. There has been insufficient exploration to define a Mineral Resource for the area the subject of the Exploration Target, and it is uncertain if further exploration will result in the determination of a Mineral Resource in respect of such area.

# Calibre Reverse-Circulation Drilling Programme - Next Steps

Given the significant size of the newly discovered Calibre high-grade gold mineralisation zone a Phase 2 RC drilling programme in conjunction with potential geophysical surveys (e.g. ground magnetics and possible Induced Polarisation) is in the planning phase.

Evaluation of the magnetic trend associated with the higher grade mineralisation which extends a further 3.5km from the northern limit of the existing RC drilling will be investigated initially with broad spaced RC drilling and ground magnetics with the reasonable expectation that significant additional mineralisation may be discovered.

The southern region of the Calibre deposit, where mineralisation is mainly coincident with the much broader and higher amplitude bulls-eye magnetic anomaly, requires ground based geophysical surveys (including Induced Polarisation) to identify discrete high-grade targets for follow-up drilling. This southern region is considered as a second or lower priority than the recently discovered northern higher grade gold trend.

## **Joint Venture**

As previously reported, the Company continues to evaluate possible joint venture opportunities to assist in the further exploration of the Citadel Project and the Company's wider interests in the Paterson Province.



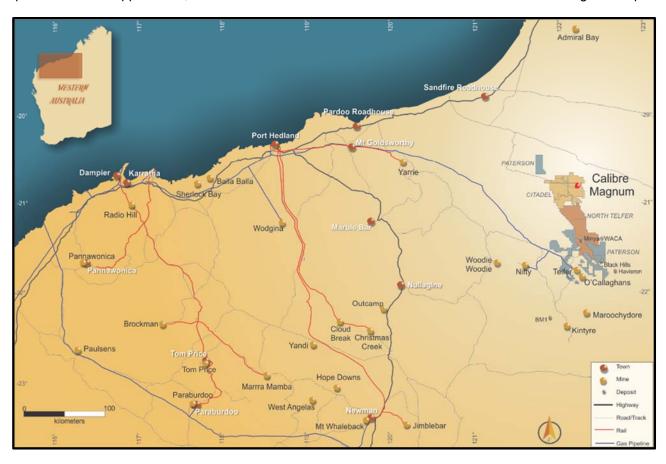
# For further information, please visit www.antipaminerals.com.au or contact:

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### **About Antipa Minerals:**

Antipa Minerals Ltd is an Australian public company which was formed with the objective of identifying under-explored mineral projects in mineral provinces which have the potential to host world class mineral deposits, thereby offering high leverage exploration potential. The Company owns a 1,111km² package of prospective granted tenements in the Proterozoic Paterson Province of Western Australia known as the Citadel Project. The Citadel Project is located approximately 75km north of Newcrest's Telfer gold-copper-silver mine and includes the gold-copper-silver±tungsten Mineral Resources at the Calibre and Magnum deposits and high-grade polymetallic Corker deposit.

The Company has an additional 1,253km² of granted exploration licences, known as the North Telfer Project which extend its ground holding in the Paterson Province to within 20km of the Telfer mine and 30km of the O'Callaghans deposit. The Company has also acquired, from the Mark Creasy controlled company Kitchener Resources Pty Ltd, additional exploration licences in the Paterson Province which now cover 1,624km², and a further 151km² of exploration licence applications, which come to within 5km of the Telfer mine and 7km of the O'Callaghans deposit.





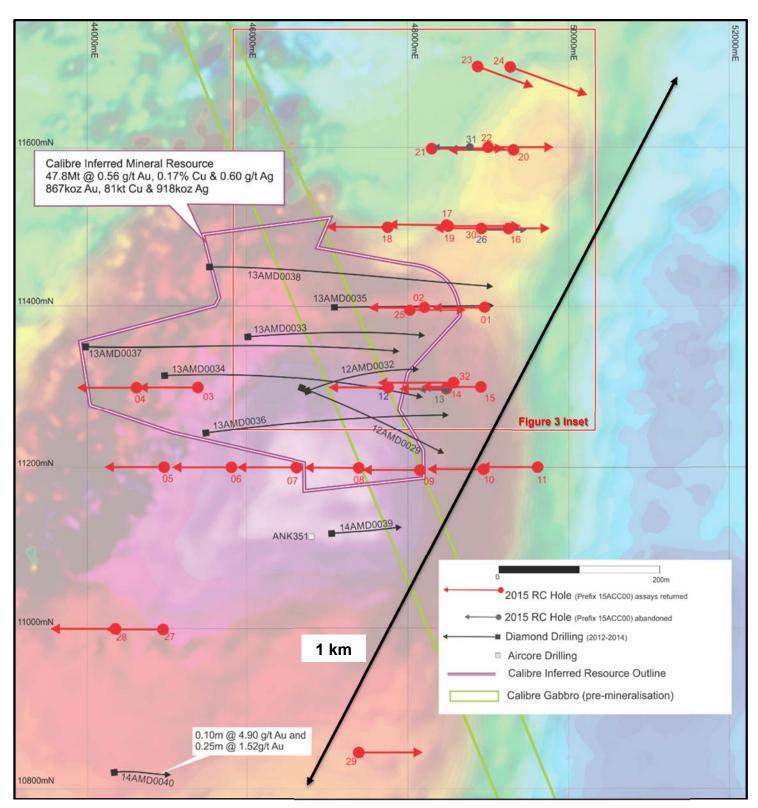


Figure 1: Calibre Ground Magnetic anomaly map showing pre-2015 diamond drillholes and completed and proposed 2015 Phase 1 Slim-line RC drillholes and JORC Code (2012 Edition) Mineral Resource (NB: Calibre Local Grid co-ordinates – Local grid north = 315° Regional grid)



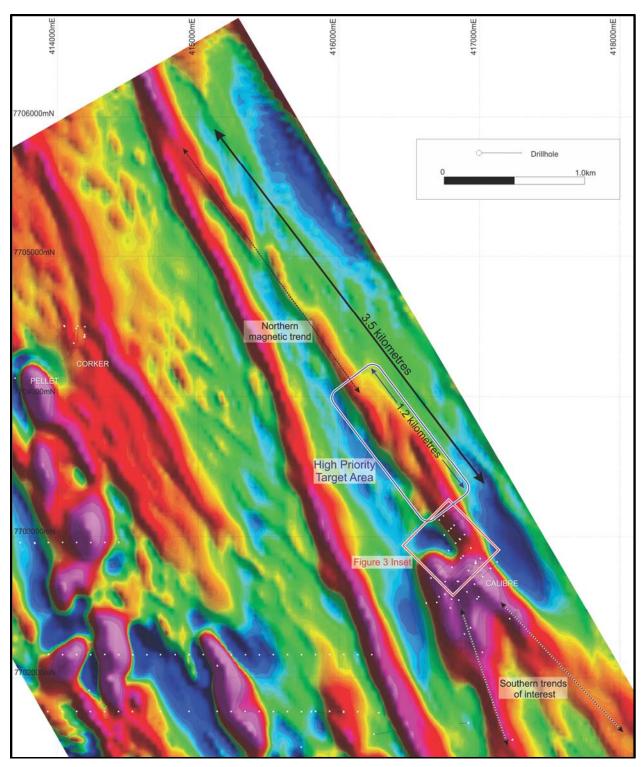


Figure 2: Airborne magnetic image showing magnetic trend associated with the Calibre northern high-grade gold mineralisation extending 3.5km to the north of the drill limits. The "linear" magnetic trend widens and displays a conceptual structural position north of drillhole 15ACC0024 over a distance of 1.2km (i.e. "High Priority Target Area" on diagram above). NB: 150m flight-line spacing at an altitude of 30m; First Vertical Derivative, Reduced to Pole, NE-Sun illumination, Regional GDA94 / MGA Zone 51 co-ordinates.



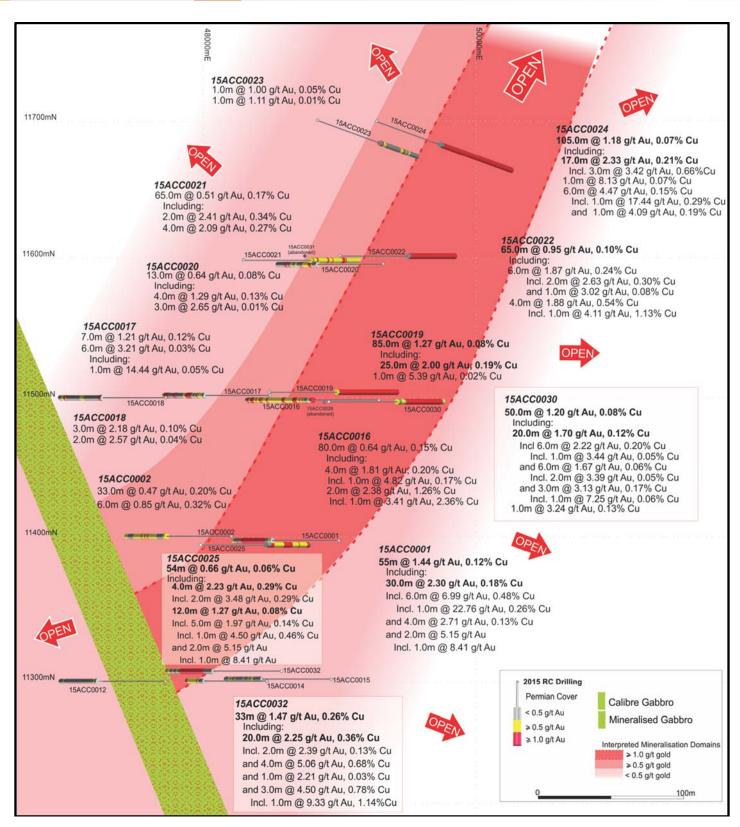


Figure 3: Northern region of Calibre showing 2015 Phase 1 Slim-line RC drillholes and interpreted (schematic) gold-copper-silver±tungsten mineralisation domains including higher grade gold zone



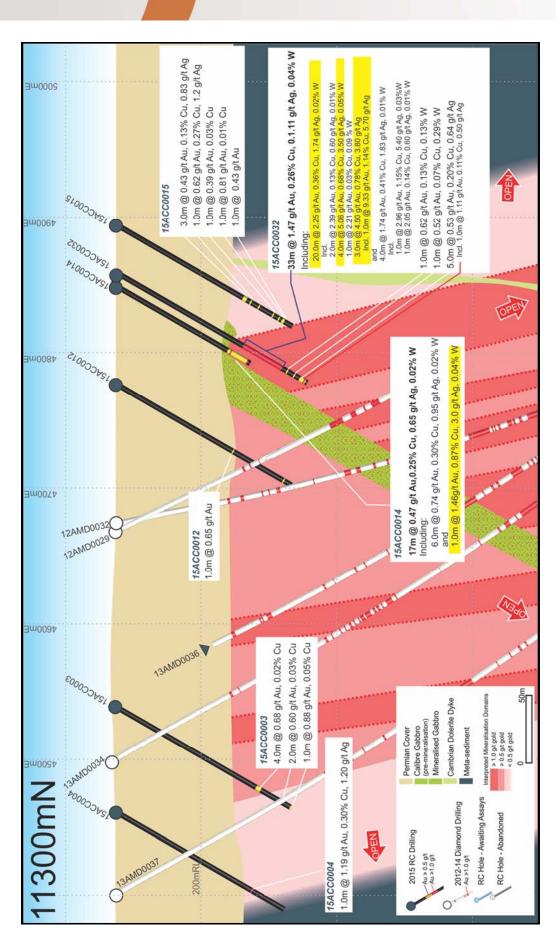


Figure 4: Calibre Deposit 11300 North interpreted (schematic) cross-section showing pre-2015 diamond drillholes and 2015 Slim-line RC drillholes (100m grid – North Looking)



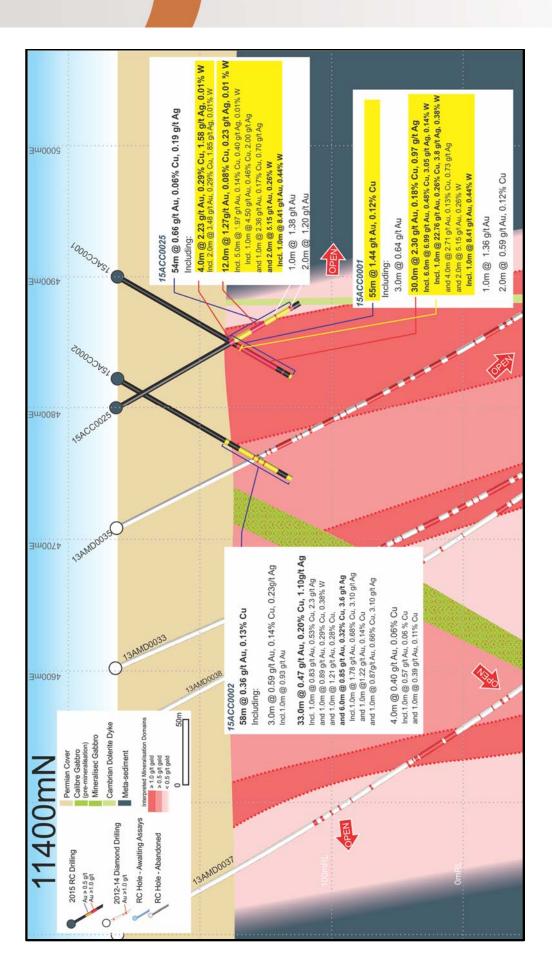


Figure 5: Calibre Deposit 11400 North interpreted (schematic) cross-section showing 2015 Slim-line RC drillholes (100m grid – North Looking)



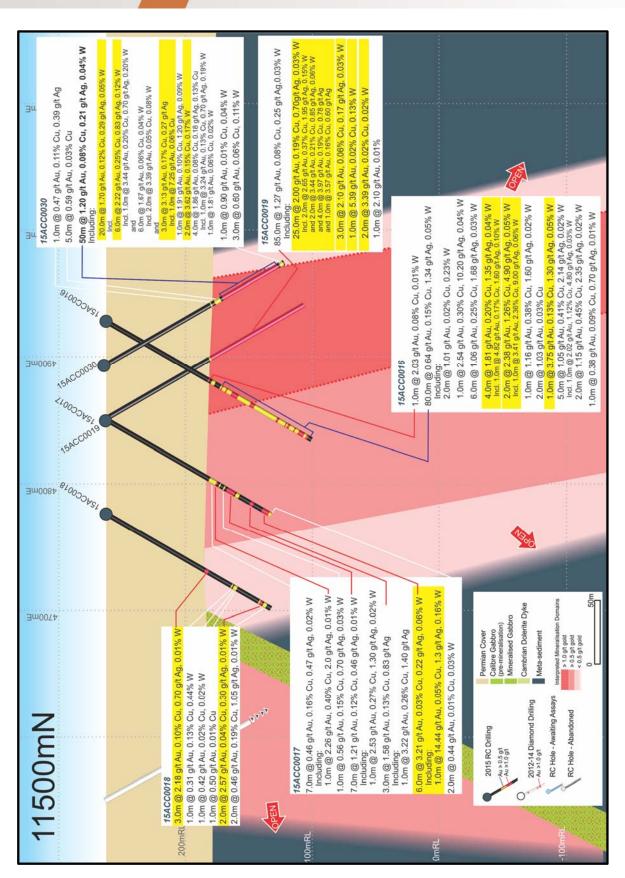


Figure 6: Calibre Deposit 11500 North interpreted (schematic) cross-section showing 2015 Slim-line RC drillholes (100m grid – North Looking)



#### Forward-Looking Statements:

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Antipa Mineral Ltd's planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may," "potential," "should," and similar expressions are forward-looking statements. Although Antipa Minerals Ltd believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.

## **Competent Person Statements:**

The information in this report that relates to the Exploration Target and Exploration Results is based on and fairly represents information and supporting documentation prepared by Mr Roger Mason who is a Member of The Australasian Institute of Mining and Metallurgy and a full time employee of the Company. Roger Mason has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which she 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'. Roger Mason consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to relates to the estimation and reporting of the Calibre deposit Mineral Resource is extracted from the report entitled "Calibre and Magnum Deposit Mineral Resource JORC 2012 Updates" created on 23 February 2015 and are available to view on <a href="www.antipaminerals.com.au">www.antipaminerals.com.au</a>. The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.



Table 1: Citadel Project - Calibre Deposit RC Drillhole Collar Locations (GDA94 / MGA Zone 51)

Hole ID	Northing (m)	Easting (m)	RL (m)	Final Hole	Azimuth	Dip
15ACC0001	416,938.6	7,702,919.5	263	<b>Depth (m)</b> 150	(degrees) 225	(degrees) -60
15ACC0001	416,884.5	7,702,865.6	263	150	225	-60
15ACC0002	416,754.6	7,702,803.0	263	150	225	-60
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15ACC0004	416,699.8	7,702,537.5	263	144	225	-60
15ACC0005	416,795.0	7,702,495.2	263	150	225	-60
15ACC0006	416,854.7	7,702,552.9	263	150	225	-60
15ACC0007	416,911.4	7,702,609.7	263	150	225	-60
15ACC0008	416,967.2	7,702,665.5	263	139	225	-60
15ACC0009	417,024.9	7,702,720.3	263	151	225	-60
15ACC0010	417,079.8	7,702,778.1	263	150	225	-60
15ACC0011	417,124.0	7,702,822.3	263	145	225	-60
15ACC0012	416,923.0	7,702,760.7	263	150	225	-60
15ACC0013	416,975.9	7,702,813.6	263	85	225	-60
15ACC0014	416,974.0	7,702,812.0	263	115	225	-60
15ACC0015	417,005.0	7,702,845.0	263	151	225	-60
15ACC0016	416,888.3	7,703,009.9	263	188	225	-60
15ACC0017	416,832.5	7,702,956.0	263	151	225	-60
15ACC0018	416,780.6	7,702,903.1	263	151	225	-60
15ACC0019	416,832.5	7,702,956.0	263	181	45	-60
15ACC0020	416,820.9	7,703,082.0	263	151	225	-60
15ACC0021	416,750.0	7,703,012.0	263	163	45	-60
15ACC0022	416,798.0	7,703,061.0	263	163	45	-60
15ACC0023	416,716.0	7,703,120.0	263	151	65	-60
15ACC0024	416,746.0	7,703,149.0	263	205	65	-60
15ACC0025	416,871.0	7,702,848.0	263	157	45	-60
15ACC0026	416,862.0	7,702,982.0	263	84	45	-60
15ACC0027	416,936.4	7,702,351.9	263	151	225	-60
15ACC0028	416,895.0	7,702,310.0	263	160	225	-60
15ACC0029	417,214.0	7,702,414.0	263	163	45	-60
15ACC0030	416,864.0	7,702,984.0	263	163	45	-60
15ACC0031	416,782.0	7,703,045.0	263	89	225	-60
15ACC0032	416,976.0	7,702,824.0	263	163	225	-60
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Table 2: Calibre Deposit 2015 Phase 1 RC Drillhole Assay Results

Hole ID	Depth From (m)	Depth To (m)	Interval (m)	Gold (g/t)	Copper (%)	Silver (g/t)	Tungsten (%)
15ACC0032	102.00	107.00	5.00	0.24	0.15	0.14	0.07
15ACC0032	109.00	142.00	33.00	1.47	0.26	1.11	0.04
Including	109.00	129.00	20.00	2.25	0.36	1.74	0.02
Also Incl	109.00	111.00	2.00	2.39	0.13	0.60	0.01
Also Incl	115.00	119.00	4.00	5.06	0.68	3.50	0.05
Also Incl	123.00	124.00	1.00	2.21	0.03	0.00	0.09
Also Incl	126.00	129.00	3.00	4.50	0.78	3.80	0.00
And	127.00	128.00	1.00	9.33	1.14	5.70	0.00
Including	138.00	142.00	4.00	1.74	0.41	1.83	0.01
Also Incl	138.00	139.00	1.00	2.96	1.15	5.40	0.03
Also Incl	141.00	142.00	1.00	2.05	0.14	0.60	0.01
15ACC0032	146.00	147.00	1.00	0.62	0.13	0.00	0.13
15ACC0032	152.00	153.00	1.00	0.52	0.07	0.00	0.29
15ACC0032	157.00	162.00	5.00	0.53	0.20	0.64	0.00
Including	160.00	161.00	1.00	1.11	0.11	0.50	0.00
15ACC0030	96.00	97.00	1.00	0.47	0.11	0.39	0.00
15ACC0030	100.00	105.00	5.00	0.59	0.03	0.00	0.00
Including	100.00	101.00	1.00	0.91	0.09	0.00	0.01
15ACC0030	107.00	157.00	50.00	1.20	0.08	0.21	0.04
Including	107.00	127.00	20.00	1.70	0.12	0.29	0.05
Also Incl	107.00	113.00	6.00	2.22	0.25	0.83	0.12
And	111.00	112.00	1.00	3.44	0.20	0.70	0.20
Also Incl	117.00	123.00	6.00	1.67	0.06	0.00	0.04
And	120.00	122.00	2.00	3.39	0.05	0.00	0.08
Also Incl	124.00	127.00	3.00	3.13	0.17	0.27	0.00
And	124.00	125.00	1.00	7.25	0.06	0.00	0.00
Including	134.00	135.00	1.00	1.91	0.10	1.20	0.09
Including	142.00	144.00	2.00	3.62	0.15	0.00	0.17
Including	149.00	153.00	4.00	1.86	0.08	0.18	0.13
Also Incl	152.00	153.00	1.00	3.24	0.13	0.70	0.19
Including	156.00	157.00	1.00	1.81	0.06	0.00	0.02
15ACC0030	159.00	162.00	3.00	0.60	0.06	0.00	0.11
Including	161.00	162.00	1.00	0.90	0.10	0.00	0.04
15ACC0029	131.00	133.00	2.00	0.46	0.00	0.00	0.00



Hole ID	Depth From (m)	Depth To (m)	Interval (m)	Gold (g/t)	Copper (%)	Silver (g/t)	Tungsten (%)
15ACC0028	112.00	115.00	3.00	0.38	0.01	0.00	0.00
15ACC0028	122.00	123.00	1.00	0.45	0.03	0.00	0.00
15ACC0028	137.00	139.00	2.00	3.70	0.07	0.00	0.00
15ACC0028	156.00	157.00	1.00	0.53	0.02	0.00	0.00
15ACC0027	124.00	125.00	1.00	0.67	0.01	0.00	0.00
15ACC0027	127.00	128.00	1.00	0.66	0.09	0.00	0.01
15ACC0027	144.00	145.00	1.00	0.36	0.00	0.00	0.00
15ACC0025	97.00	151.00	54.00	0.66	0.06	0.19	0.00
Including	97.00	101.00	4.00	2.23	0.29	1.58	0.01
Also Incl	97.00	99.00	2.00	3.48	0.29	1.85	0.01
And	115.00	127.00	12.00	1.27	0.08	0.23	0.01
Also Incl	115.00	120.00	5.00	1.97	0.14	0.40	0.01
Also Incl	116.00	117.00	1.00	4.50	0.46	2.00	0.00
Also Incl	125.00	126.00	1.00	2.36	0.17	0.70	0.00
Including	129.00	130.00	1.00	0.78	0.00	0.00	0.00
Including	136.00	137.00	1.00	1.38	0.00	0.00	0.00
Including	148.00	151.00	3.00	1.20	0.01	0.00	0.00
Also Incl	149.00	150.00	1.00	2.35	0.00	0.00	0.00
15ACC0013	Ineffective	Abandoned in pre-collar					
15ACC0026	Ineffective	Abandoned in pre-collar					
15ACC0031	Ineffective	Abandoned in pre-collar					

# **CALIBRE DEPOSIT:**

# JORC Code 2012 Edition: Table 1 - Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections)

Criteria JORC Code explanation	Commentary
<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>2012 to 2014:</li> <li>The Calibre deposit was sampled by diamond drill holes (DDH), with a total of ten DDH drilled to date for 4,670m and average depth of 424m.</li> <li>The DDH programme was drilled across four approximate northeast-southwest sections spaced approximately 50m apart with an average drill hole spacing on each section of between 100 to 200m.</li> <li>Drill hole collar locations were recorded by handheld GPS, which has an estimated accuracy of ± 5m.</li> <li>Holes are angled towards grid northeast to be perpendicular to the strike of both the dominant mineralisation trend and bedding, and at a suitable angle to the dip of the dominant mineralisation.</li> <li>Sampling was carried out under Antipa protocols and QAQC procedures as per industry best practice.</li> <li>Diamond core was drilled with HQ and NQ2 size and sampled on intervals from 0.1 to 2.0m selected on the basis of geological boundaries.</li> <li>If the sample interval is less than 1.5m in length half the core was submitted for assay. If the sample interval is greater than 1.5m in length then quarter of the core is submitted for assay.</li> <li>2015 (NB: RC Drilling programme in progress):</li> <li>To date the Calibre deposit has been sampled by 32 Air-core - Slim-line Reverse Circulation (RC) drillholes totaling 4,764m averaging 149m in total depth.</li> <li>Assays available for all thirty-two RC drillholes.</li> <li>The nominal RC drillhole spacing is a number of east-west sections spaced 100m apart with an average drill hole spacing on each section of 80m.</li> <li>Drill hole collar locations were recorded by handheld GPS, which has an estimated accuracy of ± 5m.</li> <li>Holes are angled towards grid southwest or less frequently northeast to be perpendicular to the strike of both the dominant mineralisation trend and bedding, and at a suitable angle to the dip of the dominant mineralisation.</li> <li>Air-core and RC Sampling was carried out under Antipa protocols and QAQC procedures as per industry best practice.</li> <li< td=""></li<></ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>unmineralised sample intervals to generate a 3 kg (average) sample which was pulverised at the laboratory to produce material for assay.</li> <li>Air-core samples of the Tertiary and Permian cover were drilled using an 87.5mm diameter Air-core bit and sampled on intervals of 1.0m using cyclone "dumps".</li> <li>Compositing of particular regions of the Permian cover were conducted on a 2 to 4m basis and was completed via combining "Spear" samples of the relevant sample intervals to generate a 3 kg (average) sample which was pulverised at the laboratory to produce material for low-level geochemical assay.</li> </ul>
		2012 to 2015:
		<ul> <li>Proterozoic samples were sent to MinAnalytical Laboratory Services         Australia Pty Ltd in Perth, where they were dried, crushed, pulverised and         split to produce a sub—sample for a lead collection fire assay on a 50g         sample with Atomic Absorption Spectroscopy undertaken to determine gold         content with a detection limit of 0.005ppm. All other elements (34 in total)         were assayed using a four acid digest, inductively coupled plasma – optical         emission spectroscopy technique (ICP-OES) with various detection limits.</li> <li>Permian cover samples were sent to MinAnalytical Laboratory Services         Australia Pty Ltd in Perth, where they were dried, crushed, pulverised and         split to produce a sub—sample for a 25g sample for Aqua Regia digest with         61 element inductively coupled plasma – optical emission spectroscopy         technique (ICP-OES) or inductively coupled plasma – mass spectrometry         technique (ICP-MS) low-level geochemical analysis with various detection         limits.</li> </ul>
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <li>Diamond drilling accounts for 50% and Air-core - Slim-line Reverse Circulation drilling accounts for 50% of the current Calibre prospect drill metres of 9,434m average drillhole depth of 219m.</li> <li>Diamond drillholes were completed using HQ and NQ2 sized core. Rockrolled pre-collar depths range from 31 to 100m and hole depths range from 375 to 665m.</li> <li>A total of 10 diamond drillholes (DDH) have been drilled totaling 4,670m averaging 425m in total depth.</li> <li>A total of 32 Air-core - Slim-line Reverse Circulation drillholes (RC) have been drilled totaling 4,764m averaging 149m in total depth; with Air-core (87.5mm diameter) of the majority of the Permian cover to depths ranging from 70 to 90m and Slim-line (100mm diameter) Reverse-circulation (RC) for the remainder of each drillhole (including the basal portion of the Permian cover and all of the Proterozoic basement) to total drillhole depths of between 84m to 205m.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>Holes are angled towards grid southwest or grid northeast at varying angles to optimally intersect the mineralisation.</li> <li>The diamond drillcore is oriented using a Reflex ACT electronic orientation tool.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>Diamond Core:</li> <li>Core recovery is routinely recorded as a percentage. Overall core recoveries averaged 99.6% and there are no core loss issues or significant sample recovery problems except for occasional localised regions either side of the unconformity/base of transported cover.</li> <li>Core recovery is routinely recorded and is generally very good, except for occasional localised regions either side of the unconformity and in the chloritic fault zone within the footwall of the cross-cutting (pre-mineralisation) dolerite dyke.</li> <li>Diamond core is reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against the depth given on the core blocks and rod counts are routinely carried out by the drillers.</li> <li>Drillers used appropriate measures to maximise diamond sample recovery.</li> <li>To date, no detailed analysis to determine the relationship between sample recovery and/or and grade has been warranted as the mineralisation is defined by diamond core drilling which has high recoveries.</li> </ul>
		<ul> <li>RC (and Air-core) Samples:</li> <li>RC sample recovery was recorded via visual estimation of sample volume.</li> <li>RC sample recovery typically ranges from 90 to 100%, with only very occasional samples with less than 70% recovery.</li> <li>RC sample recovery was maximized by endeavouring to maintain a dry drilling conditions as much as practicable; the Calibre RC samples were almost exclusively dry.</li> <li>Cone splitter adjustments were made to ensure representative sample volumes were collected.</li> <li>Relationships between recovery and grade are not evident and are not expected given the generally excellent and consistently high sample recovery.</li> <li>Air-core sample recovery was recorded via visual estimation of sample volume.</li> <li>Air-core results are generated solely for the purpose of low-level geochemical exploration (i.e. not for Mineral Resource estimations).</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean,</li> </ul>	<ul> <li>All diamond drillcore, Air-core and RC material is logged.</li> <li>Logging includes both qualitative and quantitative components.</li> <li>All logging is entered directly into a ruggedized notebook computer using the</li> </ul>

Criteria	JORC Code explanation	Commentary
	channel, etc) photography.  The total length and percentage of the relevant intersections logged.	<ul> <li>Antipa Proprietary Logging System which is based on Microsoft Excel. The logging system uses standard look up tables that does not allow invalid logging codes to be entered. Further data validation is carried out during upload to Antipa's master Access SQL database.</li> <li>Geological logging of 100% of all Air-core and RC sample intervals was carried out recording colour, weathering, lithology, mineralogy, alteration, veining, sulphides and (where possible) structure.</li> <li>Geotechnical logging of all core was carried out for Recovery, RQD and Fracture Frequency.</li> <li>Information on structure type, dip, dip direction, alpha angle, beta angle, gamma angle, texture and fill material is stored in the Company's technical database.</li> <li>All drill holes were logged in full with the exception of the rock-rolled precollar component of the diamond drillholes. The pre-collar in entirely within the transported (younger/post mineralisation) cover material.</li> <li>Snowden considers that the Company's logging is carried out in sufficient detail to meet the requirements of the reporting of exploration results and resource estimation and mining studies.</li> <li>Core was photographed both wet and dry.</li> <li>All Air-core - RC drillholes/samples were filmed (laid out on the ground) in HD-Videos and photography.</li> <li>All Air-core and RC sample intervals were measured for magnetic susceptibility using a hand held Magnetic Susceptibility meter.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Diamond Core:</li> <li>Diamond core was drilled with HQ and NQ2 size and sampled on intervals from 0.1 to 2.0m selected on the basis of geological boundaries.</li> <li>Diamond core is sampled on a nominal 2.0m sample interval within unmineralised zones and on 0.1 to 1.0m intervals within the mineralised zones.</li> <li>Sample intervals are adjusted so that samples do not cross lithological boundaries and samples are collected from the same side of the core.</li> <li>Samples are collected from half-core (if &lt;1.5m) and quarter-core (if &gt;1.5m) using a diamond saw located at the Company's field facility.</li> <li>Samples are selected to weigh less than 3kg to ensure total preparation at the pulverisation stage.</li> <li>RC (and Air-core) Samples:</li> <li>RC samples were drilled using a 100mm diameter face sampling hammer and sampled on intervals of 1.0m using a rig mounted cone splitter from which a 3 kg (average) sample which was pulverised at the laboratory</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>Compositing of unmineralised regions (guided by Niton field analysis) of between 2 to 4m was undertaken via combining "Spear" samples of the unmineralised sample intervals to generate a 3 kg (average) sample which was pulverised at the laboratory to produce material for assay.</li> <li>Air-core samples of the Tertiary and Permian cover were drilled using an 87.5mm diameter Air-core bit and sampled on intervals of 1.0m using cyclone "dumps".</li> <li>Compositing of particular regions of the Permian cover were conducted on a 2 to 4m basis and was undertaken via combining "Spear" samples of the relevant sample intervals to generate a 3 kg (average) sample which was pulverised at the laboratory to produce material for low-level geochemical assay.</li> </ul>
		Diamond Core and RC (and Air-core) Samples:
		<ul> <li>Sample preparation of diamond core, Air-core and RC samples was completed at MinAnalytical Laboratories in Perth following industry best practice in sample preparation involving oven drying, coarse crushing of the core sample down to approximately 10mm, followed by pulverisation of the entire sample (total prep) using Essa LM5 grinding mills to a grind size of 85% passing 75 µm and split into a sub–sample/s for analysis.</li> <li>The sample sizes are considered to be appropriate to correctly represent the sulphide style of mineralisation at Calibre, the thickness and consistency of the intersections and the sampling methodology.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>The sample preparation technique for diamond drillcore, Air-core and RC samples is documented by Antipa Mineral Ltd's standard procedures documents and is in line with industry standards in sample preparation.</li> <li>The sample sizes are considered appropriate to represent mineralisation.</li> <li>A lead collection fire assay on a 50g sample with Atomic Absorption Spectroscopy undertaken to determine gold content with a detection limit of 0.005ppm (for the Proterozoic samples).</li> <li>The Proterozoic samples were dried, crushed, pulverised and split to produce a sub–sample for a 25g sample which are digested and refluxed with hydrofluoric, nitric, hydrochloric and perchloric acids ("four acid digest") suitable for silica based samples. This digest is considered to approach a total dissolution for most minerals. Analytical methods used were ICP–OES (Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, La, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sn, Sr, Te, Ti, Tl, V, W and Zn).</li> <li>Permian cover samples were dried, crushed, pulverised and split to produce a sub–sample for a 25g sample for Aqua Regia digest with 61 element inductively coupled plasma – optical emission spectroscopy technique (ICP-OES) or inductively coupled plasma – mass spectrometry technique (ICP-OES) or inductively coupled plasma – mass spectrometry technique (ICP-OES) or inductively coupled plasma – mass spectrometry technique (ICP-</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>MS) low-level geochemical analysis with various detection limits (Ag, Al, As, Au, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Fe, Ga, Gd, Hf, Ho, In, K, La, Li, Lu, Mg, Mn, Mo, Na, Nb, Nd, Ni, P, Pb, Pd, Pr, Pt, Rb, Re, Sb, Se, Sc, Sm, Sn, Sr, Ta, Tb, Te, Th, Ti, Tl, Tm, U, V, W, Y, Yb, Zn and Zr).</li> <li>No geophysical tools were used to determine any element concentrations in this report.</li> <li>A handheld portable Niton XRF analyser (XL3t 950 GOLDD+) device is used in the field to investigate and record geochemical data for internal analysis. However, due to "spatial" accuracy/repeatability issues this data is not publically reported.</li> <li>Snowden's analysis of the 2012-2013 QC data for the Calibre deposit found the standard sample results to be acceptable.</li> <li>Field QC procedures involve the use of commercial certified reference material (CRM's) for assay standards and blanks. Standards are inserted every 30 samples, increasing to every 20 samples in mineralised zones and decreasing to every 50 samples in unmineralised zones. The grade of the inserted standard is not revealed to the laboratory.</li> <li>No field duplicates/second core sampling QC were utilised during the 2012-2014 diamond drilling programme.</li> <li>Field duplicates/second RC sampling QC was utilised during the 2015 RC drilling programme with nominally one duplicate field sample per drillhole.</li> <li>Inter laboratory cross-checks analysis programmes have not been conducted at this stage.</li> <li>In addition to Antipa supplied CRM's, MinAnalytical includes in each sample batch assayed certified reference materials, blanks and up to 10% replicates.</li> <li>Sample preparation checks for fineness were carried out by the laboratory as part of its internal procedures.</li> <li>Selected anomalous samples are re-digested and analysed to confirm results.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Significant intersections of the drilling have been visually verified by the Managing Director.</li> <li>No twinned holes have been drilled at Calibre.</li> <li>All logging is entered directly into a ruggedized notebook computer using the Antipa Proprietary Logging System which is based on Microsoft Excel. The logging system uses standard look up tables that does not allow invalid logging codes to be entered. Further data validation is carried out during upload to Antipa's master SQL database.</li> <li>No adjustments or calibrations have been made to any assay data collected.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> </ul>	<ul> <li>km = kilometre; m = metre; mm = millimetre.</li> <li>Drillhole collar locations are surveyed using a hand held Garmin 60CSx GPS</li> </ul>

Criteria	JORC Code explanation	Commentary
	Specification of the grid system used.     Quality and adequacy of topographic control.	<ul> <li>which has an accuracy of ± 5m.</li> <li>The drilling coordinates are all in GDA94 MGA Zone 51 coordinates.</li> <li>The Company has utilised and referenced a local grid at Calibre which is defined below. References in the text and the Calibre deposit diagrams are all in the Local Grid. Table 1 is in GDA94 / MGA Zone 51;</li> <li>Calibre Local Grid 0.00m east is 421,535.53m east in GDA94 / MGA Zone 51;</li> <li>Calibre Local Grid 0.00m north is 7,691,393.40m north in GDA94 / MGA Zone 51;</li> <li>Calibre Local Grid North (360°) is equal to 315° in GDA94 / MGA Zone 51;</li> <li>Calibre Local Grid elevation is equal to GDA94 / MGA Zone 51.</li> <li>Rig orientation was checked using Suunto Sighting Compass from two directions.</li> <li>Drillhole inclination was set by the driller using a clinometer on the drill mast and checked by the geologist prior the drilling commencing.</li> <li>The topographic surface has been compiled using the drillhole collar coordinates.</li> <li>For diamond drillholes downhole surveys were undertaken in-hole during drilling using a 'Reflex EZ Trac Camera' device at 30 to 50 metre intervals (maximum 50 metres) with a final survey at the end of the drillhole.</li> <li>Downhole surveys were checked by the supervising geologist for consistency. If required, readings were re-surveyed or smoothed in the database if unreliable azimuth readings were apparent.</li> <li>Survey details included drillhole dip (±0.25° accuracy) and drillhole azimuth (±0.35 accuracy°) Total Magnetic field and temperature.</li> <li>At the time of this report no downhole surveys have been undertaken for the RC drillholes; however, the deeper RC holes have been cased to facilitate future downhole surveying.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>2012-2013 era; the nominal drillhole spacing is four approximate east-west sections spaced approximately 50m apart with an average drill hole spacing on each section of 100 to 200m.</li> <li>The section spacing is sufficient to establish the degree of geological and grade continuity necessary to support the resource classification of Inferred.</li> <li>For the Mineral Resource estimations all samples were composited using a nominal 1m interval prior to compiling the estimate. Where necessary the composite interval has been adjusted to ensure that there are no residual sample lengths.</li> <li>No diamond drill sample compositing has been applied for the reporting of exploration results.</li> <li>2015 era; the nominal RC drillhole spacing is a number of east-west sections spaced 100m apart with an average drill hole spacing on each section of 80m.</li> <li>Air-core and RC drill sample compositing has been applied for the reporting of exploration results.</li> </ul>

Criteria	JORC Code ex	planation	Commentary
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling ach structures and the extent to which this is</li> <li>If the relationship between the drilling on mineralised structures is considered to h should be assessed and reported if mate</li> </ul>	known, considering the deposit type. ientation and the orientation of key nave introduced a sampling bias, this	The location and orientation of the Calibre drilling is appropriate given the strike, dip and morphology of the mineralisation.  No consistent and/or material sampling bias resulting from a structural orientation has been identified at Calibre at this point; however, both folding and multiple vein directions have been recorded via diamond drilling.
Sample security	The measures taken to ensure sample s	ecurity.	Chain of sample custody is managed by Antipa to ensure appropriate levels of sample security.  Samples are stored on site and delivered by Antipa personnel to Sadleirs Nexus Logistics Transport in Port Hedland and then to the assay laboratory in Perth.
Audits or reviews	The results of any audits or reviews of sa	ampling techniques and data.  •	Sampling techniques and procedures are regularly reviewed internally, as is the data.  Consultants Snowden, during completion of the 2013 Calibre Mineral Resource estimate, undertook a desktop review of the Company's sampling techniques and data management and found them to be consistent with industry standards.

# **CALIBRE DEPOSIT:**

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agre or material issues with third parties such as joint ventures, partnership overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any impediments to obtaining a licence to operate in the area.</li> </ul>	Minerals Ltd has a 100% interest in the tenement and there are no royalties on the tenement.  • E45/2877 is contained completely within land where the Marty People have
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>The Calibre deposit was a greenfield discovery by the Company in 2012.</li> <li>There has been no other exploration of the target area or deposit region by other parties.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	The geological setting is Paterson Province Proterozoic aged meta-sediment hosted hydrothermal shear, fault and strata/contact controlled precious and/or base metal mineralisation which is typically sulphide bearing. The mineralisation in the region is interpreted to be granite related. The Paterson is a low grade metamorphic terrane but local hydrothermal alteration and/or contact metamorphic mineral assemblages and styles are indicative of a

Criteria	JORC Code explanation	Commentary
		high-temperature local environment. Mineralisation styles include vein, stockwork, breccia and skarns.
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	A summary of all information material to the understanding of the Calibre exploration results can be found in previous public reports.
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Reported aggregated intervals have been length and, in the case of diamond core, bulk density weighted.</li> <li>No top-cuts have been applied.</li> <li>A nominal 0.30 g/t gold or 0.10% copper lower cut-off grade is applied.</li> <li>Higher grade intervals of mineralisation internal to broader zones of mineralisation are reported as included intervals.</li> <li>Metal equivalence is not used in this report.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul> <li>The quartz vein and breccia mineralisation is dominantly moderate to steeply dipping to the southwest and drill holes are typically holes inclined between -60° and -75° toward the northeast or southwest.</li> <li>No consistent and/or material sampling bias resulting from a structural orientation has been identified at Calibre at this point; however, both folding and multiple vein directions have been recorded via previous diamond drilling.</li> <li>In general the intersection angles for the drilling appear to be close to perpendicular to the overall mineralised zones. Therefore the reported downhole intersections approximate 70% to 80% true width.</li> </ul>
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul> <li>All appropriate maps and sections (with scales) and tabulations of intercepts are reported or can be found in previous public reports.</li> </ul>
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	All significant results are reported or can be found in previous public reports.
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical</li> </ul>	<ul> <li>All meaningful and material information has been included in the body of the text or previous public reports.</li> <li>The outlines of heliborne, surface and downhole electromagnetic conductivity anomalies can be found in previous public reports.</li> </ul>

Criteria	JORC Code explanation	Commentary
	and rock characteristics; potential deleterious or contaminating substances.	<ul> <li>Zones of mineralisation and associated waste material are measured for their bulk density which range from 2.45 g/cm³ to 4.23 g/cm³.</li> <li>Multi element assaying is conducted routinely on all samples for a suite of potentially deleterious elements including arsenic, sulfur, lead, zinc and magnesium.</li> <li>Geotechnical logging was carried out on all diamond drillholes for Recovery, RQD and Fracture Frequency.</li> <li>Information on structure type, dip, dip direction, alpha angle, beta angle, gamma angle, texture and fill material is stored in the Company's technical SQL database.</li> <li>For preliminary metallurgical test results refer to previous public reports.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>At this stage mineralisation identified by diamond and RC drilling is understood across a 650m strike extent and is open in all directions and so requires further work/drilling to test for lateral (in particular north-south but also east-west) and vertical extensions and continuity beyond the limits of the Inferred Mineral Resource and additional drilling limits.</li> <li>Diagrams can be found in previous public reports.</li> </ul>

# **CALIBRE DEPOSIT:**

Section 3 Reporting of Mineral Resources (Criteria listed in section 1, and where relevant section 2, also apply to this section)

Note: The Calibre (and Magnum) Mineral Resource Estimation (JORC Code 2012 Edition) are February 2015 and pre-date the current (and ongoing) Calibre Reverse-Circulation drilling programme.

Criteria	JORC Code explanation	Commentary
Database integrity	<ul> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>All drilling information is entered directly into a computer database. The validated data was provided to Snowden in a Microsoft Access database.</li> <li>Snowden undertook a basic check of the database for potential errors as a preliminary step to compiling the resource estimate. No significant flaws were identified.</li> </ul>
Site Visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>Given the early and initial stage of the deposit evaluation, no site visit was undertaken by the Mineral Resource consultants.</li> <li>Representative drill core samples were inspected.</li> <li>Diamond drill core photographs were inspected.</li> </ul>
Geological	Confidence in (or conversely, the uncertainty of) the geological interpretation	The interpretations for lithology and mineralisation have been supplied by

Criteria	JORC Code explanation	Commentary
interpretation  Dimensions	<ul> <li>of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<ul> <li>Antipa and are based on a combination of geological logging and assay results.</li> <li>Given the limited drillhole information currently available alternative interpretations of the mineralisation are likely to significantly impact the reported resource.</li> <li>Current Mineral Resource drilling is limited to the following extents within the Calibre deposit; 210m along strike, 410m across strike and to a vertical depth in excess of 540m.</li> <li>The deposit is open in all directions beyond the limits of current drilling.</li> </ul>
Estimation and modelling techniques	<ul> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulfur for acid mine drainage characterization).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul> <li>Drillhole data was coded using the wireframe interpretations. Samples were composited to 1m downhole, with composite lengths adjusted to avoid crossing lithological boundaries.</li> <li>Statistical analysis of the domains (LENSES) indicates that top-cutting was necessary for some domains. Top cuts of between 1 and 5 g/t Au were applied for gold estimation and between 0.4 and 1% Cu for copper estimation. Top cuts impacted on between &lt;1% and 5% of the data.</li> <li>Omni-directional variograms were modelled to determine grade continuity.</li> <li>Datamine software was used to estimate grades for gold, copper, silver, tungsten and bismuth using ordinary block kriging into 24 mN by 12.5 mE by 12 mRL parent cells with sub-celling to 6m by 3.125m by 3m. A block discretisation of 8 by 4 by 4 was used in the easting, northing and elevation directions respectively.</li> <li>Mineralised zone boundaries (LENSE) were treated as hard boundaries for estimation.</li> <li>There was not enough data to obtain meaningful directional variogram models and therefore the search ellipse was based on the geology and extents of the mineralisation as determined by the drillhole data. Blocks were estimated using a minimum of 5 and a maximum of 40 samples. If the initial search failed to find the minimum number of samples required, then a second search was conducted reducing the minimum number of samples to 2, a third search using quadruple the initial search radii with the minimum number of samples reduced to 2 was used to populate all remaining uninformed blocks.</li> <li>The estimates were validated using: <ul> <li>A visual comparison of the block grade estimates to the input drillhole composite data which shows a good correlation.</li> <li>Generation of moving window average plots of the block grade estimates, declustered (nearest neighbour method) composites and naïve composite grades, along with the number of composite samples available. These grade trend plots show reasonable correlation between</li> </ul> </li> </ul>

JORC Code explanation	Commentary
	the local patterns in the block grade estimates compared with the drillhole composite grades in the well informed parts of the deposit.  • A global comparison of the estimated block grades to the average composite (naïve) grades for all elements within the mineralised domains. Both sets of results are within 5% for the main mineralised lenses.  • This is an update of the maiden resource estimate for the Calibre deposit.
Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	<ul> <li>All tonnages are estimated on a dry basis.</li> <li>There are no clay-rich mineralisation lithologies (e.g. oxide material) and the mineralisation host rock is non-porous.</li> </ul>
The basis of the adopted cut-off grade(s) or quality parameters applied.	<ul> <li>The Mineral Resource is reported at a 0.5 g/t AuEq grade cut-off based on metallurgical test-work.</li> </ul>
<ul> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	The Calibre deposit is overlain by a layer of weakly lithified sediments material which has an average thickness of 84m. Open pit methods are being considered at this stage.
The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	<ul> <li>The Calibre deposit's simple and coarse grained copper mineralogy, is almost exclusively chalcopyrite. No copper oxide or other copper sulphide minerals were observed. The gangue mineralogy is dominated by quartz and feldspar. The straightforward mineralogy has produced very favourable metallurgical outcomes from the low copper ore grades of Calibre.</li> <li>Preliminary metallurgical test work was completed at the Bureau Veritas Minerals Pty Ltd laboratories in Perth, Western Australia under the management of Bureau Veritas metallurgists and Antipa's Managing Director.</li> <li>A master 39 kilogram metallurgical composite sample was composed of material from 90 individual samples. All samples were collected from diamond drill core representative of the Calibre gold-copper-silver-tungsten mineralisation. As no oxide mineralisation is known to occur at Calibre the samples were all of primary and transitional mineralisation.</li> <li>The master metallurgical composite sample was constructed to have precious and base metal grades comparable to the Calibre Inferred Mineral Resource. The head grade for the composite used in the definitive metallurgical test was 0.63 g/t gold, 0.23% copper, 0.80 g/t silver, 0.02% tungsten tri-oxide and 0.97% sulfur.</li> <li>The preliminary metallurgical test work which focused on the precious and</li> </ul>
	<ul> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>Mineralogical, and metallurgical data investigation via the QEMSCAN® micro-analysis system;</li> <li>HLS density beneficiation test work;</li> <li>Sulphide Flotation;</li> <li>Tungsten Flotation;</li> <li>Cyanide leaching of sulphide flotation tailings for recovery of remaining gold and silver.</li> <li>The Calibre mineralisation is planned to be crushed and ground with the following products being produced:         <ul> <li>A sulphide concentrate containing copper, gold and silver;</li> <li>Gold doré (containing gold and silver); and</li> <li>A tungsten concentrate.</li> </ul> </li> <li>Preliminary metallurgical test work has shown that saleable products for copper, gold and silver can be produced from the Calibre mineralisation at good metallurgical recoveries.</li> <li>Further test-work is required with respect to tungsten concentrate specifications; however, the initial results are considered encouraging, including mineralogy investigation using QEMSCAN® which revealed the tungsten minerals to be comparatively coarse grained and well liberated. As a consequence a conservative recovery of 50% was assumed for tungsten.</li> <li>Heavy Liquid Separation (HLS) test work was used to assess the amenability of the ore to physical upgrade processes such as gravity. The HLS results highlighted the excellent density beneficiation qualities of the Calibre mineralisation.</li> <li>It is envisaged that the Calibre mineralisation would be processed on site.</li> </ul>
Environmental factors and assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	<ul> <li>The Calibre project is in the early stages of exploration and therefore, given the small amount of data available considerations regarding environmental factors have not yet been made.</li> </ul>
Bulk density	<ul> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>Density measurements were supplied by Antipa and have been determined using the water immersion method.</li> <li>Zones of mineralisation and associated waste material are measured for their bulk density which range from 2.45 g/cm³ to 4.23 g/cm³.</li> <li>Density values used are listed in Table 5.3.</li> </ul>

Criteria	JORC Code explanation	Commentary
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>The resources have been classified based on geological and grade continuity, drillhole spacing as well as the information summarised in this table.</li> <li>Model blocks were flagged as Inferred or unclassified. Inferred Mineral Resources were flagged in the model based on the following guidelines: <ul> <li>Minimum drilling density of approximately 50m along strike (north-south) and 100m across strike (east-west).</li> <li>Mineralisation is constrained within the estimation domain LENSE and has been extended 25m past the last drill section along strike, approximately 50m past the last drillhole on each section and to a vertical depth of equal to the deepest drillhole (approximately 460m).</li> </ul> </li> <li>Approximately 45% of the Inferred Mineral Resource is based on extrapolated data beyond the extent of the drillholes.</li> <li>The Mineral Resource estimate appropriately reflects the views of the Competent Person with respect to the deposit.</li> </ul>
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	<ul> <li>No third party reviews of the work have been undertaken. This is appropriate given the limited amount of work completed to date.</li> </ul>
Discussion of relative accuracy/confid ence	<ul> <li>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>The relative accuracy and confidence in the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as set out in the JORC Code (2012 Edition).</li> <li>Given the limited drilling information that is available the overall confidence in the local estimates is low.</li> </ul>



#### NOTES:

# Exploration Target (Revised) +1.0 g/t Gold - Detailed explanation of the basis for the statement:

The potential quantity and grade is conceptual in nature. There has been insufficient exploration to define a Mineral Resource for the area the subject of the Exploration Target, and it is uncertain if further exploration will result in the determination of a Mineral Resource in respect of such area.

## Tonnage Range Basis:

- Density of 2.77 gm/cm<sup>3</sup> used for gold-copper mineralisation; as determined from direct measurements (linear weighted average) from drillcore.
- Exploration Target +1.0 g/t gold Tonnage Lower Limit = 2 regions hosting mineralisation (i.e. Northern and Southern Zones) with following dimensions;
  - Northern Zone = 700m strike x 100m total horizontal width x 600m dip extent below the base of transported cover; and
  - Southern Zone = 400m strike x 40m total horizontal width x 600m dip extent below the base of transported cover;
- Exploration Target +1.0 g/t gold Tonnage Upper Limit = 2 regions hosting mineralisation (i.e. Northern and Southern Zones) with following dimensions;
  - Northern Zone = 700m strike x 100m total horizontal width x 800m dip extent below the base of transported cover; and
  - Southern Zone = 400m strike x 40m total horizontal width x 800m dip extent below the base of transported cover.

## Grade Range Basis:

- ±10% of the average gold and copper grades as determined from gold and copper laboratory assay grades derived from linear weighted fully diluted intersections, from the ten existing Calibre diamond drillholes and thirty-two RC drillholes, representative of the Northern and Southern Zones +1.0 g/t gold Exploration Target, details as follows:
  - +1.0 g/t Gold Exploration Target Grade Ranges:
    - Northern Zone:

Gold = 1.04 to 1.27 g/t
 Copper = 0.10 to 0.12%

Southern Zone:

Gold = 0.85 to 1.04 g/t
 Copper = 0.26 to 0.32%

#### Geological Support:

- Interpretations of the ten diamond and thirty-two RC drillholes including;
  - Geological.
  - Structural and
  - Analytical data, in conjunction with geophysical supporting geophysical data, analysis, and modelling.



# Geophysical Support:

- Detailed ground magnetic Calibre survey relevant magnetic high anomalies.
- Airborne magnetic survey relevant magnetic anomalies associated with, and extending north of, the northern zone higher-grade gold mineralisation.
- Surface Fixed-Loop electromagnetic conductivity anomaly.
- Downhole electromagnetic conductivity plate models.

# Calibre Exploration Target Validation:

The proposed exploration activities to test the validity of the Calibre Exploration Target are anticipated to include phased drilling programmes designed to investigate the continuity of gold-copper-silver±tungsten mineralisation both along strike and down dip across the Calibre ground and aeromagnetic magnetic and EM anomalies. A staged approach over a 1 to 2 year period with drilling undertaken incrementally and supported by surface and downhole geophysics is contemplated.