



30 March 2017  
ASX: GRR

# GRANGE RESOURCES LIMITED

*Australia's most experienced magnetite producer*

**December 2016 Resource Reserve Statement  
Savage River Operations  
Tasmania**

## HIGHLIGHTS

- Mineral Resources and Ore Reserves have been estimated for Grange's Savage River magnetite deposits in Tasmania as at 31 December 2016.
- Mineral Resources decreased to 377.5 @ 47.7%DTR with normal depletion from mining.
- Ore Reserves at Savage River are 86.6MT @ 52.5%DTR and reflect mine production during the year.
- The attached updated Savage River Mineral Resource & Ore Reserve statement has been compiled in accordance with JORC 2012



Grange Resources Pty Ltd (ASX: GRR) (“Grange” or the “Company”) advises that the Mineral Resource for the Savage River Ore Deposits has decreased since the previous Mineral Resource estimate dated Dec 2015, as a result of normal mining depletion. Ore Reserves have been depleted for mine production during the last calendar year.

The resource consists of 377.5 million tonnes at 47.7% DTR (above a cut-off of 15% DTR) as detailed in table 1 and the reserve consists of 86.6 million tonnes at 52.5% DTR (above a cut-off of 15% DTR) as detailed in table 2.

**Table 1 – Savage River Mineral Resource Estimate  
(Above a cut-off grade of 15% DTR)**

	Measured Resources	Indicated Resources	Inferred Resources	TOTAL Resources
<b>Tonnes (Mt)</b>	67.3	155.1	155.1	377.5
<b>DTR (%)</b>	54.2	49.9	42.5	47.7
<b>Fe (%)</b>	68.1	68.0	68.5	68.2
<b>Ni (%)</b>	0.04	0.04	0.04	0.04
<b>TiO<sub>2</sub> (%)</b>	0.64	0.69	0.64	0.66
<b>MgO (%)</b>	1.55	1.58	1.30	1.46
<b>P (%)</b>	0.009	0.009	0.008	0.009
<b>V (%)</b>	0.39	0.36	0.36	0.36
<b>S (%)</b>	0.11	0.10	0.09	0.10

- NB
- Elemental compositions were measured from Davis Tube Concentrate
  - Stockpiles were included in this summary table and are itemised separately in tables of individual mining pits and aggregated stockpiles



**Table 2 – Savage River Ore Reserve Estimate  
(Above a cut-off grade of 15%DTR)**

	<b>Proved Reserves</b>	<b>Probable Reserves</b>	<b>TOTAL Reserves</b>
<b>Tonnes (Mt)</b>	28.0	58.6	86.6
<b>DTR (%)</b>	54.3	51.7	52.5
<b>Fe (%)</b>	67.6	67.8	67.7
<b>Ni (%)</b>	0.03	0.03	0.03
<b>TiO<sub>2</sub> (%)</b>	0.88	0.92	0.91
<b>MgO (%)</b>	1.46	1.63	1.57
<b>P (%)</b>	0.008	0.008	0.008
<b>V (%)</b>	0.39	0.37	0.37
<b>S (%)</b>	0.05	0.06	0.06

- NB
- Elemental compositions were measured from Davis Tube Concentrate
  - Stockpiles were included in this summary table and are itemised separately in tables of individual mining pits and aggregated stockpiles

The Mineral Resource and Ore Reserve have been estimated by the Company's technical staff, and has been reported in accordance with the guidelines of the JORC Code (2012 edition).



## INTRODUCTION

This document has been prepared to summarise the Mineral Resource and Ore Reserve of Grange Resources' magnetite deposits, located at Savage River and Long Plains in Tasmania.

This statement covers the material remaining at the end of December 2016 and contains summary details on the history of Savage River, the geology of the deposit and information involved in producing Mineral Resource and Ore Reserve estimates.

## TENURE

Grange Resources operates under the conditions of Mining Lease 2M/2001 which consolidates and expands the previous lease 11M/97. This lease stands for 30 years from 2001, encompassing a total of 4,975 hectares.

The mining lease encompasses the Savage River Mine and concentrator, and the pelletising plant, wharf and shipping facilities located on the north west coast at Port Latta. The operation and facilities were previously held under Mining Lease 44M/66 when Pickands Mather & Co International (PMI) were the managers of the project until 1997.

Mining lease 14M/2007 was granted in May 2008 to extend the coverage of 2M/2001 for a total of 91 hectares. Another lease, 11M/2008 was granted in August 2009 to extend coverage by a further 108 hectares. This lease renewal is pending at time of writing and remains in good standing. Figure 1 shows the location of each lease.

Exploration licence EL30/2003 was granted in February 2010 and current tenure expires 18 June 2017 but is renewable via a successful extension of term application. Grange is currently on its fourth extension of term and an application for a further extension will be made prior to the renewal date. This license covers the entire Long Plains deposit. The lease comprises 38

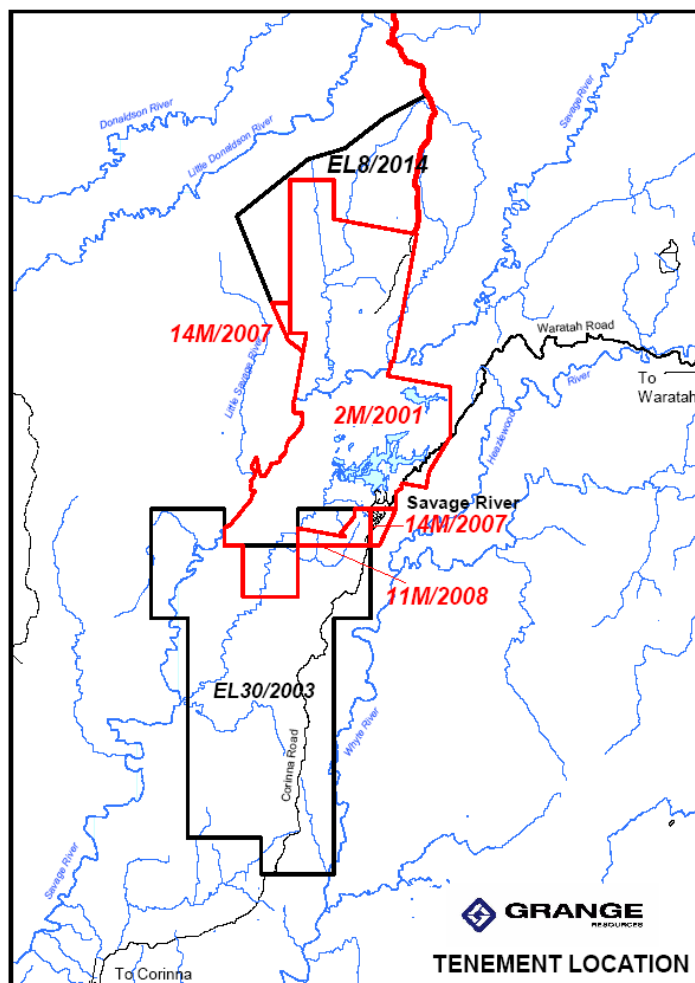


Figure 1 Tenements as at Dec 31, 2016





sq km and adjoins 2M/2001 to the north. EL30/2003 covers all potential mining infrastructure sites and haulage routes envisaged should the Long Plains magnetite deposits prove up to be economical and progress to mining. In May 2016 Mineral Resources Tasmania requested that the external boundaries of the EL be modified slightly so that they align to the regular coordinate grid (GDA94-MGA 55). This has occurred and the main prospective part of the resource is still contained within the new boundary alignment.

Grange was granted an exploration licence application “Pipeline Road” shown as EL8/2014 for an 11sq km lease north of 2M-2001 in 2014 and this licence is currently in year three of a five year term which expires on 29 July 2019.

All leases and licences previously held by Australian Bulk Minerals (ABM) were transferred to Grange Resources Tasmania following the merger in January, 2009.

## LOCATION

The Savage River Mine and concentrator plant are located approximately 100km south west by sealed road from Burnie. The pelletising plant and dedicated port facilities at Port Latta are located 70 kilometres northwest by sealed road from Burnie (Figure 2).

Local topography surrounding the mine is rugged, with incised valleys and steep hills. The west flowing Savage River dissects the deposit. Regional vegetation includes undisturbed rain forest with the mine area comprising wet eucalypt, acacia and open heath land. Climate is wet temperate with an average annual rainfall of 1,950mm and mean monthly temperatures ranging from 3-19°C.



Figure 2 Savage River Project Location



## PROJECT HISTORY

Ironstone outcrops around the Savage River were first discovered by State Government surveyor C.P. Sprent in early 1887 during one of his exploration journeys through western Tasmania. The deposits were first reported as a possible source of iron ore in 1919.

Systematic exploration techniques were employed by the Australian Bureau of Mineral Resources during 1956 that included ground and airborne magnetic surveys. The largest magnetic anomaly was detected at Savage River with two smaller anomalies being detected at Long Plains and Rocky River further to the south (Figure 3).

Diamond drilling commenced during the late 1950's and into the 1960's largely by Industrial and Mining Investigations Pty Ltd (IMI).

In 1965, Savage River Mines Ltd, a joint venture of Australian, Japanese and American interests was formed to develop the project. PMI (Pickands Mather International) developed an open cut mine, concentrator plant and township at Savage River to access the magnetite reserve. A pipeline from the concentrator plant to the pelletising plant and dedicated port facilities at Port Latta located on the northwest coast were also constructed.

Mining commenced in 1967 to supply a consortium of Japanese steel mills with 45 million tonnes of pelletised iron ore over a twenty-year period. Annual pellet production reached a maximum of 2.4 million tonnes per annum during the period.

The Savage River Project was operated for the full term of a thirty-year lease by PMI. In early 1997, PMI ceased mining activities at Savage River, transferring ownership of the Savage River Project to the Tasmanian Government on March 26 1997.

At the end of March 1997, ABM purchased the assets of the Savage River Project from the Tasmanian Government. Following this purchase, ABM continued mining the existing pits through a series of cut-back operations, mined the previously undeveloped South Deposit, and began exploration around the Long Plains area.

In January 2009 Grange Resources merged with ABM.



## GEOLOGY

The Savage River magnetite deposit lies within and near the eastern margin of the Proterozoic Arthur Metamorphic Complex in north western Tasmania. This complex is exposed along a northeast-southwest trending structural corridor, the Arthur Lineament, which separates Proterozoic sedimentary rocks to the northwest from a variety of Palaeozoic rocks to the southeast.

The magnetite deposits at Savage River represent the largest of a series of discontinuous lenses that extend in a narrow belt for some 25 kilometres south of the Savage River Township. The deposit is subdivided into sections on the basis of areas that have been mined. The areas are referred to as North Pit, South Lens, Centre Pit North, Centre Pit South, Centre Pit Southern Extension and South Deposit (Figure 5).

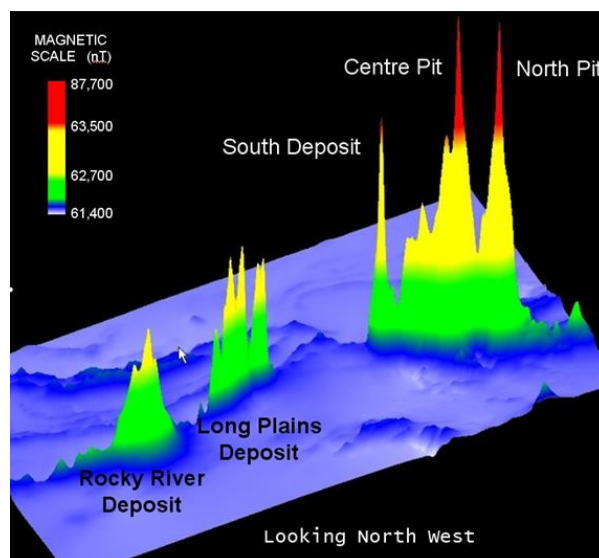


Figure 3 Savage River Regional Magnetics

Magnetite ore is almost entirely enclosed within a highly sheared and strike-faulted belt of mafic and ultramafic rocks specifically serpentinite and talc-carbonate schist. The magnetite ranges in thickness from 40 to 150 metres in width and is termed the Main Ore Zone (MOZ). Narrow (<20metre) lenses and layers also occur in the mafic sequence to the west. The mafic sequence comprises chlorite-calcite-albite schist and layered green amphibole-chlorite-albite schist.

A suite of late, strongly deformed metabasalt and metadolerite intrusive dykes occur either sub-parallel to or cut obliquely across the MOZ. Vein magnetite occurs adjacent to the MOZ with significant bodies developed in the east at South Lens and at the west in North Pit.

The magnetite ores comprise three volumetrically important groups: pyritic ores, ores associated with serpentine and talc-carbonate ores. The ore may be massive, layered, or disseminated and range from being fine-grained to coarsely crystalline. Accessory mineral phases may include talc, tremolite, actinolite, chlorite, epidote, apatite and carbonate in varying amounts. The mineral assemblages preserved at Savage River imply middle to upper green-schist facies metamorphic conditions.





## EXPLORATION, DRILLING, SAMPLING AND ANALYSIS

Exploration and resource definition over recent years at Savage River has involved dominantly reverse circulation (RC) and diamond drilling.

The exploration during the last year ending Dec 31 2016 focussed on the exploration licences. At Long Plains EL30-2003 the work consisted of water management sampling, waste rock trials (kinetic leach columns), geotechnical and geological modelling in support of a development proposal and environmental management plan for Long Plains.

At Pipeline Road, EL8-2014 no work was completed as Grange has exceeded its expenditure commitment for 2016 with the Lidar and terrain mapping completed last year.

When we drill, core recoveries are generally high in the ore zones at Savage River (>90%) and there are no significant core recovery issues. Drill collars are surveyed using a combination of conventional surveying (total station) and/or high resolution RTK GPS.

All samples used in resource estimation are taken from diamond drill core of either HQ or NQ size or from reverse circulation drill holes employing a 140mm face sampling hammer. RC drilling has been used in recent years at Savage River to undertake infill drilling to improve confidence of domain boundaries and grade estimates.

Core was half core sampled as standard practice and rarely full core sampled to confirm historic drill intercepts or for metallurgical testing. Sampled length is generally between 0.75m to 2m within lithological units to preserve volume variance and to provide sample weights of 3kg. Reverse circulation drilling was used to give uniform 1m samples by cone or riffle splitter resulting in a 3kg sample. Field quality control procedures included insertion of prepared sample standards at a rate of 1:25 and limited field duplicate samples on the RC suite of samples.

Sample preparation techniques were industry standard for magnetite ores and used the sub-sampling protocol as recommended by the Savage River Laboratory. Sample preparation was conducted at an external NATA-accredited laboratory for both core and RC chips. The subsampling process for RC was identical to that of the core except for the coarse crush stage. For drill core, the core was first analysed for bulk density by immersion in water. All mineralised core samples have had a density determination completed. The half core samples were oven dried at 110 degrees for 12 hours, then coarse crushed to minus 2mm in a Boyd crusher then split to ~3kg, crushed again to 90% passing 1.7mm and split again with a 150g sub-sample taken for pulverising to 98% passing 75 microns.

A pulp sub-sample was collected and shipped for analysis at Savage River's mine lab by Davis Tube Recovery.

The primary assay technique is Davis Tube Recovery (DTR) on a 10g sample, followed by Ferrous Iron (Fe<sup>2+</sup>) via Satmagan and S, total Fe, TiO<sub>2</sub>, MgO, V, P, S and Ni via XRF on the Davis Tube Concentrate (DTC) via XRF. All techniques are considered total. DTR is the most





appropriate assay technique for determination of magnetite recovery. All DTR samples were completed on the mine site using the Savage River DTR technique. This technique has been used for 40 years and supported by pit reconciliations.

All logging and assay data is stored in a database which was validated against original log sheets. The database includes holes drilled by Savage River Mines Limited, ABM and more recent holes drilled by Grange Resources.

## **GEOLOGICAL INTERPRETATION AND RESOURCE ESTIMATION**

Geological controls and relationships were used to define estimation domains with mostly hard boundaries, based on sharp mineralisation contacts and grade boundaries. A nominal grade cut-off of 15%DTR is a natural grade boundary between magnetite lenses and disseminated wall-rocks. This cut-off was used to help define the mineralised envelope within which the higher grade sub domains were interpreted. 3D wireframes were used to code the drilling intersects and select samples within each domain.

Oxidised material was not included in the resource estimation.

Sample data at Savage River were generally composited to 2 metre down hole length using a best fit-compositing method. Long Plains sample data were composited to 1 metre lengths owing to the thinner mineralised magnetite lenses at Long Plains. Residual samples (those composite intervals for which there was less than 75% of the composite length) were considered biased and hence were not included in the estimate.

Block models were prepared for each part of the deposit using Surpac Software. Block sizes at Savage River are generally 10mE by 10mN by 5mRL parent block size with sub-celling to 5mE by 5mN by 2.5mRL. Block sizes at Long Plains were assigned a 10mE by 25mN by 10mRL parent block size with sub-celling to 1.25mE by 6.25mN by 2.5mRL owing to the thinner mineralised magnetite lenses at Long Plains.

Models were estimated using Ordinary Kriging for the North Pit, South Deposit and Centre Pit Combined (comprising Centre Pit North and Centre Pit South Resources) and for Long Plains. Inverse Distance Cubed weighting estimation techniques are employed for the Sprent pit resource. Geostatistical analysis, including variography studies to develop spatial estimation parameters were prepared for each of the major areas of mineralisation by Snowden Mining Industry Consultants or Optiro. These parameters were used to assist in the classification of the resource.

Mineral Resources have been classified on the basis of confidence in geological and grade continuity using the drilling density, geological model, modelled grade continuity and conditional bias measures (kriging efficiency where available). The block model validation results show good correlation between the input data to the estimated grades. The mineralised domains have demonstrated sufficient geological and grade continuity to support the definition



of a Mineral Resource, and classifications were applied under the guidelines of the JORC Code (2012 Edition).

## ORE RESERVES

Measured and Indicated Mineral Resources are considered for conversion to Ore Reserves, based on assessment against an optimised pit design and with respect to the modifying factors. The Mineral Resource is inclusive of the Ore Reserve.

The Ore Reserve estimation model for Savage River includes Mineral Resources from the North Pit, Centre Pit South and South Deposit, and was developed as part of a Feasibility Study that was completed in September 2006.

Pit designs are based on optimised shells using Whittle software. The cut-off grade of 15%DTR was determined as part of the Feasibility Study and is reviewed periodically. Current Mining and recovery factors are applied to account for mining practices of conventional bulk mining methods utilizing hydraulic face shovels, dump trucks and conventional drill and blast. These are based on reconciliations calculated periodically for the different areas of the deposit. Metallurgical factors are applied to account for mill performance. Localised risk factors are also applied to specific areas to account for geotechnical risk. The overall pit slope criteria used for the design and optimization are based on ongoing geotechnical studies which are reviewed and updated on an annual basis as part of Grange Resource's Life Of Mine Planning process.



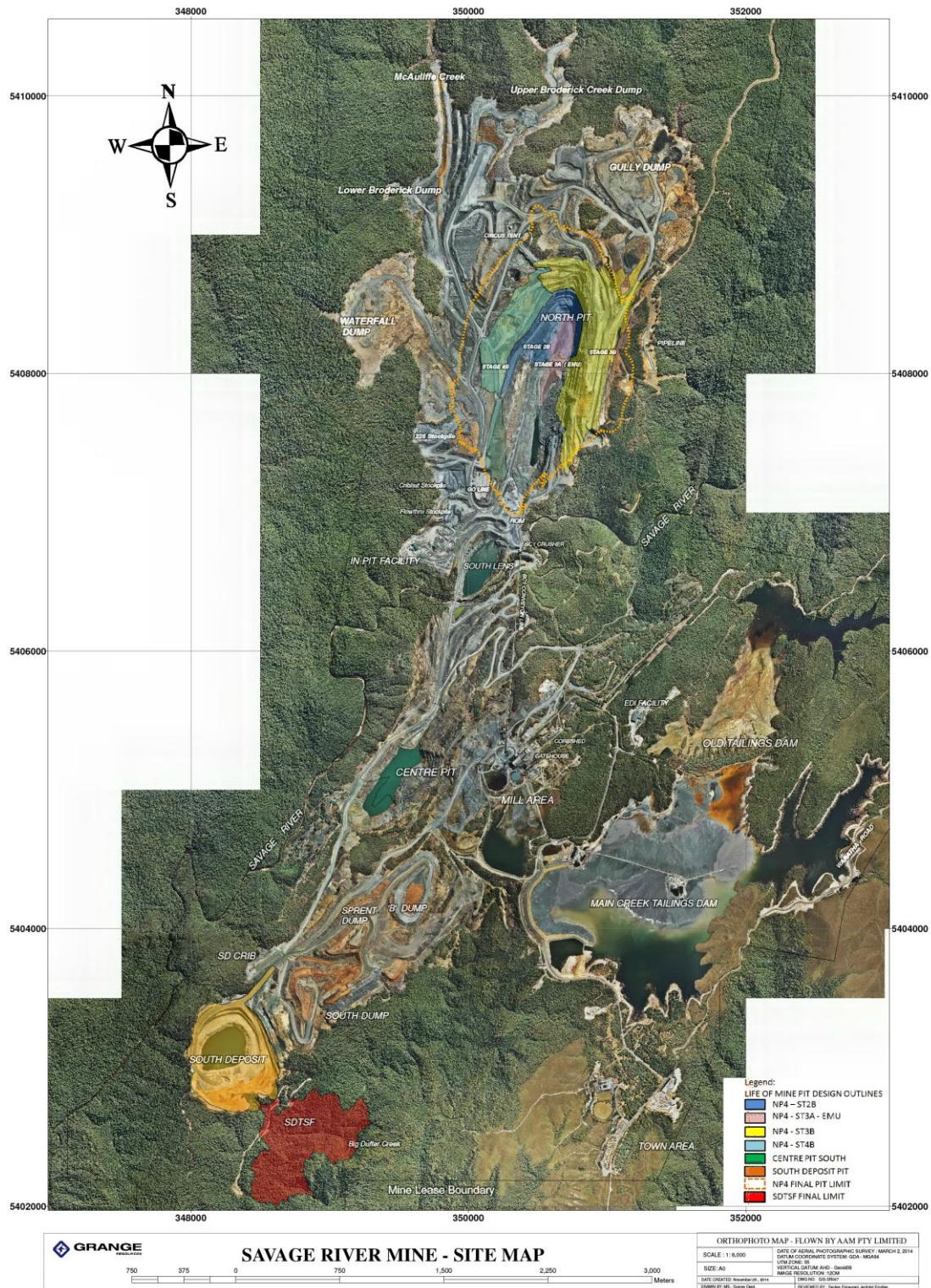


Figure 4 Image of Savage River Site Infrastructure Oct 2015





Estimates of Mineral Resources and Ore Reserves at the Savage River Mine including Long Plains are as at the end of December 2016. Mineral Resources and Ore Reserves are categorised in accordance with the guidelines established in the JORC Code (2012 Edition). Estimated Measured and Indicated Mineral Resources include those Mineral Resources modified to produce the estimated Ore Reserves. Some Mineral Resources including Centre Pit North, Sprent pit and Long Plains are not classified as Ore Reserves, due to the fact that they did not demonstrate economic viability at the time of this report, and remain as Mineral Resources. The following tables represent the Mineral Resource for each part of the deposit. In each case, elemental compositions were measured from Davis Tube Concentrate. A cut-off of 15%DTR was used in the calculation of Mineral Resources.

### Mineral Resource Estimate - North Pit - December 2016

	Measured Resources	Indicated Resources	Inferred Resources	TOTAL Resources
<b>Tonnes (Mt)</b>	24.6	69.5	33.9	128.0
<b>DTR (%)</b>	62.2	57.4	56.2	58.0
<b>Fe (%)</b>	67.9	67.7	67.2	67.6
<b>Ni (%)</b>	0.03	0.03	0.03	0.03
<b>TiO<sub>2</sub> (%)</b>	0.98	0.94	1.04	0.97
<b>MgO (%)</b>	1.64	1.80	1.83	1.78
<b>P (%)</b>	0.008	0.008	0.008	0.008
<b>V (%)</b>	0.38	0.36	0.36	0.36
<b>S (%)</b>	0.04	0.05	0.04	0.04



## Mineral Resource Estimate – South Deposit - December 2016

	Measured Resources	Indicated Resources	Inferred Resources	TOTAL Resources
<b>Tonnes (Mt)</b>	2.7	7.2	9.0	18.9
<b>DTR (%)</b>	38.6	42.9	41.7	41.7
<b>Fe (%)</b>	67.1	67.6	67.5	67.5
<b>Ni (%)</b>	0.07	0.06	0.06	0.06
<b>TiO<sub>2</sub> (%)</b>	0.58	0.72	0.66	0.67
<b>MgO (%)</b>	1.97	1.76	1.74	1.78
<b>P (%)</b>	0.009	0.007	0.008	0.008
<b>V (%)</b>	0.27	0.27	0.26	0.27
<b>S (%)</b>	0.13	0.13	0.15	0.14

## Mineral Resource Estimate – Centre Pit - December 2016

	Measured Resources	Indicated Resources	Inferred Resources	TOTAL Resources
<b>Tonnes (Mt)</b>	39.5	51.0	29.7	120.2
<b>DTR (%)</b>	51.0	48.5	46.3	48.8
<b>Fe (%)</b>	68.3	67.8	68.0	68.0
<b>Ni (%)</b>	0.05	0.05	0.05	0.05
<b>TiO<sub>2</sub> (%)</b>	0.43	0.40	0.40	0.41
<b>MgO (%)</b>	1.47	1.63	1.62	1.57
<b>P (%)</b>	0.010	0.012	0.011	0.012
<b>V (%)</b>	0.40	0.37	0.37	0.38
<b>S (%)</b>	0.16	0.19	0.19	0.18



### Mineral Resource Estimate – Sprent - December 2016

	Measured Resources	Indicated Resources	Inferred Resources	TOTAL Resources
<b>Tonnes (Mt)</b>	0.0	2.1	0.3	2.4
<b>DTR (%)</b>	0.0	51.1	49.8	51.0
<b>Fe (%)</b>	0.0	69.6	70.8	69.8
<b>Ni (%)</b>	0.00	0.06	0.02	0.06
<b>TiO<sub>2</sub> (%)</b>	0.00	0.50	0.18	0.46
<b>MgO (%)</b>	0.00	0.75	0.47	0.72
<b>P (%)</b>	0.000	0.008	0.010	0.008
<b>V (%)</b>	0.00	0.43	0.46	0.44
<b>S (%)</b>	0.00	0.27	0.06	0.24

### Mineral Resource Estimate – Long Plains - December 2016

	Measured Resources	Indicated Resources	Inferred Resources	TOTAL Resources
<b>Tonnes (Mt)</b>	0.0	25.4	82.2	107.6
<b>DTR (%)</b>	0.0	33.9	35.6	35.2
<b>Fe (%)</b>	0.0	68.9	69.4	69.3
<b>Ni (%)</b>	0.00	0.05	0.03	0.03
<b>TiO<sub>2</sub> (%)</b>	0.00	0.63	0.56	0.57
<b>MgO (%)</b>	0.00	0.91	0.92	0.91
<b>P (%)</b>	0.000	0.004	0.007	0.007
<b>V (%)</b>	0.00	0.33	0.36	0.35
<b>S (%)</b>	0.00	0.05	0.07	0.07

### Mineral Resource Estimate – Stockpiles - December 2016

Stockpiles-Measured	Tonnes (Mt)	Grade (%DTR)
<b>Crushed Ore</b>	0.1	41.0
<b>In-pit Broken stocks</b>	0.4	30.6
<b>Total</b>	0.5	32.1





The total Mineral Resource for Savage River as at the end of December 2016;

### Mineral Resource Estimate – Savage River - December 2016

	Measured Resources	Indicated Resources	Inferred Resources	TOTAL Resources
<b>Tonnes (Mt)</b>	67.3	155.1	155.1	377.5
<b>DTR (%)</b>	54.2	49.9	42.5	47.7
<b>Fe (%)</b>	68.1	68.0	68.5	68.2
<b>Ni (%)</b>	0.04	0.04	0.04	0.04
<b>TiO<sub>2</sub> (%)</b>	0.64	0.69	0.64	0.66
<b>MgO (%)</b>	1.55	1.58	1.30	1.46
<b>P (%)</b>	0.009	0.009	0.008	0.009
<b>V (%)</b>	0.39	0.36	0.36	0.36
<b>S (%)</b>	0.11	0.10	0.09	0.10

The following tables represent the Ore Reserve for each part of the deposit. In each case, elemental compositions were measured from Davis Tube Concentrate. A cut-off of 15%DTR was used in the calculation of Ore Reserves.

### Reserve Estimate - North Pit - December 2016

	Proved Reserves	Probable Reserves	TOTAL Reserves
<b>Tonnes (Mt)</b>	22.5	55.1	77.6
<b>DTR (%)</b>	57.5	52.9	54.2
<b>Fe (%)</b>	67.3	67.9	67.7
<b>Ni (%)</b>	0.03	0.03	0.03
<b>TiO<sub>2</sub> (%)</b>	0.98	0.95	0.96
<b>MgO (%)</b>	1.52	1.62	1.59
<b>P (%)</b>	0.008	0.008	0.008
<b>V (%)</b>	0.38	0.37	0.37
<b>S (%)</b>	0.03	0.05	0.04



### Reserve Estimate – South Deposit - December 2016

	Proved Reserves	Probable Reserves	TOTAL Reserves
<b>Tonnes (Mt)</b>	0.12	0.67	0.79
<b>DTR (%)</b>	37.7	39.7	39.4
<b>Fe (%)</b>	66.7	65.4	65.6
<b>Ni (%)</b>	0.05	0.06	0.06
<b>TiO<sub>2</sub> (%)</b>	0.61	0.82	0.79
<b>MgO (%)</b>	1.46	1.37	1.39
<b>P (%)</b>	0.005	0.006	0.006
<b>V (%)</b>	0.31	0.33	0.32
<b>S (%)</b>	0.12	0.18	0.17

### Reserve Estimate – Centre Pit South - December 2016

	Proved Reserves	Probable Reserves	TOTAL Reserves
<b>Tonnes (Mt)</b>	4.9	2.8	7.7
<b>DTR (%)</b>	42.2	31.5	38.1
<b>Fe (%)</b>	68.7	66.5	67.9
<b>Ni (%)</b>	0.04	0.05	0.05
<b>TiO<sub>2</sub> (%)</b>	0.43	0.35	0.40
<b>MgO (%)</b>	1.18	1.88	1.44
<b>P (%)</b>	0.007	0.012	0.009
<b>V (%)</b>	0.42	0.33	0.39
<b>S (%)</b>	0.15	0.25	0.19



## Ore Reserve Estimate – Stockpiles - December 2016

Stockpiles-Measured	Tonnes (Mt)	Grade (%DTR)
Crushed Ore	0.1	41.0
In-pit Broken stocks	0.4	30.6
<b>Total</b>	<b>0.5</b>	<b>32.1</b>

The total Ore Reserve for Savage River as at the end of December 2016 is as follows:

## Ore Reserve Estimate – Savage River- December 2016

	Proved Reserves	Probable Reserves	TOTAL Reserves
<b>Tonnes (Mt)</b>	28.0	58.6	86.6
<b>DTR (%)</b>	54.3	51.7	52.5
<b>Fe (%)</b>	67.6	67.8	67.7
<b>Ni (%)</b>	0.03	0.03	0.03
<b>TiO<sub>2</sub> (%)</b>	0.88	0.92	0.91
<b>MgO (%)</b>	1.46	1.63	1.57
<b>P (%)</b>	0.008	0.008	0.008
<b>V (%)</b>	0.39	0.37	0.37
<b>S (%)</b>	0.05	0.06	0.06





Dec 2016  
Savage River Mineral Resource  
Grade Tonnage Curve

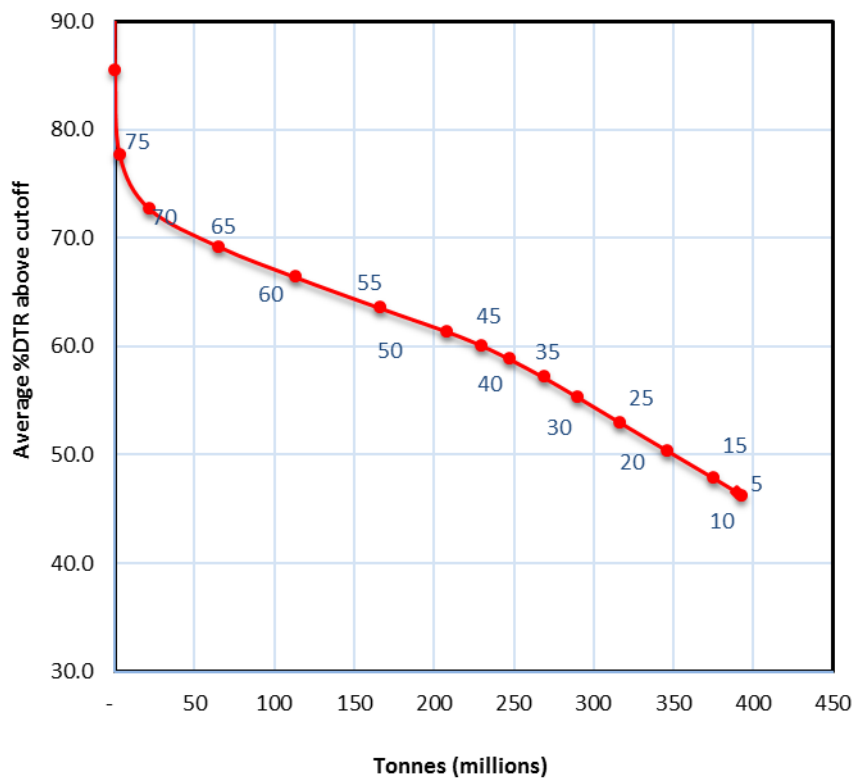


Figure 5 - Grade Tonnage Curve, Savage River



## JORC TABLE 1 SAVAGE RIVER

### SECTION 1 SAMPLING TECHNIQUES AND DATA

Note: All comments refer to all deposits on the Savage River Mining Lease; comprising North Pit, Centre Pit North, Centre Pit South, Sprent and South Deposit (and to Long Plains on an adjacent exploration lease) unless individually identified as being related to a particular prospect.

Criteria	Sampling Techniques and Data	Comments
Sampling techniques	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>The deposits were sampled using diamond drilling (DD) with limited Reverse Circulation (RC) pre-collaring. Drilling was conducted on approximately 100m spaced sections orientated perpendicular to the overall orebody strike. On section spacing (down-dip) varies but is commonly 50-70m. The mineralisation is sub-vertical and the holes are typically inclined at -60°. All samples are assayed for DTR, Fe<sup>2+</sup>, Total Fe, Ni, TiO<sub>2</sub>, MgO, P, V, S, CaO, SiO<sub>2</sub> and Al<sub>2</sub>O<sub>3</sub>. CaO, SiO<sub>2</sub> and Al<sub>2</sub>O<sub>3</sub> are not presently estimated.</li> </ul>
	<ul style="list-style-type: none"> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	<ul style="list-style-type: none"> <li>The drill hole locations were picked up and down-hole surveys completed. Diamond core was used to obtain the best possible sample quality for lithology, structural, grade and density information.</li> </ul>
	<ul style="list-style-type: none"> <li>Aspects of the determination of mineralisation that are Material to the Public Report. 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 style="list-style-type: none"> <li>Drilling of Diamond core was a combination of HQ and NQ sizes, some triple tube. Samples were controlled based on geological contacts and generally no more than 2m in length. Sample selection was nominally <math>\geq 0.75\text{m}</math> and <math>\leq 1.25\text{m}</math>. All core samples were half cored. Core was split by diamond sawing. Samples were dried, crushed, split and pulverised to nominally 98% passing 75<math>\mu\text{m}</math> for Davis Tube Recovery (DTR) determination.</li> </ul>



<p><b>Drilling techniques</b></p>	<ul style="list-style-type: none"> <li>• <i>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.).</i></li> </ul>	<ul style="list-style-type: none"> <li>• Samples used in the resource estimation were taken from diamond drill core of either HQ or NQ size or RC samples. (recent programs).</li> <li>• RC drill holes employ a 140mm face sampling hammer.</li> </ul>
<p><b>Criteria</b></p>	<p><b>Sampling Techniques and Data</b></p>	<p><b>Comments</b></p>
<p><b>Drill sample recovery</b></p>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Core recoveries were recorded in the geotechnical logs and in the sample records. Core recoveries are generally high in the ore zones at Savage River (&gt;90%) and there are no significant core recovery issues.</li> <li>• Drilling penetration rates were controlled in order to maximise recovery in ore zones.</li> <li>• No relationship between sample recovery and grade is known at Savage River.</li> </ul>
<p><b>Logging</b></p>	<ul style="list-style-type: none"> <li>• <i>Whether core and chip samples have been geologically and geo-technically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Core samples from all deposits have been logged for lithology, mineralogy, alteration and mineralisation. Geotechnical logging including domain and structural defects logging including orientations were undertaken. The level of detail is sufficient to support Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>• Logging is a combination of qualitative and quantitative. Core was photographed wet and dry. No photos available for the oldest core.</li> <li>• All core and RC chips were fully logged.</li> </ul>





<p><b>Sub-sampling techniques and sample preparation</b></p>	<p><i>•If core, whether cut or sawn and whether quarter, half or all core taken.</i></p>	<p>• Core was half core sampled as standard practice and rarely full core sampled in the very few older holes. Core was cut using a diamond impregnated saw blade on site at the Savage River core farm. The ore is relatively massive and the preferred orientation for core sawing is just left of the orientation line.</p>
	<p><i>•If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i></p>	<p>•For non-core, samples are dry riffled and sampled dry.</p>
	<p><i>•For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p>	<p>• Sample preparation techniques were industry standard for magnetite ores and use the sub-sampling protocol as recommended by the Savage river laboratory. Sample prep on recent drill core was completed at a commercial lab [NATA accredited]. The half core samples were oven dried at 110 degrees for 12 hours, then coarse crushed to minus 2mm on a Boyds crusher then split to ~3kg, crushed again to 90% passing 1.7mm and split again with a 150g sub-sample taken for pulverising to 98% passing 75 microns.</p>
	<p><i>•Quality control procedures adopted for all sub-sampling stages to maximise the representativeness of samples.</i></p>	<p>• RC chips were riffle split when dry and a 3kg sample was taken for each single metre drilled. When RC sample was damp, samples were speared uniformly. When RC sample in ore was RC holes were stopped and completed later for diamond tails.</p>
	<p><i>•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.</i></p>	<p>Limited numbers of duplicate samples were taken for intervals of HG, MG and LG within the RC drilling suite. Field QC procedures for RC and diamond samples involve the insertion of assay standards at a rate of 1 in 25. Standards were derived from 2006 MLEP drilling campaign in North Pit Savage River.</p>



	<ul style="list-style-type: none"> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The sample sizes are considered to be appropriate based on the style of mineralisation, the thickness and consistency of the intersections and assay range for the primary analysis (% recoverable magnetite concentrate).</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The primary assay technique is Davis Tube Recovery (DTR) on a 10g sample, followed by Ferrous Iron (Fe<sup>2+</sup>) via Satmagan and S, total Fe, TiO<sub>2</sub>, MgO, V, P, S and Ni via XRF on the Davis Tube Concentrate (DTC). All techniques are considered total. DTR is the most appropriate assay technique for determination of magnetite recovery. All DTR samples completed on site using Savage River technique. This technique has been use for 40 years at Savage River and pit reconciliations are good.</li> </ul>
<b>Quality of Assay Data continued</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Magnetic susceptibility instruments are used for initial geological logging to help the geologist classify the logged interval as ore grade or waste. Ore samples have sample prep, DTR and XRF determinations done and these inform the resource estimate. No mag sus values are used in the resource estimate.</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Field assay standards are inserted at a rate of 1 in 25 in drilled core and RC through ore zones. DTR determinations are performed in duplicate. Limited field duplicates were analysed. No external laboratory checks have been performed and no check assaying has been undertaken. Data analysis has been performed and the data demonstrates sufficient accuracy and precision for use in Mineral Resource estimation.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Significant intersections are verified by alternative company personnel.</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>The use of twinned holes.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No twinned holes have been drilled.</li> </ul>



	<ul style="list-style-type: none"> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Primary data is captured directly to standard template Microsoft Excel log sheets using tough book laptops with standard logging codes and data entry control. The data is verified by the geologist and then loaded into the central (project-wide) database.</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No adjustments are made to assay data.</li> <li>• Extensive use of the resubmitted pulps has been used in the past for NP, esp 2005-06 for the feasibility study.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All significant surface features were surveyed by Grange staff surveyors using a combination of conventional surveying (total station) and/or high resolution RTK GPS. In each case, the features were located to within 100mm in X, Y and Z. For downhole surveys, older drilling used single-shot Eastman dips at 50m spacing downhole (accurate to 0.5°). Hole azimuths were assumed to be straight (compass data is not useable due to the magnetic nature of the mineralization). North seeking gyro was used prior to the use of the DeviFlex downhole survey tool. This has a stated accuracy of +/- 0.01° per station in azimuth and +/- 0.1° in dip, with stations every 3m downhole.</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>Specification of the grid system used.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The grid system used is the Savage River Mine Grid, where; 10° 18' 23" (N) SRG= 0° (N) GDA94</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The topographic surface in the vicinity of the deposit was surveyed by Grange staff surveyors using a combination of conventional surveying (total station) and/or high resolution RTK GPS. In each case, the data points are located to within 100mm in X, Y and Z and the point spacing is approximately 5m in X and Y. For areas further away from the deposit, LIDAR data is used.</li> </ul>





<p><b>Data spacing and distribution</b></p>	<p>•<i>Data spacing for reporting of Exploration Results.</i></p>	<ul style="list-style-type: none"> <li>• For Deposits on the Savage River Mine lease the nominal drill hole spacing is 50m (between sections) and by 50-70m ( on section).</li> <li>• Drill spacing at Long Plains is wider given that the parts of the resource are at an early stage of delineation. Indicated Mineral Resources at Long Plains have been defined generally in areas of 50 by 50 m drill spacing.</li> <li>• Inferred Mineral Resources at Long Plains have been defined in areas of 100x100 metre up to 600x100 metre drill spacing.</li> </ul>
	<p>•<i>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.</i></p>	<ul style="list-style-type: none"> <li>• Data spacing and distribution were analysed using semi-variograms. The general quality of the experimental variograms was good. The ranges of the variograms were used to provide guidance for resource classification.</li> </ul>
	<p>•<i>Whether sample compositing has been applied.</i></p>	<ul style="list-style-type: none"> <li>• Samples have been composited prior to geostatistical analysis and Mineral Resource estimation. At Savage River Mine, the composite length was 2m. At Long Plains, the composite length was 1m.</li> </ul>



Criteria	Sampling Techniques and Data	Comments
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> </ul>	<ul style="list-style-type: none"> <li>• The majority of drill holes are oriented to achieve intersection angles as close to perpendicular to the mineralization as is practicable.</li> </ul>
	<ul style="list-style-type: none"> <li>• If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>• No significant sampling bias occurs in the data due to the orientation of drilling with regards to mineralized structures/bodies.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• All samples are logged and bagged on site by Grange geological staff and assay determinations are performed by Grange staff.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>• During the Mine Life Extension Project in 2006 AMC peer reviewed the NP resource for the mine life extension project (MLEP).</li> <li>• A sample prep audit was conducted for the external provider. No audits or reviews have been undertaken on SR lab recently.</li> </ul>



## SECTION 2 REPORTING OF EXPLORATION RESULTS

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, 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 known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>3 Mining and 2 exploration leases are held in Tasmania and are 100% owned by Grange Resources Tasmania Ltd. (formerly Goldamere Proprietary Ltd operating as Australian Bulk Minerals).</li> <li><b>Mining lease 2M/2001</b> was granted 11/12/2001 comprising 4,987 hectares which includes the main orebodies North Pit (NP), South Lens (SL), Centre Pit north (CPN), Centre Pit South (CPN), Sprent (SP) and South Deposit (SD) and the pipeline corridor from site to the Port Latta pellet plant. Locality is listed as Savage River-Port Latta. This lease expires 7 Nov 2031 and currently has a security bond held by the State of Tasmania.</li> <li>Land tenure on ML 2M 2001 includes; State forest, Forest Reserve, Informal reserve, Crown Land, Private parcel, Conservation area, Regional Reserve and national Estate.</li> <li><b>Mining lease 14M/2007</b> was granted 14/5/2008 comprising 91 hectares as an easement (including a sewerage easement) on the Savage River townsite.</li> <li>This lease expires 7 Nov 2031 and no bond is held by the State of Tasmania.</li> <li>Land tenure on ML 14M/2007 includes: Forest Reserve, Regional Reserve, Private land, Proposed public reserve-CLAC, Crown land Authority Land and Crown Land</li> <li><b>Mining lease 11M/2008</b> was granted 3/3/2009 comprising two lots totaling 108 hectares with the north west area required for the South Deposit Tailings Storage facility on Main Creek and the eastern lot required to cover the remaining part of the Savage river town ship not previously covered by a mining lease. This lease renewal is pending at time of writing, remains in good standing and a bond is held by the State of Tasmania.</li> <li><b>Exploration Licence EL8/2014</b> was granted for an 11sq km lease north of 2M-2001 during 2016. Year 3 of a 5 year term.</li> <li><b>Exploration License EL30/2003</b> was granted in February 2010 and current renewable tenure expires 18 June 2017. An application to extend the licence will be lodged prior to the expiry date. This lease covers the entire Long Plains deposit. The lease comprises 38 sq km and adjoins 2M/2001 to</li> </ul>





Criteria	JORC Code explanation	Commentary
		the north.
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>Systematic exploration commenced during the late 1950's with the Bureau of Mineral Resources conducting airborne &amp; ground magnetic surveys to delineate Savage River &amp; two smaller anomalies south at Long Plains &amp; Rocky River. Diamond drilling commenced in the late 1950's-early 1960's by Industrial &amp; Mining Investigations Pty Ltd (8 holes). Savage River Mines Ltd formed in 1965 as a JV to develop the project and mined Savage River for the next 30 years before Australian Bulk Minerals (ABM – now Grange) took over the mine lease in 1997.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralization.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Savage River Magnetite deposit lies within and near the eastern margin of the Proterozoic Arthur Metamorphic Complex in northwestern Tasmania. This complex is exposed along a northeast–southwest trending structural corridor, The Arthur Lineament, which separates Proterozoic sedimentary rocks to the northwest from a variety of Paleozoic rocks to the southeast (Turner 1990). These Paleozoic rocks include some major mafic and ultramafic intrusive complexes which lie just to the east of Savage River.</li> <li>The magnetite orebodies are enclosed within a highly sheared and strike faulted belt of mafic and ultramafic schists and mylonite. This belt is 0.5km wide, strikes North-north-east to south-south-west, and is enclosed in a thick sequence of quartz-white mica schist (Whyte schist). Magnetite ore is almost entirely confined within ultramafic rocks, specifically serpentinite and talc-carbonate schist. These ore-bearing ultramafic rocks are exposed in an axial zone above the belt, ranging from about 40 to 100m wide and termed the Main Ore Zone. They also form rare, much narrower (mostly &lt;20m wide) lenses and layers in the mafic sequence to the west.</li> <li>Magnetite ore ranges from disseminated to massive, with much of the main Ore Zone comprising massive to semi-massive magnetite.<sup>1</sup> <ul style="list-style-type: none"> <li><sup>1</sup> 1994 Thornett report on structural and lithological mapping of North Pit and South Lens.</li> </ul> </li> </ul>



Criteria	JORC Code explanation	Commentary
<p><b>Drill hole Information</b></p>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• The Savage River deposit has been mined for over 49 years and a comprehensive database of 547 drill holes for over 88K meters of drilling has been accumulated which informs the resource models.</li> <li>• Drill hole information has been included in table 3 attached</li> </ul>
<p><b>Data aggregation methods</b></p>	<ul style="list-style-type: none"> <li>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg 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 style="list-style-type: none"> <li>• Davis Tube Recovery (“DTR”) analyses were conducted on core and RC chips that had first had an estimated grade determined by magnetic susceptibility (mag-sus). If the mag-sus indicated an estimated grade greater than 15% DTR, the analytical DTR technique was used for assay.</li> <li>• 2m composites were use at Savage River and 1m composites were used at Long Plains. Both intercept methods allowed with 75% of sample. There was no cutting of high grades based on statistical analysis. Sampling protocol insists on samples between 0.75 and 1.25m in length within unique lithologies.</li> <li>• Short intervals were sampled, where discrete lithologies were present. The compositing routine aggregates these to 1m composites.</li> </ul>
<p><b>Relationship between mineralization widths and</b></p>	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralization with respect to the</li> </ul>	<ul style="list-style-type: none"> <li>• Plans and sections included in attachment</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>intercept lengths</b>	<p>drill hole angle is known, its nature should be reported.</p> <ul style="list-style-type: none"> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	
<b>Diagrams</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>A locality plan (figure 5) and typical cross sections (figure 6-8) for each deposit area are attached.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>All individual drilling results have been incorporated into the resource estimations. See table 3 attached</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <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 and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>The Savage River Mine has been in operation for 45 years with substantial data collected including geophysical surveys, geological mapping of exposures and metallurgical test work. Waste management plans are based upon acid based accounting analyses of selected representative data from each deposit at Savage River.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg 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 style="list-style-type: none"> <li>No further potential for lateral extensions to the Savage River ore-bodies have been identified. Further drilling to infill the depth extent of the resources will be required to define the potential for further cutbacks on existing pits.</li> </ul>





## SECTION 3 ESTIMATION & REPORTING OF MINERAL RESOURCES

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Transcription errors are limited by having assay data directly merged into the database with key fields on sample ID.</li> <li>Visual validation in 3D is utilized having sections plotted with block grades, the drill-hole assays and geology intervals displayed.</li> <li>Validation of the database occurs at distinct stages.</li> <li>Data entry – data is mostly entered into Excel spreadsheets, controlled by lookup lists and ranges of acceptable values.</li> <li>Before upload to the database – data is cross-checked in Excel.</li> <li>Before extracting composites – a set of queries are run, checking for data continuity, abnormal values and overlapping ranges.</li> <li>At all stages spot checks are made on specific areas against raw data or core where available, to check for accuracy and/or correlation. Where applicable, data is plotted out on section or graphically for visual checking.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Competent person works on site and has an intimate knowledge of the operation.</li> <li>All pits have mining history, with North Pit and South Deposit being mined currently.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation 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> </ul>	<ul style="list-style-type: none"> <li>Each section was interpreted for magnetite mineralization in a live-3D environment, i.e. the sections were not printed out for interpretation purposes. The work was all done in Geovia Surpac.</li> <li>Historically, there were three types of mineralization defined (termed sparse, moderate and abundant and given the codes ZS, ZM and ZA respectively). Recent practice has been to amalgamate the ZM and ZA. The mineralized zones were therefore subdivided into moderate and high grade (ZAZM, &gt;35 DTR) and low grade (ZS 15-35 DTR) categories.</li> <li>The geological interpretation has high confidence on a deposit scale, informed by regularly spaced drilling, in-pit mapping, grade control drilling and monthly reconciliations.</li> </ul>



Criteria	JORC Code explanation	Commentary																								
	<ul style="list-style-type: none"> <li><i>The use of geology in guiding and controlling Mineral Resource estimation.</i></li> <li><i>The factors affecting continuity both of grade and geology.</i></li> </ul>	<ul style="list-style-type: none"> <li>The boudinaged nature of the high grade lenses does sometimes result in some areas having to be adjusted by on ground mapping and grade control, during mining.</li> <li>Geology, lithology and structure are used to guide and control the interpretation and wireframing of ore lenses in preparation for resource estimation. Wireframes are validated in section, then in plan (flitch) to enable robust shapes to be developed.</li> <li>Continuity is greatest down dip owing to the strike-slip deformation at Savage River. Continuity along strike is characterized by discontinuous swarms of boudinaged high grade magnetite lenses surrounded by lower grade magnetite ore hosted in serpentinite gangue.</li> </ul>																								
<b>Dimensions</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Savage River ore-bodies occur discontinuously over a strike length of 6km with thickness ranging from 40-150m.</li> <li>All lenses remain open at depth.</li> <li>A summary of the defined extents of individual deposits follows:</li> </ul> <table border="1"> <thead> <tr> <th>Deposit</th> <th>Strike Extent (m)</th> <th>Width Extent (m)</th> <th>Depth Extent (m)</th> </tr> </thead> <tbody> <tr> <td>North Pit</td> <td>2,400</td> <td>250</td> <td>800</td> </tr> <tr> <td>Centre Pit North</td> <td>860</td> <td>200</td> <td>500</td> </tr> <tr> <td>Centre Pit South</td> <td>1,140</td> <td>250</td> <td>400</td> </tr> <tr> <td>Sprent</td> <td>250</td> <td>50</td> <td>150</td> </tr> <tr> <td>South Deposit</td> <td>550</td> <td>100</td> <td>360</td> </tr> </tbody> </table>	Deposit	Strike Extent (m)	Width Extent (m)	Depth Extent (m)	North Pit	2,400	250	800	Centre Pit North	860	200	500	Centre Pit South	1,140	250	400	Sprent	250	50	150	South Deposit	550	100	360
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<b>Estimation and modeling techniques</b>	<p><i>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</i></p>	<ul style="list-style-type: none"> <li>Estimations have generally been undertaken by Grange staff using recommendations and parameters defined in variographic studies completed by Snowden Mining Industry Consultants.</li> <li>Mineralized domains were established from high grade and low grade intersects as interpreted in the geological model.</li> <li>Ordinary Kriging (OK) was employed to estimate the North Pit resource from 2007 based on the recommendation of a report by Snowden in 2006. Other</li> </ul>																								



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	<p><i>points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></p>	<p>deposits have progressively moved from inverse distance methods to OK as appropriate. The Sprent deposit is comparatively small (&lt;3M tonnes) and considered to be an extension of Centre Pit South. It was developed in 2010 to supplement ore supply.</p> <ul style="list-style-type: none"> <li>• Drill hole sample data was flagged as ore in the database within the domain wireframes interpreted for each deposit. Composites extracted from the database for each domain were therefore controlled by the geological interpretation.</li> <li>• Sample data was generally composited to 2 metres down hole length using a best fit-compositing method. Residual samples (those composite intervals for which there was less than 75% of the composite length) were considered biased and hence were not included in the estimate.</li> <li>• Snowden have recommended top cuts as tabled below to reduce the impact of significant outliers and positively skewed populations.</li> <li>• No top cuts have been applied to the Centre Pit South or Sprent models.</li> </ul> <table border="1"> <thead> <tr> <th colspan="12">Top Cuts - North pit</th> </tr> <tr> <th>Domain</th> <th>DTR</th> <th>DxDTR</th> <th>Density</th> <th>Fe2+</th> <th>Fe</th> <th>Ni</th> <th>TiO2</th> <th>MgO</th> <th>P</th> <th>V</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>ZAZM</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>7</td> <td>0.1</td> <td>-</td> <td>0.25</td> <td>-</td> <td>0.52</td> </tr> <tr> <td>ZS</td> <td>-</td> <td>4.2</td> <td>350</td> <td>-</td> <td>-</td> <td>7.5</td> <td>0.73</td> <td>0.03</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>WL</td> <td>-</td> <td>3.71</td> <td>218</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>0.97</td> <td>-</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="12">Top Cuts - South Deposit</th> </tr> <tr> <th>Domain</th> <th>DTR</th> <th>DxDTR</th> <th>Density</th> <th>Fe2+</th> <th>Fe</th> <th>Ni</th> <th>TiO2</th> <th>MgO</th> <th>P</th> <th>V</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>East</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>0.03</td> <td>-</td> <td>0.37</td> </tr> <tr> <td>West</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>0.02</td> <td>-</td> <td>0.19</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="12">Top Cuts - Centre Pit North</th> </tr> <tr> <th>Domain</th> <th>DTR</th> <th>DxDTR</th> <th>Density</th> <th>Fe2+</th> <th>Fe</th> <th>Ni</th> <th>TiO2</th> <th>MgO</th> <th>P</th> <th>V</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>ZAZM</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>0.5</td> <td>1.22</td> <td>7.5</td> <td>0.08</td> <td>0.8</td> <td>0.6</td> </tr> <tr> <td>ZS</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>1.27</td> <td>7.5</td> <td>0.05</td> <td>-</td> <td>1.3</td> </tr> <tr> <td>WL</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>1.22</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>• DTR is not directly estimated but instead weighted by density with which it has a very strong correlation. Density values and the calculated attribute Density x DTR are both subjected to variography and estimation, with DTR back calculated in the model.</li> <li>• Grange personnel have generally created the block models and run the estimations with Geovia Surpac software using in-house estimation macros to ensure consistency of methodology.</li> <li>• Block models were constructed for each deposit using a 10mE by 10mN by 5mRL parent block size with sub-celling to 5mE by 5mN by 2.5mRL.</li> <li>• Variography studies for each deposit have been completed by Snowden Consultants with recommendations for estimation parameters appropriate</li> </ul>	Top Cuts - North pit												Domain	DTR	DxDTR	Density	Fe2+	Fe	Ni	TiO2	MgO	P	V	S	ZAZM	-	-	-	-	-	7	0.1	-	0.25	-	0.52	ZS	-	4.2	350	-	-	7.5	0.73	0.03	-	-	-	WL	-	3.71	218	-	-	-	-	-	-	0.97	-	Top Cuts - South Deposit												Domain	DTR	DxDTR	Density	Fe2+	Fe	Ni	TiO2	MgO	P	V	S	East	-	-	-	-	-	-	-	-	0.03	-	0.37	West	-	-	-	-	-	-	-	-	0.02	-	0.19	Top Cuts - Centre Pit North												Domain	DTR	DxDTR	Density	Fe2+	Fe	Ni	TiO2	MgO	P	V	S	ZAZM	-	-	-	-	-	0.5	1.22	7.5	0.08	0.8	0.6	ZS	-	-	-	-	-	-	1.27	7.5	0.05	-	1.3	WL	-	-	-	-	-	-	1.22	-	-	-	-
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	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>New model estimates were compared against previous model estimates by fitch plots, visual inspection of the model around new drill hole data in section, and have been reconciled with production data as part of the validation process.</li> </ul>																																																																																																																														
	<ul style="list-style-type: none"> <li>The assumptions made regarding recovery of by-products.</li> </ul>	<ul style="list-style-type: none"> <li>No byproduct recoveries have been considered.</li> </ul>																																																																																																																														
	<ul style="list-style-type: none"> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterization).</li> </ul>	<ul style="list-style-type: none"> <li>Concentrate grades and deleterious elements (impurities) have all had variography completed where samples were available and were estimated using the appropriate method with the resource run.</li> </ul>																																																																																																																														
	<ul style="list-style-type: none"> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> </ul>	<ul style="list-style-type: none"> <li>Sample spacing on a 50 x 70m grid is 5-7 times the block size. This sample spacing is supported by the very strong geological continuity (low sample variance). See tables above.</li> </ul>																																																																																																																														
	<ul style="list-style-type: none"> <li>Any assumptions behind modelling of selective mining units.</li> </ul>	<ul style="list-style-type: none"> <li>No assumptions were made behind modeling of selective mining units.</li> </ul>																																																																																																																														
	<ul style="list-style-type: none"> <li>Any assumptions about correlation between variables.</li> </ul>	<ul style="list-style-type: none"> <li>There is a strong correlation between DTR and density which is described below in the Bulk Density section.</li> </ul>																																																																																																																														
	<ul style="list-style-type: none"> <li>Description of how the geological interpretation was used to control the</li> </ul>	<ul style="list-style-type: none"> <li>Geology, lithology and structure are used to guide and control the interpretation and wire-framing of ore lenses in preparation for resource estimation. Wireframes are</li> </ul>																																																																																																																														



Criteria	JORC Code explanation	Commentary
	<i>resource estimates.</i>	validated in section, then in plan (flitch) to enable robust shapes to be developed.
	<ul style="list-style-type: none"> <li><i>Discussion of basis for using or not using grade cutting or capping.</i></li> </ul>	<ul style="list-style-type: none"> <li>Top cuts were used where recommended by geo-statistical data analysis.</li> </ul>
	<ul style="list-style-type: none"> <li><i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available. New model estimates are compared against old model estimates and reconciliations as part of validation.</i></li> </ul>	<ul style="list-style-type: none"> <li>Block estimates were cross-validated by comparison with printed block sections showing drilling, block values and constraining wireframes.</li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li><i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i></li> </ul>	<ul style="list-style-type: none"> <li>Tonnages were estimated on a dry basis</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li><i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>The cut-off grade of 15%DTR is based on a natural break in the Grade-Tonnage Curve and is supported by economic analysis undertaken during 2010.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li><i>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</i></li> </ul>	<ul style="list-style-type: none"> <li>No mining factors (i.e. dilution, ore loss, recoverable resources at selective mining block size) have been applied.</li> <li>Selective mining unit is block model parent size for each model, and the equipment selection allows for finer discretization.</li> </ul>





Criteria	JORC Code explanation	Commentary
	<p><i>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.</i></p>	
<p><b>Metallurgical factors or assumptions</b></p>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>DTR has been incorporated into the model as a measure of magnetite recovery in the magnetic separation process. This is based on the performance of DTR at the Savage River mine, where it has been employed as a good measure of delineating ore and waste and in modeling the anticipated recoveries through the magnetic separation process for over 45 years.</li> <li>Historical records indicate the Metallurgical recovery of magnetite from the magnetic separators has been demonstrated to be 95% of the DTR derived from laboratory DTR process. This factor is not applied to the resource model.</li> </ul>
<p><b>Environmental factors or assumptions</b></p>	<ul style="list-style-type: none"> <li><i>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</i></li> </ul>	<ul style="list-style-type: none"> <li>Waste rock: waste is segregated while mined into one of four waste types based on the rocks acid-base chemistry. These units are disposed of in encapsulated dumps according to the waste management plan as part of the environmental permit conditions.</li> <li>Tailings are disposed of as sediment beaches in engineered tailing ponds. The tailings management plan is part of the environmental permit conditions.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>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.</i></p>	
<p><b>Bulk density</b></p>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> <li>• <i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All 'modern' (post-2005) diamond drilling samples have measured density values. However, some historic drilling samples do not have density data and it is not possible to measure density for RC samples. The density of the ore for the RC samples and legacy diamond drilling samples was determined based on the first principles equation, where:</li> <li>• <math display="block">SG = \left( \frac{DTR}{510} + \frac{100-DTR}{281} \right)^{-1}</math></li> <li>• The First Principles equation relates density to DTR and provides a reasonable fit to the measured data. Density is related to DTR because the gangue mineralogy generally has a lower specific gravity than that of magnetite.</li> <li>• The ore zones at Savage River are very competent and void space is not considered significant to make allowance for in the density determination method.</li> </ul>
<p><b>Audits or reviews</b></p>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>• During the Mine Life Extension Project in 2006, AMC peer reviewed the NP resource estimation process and parameters for the mine life extension project (MLEP).</li> <li>• The estimation process and parameters are considered to be still valid for this deposit as additional drilling has been infill in nature. Several due diligence studies have reviewed the estimation methodologies as recommended</li> </ul>



Criteria	JORC Code explanation	Commentary
<p><i>Discussion of relative accuracy/confidence</i></p>	<ul style="list-style-type: none"> <li>• <i>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve 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 reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.</i></li> <li>• <i>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.</i></li> <li>• <i>Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the</i></li> </ul>	<p>by Snowden and found them to be valid</p> <ul style="list-style-type: none"> <li>• Global reconciliations and bench reconciliations are used to feedback into the resource model. Regular reconciliations show a good performance of model vs actual.</li> <li>• Reconciliations are calculated from material survey movement against changes in stockpiles and actual magnetite concentrate production.</li> <li>• Grange believes that the relative accuracy and confidence in the Mineral Resources is appropriate for the generally- accepted error ranges understood by the resource confidence categories which have been allocated</li> <li>• Historically, model predictions have been well within 10% of actual production.</li> </ul>





Criteria	JORC Code explanation	Commentary
	<p><i>current study stage.</i></p> <ul style="list-style-type: none"> <li><i>It is recognized that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	



## Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Mineral Resource estimate for conversion to Ore Reserves</b>	<ul style="list-style-type: none"> <li>• <i>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</i></li> <li>• <i>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Ore Reserve estimate for Savage River includes Mineral Resources from North Pit, Centre Pit and South Deposit. The Mineral Resources used are from updated Mineral Resource models for each deposit as at 31 Dec 2014.</li> <li>• The stated Mineral Resource is inclusive of the Ore Reserve</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>• <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></li> <li>• <i>If no site visits have been undertaken indicate why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Competent Person has more than 10 years of experience in an open pit Magnetite mine at senior operational management and technical level.</li> <li>• Competent person is an employee of the company.</li> </ul>
<b>Study status</b>	<ul style="list-style-type: none"> <li>• <i>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</i></li> <li>• <i>The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</i></li> </ul>	<ul style="list-style-type: none"> <li>• This Ore Reserve estimate is based on a Feasibility Study that was completed, in September 2006. The information used for estimation and reporting of this Ore Reserve is based upon that Feasibility Study with current production reconciled modifying factors.</li> <li>• The Life Of Mine Plan process is undertaken annually which encompasses reviews of conversion of mineral resource to ore reserve and assessment of current economic and other reconciled modifying factors.</li> </ul>



Criteria	JORC Code explanation	Commentary																								
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The basis of the cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>Cut-Off-Grade Analysis was undertaken as part of the Feasibility Study and is updated on an annual basis as part of Grange Resource's Life Of Mine Budget process. The Cut-off grade is 15% DTR.</li> </ul>																								
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimization or by preliminary or detailed design).</li> <li>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</li> <li>The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.</li> </ul>	<ul style="list-style-type: none"> <li>The Whittle optimizer is used to derive an economic pit outline which is then used as the basis for mine design. The software uses profit maximization algorithms to generate pit shells. The cost inputs used in the Whittle optimizer were based initially upon the parameters determined in the Feasibility Study and are reviewed as part of The ongoing Life Of Mine Planning and evaluation process.</li> <li>The Ore Reserves are reported within a detailed staged pit designs which are based on Whittle open pit optimization.</li> <li>Mining is be undertaken by conventional bulk mining methods utilizing hydraulic face shovels, dump trucks and conventional drill and blast, which is suited to the local terrain.</li> <li>The overall pit slopes used for the design and optimization are based on geotechnical studies undertaken in the Feasibility Study and are reviewed and updated on an annual basis as part of Grange Resource's Life Of Mine Planning process. The current overall slope parameters are as follows:</li> </ul> <table border="1" data-bbox="762 1518 1474 1899"> <thead> <tr> <th rowspan="2">Pit</th> <th colspan="4">Overall Slope Angle degrees</th> </tr> <tr> <th>East</th> <th>West</th> <th>North</th> <th>South</th> </tr> </thead> <tbody> <tr> <td>North Pit</td> <td>48</td> <td>33</td> <td>32</td> <td>25</td> </tr> <tr> <td>Centre Pit</td> <td>44</td> <td>32</td> <td>35</td> <td>36</td> </tr> <tr> <td>South Deposit</td> <td>40</td> <td>38</td> <td>36</td> <td>42</td> </tr> </tbody> </table>	Pit	Overall Slope Angle degrees				East	West	North	South	North Pit	48	33	32	25	Centre Pit	44	32	35	36	South Deposit	40	38	36	42
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Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>• <i>The major assumptions made and Mineral Resource model used for pit and stope optimization (if appropriate).</i></li> <li>• <i>The mining dilution factors used.</i></li> <li>• <i>The mining recovery factors used.</i></li> <li>• <i>Any minimum mining widths used.</i></li> <li>• <i>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</i></li> <li>• <i>The infrastructure requirements of the selected mining methods.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Smallest Mining Unit (SMU) assumed is 5 m x 5 m x 2.5 m in the X, Y and Z direction consistent with the sub-cell resolution in the resource.</li> <li>• The mining block model includes an allowance for likely mining dilution based on a regularization of the geological model. The regularization has added approximately 2% tonnage and reduced the DTR by 8%.</li> <li>• These factors reflect the expected ore dilution leading to a decrease in recovered grade and an increase in recovered ore volume, and are based on historic reconciliation performance. Reconciliations (global) are compiled annually and bench reconciliations are compiled as benches are completed (about 8 per year).</li> <li>• Temporal or period reconciliations are run to check the quality of the 3 month plan cycle</li> <li>• No minimum mining widths have been applied</li> <li>• A risk factor of 0.8 was applied to the Centre Pit South reserve for potential loss due to wall instability. Studies will be undertaken to mitigate this risk.</li> <li>• The Whittle Optimization on which the mine design is based utilizes only Measured and Indicated Material. Ore Reserve classification is that portion of the mineral resource that resides within an economic pit design. Only Measured and indicated resources are considered.</li> <li>• Inferred resources are not scheduled but are considered during optimizations. The current North pit design has less than 30,000 tonnes of inferred resource.</li> <li>• The mine has introduced remote blast hole drilling, five years ago, and has recently introduced remote blast hole charging</li> </ul>



Criteria	JORC Code explanation	Commentary
<p><b>Metallurgical factors or assumptions</b></p>	<ul style="list-style-type: none"> <li>• <i>The metallurgical process proposed and the appropriateness of that process to the style of mineralization.</i></li> <li>• <i>Whether the metallurgical process is well-tested technology or novel in nature.</i></li> <li>• <i>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domains applied and the corresponding metallurgical recovery factors applied.</i></li> <li>• <i>Any assumptions or allowances made for deleterious elements.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Concentrator comprises primary crushing, primary and secondary grinding and magnetic separation. Concentrate is pumped by a slurry pipeline for drying, pelletizing and ship loading at the Port Latta. This process is well proven at Savage River over the last 47 years and is used extensively for magnetite deposits throughout the world.</li> <li>• The Concentrator and Pellet Plant have been have operated continuously by Grange Resources since 2009 and before by Australian Bulk Minerals since 1997.</li> <li>• There has been metallurgical test work undertaken as part of the Feasibility Study and subsequent drilling programs.</li> <li>• A plant recover factor of 95% is used to account for concentrator efficiency and is supported by historical performance.</li> <li>• The Ore Reserve and the associated mine schedule produce an output on which the sale of pellet is based and includes any deleterious elements.</li> <li>• Deleterious elements (also referred to as impurities), are identified in product specification and are estimated in the resource model.</li> <li>• The mineral resource model appropriately addresses the chemical criteria and the emergent physical properties to meet a high quality iron ore product.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li><i>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the ore-body as a whole.</i></li> <li><i>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</i></li> </ul>	<ul style="list-style-type: none"> <li>Magnetite concentrate and hematite pellets are sold on a market specification.</li> <li>The mineral resource model appropriately addresses the chemical criteria and the emergent physical properties to meet a high quality iron ore product.</li> </ul>
<b>Environmental</b>	<p><i>The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</i></p>	<ul style="list-style-type: none"> <li>The mining and exploration tenements held by the Company contain environmental requirements and conditions that the entities must comply with in the course of normal operations. These conditions and regulations cover the management of the storage of hazardous materials and rehabilitation of mine sites. The Company obtained approvals to operate in 1996 and 1997 under Tasmania's Land Use Planning and Approvals Act (LUPA) and the Environmental Management and Pollution Control Act (EMPCA) as well as the Goldamere Act and Mineral Resources Development Act. The land use permit conditions for Savage River and Port Latta are contained in Environmental Protection Notices 248/2 and 302/2 respectively. The currently approved Environmental Management Plans were submitted for Savage River and Port Latta on 21 December 2010. The extension of the project's life was approved by the Department of Tourism, Arts and the Environment on 12 March 2007 and together with the Goldamere Act and the Environmental Protection Notices, is the basis for the management of all environmental aspects of the mining leases. The Goldamere Act limits the Company's liability under Tasmanian law for</li> </ul>





Criteria	JORC Code explanation	Commentary
		<p>remediation of contamination to that caused by the Company's operations, and indemnifies the Company for certain environmental liabilities arising from past operations. Where pollution is caused or might be caused by previous operations and this may be impacting on Grange's operations or discharges. Grange is indemnified against any associated emissions. Grange is however required to operate to Best Practice Environmental Management (BPEM).</p> <ul style="list-style-type: none"> <li>• The Goldamere Act provides overriding legislation against all other Tasmanian legislation.</li> <li>• Grange has current approvals to mine North Pit until 2031. The waste rock from North Pit is to be segregated into potential acid forming and non-acid forming waste in the pit and then disposed of in the Broderick Creek waste rock dump which has sufficient capacity for the current life of the mine. The potentially acid forming waste is encapsulated with layers of clay and alkaline rocks to prevent the formation of acid rock drainage.</li> <li>• Process residue from the concentration of ore (tailings) is stored in the Main Creek Tailings Dam which has sufficient capacity until 2017. Grange has received approval from the Tasmanian Environmental Protection Authority to construct and operate a new tailings storage facility called South Deposit Tailings Storage Facility. This has sufficient capacity to store tailings from North Pit, Centre Pit and South Deposit until at least 2031. Approval for this facility has been granted by the Department of Environment and the Waratah Wynyard Council.</li> </ul>
<p><b>Infrastructure</b></p>	<ul style="list-style-type: none"> <li>• <i>The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk</i></li> </ul>	<ul style="list-style-type: none"> <li>• Current operation consists of North Pit and South Deposit and one previously mined pit (Centre Pit) which is planned to be mined as part of the Life Of Mine Plan. There are also two primary crushers and conveyors, concentrator, pipeline and pellet processing plant with process water sourced on-site and dedicated power transmission lines. Townsite hosts a workforce of 250 persons. Concentrate is transported by slurry pipeline to the Grange-owned</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.</i></p>	<p>Port Latta pellet plant and dedicated ship loading facility for export. The current Main Creek Tails Storage Dam (facility) will be closed in 2017 and the construction of a new South Deposit Tails Storage Facility will commence in March 2014. The new facility will have sufficient capacity to support the Life of Mine operation.</p>
<p><b>Costs</b></p>	<ul style="list-style-type: none"> <li>• <i>The derivation of, or assumptions made, regarding projected capital costs in the study.</i></li> <li>• <i>The methodology used to estimate operating costs.</i></li> <li>• <i>Allowances made for the content of deleterious elements.</i></li> <li><i>The source of exchange rates used in the study.</i></li> <li>• <i>Derivation of transportation charges</i></li> <li>• <i>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Life Of Mine Plan is updated annually. All assumptions regarding capital costs are reviewed monthly and as part of the annual budgeting process. Capital costs are well documented, managed and understood for the operation.</li> <li>• The Concentrator and Pellet Plant have operated continuously by Grange Resources since 2009 and before by Australian Bulk Minerals since 1997. The operating and capital costs are based upon actual operating historical data.</li> <li>• Allowances are made for the various deleterious elements and adjustments are made to the Iron Content.</li> <li>• The exchange rate is sourced from CRU (Specialist Matter Experts in the market analysis for mining and metals), with periodic updates for forecast.</li> <li>• Product is sold Free On Board from Port Latta</li> <li>• Forecasting of treatment and refining charges including penalties in concentrate are completed annually using the scheduled annual feed grade (including impurities).</li> <li>• No royalty or other government charges are used in the Whittle Optimization, however all operating and capital costs including royalties and other government charges are included in the Life Of Mine Plan.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li><i>The allowances made for royalties payable, both Government and private.</i></li> </ul>	
<b>Revenue factors</b>	<ul style="list-style-type: none"> <li><i>The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc .</i></li> <li><i>The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</i></li> </ul>	<ul style="list-style-type: none"> <li>The 2013 Whittle optimization was carried out including Measured and Indicated Mineral Resource categories and using: a gross FOB price at Port Latta expressed as US\$/dmt pellet and a nominated AUD = USD exchange rate</li> <li>The commodity pricing is sourced from CRU (Specialist Matter Experts in the market analysis for mining and metals)</li> </ul>
<b>Market assessment</b>	<ul style="list-style-type: none"> <li><i>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</i></li> <li><i>A customer and competitor analysis along with the identification of likely market windows for the product.</i></li> </ul>	<ul style="list-style-type: none"> <li>The mine and concentrator have operated continuously by Grange Resources since 2009 and before by Australian Bulk Minerals since 1997, and various parties since 1967. Product is presently sold as Concentrate and Pellet into the Asian and Australian markets.</li> <li>There are long term contracts in place and we also see a strong spot market.</li> <li>Prices are negotiated based on market indices.</li> </ul>





Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>• <i>Price and volume forecasts and the basis for these forecasts.</i></li> <li>• <i>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</i></li> </ul>	
<b>Economic</b>	<ul style="list-style-type: none"> <li>• <i>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</i></li> <li>• <i>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Financial modeling of the Savage River operation, shows support for strong NPV's.</li> <li>• The NPV is most sensitive to product price and exchange rate</li> </ul>
<b>Land Tenure</b>	<ul style="list-style-type: none"> <li>• <i>Land use</i></li> </ul>	<ul style="list-style-type: none"> <li>• North Pit, Centre Pit, South Deposit and the associated waste dumps, tails storage facility, concentrator, accommodation and pellet plant all lie wholly within ML 2M/2001 and ML 11M/2008. There are no restrictions placed on the operation by these leases which materially restrict its operation.</li> </ul>
<b>Social</b>	<ul style="list-style-type: none"> <li>• <i>The status of agreements with key stakeholders and matters leading to social licence to</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Mine is relatively isolated, being situated 45 km off the Murchison Highway, which links the north-west and western coasts of Tasmania (Figure 12). The nearest localities are Corinna (population 6), 24 km to the south-west and Waratah (population 380),</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>operate.</i></p>	<p>38 km to the north-east. The nearest major town by road is Burnie (population ~20,000), located on the north-west coast, about 100 km distant.</p> <ul style="list-style-type: none"> <li>Grange also works with the Tasmanian Government in the Savage River Rehabilitation Project. This work has seen water quality in the Savage River improve from where it was significantly degraded by acid rock drainage in 1997 to where modified ecosystem targets are being met and pelagic aquatic species are re-populating the middle reaches of the river. On the back of this work, Grange has community support for the ongoing operation of the mine.</li> </ul>
<p><b>Other</b></p>	<ul style="list-style-type: none"> <li><i>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</i></li> <li><i>Any identified material naturally occurring risks.</i></li> <li><i>The status of material legal agreements and marketing arrangements.</i></li> <li><i>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which</i></li> </ul>	<ul style="list-style-type: none"> <li>Asbestos group of minerals have been identified at Savage River. The asbesti-form materials are handled according to the fibrous materials policy at Grange, whereby risks from inspirable particles are monitored and controlled.</li> <li>A long term contract for supply of magnetite pellet to various customers exists.</li> <li>The Goldamere Act provides Tasmanian legislation to support the Savage River Operation</li> <li>Final approval for the SDTSF was received in 2014 and construction commenced in Q3 2014.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>extraction of the reserve is contingent.</i>	
<b>Classification</b>	<ul style="list-style-type: none"> <li>• <i>The basis for the classification of the Ore Reserves into varying confidence categories.</i></li> <li>• <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> <li>• <i>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</i></li> </ul>	<ul style="list-style-type: none"> <li>• Reserve classification is that portion of the mineral resource that resides within an economic pit design. Only Measured and Indicated resources are considered and have been converted to proven and probable reserves (respectively).</li> <li>• The result reflects the Competent persons view of the deposit.</li> <li>• No probable Ore Reserves have been derived from measured mineral resources.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of Ore Reserve estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Feasibility Study that was completed in September 2006 had been peer reviewed by Australian Mining Consultants (AMC) for the NP reserve for the mine life extension project (MLEP).</li> </ul>
<b>Discussion of relative accuracy/ confidence</b>	<ul style="list-style-type: none"> <li>• <i>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve 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 reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and</i></li> </ul>	<ul style="list-style-type: none"> <li>• Global reconciliations and bench reconciliations are used to feedback into the resource model. Regular reconciliations show a good performance of model vs actual.</li> <li>• Reconciliations are calculated from material survey movement against changes in stockpiles and actual magnetite concentrate production.</li> <li>• Grange believes that the relative accuracy and confidence in the Mineral Resources is appropriate for the generally- accepted error ranges understood by the resource confidence categories which have been allocated</li> <li>• Historically model predictions are well within 10% of actual production</li> <li>• Mod factors apply globally and metallurgical factors are reviewed annually.</li> <li>• Some factors are applied locally, for example geotechnical parameters are applied locally.</li> <li>• All modifying factors are reviewed annually.</li> <li>• Modifying Factors are reviewed periodically with reconciliations to evaluate accuracy and confidence of the estimates.</li> </ul>





Criteria	JORC Code explanation	Commentary
	<p><i>confidence of the estimate.</i></p> <ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.</i></li> <li>• <i>It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Relative accuracy of the mod factors compares well with production data which is compared on a monthly and annual basis.</li> </ul>

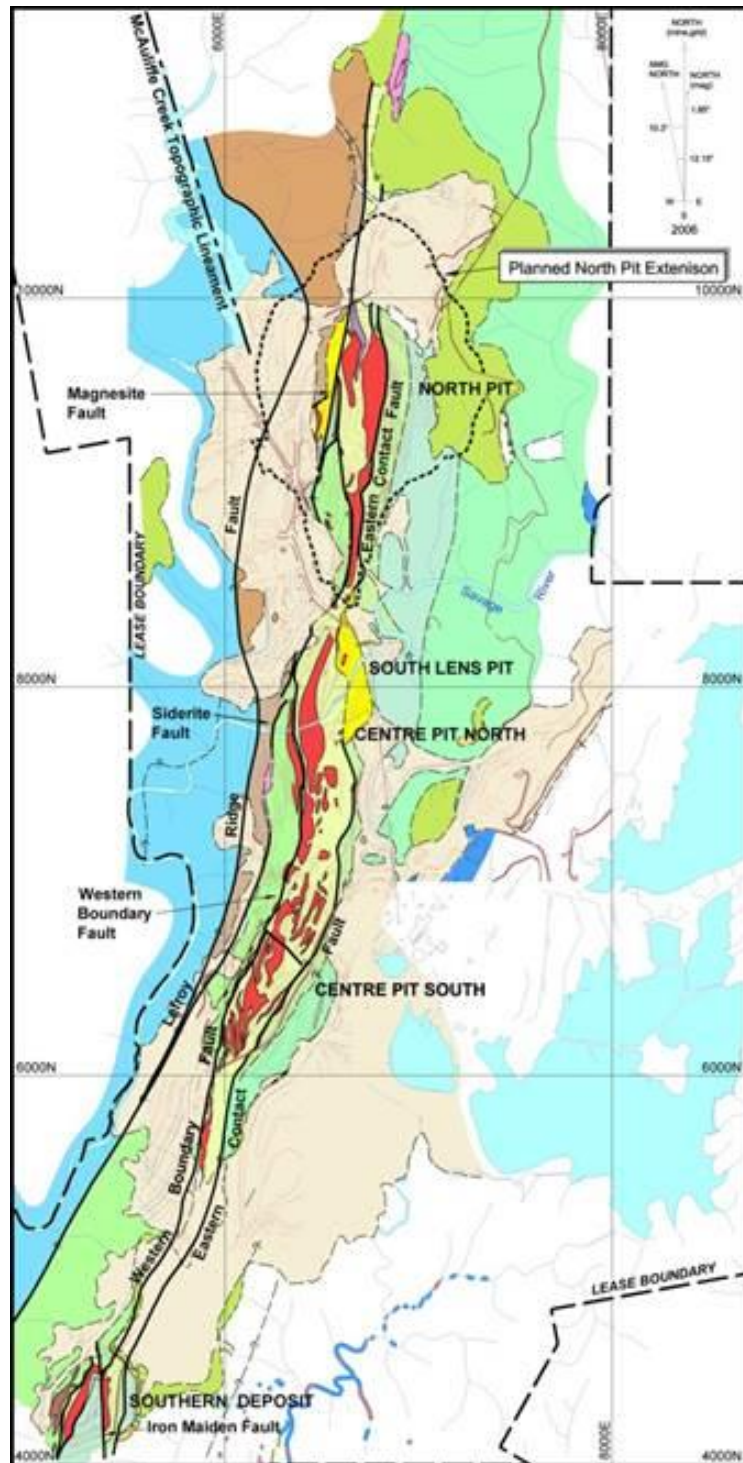


Figure 6 Regional Geology (2008)

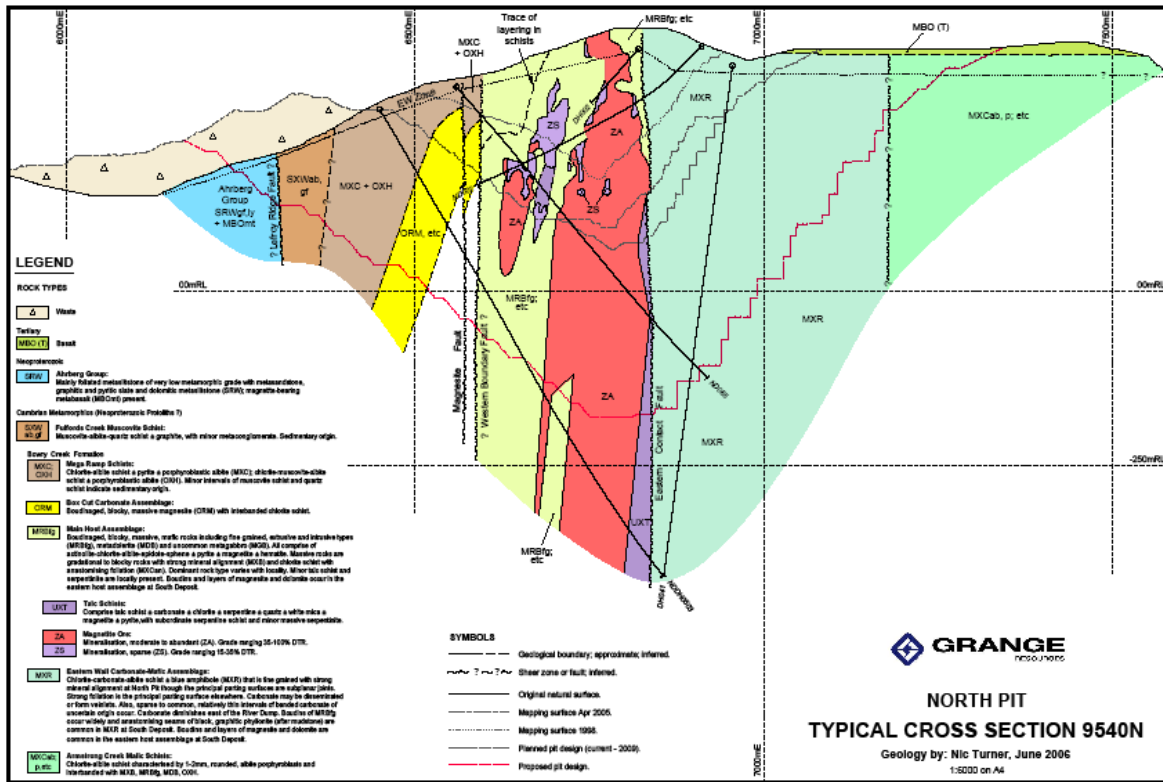


Figure 7 Typical Cross Section for NP

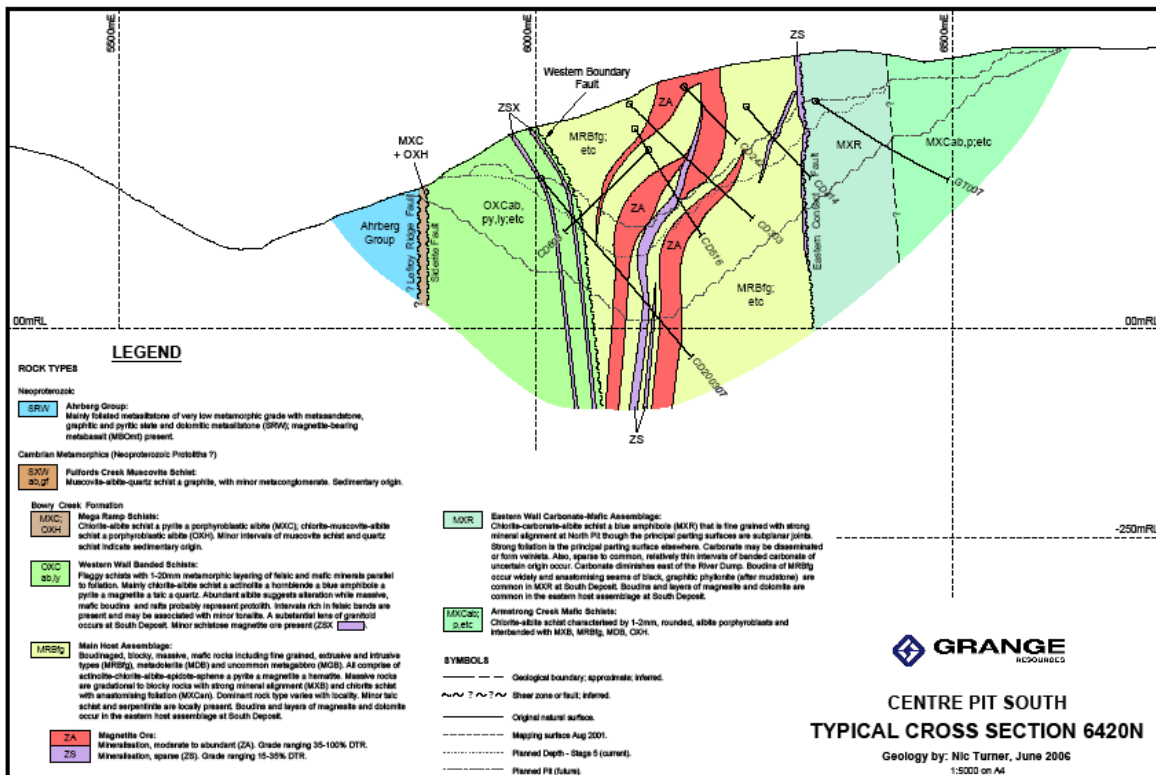


Figure 8 Typical Cross Section of CPS



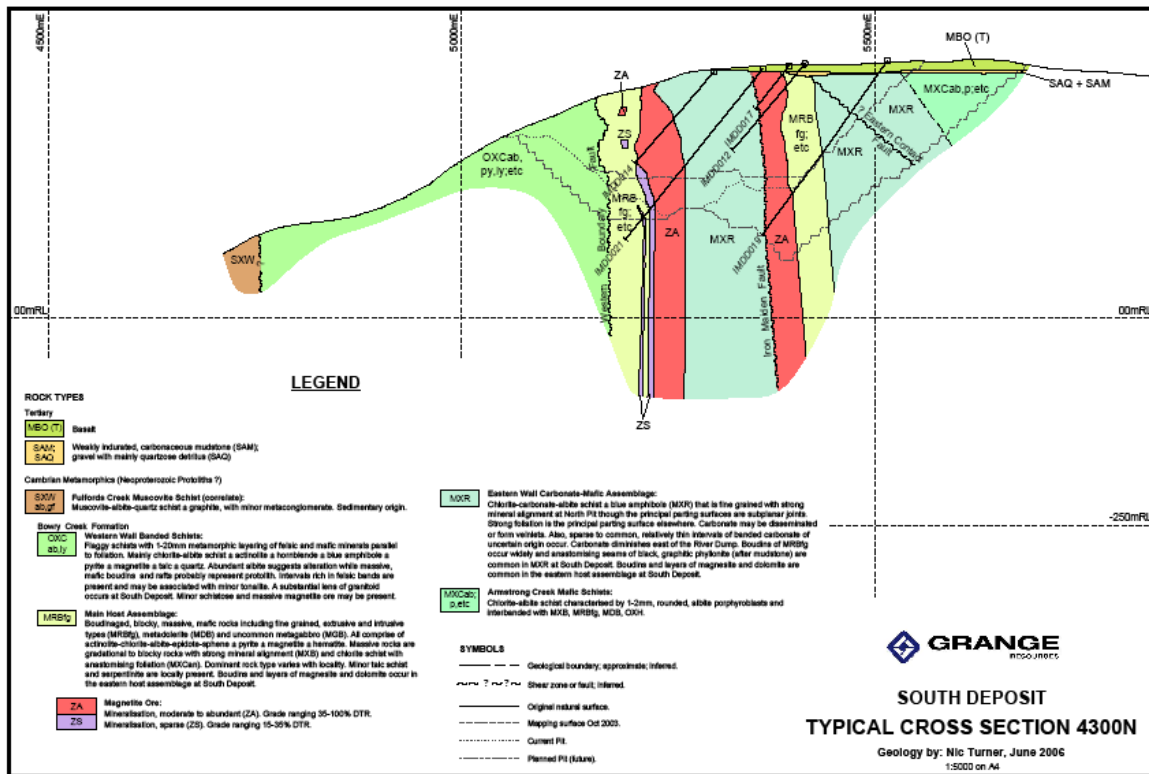


Figure 9 Typical Cross Section for SD

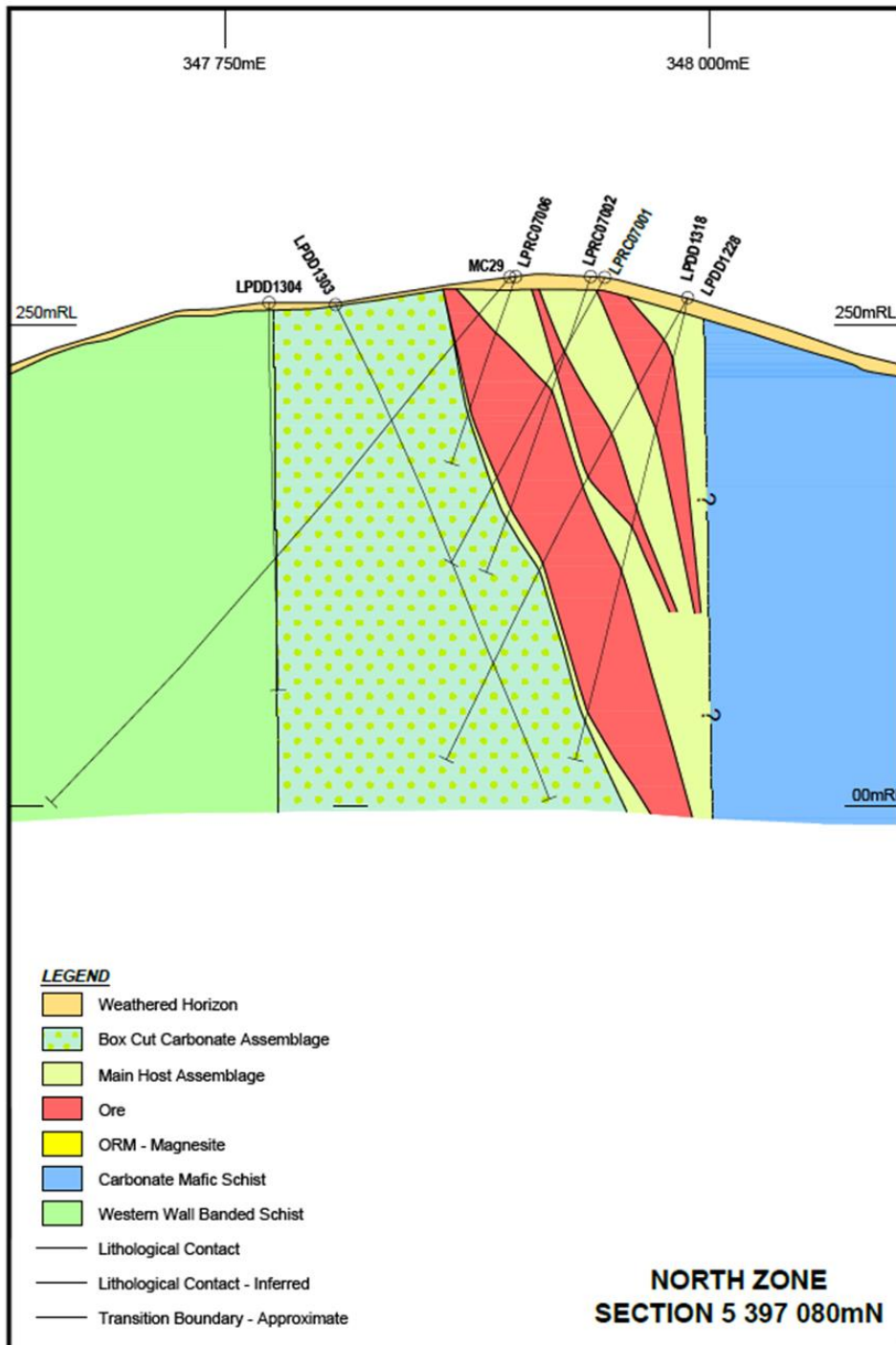


Figure 10 Typical Cross Section for Long Plains



## Competent Person Statement

The information in this report that relates to Mineral Resources and Ore Reserves is based on information compiled by Mr Ben Maynard, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy, and is a full time employee of Grange Resources, and who holds shares in Grange Resources as part of the company incentive scheme.

Mr Maynard has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being 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'.

Mr Maynard consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

-ENDS-

For further information, please contact:

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## DRILL HOLE DATA

Pursuant to the guidelines established in the JORC Code (2012 Edition), the following tables represents the drill hole intercepts which support the Mineral Resource and Ore Reserve estimates for Savage River. No new holes have been added in the last calendar year.

# ANNUAL RESOURCE & RESERVE STATEMENT DECEMBER 2016



**GRANGE**  
RESOURCES

lp2013_resource	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	hole_depth
2	IMI28	348036	5396583	280	-47	259	24.37	83.33	166.72
1	IMI29	348011	5396883	263	-50	258	111.86	115.21	182.88
1	IMI29	348011	5396883	263	-50	258	141.57	151.24	182.88
1	IMI29	348011	5396883	263	-50	258	79.44	90.3	182.88
1	IMI29	348011	5396883	263	-50	258	16.45	36.32	182.88
2	IMI30	348311	5395383	230	-45	255	128.52	157.01	192.02
2	IMI30	348311	5395383	230	-45	255	98.38	110.76	192.02
2	IMI30	348311	5395383	230	-45	255	58.16	83.09	192.02
2	IMI35	347976	5397188	253	-85	257	65.2	79.8	137.76
2	IMI46	347976	5397188	253	-44	257	98.5	116.5	233.5
2	IMI46	347976	5397188	253	-44	257	30.92	46.44	233.5
1	LPC06001	347832.334	5396884.196	274.325	9.975	97.4236	52	52.07	136
1	LPC06001	347832.334	5396884.196	274.325	9.975	97.4236	85.71	97.25	136
1	LPC06001	347832.334	5396884.196	274.325	9.975	97.4236	115.44	122.03	136
1	LPC06002	347824.675	5396929.225	275.468	7.633	73.084	72	72.14	182.5
1	LPC06002	347824.675	5396929.225	275.468	7.633	73.084	140	142.34	182.5
1	LPC06002	347824.675	5396929.225	275.468	7.633	73.084	151	156	182.5
1	LPC06003	347878.762	5396988.981	278.285	5.374	99.484	18.14	30.97	115.5
1	LPC06003	347878.762	5396988.981	278.285	5.374	99.484	86	90	115.5
1	LPC06004	347789.948	5396998.136	274.601	-22.742	74.0721	184	185.35	222
1	LPC06005	347839.92	5397087.878	262.647	6.756	102.2647	28.99	29	157
1	LPC06005	347839.92	5397087.878	262.647	6.756	102.2647	70.46	71.21	157
1	LPC06006	347800.287	5397139.931	251.357	1.5	96.39	66.16	98.85	232
1	LPC06006	347800.287	5397139.931	251.357	1.5	96.39	121.23	141.85	232
1	LPC06006	347800.287	5397139.931	251.357	1.5	96.39	166.9	169.18	232
1	LPC06007	347794.805	5397184.637	238.578	10.962	94.769	85	103.99	226
1	LPC06007	347794.805	5397184.637	238.578	10.962	94.769	117.81	125.3	226
1	LPC06007	347794.805	5397184.637	238.578	10.962	94.769	130.62	146.2	226
1	LPC06008	347937.035	5396682.272	282.404	2.312	90.2152	4.1	27.98	56.5
1	LPC06008	347937.035	5396682.272	282.404	2.312	90.2152	43.27	56.5	56.5
1	LPC06009	347994.785	5396703.768	287.834	-2.586	71.4756	35.08	39.02	75.5
1	LPC06010	347968.41	5396582.489	277.129	6.828	86.3733	8	48.91	111
1	LPC06010	347968.41	5396582.489	277.129	6.828	86.3733	72	77	111
1	LPC06011	347955.274	5396486.27	269.432	7.154	93.0714	12.02	22.41	90.5
1	LPC06011	347955.274	5396486.27	269.432	7.154	93.0714	69.08	73.12	90.5
1	LPC06012	347996.683	5396384.121	264.179	11.897	91.1609	32	33	35
1	LPC06012	347996.683	5396384.121	264.179	11.897	91.1609	9.02	15.12	35
1	LPDD1103	348437.026	5394659.961	259.328	-54.29	89.64	71.04	76	293.2
1	LPDD1103	348437.026	5394659.961	259.328	-54.29	89.64	123.5	137.47	293.2
1	LPDD1103	348437.026	5394659.961	259.328	-54.29	89.64	184.3	186	293.2
1	LPDD1103	348437.026	5394659.961	259.328	-54.29	89.64	232	245.53	293.2
1	LPDD1204	348295.353	5394950.179	259.373	-59.57	94.09	97.21	143.61	488.34
1	LPDD1204	348295.353	5394950.179	259.373	-59.57	94.09	175.08	215	488.34
1	LPDD1204	348295.353	5394950.179	259.373	-59.57	94.09	220.18	297.31	488.34
1	LPDD1204	348295.353	5394950.179	259.373	-59.57	94.09	297.32	351.95	488.34
1	LPDD1205	348194.817	5395259.99	240.681	-57.36	84.36	24.04	31.2	278.5
1	LPDD1205	348194.817	5395259.99	240.681	-57.36	84.36	66.55	120.66	278.5
1	LPDD1205	348194.817	5395259.99	240.681	-57.36	84.36	120.66	145	278.5
1	LPDD1205	348194.817	5395259.99	240.681	-57.36	84.36	166.9	179.58	278.5
1	LPDD1212	348080.499	5396392.012	267.101	-59.82	268	219.87	235.2	301.3
1	LPDD1212	348080.499	5396392.012	267.101	-59.82	268	123.98	132.1	301.3
1	LPDD1212	348080.499	5396392.012	267.101	-59.82	268	145.44	159.06	301.3
1	LPDD1212	348080.499	5396392.012	267.101	-59.82	268	265.33	268.97	301.3
1	LPDD1212	348080.499	5396392.012	267.101	-59.82	268	55.1	61.25	301.3
1	LPDD1215	348123.424	5396480.009	271.778	-56.96	273.29	204.6	252.2	301.4
1	LPDD1215	348123.424	5396480.009	271.778	-56.96	273.29	178.1	189.9	301.4
1	LPDD1218	348088.841	5396580.143	282.278	-60	270	101.5	232.12	288.1
1	LPDD1218	348088.841	5396580.143	282.278	-60	270	73.95	81.2	288.1
1	LPDD1220	348083.671	5396676.398	275.584	-52.29	259.25	178.8	207.53	236.6
1	LPDD1220	348083.671	5396676.398	275.584	-52.29	259.25	61	165.85	236.6
1	LPDD1223	347995.504	5396772.048	290.53	-73.49	280.98	142.3	201.2	300
1	LPDD1223	347995.504	5396772.048	290.53	-73.49	280.98	33.1	103.3	300
1	LPDD1228	347988.855	5397078.404	263.659	-60.76	274.49	111.9	156.51	270.2
1	LPDD1228	347988.855	5397078.404	263.659	-60.76	274.49	79.72	107	270.2
1	LPDD1228	347988.855	5397078.404	263.659	-60.76	274.49	24.48	52.38	270.2
1	LPDD1229	348007.081	5397181.123	254.693	-60	270	175.1	183.75	261.8
1	LPDD1229	348007.081	5397181.123	254.693	-60	270	74.42	83.87	261.8
1	LPDD1301	347991.708	5397130.271	262.24	-61	270	131	167	201.8
1	LPDD1301	347991.708	5397130.271	262.24	-61	270	37.02	48.89	201.8
1	LPDD1302	347992.196	5397130.286	262.136	-71	270	192.5	203.7	228.7
1	LPDD1302	347992.196	5397130.286	262.136	-71	270	72	78	228.7
1	LPDD1306	347795.267	5396931.67	276.328	-46.99	88.6	173.5	243	488.2
1	LPDD1306	347795.267	5396931.67	276.328	-46.99	88.6	278.2	300	488.2
1	LPDD1307	347845.553	5396939.252	283.403	-49.53	94.3	93	145	260.5

Long Plains Drill-hole Intersects as at 31 Dec 2013 1 of 2

# ANNUAL RESOURCE & RESERVE STATEMENT DECEMBER 2016



lp2013_resource	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	hole_depth
1	LPDD1307	347845.553	5396939.252	283.403	-49.53	94.3	158.7	174	260.5
1	LPDD1307	347845.553	5396939.252	283.403	-49.53	94.3	203.9	209.3	260.5
1	LPDD1309	347948.173	5396780.587	290.548	-69.53	92.66916667	46.3	172.9	284.7
1	LPDD1309	347948.173	5396780.587	290.548	-69.53	92.66916667	242.9	257.1	284.7
1	LPDD1310	348081.84	5396676.7	270	-74.1	270	153.96	309.8	309.8
1	LPDD1311	348070.753	5396534.388	281.853	-70.91	261.1580556	162.6	241	271.6
1	LPDD1311	348070.753	5396534.388	281.853	-70.91	261.1580556	120	129	271.6
1	LPDD1312	348090	5396160	262.527	-65	270	101	153.6	222.2
1	LPDD1313	348133.62	5396058.823	258.612	-72	279.31	172	206.4	298.8
1	LPDD1313	348133.62	5396058.823	258.612	-72	279.31	170.2	172	298.8
1	LPDD1313	348133.62	5396058.823	258.612	-72	279.31	128.3	166.5	298.8
1	LPDD1314	348159.542	5395961.302	251.144	-69.86	259	190	228.4	283.8
1	LPDD1314	348159.542	5395961.302	251.144	-69.86	259	150.8	183.1	283.8
1	LPDD1314	348159.542	5395961.302	251.144	-69.86	259	78	119.05	283.8
1	LPDD1315	348155.99	5395864.405	246.255	-76	270	175.3	204.7	312.7
1	LPDD1315	348155.99	5395864.405	246.255	-76	270	83	137.2	312.7
1	LPDD1315	348155.99	5395864.405	246.255	-76	270	5	43	312.7
1	LPDD1316	348158.501	5395867.783	246.338	-50	209	197.6	216.55	303.6
1	LPDD1316	348158.501	5395867.783	246.338	-50	209	140.8	171.3	303.6
1	LPDD1316	348158.501	5395867.783	246.338	-50	209	8.36	39.12	303.6
1	LPDD1318	347988.855	5397078.404	263.659	-75.84	274.5	143.7	220	245.9
1	LPDD1318	347988.855	5397078.404	263.659	-75.84	274.5	112.55	121	245.9
1	LPDD1318	347988.855	5397078.404	263.659	-75.84	274.5	34.16	69.07	245.9
1	LPDDH0707	347942.14	5397183.33	262	-55.32	268.42	52.3	89.6	156.2
1	LPDDH0707	347942.14	5397183.33	262	-55.32	268.42	37	46.72	156.2
1	LPDDH0707	347942.14	5397183.33	262	-55.32	268.42	5	23.9	156.2
1	LPDDH100	347993	5397029	260	-50	255	111.04	154.2	181
1	LPDDH100	347993	5397029	260	-50	255	78	105	181
1	LPDDH100	347993	5397029	260	-50	255	32.8	46.7	181
1	LPDDH101	347945.548	5397030.359	274.873	-50	255	34.88	80	95
1	LPDDH101	347945.548	5397030.359	274.873	-50	255	26.1	28	95
1	LPDDH102	347896.183	5397018.656	275.786	-50	255	0	10	49
1	LPDDH103	348038	5397041	249	-50	255	180.6	199	199
1	LPDDH103	348038	5397041	249	-50	255	144.2	175.6	199
1	LPDDH103	348038	5397041	249	-50	255	81.7	96.5	199
1	LPRC07001	347942.22	5397124.86	267.41	-60.38	270.14	52	125	160
1	LPRC07001	347942.22	5397124.86	267.41	-60.38	270.14	7	36	160
1	LPRC07002	347936.054	5397079.973	266.893	-70.82	270.21	54	119	154
1	LPRC07002	347936.054	5397079.973	266.893	-70.82	270.21	34	45.64	154
1	LPRC07003	347891	5396985.04	280.04	-68.83	94.92	21	120	184
1	LPRC07003	347891	5396985.04	280.04	-68.83	94.92	123	163	184
1	LPRC07003	347891	5396985.04	280.04	-68.83	94.92	179.52	184	184
1	LPRC07004	347895.79	5396985.02	282.11	-56.02	92.25	2.05	41	160
1	LPRC07004	347895.79	5396985.02	282.11	-56.02	92.25	54	92	160
1	LPRC07004	347895.79	5396985.02	282.11	-56.02	92.25	102	121	160
1	LPRC07005	347908.03	5397133.71	263.89	-60.49	270.03	6	70	167
1	LPRC07006	347896.8	5397082.05	265.92	-70.38	270.36	23	66	93
1	LPRC1113	348042.602	5396380.131	271.166	-60.1	269.16	144	155	220
1	LPRC1113	348042.602	5396380.131	271.166	-60.1	269.16	29.27	33.3	220
1	LPRC1113	348042.602	5396380.131	271.166	-60.1	269.16	79.12	88.36	220
1	LPRC1113	348042.602	5396380.131	271.166	-60.1	269.16	200	203	220
1	LPRC1114	347973.878	5396383.201	266.921	-58.1	273.78	6	17	103
1	LPRC1114	347973.878	5396383.201	266.921	-58.1	273.78	45	58	103
1	LPRC1116	348044.813	5396479.946	281.345	-57.1	269.44	47	114	200
1	LPRC1116	348044.813	5396479.946	281.345	-57.1	269.44	29	42	200
1	LPRC1117	347972.774	5396480.018	274.563	-58.71	272.96	3.51	15	100
1	LPRC1121	348007.536	5396674.801	290.545	-55.7	266.77	74	111	196
1	LPRC1121	348007.536	5396674.801	290.545	-55.7	266.77	1.54	49	196
1	LPRC1122	347949.997	5396679.889	287.229	-60.26	269.48	0	16	106
1	LPRC1127	347929.009	5396879.567	292.593	-59.74	276.21	0	21	100
1	LPRC1127	347929.009	5396879.567	292.593	-59.74	276.21	65	73	100
1	LPRC1209	348156.736	5396270.128	258.904	-57.34	262.93	127.03	131	131
1	LPRC1210	348075.085	5396280.1	262.102	-59.31	271.34	135	170	200
1	LPRC1210	348075.085	5396280.1	262.102	-59.31	271.34	7	22	200
1	LPRC1210	348075.085	5396280.1	262.102	-59.31	271.34	42.31	57.48	200
1	LPRC1211	348013.93	5396278.708	258.77	-59.5	277.09	37	61	88
1	LPRC1224	347996.064	5396774.079	290.517	-58.22	272.08	95.55	141	200
1	LPRC1224	347996.064	5396774.079	290.517	-58.22	272.08	24.8	76	200
1	LPRC1225	347943.252	5396780.434	290.429	-61.25	276.21	25.44	66	100
1	LPRC1308	347949.088	5396780.572	290.574	-48	92	39.33	61	166
1	LPRC1308	347949.088	5396780.572	290.574	-48	92	127	136	166
1	LPRC1310	348085.212	5396674.553	275.746	-74	270	150.77	153	153
1	LPRC1317	348091.727	5396161.494	262.527	-65	90	17	28	149
1	LPRC1317	348091.727	5396161.494	262.527	-65	90	51	62	149
1	MC29	347888.057	5397120.877	263.792	-49.26	258.83	7.99	30.83	348
2	rtae1	347991	5397143	257	-45	255	90	145	195
2	rtae1	347991	5397143	257	-45	255	72.11	72.99	195
2	rtae1	347991	5397143	257	-45	255	26	35	195

Long Plains Drill-hole Intersects as at 31 Dec 2013 2 of 2





SD_1302	hole_id	x	y	z	dip	azimuth	depth from	depth to	hole depth
1	IMDD001	4,422.5	5,477.3	310.1	-50.0	278.9	106.3	176.3	206.2
1	IMDD002	4,436.8	5,362.1	290.7	-50.0	283.4	87.5	104.7	175.3
1	IMDD002	4,436.8	5,362.1	290.7	-50.0	283.4	104.7	124.6	175.3
1	IMDD003	4,348.1	5,334.9	298.1	-50.0	271.6	98.2	142.1	167.2
1	IMDD004	4,342.2	5,410.9	307.2	-49.5	274.3	58.7	85.2	123.0
1	IMDD005	4,337.7	5,468.9	313.9	-50.0	273.7	130.5	134.5	134.5
1	IMDD006	4,242.2	5,387.3	307.9	-50.0	273.4	33.0	40.9	87.0
1	IMDD007	4,504.0	5,262.7	285.4	-50.0	94.3	74.2	85.7	151.5
1	IMDD007	4,504.0	5,262.7	285.4	-50.0	94.3	85.7	144.3	151.5
1	IMDD008	4,237.0	5,252.1	310.5	-50.0	299.9	56.6	95.5	95.5
1	IMDD009	4,490.8	5,427.0	307.2	-58.0	282.3	38.0	45.0	117.3
1	IMDD010	4,399.7	5,430.0	309.3	-50.0	273.7	38.6	116.9	124.5
1	IMDD011	4,398.0	5,321.4	295.6	-61.0	274.3	92.6	106.1	141.7
1	IMDD011	4,398.0	5,321.4	295.6	-61.0	274.3	122.0	127.7	141.7
1	IMDD012	4,290.8	5,414.7	307.4	-50.2	276.9	40.4	86.1	136.0
1	IMDD013	4,553.8	5,283.6	288.2	-49.0	93.4	81.8	82.3	136.0
1	IMDD014	4,302.5	5,305.0	298.4	-49.0	276.7	70.5	125.4	146.8
1	IMDD015	4,364.3	5,302.2	297.5	-56.1	96.3	93.0	158.0	188.1
1	IMDD016	4,257.6	5,281.3	304.4	-52.0	94.5	150.1	229.4	239.0
1	IMDD017	4,290.9	5,395.6	305.0	-51.5	273.4	13.0	59.5	65.5
1	IMDD019	4,285.2	5,514.7	311.2	-55.0	269.5	196.0	253.3	259.0
1	IMDD019	4,285.2	5,514.7	311.2	-55.0	269.5	253.3	259.0	259.0
1	IMDD020	4,499.1	5,306.9	271.5	-50.5	90.4	4.9	24.9	79.5
1	IMDD020	4,499.1	5,306.9	271.5	-50.5	90.4	24.9	61.8	79.5
1	IMDD021	4,295.3	5,363.9	301.3	-51.0	265.4	5.7	19.0	264.5
1	IMDD021	4,295.3	5,363.9	301.3	-51.0	265.4	154.2	209.7	264.5
1	IMDD021	4,295.3	5,363.9	301.3	-51.0	265.4	209.7	222.5	264.5
1	IMDD021	4,295.3	5,363.9	301.3	-51.0	265.4	234.0	240.5	264.5
1	IMDD022	4,385.4	5,505.7	311.4	-52.0	274.4	180.6	219.6	279.5
1	IMDD022	4,385.4	5,505.7	311.4	-52.0	274.4	219.6	223.3	279.5
1	IMDD023	4,394.3	5,372.9	303.6	-57.5	278.1	5.5	26.0	234.5
1	IMDD023	4,394.3	5,372.9	303.6	-57.5	278.1	154.2	179.2	234.5
1	IMDD023	4,394.3	5,372.9	303.6	-57.5	278.1	187.7	199.2	234.5
1	IMDD024	4,203.1	5,460.3	313.9	-49.0	274.3	106.1	139.8	149.3
1	IMDD025	4,199.9	5,240.6	283.5	-54.0	267.5	45.5	111.0	114.3
1	IMDD026	4,201.5	5,306.4	283.6	-48.0	270.6	124.0	147.1	237.1
1	IMDD026	4,201.5	5,306.4	283.6	-48.0	270.6	147.1	206.9	237.1
1	IMDD027	4,201.3	5,500.1	313.3	-56.7	270.2	143.6	200.8	218.7
1	IMDD027	4,201.3	5,500.1	313.3	-56.7	270.2	200.8	205.1	218.7
1	IMDD029	4,131.0	5,295.0	301.0	-51.1	268.4	155.2	308.8	345.5
1	IMDD030	4,132.9	5,249.6	294.9	-51.5	287.4	90.6	98.0	169.7
1	IMDD030	4,132.9	5,249.6	294.9	-51.5	287.4	121.9	129.0	169.7
1	IMDD030	4,132.9	5,249.6	294.9	-51.5	287.4	134.5	154.0	169.7
1	IMDD032	4,097.3	5,224.9	291.6	-46.0	268.5	84.1	90.2	155.5
1	IMDD032	4,097.3	5,224.9	291.6	-46.0	268.5	100.3	105.9	155.5
1	IMDD033	4,095.1	5,272.3	294.8	-59.5	89.2	213.9	354.0	390.4
1	IMDD034	4,052.8	5,250.5	295.6	-54.7	90.4	245.9	313.1	403.9
1	IMDD035	4,094.1	5,266.1	294.6	-51.0	270.0	133.6	151.2	223.2
1	IMDD035	4,094.1	5,266.1	294.6	-51.0	270.0	151.2	171.3	223.2
1	IMDD035	4,094.1	5,266.1	294.6	-51.0	270.0	188.0	196.0	223.2
1	IMDD036	4,102.7	5,325.8	293.6	-60.0	88.1	105.7	267.0	287.0
1	IMDD038	4,055.6	5,267.2	295.1	-52.0	270.4	158.5	182.3	244.0
1	IMDD038	4,055.6	5,267.2	295.1	-52.0	270.4	182.3	193.0	244.0
1	IMDD039	4,052.6	5,220.5	295.7	-51.0	268.4	98.5	104.5	148.8
1	IMDD039	4,052.6	5,220.5	295.7	-51.0	268.4	104.5	119.8	148.8
1	SDDD1201	4,181.1	5,547.6	291.2	-52.3	279.6	190.2	269.5	312.7
1	SDDD1201	4,181.1	5,547.6	291.2	-52.3	279.6	280.5	280.5	312.7
1	SDDD1202	4,054.7	5,301.0	287.9	-57.5	83.4	156.7	236.7	267.7
1	SDDD1203	4,129.3	5,486.1	292.3	-54.7	277.0	127.0	136.0	136.0
1	SDDD1204	4,141.3	5,513.1	291.6	-56.2	87.7	168.0	219.2	249.4
1	SDDD1205	4,300.0	5,096.9	219.7	-46.2	87.4	209.2	229.9	281.6
1	SDDD1205	4,300.0	5,096.9	219.7	-46.2	87.4	229.9	232.4	281.6
1	SDDD1206	4,250.0	5,102.0	213.4	-49.4	92.2	159.0	173.8	218.9
1	SDDD1206	4,250.0	5,102.0	213.4	-49.4	92.2	173.8	177.4	218.9
				END					

South Deposit Drill-hole Intersects as at 31 Dec 2014 1 of 1



CP_1409	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
1	C88107	6423	7651	137	-90	0	9	18	18
1	C88108	6421	7631	141	-90	0	9.66	18	18
1	C88116	6395	7674	137	-90	0	0	18.8	21
1	C88118	6379	7439	152	-90	0	0	2.67	30
1	C88119	6380	7410	152	-90	0	0	6	30
1	C88121	6398	7319	152	-90	0	2.89	3	3
1	C88122	6406	7344	152	-90	0	0	30	30
1	C88123	6410	7365	152	-90	0	6	30	30
1	C88124	6408	7394	152	-90	0	0	12	30
1	C88124	6408	7394	152	-90	0	0	12	30
1	C88126	6425	7418	142	-90	0	0	8.28	12
1	C88127	6422	7444	140	-90	0	0	18	18
1	C88128	6420	7471	140	-90	0	0	9	18
1	C88128	6420	7471	140	-90	0	0	9	18
1	C88130	6452	7443	140	-90	0	0	3	3
1	C88131	6448	7413	140	-90	0	0	18	18
1	C88132	6452	7393	142	-90	0	0	18	18
1	C88133	6361	7585	150	-90	0	24	30	30
1	C88134	6362	7565	150	-90	0	0	30	30
1	C88135	6369	7536	150	-90	0	12	21	30
1	C88136	6378	7526	150	-90	0	0	30	30
1	C88137	6387	7519	150	-90	0	0	30	30
1	C88139	6391	7538	150	-90	0	0	33	33
1	C88140	6388	7563	150	-90	0	0	21	21
1	C88141	6380	7587	150	-90	0	1.93	33	33
1	C88142	6362	7605	150	-90	0	1	21	30
1	C88143	6380	7502	150	-90	0	21	39	39
1	C88145	6476	7639	127	-10	90	2.95	21	24
1	C88145	6476	7639	127	-10	90	2.95	21	24
1	C88146	6482	7529	130	-6	40	0	12	12
1	C88147	6444	7389	142	-90	0	0	6.08	15
1	C88148	6425	7391	141	-90	0	0	21	21
1	C88149	6440	7364	142	-90	0	0	17.37	24
1	C88150	6437	7342	143	-90	0	0	3	3
1	C88151	6435	7322	145	-90	0	0	24	24
1	C88152	6414	7328	144	-90	0	0	18	18
1	C88153	6418	7350	144	-90	0	0	21	21
1	C88154	6422	7370	144	-90	0	0	27	27
1	C88155	6432	7410	144	-90	0	0	18	18
1	C88156	6376	7366	155	-90	0	0	24	24
1	C88157	6375	7338	155	-90	0	0	27	27
1	C88158	6362	7643	153	-90	0	0	27	27
1	CD101	6524.2	7226.8	331.1	-45	267.8	0	30.8	182.9
1	CD101	6524.2	7226.8	331.1	-45	267.8	0	30.8	182.9
1	CD101	6524.2	7226.8	331.1	-45	267.8	30.8	67.4	182.9
1	CD101	6524.2	7226.8	331.1	-45	267.8	67.4	117.3	182.9
1	CD102	6514.2	7413.3	270.9	-45	268.5	3.7	15.2	167.6
1	CD102	6514.2	7413.3	270.9	-45	268.5	3.7	15.2	167.6
1	CD102	6514.2	7413.3	270.9	-45	268.5	22.6	41.8	167.6
1	CD102	6514.2	7413.3	270.9	-45	268.5	41.8	48.5	167.6

Centre Pit Combined Drill-hole Intersects as at 31 Dec 2014 1 of 21



CP_1409	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
1	CD102	6514.2	7413.3	270.9	-45	268.5	48.5	70.1	167.6
1	CD102	6514.2	7413.3	270.9	-45	268.5	75.3	97.8	167.6
1	CD103	6488.9	7043.9	345.7	-45	269	24.7	45.4	174.7
1	CD103	6488.9	7043.9	345.7	-45	269	24.7	45.4	174.7
1	CD103	6488.9	7043.9	345.7	-45	269	45.4	115.8	174.7
1	CD104	6552.3	6956.8	342.5	-45	275	31.1	36.3	347.6
1	CD104	6552.3	6956.8	342.5	-45	275	31.1	36.3	347.6
1	CD104	6552.3	6956.8	342.5	-45	275	80.8	88.1	347.6
1	CD104	6552.3	6956.8	342.5	-45	275	163.7	204.8	347.6
1	CD104	6552.3	6956.8	342.5	-45	275	231	272.5	347.6
1	CD104	6552.3	6956.8	342.5	-45	275	272.5	291.49	347.6
1	CD105	6560.2	7672.7	212.8	-45	268.14	76.8	111.9	204.22
1	CD105	6560.2	7672.7	212.8	-45	268.14	76.8	111.9	204.22
1	CD105	6560.2	7672.7	212.8	-45	268.14	116.4	139.9	204.22
1	CD105	6560.2	7672.7	212.8	-45	268.14	139.9	153.6	204.22
1	CD105	6560.2	7672.7	212.8	-45	268.14	158.8	174	204.22
1	CD105	6560.2	7672.7	212.8	-45	268.14	174	185.9	204.22
1	CD106	6440.1	7583.7	217.4	-45	91.5	7.9	12.32	158.8
1	CD106	6440.1	7583.7	217.4	-45	91.5	7.9	12.32	158.8
1	CD106	6440.1	7583.7	217.4	-45	91.5	34.1	39.8	158.8
1	CD106	6440.1	7583.7	217.4	-45	91.5	112.5	118.3	158.8
1	CD108	6600.4	7413.3	266.9	-45	270	9.8	17.96	285
1	CD108	6600.4	7413.3	266.9	-45	270	9.8	17.96	285
1	CD108	6600.4	7413.3	266.9	-45	270	28.3	34.1	285
1	CD108	6600.4	7413.3	266.9	-45	270	109.4	120.7	285
1	CD108	6600.4	7413.3	266.9	-45	270	135.6	161.8	285
1	CD108	6600.4	7413.3	266.9	-45	270	161.8	173.4	285
1	CD108	6600.4	7413.3	266.9	-45	270	173.4	183.5	285
1	CD108	6600.4	7413.3	266.9	-45	270	183.5	197.2	285
1	CD108	6600.4	7413.3	266.9	-45	270	200.15	211.5	285
1	CD108	6600.4	7413.3	266.9	-45	270	222.8	245.7	285
1	CD109	6407.5	6876.3	323	-61	270	0.72	16.09	142.6
1	CD109	6407.5	6876.3	323	-61	270	0.72	16.09	142.6
1	CD109	6407.5	6876.3	323	-61	270	46.3	62.2	142.6
1	CD110	6406.29	6790.64	321.75	-55	270	0	3.62	303.6
1	CD110	6406.29	6790.64	321.75	-55	270	0	3.62	303.6
1	CD110	6406.29	6790.64	321.75	-55	270	46	59.27	303.6
1	CD110	6406.29	6790.64	321.75	-55	270	59.27	132.3	303.6
1	CD110	6406.29	6790.64	321.75	-55	270	152.4	192.9	303.6
1	CD110	6406.29	6790.64	321.75	-55	270	199	208.8	303.6
1	CD110	6406.29	6790.64	321.75	-55	270	221.6	255.7	303.6
1	CD111	6600.1	7587.1	226	-45	270	1.2	22.9	152.4
1	CD111	6600.1	7587.1	226	-45	270	1.2	22.9	152.4
1	CD112	6363	6690.4	306.7	-45	270	12.2	32.9	142.3
1	CD112	6363	6690.4	306.7	-45	270	12.2	32.9	142.3
1	CD113	6578.8	7043.9	332.2	-45	270	66.4	71.6	359.7
1	CD113	6578.8	7043.9	332.2	-45	270	66.4	71.6	359.7
1	CD113	6578.8	7043.9	332.2	-45	270	180.1	194.5	359.7
1	CD113	6578.8	7043.9	332.2	-45	270	194.5	208.2	359.7
1	CD113	6578.8	7043.9	332.2	-45	270	252.1	255.7	359.7

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CP_1409	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
1	CD113	6578.8	7043.9	332.2	-45	270	255.7	263.3	359.7
1	CD113	6578.8	7043.9	332.2	-45	270	300.8	306.3	359.7
1	CD113	6578.8	7043.9	332.2	-45	270	309.4	323.4	359.7
1	CD114	6286.5	6461.8	315.5	-45	270	47.9	72.41	227.4
1	CD114	6286.5	6461.8	315.5	-45	270	47.9	72.41	227.4
1	CD114	6286.5	6461.8	315.5	-45	270	72.41	104.9	227.4
1	CD114	6286.5	6461.8	315.5	-45	270	139	187.37	227.4
1	CD115	6298.1	6598	308.5	-55	270	48.5	128.6	128.6
1	CD116	6221.6	6371.2	304.9	-55	270	29.3	37.2	274.3
1	CD116	6221.6	6371.2	304.9	-55	270	29.3	37.2	274.3
1	CD116	6221.6	6371.2	304.9	-55	270	37.2	88.1	274.3
1	CD116	6221.6	6371.2	304.9	-55	270	100	123.1	274.3
1	CD117	6614.2	7142.7	308.6	-55	270	125	128.9	335.3
1	CD117	6614.2	7142.7	308.6	-55	270	125	128.9	335.3
1	CD117	6614.2	7142.7	308.6	-55	270	152.7	167.9	335.3
1	CD117	6614.2	7142.7	308.6	-55	270	264	274.3	335.3
1	CD117	6614.2	7142.7	308.6	-55	270	308.5	317.3	335.3
1	CD118	6607.1	7227.4	309.8	-45	270	115.8	151.8	243.8
1	CD118	6607.1	7227.4	309.8	-45	270	115.8	151.8	243.8
1	CD119	6141.4	6186.8	272.8	-55	270	47.2	51.5	243.8
1	CD119	6141.4	6186.8	272.8	-55	270	47.2	51.5	243.8
1	CD119	6141.4	6186.8	272.8	-55	270	59.7	63.62	243.8
1	CD119	6141.4	6186.8	272.8	-55	270	71.3	88.1	243.8
1	CD119	6141.4	6186.8	272.8	-55	270	98.5	118	243.8
1	CD119	6141.4	6186.8	272.8	-55	270	118	133.2	243.8
1	CD119	6141.4	6186.8	272.8	-55	270	139.3	189.3	243.8
1	CD119	6141.4	6186.8	272.8	-55	270	201.5	206.7	243.8
1	CD120	6187.4	6746.4	269	-45	90	6.7	15.5	221.1
1	CD120	6187.4	6746.4	269	-45	90	6.7	15.5	221.1
1	CD120	6187.4	6746.4	269	-45	90	32.3	37.5	221.1
1	CD120	6187.4	6746.4	269	-45	90	46.6	47.24	221.1
1	CD120	6187.4	6746.4	269	-45	90	47.24	49.01	221.1
1	CD120	6187.4	6746.4	269	-45	90	49.01	58.8	221.1
1	CD120	6187.4	6746.4	269	-45	90	82.9	93.9	221.1
1	CD120	6187.4	6746.4	269	-45	90	108.5	144.8	221.1
1	CD121	6398.4	7326	314	-55	90	4.6	18.3	323.4
1	CD121	6398.4	7326	314	-55	90	4.6	18.3	323.4
1	CD121	6398.4	7326	314	-55	90	24.7	34.96	323.4
1	CD121	6398.4	7326	314	-55	90	39.6	101.8	323.4
1	CD121	6398.4	7326	314	-55	90	101.8	134.1	323.4
1	CD121	6398.4	7326	314	-55	90	134.1	167.14	323.4
1	CD121	6398.4	7326	314	-55	90	167.14	175.6	323.4
1	CD200101	6355.72	7640.28	99.71	-54.3	88.32	0	10.3	314.4
1	CD200101	6355.72	7640.28	99.71	-54.3	88.32	0	10.3	314.4
1	CD200101	6355.72	7640.28	99.71	-54.3	88.32	10.3	25.6	314.4
1	CD200101	6355.72	7640.28	99.71	-54.3	88.32	85.1	93.6	314.4
1	CD200101	6355.72	7640.28	99.71	-54.3	88.32	105.2	128.91	314.4
1	CD200101	6355.72	7640.28	99.71	-54.3	88.32	128.91	147	314.4
1	CD200101	6355.72	7640.28	99.71	-54.3	88.32	147	155.3	314.4
1	CD200101	6355.72	7640.28	99.71	-54.3	88.32	155.3	167.7	314.4

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1	CD200101	6355.72	7640.28	99.71	-54.3	88.32	174.73	199.6	314.4
1	CD200101	6355.72	7640.28	99.71	-54.3	88.32	207	237.7	314.4
1	CD200101	6355.72	7640.28	99.71	-54.3	88.32	278.7	281.1	314.4
1	CD200102	6346.028	7689.636	105.083	-49.2973	89.9572	0	16.2	304.5
1	CD200102	6346.028	7689.636	105.083	-49.2973	89.9572	0	16.2	304.5
1	CD200102	6346.028	7689.636	105.083	-49.2973	89.9572	64.79	102.5	304.5
1	CD200102	6346.028	7689.636	105.083	-49.2973	89.9572	102.5	127.42	304.5
1	CD200102	6346.028	7689.636	105.083	-49.2973	89.9572	127.42	146.8	304.5
1	CD200102	6346.028	7689.636	105.083	-49.2973	89.9572	150.3	167.7	304.5
1	CD200102	6346.028	7689.636	105.083	-49.2973	89.9572	167.7	171.4	304.5
1	CD200102	6346.028	7689.636	105.083	-49.2973	89.9572	191.5	205.52	304.5
1	CD200102	6346.028	7689.636	105.083	-49.2973	89.9572	205.52	226.01	304.5
1	CD200102	6346.028	7689.636	105.083	-49.2973	89.9572	231	258	304.5
1	CD200103	6335.986	7739.993	110.069	-50	93.223	2.6	19.63	326.8
1	CD200103	6335.986	7739.993	110.069	-50	93.223	2.6	19.63	326.8
1	CD200103	6335.986	7739.993	110.069	-50	93.223	70.3	92.6	326.8
1	CD200103	6335.986	7739.993	110.069	-50	93.223	92.6	114.4	326.8
1	CD200103	6335.986	7739.993	110.069	-50	93.223	120.6	139.7	326.8
1	CD200103	6335.986	7739.993	110.069	-50	93.223	146	158.5	326.8
1	CD200103	6335.986	7739.993	110.069	-50	93.223	181	215.5	326.8
1	CD200103	6335.986	7739.993	110.069	-50	93.223	216.86	217.06	326.8
1	CD200103	6335.986	7739.993	110.069	-50	93.223	223.7	246.4	326.8
1	CD200103	6335.986	7739.993	110.069	-50	93.223	250.4	262.2	326.8
1	CD200104	6353.068	7840.115	111.301	-48.7267	88.0102	47.43	53	281.4
1	CD200104	6353.068	7840.115	111.301	-48.7267	88.0102	47.43	53	281.4
1	CD200104	6353.068	7840.115	111.301	-48.7267	88.0102	53	54.6	281.4
1	CD200104	6353.068	7840.115	111.301	-48.7267	88.0102	54.6	72.7	281.4
1	CD200104	6353.068	7840.115	111.301	-48.7267	88.0102	80.6	110.8	281.4
1	CD200104	6353.068	7840.115	111.301	-48.7267	88.0102	132.3	139.07	281.4
1	CD200104	6353.068	7840.115	111.301	-48.7267	88.0102	139.07	139.08	281.4
1	CD200104	6353.068	7840.115	111.301	-48.7267	88.0102	139.08	150.6	281.4
1	CD200105	6346.25	7890.37	111.97	-48.341	88.5902	0	12.4	292.7
1	CD200105	6346.25	7890.37	111.97	-48.341	88.5902	0	12.4	292.7
1	CD200105	6346.25	7890.37	111.97	-48.341	88.5902	59.3	76.4	292.7
1	CD200105	6346.25	7890.37	111.97	-48.341	88.5902	80.5	82.5	292.7
1	CD200105	6346.25	7890.37	111.97	-48.341	88.5902	87.59	101.6	292.7
1	CD200105	6346.25	7890.37	111.97	-48.341	88.5902	113.2	157	292.7
1	CD200105	6346.25	7890.37	111.97	-48.341	88.5902	157	166.42	292.7
1	CD200105	6346.25	7890.37	111.97	-48.341	88.5902	166.42	176	292.7
1	CD200105	6346.25	7890.37	111.97	-48.341	88.5902	193.63	225.2	292.7
1	CD200105	6346.25	7890.37	111.97	-48.341	88.5902	225.2	240.2	292.7
1	CD200105	6346.25	7890.37	111.97	-48.341	88.5902	242.5	254.1	292.7
1	CD200106	6353.966	7815.159	110.505	-48.15	96	51.31	52.4	270.1
1	CD200106	6353.966	7815.159	110.505	-48.15	96	51.31	52.4	270.1
1	CD200106	6353.966	7815.159	110.505	-48.15	96	53.7	85.18	270.1
1	CD200106	6353.966	7815.159	110.505	-48.15	96	93.4	99.4	270.1
1	CD200106	6353.966	7815.159	110.505	-48.15	96	134.12	136.65	270.1
1	CD200106	6353.966	7815.159	110.505	-48.15	96	187.6	212.3	270.1
1	CD200107	6355.622	7940.187	112.187	-47.84	89.15	0	3.87	275.7
1	CD200107	6355.622	7940.187	112.187	-47.84	89.15	0	3.87	275.7

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CP_1409	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
1	CD200107	6355.622	7940.187	112.187	-47.84	89.15	58.9	61.6	275.7
1	CD200107	6355.622	7940.187	112.187	-47.84	89.15	116.8	124.9	275.7
1	CD200107	6355.622	7940.187	112.187	-47.84	89.15	130.2	147	275.7
1	CD200107	6355.622	7940.187	112.187	-47.84	89.15	156.6	179.9	275.7
1	CD200107	6355.622	7940.187	112.187	-47.84	89.15	179.9	208.6	275.7
1	CD200107	6355.622	7940.187	112.187	-47.84	89.15	232.69	233.59	275.7
1	CD200108	6361	7990	112	-50	90	197.91	198.4	250
1	CD200109	6353.652	7990.067	112.94	-48.148	89.4	2.43	2.45	363.2
1	CD200109	6353.652	7990.067	112.94	-48.148	89.4	2.43	2.45	363.2
1	CD200109	6353.652	7990.067	112.94	-48.148	89.4	13	19.75	363.2
1	CD200109	6353.652	7990.067	112.94	-48.148	89.4	72.3	93.7	363.2
1	CD200109	6353.652	7990.067	112.94	-48.148	89.4	120.8	130.3	363.2
1	CD200109	6353.652	7990.067	112.94	-48.148	89.4	153.5	171.81	363.2
1	CD200109	6353.652	7990.067	112.94	-48.148	89.4	171.82	179.9	363.2
1	CD200109	6353.652	7990.067	112.94	-48.148	89.4	202.4	232.6	363.2
1	CD200109	6353.652	7990.067	112.94	-48.148	89.4	243.3	246.2	363.2
1	CD200109	6353.652	7990.067	112.94	-48.148	89.4	263.2	290.2	363.2
1	CD200109	6353.652	7990.067	112.94	-48.148	89.4	305.7	321.1	363.2
1	CD200201	5921.362	6000	224.235	-45.067	92.44	39.3	50.4	280.2
1	CD200301	6197.142	6140.109	249.274	-41.996	270.244	60.4	66.6	252
1	CD200301	6197.142	6140.109	249.274	-41.996	270.244	60.4	66.6	252
1	CD200301	6197.142	6140.109	249.274	-41.996	270.244	133.3	150.4	252
1	CD200301	6197.142	6140.109	249.274	-41.996	270.244	158.2	161	252
1	CD200301	6197.142	6140.109	249.274	-41.996	270.244	162	173.2	252
1	CD200301	6197.142	6140.109	249.274	-41.996	270.244	178.7	199.75	252
1	CD200302	5898.993	6189.624	206.474	-43.646	91.438	112.4	115.5	293
1	CD200302	5898.993	6189.624	206.474	-43.646	91.438	112.4	115.5	293
1	CD200302	5898.993	6189.624	206.474	-43.646	91.438	120.72	141.89	293
1	CD200302	5898.993	6189.624	206.474	-43.646	91.438	141.89	142.4	293
1	CD200302	5898.993	6189.624	206.474	-43.646	91.438	142.4	142.6	293
1	CD200302	5898.993	6189.624	206.474	-43.646	91.438	150.7	185.25	293
1	CD200302	5898.993	6189.624	206.474	-43.646	91.438	196.7	202.7	293
1	CD200302	5898.993	6189.624	206.474	-43.646	91.438	202.7	213.2	293
1	CD200302	5898.993	6189.624	206.474	-43.646	91.438	231.7	247.7	293
1	CD200302	5898.993	6189.624	206.474	-43.646	91.438	247.7	259.6	293
1	CD200303	5899.32	6235.082	201.274	-44	90	120.4	139.9	297.4
1	CD200303	5899.32	6235.082	201.274	-44	90	120.4	139.9	297.4
1	CD200303	5899.32	6235.082	201.274	-44	90	156.81	165	297.4
1	CD200303	5899.32	6235.082	201.274	-44	90	191.4	202.7	297.4
1	CD200303	5899.32	6235.082	201.274	-44	90	202.7	214.2	297.4
1	CD200303	5899.32	6235.082	201.274	-44	90	221.5	250.1	297.4
1	CD200303	5899.32	6235.082	201.274	-44	90	250.1	266.8	297.4
1	CD200304	6015.901	6274.009	158.079	-55.363	91.423	1.17	16.5	190
1	CD200304	6015.901	6274.009	158.079	-55.363	91.423	1.17	16.5	190
1	CD200304	6015.901	6274.009	158.079	-55.363	91.423	32.27	32.5	190
1	CD200304	6015.901	6274.009	158.079	-55.363	91.423	42.26	45.7	190
1	CD200304	6015.901	6274.009	158.079	-55.363	91.423	76.75	88.74	190
1	CD200304	6015.901	6274.009	158.079	-55.363	91.423	88.74	94.22	190
1	CD200304	6015.901	6274.009	158.079	-55.363	91.423	108.4	131.3	190
1	CD200304	6015.901	6274.009	158.079	-55.363	91.423	131.3	144.4	190

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CP_1409	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
1	CD200304	6015.901	6274.009	158.079	-55.363	91.423	144.4	158.2	190
1	CD200305	6029.614	6322.97	156.728	-50.118	89.1714	2.25	3.3	196.1
1	CD200305	6029.614	6322.97	156.728	-50.118	89.1714	2.25	3.3	196.1
1	CD200305	6029.614	6322.97	156.728	-50.118	89.1714	56.4	72.9	196.1
1	CD200305	6029.614	6322.97	156.728	-50.118	89.1714	80.8	102.8	196.1
1	CD200305	6029.614	6322.97	156.728	-50.118	89.1714	107.61	143.8	196.1
1	CD200305	6029.614	6322.97	156.728	-50.118	89.1714	149.9	164.6	196.1
1	CD200306	6048.328	6371.623	156.72	-51	90	15.4	23.3	199.7
1	CD200306	6048.328	6371.623	156.72	-51	90	15.4	23.3	199.7
1	CD200306	6048.328	6371.623	156.72	-51	90	51.03	74.2	199.7
1	CD200306	6048.328	6371.623	156.72	-51	90	104	112.5	199.7
1	CD200306	6048.328	6371.623	156.72	-51	90	120.32	140.4	199.7
1	CD200306	6048.328	6371.623	156.72	-51	90	153.9	164.7	199.7
1	CD200306	6048.328	6371.623	156.72	-51	90	167.3	174.8	199.7
1	CD200307	6006.701	6419.85	180.623	-51	90	140	160.5	280
1	CD200307	6006.701	6419.85	180.623	-51	90	140	160.5	280
1	CD200307	6006.701	6419.85	180.623	-51	90	190.84	202.21	280
1	CD200308	6012.16	6461.93	177.28	-52.68	92.46	155.9	166.3	286.9
1	CD200308	6012.16	6461.93	177.28	-52.68	92.46	155.9	166.3	286.9
1	CD200308	6012.16	6461.93	177.28	-52.68	92.46	174.5	199.7	286.9
1	CD200308	6012.16	6461.93	177.28	-52.68	92.46	214.5	219	286.9
1	CD200308	6012.16	6461.93	177.28	-52.68	92.46	219	234.6	286.9
1	CD200308	6012.16	6461.93	177.28	-52.68	92.46	234.6	246.3	286.9
1	CD200309	6096.768	6090.8	237.71	-38.67	269.25	55.8	57.01	202.1
1	CD200309	6096.768	6090.8	237.71	-38.67	269.25	55.8	57.01	202.1
1	CD200309	6096.768	6090.8	237.71	-38.67	269.25	67.5	72.4	202.1
1	CD200309	6096.768	6090.8	237.71	-38.67	269.25	128.6	133.7	202.1
1	CD200310	6312.773	6321.347	265.008	-45	270	56.87	75.4	91
1	CD200310	6312.773	6321.347	265.008	-45	270	56.87	75.4	91
1	CD200401	6131.02	6641.267	155.52	-50.5	90	59.8	61.9	216
1	CD200401	6131.02	6641.267	155.52	-50.5	90	59.8	61.9	216
1	CD200401	6131.02	6641.267	155.52	-50.5	90	95.8	100.3	216
1	CD200401	6131.02	6641.267	155.52	-50.5	90	100.3	120	216
1	CD200401	6131.02	6641.267	155.52	-50.5	90	122.4	152.5	216
1	CD200402	6078.88	6553.31	165.83	-50	90	96	102.7	280.5
1	CD200402	6078.88	6553.31	165.83	-50	90	96	102.7	280.5
1	CD200402	6078.88	6553.31	165.83	-50	90	116.6	136.7	280.5
1	CD200402	6078.88	6553.31	165.83	-50	90	141.7	166.5	280.5
1	CD200402	6078.88	6553.31	165.83	-50	90	166.5	186.8	280.5
1	CD200403	6156.56	6705.33	149.06	-50	102	53.53	64.59	249.9
1	CD200403	6156.56	6705.33	149.06	-50	102	53.53	64.59	249.9
1	CD200403	6156.56	6705.33	149.06	-50	102	89.4	118.8	249.9
1	CD200403	6156.56	6705.33	149.06	-50	102	118.8	120.8	249.9
1	CD200403	6156.56	6705.33	149.06	-50	102	157.2	178.5	249.9
1	CD200403	6156.56	6705.33	149.06	-50	102	210.5	218.2	249.9
1	CD201	6407.2	6876.3	322.9	-55	270	0.44	13.13	46.9
1	CD201	6407.2	6876.3	322.9	-55	270	0.44	13.13	46.9
1	CD202	6319.4	6868.1	299.9	-55	270	0	20.86	47.2
1	CD202	6319.4	6868.1	299.9	-55	270	0	20.86	47.2
1	CD203	6255.7	6868.1	287.1	-55	90	1.38	39.19	61

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CP_1409	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
1	CD203	6255.7	6868.1	287.1	-55	90	1.38	39.19	61
1	CD20303	6425	7674	137	-90	0	14.79	17.5	21
1	CD20303	6425	7674	137	-90	0	14.79	17.5	21
1	CD204	6255.1	6868.1	287.1	-55	270	13.4	63.4	63.4
1	CD205	6394.4	6952.5	321.7	-45	90	17.99	31.4	48.2
1	CD205	6394.4	6952.5	321.7	-45	90	17.99	31.4	48.2
1	CD206	6363.9	6952.5	309.6	-45	90	0	7.11	57.3
1	CD206	6363.9	6952.5	309.6	-45	90	0	7.11	57.3
1	CD206	6363.9	6952.5	309.6	-45	90	19.25	37.8	57.3
1	CD206	6363.9	6952.5	309.6	-45	90	52.1	52.8	57.3
1	CD206	6363.9	6952.5	309.6	-45	90	52.8	53.57	57.3
1	CD207	6340	6954	301.1	-45	90	0	15.82	59.4
1	CD207	6340	6954	301.1	-45	90	0	15.82	59.4
1	CD207	6340	6954	301.1	-45	90	20.04	39.79	59.4
1	CD208	6544.1	7043.9	343.3	-45	270	16.2	19.5	85.6
1	CD209	6438.9	7045.1	336	-45	270	0	39.6	45.7
1	CD209	6438.9	7045.1	336	-45	270	0	39.6	45.7
1	CD210	6400.5	7044.2	329.8	-45	270	0	11.9	47.5
1	CD210	6400.5	7044.2	329.8	-45	270	0	11.9	47.5
1	CD211	6496.2	7134.8	346.2	-45	270	0.61	11.6	57.9
1	CD211	6496.2	7134.8	346.2	-45	270	0.61	11.6	57.9
1	CD211	6496.2	7134.8	346.2	-45	270	16.2	21.6	57.9
1	CD212	6456.6	7135.4	336.2	-45	270	0	33.8	33.8
1	CD213	6434.9	7135.3	330.9	-45	270	0	20.22	46.9
1	CD213	6434.9	7135.3	330.9	-45	270	0	20.22	46.9
1	CD213	6434.9	7135.3	330.9	-45	270	20.22	36.9	46.9
1	CD215	6324	6788	301.3	-45	90	39.3	46	46
1	CD216	6489.5	7618.8	240.5	-60	270	12.8	25	76.2
1	CD216	6489.5	7618.8	240.5	-60	270	12.8	25	76.2
1	CD217	6294.7	6787.3	296.8	-45	90	39.3	51.5	52.1
1	CD218	6266.4	6787.9	288.8	-45	90	14.3	20.4	60.4
1	CD218	6266.4	6787.9	288.8	-45	90	14.3	20.4	60.4
1	CD219	6452	7323	323.6	-45	270	10.1	41.1	64.9
1	CD219	6452	7323	323.6	-45	270	10.1	41.1	64.9
1	CD219	6452	7323	323.6	-45	270	49.4	57	64.9
1	CD220	6232.6	6786.1	281.2	-45	90	31.7	39.9	51.8
1	CD220	6232.6	6786.1	281.2	-45	90	31.7	39.9	51.8
1	CD221	6496	7321	318.6	-45	270	19.2	50.9	62.5
1	CD221	6496	7321	318.6	-45	270	19.2	50.9	62.5
1	CD222	6181	6789	264.2	-45	90	17.1	28	54.9
1	CD222	6181	6789	264.2	-45	90	17.1	28	54.9
1	CD223	6552	7228.6	324.9	-45	270	1.8	42.7	42.7
1	CD224	6472	7227	336.4	-45	270	1.15	12.5	57.6
1	CD224	6472	7227	336.4	-45	270	1.15	12.5	57.6
1	CD226	6415.7	7410	305.5	-55	270	13.7	33.5	82.3
1	CD226	6415.7	7410	305.5	-55	270	13.7	33.5	82.3
1	CD227	6279.5	6690	287.5	-55	270	0	25.3	106.7
1	CD227	6279.5	6690	287.5	-55	270	0	25.3	106.7
1	CD227	6279.5	6690	287.5	-55	270	25.3	49.92	106.7
1	CD228	6448.3	7419	311.2	-55	270	0	10.1	70.1

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1	CD228	6448.3	7419	311.2	-55	270	0	10.1	70.1
1	CD228	6448.3	7419	311.2	-55	270	18.6	38.1	70.1
1	CD229	6444.4	7272.5	329.8	-45	270	0	36.92	97.5
1	CD229	6444.4	7272.5	329.8	-45	270	0	36.92	97.5
1	CD229	6444.4	7272.5	329.8	-45	270	37.4	42.37	97.5
1	CD229	6444.4	7272.5	329.8	-45	270	53.9	61	97.5
1	CD229	6444.4	7272.5	329.8	-45	270	79.5	91.38	97.5
1	CD230	6435.2	7226.8	331.9	-45	270	49.7	54.6	82.9
1	CD231	6504.7	7273.1	324.9	-45	270	16.8	34.7	92.7
1	CD231	6504.7	7273.1	324.9	-45	270	16.8	34.7	92.7
1	CD231	6504.7	7273.1	324.9	-45	270	34.7	72.46	92.7
1	CD232	6241.4	6605.3	291.9	-55	270	0	6.43	70.4
1	CD233	6537	7272.8	316.9	-45	270	23.8	80.2	80.2
1	CD234	6432.5	7364	315.3	-45	270	4	29.3	61.9
1	CD234	6432.5	7364	315.3	-45	270	4	29.3	61.9
1	CD234	6432.5	7364	315.3	-45	270	32.6	44.2	61.9
1	CD235	6285.6	6915.6	287	-45	90	0	15.1	91.7
1	CD235	6285.6	6915.6	287	-45	90	0	15.1	91.7
1	CD235	6285.6	6915.6	287	-45	90	17.31	33.7	91.7
1	CD235	6285.6	6915.6	287	-45	90	45.26	77.89	91.7
1	CD235	6285.6	6915.6	287	-45	90	77.89	78	91.7
1	CD236	6358.1	6830.3	303	-45	90	0	13.4	91.6
1	CD236	6358.1	6830.3	303	-45	90	0	13.4	91.6
1	CD237	6479.7	7089	342.9	-45	90	10.1	26.2	91.4
1	CD237	6479.7	7089	342.9	-45	90	10.1	26.2	91.4
1	CD237	6479.7	7089	342.9	-45	90	36.43	36.94	91.4
1	CD238	6348.1	6915.6	309.8	-45	90	0	4.45	99.4
1	CD238	6348.1	6915.6	309.8	-45	90	0	4.45	99.4
1	CD238	6348.1	6915.6	309.8	-45	90	7.18	51.24	99.4
1	CD238	6348.1	6915.6	309.8	-45	90	62.59	64.99	99.4
1	CD239	6281.3	6553.5	310.19	-55	270	17.4	39.3	79.25
1	CD239	6281.3	6553.5	310.19	-55	270	17.4	39.3	79.25
1	CD240	6192.3	6544.97	277.03	-55	270	16.9	59.7	59.7
1	CD241	6296	6640	296.8	-45	90	11.6	22.85	56.1
1	CD241	6296	6640	296.8	-45	90	11.6	22.85	56.1
1	CD242	6178.3	6420.6	290.6	-45	90	0	1.2	91.4
1	CD242	6178.3	6420.6	290.6	-45	90	0	1.2	91.4
1	CD242	6178.3	6420.6	290.6	-45	90	29.6	40.77	91.4
1	CD243	6242.3	6553.2	298.4	-55	270	0	15.2	103.6
1	CD243	6242.3	6553.2	298.4	-55	270	0	15.2	103.6
1	CD244	6203	6509	281.5	-45	90	0	4.09	82.6
1	CD244	6203	6509	281.5	-45	90	0	4.09	82.6
1	CD245	6419.7	7090	327.8	-45	90	3.05	14.9	91.7
1	CD245	6419.7	7090	327.8	-45	90	3.05	14.9	91.7
1	CD245	6419.7	7090	327.8	-45	90	14.9	27.4	91.7
1	CD246	6495.3	7354.5	301.4	-45	270	2.28	15.2	91.7
1	CD246	6495.3	7354.5	301.4	-45	270	2.28	15.2	91.7
1	CD246	6495.3	7354.5	301.4	-45	270	15.2	49.4	91.7
1	CD246	6495.3	7354.5	301.4	-45	270	53.9	76.2	91.7
1	CD247	6497.1	7357	301.2	-55	90	0	22.9	91.4

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1	CD247	6497.1	7357	301.2	-55	90	0	22.9	91.4
1	CD247	6497.1	7357	301.2	-55	90	37.8	50.9	91.4
1	CD247	6497.1	7357	301.2	-55	90	58.8	86.3	91.4
1	CD248	6379.8	7001	320.3	-45	90	0	10.7	91.4
1	CD248	6379.8	7001	320.3	-45	90	0	10.7	91.4
1	CD248	6379.8	7001	320.3	-45	90	21.3	34.4	91.4
1	CD248	6379.8	7001	320.3	-45	90	46.6	55.2	91.4
1	CD249	6315.5	7002	290.3	-45	90	0	12.2	91.4
1	CD249	6315.5	7002	290.3	-45	90	0	12.2	91.4
1	CD249	6315.5	7002	290.3	-45	90	12.2	24.4	91.4
1	CD249	6315.5	7002	290.3	-45	90	24.4	57.9	91.4
1	CD249	6315.5	7002	290.3	-45	90	63.4	71.6	91.4
1	CD250	6354.8	7090	311.1	-45	90	23.32	60	80.5
1	CD250	6354.8	7090	311.1	-45	90	23.32	60	80.5
1	CD251	6299	7090.9	296.1	-45	90	7.3	54.3	91.4
1	CD252	6452.3	7184.1	336.6	-45	270	29.6	63.4	97.5
1	CD254	6552	7180	328.8	-43	270	6.4	46.6	79.2
1	CD254	6552	7180	328.8	-43	270	6.4	46.6	79.2
1	CD302	6006.1	6324.3	231.6	-45	90	9.8	22.1	243.8
1	CD302	6006.1	6324.3	231.6	-45	90	9.8	22.1	243.8
1	CD302	6006.1	6324.3	231.6	-45	90	35.1	44.2	243.8
1	CD302	6006.1	6324.3	231.6	-45	90	49.2	54.9	243.8
1	CD302	6006.1	6324.3	231.6	-45	90	62.3	81.7	243.8
1	CD302	6006.1	6324.3	231.6	-45	90	104.5	112.9	243.8
1	CD302	6006.1	6324.3	231.6	-45	90	124.8	136.6	243.8
1	CD302	6006.1	6324.3	231.6	-45	90	136.6	146.4	243.8
1	CD302	6006.1	6324.3	231.6	-45	90	155	169.6	243.8
1	CD302	6006.1	6324.3	231.6	-45	90	183.5	188.6	243.8
1	CD302	6006.1	6324.3	231.6	-45	90	199.3	208.5	243.8
1	CD303	6113	6416	269.6	-45	90	30.6	46	201.2
1	CD303	6113	6416	269.6	-45	90	30.6	46	201.2
1	CD303	6113	6416	269.6	-45	90	92	99.5	201.2
1	CD303	6113	6416	269.6	-45	90	99.5	105.25	201.2
1	CD303	6113	6416	269.6	-45	90	105.25	130.9	201.2
1	CD305	6128	6599	247.8	-47	90	8.2	41.5	204.2
1	CD305	6128	6599	247.8	-47	90	8.2	41.5	204.2
1	CD305	6128	6599	247.8	-47	90	85.8	91.1	204.2
1	CD305	6128	6599	247.8	-47	90	97.5	125.3	204.2
1	CD305	6128	6599	247.8	-47	90	145.5	148	204.2
1	CD305	6128	6599	247.8	-47	90	148	172.7	204.2
1	CD305	6128	6599	247.8	-47	90	172.7	201.9	204.2
1	CD307	6136.8	6681.8	238.1	-45	90	11.3	22.1	243.8
1	CD307	6136.8	6681.8	238.1	-45	90	11.3	22.1	243.8
1	CD307	6136.8	6681.8	238.1	-45	90	33.5	61.7	243.8
1	CD307	6136.8	6681.8	238.1	-45	90	80.9	96.5	243.8
1	CD307	6136.8	6681.8	238.1	-45	90	106.4	134	243.8
1	CD307	6136.8	6681.8	238.1	-45	90	137	145.7	243.8
1	CD307	6136.8	6681.8	238.1	-45	90	145.7	163.05	243.8
1	CD307	6136.8	6681.8	238.1	-45	90	163.05	173.4	243.8
1	CD308	6220	6830	274.7	-48	90	13.09	15.83	286.82

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1	CD308	6220	6830	274.7	-48	90	13.09	15.83	286.82
1	CD308	6220	6830	274.7	-48	90	25.3	47.5	286.82
1	CD308	6220	6830	274.7	-48	90	47.5	78	286.82
1	CD308	6220	6830	274.7	-48	90	84.9	111.6	286.82
1	CD308	6220	6830	274.7	-48	90	113.06	123.3	286.82
1	CD308	6220	6830	274.7	-48	90	162.5	195.2	286.82
1	CD308	6220	6830	274.7	-48	90	206.6	222.2	286.82
1	CD309	6224	6900	273.3	-45	90	6.1	37.8	240.2
1	CD309	6224	6900	273.3	-45	90	6.1	37.8	240.2
1	CD309	6224	6900	273.3	-45	90	44.2	81.07	240.2
1	CD309	6224	6900	273.3	-45	90	83.91	87.78	240.2
1	CD309	6224	6900	273.3	-45	90	92.2	122.7	240.2
1	CD309	6224	6900	273.3	-45	90	171.75	174.07	240.2
1	CD309	6224	6900	273.3	-45	90	174.35	191.29	240.2
1	CD309	6224	6900	273.3	-45	90	203.56	208.66	240.2
1	CD401	6526	7002	301.3	-60	90	6.82	7.33	119.35
1	CD401	6526	7002	301.3	-60	90	6.82	7.33	119.35
1	CD403	6438	6990	265	-45	90	0	12.95	171.67
1	CD403	6438	6990	265	-45	90	0	12.95	171.67
1	CD403	6438	6990	265	-45	90	83.05	88.4	171.67
1	CD405	6302	7318	241	-55	90	110.8	125.5	179.95
1	CD405	6302	7318	241	-55	90	110.8	125.5	179.95
1	CD405	6302	7318	241	-55	90	153.69	172.06	179.95
1	CD406	6268	6811	228.6	-45	270	5.8	52.61	100.78
1	CD406	6268	6811	228.6	-45	270	5.8	52.61	100.78
1	CD407	6457	7182	221	-60	90	11.7	66.57	168.45
1	CD409	6482	7631	202	-50	270	0	5.45	152.91
1	CD409	6482	7631	202	-50	270	0	5.45	152.91
1	CD409	6482	7631	202	-50	270	5.45	61.3	152.91
1	CD410	6485	7440	206	-60	90	7.5	10.28	163.08
1	CD410	6485	7440	206	-60	90	7.5	10.28	163.08
1	CD410	6485	7440	206	-60	90	10.28	22	163.08
1	CD410	6485	7440	206	-60	90	39.52	47.1	163.08
1	CD411	6297	6690	231	-60	90	0	9.03	149.96
1	CD411	6297	6690	231	-60	90	0	9.03	149.96
1	CD411	6297	6690	231	-60	90	9.68	25.5	149.96
1	CD411	6297	6690	231	-60	90	40.7	49.5	149.96
1	CD412	6253	6416	267	-50	90	45.9	49.7	115.7
1	CD412	6253	6416	267	-50	90	45.9	49.7	115.7
1	CD413	6135	6788	233	-55	90	141.26	151.94	169.86
1	CD414	6539	7172.5	272.7	-60	90	10.75	20.2	128.03
1	CD414	6539	7172.5	272.7	-60	90	10.75	20.2	128.03
1	CD501	6134.5	6461.4	239.2	-50	270	0	34.8	115.5
1	CD502	6040.6	6186.9	238.6	-55	270	20.37	43.6	140
1	CD502	6040.6	6186.9	238.6	-55	270	20.37	43.6	140
1	CD502	6040.6	6186.9	238.6	-55	270	43.71	52.1	140
1	CD504	6487	7416.2	194.3	-45	270	0	4	134
1	CD504	6487	7416.2	194.3	-45	270	0	4	134
1	CD504	6487	7416.2	194.3	-45	270	6.5	23.4	134
1	CD504	6487	7416.2	194.3	-45	270	23.4	57.01	134

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1	CD504	6487	7416.2	194.3	-45	270	68.18	86.5	134
1	CD506	6014.1	6186.8	238.1	-50	90	0	23.5	136.4
1	CD506	6014.1	6186.8	238.1	-50	90	0	23.5	136.4
1	CD506	6014.1	6186.8	238.1	-50	90	27.6	33.45	136.4
1	CD506	6014.1	6186.8	238.1	-50	90	41.42	61.5	136.4
1	CD506	6014.1	6186.8	238.1	-50	90	68	87.9	136.4
1	CD506	6014.1	6186.8	238.1	-50	90	94.3	97.65	136.4
1	CD506	6014.1	6186.8	238.1	-50	90	97.65	109.8	136.4
1	CD507	6446.2	7675.1	178.8	-45	90	0	3.1	101.6
1	CD507	6446.2	7675.1	178.8	-45	90	0	3.1	101.6
1	CD507	6446.2	7675.1	178.8	-45	90	3.1	16.8	101.6
1	CD508	6453.3	7497.9	184.5	-50	90	16.9	52	116.1
1	CD508	6453.3	7497.9	184.5	-50	90	16.9	52	116.1
1	CD508	6453.3	7497.9	184.5	-50	90	52	65	116.1
1	CD508	6453.3	7497.9	184.5	-50	90	65	65.21	116.1
1	CD508	6453.3	7497.9	184.5	-50	90	65.21	73.8	116.1
1	CD508	6453.3	7497.9	184.5	-50	90	74.24	81.2	116.1
1	CD509	6200	6502.9	223.3	-55	90	0	12.28	29
1	CD509	6200	6502.9	223.3	-55	90	0	12.28	29
1	CD510	6435.7	7227.5	199.1	-50	270	0	16.3	81.9
1	CD510	6435.7	7227.5	199.1	-50	270	0	16.3	81.9
1	CD511	6321.7	6954	204.5	-60	270	3	24.9	66.7
1	CD512	6438.5	7225.5	198.3	-45	90	0	5.5	143
1	CD512	6438.5	7225.5	198.3	-45	90	0	5.5	143
1	CD512	6438.5	7225.5	198.3	-45	90	5.5	13.8	143
1	CD512	6438.5	7225.5	198.3	-45	90	16.8	51.62	143
1	CD513	6233.3	6690.5	209.7	-50	270	0	28.21	80.5
1	CD513	6233.3	6690.5	209.7	-50	270	0	28.21	80.5
1	CD514	6344.5	7000	203.7	-45	90	0	7.9	146
1	CD514	6344.5	7000	203.7	-45	90	0	7.9	146
1	CD514	6344.5	7000	203.7	-45	90	15	41	146
1	CD514	6344.5	7000	203.7	-45	90	45.86	50.53	146
1	CD514	6344.5	7000	203.7	-45	90	54.1	82	146
1	CD514	6344.5	7000	203.7	-45	90	103.6	112.9	146
1	CD515	6078.4	6277.7	238.9	-55	270	17.04	67.03	104.3
1	CD515	6078.4	6277.7	238.9	-55	270	17.04	67.03	104.3
1	CD516	6119.4	6415.4	240.4	-60	90	10.7	16.7	151.2
1	CD516	6119.4	6415.4	240.4	-60	90	10.7	16.7	151.2
1	CD516	6119.4	6415.4	240.4	-60	90	56.5	75.2	151.2
1	CD516	6119.4	6415.4	240.4	-60	90	86.9	100.7	151.2
1	CD517	5898	6000	222.5	-40	90	63.6	72.2	152.4
1	CD517	5898	6000	222.5	-40	90	63.6	72.2	152.4
1	CD520	5968	6096.2	213.23	-40	90	21.9	38.1	158.3
1	CD520	5968	6096.2	213.23	-40	90	21.9	38.1	158.3
1	CD520	5968	6096.2	213.23	-40	90	48.8	54.94	158.3
1	CD520	5968	6096.2	213.23	-40	90	84.45	103.51	158.3
1	CD601	6222	6645	209	-45	90	3.5	29.2	117.1
1	CD601	6222	6645	209	-45	90	3.5	29.2	117.1
1	CD601	6222	6645	209	-45	90	49.8	83.31	117.1
1	CD602	6173	6503	213	-45	270	0	19.3	146.6

Centre Pit Combined Drill-hole Intersects as at 31 Dec 2014 11 of 21





CP_1409	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
1	CD602	6173	6503	213	-45	270	0	19.3	146.6
1	CD603	6135.8	6417	214.7	-45	270	78	81.5	140
1	CD604	6332	6689.4	243.2	-50	90	11.3	26.5	113.3
1	CD604	6332	6689.4	243.2	-50	90	11.3	26.5	113.3
1	CD605	6424.1	7586	170.8	-45	270	60.6	83.9	151
1	CD605	6424.1	7586	170.8	-45	270	60.6	83.9	151
1	CD606	6424.1	7586	170.8	-45	90	9	15.6	184
1	CD606	6424.1	7586	170.8	-45	90	9	15.6	184
1	CD606	6424.1	7586	170.8	-45	90	31.1	50	184
1	CD606	6424.1	7586	170.8	-45	90	50	59.7	184
1	CD606	6424.1	7586	170.8	-45	90	127.5	141.2	184
1	CD606	6424.1	7586	170.8	-45	90	150.5	155.1	184
1	CD606	6424.1	7586	170.8	-45	90	155.1	162.3	184
1	CD607	6398.3	7181.3	187.5	-45	270	49.62	61.48	149.5
1	CD608	6360	7090.2	190.9	-40	90	49	58.7	169.5
1	CD608	6360	7090.2	190.9	-40	90	49	58.7	169.5
1	CD608	6360	7090.2	190.9	-40	90	75.9	83.8	169.5
1	CD609	6360	7090.2	190.9	-45	270	0.2	13	91.8
1	CD611	6349.2	6832	229.5	-40	90	6.43	17.8	140
1	CD611	6349.2	6832	229.5	-40	90	6.43	17.8	140
1	CD611	6349.2	6832	229.5	-40	90	77.6	84.8	140
1	CD612	6410	7498.5	173.2	-40	270	65.5	70.5	97.4
1	CD613	6436	7090	222.5	-40	90	17.6	31.8	169
1	CD613	6436	7090	222.5	-40	90	17.6	31.8	169
1	CD613	6436	7090	222.5	-40	90	75.4	84.4	169
1	CD614	6149	6279.5	230.29	-40	90	0.5	23.63	118
1	CD614	6149	6279.5	230.29	-40	90	0.5	23.63	118
1	CD614	6149	6279.5	230.29	-40	90	31.8	37.4	118
1	CD701	6444.2	7539.5	172.3	-45	90	6.3	20.7	194.3
1	CD701	6444.2	7539.5	172.3	-45	90	6.3	20.7	194.3
1	CD701	6444.2	7539.5	172.3	-45	90	49.4	68.69	194.3
1	CD701	6444.2	7539.5	172.3	-45	90	69.2	82	194.3
1	CD701	6444.2	7539.5	172.3	-45	90	106.7	113.5	194.3
1	CD701	6444.2	7539.5	172.3	-45	90	126.7	130	194.3
1	CD701	6444.2	7539.5	172.3	-45	90	144.6	152.4	194.3
1	CD702	6427	7440	174.3	-45	90	0	34.5	119.1
1	CD702	6427	7440	174.3	-45	90	0	34.5	119.1
1	CD702	6427	7440	174.3	-45	90	34.5	55.6	119.1
1	CD702	6427	7440	174.3	-45	90	58.25	71.4	119.1
1	CD702	6427	7440	174.3	-45	90	84.1	90.3	119.1
1	CD703	6420	7364	175.7	-43	90	0	11.55	155.6
1	CD703	6420	7364	175.7	-43	90	0	11.55	155.6
1	CD703	6420	7364	175.7	-43	90	11.55	22.3	155.6
1	CD703	6420	7364	175.7	-43	90	25.3	69	155.6
1	CD703	6420	7364	175.7	-43	90	75.6	82.5	155.6
1	CD703	6420	7364	175.7	-43	90	82.5	90	155.6
1	CD703	6420	7364	175.7	-43	90	90	98.1	155.6
1	CD703	6420	7364	175.7	-43	90	98.1	104.9	155.6
1	CD703	6420	7364	175.7	-43	90	113.5	130.1	155.6
1	CD704	6411.7	7317.5	176	-40	90	0	11.8	98.5

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CP_1409	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
1	CD704	6411.7	7317.5	176	-40	90	0	11.8	98.5
1	CD704	6411.7	7317.5	176	-40	90	13.9	30	98.5
1	CD704	6411.7	7317.5	176	-40	90	31.2	50.3	98.5
1	CD704	6411.7	7317.5	176	-40	90	53.1	71.4	98.5
1	CD705	6423	7273	176.2	-40	90	0	37.2	131.2
1	CD705	6423	7273	176.2	-40	90	0	37.2	131.2
1	CD705	6423	7273	176.2	-40	90	37.2	52.6	131.2
1	CD705	6423	7273	176.2	-40	90	71.5	78.9	131.2
1	CD706	6381	7136	190.5	-40	90	65.8	70.5	115.85
1	CD706	6381	7136	190.5	-40	90	65.8	70.5	115.85
1	CD707	6304.9	7001	193.5	-40	90	0	4.5	112.5
1	CD707	6304.9	7001	193.5	-40	90	0	4.5	112.5
1	CD708	6259.8	6873.5	196.2	-45	90	18	58.06	120.5
1	CD708	6259.8	6873.5	196.2	-45	90	18	58.06	120.5
1	CD708	6259.8	6873.5	196.2	-45	90	59.17	88.1	120.5
1	CD709	6166.2	6640.8	201.6	-45	90	0	3.75	100.5
1	CD709	6166.2	6640.8	201.6	-45	90	0	3.75	100.5
1	CD709	6166.2	6640.8	201.6	-45	90	24	28.55	100.5
1	CD709	6166.2	6640.8	201.6	-45	90	53.1	76.5	100.5
1	CD709	6166.2	6640.8	201.6	-45	90	86	93.92	100.5
1	CD711	6151.5	6369.5	205.2	-40	90	0	5.5	91.5
1	CD711	6151.5	6369.5	205.2	-40	90	0	5.5	91.5
1	CD712	6098.8	6234.5	208.3	-40	270	0	13.3	144
1	CD712	6098.8	6234.5	208.3	-40	270	0	13.3	144
1	CD712	6098.8	6234.5	208.3	-40	270	28.8	41.8	144
1	CD712	6098.8	6234.5	208.3	-40	270	41.8	44	144
1	CD712	6098.8	6234.5	208.3	-40	270	44	78.3	144
1	CD712	6098.8	6234.5	208.3	-40	270	78.3	113.4	144
1	CD713	6359	7043	192.7	-40	90	0	0.65	112
1	CD713	6359	7043	192.7	-40	90	0	0.65	112
1	CD713	6359	7043	192.7	-40	90	26.2	42	112
1	CD713	6359	7043	192.7	-40	90	46.2	56	112
1	CD714	6149.5	6462.5	204.3	-45	90	5.8	21.4	131.6
1	CD714	6149.5	6462.5	204.3	-45	90	5.8	21.4	131.6
1	CD714	6149.5	6462.5	204.3	-45	90	23.25	48.1	131.6
1	CD714	6149.5	6462.5	204.3	-45	90	52.39	52.49	131.6
1	CD714	6149.5	6462.5	204.3	-45	90	83.53	83.6	131.6
1	CD715	6219.5	6500	202.8	-50	270	50.19	52.77	91.4
1	CD715	6219.5	6500	202.8	-50	270	50.19	52.77	91.4
1	CD716	6500	7719.7	158	-40	270	0	49.58	157.2
1	CD716	6500	7719.7	158	-40	270	0	49.58	157.2
1	CD716	6500	7719.7	158	-40	270	49.93	51.1	157.2
1	CD716	6500	7719.7	158	-40	270	51.2	66.6	157.2
1	CD716	6500	7719.7	158	-40	270	66.6	90.6	157.2
1	CD716	6500	7719.7	158	-40	270	90.6	110.2	157.2
1	CD716	6500	7719.7	158	-40	270	119.4	141	157.2
1	CD717	6237	6830	197.2	-50	90	0	3.5	120
1	CD717	6237	6830	197.2	-50	90	0	3.5	120
1	CD717	6237	6830	197.2	-50	90	24.3	33.6	120
1	CD717	6237	6830	197.2	-50	90	60.8	80.8	120

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CP_1409	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
1	CD717	6237	6830	197.2	-50	90	89.1	94.3	120
1	CD717	6237	6830	197.2	-50	90	100.25	111.28	120
1	CD718	6193.1	6736.5	199.5	-45	90	27.3	42.6	129.4
1	CD718	6193.1	6736.5	199.5	-45	90	27.3	42.6	129.4
1	CD718	6193.1	6736.5	199.5	-45	90	54.52	55.03	129.4
1	CD718	6193.1	6736.5	199.5	-45	90	55.03	55.85	129.4
1	CD718	6193.1	6736.5	199.5	-45	90	55.85	65.26	129.4
1	CD719	6233.9	6688.8	200.3	-40	90	0	4.5	120
1	CD719	6233.9	6688.8	200.3	-40	90	0	4.5	120
1	CD719	6233.9	6688.8	200.3	-40	90	4.5	9.4	120
1	CD719	6233.9	6688.8	200.3	-40	90	9.4	18.7	120
1	CD719	6233.9	6688.8	200.3	-40	90	20.9	25.91	120
1	CD719	6233.9	6688.8	200.3	-40	90	35.75	76.6	120
1	CD720	6244.5	6599.5	201.85	-45	90	7	12.72	104.7
1	CD720	6244.5	6599.5	201.85	-45	90	7	12.72	104.7
1	CD720	6244.5	6599.5	201.85	-45	90	12.99	26.3	104.7
1	CD720	6244.5	6599.5	201.85	-45	90	26.3	48.7	104.7
1	CD720	6244.5	6599.5	201.85	-45	90	48.7	64.5	104.7
1	CD721	6107.5	6325	207.25	-40	90	0	8	103.5
1	CD721	6107.5	6325	207.25	-40	90	0	8	103.5
1	CD721	6107.5	6325	207.25	-40	90	32.9	45.7	103.5
1	CD722	6075	6235	208.3	-45	90	0	12.5	90
1	CD722	6075	6235	208.3	-45	90	0	12.5	90
1	CD722	6075	6235	208.3	-45	90	17.5	51.7	90
1	CD723	6041.6	6140	233.3	-45	270	10.2	29.9	76.5
1	CD723	6041.6	6140	233.3	-45	270	10.2	29.9	76.5
1	CD724	6115	6139.7	240.9	-45	270	32.2	44.9	102
1	CD724	6115	6139.7	240.9	-45	270	32.2	44.9	102
1	CD724	6115	6139.7	240.9	-45	270	53.11	64.35	102
1	CD725	6400	7628.8	159.75	-40	90	44.04	80	204
1	CD725	6400	7628.8	159.75	-40	90	44.04	80	204
1	CD725	6400	7628.8	159.75	-40	90	84.85	95	204
1	CD725	6400	7628.8	159.75	-40	90	95	123	204
1	CD726	6360.5	6958.1	194	-40	90	3.8	16	89
1	CD726	6360.5	6958.1	194	-40	90	3.8	16	89
1	CD726	6360.5	6958.1	194	-40	90	17.12	27.3	89
1	CD726	6360.5	6958.1	194	-40	90	31.2	51.28	89
1	CD726	6360.5	6958.1	194	-40	90	54.19	67.57	89
1	CD726	6360.5	6958.1	194	-40	90	69.54	72.98	89
1	CD727	6294.6	6787.6	198.3	-40	90	0	11.2	100
1	CD727	6294.6	6787.6	198.3	-40	90	0	11.2	100
1	CD727	6294.6	6787.6	198.3	-40	90	15.2	33	100
1	CD727	6294.6	6787.6	198.3	-40	90	62.5	90	100
1	CD728	6139.7	6498.8	204.8	-45	90	0	9.5	99.7
1	CD728	6139.7	6498.8	204.8	-45	90	0	9.5	99.7
1	CD728	6139.7	6498.8	204.8	-45	90	24.8	52	99.7
1	CD728	6139.7	6498.8	204.8	-45	90	60.5	62.4	99.7
1	CD729	6132.6	6553	203	-40	90	41.2	47.1	164.5
1	CD729	6132.6	6553	203	-40	90	41.2	47.1	164.5
1	CD729	6132.6	6553	203	-40	90	56.8	64.4	164.5

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CP_1409	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
1	CD729	6132.6	6553	203	-40	90	64.64	78.08	164.5
1	CD729	6132.6	6553	203	-40	90	96.9	130.7	164.5
1	CD729	6132.6	6553	203	-40	90	131.2	149.14	164.5
1	CD729	6132.6	6553	203	-40	90	149.14	149.65	164.5
1	CD730	6062.6	6279	208.1	-40	90	0	20.5	126
1	CD730	6062.6	6279	208.1	-40	90	0	20.5	126
1	CD730	6062.6	6279	208.1	-40	90	33.9	53.2	126
1	CD731	6386	7227.2	178	-40	90	35.7	52.5	110
1	CD732	6414.3	7182	179.1	-50	90	0	7.19	105.5
1	CD801	6450.5	7364.2	143	-45	270	0	8.8	98.5
1	CD801	6450.5	7364.2	143	-45	270	0	8.8	98.5
1	CD801	6450.5	7364.2	143	-45	270	10.29	16.86	98.5
1	CD801	6450.5	7364.2	143	-45	270	34	58.3	98.5
1	CD802	6465	7410.9	143.15	-45	90	0	12.47	85
1	CD802	6465	7410.9	143.15	-45	90	0	12.47	85
1	CD802	6465	7410.9	143.15	-45	90	13.12	17	85
1	CD802	6465	7410.9	143.15	-45	90	17	35	85
1	CD802	6465	7410.9	143.15	-45	90	35	75.4	85
1	CD803	6470.3	7439.5	141.7	-45	270	0	1.54	91.2
1	CD803	6470.3	7439.5	141.7	-45	270	0	1.54	91.2
1	CD803	6470.3	7439.5	141.7	-45	270	4.29	25.7	91.2
1	CD803	6470.3	7439.5	141.7	-45	270	28.8	54.44	91.2
1	CD804	6449.8	7272.2	145.4	-40	270	44.9	66.5	80.8
1	CD804	6449.8	7272.2	145.4	-40	270	44.9	66.5	80.8
1	CD805	6458.6	7719.5	128.6	-45	90	0	0.73	57
1	CD805	6458.6	7719.5	128.6	-45	90	0	0.73	57
1	CD805	6458.6	7719.5	128.6	-45	90	2.4	19.7	57
1	CD806	6186.1	6462.6	154.8	-45	270	46.82	54	54
1	CD807	6015	6235.4	155.9	-50	90	0.4	28.9	80.3
1	CD807	6015	6235.4	155.9	-50	90	0.4	28.9	80.3
1	CD807	6015	6235.4	155.9	-50	90	28.9	42.1	80.3
1	CD807	6015	6235.4	155.9	-50	90	67.9	75.6	80.3
1	CD808	6042.8	6278.8	147	-45	90	0	16.3	80.3
1	CD808	6042.8	6278.8	147	-45	90	0	16.3	80.3
1	CD808	6042.8	6278.8	147	-45	90	40.7	45.7	80.3
1	CD808	6042.8	6278.8	147	-45	90	45.7	52.7	80.3
1	CD808	6042.8	6278.8	147	-45	90	52.7	75.7	80.3
1	CD810	6124.9	6502.1	155.1	-45	90	28.38	38.31	77
1	CD810	6124.9	6502.1	155.1	-45	90	28.38	38.31	77
1	CD811	6446.8	7540.9	130.7	-50	90	0	0.83	100
1	CD811	6446.8	7540.9	130.7	-50	90	0	0.83	100
1	CD811	6446.8	7540.9	130.7	-50	90	10.72	17.2	100
1	CD811	6446.8	7540.9	130.7	-50	90	17.2	27.6	100
1	CD811	6446.8	7540.9	130.7	-50	90	27.6	51.86	100
1	CD811	6446.8	7540.9	130.7	-50	90	53.49	58.8	100
1	CD812	6445.9	7677.6	126.9	-45	90	0	9.53	117
1	CD812	6445.9	7677.6	126.9	-45	90	0	9.53	117
1	CD812	6445.9	7677.6	126.9	-45	90	19.9	23.5	117
1	CD812	6445.9	7677.6	126.9	-45	90	23.5	33	117
1	CD812	6445.9	7677.6	126.9	-45	90	33	65.3	117

Centre Pit Combined Drill-hole Intersects as at 31 Dec 2014 15 of 21



CP_1409	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
1	CD812	6445.9	7677.6	126.9	-45	90	65.3	73.7	117
1	CD813	6470.1	7625.5	128.3	-50	270	0	42.9	90
1	CD813	6470.1	7625.5	128.3	-50	270	0	42.9	90
1	CD901	6573.4	7745	145	-54	270	105	115	301.5
1	CD901	6573.4	7745	145	-54	270	105	115	301.5
1	CD901	6573.4	7745	145	-54	270	124.4	162.1	301.5
1	CD901	6573.4	7745	145	-54	270	164	255.8	301.5
1	CD901	6573.4	7745	145	-54	270	264.2	292.5	301.5
1	CD903	5926	6158.3	209.5	-50	90	107.3	113.4	241.3
1	CD903	5926	6158.3	209.5	-50	90	107.3	113.4	241.3
1	CD903	5926	6158.3	209.5	-50	90	115.55	118.5	241.3
1	CD903	5926	6158.3	209.5	-50	90	127.6	171	241.3
1	CD903	5926	6158.3	209.5	-50	90	181.86	202.01	241.3
1	CD903	5926	6158.3	209.5	-50	90	210.34	211.51	241.3
1	CD904	5942.2	6325.1	192.5	-50	90	178.8	187.3	272
1	CD904	5942.2	6325.1	192.5	-50	90	178.8	187.3	272
1	CD904	5942.2	6325.1	192.5	-50	90	196.8	197.95	272
1	CD904	5942.2	6325.1	192.5	-50	90	197.95	198.12	272
1	CD904	5942.2	6325.1	192.5	-50	90	198.12	219.3	272
1	CD905	6061.8	6499.9	173	-50	90	95.29	109.05	247
1	CD905	6061.8	6499.9	173	-50	90	95.29	109.05	247
1	CD905	6061.8	6499.9	173	-50	90	123.3	126.5	247
1	CD905	6061.8	6499.9	173	-50	90	138.3	142.3	247
1	CD905	6061.8	6499.9	173	-50	90	152.1	178.4	247
1	CD905	6061.8	6499.9	173	-50	90	196.8	212.03	247
1	CD905	6061.8	6499.9	173	-50	90	212.03	212.04	247
1	CD905	6061.8	6499.9	173	-50	90	212.05	230.7	247
1	CD906	6163	6780	168.5	-50	83	96.8	107.7	236.7
1	CD906	6163	6780	168.5	-50	83	96.8	107.7	236.7
1	CD906	6163	6780	168.5	-50	83	114.48	136.8	236.7
1	CD908	6599	7540	183	-53	270	82.4	92.3	250
1	CD908	6599	7540	183	-53	270	82.4	92.3	250
1	CD908	6599	7540	183	-53	270	93.7	97.1	250
1	CD908	6599	7540	183	-53	270	128.5	139.1	250
1	CD908	6599	7540	183	-53	270	153.18	169.67	250
1	CD908	6599	7540	183	-53	270	169.96	224.4	250
1	CD910	6111	6599	160	-45	90	93.04	93.51	242
1	CD910	6111	6599	160	-45	90	93.04	93.51	242
1	CD910	6111	6599	160	-45	90	116.2	134.1	242
1	CD910	6111	6599	160	-45	90	134.53	166.81	242
1	CD911	6007	6095	222	-60	90	0	24	111
1	CD911	6007	6095	222	-60	90	0	24	111
1	CD911	6007	6095	222	-60	90	58	84	111
1	CD913	5948	6045	222	-60	90	28	42	96
1	CD913	5948	6045	222	-60	90	28	42	96
1	CDDH07001	6421.05	7816.59	111.71	-53.56	72.632	4.76	13.36	20
1	CDDH07001	6421.05	7816.59	111.71	-53.56	72.632	4.76	13.36	20
1	CDDH07002	6419.03	7816.03	111.54	-86.266	244.445	5.6	20	20
1	CDDH13011	6017.12	6673	188.577	-50.62	91.335	280.75	287.8	410
1	CDDH13012	6056.434	6746.771	193.826	-59.73	91.4823	279.3	300.5	400

Centre Pit Combined Drill-hole Intersects as at 31 Dec 2014 16 of 21



CP_1409	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
1	CDDH13012	6056.434	6746.771	193.826	-59.73	91.4823	279.3	300.5	400
1	CDDH13012	6056.434	6746.771	193.826	-59.73	91.4823	305.6	311.2	400
1	CDDH13012	6056.434	6746.771	193.826	-59.73	91.4823	328.2	360.93	400
1	CDDH13013	6174.863	6829.117	168.983	-53.71	126.785	99	111	262.1
1	CDDH13013	6174.863	6829.117	168.983	-53.71	126.785	99	111	262.1
1	CDDH13013	6174.863	6829.117	168.983	-53.71	126.785	121.53	138.25	262.1
1	CDDH13013	6174.863	6829.117	168.983	-53.71	126.785	145.4	167.9	262.1
1	CDDH13013	6174.863	6829.117	168.983	-53.71	126.785	174.1	184.9	262.1
1	CDDH13013	6174.863	6829.117	168.983	-53.71	126.785	186.9	212.9	262.1
1	CDDH13014	6175.226	6829.948	169.139	-52.04	81.0741667	82.72	92.3	315.2
1	CDDH13014	6175.226	6829.948	169.139	-52.04	81.0741667	82.72	92.3	315.2
1	CDDH13014	6175.226	6829.948	169.139	-52.04	81.0741667	112.3	120.9	315.2
1	CDDH13014	6175.226	6829.948	169.139	-52.04	81.0741667	199.9	218	315.2
1	CDDH13014	6175.226	6829.948	169.139	-52.04	81.0741667	243.5	255.5	315.2
1	CDDH13014	6175.226	6829.948	169.139	-52.04	81.0741667	271.1	281.62	315.2
1	CDDH13014	6175.226	6829.948	169.139	-52.04	81.0741667	281.62	281.63	315.2
1	CDDH13014	6175.226	6829.948	169.139	-52.04	81.0741667	281.63	292.4	315.2
1	CDDH13015	6263.191	6927.95	155.053	-57.38	112.68	89.37	90.89	229.8
1	CDDH13015	6263.191	6927.95	155.053	-57.38	112.68	89.37	90.89	229.8
1	CDDH13015	6263.191	6927.95	155.053	-57.38	112.68	116.29	117.98	229.8
1	CDDH13015	6263.191	6927.95	155.053	-57.38	112.68	133.6	140.6	229.8
1	CDDH13015	6263.191	6927.95	155.053	-57.38	112.68	148.6	171.1	229.8
1	CDDH13015	6263.191	6927.95	155.053	-57.38	112.68	171.1	174.8	229.8
1	CDDH13015	6263.191	6927.95	155.053	-57.38	112.68	182.3	184	229.8
1	CDDH13016	6264.217	6930.421	155.011	-50.97	77.194	102.57	113.78	230.1
1	CDDH13016	6264.217	6930.421	155.011	-50.97	77.194	102.57	113.78	230.1
1	CDDH13016	6264.217	6930.421	155.011	-50.97	77.194	121.9	128.43	230.1
1	CDDH13016	6264.217	6930.421	155.011	-50.97	77.194	145.82	161.05	230.1
1	CDDH13016	6264.217	6930.421	155.011	-50.97	77.194	177.33	187.12	230.1
1	CDDH13016	6264.217	6930.421	155.011	-50.97	77.194	187.12	191.5	230.1
1	CDDH13017	6176.225	6828.275	168.225	-51.97	98.46	76.33	86.67	278.3
1	CDDH13017	6176.225	6828.275	168.225	-51.97	98.46	76.33	86.67	278.3
1	CDDH13017	6176.225	6828.275	168.225	-51.97	98.46	112.3	122.4	278.3
1	CDDH13017	6176.225	6828.275	168.225	-51.97	98.46	124.3	159.15	278.3
1	CDDH13017	6176.225	6828.275	168.225	-51.97	98.46	164.1	177	278.3
1	CDDH13018	6338.826	7000.721	144.488	-63.85	90.021	45.3	54.17	163.7
1	CDDH13018	6338.826	7000.721	144.488	-63.85	90.021	45.3	54.17	163.7
1	CDDH13018	6338.826	7000.721	144.488	-63.85	90.021	60.55	82.24	163.7
1	CDDH13018	6338.826	7000.721	144.488	-63.85	90.021	82.24	82.82	163.7
1	CDDH13018	6338.826	7000.721	144.488	-63.85	90.021	82.82	102.7	163.7
1	CDDH13018	6338.826	7000.721	144.488	-63.85	90.021	109.15	138.8	163.7
1	CDDH13019	6323.899	7087.316	139.919	-56.5	116.732	28.5	52.62	195.2
1	CDDH13019	6323.899	7087.316	139.919	-56.5	116.732	28.5	52.62	195.2
1	CDDH13019	6323.899	7087.316	139.919	-56.5	116.732	72.7	106.8	195.2
1	CDDH13019	6323.899	7087.316	139.919	-56.5	116.732	110.5	127	195.2
1	CDDH13019	6323.899	7087.316	139.919	-56.5	116.732	130.8	163.8	195.2
1	CDDH13020	6323.918	7088.568	139.932	-54.7	81.62	38.2	49.6	219.6
1	CDDH13020	6323.918	7088.568	139.932	-54.7	81.62	38.2	49.6	219.6
1	CDDH13020	6323.918	7088.568	139.932	-54.7	81.62	59.35	81	219.6
1	CDDH13020	6323.918	7088.568	139.932	-54.7	81.62	93.45	124.3	219.6

Centre Pit Combined Drill-hole Intersects as at 31 Dec 2014 17 of 21





CP_1409	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
1	CDDH13020	6323.918	7088.568	139.932	-54.7	81.62	130	139.8	219.6
1	CDDH13020	6323.918	7088.568	139.932	-54.7	81.62	150.11	174.35	219.6
1	CDDH13021	6323.512	7090.779	139.719	-48.83	54.8766	52.8	56.7	246.5
1	CDDH13021	6323.512	7090.779	139.719	-48.83	54.8766	52.8	56.7	246.5
1	CDDH13021	6323.512	7090.779	139.719	-48.83	54.8766	65.23	68.05	246.5
1	CDDH13021	6323.512	7090.779	139.719	-48.83	54.8766	69.1	98.3	246.5
1	CDDH13021	6323.512	7090.779	139.719	-48.83	54.8766	122.2	148.4	246.5
1	CDDH13021	6323.512	7090.779	139.719	-48.83	54.8766	151.9	179.9	246.5
1	CDDH13021	6323.512	7090.779	139.719	-48.83	54.8766	181.6	185.1	246.5
1	CDDH13021	6323.512	7090.779	139.719	-48.83	54.8766	189.6	202.4	246.5
1	CDDH14001	6294.109	6850.427	141.644	-59.16	89.7492	0	9.6	314.2
1	CDDH14001	6294.109	6850.427	141.644	-59.16	89.7492	0	9.6	314.2
1	CDDH14001	6294.109	6850.427	141.644	-59.16	89.7492	16.98	19.37	314.2
1	CDDH14001	6294.109	6850.427	141.644	-59.16	89.7492	19.53	37.79	314.2
1	CDDH14001	6294.109	6850.427	141.644	-59.16	89.7492	44.8	54	314.2
1	CDDH14001	6294.109	6850.427	141.644	-59.16	89.7492	98.42	109.25	314.2
1	CDDH14001	6294.109	6850.427	141.644	-59.16	89.7492	110.34	118.6	314.2
1	CDDH14001	6294.109	6850.427	141.644	-59.16	89.7492	189.4	197.9	314.2
1	CDDH14002	6314.808	6900.143	140.75	-60.15	90.512	18	23.3	150.7
1	CDDH14002	6314.808	6900.143	140.75	-60.15	90.512	18	23.3	150.7
1	CDDH14002	6314.808	6900.143	140.75	-60.15	90.512	90.42	91.52	150.7
1	CDDH14002	6314.808	6900.143	140.75	-60.15	90.512	91.52	93.7	150.7
1	CDDH14002	6314.808	6900.143	140.75	-60.15	90.512	95.9	98.9	150.7
1	CDDH14003	6342.984	6950.185	140.46	-59.38	89.984	0	0.35	135.1
1	CDDH14003	6342.984	6950.185	140.46	-59.38	89.984	0	0.35	135.1
1	CDDH14004	6392.661	7050.157	152.196	-60.06	89.942	32.5	44.92	115.8
1	CDDH14004	6392.661	7050.157	152.196	-60.06	89.942	32.5	44.92	115.8
1	CDDH14004	6392.661	7050.157	152.196	-60.06	89.942	66.4	72.4	115.8
1	CDDH14005	6396.748	7100.153	153.153	-60.04	90.9128	5.9	18.29	120.8
1	CDDH14005	6396.748	7100.153	153.153	-60.04	90.9128	5.9	18.29	120.8
1	CDDH14005	6396.748	7100.153	153.153	-60.04	90.9128	30.95	49	120.8
1	CDDH14005	6396.748	7100.153	153.153	-60.04	90.9128	63.75	76.15	120.8
1	CDDH14005	6396.748	7100.153	153.153	-60.04	90.9128	78.2	87.3	120.8
1	CDDH14006	6403.49	7150.266	153.731	-59.163	90.218	33.02	33.35	122.2
1	CDDH14006	6403.49	7150.266	153.731	-59.163	90.218	33.02	33.35	122.2
1	CDDH14006	6403.49	7150.266	153.731	-59.163	90.218	46.38	53.51	122.2
1	CDDH14006	6403.49	7150.266	153.731	-59.163	90.218	67.55	77.8	122.2
1	CP8877	6491	7699	129	-90	0	0	4.3	21
1	CP8877	6491	7699	129	-90	0	0	4.3	21
1	CP8879	6472	7696	127	-90	0	0	3	3
1	CP8880	6465	7677	127	-90	0	0	3	3
1	CP8881	6457	7653	127	-90	0	0	6	6
1	CP8883	6461	7627	127	-90	0	0	21	21
1	CP8884	6455	7628	127	-90	0	0	3	3
1	CP8885	6459	7612	127	-90	0	0	21	21
1	CP8886	6464	7657	128	-90	0	0	6	6
1	CP8887	6456	7591	127	-90	0	0	1.14	21
1	CP8887	6456	7591	127	-90	0	0	1.14	21
1	CP8888	6453	7572	127	-90	0	0	21	21
1	CP8889	6454	7541	129	-90	0	6	18	24

Centre Pit Combined Drill-hole Intersects as at 31 Dec 2014 18 of 21



CP_1409	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
1	CP8890	6462	7512	129	-90	0	0	11.24	24
1	CP8890	6462	7512	129	-90	0	0	11.24	24
1	CP8891	6476	7518	128	-90	0	0.06	24	24
1	CP8892	6475	7541	129	-90	0	0.65	21.7	24
1	CP8892	6475	7541	129	-90	0	0.65	21.7	24
1	CP8893	6485	7460	128	-90	0	0	24	24
1	CP8894	6474	7481	129	-90	0	0	24	24
1	CP8895	6485	7502	128	-90	0	0	24	24
1	CP8896	6469	7500	129	-90	0	0	24	24
1	CP8897	6473	7678	128	-90	0	0	6	6
1	CP8898	6481	7699	128	-90	0	0	0.92	3
1	CPSTH1	6406.649	6997.925	159.249	-54.6789	110.2997	0	12	29.5
1	CPSTH2	6404.769	7012.277	157.214	-53.2886	111.1647	0	29.5	29.5
1	DH014	6660	7870	140	-60	274	258.5	268.8	469.7
1	DH014	6660	7870	140	-60	274	258.5	268.8	469.7
1	DH014	6660	7870	140	-60	274	272.2	291.1	469.7
1	DH014	6660	7870	140	-60	274	307.5	349	469.7
1	DH014	6660	7870	140	-60	274	355.1	356.3	469.7
1	DH018	6558	8042	155.4	-55	270	111.66	145.4	193.2
1	DH018	6558	8042	155.4	-55	270	111.66	145.4	193.2
1	DH018	6558	8042	155.4	-55	270	160.16	169.8	193.2
1	DH019	6552	8195	161.5	-60	270	20.62	77.61	150
1	DH019	6552	8195	161.5	-60	270	20.62	77.61	150
1	DH019	6552	8195	161.5	-60	270	77.62	81.78	150
1	DH019	6552	8195	161.5	-60	270	83.67	84.3	150
1	DH023	6252	6736	284	-46	270	0	32.35	90.5
1	DH023	6252	6736	284	-46	270	0	32.35	90.5
1	DH023	6252	6736	284	-46	270	32.59	84.94	90.5
1	DH039	6642.5	8187	143.75	-80	274	144.2	146.46	167
1	DH039B	6642.5	8187	143.8	-80	274	150.63	153.89	320.3
1	DH039B	6642.5	8187	143.8	-80	274	150.63	153.89	320.3
1	DH042	6725	7860	145	-80	270.3	539.5	555.8	697.8
1	DH042	6725	7860	145	-80	270.3	539.5	555.8	697.8
1	DH048	6577	8341.5	195.1	-60	274	73.8	88.38	101.5
1	GT001	6355.275	7940.683	111.749	-43.5	270	0	14.69	161.34
1	ND049	6490.7	8019.9	179	-45	270	28.35	37.81	136
1	ND049	6490.7	8019.9	179	-45	270	28.35	37.81	136
1	ND049	6490.7	8019.9	179	-45	270	44.16	59.69	136
1	ND049	6490.7	8019.9	179	-45	270	61.83	98	136
1	ND066	6463.32	7928.74	154.71	-43	267.92	13.53	67.9	127
1	ND066	6463.32	7928.74	154.71	-43	267.92	13.53	67.9	127
1	ND067	6412.17	7990.06	154.96	-51	89.3	0	0.91	151.5
1	ND067	6412.17	7990.06	154.96	-51	89.3	0	0.91	151.5
1	ND067	6412.17	7990.06	154.96	-51	89.3	22.6	48.19	151.5
1	ND067	6412.17	7990.06	154.96	-51	89.3	53.36	75.64	151.5
1	ND067	6412.17	7990.06	154.96	-51	89.3	75.64	77.7	151.5
1	ND068	6530.8	8089.56	146.52	-45	269.1	58.81	61.8	197
1	ND068	6530.8	8089.56	146.52	-45	269.1	58.81	61.8	197
1	ND068	6530.8	8089.56	146.52	-45	269.1	61.8	84.3	197
1	ND068	6530.8	8089.56	146.52	-45	269.1	87.1	94.05	197

Centre Pit Combined Drill-hole Intersects as at 31 Dec 2014 19 of 21



CP_1409	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
1	ND068	6530.8	8089.56	146.52	-45	269.1	94.05	98.09	197
1	ND068	6530.8	8089.56	146.52	-45	269.1	131.8	133.8	197
1	ND069	6539.71	8141.51	146.47	-47	269.5	50.6	68.8	139
1	ND069	6539.71	8141.51	146.47	-47	269.5	50.6	68.8	139
1	ND069	6539.71	8141.51	146.47	-47	269.5	77.57	78.03	139
1	ND069	6539.71	8141.51	146.47	-47	269.5	78.03	78.09	139
1	ND070	6514.6	8239.37	153.19	-45	88.22	4	45.7	163
1	ND070	6514.6	8239.37	153.19	-45	88.22	4	45.7	163
1	ND070	6514.6	8239.37	153.19	-45	88.22	46.34	52.31	163
1	ND074	6510.74	8297.89	157	-45	87.91	0	13.8	148.5
1	ND074	6510.74	8297.89	157	-45	87.91	0	13.8	148.5
1	ND078	6440.3	8141.7	139.2	-45	91.98	29.29	61.51	151
1	ND078	6440.3	8141.7	139.2	-45	91.98	29.29	61.51	151
1	ND078	6440.3	8141.7	139.2	-45	91.98	61.55	61.57	151
1	ND078	6440.3	8141.7	139.2	-45	91.98	69.4	108.83	151
1	ND078	6440.3	8141.7	139.2	-45	91.98	115.8	138.7	151
1	ND079	6477.7	8087.7	125.8	-37	270.35	0	12.3	91.6
1	ND079	6477.7	8087.7	125.8	-37	270.35	0	12.3	91.6
1	ND079	6477.7	8087.7	125.8	-37	270.35	21.6	29.37	91.6
1	ND079	6477.7	8087.7	125.8	-37	270.35	40.1	51.3	91.6
1	ND093	6618.4	8348.8	163.9	-38	270	99.96	106.92	200
1	ND095	6519.9	8440.4	168.8	-40	90	79.27	85.9	177.5
1	NP026	6444	8040	203.1	-90	0	54	75	75
1	NP027	6425	7990	210.2	-90	0	9	32.92	90
1	NP027	6425	7990	210.2	-90	0	9	32.92	90
1	NP028	6463	7993	185.4	-90	0	0	12	81
1	NP028	6463	7993	185.4	-90	0	0	12	81
1	NP030	6520	8189	159.7	-90	0	0	39	39
1	NP031	6424	7894	167.8	-90	0	0	36	36
1	NP032	6487	7990	166.2	-60	270	0	12	60
1	NP032	6487	7990	166.2	-60	270	0	12	60
1	NP032	6487	7990	166.2	-60	270	30	51.94	60
1	NP033	6451	7891	150.8	-90	0	0	27	27
1	SL001	6404	7989.9	215.4	-60	270	0	24	24
1	SL002	6400	7940	199	-60	270	4	15	70
1	SL003	6381.7	8029.7	183.1	-60	90	22.23	39.09	70
1	SL004	6353.4	7893.7	174.5	-60	270	9	43	43
1	SL005	6378.5	7888.1	172.9	-60	90	16	65	65
1	SL006	6450.2	7891.3	151.6	-60	270	0	1.98	30
1	SL006	6450.2	7891.3	151.6	-60	270	0	1.98	30
1	SL007	6466.2	7947.5	166	-40	270	23	34	34
1	SL009	6549.7	7939.8	110	0	270	50	75	163
1	SL009	6549.7	7939.8	110	0	270	50	75	163
1	SL009	6549.7	7939.8	110	0	270	75	92.91	163
1	SL009	6549.7	7939.8	110	0	270	101.5	103.53	163
1	SL009	6549.7	7939.8	110	0	270	115.05	133.28	163
1	SL010	6523.1	7890.8	107.1	0	270	29	43.78	124
1	SL010	6523.1	7890.8	107.1	0	270	29	43.78	124
1	SL010	6523.1	7890.8	107.1	0	270	43.78	44	124
1	SL010	6523.1	7890.8	107.1	0	270	44	59	124

Centre Pit Combined Drill-hole Intersects as at 31 Dec 2014 20 of 21





CP_1409	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
1	SL010	6523.1	7890.8	107.1	0	270	89	95	124
1	SL010	6523.1	7890.8	107.1	0	270	95	119	124
1	SL012	6508.9	8090.6	167.7	-20	270	18	39	71
1	SL012	6508.9	8090.6	167.7	-20	270	18	39	71
1	SL012	6508.9	8090.6	167.7	-20	270	39	51	71
1	SL012	6508.9	8090.6	167.7	-20	270	51.58	51.68	71
1	SL013	6505.8	7990.1	161.6	-60	270	0	5	78
1	SL013	6505.8	7990.1	161.6	-60	270	0	5	78
1	SLP07001	6438.15	7823.129	110.06	-72	73	0	1.27	18
1	SLP07002	6427.139	7816.89	111.246	-70	77	0	2.63	18
1	SLP07002	6427.139	7816.89	111.246	-70	77	0	2.63	18
1	SLP07002	6427.139	7816.89	111.246	-70	77	2.63	3.59	18
1	SLP07004	6402.686	7810.448	111.26	-73	94	0	18	18
1	SLP07005	6383.298	7807.473	111.839	-73	100	4	16.18	18

Centre Pit Combined Drill-hole Intersects as at 31 Dec 2014 21 of 21



NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
	DH001	6680	9402	328	-41	102	29.9	29.91	203.6
	DH001	6680	9402	328	-41	102	42.01	77.79	203.6
	DH001	6680	9402	328	-41	102	77.79	130.48	203.6
	DH002	6852	9550	374	-45	295	94.5	151.78	263
	DH002	6852	9550	374	-45	295	151.78	219.26	263
	DH017	6644	8528	196	-67	276	1.2	18.3	65.5
	DH017	6644	8528	196	-67	276	36.6	61.6	65.5
	DH025	6708	8878	257.5	-65	270	30.76	75.6	228.3
	DH025	6708	8878	257.5	-65	270	75.6	102.4	228.3
	DH026	6777	9229	358.1	-64	270	21.3	48.1	181.4
	DH026	6777	9229	358.1	-64	270	65.5	79.9	181.4
	DH026	6777	9229	358.1	-64	270	91.4	170.7	181.4
	DH027	6777	9229	358.1	-51	270			
	DH036	6868.5	9353	348.4	-79	300	231.6	240.79	439.2
	DH036	6868.5	9353	348.4	-79	300	258.5	326.7	439.2
	DH036	6868.5	9353	348.4	-79	300	326.7	408.4	439.2
	DH037	6892.5	9460	336	-78	294	287.1	373.68	546.8
	DH037	6892.5	9460	336	-78	294	375.09	545.3	546.8
	DH041	6955	9505	323					738.2
	DH043	6888	9990	354.5	-45	275	116.27	121.81	186.5
	DH043	6888	9990	354.5	-45	275	158.5	164	
	DH049	6666.5	9020	309	-50	274	46.8	52.4	88.4
	DH049	6666.5	9020	309	-50	274	69.5	75.8	88.4
	DH050	6602.5	8913.5	296	-48	94	44.18	45.7	209.1
	DH050	6602.5	8913.5	296	-48	94	46.81	97.8	209.1
	DH050	6602.5	8913.5	296	-48	94	106.7	155.4	209.1
	DH051	6670	9242	335.3	-55	94	3.7	119.74	234.7
	DH051	6670	9242	335.3	-55	94	119.74	198.1	234.7
	DH052	6825	9305	344.5	-57	286	105.2	122.2	326.7
	DH052	6825	9305	344.5	-57	286	132.9	153.84	326.7
	DH052	6825	9305	344.5	-57	286	161.67	216.4	326.7
	DH052	6825	9305	344.5	-57	286	216.4	242.6	326.7
	DH052	6825	9305	344.5	-57	286	285.6	294.7	326.7
	DH053	6854	9653.5	366	-67	286	118.6	133.66	323.7
	DH053	6854	9653.5	366	-67	286	146.34	190.31	323.7
	DH053	6854	9653.5	366	-67	286	190.31	301.8	323.7
	DH053	6854	9653.5	366	-67	286	301.8	323.7	323.7
	N88100	6640	8752	240	-90	0	6	30	30
	N88101	6657	8752	240	-90	0	0	12	30
	N88101	6657	8752	240	-90	0	12	30	30
	N88102	6675	8752	241	-90	0	0	24	24
	N88103	6697	8752	241					
	N88104	6676	8918	235	-90	0	0	30	30
	N88105	6618	8752	239					18
	ND001	6865.5	9740	363.46	-45	270	116	127.1	326
	ND001	6865.5	9740	363.46	-45	270	269.4	280.7	326
	ND001	6865.5	9740	363.46	-45	270	305.3	317.6	326
	ND002	6910.5	9542.5	350.87	-45	270	127.65	181.49	380
	ND002	6910.5	9542.5	350.87	-45	270	181.79	198.48	380
	ND002	6910.5	9542.5	350.87	-45	270	250.7	273.9	380
NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth

North Pit Drill-hole Intersects as at 31 Dec 2013 1 of 11



NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
	ND002	6910.5	9542.5	350.87	-45	270	289	300.5	380
	ND002	6910.5	9542.5	350.87	-45	270	311.4	338.8	380
	ND003	6553.5	9134	273	-45	90	199.1	245.6	309
	ND003	6553.5	9134	273	-45	90	253.9	285.5	309
	ND003	6553.5	9134	273	-45	90	288.2	295.6	309
	ND004	6817	9291	345.05	-45	270	50.1	79.3	175.9
	ND004	6817	9291	345.05	-45	270	86.3	124.86	175.9
	ND004	6817	9291	345.05	-45	270	124.86	175.9	175.9
	ND034	6789.9	9490.5	347.6	-45	270	0	51.8	85
	ND035	6758.4	9440	347.5	-45	270	0	38.2	85
	ND035	6758.4	9440	347.5	-45	270	38.2	76.5	85
	ND036	6759.4	9440.8	347.5	-45	90	0	13.5	71
	ND036	6759.4	9440.8	347.5	-45	90	21.7	27.1	71
	ND036	6759.4	9440.8	347.5	-45	90	57.2	65	71
	ND037	6770.9	9391.1	347.3	-45	270	8.4	50.4	102.5
	ND037	6770.9	9391.1	347.3	-45	270	50.4	85.4	102.5
	ND037	6770.9	9391.1	347.3	-45	270	85.4	97.7	102.5
	ND038	6772.5	9312	349.7	-45	270	4.4	18.2	127.5
	ND038	6772.5	9312	349.7	-45	270	23	53.6	127.5
	ND038	6772.5	9312	349.7	-45	270	56.8	94.8	127.5
	ND038	6772.5	9312	349.7	-45	270	115.25	127.5	127.5
	ND039	6723.2	9339.6	347.7	-45	270	6.4	72.78	78.5
	ND040	6744	9640	357.6	-45	90	57.5	81.5	86
	ND041	6820	9540	347	-45	241	19.7	72.4	108.5
	ND042	6765.4	9538.5	346.5	-45	90	0	64.7	75.5
	ND043	6772.4	9194.7	336.3	-45	270	3	30.5	147
	ND043	6772.4	9194.7	336.3	-45	270	45.4	66.4	147
	ND043	6772.4	9194.7	336.3	-45	270	66.4	131.8	147
	ND043	6772.4	9194.7	336.3	-45	270	131.8	147	147
	ND044	6729.1	9250.3	352.6	-50	270	14.5	109.09	112.7
	ND044	6729.1	9250.3	352.6	-50	270	109.09	111.6	112.7
	ND044	6729.1	9250.3	352.6	-50	270	111.6	112.7	112.7
	ND045	6658	9005.8	308.6	-55	270	43.17	51.83	69.2
	ND045	6658	9005.8	308.6	-55	270	59.13	65.88	69.2
	ND046	6663.3	9141.3	322.7	-55	270	1.5	43.3	56
	ND046	6663.3	9141.3	322.7	-55	270	48.3	56	56
	ND047	6765.4	9540.9	348	-50	270	0	14.7	43
	ND048	6791.6	9489.9	337.9	-45	90	0	30.2	59
	ND050	6834.4	9491.2	336.6	-45	270	34.5	98.42	145.5
	ND050	6834.4	9491.2	336.6	-45	270	98.42	98.43	145.5
	ND050	6834.4	9491.2	336.6	-45	270	98.43	129.3	145.5
	ND051	6810.3	9389.7	328.7	-45	270	65	101.3	159.5
	ND051	6810.3	9389.7	328.7	-45	270	101.3	125	159.5
	ND051	6810.3	9389.7	328.7	-45	270	125	151	159.5
	ND052	6759.9	9338.7	321.5	-45	270	1.5	33.84	110
	ND052	6759.9	9338.7	321.5	-45	270	33.89	71.5	110
	ND053	6756.2	9129.9	292.7	-45	270	33.3	51	72.7
	ND053	6756.2	9129.9	292.7	-45	270	72.5	72.7	72.7
	ND054	6716.7	9096.8	287.7					17
NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth

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NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
	ND055	6608.6	9090.5	300.7	-40	90	28	34	137
	ND055	6608.6	9090.5	300.7	-40	90	50	137	137
	ND056	6831.3	9189.4	305.2	-45	270	104	128	210.5
	ND056	6831.3	9189.4	305.2	-45	270	144	165.7	210.5
	ND056	6831.3	9189.4	305.2	-45	270	167.6	198.6	210.5
	ND057	6875.3	9390.1	327.8	-45	270	134.2	149	149
	ND058	6591.9	8741.6	236.6	-45	90	90.6	116	153.5
	ND058	6591.9	8741.6	236.6	-45	90	120.2	144.2	153.5
	ND059	6704.5	9590.45	341.54	-60	90	45.5	55	262.3
	ND059	6704.5	9590.45	341.54	-60	90	84.49	103.26	262.3
	ND059	6704.5	9590.45	341.54	-60	90	103.26	262.3	262.3
	ND060	6677.7	8949.8	270.2	-65	270	12.5	43.9	110
	ND060	6677.7	8949.8	270.2	-65	270	54	110	110
	ND061	6713.8	8831.8	258.2	-50	270	45	85.5	110
	ND061	6713.8	8831.8	258.2	-50	270	99	103.3	110
	ND062	6566.3	9041.5	286.4	-40	90	76.6	83.6	165
	ND062	6566.3	9041.5	286.4	-40	90	138.18	165	165
	ND063	6690.3	9639.2	344.3	-45	90	91.4	213.8	228.5
	ND064	6657.7	9439.9	310.6	-45	90	85.1	110.3	240
	ND064	6657.7	9439.9	310.6	-45	90	110.3	161.69	240
	ND064	6657.7	9439.9	310.6	-45	90	161.69	217.2	240
	ND065	6619.3	8646	230.7	-55	90	21.5	72.4	110
	ND071	6723.38	9091.14	199.24	-48	267.53	0	24.3	103
	ND071	6723.38	9091.14	199.24	-48	267.53	73	79	103
	ND072	6724.22	9348.31	215.62	-42	91.18	0	22.21	103
	ND072	6724.22	9348.31	215.62	-42	91.18	22.21	93.5	103
	ND073	6748.41	9482.47	219.36	-45	82.56	4.1	32.37	130
	ND073	6748.41	9482.47	219.36	-45	82.56	32.37	111.2	130
	ND076	6527.6	8590.7	178.4	-37	89.6	137.1	173.1	173.1
	ND077	6589	8504.1	202.7	-45	90.7			74.2
	ND080	6590	9739.7	316.9	-56.06	92.32	27.4	77.36	530
	ND080	6590	9739.7	316.9	-56.06	92.32	77.46	143.6	530
	ND080	6590	9739.7	316.9	-56.06	92.32	249.8	264.8	530
	ND080	6590	9739.7	316.9	-56.06	92.32	264.8	296.49	530
	ND080	6590	9739.7	316.9	-56.06	92.32	296.49	297.32	530
	ND080	6590	9739.7	316.9	-56.06	92.32	297.32	422	530
	ND080	6590	9739.7	316.9	-56.06	92.32	422	466.1	530
	ND081	6606.1	9655.5	308.6	-54	89.1	115.3	138.5	516
	ND081	6606.1	9655.5	308.6	-54	89.1	192.2	283.6	516
	ND081	6606.1	9655.5	308.6	-54	89.1	283.6	327.7	516
	ND081	6606.1	9655.5	308.6	-54	89.1	327.7	412.7	516
	ND082	6886.5	9189.9	287.3	-57	271.7	184.7	212.5	407.7
	ND082	6886.5	9189.9	287.3	-57	271.7	234.7	254.8	407.7
	ND082	6886.5	9189.9	287.3	-57	271.7	269.1	276.6	407.7
	ND082	6886.5	9189.9	287.3	-57	271.7	298.6	327.3	407.7
	ND083	6584.2	9352.3	279.5	-60	92.1	294.6	316.9	525.7
	ND083	6584.2	9352.3	279.5	-60	92.1	316.9	331.6	525.7
	ND083	6584.2	9352.3	279.5	-60	92.1	331.6	356.9	525.7
	ND083	6584.2	9352.3	279.5	-60	92.1	356.9	472.4	525.7

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NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
	ND085	6559.2	9529.9	292.8	-49	89.3	141.38	148.21	550
	ND085	6559.2	9529.9	292.8	-49	89.3	156.3	170.9	550
	ND085	6559.2	9529.9	292.8	-49	89.3	232.1	340.42	550
	ND085	6559.2	9529.9	292.8	-49	89.3	340.52	432.2	550
	ND086	6596.2	9794.8	323.3	-55	77.65	67.8	88.7	433.1
	ND086	6596.2	9794.8	323.3	-55	77.65	110.7	126.4	433.1
	ND086	6596.2	9794.8	323.3	-55	77.65	274.3	305.03	433.1
	ND086	6596.2	9794.8	323.3	-55	77.65	316.23	316.5	433.1
	ND086	6596.2	9794.8	323.3	-55	77.65	316.5	377.3	433.1
	ND087	6702.5	8992.2	198.2	-51	135.3			350
	ND088	6698.4	8872.4	195.85	-51	135.3			271.6
	ND089	6612.1	8698.6	230.5	-51	135.3	114.3	142.8	340.1
	ND094	6750.5	8944.6	207.5	-40	270	65	94	210
	ND094	6750.5	8944.6	207.5	-40	270	115.8	132	210
	ND096	6781.4	9090.7	193.5	-60	270	70.6	98	185.1
	ND096	6781.4	9090.7	193.5	-60	270	134.8	139.04	185.1
	ND096	6781.4	9090.7	193.5	-60	270	177	181.6	185.1
	ND097	6753.5	8889.9	213.8	-65	270	92.9	132.2	257.5
	ND097	6753.5	8889.9	213.8	-65	270	139.9	183	257.5
	ND097	6753.5	8889.9	213.8	-65	270	202	213.3	257.5
	ND098	6743.3	8839.8	216.8	-58	270	80	107.8	205.7
	ND098	6743.3	8839.8	216.8	-58	270	118.2	132.9	205.7
	ND099	6714.2	8739.9	225.5	-65	270	63.6	81.3	137
	ND099	6714.2	8739.9	225.5	-65	270	86.4	111.3	137
	ND100	6583.9	8639.6	234	-65	90	175.8	205.1	214.7
	ND101	6543.3	8521.2	198.1	-49	71	145	184.4	235
	ND101	6543.3	8521.2	198.1	-49	71	187.9	197.9	235
	ND102	6793.5	9074	195.1	-49	71			79
	ND103	6640.5	8590.2	210.8	-50	90	0	4	100
	ND103	6640.5	8590.2	210.8	-50	90	4	38	100
	ND104	6644.89	8675.2	212	-60	90	0	68	87
	ND104	6644.89	8675.2	212	-60	90	68	74	87
	ND105	6693.7	9798.59	339.89	-60	90			100
	ND106	6790.1	9798.09	352.5	-60	90			100
	ND107	6758	9844.4	347.6	-60	90			94
	ND108	6645.5	9800.4	330.29	-60	95	10	16	60
	ND108	6645.5	9800.4	330.29	-60	95	58	60	60
	ND109	6643.89	9799.9	330.2	-60	178	16	26	78
	ND109	6643.89	9799.9	330.2	-60	178	46	78	78
	ND110	6652	9750.2	330.6	-60	270	44	78	100
	ND111	6659.7	9749.79	330.7	-60	5	50	100	100
	ND112	6776.6	9894.59	344.79	-60	5			100
	ND113	6766.5	9843.2	348.2	-60	5			100
	ND200101	6947.4	9789.62	341.89	-51.29	267.44	194.1	201.2	370
	ND200101	6947.4	9789.62	341.89	-51.29	267.44	214.4	250.8	370
	ND200101	6947.4	9789.62	341.89	-51.29	267.44	250.8	264.9	370
	ND200101	6947.4	9789.62	341.89	-51.29	267.44	273.9	300.1	370
	ND200102	6719.18	9390.033	119.06	-59.042	269.122	0	9.6	162.4
	ND200102	6719.18	9390.033	119.06	-59.042	269.122	49.5	53.2	162.4
NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth

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NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
	ND200102	6719.18	9390.033	119.06	-59.042	269.122	78.4	87.9	162.4
	ND200102	6719.18	9390.033	119.06	-59.042	269.122	97.9	98.29	162.4
	ND200103	6720.85	9390.135	119.19	-54.912	86.295	0	10.3	185
	ND200103	6720.85	9390.135	119.19	-54.912	86.295	10.3	53.8	185
	ND200103	6720.85	9390.135	119.19	-54.912	86.295	53.8	172.4	185
	ND200104	6903.31	9836.85	341.88	-55.23	270.04	198	243.2	296.2
	ND200104	6903.31	9836.85	341.88	-55.23	270.04	243.2	267.7	296.2
	ND200111	6979.68	9739.838	341.88	-47.21	271.33	213	304.4	380.1
	ND200111	6979.68	9739.838	341.88	-47.21	271.33	304.4	342	380.1
	ND200111	6979.68	9739.838	341.88	-47.21	271.33	342	352.3	380.1
	NDDH0501	6822.06	9189.93	184.96	-69	268.83	102.9	115.8	483.9
	NDDH0501	6822.06	9189.93	184.96	-69	268.83	115.8	142	483.9
	NDDH0501	6822.06	9189.93	184.96	-69	268.83	158.7	181.5	483.9
	NDDH0501	6822.06	9189.93	184.96	-69	268.83	191.25	206.4	483.9
	NDDH0501	6822.06	9189.93	184.96	-69	268.83	276.8	324	483.9
	NDDH0502	6821.82	9192.68	184.82	-50.18	94.27			358.9
	NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	466.52	490	783.1
	NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	541.24	629.09	783.1
	NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	629.09	699.55	783.1
	NDDH0504	6657.56	9388.61	117.62	-57.05	89.13	0	6.7	333.95
	NDDH0504	6657.56	9388.61	117.62	-57.05	89.13	129.25	148	333.95
	NDDH0504	6657.56	9388.61	117.62	-57.05	89.13	148	315.1	333.95
	NDDH0505	6671.36	9485.02	111.99	-53.06	91.43	14.61	16.1	314.8
	NDDH0505	6671.36	9485.02	111.99	-53.06	91.43	56	173.13	314.8
	NDDH0505	6671.36	9485.02	111.99	-53.06	91.43	173.13	259.75	314.8
	NDDH0506	6642.49	9292.96	126.69	-59.45	92.84	64.5	100.1	351.35
	NDDH0506	6642.49	9292.96	126.69	-59.45	92.84	146.7	170	351.35
	NDDH0506	6642.49	9292.96	126.69	-59.45	92.84	170	204	351.35
	NDDH0506	6642.49	9292.96	126.69	-59.45	92.84	204	244	351.35
	NDDH0506	6642.49	9292.96	126.69	-59.45	92.84	244	268	351.35
	NDDH0506	6642.49	9292.96	126.69	-59.45	92.84	268	337.1	351.35
	NDDH0506	6642.49	9292.96	126.69	-59.45	92.84	337.1	349.4	351.35
	NDDH0507	6542.32	9734.73	241.28	-54.84	94.71	120	125.1	560.5
	NDDH0507	6542.32	9734.73	241.28	-54.84	94.71	178.92	186.2	560.5
	NDDH0507	6542.32	9734.73	241.28	-54.84	94.71	302.45	476.6	560.5
	NDDH0507	6542.32	9734.73	241.28	-54.84	94.71	484.8	499.7	560.5
	NDDH0507	6542.32	9734.73	241.28	-54.84	94.71	499.7	507.7	560.5
	NDDH0508	6455.2	9644.22	254.94	-55.45	89.55	316	348.1	477.4
	NDDH0508	6455.2	9644.22	254.94	-55.45	89.55	356	378	477.4
	NDDH0508	6455.2	9644.22	254.94	-55.45	89.55	460	477.4	477.4
	NDDH0601	6485.09	9867.3	295.68	-48.2	74.57	285.85	304.3	603.4
	NDDH0601	6485.09	9867.3	295.68	-48.2	74.57	432	528	603.4
	NDDH0601	6485.09	9867.3	295.68	-48.2	74.57	528	544	603.4
	NDDH0602	7140.54	9954.83	352.08	-45.37	267.48	473.85	483.58	750.1
	NDDH0602	7140.54	9954.83	352.08	-45.37	267.48	483.58	545.38	750.1
	NDDH0602	7140.54	9954.83	352.08	-45.37	267.48	553.17	553.2	750.1
	NDDH0605	6400.55	9346.885	262.85	-44.93	90.34			237.3
NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth

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NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
	NDDH0606	6615.67	9054.26	201.85	-54.06	89.134	47.6	102.14	285.5
	NDDH0606	6615.67	9054.26	201.85	-54.06	89.134	158	275.5	285.5
	NDDH0607	6606.54	8991.057	206.8	-56.25	88.54	29.9	55.4	317.5
	NDDH0607	6606.54	8991.057	206.8	-56.25	88.54	91.9	113	317.5
	NDDH0607	6606.54	8991.057	206.8	-56.25	88.54	121.55	136.7	317.5
	NDDH0607	6606.54	8991.057	206.8	-56.25	88.54	147.4	151.6	317.5
	NDDH0607	6606.54	8991.057	206.8	-56.25	88.54	248.17	261.54	317.5
	NDDH0607	6606.54	8991.057	206.8	-56.25	88.54	262	317.5	317.5
	NDDH0608	6666.98	9641.15	127.82	-55.11	270.91	0	6.05	107.3
	NDDH0608	6666.98	9641.15	127.82	-55.11	270.91	11.2	20	107.3
	NDDH0608	6666.98	9641.15	127.82	-55.11	270.91	36	58	107.3
	NDDH0609	6670.32	9591.288	122.01	-55.19	273.94	13.2	30.25	201.5
	NDDH0609	6670.32	9591.288	122.01	-55.19	273.94	56	63	201.5
	NDDH0610	6672.04	9586.944	122.08	-54.81	230.42	2.9	6.4	130.5
	NDDH0610	6672.04	9586.944	122.08	-54.81	230.42	17.3	29	130.5
	NDDH0610	6672.04	9586.944	122.08	-54.81	230.42	84.7	88	130.5
	NDDH0611	6698.91	9464.161	110.78	-55.81	296.06	36	39.25	181.5
	NDDH0611	6698.91	9464.161	110.78	-55.81	296.06	71.5	85	181.5
	NDDH0611	6698.91	9464.161	110.78	-55.81	296.06	121.9	124.1	181.5
	NDDH0612	6697.27	9461.92	110.77	-55.51	260.62	18	21	146.6
	NDDH0612	6697.27	9461.92	110.77	-55.51	260.62	61.9	66.8	146.6
	NDDH0612	6697.27	9461.92	110.77	-55.51	260.62	93.5	97.5	146.6
	NDDH0612	6697.27	9461.92	110.77	-55.51	260.62	108	111.4	146.6
	NDDH0612	6697.27	9461.92	110.77	-55.51	260.62	122	127.65	146.6
	NDDH0613	6670.64	9648.64	128.38	-53.09	92.11	59.85	134.15	315.5
	NDDH0613	6670.64	9648.64	128.38	-53.09	92.11	134.15	159	315.5
	NDDH0613	6670.64	9648.64	128.38	-53.09	92.11	159	280.7	315.5
	NDDH0613	6670.64	9648.64	128.38	-53.09	92.11	280.7	294.3	315.5
	NDDH0614	6810.81	8995.886	207.94	-52.63	250.37	127.1	191.6	276.3
	NDDH0614	6810.81	8995.886	207.94	-52.63	250.37	191.6	197.1	276.3
	NDDH0614	6810.81	8995.886	207.94	-52.63	250.37	222	275	276.3
	NDDH0615	6840.69	9083.07	197.31	-63.54	313.2	147.3	158	263.6
	NDDH0615	6840.69	9083.07	197.31	-63.54	313.2	165	196.1	263.6
	NDDH0615	6840.69	9083.07	197.31	-63.54	313.2	204.6	230.25	263.6
	NDDH0615	6840.69	9083.07	197.31	-63.54	313.2	234.6	239.65	263.6
	NDDH0616	6842.9	9081.66	197.6	-61.71	272.79	137	244.4	287.7
	NDDH07022	6767.49	8840.53	215.75	-60	264	112	158.1	243.2
	NDDH07023	6810	8990	203	-53.23	273.46	120	178	204.2
	NDDH08035	6802	9533.603	70.817	-90	0	0	25	25
	NDDH08036	6780.4	9328.3	76.429	-60	346	0	47.2	47.2
	NDDH08037	6796.75	9466.526	65.583	-60	350	0	10	10
	NDDH08038	6796.75	9466.526	65.583	-60	13	0	41	41
NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth

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NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
	NDDH03054	6703	10143.68	324.17	-43.275	35.2	64	134.3	163.7
	NDDH03055	6704.64	10186.25	324.33	-43.225	87.58	31.86	126.63	149.6
	NDDH03056	6712.03	10041.17	320.24	-53.3	37.34	83.8	110.6	118.4
	NDDH03064	6630.23	3330.037	237.53	-50	32.24	213	231	343.3
	NDDH03064	6630.23	3330.037	237.53	-50	32.24	231	234.6	343.3
	NDDH03064	6630.23	3330.037	237.53	-50	32.24	275	295	343.3
	NDDH03065	6345.03	3333.886	322.07	-50.67	270.57	225	228	323.2
	NDDH03065	6345.03	3333.886	322.07	-50.67	270.57	257.25	238.25	323.2
	NDDH10066	6340.8	10040.79	322.72	-52.7	264.3	225	253.17	368.5
	NDDH10067	6621.28	10133.38	306.03					236.3
	NDDH10068	6686.57	10083.87	230.08	-43.68	88.55	84.5	130	206.5
	NDDH10068	6686.57	10083.87	230.08	-43.68	88.55	148.7	163.16	206.5
	NDDH10069	6707.54	3333.823	275.31	-50.63	33.55	61.55	80.55	177.8
	NDDH10069	6707.54	3333.823	275.31	-50.63	33.55	123.25	143	177.8
	NDDH10070	6834.27	10036.83	306.16	-43.75	235.18	143.3	180.7	235.1
	NDDH10070	6834.27	10036.83	306.16	-43.75	235.18	210.3	234.6	235.1
	NDDH10070	6834.27	10036.83	306.16	-43.75	235.18	234.65	244	235.1
	NP005	6785	3432	375.65	-30	0	0	33.5	33.5
	NP006	6723.6	3340.6	360.5	-60	270	12	33	33
	NP010	6747.2	3443.3	366.5	-53	30	0	45	45
	NP011	6758.8	3340.2	367.3	-60	270	0	18	65
	NP011	6758.8	3340.2	367.3	-60	270	24	55.34	65
	NP011	6758.8	3340.2	367.3	-60	270	55.34	65	65
	NP012	6772.4	3587.2	367.3	-60	30	18	33	33
	NP013	6693.3	3183.8	334.5	-60	270	0	48	48
	NP014	6780	3340	363.1	-60	270	33	57	57
	NP015	6733	3534	373.7	-60	270	21	33	33
	NP016	6768	3441	375.2	-30	0	33	63	72
	NP016	6768	3441	375.2	-30	0	63	72	72
	NP017	6743	3240	343.3	-60	30	3	33	63
	NP017	6743	3240	343.3	-60	30	50	63	63
	NP018	6670	3030	314.7	-60	270	0	43	43
	NP021	6675	3031	314.7	-30	0	0	23	23
	NP023	6751	3603	358.3	-30	0	0	12	54
	NP024	6707	3243	341.1	-30	0	6	33	33
	NP025	6630	3133	320.6	-30	0	0	36	36
	NP8701	6630	3140	255.1	-30	0	0	27	27
	NP8703	6778	3515	283.4	-30	0	0	24	24
	NP8704	6730	3480	283	-30	0	0	21	21
	NP8705	6763	3463	281.5	-30	0	0.22	6.3	36
	NP8705	6763	3463	281.5	-30	0	3	36	36
	NP8706	6687	3031	254.4	-30	0	0	36	36
	NP8707	6715	3288	256.7	-30	0	0	36	36
	NP8708	6710	3233	255.5	-30	0	0	36	36
	NP8709	6737	3157	255	-30	0	0	33	36
	NP8710	6674.6	8788.7	235.8	-30	0	0	21	21
	NP8711	6673.8	3281.1	263.1	-30	0	0	42.77	54
	NP8712	6814.5	3483	282	-30	0	3	27	42
	NP8713	6735	3430	282	-30	0	0	42	42
	NP8714	6780	3430	282	-30	0	0	6	6
	NP8715	6764	3430	282	-30	0	6	42	42
	NP8716	6813	3540	282	-30	0	0	33	33
	NP8717	6737	3540	282	-30	0	0	33	33
	NP8718	6641	3253	287	-30	0	4.64	3	3
	NP8719	6644	3275	287	-30	0	0	21	21
	NP8720	6644	3230	287	-30	0	0	21	21

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NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
	NP8721	6625	3231	287	-30	0	0	13.53	21
	NP8722	6630	3275	287	-30	0	0	21	21
	NP8726	6615	3276	287	-30	0	3.34	12	18
	NP8727	6750	3430	282	-30	0	27.05	36	36
	NP8728	6810	3540	282	-30	0	0	33	33
	NP8729	6764.5	3540	282	-30	0	9	33	33
	NP8730	6810	3515	282	-30	0	0	42	42
	NP8731	6795	3515	282	-30	0	0	36	36
	NP8732	6807	3566	282	-30	0	3	33	33
	NP8733	6760	3515	282	-30	0	13.71	42	42
	NP8735	6630	3051	254	-30	0	0	33	33
	NP8736	6630	3065	254	-30	0	0	21	21
	NP8737	6702.5	3065	254	-30	0	5.13	21	21
	NP8738	6630	3015	255	-30	0	24	33	33
	NP8739	6677.5	3065	255	-30	0	0	21	21
	NP8740	6665	3066	255	-30	0	0	9	9
	NP8741	6675	3057.7	255	-30	0	0	33	33
	NP8742	6679.6	3090	255	-30	0	0	18	18
	NP8743	6667.4	3091	255	-30	0	0	21	21
	NP8744	6677.4	3116	255	-30	0	0	3	3
	NP8745	6689.2	3115.4	255	-30	0	0	3	3
	NP8746	6679.3	3140	255	-30	0	0	9	9
	NP8801	6678	3139	255	-30	0	0	21	21
	NP8802	6631	3142	255	-30	0	0	21	21
	NP8803	6701	3115	255	-30	0	0.47	16.11	21
	NP8806	6688	3315	254	-30	0	0	21	21
	NP8808	6674	3315	253	-30	0	0	12	12
	NP8811	6720	3166	255	-30	0	11.05	12	12
	NP8813	6639	3167	255	-30	0	0	21	21
	NP8815	6720	3192	255	-30	0	0	3	3
	NP8817	6706	3213	255	-30	0	0	21	21
	NP8818	6732	3240	255	-30	0	0	3	3
	NP8819	6732	3262	255	-30	0	0	21	21
	NP8822	6789	3438	271	-30	0	0	33	33
	NP8823	6768	3437	271	-30	0	1.24	24	33
NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth

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NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
	NP8823	6768	9437	271	-90	0	24	33	33
	NP8826	6766	9263	266	-90	0	18	33	33
	NP8827	6766	9290	266	-90	0	0	21	21
	NP8828	6761	9315	267	-90	0	0	11.9	33
	NP8828	6761	9315	267	-90	0	15	33	33
	NP8829	6774	9315	267	-90	0	15	27	27
	NP8835	6636	9240	276.1	-90	0	7.6	11.58	21
	NP8836	6660	9238	275.5	-90	0	0	3.63	21
	NP8836	6660	9238	275.5	-90	0	19.95	21	21
	NP8837	6646	9214	278.5	-90	0	5.88	21	21
	NP8838	6639	9183	280.7	-90	0	0	27	27
	NP8839	6632	9167	282.2	-90	0	0	27	27
	NP8840	6634	9144	281	-90	0	0	27	27
	NP8841	6623	9110	281.8	-90	0	0	20.97	27
	NP8845	6622	9141	281	-90	0	0	12	12
	NP8846	6652	8814	235	-90	0	0	6.01	21
	NP8846	6652	8814	235	-90	0	14.19	21	21
	NP8847	6672	8814	235	-90	0	0	21	21
	NP8849	6682	8839	236	-90	0	0	12	12
	NP8850	6669	8839	236	-90	0	0	18	18
	NP8855	6659	8832	236	-90	0	0	9	9
	NP8856	6649	8851	236	-90	0	0	21	21
	NP8857	6648	8838	236	-90	0	1.23	24	24
	NP8859	6747	9154	254.6	-90	0	0	27	27
	NP8860	6754	9174	254.5	-90	0	6	33	33
	NP8861	6759	9186	254.4	-90	0	0	9	9
	NP8862	6730	9190	255	-90	0	0	3	3
	NP8863	6720	9172	255	-90	0	0.76	21	21
	NP8864	6760	9232	255	-90	0	0	3	3
	NP8865	6740	9215	255	-90	0	0	3	3
	NP8866	6655	9042	242	-90	0	0	12	12
	NP8867	6647	9017	242	-90	0	0	18	18
	NP8868	6640	8993	241	-90	0	11.76	12	12
	NP8869	6635	8967	240	-90	0	2.73	18	18
	NP8870	6656	8968	240	-90	0	0	12	12
	NP8871	6664	8992	240	-90	0	14.29	21	21
	NP8872	6667	9016	242					15
	NP8873	6632	8943	239	-90	0	0	21	21
NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth

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NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
	NP8874	6653	8943	239	-90	0.00	6	21	21
	NP8875	6651	8914	239	-90	0.00	0	15	15
	NP8876	6631	8918	239	-90	0.00	0	12	12
	NP9738	6690	9015	255	-90	0.00	24	33	33
	NPRC07009	6719.31	9105.78	148.24	-57.8	337.20	9	37	72
	NPRC07010	6716.86	9112.73	147.41	-60	337.20	4	10.93	71
	NPRC07012	6718	9077.23	151.6	-53.8	251.12	0	2.59	80
	NPRC07012	6718	9077.23	151.6	-53.8	251.12	46.31	49	80
	NPRC07012	6718	9077.23	151.6	-53.8	251.12	67	70	80
	NPRC07013	6707	9027	156	-55	253.00	5	36.6	88
	NPRC07013	6707	9027	156	-55	253.00	54	71	88
	NPRC07014	6703.78	9029.5	156.09	-64.757	296.18	5	26	88
	NPRC07014	6703.78	9029.5	156.09	-64.757	296.18	61.81	71.59	88
	NPRC07015	6699.21	8977.21	161.07	-54.1	287.08	6	47	100
	NPRC07015	6699.21	8977.21	161.07	-54.1	287.08	54	62	100
	NPRC07016	6701.35	8978.04	160.96	-56.4	256.42	7	44.7	120
	NPRC07016	6701.35	8978.04	160.96	-56.4	256.42	57	64.8	120
	NPRC07016	6701.35	8978.04	160.96	-56.4	256.42	87	94	120
	NPRC07017	6686.57	8839.52	175.13	-56.7	270.46	16	26	60
	NPRC07017	6686.57	8839.52	175.13	-56.7	270.46	37	49	60
	NPRC07018	6678.09	8792.69	179.77	-63.2	270.36	0	0.15	41
	NPRC07018	6678.09	8792.69	179.77	-63.2	270.36	32	41	41
	NPRC07019	6692.85	8889.9	170.32	-66.2	271.24	0	1.37	91
	NPRC07019	6692.85	8889.9	170.32	-66.2	271.24	12	71	91
	NPRC07020	6781.54	8917.09	216.36	53.5	279.03	110	119	154
	NPRC07020	6781.54	8917.09	216.36	53.5	279.03	119	143	154
	NPRC07020	6781.54	8917.09	216.36	53.5	279.03	143	152	154
	NPRC07021	6817.76	8889.58	218.09	-60.7	266.56	166	176	195
	NPRC07021	6817.76	8889.58	218.09	-60.7	266.56	176	195	195
	NPRC09039	6713.8	9000.85	140.1	-50.52	273.15	13	35	40
	NPRC09040	6709.82	8991.8	139.72	-49.11	274.26	6	40	60
	NPRC09040	6709.82	8991.8	139.72	-49.11	274.26	46.82	54.73	60
	NPRC09041	6727.07	8989.34	139.96	-49.63	267.24	25	60	60
	NPRC09042	6725.14	9015	139.81	-48.4	270.00	15	41	50
	NPRC09043	6748.44	9040	139.64	-50.4	270.00	16	53	65
	NPRC09044	6746.74	9015	139.08	-50.5	270	30	58	70
	NPRC09045	6731.34	9002.5	139.85	-50.2	270	30	52	60
	NPRC09046	6754.17	10189.39	335.31	-49.6	80.51	29.01	69.96	85
	NPRC09048	6738.62	10144.84	322.99	-49.7	90.17	30	100	100
	NPRC09051	6735.13	10087.13	321.92	-49.5	87.04	25.01	58.04	70
	NPRC09052	6760.43	10039.94	321.62	-49.5	79.59	3.98	32	70
	NPRC09052	6760.43	10039.94	321.62	-49.37	85.48	50.3	56	70
	NPRC09053	6757.99	9995.216	321.29	-49.37	85.48	4	7	70
	NPRC09053	6757.99	9995.216	321.29	-49.37	85.48	53	60	70
NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth

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NP_1103	hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
	NPRC09058	6740.55	10337.78	323.68	-48.1	93.6	43	48	82
	NPRC09059	6757.43	10313.37	322.81	-53.5	89.3	18	35	58
	NPRC09060	6743.54	10304.49	322.72	-46.1	117.4	60.98	71	82
	NPRC09061	6742.29	10392.04	336.48	-46.6	86	10	56	76
	NPRC09062	6731.72	10376.56	336.36	-47.4	99.5	50	63.99	76
	NPRC10072	6711.54	9989.97	275.82	-53.7	90.4	57	78	124
	NPRC10072	6711.54	9989.97	275.82	-53.7	90.4	100	111	124
	NPRC10073	6741.96	9932.04	275.9	-53.08	89.694	4	28	31
	NPRC10076	6670.84	8790.003	100.62	-53.08	89.694	0	21	119
	NPRC10076	6670.84	8790.003	100.62	-53.08	89.694	21	100	119
	NPRC10077	6747.47	10390.08	304.68	-48	270	75	79	100
	NPRC10079	6747.98	10339.88	304.02	-48.9	272.1	70	84	100
	NPRC10086	6688.69	8589.535	167.37	-60.4	273.39	37	72	105
	NPRC10086	6688.69	8589.535	167.37	-60.4	273.39	72	95	105
	NPRC10087	6718.98	8600.912	168.55	-59.37	258.57	94	106	114
	NPRC10087	6718.98	8600.912	168.55	-59.37	258.57	106	114	114
	NPRC10089	6719.73	8764.998	95.247	-60.79	227.054	18	57	108
	NPRC10091	6648.36	8690	153.67	-55.8	94.233	0	53.35	84
	NPRC10092	6674.93	8550.535	167.56	-59.7	257.742	53	65	66
	NPRC10092	6674.93	8550.535	167.56	-59.7	257.742	65	66	66
	NRC200405	6736.76	9819.91	281.49	-60	30	68	101.69	102
	NRC200406	6753.54	9843.09	280.27	-57.5	52.857	2	25.02	102
	NRC200408	6725.09	9845.05	283.13	-59.5	176.28	60.69	90	102
	NRC200509	6717.1	9756.8	221.8	-58.96	267.68	62	152	152
	NRC200510	6764.5	9754.99	220.2	-56.341	245.467	14.93	56.53	140
	NRC200510	6764.5	9754.99	220.2	-56.341	245.467	58.13	140	140
	NRC200611	6804.91	9031.819	202.8	-56.5	267.68	98	106	202
	NRC200611	6804.91	9031.819	202.8	-56.5	267.68	106	172	202
	NRC200612	6777.39	9171.709	149.83	-57.5	245.467	13.84	48	180
	NRC200612	6777.39	9171.709	149.83	-57.5	245.467	60.14	106	180
	NRC200612	6777.39	9171.709	149.83	-57.5	245.467	154	170	180
	NRC200613	6793.53	9231.484	150.23	-55.5	267.943	38	52	196
	NRC200613	6793.53	9231.484	150.23	-55.5	267.943	64	76	196
	NRC200613	6793.53	9231.484	150.23	-55.5	267.943	76	104	196
	NRC200613	6793.53	9231.484	150.23	-55.5	267.943	172	194	196
	NRC200614	6796.93	8991.752	207.96	-54	268.78	104	154	196
	NRC200614	6796.93	8991.752	207.96	-54	268.78	154	160	196
	NRC200614	6796.93	8991.752	207.96	-54	268.78	174	182	196
	NRC200615	6746.41	8788.299	211.49	128	142	86	124	170
				END					

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