



27 April 2020

ASX: GRR

GRANGE RESOURCES LIMITED

Australia's most experienced magnetite producer

Update to Savage River Mineral Resources and Ore Reserves

December 2019 Resource - Reserve Statement

Savage River Operations, Tasmania

HIGHLIGHTS

- Total Ore Reserves have increased to 113.2MT @ 47.2%DTR
- The increase in Ore Reserves of 19.2MT is driven by the completion of the Centre Pit feasibility study less mining depletion from North Pit during 2019.
- The increase in Ore Reserves continue to maintain a mine life at Savage River of over 15 years with a projected mine life beyond 2035.
- Total Mineral Resources have decreased to 489.9MT @ 45.5%DTR, and have increased in confidence with 31% of Mineral Resources now meeting the Measured category up from 28% previously.
- The decrease of 55MT of Mineral Resource and increase in confidence from the previous statement is driven by the deep holes drilled in Phase Two of the 2019 North Pit underground drill program.
- Phase Three drilling is currently in progress and further refinement is expected at completion.
- The decrease in total Mineral Resources is considered minor given the quantum of the total Mineral Resources; annual mine production levels; and the ongoing nature of the drilling program.
- This release encompasses the estimation updated with the second phase of the 2018/19 resource drilling program and includes mining depletion since the 2019 report.



The Mineral Resource consists of 489.9 million tonnes at 45.5% DTR (above a cut-off of 15% DTR) as detailed in table 1 and the Ore Reserve consists of 113.2million tonnes at 47.2% DTR (above a cut-off of 15% DTR) as detailed in table 2.

Table 1 – Savage River Mineral Resource Estimate

	Measured Resources	Indicated Resources	Inferred Resources	TOTAL Resources
Tonnes (Mt)	152.6	182.6	154.7	489.9
DTR (%)	55.8	43.5	37.6	45.5
Fe (%)	67.9	68.2	68.8	68.3
Ni (%)	0.04	0.05	0.04	0.04
TiO₂ (%)	0.82	0.67	0.64	0.70
MgO (%)	1.82	1.35	1.15	1.43
P (%)	0.007	0.008	0.008	0.008
V (%)	0.36	0.35	0.34	0.35
S (%)	0.08	0.11	0.09	0.09

- Elemental compositions were measured from Davis Tube Concentrate
- Above a cut-off grade of 15% DTR
- 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

	Proved Reserves	Probable Reserves	TOTAL Reserves
Tonnes (Mt)	61.1	52.1	113.2
DTR (%)	53.4	39.9	47.2
Fe (%)	67.9	68.1	68.0
Ni (%)	0.03	0.05	0.04
TiO₂ (%)	0.94	0.60	0.78
MgO (%)	1.78	1.35	1.58
P (%)	0.007	0.009	0.008
V (%)	0.37	0.37	0.37
S (%)	0.05	0.11	0.08

- Elemental compositions were measured from Davis Tube Concentrate
- Above a cut-off grade of 15% DTR
- 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 assisted by external consultants and are reported in accordance with the guidelines of the JORC Code (2012 edition).

An independent technical review was performed by AMC Consultants Pty Ltd (AMC) with regard to the resource estimation process and the reserve estimation of Centre Pit. AMC considers that Mineral Resource and Ore Reserve estimates have been completed using acceptable practices.



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 2019 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.

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 1).

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 1 Savage River Project Location



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 was renewed 18 Dec 2017 and expires in 2031. Figure 1 shows the location of each lease.

Exploration licence EL30/2003 was granted in February 2010. The current 2yr tenure period expires on the 18 June 2021, is renewable via a successful extension of term application. Grange is currently on its sixth 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 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.

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 on its first extension of term which expires on 29 July 2021.

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

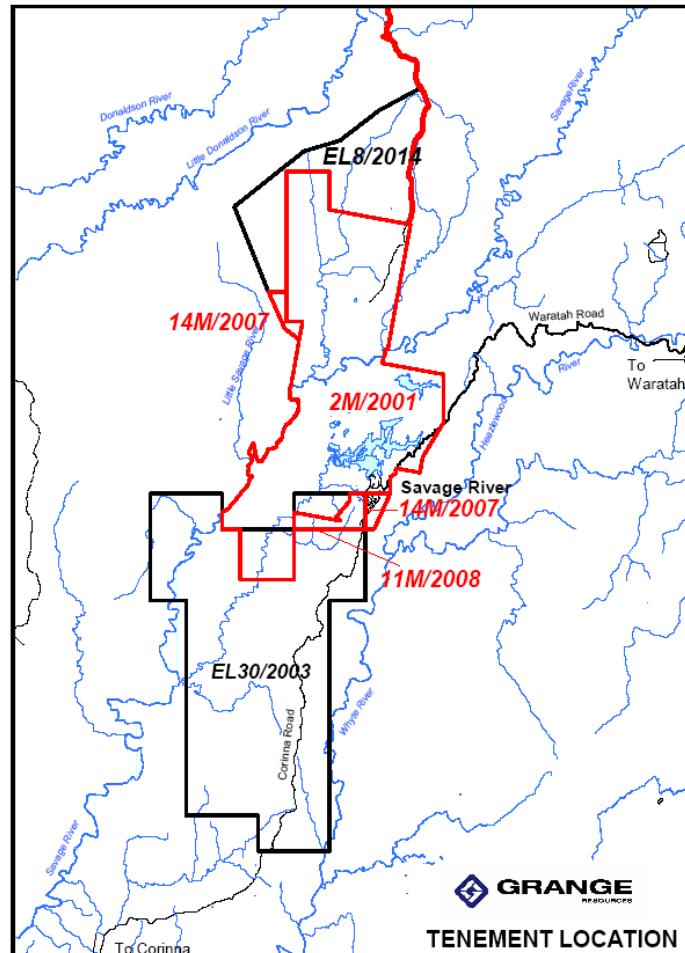


Figure 2 Tenements as at Dec 2019



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 (Pickards 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 and has continued to operate the open pit operation and further develop the mineral assets.



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, and South Deposit (Figure 3).

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 magnesite 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.

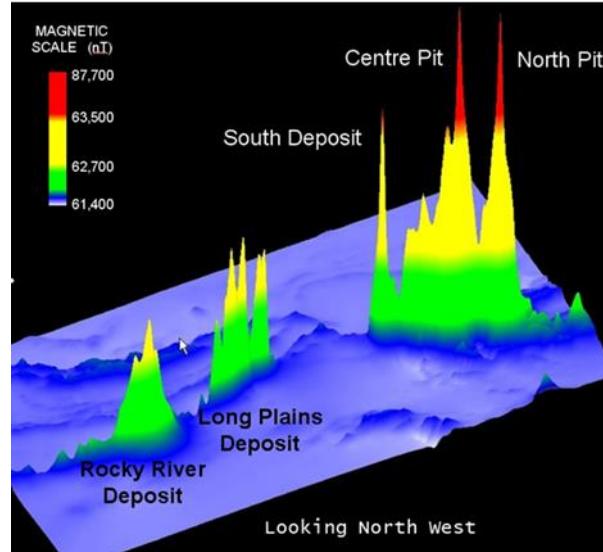


Figure 3 Savage River Regional Magnetics



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 resource definition during the last year ending December 31, 2019 focussed on the mining lease areas around North Pit and Centre Pit. The objectives of the program were to confirm continuity of the magnetite mineralisation at depth below North Pit and to improve confidence in the resource model for Centre Pit. This has included RC and diamond holes drilled both into the mineralisation and out into the surrounding host rocks. This statement incorporates the results of 4 holes drilled near Centre Pit for a total advance of 672 metres and 11 holes around North Pit for a total advance of 8,463 metres.

The second phase of surface drilling is complete for North Pit and the model was re-estimated in July 2019. In addition to that a further 19 holes (NPUG Phase 3) are planned for 9,900 metres of drilling to be undertaken from the exploration decline.

Regarding the drilling program, 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 analysed at Savage River's mine lab by Davis Tube Recovery.



**ANNUAL RESOURCE & RESERVE STATEMENT
DECEMBER 2019**



The primary assay technique is Davis Tube Recovery (DTR) on a 10g sample, followed by Ferrous Iron (Fe²⁺) via Satmagan and S, total Fe, TiO₂, 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 50 years and is 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.

Sample data at Savage River were generally composited to 1 metre 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.

Block models were prepared for each part of the deposit using Surpac Software. Block sizes at Savage River are as follows

- North Pit - 5mE by 10mN by 5mRL parent block with sub-celling to 2.5mE by 5mN by 2.5mRL
- Centre Pit - 5mE by 15mN by 5mRL parent block size with sub-celling to 2.5mE by 3.75mN by 2.5mRL
- Long Plains - 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 main deposits with Inverse Distance Cubed weighting estimation techniques 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 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). Assessment for Reasonable Prospects of Eventual Economic Extraction (RPEEE) was undertaken and based on a detailed review of true width and grade. Areas with unlikely prospectivity were manually removed from the estimation, based on a true width greater than 20m with a cutoff grade of 15% DTR.

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).



The second stage of the NPUG drilling was completed in 2019. A complete re-wireframing and re-estimation of North Pit including the western lens (WL) and the internal waste lenses within the Main Ore Zone (MOZ) of North Pit was completed in 2019 using the second stage of drilling. These wireframe improvements / refinements afforded by the new data provide a much better geologically constrained model. As a result, the size of the North Pit Mineral Resource has decreased by 55MT, including stockpiles which represents a 19% decrease. Confidence and grade of Measured Resource has increased. The overall change in Mineral Resource is a decrease of 10%.

There has been no material change to the Centre Pit Mineral Resource since the last statement, but Ore Reserves have been updated and as discussed below.

There have been no changes over the last year to the Mineral Resources for the other deposits; Sprent South Deposit and Long Plains.

Oxidised hematite materialisation is not included in the any of the resource estimation.

Mineral Resources at the Savage River Mine including Long Plains are as at the end of December 2019. Mineral Resources are categorised in accordance with the guidelines established in the JORC Code (2012 Edition). Estimated Measured and Indicated Mineral Resources include those Mineral Resources include those Mineral Resources modified to produce the estimated Ore Reserves.

Some Mineral Resources such as, Sprent pit and Long Plains have not had the required level of studies completed to report any Ore Reserves associated with those deposits. They are considered to meet the Mineral Resource requirement of having reasonable prospects of future eventual economic extraction.



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 North Pit, Centre Pit and South Deposit, and was developed as part of a Feasibility Study that was completed in September 2006. A feasibility study on Centre Pit has recently been completed in October of 2019.

Pit designs are based on optimised shells determined using Whittle software. The cut-off grade of 15%DTR was determined as part of feasibility studies 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, excavators, dump trucks and conventional drill and blast processes. These are based on reconciliations calculated periodically for the different areas of the deposit. Metallurgical factors are applied to account for mill performance. 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.

Estimates of Ore Reserves at the Savage River Mine including Long Plains are as at the end of December 2019. 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. 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 Ore Reserves.

Between Dec 2018 and Dec 2019 Ore Reserves at North pit reduced by 4.3Mt to 81.4Mt. Proven Reserves reduced by 16.4Mt and Probable Reserves increased by 12.1Mt. This movement is owing to a decision to classify all ore reserves within the final west wall cut back of North Pit as meeting the lower confidence classification of a Probable Ore Reserve. This was taken due to lower geotechnical and economic confidence. This was based on recent geotechnical modelling work using new data and updates to economic evaluation including global assumptions which are conducted as part of Grange Resources' annual life of mine planning process. Total North Pit Ore Reserves less mining depletion remain in line with previous reports.

Between Dec 2018 and Dec 2019 Ore Reserves at Centre Pit increased by 21.5Mt to 29.3 Mt. The increase is a result of the successful feasibility study of cutting back Centre Pit. Centre Pit Proven Reserves have reduced by 0.5Mt and Probable Reserves increased by 22Mt.



The Centre Pit feasibility study was completed during 2019 and included:

- An update to the Centre Pit resource model that included new drilling completed in 2018 and 2019.
- New geotechnical wall stability assessment including limited equilibrium and 3D finite element analysis.
- New Whittle optimisations considering current long-term revenue and cost forecasts.
- New pit design and mining schedule along with assessment and integration with North Pit and Grange's Capital equipment profile.

The Tasmanian EPA has issued interim approval for the commencement of pre-stripping the first stage of Centre Pit with full approval anticipated by the end of the year. Grange believe there are reasonable prospects of obtaining full approval covering the stated reserves given that the proposal is the cut back of an existing open pit. Guidance has been provided by the EPA and an Environmental Impact Statement is being drafted to address the requirements. As full approval has not yet been obtained Measured and Indicated Resources within the second and third stage of Centre Pit have been designated as meeting the Probable Ore Reserve Category. Once final approvals are received an update to the Reserve confidence is expected.



MINERAL RESOURCES ESTIMATES BY DEPOSIT

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.

Table 3 - North Pit Mineral Resources - December 2019

	Measured Resources	Indicated Resources	Inferred Resources	TOTAL Resources
Tonnes (Mt)	106.5	81.7	48.8	237.0
DTR (%)	57.9	43.8	37.9	48.9
Fe (%)	67.7	67.9	68.1	67.9
Ni (%)	0.04	0.05	0.06	0.04
TiO₂ (%)	0.97	0.86	0.84	0.91
MgO (%)	2.05	1.59	1.49	1.78
P (%)	0.006	0.007	0.008	0.007
V (%)	0.35	0.34	0.32	0.34
S (%)	0.05	0.08	0.10	0.07

Table 4 - South Deposit Mineral Resource December 2019

	Measured Resources	Indicated Resources	Inferred Resources	TOTAL Resources
Tonnes (Mt)	2.6	6.6	9.0	18.2
DTR (%)	38.3	42.3	41.7	41.4
Fe (%)	67.1	67.6	67.5	67.5
Ni (%)	0.07	0.06	0.06	0.06
TiO₂ (%)	0.58	0.70	0.66	0.66
MgO (%)	1.99	1.79	1.74	1.79
P (%)	0.010	0.007	0.008	0.008
V (%)	0.26	0.26	0.26	0.26
S (%)	0.13	0.13	0.15	0.14



Table 5 Centre Pit Mineral Resource Estimate December 2019

	Measured Resources	Indicated Resources	Inferred Resources	TOTAL Resources
Tonnes (Mt)	41.2	66.8	14.4	122.4
DTR (%)	51.8	46.7	44.9	48.2
Fe (%)	68.3	68.3	68.3	68.3
Ni (%)	0.05	0.05	0.04	0.05
TiO₂ (%)	0.43	0.45	0.43	0.44
MgO (%)	1.21	1.21	1.03	1.19
P (%)	0.009	0.010	0.010	0.010
V (%)	0.39	0.37	0.33	0.37
S (%)	0.16	0.15	0.17	0.16

Table 6 – Spent Mineral Resource December 2019

	Measured Resources	Indicated Resources	Inferred Resources	TOTAL Resources
Tonnes (Mt)	0.0	2.1	0.3	2.4
DTR (%)	0.0	51.1	49.8	51.0
Fe (%)	0.0	69.6	70.8	69.8
Ni (%)	0.00	0.06	0.02	0.06
TiO₂ (%)	0.00	0.50	0.18	0.46
MgO (%)	0.00	0.75	0.47	0.72
P (%)	0.000	0.008	0.010	0.008
V (%)	0.00	0.43	0.46	0.44
S (%)	0.00	0.27	0.06	0.24



Table 7 – Long Plains Mineral Resource Estimate December 2019

	Measured Resources	Indicated Resources	Inferred Resources	TOTAL Resources
Tonnes (Mt)	0.0	25.4	82.2	107.6
DTR (%)	0.0	33.9	35.6	35.2
Fe (%)	0.0	68.9	69.4	69.3
Ni (%)	0.00	0.05	0.03	0.03
TiO₂ (%)	0.00	0.63	0.56	0.57
MgO (%)	0.00	0.91	0.92	0.91
P (%)	0.000	0.004	0.007	0.007
V (%)	0.00	0.33	0.36	0.35
S (%)	0.00	0.05	0.07	0.07

Table 8 Stockpiles Mineral Resource Estimate 2019

Stockpiles-Measured	Tonnes (Mt)	Grade (%DTR)
Crushed Ore	0.11	55.0
In-pit Broken stocks	2.23	50.3
Total	2.33	50.5



Table 9 Total Mineral Resource Estimate Savage River December 2019

	Measured Resources	Indicated Resources	Inferred Resources	TOTAL Resources
Tonnes (Mt)	152.6	182.6	154.7	489.9
DTR (%)	55.8	43.5	37.6	45.5
Fe (%)	67.9	68.2	68.8	68.3
Ni (%)	0.04	0.05	0.04	0.04
TiO₂ (%)	0.82	0.67	0.64	0.70
MgO (%)	1.82	1.35	1.15	1.43
P (%)	0.007	0.008	0.008	0.008
V (%)	0.36	0.35	0.34	0.35
S (%)	0.08	0.11	0.09	0.09

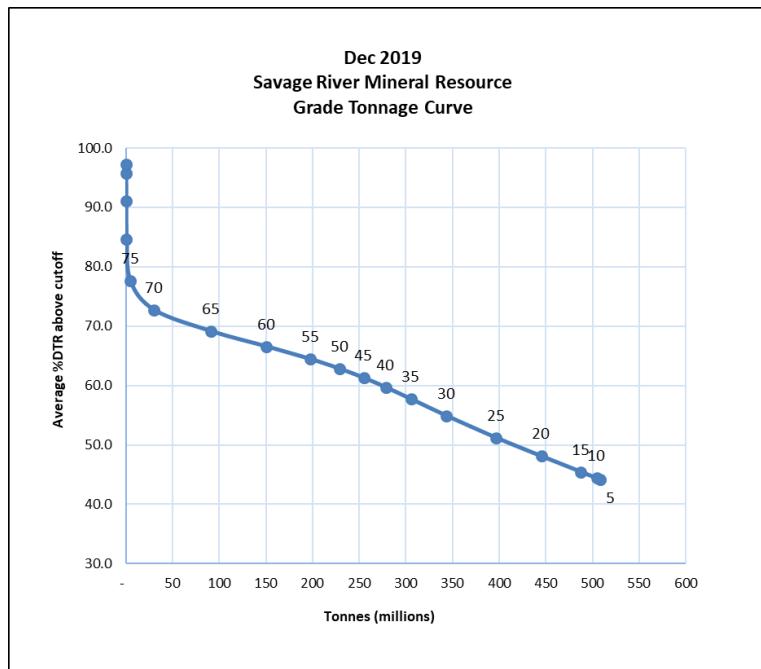


Figure 4 Grade Tonnage Curve, Savage River



ORE RESERVES BY DEPOSIT

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.

Table 10 - North Pit Ore Reserve Estimate - December 2019

	Proved Reserves	Probable Reserves	TOTAL Reserves
Tonnes (Mt)	54.6	26.8	81.4
DTR (%)	54.2	38.4	49.0
Fe (%)	67.9	67.7	67.8
Ni (%)	0.03	0.05	0.04
TiO₂ (%)	0.97	0.77	0.90
MgO (%)	1.83	1.57	1.74
P (%)	0.007	0.008	0.007
V (%)	0.36	0.33	0.36
S (%)	0.04	0.09	0.06

Table 11 – South Deposit Ore Reserve Estimate - December 2019

	Proved Reserves	Probable Reserves	TOTAL Reserves
Tonnes (Mt)	0.03	0.13	0.16
DTR (%)	37.7	39.7	39.4
Fe (%)	66.7	65.4	65.6
Ni (%)	0.05	0.06	0.06
TiO₂ (%)	0.61	0.82	0.79
MgO (%)	1.46	1.37	1.39
P (%)	0.005	0.006	0.006
V (%)	0.31	0.33	0.32
S (%)	0.12	0.18	0.17



Table 12 – Centre Pit Ore Reserve Estimate - December 2019

	Proved Reserves	Probable Reserves	TOTAL Reserves
Tonnes (Mt)	4.1	25.2	29.3
DTR (%)	44.8	41.5	42.0
Fe (%)	68.7	68.6	68.6
Ni (%)	0.04	0.05	0.05
TiO₂ (%)	0.49	0.42	0.43
MgO (%)	1.16	1.12	1.13
P (%)	0.006	0.010	0.009
V (%)	0.44	0.41	0.42
S (%)	0.12	0.14	0.13

Table 13 – Stockpiles Ore Reserve Estimate - December 2019

Stockpiles-Measured	Tonnes (Mt)	Grade (%DTR)
Crushed Ore	0.11	55.0
In-pit Broken stocks	2.23	50.3
Total	2.33	50.5

Table 14 – Total Savage River Ore Reserve Estimate - December 2019

	Proved Reserves	Probable Reserves	TOTAL Reserves
Tonnes (Mt)	61.1	52.1	113.2
DTR (%)	53.4	39.9	47.2
Fe (%)	67.9	68.1	68.0
Ni (%)	0.03	0.05	0.04
TiO₂ (%)	0.94	0.60	0.78
MgO (%)	1.78	1.35	1.58
P (%)	0.007	0.009	0.008
V (%)	0.37	0.37	0.37
S (%)	0.05	0.11	0.08



MINERAL RESOURCE & ORE RESERVE GOVERNANCE

In accordance with ASX Listing Rule 5.21.5, governance of the development and management of Grange's Mineral Resource and Ore Reserve is a key responsibility of Senior Management.

Granges senior staff designated with responsibility for internal review of the JORC Mineral Resources and Ore Reserves are:

- Roger Hill – Senior Geology Manager,
- Matthew Anderson - Savage River Mine Manager
- Nicholas van der Hout – Long term Planning Coordinator
- Ben Maynard – General Manager Operations

These staff oversee the planning and implementation of exploration and resource evaluation programs. The evaluation process incorporates internal skills and knowledge in operation and project management, downstream processing and commercial/financial areas of the business.

The General Manager Operations, in consultation with senior staff, facilitates the planning, monitoring, and the estimation and reporting of resources and reserves. The process is reviewed by an internal peer review team. External consultants are also utilised to supplement internal resources in the estimation process, with independent technical review undertaken as required.

Mineral Resource and Ore Reserve reporting is based on substantiated geological and mining assumptions and prepared in accordance with the Australasian Joint Ore Reserves Committee (JORC) Code 2012.

Grange reports Mineral Resources and Ore Reserves on an annual basis. Competent Persons named are members of the Australasian Institute of Mining and Metallurgy (AusIMM) and qualify as Competent Persons as defined in the JORC Code 2012.

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. Mr Maynard is a full-time employee, holds shares in Grange Resources, and is eligible to participate in short- and long-term incentive schemes.

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.



ABOUT GRANGE RESOURCES

Grange Resources Limited (Grange or the Company), ASX Code: GRR, is Australia's most experienced magnetite producer with over 50 years of mining and production from its Savage River mine and has a projected mine life beyond 2035. Grange produces a high-quality iron ore pellet with low levels of impurities that support reduced environmental impacts for end users.

Grange's operations consist principally of owning and operating the Savage River integrated iron ore mining and pellet production business located in the north-west region of Tasmania. The Savage River magnetite iron ore mine is a long-life mining asset. At Port Latta, on the north-west coast of Tasmania, Grange owns a downstream pellet plant and port facility producing more than two million tonnes of premium quality iron ore pellets annually.

Grange has a combination of spot and contracted sales arrangements in place to deliver its pellets to customers throughout the Asia Pacific region. In addition, Grange is a majority joint venture partner in a major magnetite development project at Southdown, near Albany in Western Australia.

Contacts

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-ENDS-



APPENDIX A - JORC TABLE 1 SAVAGE RIVER

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

SECTION 1: SAMPLING TECHNIQUES AND DATA

Criteria	Section 1 Sampling Techniques and Data	Commentary
Sampling techniques	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The deposits were sampled using diamond drilling (DD) with limited Reverse Circulation (RC) pre-collar. 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 recent samples are assayed for DTR, Fe²⁺, Total Fe, Ni, TiO₂, MgO, P, V, S, CaO, SiO₂ and Al₂O₃.
	<ul style="list-style-type: none"> Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 	<ul style="list-style-type: none"> 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.
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Drilling of Diamond core was a combination of HQ and NQ sizes, some triple tube. All resource drilling has been drilled with triple tube equipment since 2005. Samples were controlled based on geological contacts and generally no more than 2m in length. Sample selection was nominally >=0.75m and <=1.25m. All core samples were half cored. Core was split by diamond sawing. Samples were dried, crushed, split and pulverised to nominally 98% passing 75µm for Davis Tube Recovery (DTR) determination.



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Criteria	Section 1 Sampling Techniques and Data	Commentary
Drilling techniques	<ul style="list-style-type: none"> Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.). 	<ul style="list-style-type: none"> Samples used in the resource estimation were taken from diamond drill core of either HQ or NQ size or RC samples. (recent programs). 80% of holes informing the resource were diamond holes and 13% were RC holes. 5% of the total were percussion holes (isolated to CP resource) and 2 % other hole types. RC drill holes employ a 140mm face sampling hammer. Samples from vertical percussion drilling have been used in the past as part of the resource datasets, especially in the late '80's. • RC pre-collars were used in only 16% of the Long Plains campaign 2011-2013 to reduce drilling cost. RC was drilled to refusal and holes completed with diamond tails. (10 holes for 2592m drilling in 2012-3) Sonic precollars were used in the recent CP drilling campaign to penetrate waste dumps over-lying the remaining ore in Centre Pit North. Sonic pre-collars were typically 50-80m in inclined HQ3 diamond holes. (9 holes for 1862m drilled in 2018)
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. 	<ul style="list-style-type: none"> 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 (>90%) and there are no significant core recovery issues. RC chip recoveries are near total in dry holes and reduce significantly in wet holes. RC is discontinued in wet holes.
	<ul style="list-style-type: none"> Measures taken to maximise sample recovery and ensure representative nature of the samples. 	<ul style="list-style-type: none"> Drilling penetration rates were controlled in order to maximise recovery in ore zones.
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No relationship between sample recovery and grade is known at Savage River.
Logging	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Core samples from all deposits have been logged for lithology, mineralogy, alteration and mineralisation.



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Criteria	Section 1 Sampling Techniques and Data	Commentary
		<ul style="list-style-type: none"> 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.
	<ul style="list-style-type: none"> Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. 	<ul style="list-style-type: none"> Logging is a combination of qualitative and quantitative. Core was photographed wet and dry. No photos available for the oldest core.
	<ul style="list-style-type: none"> The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> All core and RC chips were fully logged.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> If core, whether cut or sawn and whether quarter, half or all core taken. 	<ul style="list-style-type: none"> 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. Core is cut on the centre axis and has no offset. The ore is relatively massive and the preferred orientation for core sawing is just left of the orientation line.
	<ul style="list-style-type: none"> If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. 	<ul style="list-style-type: none"> RC samples passed through a cyclone with dust collector and were split at the drill rig using a three stage riffle splitter or a rig mounted con splitter. Sample interval was 1m in recent programs and 2m in programs prior to 2000. For non-core, samples are dry riffled and sampled dry. When RC sample was damp, samples were speared uniformly.
	<ul style="list-style-type: none"> For all sample types, the nature, quality and appropriateness of the sample preparation technique. 	<ul style="list-style-type: none"> Sample preparation techniques are industry standard for magnetite ores and use the sub-sampling protocol as recommended by the Savage river laboratory. Sample prep on drill core drilled prior to 2011 was completed on site. Between 2011-2013 sample prep was completed at a commercial lab [NATA accredited]. In 2013 the Savage River lab upgraded the crushers and ovens and since then all core has been processed at the Savage River lab.



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Criteria	Section 1 Sampling Techniques and Data	Commentary
	<ul style="list-style-type: none"> Quality control procedures adopted for all sub-sampling stages to maximise the representativeness of samples. 	<ul style="list-style-type: none"> 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. As per standard operating procedure diamond core is dried and crushed according to Grange standard operating procedure, Diamond core was dried overnight in an oven at 1100C, crushed in a jaw crusher to 6mm, crushed in a Rolls crusher to 3mm. Since 2011 a Boyds crusher was installed in the lab enabling this comminution step to crush to 2mm. Following secondary crushing, the samples are riffle split to 2-3kg then a 150 gram sample is pulverised using a Rocklabs 3 ring grinder. RC chips were riffle split at the rig when dry and a 3kg sample was taken for each single metre drilled as described above. When RC sample was damp, samples were speared uniformly.
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Field QC procedures for RC and diamond samples involve the insertion of assay standards at a rate of 1 in 25. No duplicates or blanks have been taken except 27 field duplicates taken in the 2006 MLEP program. In this program the correlation was 1.000 for the duplicates.
	<ul style="list-style-type: none"> Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> 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).
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. 	<ul style="list-style-type: none"> The primary assay technique is Davis Tube Recovery (DTR) on a 10g sample, followed by Ferrous Iron (Fe^{2+}) via Satmagan and S, total Fe, TiO_2, MgO, V, P, S, CaO, SiO_2 and Al_2O_3 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.



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Criteria	Section 1 Sampling Techniques and Data	Commentary
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All DTR samples completed on site using Savage River technique. This technique has been used for 50 years at Savage River and pit reconciliations are within accepted tolerance. Magnetic susceptibility instruments are used for initial geological logging to help the geologist classify the logged interval as ore grade or waste. Grange uses TerraPlus KT-10 MagSus meters to classify ore and provide an indicative grade estimate ahead of DTR analysis. 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.
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Standards- Field assay standards are inserted at a rate of 1 in 25 in drilled core and RC through ore zones. Data analysis of standards has been performed and the data demonstrates sufficient accuracy and precision for use in Mineral Resource estimation. Three Standards were derived from 2006 MLEP drilling campaign in North Pit Savage River. Standards for recent Centre Pit and North Pit drill campaigns (2013 onwards) were prepared on site by a staff geo-chemist and are sourced from core from Long Plains. Results to date show good agreement with expected value which implies that the lab is producing accurate and repeatable analyses. Results from the 2006 Mine Lease Extension Project (MLEP) that campaign showed a correlation coefficient of 1.00 for 27 pairs of data. Since 2006, no field duplicates or blanks are inserted. No external laboratory checks have been performed and no check assaying has been undertaken since, but a new QAQC duplicates program has been initiated as part of the current drilling programs .
Verification of sampling and assaying	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. 	<ul style="list-style-type: none"> Significant intersections MagSus readings) are verified by alternate company geologists present in the core shed as part of the process of developing the cut-sheet instruction. The cut sheet defining sample lengths for cutting and sampling is selected based on the MagSus values



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Criteria	Section 1 Sampling Techniques and Data	Commentary
	<ul style="list-style-type: none"> The use of twinned holes. 	<ul style="list-style-type: none"> No twinned holes have been drilled.
	<ul style="list-style-type: none"> Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. 	<ul style="list-style-type: none"> Prior to 2005 Primary data is captured in paper format and transferred manually to an Access database. From 2005 Primary data was 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. Recently (July 2019), logged data capture is directly in DataShed-LogChief software with validation controls.
	<ul style="list-style-type: none"> Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> In the drilling campaigns in 2019 a small proportion of the parent sample were excluded for destructive geotechnical testing prior to assay. These represent <1% of the all of the composite assays and will have no material effect on the estimate.
Location of data points	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All significant surface features including drill collars were surveyed by Grange staff surveyors using a combination of conventional surveying (total station) and/or high resolution RTK GPS. In each case, the collars 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°). North seeking gyro was used prior to the use of the DeviFlex downhole survey tool. The stated accuracy for DeviFlex is +/- 0.01° per station in azimuth and +/- 0.1° in dip, with stations every 3m downhole.
	<ul style="list-style-type: none"> Specification of the grid system used. 	<ul style="list-style-type: none"> The grid system used is the Savage River Mine Grid, where; $10^{\circ}18' 23''$ (N) SRG= 0° (N) GDA94



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Criteria	Section 1 Sampling Techniques and Data	Commentary
	<ul style="list-style-type: none">Quality and adequacy of topographic control.	<ul style="list-style-type: none">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.
Data spacing and distribution	<ul style="list-style-type: none">Data spacing for reporting of Exploration Results.	<ul style="list-style-type: none">For Deposits on the Savage River Mine lease the nominal drill hole spacing is 50m (between sections) and by 50-70m (on section).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.Inferred Mineral Resources at Long Plains have been defined in areas of 100x100 metre up to 600x100 metre drill spacing.
	<ul style="list-style-type: none">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.	<ul style="list-style-type: none">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.
	<ul style="list-style-type: none">Whether sample compositing has been applied.	<ul style="list-style-type: none">Samples have been composited prior to geostatistical analysis and Mineral Resource estimation. At Savage River Mine, for the 2006 MLEP the composite length was 2m. At Long Plains, the composite length was 1m. The most common composite length was 1m and the second most common was 2m. For the resource estimates, the Surpac best-fit algorithm was used which resulted in composite lengths of 0.5 to 1.5m. This approach was adopted because a selection of a uniform composite length would have resulted in duplicated values in composites created from longer intervals, which may reduce the nugget values in variograms.
Orientation of data in relation	<ul style="list-style-type: none">• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	<ul style="list-style-type: none">The majority of drill holes are oriented to achieve intersection angles as close to perpendicular to the mineralization as is practicable.



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Criteria	Section 1 Sampling Techniques and Data	Commentary
to geological structure	<ul style="list-style-type: none">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.	<ul style="list-style-type: none">No significant sampling bias occurs in the data due to the orientation of drilling with regards to mineralized structures/bodies.
Sample security	<ul style="list-style-type: none">The measures taken to ensure sample security.	<ul style="list-style-type: none">All samples are logged and bagged on site by Grange geological staff and chain of custody remains with Grange staff.
Audits or reviews	<ul style="list-style-type: none">The results of any audits or reviews of sampling techniques and data.	<ul style="list-style-type: none">During the Mine Life Extension Project in 2006 AMC peer reviewed the NP resource for the mine life extension project (MLEP).Following the recent major drill campaign the resource was reviewed by AMC (March 2019 and Aug 2019).A sample prep audit was conducted for the external provider. An internal review of the SR lab was completed in June 2019. That review was satisfied with procedures, calibration sand methods.In 2019, AMC peer reviewed the NP and CP Resources and CP Reserves their comments for EOY2018 noted QA/QC practices at Savage River were to an acceptable standard, with recommendations:<ul style="list-style-type: none">There is opportunity to improve QA/QC by including external umpire check assays as a means of further validation.It was recommended to continue submitting standards and add duplicate and blank samples at a rate of 5% particularly when drilling new areas. <p>These recommendations are being addressed with a procedural update and an upgrade to the geological database</p>



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SECTION 2: REPORTING OF EXPLORATION RESULTS

Criteria	Reporting Of Exploration Results	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> 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. 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. 	<ul style="list-style-type: none"> 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). Mining lease 2M/2001 was granted 11/12/2001 comprising 4,987 hectares which includes the main orebodies North Pit (NP), South Lens (SL), Centre Pit (CP), 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. Land tenure on ML 2M /2001 includes; State forest, Forest Reserve, Informal reserve, Crown Land, Private parcel, Conservation area, Regional Reserve and national Estate. Mining lease 14M/2007 was granted 14/5/2008 comprising 91 hectares as an easement (including a sewerage easement) on the Savage River townsite. This lease expires 7 Nov 2031 and no bond is held by the State of Tasmania. Land tenure on ML 14M/2007 includes: Forest Reserve, Regional Reserve, Private land, Proposed public reserve-CLAC, Crown land Authority Land and Crown Land Mining lease 11M/2008 was renewed on 18 December 2017 and expires 7/10/2031 and comprises two lots totalling 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. A bond is held by the State of Tasmania. Exploration Licence EL8/2014 was granted for an 11sq km lease north of 2M-2001 during 2017. Currently under application for an extension of term. A small mining lease ML4M-2019 is currently also under application (August 2019) . The purpose of the ML 4M-2019 is merely to accommodate ponding of water upstream in the drainages if it occurs as a result of approved mining activity on the neighbouring ML 2M-2001.



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Criteria	Reporting Of Exploration Results	Commentary
		<ul style="list-style-type: none"> Exploration License EL30/2003 was granted in February 2010 and an extension of term has been granted on 5th July 2019 and expires on 18 June 2021. This lease covers the entire Long Plains deposit. The lease comprises 38 sq km and adjoins 2M/2001 to the north.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> Systematic exploration commenced during the late 1950's with the Bureau of Mineral Resources conducting airborne & ground magnetic surveys to delineate Savage River & two smaller anomalies south at Long Plains & Rocky River. Diamond drilling commenced in the late 1950's-early 1960's by Industrial & 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.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralization. 	<ul style="list-style-type: none"> 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. 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 <20m wide) lenses and layers in the mafic sequence to the west. Magnetite ore ranges from disseminated to massive, with much of the main Ore Zone comprising massive to semi-massive magnetite from 1994 report by Thorne.
Drill hole Information	<ul style="list-style-type: none"> 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"> The Savage River deposit has been mined for over 50 years and a comprehensive database 948 drill holes for over 140,000m of drilling has been accumulated which informs the resource models. Drill hole information has been included in Appendix C



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Criteria	Reporting Of Exploration Results	Commentary
	<ul style="list-style-type: none">• easting and northing of the drill hole collar• elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar• dip and azimuth of the hole• down hole length and interception depth• hole length.• 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.	
Data aggregation methods	<ul style="list-style-type: none">• 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.	<ul style="list-style-type: none">• 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.
	<ul style="list-style-type: none">• 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.	<ul style="list-style-type: none">• There was no cutting of high grades based on statistical analysis.• Sample data was generally composited to 1 metre down hole length using a best fit-compositing method.
	<ul style="list-style-type: none">• The assumptions used for any reporting of metal equivalent values should be clearly stated.	<ul style="list-style-type: none">• Short intervals were sampled, where discrete lithologies were present. The compositing routine aggregates these to 1m composites.



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Criteria	Reporting Of Exploration Results	Commentary
Relationship between mineralization widths and intercept lengths	<ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralization with respect to the drill hole angle is known, its nature should be reported. 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'). 	<ul style="list-style-type: none"> All intercepts are reported as down hole lengths and the down hole composites are used to inform the ordinary kriged resource estimate. Refer to intercept tables in Appendix C.
Diagrams	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> A locality plan (figure 5) and typical cross sections (figure 6-10) for each deposit area are attached.
Balanced reporting	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All individual drilling results from diamond, RC (and limited percussion holes in CP resource) have been incorporated into the current resource estimations. Note that in the most recent NP estimate, the percussion holes were removed. The most recent CP estimate includes 4% of data sourced from percussion holes.
Other substantive exploration data	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> The Savage River Mine has been in operation for over 50 years with substantial data collected including geophysical surveys, geological mapping of exposures and metallurgical test work. Waste management plans are based upon acid base accounting analyses of selected representative data from each deposit at Savage River.



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Criteria	Reporting Of Exploration Results	Commentary
	characteristics; potential deleterious or contaminating substances.	
Further work	<ul style="list-style-type: none">The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).	<ul style="list-style-type: none">Current (2018-19) drilling campaigns have focused on:<ul style="list-style-type: none">a) in-pit resource and geotechnical drilling to firm up life of mine plans for the open cut method andb) Drilling depth extensions beneath the planned open cut pit to provide a resource estimate upon which to base a pre-feasibility study for underground mining.c) NP-UG drilling from the exploration decline is focussed on In-fill drilling for geotechnical and resource purposes.
	<ul style="list-style-type: none">Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	<ul style="list-style-type: none">Current drilling is in-fill drilling within the underground mine target area. The purpose of the drilling is to increase geotechnical orebody knowledge and it is not extensional drilling.



SECTION 3 ESTIMATION & REPORTING OF MINERAL RESOURCES

Criteria	Estimation and Reporting of Mineral Resources	Commentary
Database integrity	<ul style="list-style-type: none">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.	<ul style="list-style-type: none">Transcription errors are limited by having assay data directly merged into the database with key fields on sample ID.
	<ul style="list-style-type: none">Data validation procedures used.	<ul style="list-style-type: none">Visual validation in 3D is utilized having sections plotted with block grades, the drill-hole assays and geology intervals displayed.Validation of the database occurs at distinct stages.Data entry – data is mostly entered into Excel spreadsheets, controlled by lookup lists and ranges of acceptable values.Before upload to the database – data is cross-checked in Excel.Before extracting composites – a set of queries are run, checking for data continuity, abnormal values and overlapping ranges.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.
Site visits	<ul style="list-style-type: none">Comment on any site visits undertaken by the Competent Person and the outcome of those visits.If no site visits have been undertaken indicate why this is the case.	<ul style="list-style-type: none">Competent Person is a Grange employee, works on site and has an intimate knowledge of the operation. The technical services team includes senior mining engineers, geologists and environmental scientists that provide specialist advice and analysis to the Competent Person to inform the resource and reserve estimates.Competent person visits site frequently and has a very close and current understanding of the orebodies.
Geological interpretation	<ul style="list-style-type: none">Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	<ul style="list-style-type: none">Each section was interpreted for magnetite mineralization in a live-3D environment, i.e. the sections were not printed out for interpretation purposes. Grade control outlines and blasthole data as well as visual checks in the field were used to inform the ore/waste contacts and this supports the spatial interp using both grade control and wide spaced diamond drilling data. This has improved the confidence of the model especially close to current mining benches. The work was all done in Geovia Surpac.



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Criteria	Estimation and Reporting of Mineral Resources	Commentary
		<ul style="list-style-type: none"> 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, >35 DTR) and low grade (ZS 15-35 DTR) categories.
	<ul style="list-style-type: none"> Nature of the data used and of any assumptions made. 	<ul style="list-style-type: none"> The geological interpretation has high confidence on a deposit scale, informed by regularly spaced drilling, in-pit mapping, grade control drilling and monthly reconciliations.
	<ul style="list-style-type: none"> The effect, if any, of alternative interpretations on Mineral Resource estimation. 	<ul style="list-style-type: none"> 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. The wireframing exercise in July 2019 added 128 separate new waste wireframes and 50 new separate internal low grade wireframes within the North Pit Main Ore Zone (MOZ) wireframe. This had the effect of improving the match between the block model grade versus the top-cut declustered composite mean grade by domain. The global resource reconciliation had a very good match with concentrate produced in 2019. So for each of the MOZ, internal LG and internal waste domains; <ul style="list-style-type: none"> the data is from a single normally distributed statistical population; the mean and variance are consistent throughout the domain; the domain is geologically homogeneous; the domain has a single orientation of grade continuity.
	<ul style="list-style-type: none"> The use of geology in guiding and controlling Mineral Resource estimation. 	<ul style="list-style-type: none"> 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.
	<ul style="list-style-type: none"> The factors affecting continuity both of grade and geology. 	<ul style="list-style-type: none"> 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. In extrapolated areas down dip, the interpretations of mineralised geometry have been conservative.
Dimensions	<ul style="list-style-type: none"> The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan 	<ul style="list-style-type: none"> The Savage River ore-bodies occur discontinuously over a strike length of 6km with thickness ranging from 40-150m.



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	<p>width, and depth below surface to the upper and lower limits of the Mineral Resource.</p>	<ul style="list-style-type: none"> • All lenses remain open at depth. • A summary of the defined extents of individual deposits follows: <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>1900</td><td>219</td><td>1089</td></tr> <tr> <td>Centre Pit</td><td>2450</td><td>255</td><td>583</td></tr> <tr> <td>Sprent</td><td>244</td><td>49</td><td>152</td></tr> <tr> <td>South Deposit</td><td>554</td><td>72</td><td>396</td></tr> <tr> <td>Long Plains</td><td>3200</td><td>75</td><td>300</td></tr> </tbody> </table>	Deposit	Strike Extent (m)	Width Extent (m)	Depth Extent (m)	North Pit	1900	219	1089	Centre Pit	2450	255	583	Sprent	244	49	152	South Deposit	554	72	396	Long Plains	3200	75	300
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Estimation and modelling techniques	<ul style="list-style-type: none"> • The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. 	<ul style="list-style-type: none"> • Estimations up to 2014 been undertaken by Grange staff using recommendations and parameters defined in variography studies completed by Snowden Mining Industry Consultants • Since 2014, estimations have been undertaken by Optiro Mining consultants in consultation with Grange staff. • Mineralized domains were established from high grade and low grade intersects as interpreted in the geological model. • 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 deposits have progressively moved from inverse distance methods to OK as appropriate. • The Sprent deposit is comparatively small (<3M tonnes) and considered to be an extension of Centre Pit South. It was developed in 2010 to supplement ore supply. • 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. • Sample data was generally composited to 1 metre 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 • Optiro have recommended top cuts as tabled below to reduce the impact of significant outliers and positively skewed populations. 																								



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		Top Cuts North Pit 2019	Domain	DTR	DxDTR	Density	Fe2+	Fe	Ni	TiO2	MgO	P	V	S
		ZAZM	-	-	-	-	-	0.75	2.00	-	0.09	-	0.31	
		ZS	-	-	-	-	-	-	2.00	-	-	-	0.68	
		WL	-	-	-	-	-	-	-	-	-	-	0.47	
		Top Cuts South Deposit 2019												
		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 2019												
		Domain	DTR	DxDTR	Density	Fe2+	Fe	Ni	TiO2	MgO	P	V	S	
		CPN_ZAZM	-	-	-	-	-	0.30	-	7.00	0.10	-	1.00	
		CPN_ZS	-	-	-	-	-	0.20	-	8.00	0.06	-	-	
		CPS_ZAZM	-	-	-	-	-	-	-	4.50	0.05	-	-	
		CPS_ZS	-	-	-	-	-	0.40	-	10.00	0.10	2.00	1.50	
		<ul style="list-style-type: none"> No top cuts have been applied to the Centre Pit South or Sprent models. DTR is calculated from the attribute estimate (DxDTR), where $DTR = (DxDTR/D)$. Check estimates using an ordinary kriging of DTR_ok are also estimated, Density values and the calculated attribute Density x DTR are both subjected to variography and estimation, with DTR back calculated in the model. DTR_ok has been estimated as a comparison to DxDTR. Specialist Resource Estimation consultants (Optiro) have created the block models from wireframes and data supplied by on-site geologists. These model estimations have been run with Surpac software and Snowden Supervisor for variography studies. Block models were constructed for North Pit using a 5mE by 10mN by 5mRL parent block size with sub- 												



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		<p>celling to 2.5mE by 5mN by 2.5mRL. Centre Pit using a 5mE by 15mN by 5mRL parent block size with sub-celling to 2.5mE by 3.75mN by 2.5mRL.</p> <ul style="list-style-type: none"> Variography studies for each deposit have been completed by Optiro Mining Consultants using "Supervisor" software with recommendations for estimation parameters appropriate for each deposit and the modelling technique employed as tabulated below. <table border="1"> <thead> <tr> <th colspan="8">North Pit 2019</th> </tr> <tr> <th colspan="3">Ellipsoid Orientation</th> <th colspan="2">Anisotropy Ratios</th> <th colspan="3">Search Distance (m)</th> </tr> <tr> <th>Major Axis</th> <th>Semi-Major Axis</th> <th>Minor Axis</th> <th>Major/Semi Major</th> <th>Major/Minor</th> <th>Pass 1</th> <th>Pass 2</th> <th>Pass 3</th> </tr> </thead> <tbody> <tr> <td>0->0</td> <td>-90->0</td> <td>0->90</td> <td>1</td> <td>5</td> <td>150</td> <td>300</td> <td>600</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="4">North Pit 2019</th> </tr> <tr> <th rowspan="2">Pass</th> <th colspan="2">Number of Samples</th> <th rowspan="2">Maximum Number of samples per hole</th> </tr> <tr> <th>Minimum</th> <th>Maximum</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>16</td> <td>32</td> <td>4</td> </tr> <tr> <td>2</td> <td>8</td> <td>32</td> <td>4</td> </tr> <tr> <td>3</td> <td>2</td> <td>32</td> <td>999</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="8">Centre Pit 2019</th> </tr> <tr> <th colspan="3">Ellipsoid Orientation</th> <th colspan="2">Anisotropy Ratios</th> <th colspan="3">Search Distance (m)</th> </tr> <tr> <th>Major Axis</th> <th>Semi-Major Axis</th> <th>Minor Axis</th> <th>Major/Semi Major</th> <th>Major/Minor</th> <th>Pass 1</th> <th>Pass 2</th> <th>Pass 3</th> </tr> </thead> <tbody> <tr> <td>0->0</td> <td>-90->0</td> <td>0->90</td> <td>1</td> <td>5</td> <td>50</td> <td>100</td> <td>600</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="4">Centre Pit 2019</th> </tr> <tr> <th rowspan="2">Pass</th> <th colspan="2">Number of Samples</th> <th rowspan="2">Maximum Number of samples per hole</th> </tr> <tr> <th>Minimum</th> <th>Maximum</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>16</td> <td>32</td> <td>8</td> </tr> <tr> <td>2</td> <td>8</td> <td>32</td> <td>8</td> </tr> <tr> <td>3</td> <td>2</td> <td>32</td> <td>999</td> </tr> </tbody> </table>									North Pit 2019								Ellipsoid Orientation			Anisotropy Ratios		Search Distance (m)			Major Axis	Semi-Major Axis	Minor Axis	Major/Semi Major	Major/Minor	Pass 1	Pass 2	Pass 3	0->0	-90->0	0->90	1	5	150	300	600	North Pit 2019				Pass	Number of Samples		Maximum Number of samples per hole	Minimum	Maximum	1	16	32	4	2	8	32	4	3	2	32	999	Centre Pit 2019								Ellipsoid Orientation			Anisotropy Ratios		Search Distance (m)			Major Axis	Semi-Major Axis	Minor Axis	Major/Semi Major	Major/Minor	Pass 1	Pass 2	Pass 3	0->0	-90->0	0->90	1	5	50	100	600	Centre Pit 2019				Pass	Number of Samples		Maximum Number of samples per hole	Minimum	Maximum	1	16	32	8	2	8	32	8	3	2	32	999
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	<ul style="list-style-type: none"> The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterization). 	<ul style="list-style-type: none"> New model estimates were compared against previous model estimates by flitch 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. DTR is calculated from the estimated attribute of dxdt; then DTR is calculated as $= (dxDT/d)$. This estimate is checked by an ordinary kriged attribute of DTR_ok. These correlate very closely with an overall difference of 1.7% at a 15% DTR cut-off grade. No byproduct recoveries have been considered. 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. 																																																																																																				



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	<ul style="list-style-type: none"> In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions behind modelling of selective mining units. Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates. Discussion of basis for using or not using grade cutting or capping. 	<ul style="list-style-type: none"> 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. No assumptions were made behind modelling of selective mining units. There is a strong correlation between DTR and density which is described below in the Bulk Density section. Pearson correlation coefficient of 97% for all DTRvs density values in the database. 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 validated in section, then in plan (flitch) to enable robust shapes to be developed. Top cuts were used where outliers were identified by exploration data analysis. Outliers were identified for: <ul style="list-style-type: none"> Ni, TiO₂ and P in North Pit P in South Deposit Ni, MgO, P,V and S in Centre Pit
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Block estimates were cross-validated by comparison with printed block sections showing drilling, block values and constraining wireframes. Swath plots generated show the drill hole and modelled grades compared well across the deposits particularly where there were a large number of drillholes. Grade Control outlines and blasthole data as well as visual checks in the field were used to inform the ore/waste contacts and this supports the spatial interp using both GC and wide spaced diamond drilling data. This has improved the confidence of the model especially close to current mining benches.
Moisture	<ul style="list-style-type: none"> Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content. 	<ul style="list-style-type: none"> Tonnages were estimated on a dry basis
Cut-off	<ul style="list-style-type: none"> The basis of the adopted cut-off grade(s) or quality parameters applied. 	<ul style="list-style-type: none"> For the Open Cut, the cut-off grade of 15%DTR is based on a natural break in the Grade-Tonnage Curve and is supported by economic analysis for the open cut undertaken during 2019.



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parameters		<ul style="list-style-type: none"> The basis for RPEEE for the mineralisation accessible from underground a minimum average panel grade of 35% has applied using an appraisal of break-even revenue per panel for sub-level mining. The mining method has not been decided, but the SLC and block caving methods are under consideration. 															
Mining factors or assumptions	<ul style="list-style-type: none"> Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made. 	<ul style="list-style-type: none"> Above the ultimate pit shape, an optimised pit has been designed, based on an iron ore price, mining costs. Below the ultimate open cut profile , a combination of minimum mining width and average panel grades for three mining methods; (Stoping, SLC and Block Caving) have been used as a preliminary guide to reasonable prospects of eventual economic extraction ahead of further studies. No mining factors (i.e. dilution, ore loss, recoverable resources at selective mining block size) have been applied for an eventual underground operation. <table border="1"> <thead> <tr> <th colspan="3">Conditions to meet RPEEE</th></tr> <tr> <th>Method</th><th>Min width</th><th>Cut-Off Grade</th></tr> </thead> <tbody> <tr> <td>Stoping</td><td>10</td><td>50</td></tr> <tr> <td>SLC</td><td>20</td><td>35</td></tr> <tr> <td>BC</td><td>25</td><td>25</td></tr> </tbody> </table>	Conditions to meet RPEEE			Method	Min width	Cut-Off Grade	Stoping	10	50	SLC	20	35	BC	25	25
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Metallurgical factors or assumptions	<ul style="list-style-type: none"> The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made. 	<ul style="list-style-type: none"> 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 modelling the anticipated recoveries through the magnetic separation process for over 50 years. 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. 															
Environmental factors or	<ul style="list-style-type: none"> Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable 	<ul style="list-style-type: none"> Waste rock: waste is segregated while mined into one of four waste types based on the rock's acid-base chemistry. These units are disposed of in encapsulated dumps according to the waste management plan as part of the environmental permit conditions. 															



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Criteria	Estimation and Reporting of Mineral Resources	Commentary
assumptions	prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	<ul style="list-style-type: none">Tailings are disposed of as sediment beaches in engineered tailing ponds. The tailings management plan is part of the environmental permit conditions.
Bulk density	<ul style="list-style-type: none">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.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 depositDiscuss assumptions for bulk density estimates used in the evaluation process of the different materials.	<ul style="list-style-type: none">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: $SG = \left(\frac{DTR}{510} + \frac{100 - DTR}{281} \right)^{-1}$ <ul style="list-style-type: none">36% of all bulk density values are measured, 56% are calculated and 7% have null values for density.The First Principles equation relates density to DTR and provides a reasonable fit to the measured data.North Pit models removed percussion holes (nearly half of informing data for 2011 and prior resource. Centre Pit has retained a small proportion of percussion holes in the resource estimate.As a consequence, there are now much greater proportion of densities having measured values and a smaller portion of density is calculated via regression methods where primary density measurements were absent.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.



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Criteria	Estimation and Reporting of Mineral Resources	Commentary
Audits or reviews	<ul style="list-style-type: none">The results of any audits or reviews of Mineral Resource estimates.	<ul style="list-style-type: none">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).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 by Snowden and found them to be valid.AMC conducted a new resource Audit in March 2019-with further review in August 2019. AMC's review found that:<ul style="list-style-type: none">The Mineral Resource for Centre and North Pit Deposits were appropriately classified as Measured, Indicated, and inferred resources in accordance with JORC CodeThat the processes to generate the block model for the Resource Estimates have been completed using accepted practice with drill-hole data supported by quality control protocol, known mining history and reconciliation.AMC cited the following areas for improvement in future;The block grade estimation has used the product of density and the DTR (DxDTR) to generate semi-variograms. AMC suggests DTR and Bulk density are modelled separatelyA new resource model was estimated in August 2019 where DTR was calculated using both methods. As the resulting difference is very slight, Grange has decided to retain the DTR=(DxDTR/D) calculation. AMC maintain the view that DTR should be estimated directlyInitially large searches of 9,999m were used for the third pass in the estimation for each pit. Which in the lastest model has been reduced to 600m in both CP and NP.AMC recommended that a maximum of three samples per drillhole as used in each search pass. Grange currently uses 4 in NP and 8 in CP with the method used has been supported by good reconciliation performance.A polygonal grade estimate was performed to validate the outputs from the modelling. shows 7% less tonnes and similar DTR to the kriged estimates.



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Criteria	Estimation and Reporting of Mineral Resources	Commentary
		<ul style="list-style-type: none">Reconciliation suggests that the estimation is comparable with grade control data. Global reconciliation is performed on an annual basis and show good performance between actual produced concentrate and estimated contained concentrate in the resource model.
Discussion of relative accuracy/confidence	<ul style="list-style-type: none">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.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.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.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.	<ul style="list-style-type: none">Global reconciliations and bench reconciliations are used to feedback into the resource model.Regular reconciliations show a good performance of model vs actual. The current resource model was found to be a better predictor of modelled concentrate due to changes in wireframes in current model.Bench reconciliations show good agreement and generally a positive reconciliation between resource and produced ore (metal),Reconciliations are calculated from material survey movement against changes in stockpiles and actual magnetite concentrate production. Global reconciliation current model shows an under-prediction of the actual concentrate production by approximately 1.5% project to date, although this varies on a year to year basis. The Resource model under predicts by an avg of 10% for the last 3 years (2017-2019) and 2.9% over the past year (2019).Grange believes that the accuracy and confidence in the Mineral Resources is appropriate and within the accepted error ranges for the Mineral Resource confidence categories (Measured Indicated and Inferred).



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SECTION 4: ESTIMATION & 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
Mineral Resource estimate for conversion to Ore Reserves	<ul style="list-style-type: none"> Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. 	<ul style="list-style-type: none"> The Total 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 as at 31 Dec 2019 and as publicly reported on in this release.
	<ul style="list-style-type: none"> Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves. 	<ul style="list-style-type: none"> The stated Mineral Resource is inclusive of the Ore Reserve
Site visits	<ul style="list-style-type: none"> Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case. 	<ul style="list-style-type: none"> The Competent Person has more than 10 years of experience in an open pit Magnetite mine at senior operational management and technical level. Competent person is an employee of the company.
Study status	<ul style="list-style-type: none"> The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. 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. 	<ul style="list-style-type: none"> The Centre Pit Ore Reserve estimate is based on an updated Feasibility Study completed in October 2019. The Reserves for North Pit and South Deposit are based on feasibility studies completed in 2006 with updated economic considerations as reviewed through the annual budgeting process. The Stockpile reserves are based on detailed physical surveys and collected grade control assays 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. The information used for estimation and reporting of this Ore Reserve is based upon those Feasibility Studies and with current production reconciled modifying factors. Feasibility assessments continue on an ongoing basis, for which applicable preliminary results support the reported reserves.



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Criteria	JORC Code explanation	Commentary																								
Cut-off parameters	<ul style="list-style-type: none"> The basis of the cut-off grade(s) or quality parameters applied. 	<ul style="list-style-type: none"> 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. 																								
Mining factors or assumptions	<ul style="list-style-type: none"> 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). 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. The assumptions made regarding geotechnical parameters (eg: pit slopes, stope sizes, etc), grade control and pre-production drilling. 	<ul style="list-style-type: none"> Whittle Optimisations are 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 optimiser are based on a combination of historical performance and forecasts of future costs. Parameters are initial determined in Feasibility Studies and are reviewed as part of the ongoing Life Of Mine Planning and evaluation process. The Ore Reserves are reported within a detailed staged pit designs which are based on Whittle open pit optimization. Mining is undertaken by conventional bulk mining methods utilizing hydraulic face shovels, dump trucks and conventional drill and blast, which is suited to the local terrain. The overall pit slopes used for the design and optimisation 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: <table border="1"> <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>27</td> <td>32</td> <td>25</td> </tr> <tr> <td>Centre Pit</td> <td>37</td> <td>28</td> <td>37</td> <td>35</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	27	32	25	Centre Pit	37	28	37	35	South Deposit	40	38	36	42
Pit	Overall Slope Angle (degrees)																									
	East	West	North	South																						
North Pit	48	27	32	25																						
Centre Pit	37	28	37	35																						
South Deposit	40	38	36	42																						
	<ul style="list-style-type: none"> The major assumptions made and Mineral Resource model used for pit and stope optimization (if appropriate). 	<ul style="list-style-type: none"> 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. 																								



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Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> The mining dilution factors used. The mining recovery factors used Any minimum mining widths used. The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. The infrastructure requirements of the selected mining methods. 	<ul style="list-style-type: none"> The mining block model includes an allowance for likely mining dilution based on historical performance. For North Pit this has added approximately 2% tonnage and reduced the DTR by 8%. In Centre Pit this has added zero additional tonnage and reduced the DTR by 15%. 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). Temporal or period reconciliations are run to check the quality of the 3 month plan cycle Mining widths of 20m are applied to the pit designs based on the current primary load and haul equipment's minimum working requirements. Ore and waste can be mined and segregated to the minimum block size based on the current equipment specification and mining method. 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 Inferred resources are not scheduled or included in cash flow assessments. Inferred resources are considered during optimizations to assess further reserve development priorities. The mine can conduct remote blast hole drilling and charging to support safe operation utilising the mining method.
Metallurgical factors or assumptions	<ul style="list-style-type: none"> The metallurgical process proposed and the appropriateness of that process to the style of mineralization. Whether the metallurgical process is well-tested technology or novel in nature. The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domains applied and the 	<ul style="list-style-type: none"> 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 50 years and is used extensively for magnetite deposits throughout the world. The Concentrator and Pellet Plant have been operated continuously by Grange Resources since 2009 and before by Australian Bulk Minerals since 1997. There has been metallurgical test work undertaken as part of early Feasibility Studies and subsequent drilling programs. A plant recovery factor of 95% is used to account for concentrator efficiency and is supported by historical performance



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Criteria	JORC Code explanation	Commentary
	<p>corresponding metallurgical recovery factors applied.</p> <ul style="list-style-type: none">• Any assumptions or allowances made for deleterious elements.• 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.• For minerals that are defined by a specification, has the ore reserve estimation	<ul style="list-style-type: none">• The Ore Reserve and the associated mine schedule produce an output on which the sale of pellet is based and includes any deleterious elements• Deleterious elements (also referred to as impurities), are identified in product specification and are estimated in the resource model.• The mineral resource model appropriately addresses the chemical criteria and the emergent physical properties to meet a high quality iron ore product.• The Davis Tube Recovery (DTR) technique is the fundamental unit of measurement of grade of ore at a magnetite mine.• DTR is a measure of the “recoverable” magnetite as determined by equipment which seeks to mimic the process occurring in the concentrator.• DTR can be used to predict the concentrate contained within the ore, which is far more relevant than an analysis for total iron in the ore.• The DTR is a physical test, dependent on the actual liberation of the magnetite from its gangue elements.• The liberation at the laboratory scale needs to mimic the liberation at a plant scale. This liberation is directly related to the grind distribution the method has been designed as appropriate for the Savage River deposit. The recoverable magnetite from the Davis Tube is called Davis Tube Concentrate (DTC) and is weighed to determine what proportion of the original sample was recovered.• The concentrate recovered from the DTC is analysed by X-ray fluorescence (XRF) methods to assess the quality of the DTC, ie the grade of iron, silica, sulphur etc in the concentrate.• X-ray fluorescence utilizes a spectrometer, an x-ray instrument used for non-destructive chemical analyses of rocks, minerals, sediments and fluids• Magnetite concentrate and hematite pellets are sold on a market specification.



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Criteria	JORC Code explanation	Commentary
	been based on the appropriate mineralogy to meet the specifications?	
Environmental	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 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 remediation of contamination to that caused by the Company's operation 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 required to operate to Best Practice Environmental Management (BPEM). The Goldamere Act provides overriding legislation against all other Tasmanian legislation The main mining lease 2M/2001 on which both North Pit and Centre pit are allocated and is granted for a 30 year term due for renewal in 2031. Grange has current approvals to mine in place. The waste rock 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 complex or other dumps as approved by the Tasmania EPA and Mineral Resource Tasmania which have sufficient capacity for the current life of the mine. The potentially



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Criteria	JORC Code explanation	Commentary
		<p>acid forming waste is encapsulated with layers of clay and alkaline rocks to prevent the formation of acid rock drainage</p> <ul style="list-style-type: none"> Process residue from the concentration of ore (tailings) is stored in the Main Creek Tailings Dam and the South Deposit Tailings Storage Facility. There is sufficient capacity to store tailings from North Pit, Centre Pit and South Deposit until 2040. Approval for the South Deposit Tailing Storage Facility was granted by the Department of Environment and the Waratah-Wynyard Council and was commissioned in November 2018
Infrastructure	<ul style="list-style-type: none"> The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed. 	<ul style="list-style-type: none"> 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. Towns site hosts a workforce of 250 persons. Concentrate is transported by slurry pipeline to the Grange-owned Port Latta pellet plant and dedicated ship loading facility for export. Storage of tails in the Main Creek Tails Storage Dam (facility) will be transitioned to the new South Deposit Tails Storage Facility over the next 3 years. The new facility will have sufficient capacity to support the Life of Mine operation.
Costs	<ul style="list-style-type: none"> The derivation of, or assumptions made, regarding projected capital costs in the study. The methodology used to estimate operating costs. Allowances made for the content of deleterious elements. The source of exchange rates used in the study. 	<ul style="list-style-type: none"> 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. 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. Allowances are made for the various deleterious elements and adjustments are made to the Iron Content. The exchange rate is sourced from National Australia Bank (Specialist Matter Experts), with periodic updates for forecast.



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Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none">Derivation of transportation chargesThe basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.The allowances made for royalties payable, both Government and private.	<ul style="list-style-type: none">Reserve revenues are calculated based on Free On Board (FOB) from Port Latta. Individual shipments are sold on either an FOB basis from Port Latta or on a CFR basis.Forecasting of treatment and refining charges including penalties in concentrate are completed annually using the scheduled annual feed grade (including impurities). With forecast reports provided by subject matter expertsRoyalties are used in the Whittle Optimization using the Tasmanian State charges.All operating and capital costs including royalties and other government charges are included in the Life Of Mine Plan and budgets..
Revenue factors	<ul style="list-style-type: none">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	<ul style="list-style-type: none">The 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
	<ul style="list-style-type: none">The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	<ul style="list-style-type: none">The commodity pricing is sourced from subject matter experts in the market analysis for mining and metals.
Market assessment	<ul style="list-style-type: none">The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.A customer and competitor analysis along with the identification of likely market windows for the product.Price and volume forecasts and the basis for these forecasts.	<ul style="list-style-type: none">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.There are long term contracts in place and we also see a strong spot market.Prices are negotiated based on market indices.



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Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none">For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	
Economic	<ul style="list-style-type: none">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.	<ul style="list-style-type: none">Financial modelling of the Savage River operation, shows support for strong NPV's.
	<ul style="list-style-type: none">NPV ranges and sensitivity to variations in the significant assumptions and inputs.	<ul style="list-style-type: none">The NPV is most sensitive to product price and exchange rate
Land Tenure	<ul style="list-style-type: none">Land use	<ul style="list-style-type: none">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.
Social	<ul style="list-style-type: none">The status of agreements with key stakeholders and matters leading to social licence to operate.	<ul style="list-style-type: none">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), 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.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.
Other	<ul style="list-style-type: none">To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:	<ul style="list-style-type: none">Grange's project at Savage River is an active and ongoing operation.



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Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> Any identified material naturally occurring risks. The status of material legal agreements and marketing arrangements. 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 extraction of the reserve is contingent. 	<ul style="list-style-type: none"> Asbestos group of minerals have been identified at Savage River. The asbestiform materials are handled according to the fibrous materials policy at Grange, whereby risks from inspirable particles are monitored and controlled. A long-term contract for supply of magnetite pellet to various customers exists. The Goldamere Act provides Tasmanian legislation to support the Savage River Operation. Final approval for the SDTSF was received in 2014 and construction commenced in Q3 2014. Interim approval from the Tasmania EPA for pre-stripping work at CP was received in September 2019. Documentation for final assessment and full approval is currently in progress and is expected by the end of 2020. There is deemed to be reasonable prospects of the final approval being obtained without material impact on the quoted reserve.
Classification	<ul style="list-style-type: none"> The basis for the classification of the Ore Reserves into varying confidence categories. Whether the result appropriately reflects the Competent Person's view of the deposit. The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any). 	<ul style="list-style-type: none"> Reserve classification is that portion of the mineral resource that resides within an economic and stage pit design. In general, Measured Resources have been converted to Proven Reserves and Indicated Resources have been converted to Probable Reserves. In cases where there is lower confidence in a major modifying factor Measured Resources are converted to only a Probable Reserve. Instances of this assessment are described below The result reflects the Competent persons view of the deposit. A total of 24.5Mt equal to 47% of the Total Reported Probable Reserves has been derived from Measured Resources.



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Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> Measure Resources within the final West Wall cut back of North Pit has been assessed as Probable Reserves and due to lower geotechnical and economic confidence Measured Resources with Stage 2 and Stage 3 of Centre Pit has been assessed as Probable Reserves pending the final environmental approval from the Tasmanian Government.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of Ore Reserve estimates. 	<ul style="list-style-type: none"> 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). The CP feasibility was reviewed by AMC Consultants Pty Ltd (AMC) in September 2019. AMC concluded that the feasibility study supported the reported Ore Reserve and the requirements of the JORC Code.
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> 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. 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. Accuracy and confidence discussions should extend to specific discussions of any applied 	<ul style="list-style-type: none"> Global reconciliations and bench reconciliations are used to feedback into the resource model. Regular reconciliations show a good performance of model vs actual. Global Reserve Reconciliation for 2019- Actual concentrate produced plus net change in stockpiles at end year was 2.9% more than model predicted. Reconciliations are calculated from material survey movement against changes in stockpiles and actual magnetite concentrate production. 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 Historically model predictions are well within 10% of actual production Modifying factors are applied both globally and locally depending on their nature. Revenue and Exchange assumption are applied globally; Geotehcnical factors are applied local to each deposit. Mining cost factors and some metallurgical performance factors are applied down the local block level to account for the Reserves block location and relative recovery costs. All modifying factors are reviewed annually. Modifying Factors are reviewed against actual performance with reconciliations to evaluate accuracy and confidence of the estimates.



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Criteria	JORC Code explanation	Commentary
	<p>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.</p> <ul style="list-style-type: none">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.	<ul style="list-style-type: none">The accuracy of the modifying factors compares well with historical performance data which is compared on a monthly and annual basis.



APPENDIX B – PLANS & SECTIONS



Figure 5 Image of Savage River Site Infrastructure, Aug 2017

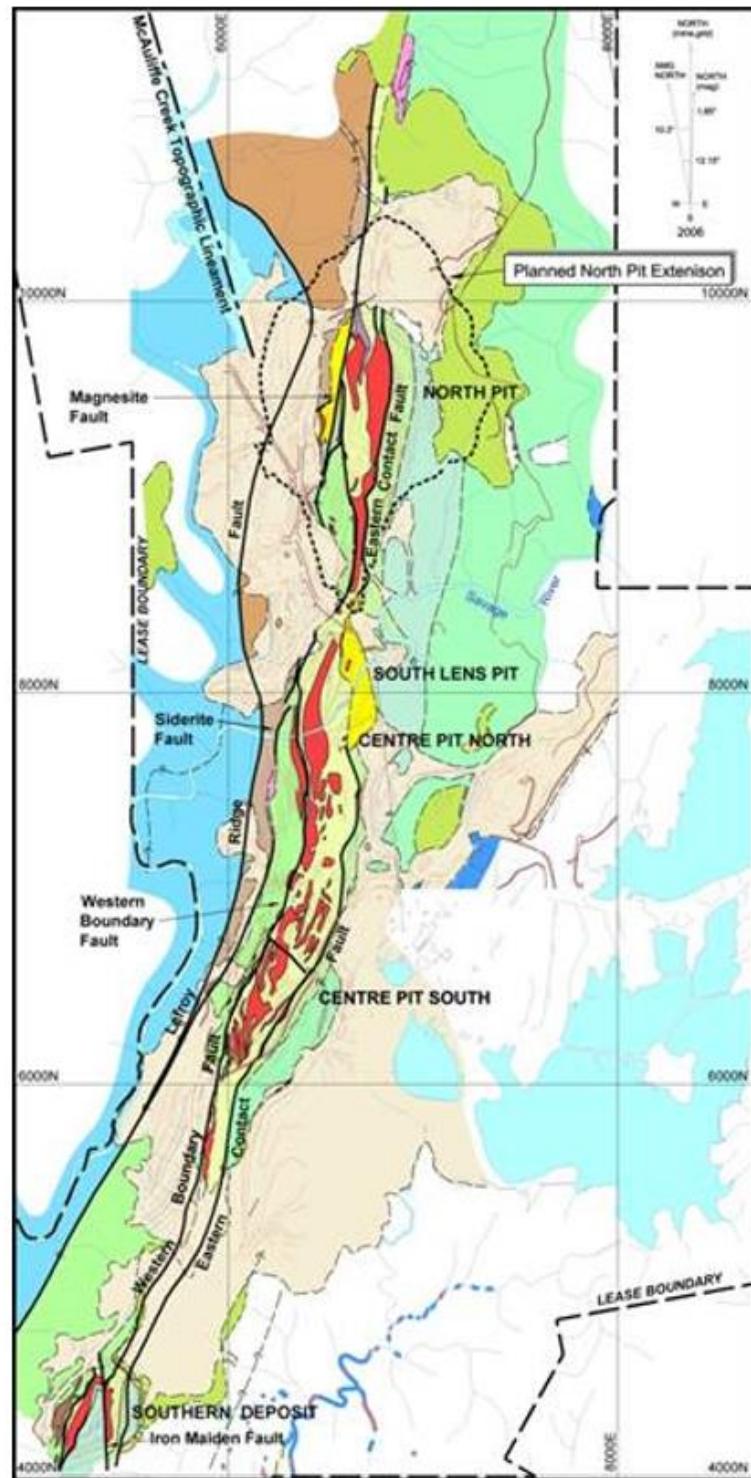


Figure 6 Regional Geology (2008)

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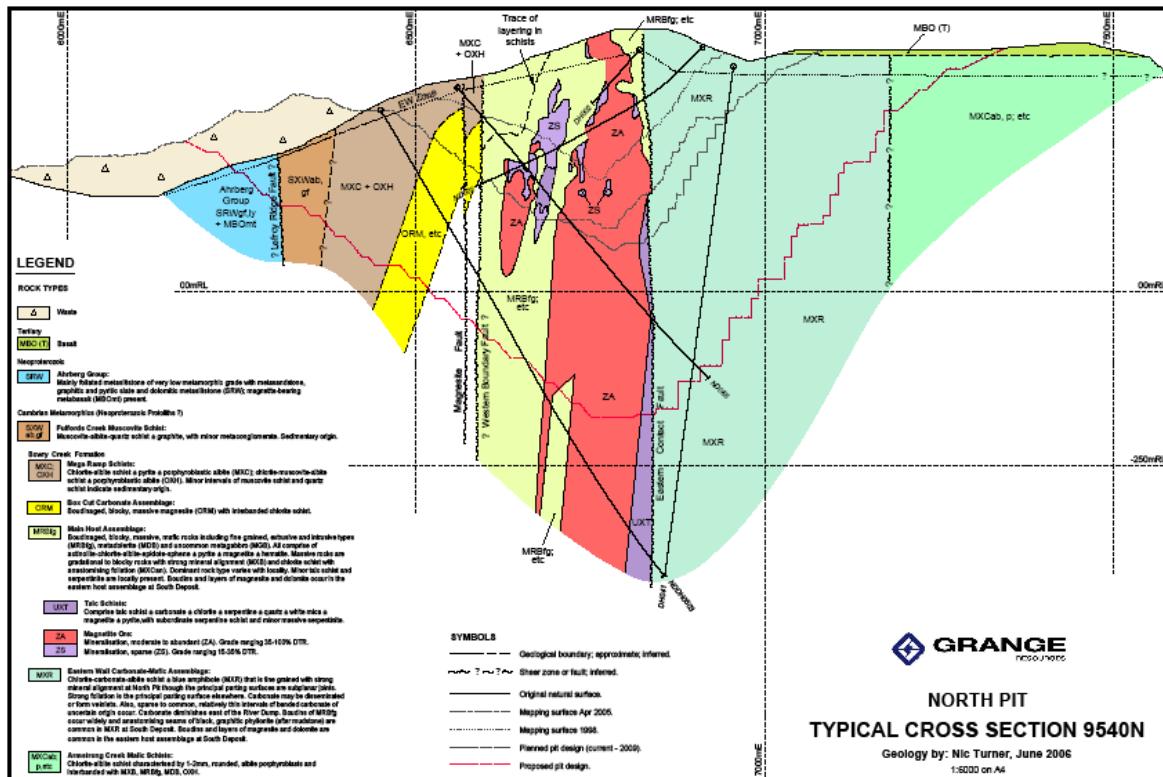


Figure 7 Typical Cross Section for NP

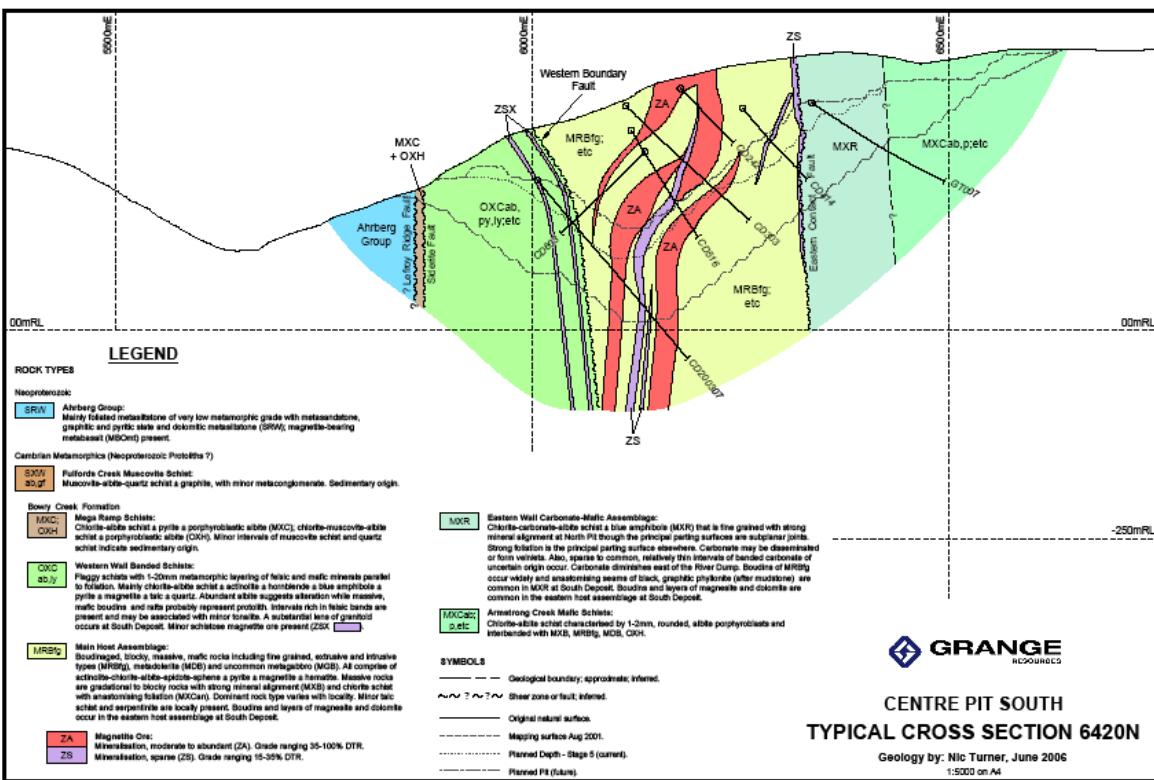


Figure 8 Typical Cross section for Centre Pit

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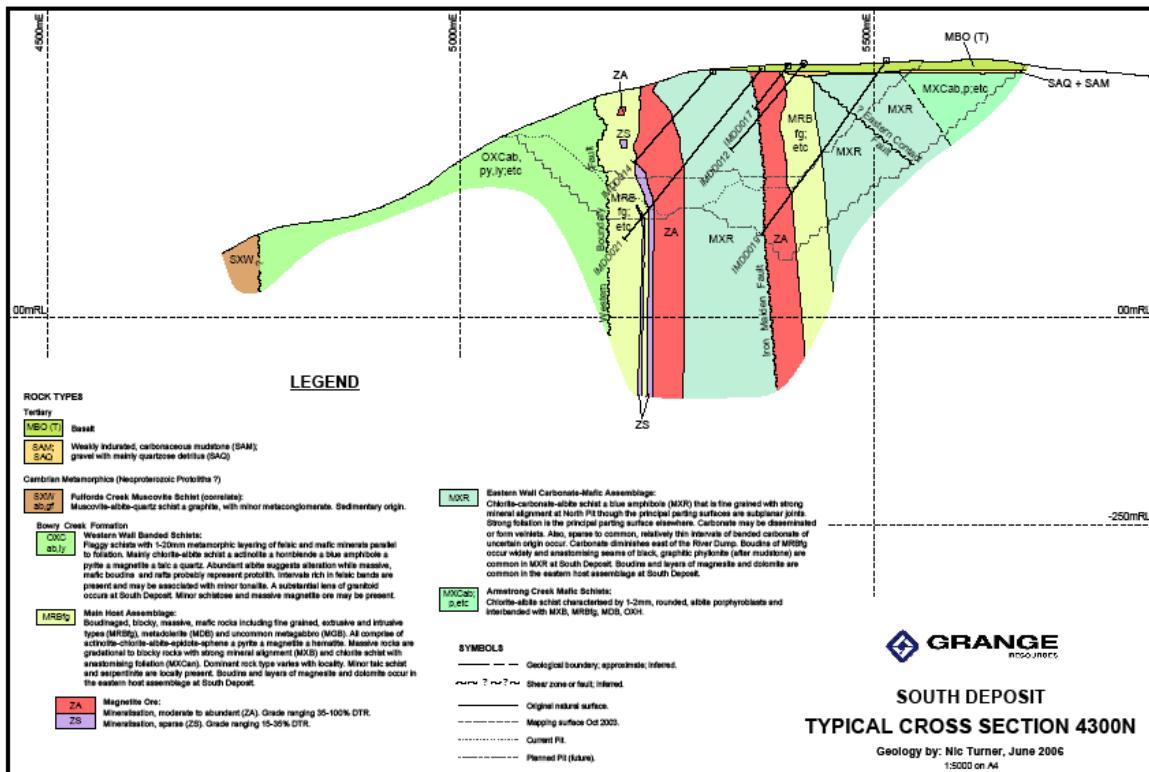


Figure 9 Typical Cross Section for South Deposit

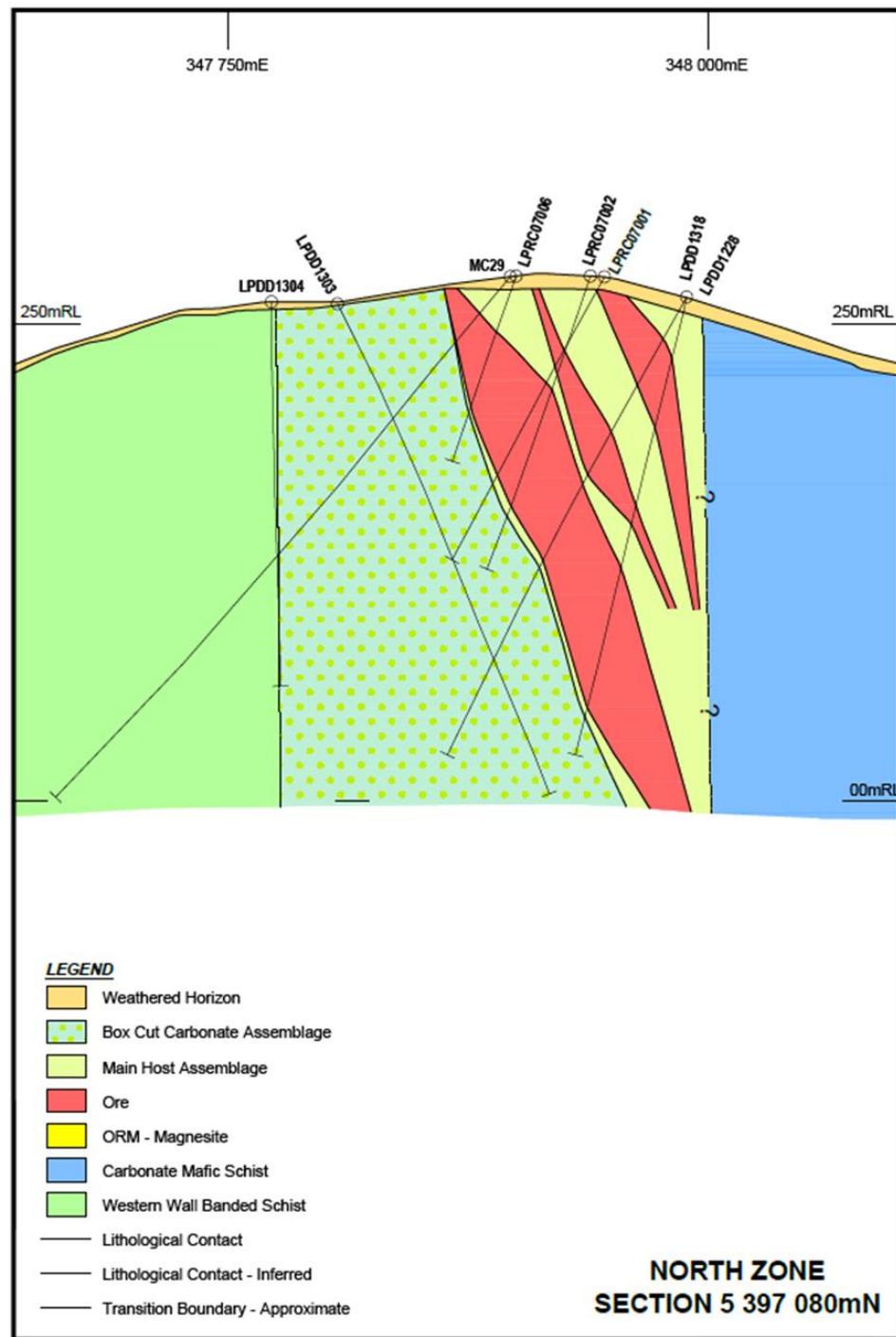


Figure 10 Typical Cross Section for Long Plains



APPENDIX C - 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. Fifteen (15) new holes have been added for the calendar year 2019.

Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
DH002	6852	9550	374	-45	295	94.5	95.99	263
DH002	6852	9550	374	-45	295	95.99	133.8	263
DH002	6852	9550	374	-45	295	133.8	134.6	263
DH002	6852	9550	374	-45	295	134.6	198.4	263
DH002	6852	9550	374	-45	295	198.4	203.9	263
DH002	6852	9550	374	-45	295	203.9	219	263
DH017	6644	8528	196	-67	276	1.2	18.3	65.5
DH017	6644	8528	196	-67	276	18.3	36.6	65.5
DH017	6644	8528	196	-67	276	36.6	55.8	65.5
DH017	6644	8528	196	-67	276	55.8	61.6	65.5
DH025	6708	8878	257.5	-65	270	1.52	5.9	228.3
DH025	6708	8878	257.5	-65	270	5.9	25.9	228.3
DH025	6708	8878	257.5	-65	270	25.9	43.4	228.3
DH025	6708	8878	257.5	-65	270	43.4	49.5	228.3
DH025	6708	8878	257.5	-65	270	49.5	65.7	228.3
DH025	6708	8878	257.5	-65	270	65.7	75.6	228.3
DH025	6708	8878	257.5	-65	270	75.6	80.2	228.3
DH025	6708	8878	257.5	-65	270	80.2	94.5	228.3
DH025	6708	8878	257.5	-65	270	94.5	102.4	228.3
DH026	6777	9229	358.1	-64	270	9.1	21.3	181.4
DH026	6777	9229	358.1	-64	270	21.3	28.3	181.4
DH026	6777	9229	358.1	-64	270	28.3	32.9	181.4
DH026	6777	9229	358.1	-64	270	32.9	40.8	181.4
DH026	6777	9229	358.1	-64	270	40.8	40.93	181.4
DH026	6777	9229	358.1	-64	270	40.93	51.27	181.4
DH026	6777	9229	358.1	-64	270	51.27	54.9	181.4
DH026	6777	9229	358.1	-64	270	54.9	73.2	181.4
DH026	6777	9229	358.1	-64	270	73.2	79.9	181.4
DH026	6777	9229	358.1	-64	270	79.9	91.4	181.4
DH026	6777	9229	358.1	-64	270	91.4	109.1	181.4
DH026	6777	9229	358.1	-64	270	109.1	112	181.4
DH026	6777	9229	358.1	-64	270	112	114.9	181.4
DH026	6777	9229	358.1	-64	270	114.9	133.7	181.4
DH026	6777	9229	358.1	-64	270	133.7	140.5	181.4
DH026	6777	9229	358.1	-64	270	140.5	165.5	181.4
DH026	6777	9229	358.1	-64	270	165.5	167.8	181.4



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
DH026	6777	9229	358.1	-64	270	167.8	169.8	181.4
DH026	6777	9229	358.1	-64	270	169.8	170.7	181.4
DH027	6862	9780.5	365.8	-51	270	134.88	170.99	291.1
DH036	6868.5	9353	348.4	-79	300	258.5	277.7	439.2
DH036	6868.5	9353	348.4	-79	300	277.7	278.6	439.2
DH036	6868.5	9353	348.4	-79	300	278.6	300.53	439.2
DH036	6868.5	9353	348.4	-79	300	300.53	302.35	439.2
DH036	6868.5	9353	348.4	-79	300	302.35	328.9	439.2
DH036	6868.5	9353	348.4	-79	300	328.9	376.36	439.2
DH036	6868.5	9353	348.4	-79	300	376.36	388.3	439.2
DH036	6868.5	9353	348.4	-79	300	388.3	393.72	439.2
DH036	6868.5	9353	348.4	-79	300	393.72	409.94	439.2
DH036	6868.5	9353	348.4	-79	300	409.94	423.1	439.2
DH043	6888	9990	354.5	-45	275	158.5	164	186.5
DH049	6666.5	9020	309	-50	274	41	46.8	88.4
DH049	6666.5	9020	309	-50	274	46.8	51.09	88.4
DH049	6666.5	9020	309	-50	274	51.09	52.4	88.4
DH049	6666.5	9020	309	-50	274	52.4	55.5	88.4
DH049	6666.5	9020	309	-50	274	55.5	57.9	88.4
DH049	6666.5	9020	309	-50	274	69.5	75.8	88.4
DH050	6602.5	8913.5	296	-48	94	23.8	45.7	209.1
DH050	6602.5	8913.5	296	-48	94	45.7	58.5	209.1
DH050	6602.5	8913.5	296	-48	94	58.5	109.7	209.1
DH050	6602.5	8913.5	296	-48	94	109.7	127.4	209.1
DH050	6602.5	8913.5	296	-48	94	127.4	129.4	209.1
DH050	6602.5	8913.5	296	-48	94	129.4	136.93	209.1
DH050	6602.5	8913.5	296	-48	94	136.93	155.4	209.1
DH051	6670	9242	335.3	-55	94	3.7	21.3	234.7
DH051	6670	9242	335.3	-55	94	21.3	24.4	234.7
DH051	6670	9242	335.3	-55	94	24.4	57.9	234.7
DH051	6670	9242	335.3	-55	94	57.9	61	234.7
DH051	6670	9242	335.3	-55	94	61	88.4	234.7
DH051	6670	9242	335.3	-55	94	88.4	91.4	234.7
DH051	6670	9242	335.3	-55	94	91.4	128	234.7
DH051	6670	9242	335.3	-55	94	128	131.1	234.7
DH051	6670	9242	335.3	-55	94	131.1	192	234.7
DH051	6670	9242	335.3	-55	94	192	195.1	234.7
DH051	6670	9242	335.3	-55	94	195.1	198.1	234.7
DH052	6825	9305	344.5	-57	286	105.2	122.2	326.7
DH052	6825	9305	344.5	-57	286	122.2	132.9	326.7



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
DH052	6825	9305	344.5	-57	286	132.9	166.76	326.7
DH052	6825	9305	344.5	-57	286	166.76	168.55	326.7
DH052	6825	9305	344.5	-57	286	168.55	172.2	326.7
DH052	6825	9305	344.5	-57	286	172.2	178.3	326.7
DH052	6825	9305	344.5	-57	286	178.3	216.4	326.7
DH052	6825	9305	344.5	-57	286	216.4	242.9	326.7
DH052	6825	9305	344.5	-57	286	285.6	294.7	326.7
DH053	6854	9653.5	366	-67	286	118.6	121.9	323.7
DH053	6854	9653.5	366	-67	286	121.9	146.3	323.7
DH053	6854	9653.5	366	-67	286	146.3	210.3	323.7
DH053	6854	9653.5	366	-67	286	210.3	219.5	323.7
DH053	6854	9653.5	366	-67	286	219.5	301.8	323.7
DH053	6854	9653.5	366	-67	286	301.8	307.8	323.7
DH053	6854	9653.5	366	-67	286	307.8	313.9	323.7
DH053	6854	9653.5	366	-67	286	313.9	317.75	323.7
DH053	6854	9653.5	366	-67	286	317.75	322.34	323.7
DH053	6854	9653.5	366	-67	286	322.34	323.7	323.7
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	301	317.6	326
ND002	6910.5	9542.5	350.87	-45	270	138.5	197.9	380
ND002	6910.5	9542.5	350.87	-45	270	197.9	200.5	380
ND002	6910.5	9542.5	350.87	-45	270	200.5	203.6	380
ND002	6910.5	9542.5	350.87	-45	270	203.6	208.5	380
ND002	6910.5	9542.5	350.87	-45	270	250.7	273.9	380
ND002	6910.5	9542.5	350.87	-45	270	289	299	380
ND002	6910.5	9542.5	350.87	-45	270	311.4	331.6	380
ND002	6910.5	9542.5	350.87	-45	270	331.6	338.8	380
ND003	6553.5	9134	273	-45	90	198.8	213	309
ND003	6553.5	9134	273	-45	90	213	245.6	309
ND003	6553.5	9134	273	-45	90	245.6	250.7	309
ND003	6553.5	9134	273	-45	90	250.7	253.9	309
ND003	6553.5	9134	273	-45	90	253.9	285.5	309
ND004	6817	9291	345.05	-45	270	50.1	79.3	175.9
ND004	6817	9291	345.05	-45	270	79.3	86.3	175.9
ND004	6817	9291	345.05	-45	270	86.3	143.9	175.9
ND004	6817	9291	345.05	-45	270	143.9	146.1	175.9
ND004	6817	9291	345.05	-45	270	146.1	175.9	175.9
ND034	6789.9	9490.5	347.6	-45	270	0	0.5	85
ND034	6789.9	9490.5	347.6	-45	270	0.5	1.49	85



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
ND034	6789.9	9490.5	347.6	-45	270	1.49	5.68	85
ND034	6789.9	9490.5	347.6	-45	270	5.68	37	85
ND034	6789.9	9490.5	347.6	-45	270	37	38.5	85
ND034	6789.9	9490.5	347.6	-45	270	38.5	45.8	85
ND034	6789.9	9490.5	347.6	-45	270	45.8	46.8	85
ND034	6789.9	9490.5	347.6	-45	270	46.8	51.3	85
ND034	6789.9	9490.5	347.6	-45	270	51.3	51.8	85
ND035	6758.4	9440	347.5	-45	270	0	1	85
ND035	6758.4	9440	347.5	-45	270	1	31.4	85
ND035	6758.4	9440	347.5	-45	270	31.4	43.5	85
ND035	6758.4	9440	347.5	-45	270	43.5	45.5	85
ND035	6758.4	9440	347.5	-45	270	45.5	56.9	85
ND035	6758.4	9440	347.5	-45	270	56.9	61.7	85
ND035	6758.4	9440	347.5	-45	270	61.7	71.39	85
ND035	6758.4	9440	347.5	-45	270	71.39	76.5	85
ND036	6759.4	9440.8	347.5	-45	90	0	1.5	71
ND036	6759.4	9440.8	347.5	-45	90	1.5	11.27	71
ND036	6759.4	9440.8	347.5	-45	90	11.27	13.5	71
ND036	6759.4	9440.8	347.5	-45	90	13.5	21.7	71
ND036	6759.4	9440.8	347.5	-45	90	21.7	27.1	71
ND036	6759.4	9440.8	347.5	-45	90	27.1	57.2	71
ND036	6759.4	9440.8	347.5	-45	90	57.2	65	71
ND037	6770.9	9391.1	347.3	-45	270	3.5	8.4	102.5
ND037	6770.9	9391.1	347.3	-45	270	8.4	35.2	102.5
ND037	6770.9	9391.1	347.3	-45	270	35.2	38	102.5
ND037	6770.9	9391.1	347.3	-45	270	38	65	102.5
ND037	6770.9	9391.1	347.3	-45	270	65	67.4	102.5
ND037	6770.9	9391.1	347.3	-45	270	67.4	85.4	102.5
ND037	6770.9	9391.1	347.3	-45	270	85.4	89.4	102.5
ND037	6770.9	9391.1	347.3	-45	270	89.4	97.7	102.5
ND038	6772.5	9312	349.7	-45	270	4.4	13.5	127.5
ND038	6772.5	9312	349.7	-45	270	13.5	18.2	127.5
ND038	6772.5	9312	349.7	-45	270	18.2	23	127.5
ND038	6772.5	9312	349.7	-45	270	23	32.9	127.5
ND038	6772.5	9312	349.7	-45	270	32.9	39.8	127.5
ND038	6772.5	9312	349.7	-45	270	39.8	45.3	127.5
ND038	6772.5	9312	349.7	-45	270	45.3	51.2	127.5
ND038	6772.5	9312	349.7	-45	270	51.2	56.8	127.5
ND038	6772.5	9312	349.7	-45	270	56.8	94.8	127.5
ND039	6723.2	9339.6	347.7	-45	270	0	6.4	78.5



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
ND039	6723.2	9339.6	347.7	-45	270	6.4	34.1	78.5
ND040	6744	9640	357.6	-45	90	27.7	46.2	86
ND040	6744	9640	357.6	-45	90	46.2	51	86
ND040	6744	9640	357.6	-45	90	51	57.5	86
ND040	6744	9640	357.6	-45	90	57.5	63.7	86
ND040	6744	9640	357.6	-45	90	63.7	70	86
ND040	6744	9640	357.6	-45	90	70	81.5	86
ND041	6820	9540	347	-45	241	19.7	43	108.5
ND041	6820	9540	347	-45	241	43	46.6	108.5
ND041	6820	9540	347	-45	241	46.6	72.4	108.5
ND041	6820	9540	347	-45	241	72.4	92.86	108.5
ND041	6820	9540	347	-45	241	92.86	108.5	108.5
ND042	6765.4	9538.5	346.5	-45	90	0	2.5	75.5
ND042	6765.4	9538.5	346.5	-45	90	2.5	48.5	75.5
ND042	6765.4	9538.5	346.5	-45	90	48.5	51	75.5
ND042	6765.4	9538.5	346.5	-45	90	51	64.7	75.5
ND043	6772.4	9194.7	336.3	-45	270	2.5	15.1	147
ND043	6772.4	9194.7	336.3	-45	270	15.1	18	147
ND043	6772.4	9194.7	336.3	-45	270	18	22.9	147
ND043	6772.4	9194.7	336.3	-45	270	22.9	30.5	147
ND043	6772.4	9194.7	336.3	-45	270	30.5	35.5	147
ND043	6772.4	9194.7	336.3	-45	270	35.5	45.4	147
ND043	6772.4	9194.7	336.3	-45	270	45.4	59.9	147
ND043	6772.4	9194.7	336.3	-45	270	59.9	63.7	147
ND043	6772.4	9194.7	336.3	-45	270	63.7	69.5	147
ND043	6772.4	9194.7	336.3	-45	270	69.5	74	147
ND043	6772.4	9194.7	336.3	-45	270	74	77.1	147
ND043	6772.4	9194.7	336.3	-45	270	77.1	81.4	147
ND043	6772.4	9194.7	336.3	-45	270	81.4	88.3	147
ND043	6772.4	9194.7	336.3	-45	270	88.3	92.12	147
ND043	6772.4	9194.7	336.3	-45	270	92.12	106.62	147
ND043	6772.4	9194.7	336.3	-45	270	106.62	109.84	147
ND043	6772.4	9194.7	336.3	-45	270	109.84	131.8	147
ND044	6729.1	9250.3	352.6	-50	270	14.5	20.2	112.7
ND044	6729.1	9250.3	352.6	-50	270	20.2	21.8	112.7
ND044	6729.1	9250.3	352.6	-50	270	21.8	36	112.7
ND044	6729.1	9250.3	352.6	-50	270	36	45.76	112.7
ND044	6729.1	9250.3	352.6	-50	270	45.76	46.4	112.7
ND044	6729.1	9250.3	352.6	-50	270	46.4	72.9	112.7
ND045	6658	9005.8	308.6	-55	270	30	33	69.2



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
ND045	6658	9005.8	308.6	-55	270	33	44	69.2
ND045	6658	9005.8	308.6	-55	270	44	54.6	69.2
ND045	6658	9005.8	308.6	-55	270	54.6	60.3	69.2
ND046	6663.3	9141.3	322.7	-55	270	1.5	33.7	56
ND046	6663.3	9141.3	322.7	-55	270	33.7	38.7	56
ND046	6663.3	9141.3	322.7	-55	270	38.7	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	2.5	43
ND047	6765.4	9540.9	348	-50	270	2.5	14.7	43
ND048	6791.6	9489.9	337.9	-45	90	0	4.29	59
ND048	6791.6	9489.9	337.9	-45	90	4.29	13.89	59
ND048	6791.6	9489.9	337.9	-45	90	13.89	16.31	59
ND048	6791.6	9489.9	337.9	-45	90	16.31	30.2	59
ND050	6834.4	9491.2	336.6	-45	270	34.5	87	145.5
ND050	6834.4	9491.2	336.6	-45	270	87	88.3	145.5
ND050	6834.4	9491.2	336.6	-45	270	88.3	99.3	145.5
ND050	6834.4	9491.2	336.6	-45	270	99.3	102.5	145.5
ND050	6834.4	9491.2	336.6	-45	270	102.5	113	145.5
ND050	6834.4	9491.2	336.6	-45	270	113	115.83	145.5
ND050	6834.4	9491.2	336.6	-45	270	115.83	120.9	145.5
ND050	6834.4	9491.2	336.6	-45	270	120.9	129.3	145.5
ND051	6810.3	9389.7	328.7	-45	270	65	78.49	159.5
ND051	6810.3	9389.7	328.7	-45	270	78.49	84.21	159.5
ND051	6810.3	9389.7	328.7	-45	270	84.21	111.7	159.5
ND051	6810.3	9389.7	328.7	-45	270	111.7	116	159.5
ND051	6810.3	9389.7	328.7	-45	270	116	125	159.5
ND051	6810.3	9389.7	328.7	-45	270	125	128	159.5
ND051	6810.3	9389.7	328.7	-45	270	128	137.1	159.5
ND052	6759.9	9338.7	321.5	-45	270	1.49	2.46	110
ND052	6759.9	9338.7	321.5	-45	270	2.46	9.7	110
ND052	6759.9	9338.7	321.5	-45	270	9.7	11.7	110
ND052	6759.9	9338.7	321.5	-45	270	11.7	71.5	110
ND053	6756.2	9129.9	292.7	-45	270	33.3	39.98	72.7
ND053	6756.2	9129.9	292.7	-45	270	39.98	47.6	72.7
ND053	6756.2	9129.9	292.7	-45	270	47.6	56.6	72.7
ND053	6756.2	9129.9	292.7	-45	270	56.6	72.7	72.7
ND055	6608.6	9090.5	300.7	-40	90	50	65.8	137
ND055	6608.6	9090.5	300.7	-40	90	65.8	72	137
ND055	6608.6	9090.5	300.7	-40	90	72	91.2	137
ND055	6608.6	9090.5	300.7	-40	90	91.2	105.5	137



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
ND055	6608.6	9090.5	300.7	-40	90	105.5	116	137
ND055	6608.6	9090.5	300.7	-40	90	116	137	137
ND056	6831.3	9189.4	305.2	-45	270	104	111.1	210.5
ND056	6831.3	9189.4	305.2	-45	270	111.1	113.5	210.5
ND056	6831.3	9189.4	305.2	-45	270	113.5	125.7	210.5
ND056	6831.3	9189.4	305.2	-45	270	125.7	128	210.5
ND056	6831.3	9189.4	305.2	-45	270	128	141.3	210.5
ND056	6831.3	9189.4	305.2	-45	270	141.3	144	210.5
ND056	6831.3	9189.4	305.2	-45	270	144	165.7	210.5
ND057	6875.3	9390.1	327.8	-45	270	134.2	149	149
ND058	6591.9	8741.6	236.6	-45	90	70.2	79	153.5
ND058	6591.9	8741.6	236.6	-45	90	79	90.6	153.5
ND058	6591.9	8741.6	236.6	-45	90	90.6	120.2	153.5
ND058	6591.9	8741.6	236.6	-45	90	120.2	128.6	153.5
ND058	6591.9	8741.6	236.6	-45	90	128.6	136.9	153.5
ND058	6591.9	8741.6	236.6	-45	90	136.9	144.2	153.5
ND059	6704.5	9590.45	341.54	-60	90	45.5	49.5	262.3
ND059	6704.5	9590.45	341.54	-60	90	49.5	94.1	262.3
ND059	6704.5	9590.45	341.54	-60	90	94.1	105.2	262.3
ND059	6704.5	9590.45	341.54	-60	90	105.2	112.2	262.3
ND059	6704.5	9590.45	341.54	-60	90	112.2	136.4	262.3
ND059	6704.5	9590.45	341.54	-60	90	136.4	140	262.3
ND059	6704.5	9590.45	341.54	-60	90	140	221.9	262.3
ND059	6704.5	9590.45	341.54	-60	90	221.9	224.5	262.3
ND059	6704.5	9590.45	341.54	-60	90	224.5	228.83	262.3
ND059	6704.5	9590.45	341.54	-60	90	228.83	235.7	262.3
ND059	6704.5	9590.45	341.54	-60	90	235.7	262.3	262.3
ND060	6677.7	8949.8	270.2	-65	270	12	16	110
ND060	6677.7	8949.8	270.2	-65	270	16	24	110
ND060	6677.7	8949.8	270.2	-65	270	24	43.8	110
ND060	6677.7	8949.8	270.2	-65	270	43.8	62.7	110
ND060	6677.7	8949.8	270.2	-65	270	62.7	74.1	110
ND060	6677.7	8949.8	270.2	-65	270	74.1	77.9	110
ND060	6677.7	8949.8	270.2	-65	270	93.7	110	110
ND061	6713.8	8831.8	258.2	-50	270	45	54.7	110
ND061	6713.8	8831.8	258.2	-50	270	54.7	56.5	110
ND061	6713.8	8831.8	258.2	-50	270	56.5	68	110
ND061	6713.8	8831.8	258.2	-50	270	68	75	110
ND061	6713.8	8831.8	258.2	-50	270	75	82.9	110
ND061	6713.8	8831.8	258.2	-50	270	82.9	85.5	110



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
ND062	6566.3	9041.5	286.4	-40	90	81.6	90.7	165
ND062	6566.3	9041.5	286.4	-40	90	117.6	165	165
ND063	6690.3	9639.2	344.3	-45	90	91.4	96.8	228.5
ND063	6690.3	9639.2	344.3	-45	90	96.8	101.2	228.5
ND063	6690.3	9639.2	344.3	-45	90	101.2	205.4	228.5
ND064	6657.7	9439.9	310.6	-45	90	85.1	88	240
ND064	6657.7	9439.9	310.6	-45	90	88	90.7	240
ND064	6657.7	9439.9	310.6	-45	90	90.7	96	240
ND064	6657.7	9439.9	310.6	-45	90	96	105.9	240
ND064	6657.7	9439.9	310.6	-45	90	105.9	110.3	240
ND064	6657.7	9439.9	310.6	-45	90	110.3	133.6	240
ND064	6657.7	9439.9	310.6	-45	90	133.6	170.9	240
ND064	6657.7	9439.9	310.6	-45	90	170.9	175.4	240
ND064	6657.7	9439.9	310.6	-45	90	175.4	217.2	240
ND065	6619.3	8646	230.7	-55	90	21.5	38.9	110
ND065	6619.3	8646	230.7	-55	90	38.9	47.3	110
ND065	6619.3	8646	230.7	-55	90	47.3	51.5	110
ND065	6619.3	8646	230.7	-55	90	51.5	61.9	110
ND065	6619.3	8646	230.7	-55	90	61.9	72.4	110
ND065	6619.3	8646	230.7	-55	90	72.4	76.8	110
ND065	6619.3	8646	230.7	-55	90	76.8	88.2	110
ND065	6619.3	8646	230.7	-55	90	88.2	93.73	110
ND065	6619.3	8646	230.7	-55	90	93.73	101	110
ND071	6723.38	9091.14	199.24	-48	267.53	0	12	103
ND071	6723.38	9091.14	199.24	-48	267.53	12	18	103
ND071	6723.38	9091.14	199.24	-48	267.53	18	24.3	103
ND072	6724.22	9348.31	215.62	-42	91.18	0	12.8	103
ND072	6724.22	9348.31	215.62	-42	91.18	12.8	14.9	103
ND072	6724.22	9348.31	215.62	-42	91.18	14.9	93.5	103
ND073	6748.41	9482.47	219.36	-45	82.56	4.1	69.3	130
ND073	6748.41	9482.47	219.36	-45	82.56	69.3	72.4	130
ND073	6748.41	9482.47	219.36	-45	82.56	72.4	81.4	130
ND073	6748.41	9482.47	219.36	-45	82.56	81.4	83.1	130
ND073	6748.41	9482.47	219.36	-45	82.56	83.1	88.7	130
ND073	6748.41	9482.47	219.36	-45	82.56	88.7	92.7	130
ND073	6748.41	9482.47	219.36	-45	82.56	92.7	111.2	130
ND076	6527.6	8590.7	178.4	-37	89.6	137.1	162.6	173.1
ND076	6527.6	8590.7	178.4	-37	89.6	162.6	168.2	173.1
ND076	6527.6	8590.7	178.4	-37	89.6	168.2	173.1	173.1
ND077	6589	8504.1	202.7	-45	90.7	29.2	35.3	74.2



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
ND077	6589	8504.1	202.7	-45	90.7	35.3	39.2	74.2
ND080	6590	9739.7	316.9	-56.06	92.32	27.4	93.6	530
ND080	6590	9739.7	316.9	-56.06	92.32	93.6	143.6	530
ND080	6590	9739.7	316.9	-56.06	92.32	260.5	264.8	530
ND080	6590	9739.7	316.9	-56.06	92.32	264.8	271.4	530
ND080	6590	9739.7	316.9	-56.06	92.32	271.4	274.1	530
ND080	6590	9739.7	316.9	-56.06	92.32	274.1	300.7	530
ND080	6590	9739.7	316.9	-56.06	92.32	300.7	306	530
ND080	6590	9739.7	316.9	-56.06	92.32	306	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	129	516
ND081	6606.1	9655.5	308.6	-54	89.1	129	138.5	516
ND081	6606.1	9655.5	308.6	-54	89.1	192.2	212.1	516
ND081	6606.1	9655.5	308.6	-54	89.1	212.1	216.2	516
ND081	6606.1	9655.5	308.6	-54	89.1	216.2	223.2	516
ND081	6606.1	9655.5	308.6	-54	89.1	223.2	227.2	516
ND081	6606.1	9655.5	308.6	-54	89.1	227.2	283.6	516
ND081	6606.1	9655.5	308.6	-54	89.1	283.6	287.4	516
ND081	6606.1	9655.5	308.6	-54	89.1	287.4	314.1	516
ND081	6606.1	9655.5	308.6	-54	89.1	314.1	319.5	516
ND081	6606.1	9655.5	308.6	-54	89.1	319.5	327.7	516
ND081	6606.1	9655.5	308.6	-54	89.1	327.7	342.7	516
ND081	6606.1	9655.5	308.6	-54	89.1	342.7	345.7	516
ND081	6606.1	9655.5	308.6	-54	89.1	345.7	412.11	516
ND081	6606.1	9655.5	308.6	-54	89.1	412.11	412.7	516
ND082	6886.5	9189.9	287.3	-57	271.7	184.7	204.4	407.7
ND082	6886.5	9189.9	287.3	-57	271.7	204.4	208.5	407.7
ND082	6886.5	9189.9	287.3	-57	271.7	208.5	212.5	407.7
ND082	6886.5	9189.9	287.3	-57	271.7	212.5	220.6	407.7
ND082	6886.5	9189.9	287.3	-57	271.7	220.6	224.7	407.7
ND082	6886.5	9189.9	287.3	-57	271.7	224.7	230.7	407.7
ND082	6886.5	9189.9	287.3	-57	271.7	230.7	247.8	407.7
ND082	6886.5	9189.9	287.3	-57	271.7	247.8	254.8	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	297.6	525.7
ND083	6584.2	9352.3	279.5	-60	92.1	297.6	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	350.3	525.7
ND083	6584.2	9352.3	279.5	-60	92.1	350.3	395.5	525.7
ND083	6584.2	9352.3	279.5	-60	92.1	395.5	402.13	525.7



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
ND083	6584.2	9352.3	279.5	-60	92.1	402.13	417.9	525.7
ND083	6584.2	9352.3	279.5	-60	92.1	417.9	422.1	525.7
ND083	6584.2	9352.3	279.5	-60	92.1	422.1	457.4	525.7
ND083	6584.2	9352.3	279.5	-60	92.1	457.4	459.8	525.7
ND083	6584.2	9352.3	279.5	-60	92.1	459.8	472.4	525.7
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	260.7	550
ND085	6559.2	9529.9	292.8	-49	89.3	260.7	268.9	550
ND085	6559.2	9529.9	292.8	-49	89.3	268.9	315.3	550
ND085	6559.2	9529.9	292.8	-49	89.3	315.3	317.2	550
ND085	6559.2	9529.9	292.8	-49	89.3	317.2	339.2	550
ND085	6559.2	9529.9	292.8	-49	89.3	339.2	340.4	550
ND085	6559.2	9529.9	292.8	-49	89.3	340.4	369.2	550
ND085	6559.2	9529.9	292.8	-49	89.3	369.2	371	550
ND085	6559.2	9529.9	292.8	-49	89.3	371	416	550
ND085	6559.2	9529.9	292.8	-49	89.3	416	417.3	550
ND085	6559.2	9529.9	292.8	-49	89.3	417.3	432.2	550
ND086	6596.2	9794.8	323.3	-55	77.65	67.8	91.8	433.1
ND086	6596.2	9794.8	323.3	-55	77.65	274.3	291.5	433.1
ND086	6596.2	9794.8	323.3	-55	77.65	291.5	293.5	433.1
ND086	6596.2	9794.8	323.3	-55	77.65	293.5	316.5	433.1
ND086	6596.2	9794.8	323.3	-55	77.65	316.5	337.5	433.1
ND086	6596.2	9794.8	323.3	-55	77.65	337.5	346.5	433.1
ND086	6596.2	9794.8	323.3	-55	77.65	346.5	360.8	433.1
ND086	6596.2	9794.8	323.3	-55	77.65	360.8	364.4	433.1
ND086	6596.2	9794.8	323.3	-55	77.65	364.4	377.3	433.1
ND089	6612.1	8698.6	230.5	-51	135.3	114.3	117.3	340.1
ND089	6612.1	8698.6	230.5	-51	135.3	117.3	118.5	340.1
ND089	6612.1	8698.6	230.5	-51	135.3	118.5	121.4	340.1
ND089	6612.1	8698.6	230.5	-51	135.3	121.4	128.2	340.1
ND089	6612.1	8698.6	230.5	-51	135.3	128.2	132.3	340.1
ND089	6612.1	8698.6	230.5	-51	135.3	132.3	132.83	340.1
ND089	6612.1	8698.6	230.5	-51	135.3	132.83	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	150	210
ND096	6781.4	9090.7	193.5	-60	270	70.6	98.27	185.1
ND096	6781.4	9090.7	193.5	-60	270	98.27	129.87	185.1
ND096	6781.4	9090.7	193.5	-60	270	129.87	132	185.1
ND096	6781.4	9090.7	193.5	-60	270	132	136	185.1
ND097	6753.5	8889.9	213.8	-65	270	92.9	132.1	257.5



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
ND097	6753.5	8889.9	213.8	-65	270	132.1	139.9	257.5
ND097	6753.5	8889.9	213.8	-65	270	139.9	149.9	257.5
ND097	6753.5	8889.9	213.8	-65	270	149.9	183.9	257.5
ND097	6753.5	8889.9	213.8	-65	270	183.9	189.3	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	92	205.7
ND098	6743.3	8839.8	216.8	-58	270	92	96.7	205.7
ND098	6743.3	8839.8	216.8	-58	270	96.7	107.8	205.7
ND098	6743.3	8839.8	216.8	-58	270	107.8	118.2	205.7
ND098	6743.3	8839.8	216.8	-58	270	118.2	120.5	205.7
ND098	6743.3	8839.8	216.8	-58	270	120.5	132.9	205.7
ND099	6714.2	8739.9	225.5	-65	270	63.6	77.33	137
ND099	6714.2	8739.9	225.5	-65	270	77.33	81.3	137
ND099	6714.2	8739.9	225.5	-65	270	81.3	94.4	137
ND099	6714.2	8739.9	225.5	-65	270	94.4	102.5	137
ND099	6714.2	8739.9	225.5	-65	270	102.5	105.1	137
ND099	6714.2	8739.9	225.5	-65	270	105.1	106.4	137
ND099	6714.2	8739.9	225.5	-65	270	106.4	111.3	137
ND100	6583.9	8639.6	234	-65	90	175.8	188.1	214.7
ND100	6583.9	8639.6	234	-65	90	188.1	197.8	214.7
ND100	6583.9	8639.6	234	-65	90	197.8	205.1	214.7
ND100	6583.9	8639.6	234	-65	90	205.1	214.7	214.7
ND101	6543.3	8521.2	198.1	-49	71	145	161.8	235
ND101	6543.3	8521.2	198.1	-49	71	161.8	169.47	235
ND101	6543.3	8521.2	198.1	-49	71	169.47	169.5	235
ND101	6543.3	8521.2	198.1	-49	71	169.5	175.6	235
ND101	6543.3	8521.2	198.1	-49	71	175.6	187.9	235
ND101	6543.3	8521.2	198.1	-49	71	187.9	197.9	235
ND101	6543.3	8521.2	198.1	-49	71	197.9	220.5	235
ND103	6640.5	8590.2	210.8	-50	90	0	4	100
ND103	6640.5	8590.2	210.8	-50	90	4	10	100
ND103	6640.5	8590.2	210.8	-50	90	10	12	100
ND103	6640.5	8590.2	210.8	-50	90	12	18	100
ND103	6640.5	8590.2	210.8	-50	90	18	20	100
ND103	6640.5	8590.2	210.8	-50	90	20	38	100
ND104	6644.89	8675.2	212	-60	90	0	10	87
ND104	6644.89	8675.2	212	-60	90	10	20	87
ND104	6644.89	8675.2	212	-60	90	20	26	87
ND104	6644.89	8675.2	212	-60	90	26	30	87
ND104	6644.89	8675.2	212	-60	90	30	68	87



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
ND104	6644.89	8675.2	212	-60	90	68	74	87
ND104	6644.89	8675.2	212	-60	90	74	87	87
ND106	6790.1	9798.09	352.5	-60	270	74	78	100
ND108	6645.5	9800.4	330.29	-60	95	0	16	60
ND109	6643.89	9799.9	330.2	-60	178	0	78	78
ND110	6652	9750.2	330.6	-60	270	28	90	100
ND111	6659.7	9749.79	330.7	-60	5	36	100	100
ND200101	6947.4	9789.62	341.89	-51.29	267.44	214.4	233.9	370
ND200101	6947.4	9789.62	341.89	-51.29	267.44	233.9	238.9	370
ND200101	6947.4	9789.62	341.89	-51.29	267.44	238.9	242.24	370
ND200101	6947.4	9789.62	341.89	-51.29	267.44	242.24	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	264.9	273.9	370
ND200101	6947.4	9789.62	341.89	-51.29	267.44	273.9	300.1	370
ND200102	6719.181	9390.033	119.063	-59.042	269.122	0	9.6	162.4
ND200102	6719.181	9390.033	119.063	-59.042	269.122	78.4	87.9	162.4
ND200103	6720.854	9390.135	119.189	-54.912	86.295	0	10.3	185
ND200103	6720.854	9390.135	119.189	-54.912	86.295	10.3	37.5	185
ND200103	6720.854	9390.135	119.189	-54.912	86.295	37.5	42.8	185
ND200103	6720.854	9390.135	119.189	-54.912	86.295	42.8	53.8	185
ND200103	6720.854	9390.135	119.189	-54.912	86.295	53.8	96.8	185
ND200103	6720.854	9390.135	119.189	-54.912	86.295	96.8	98.82	185
ND200103	6720.854	9390.135	119.189	-54.912	86.295	98.82	115.7	185
ND200103	6720.854	9390.135	119.189	-54.912	86.295	115.7	117.78	185
ND200103	6720.854	9390.135	119.189	-54.912	86.295	117.78	140.5	185
ND200103	6720.854	9390.135	119.189	-54.912	86.295	140.5	146.8	185
ND200103	6720.854	9390.135	119.189	-54.912	86.295	146.8	168.1	185
ND200103	6720.854	9390.135	119.189	-54.912	86.295	168.1	170.4	185
ND200103	6720.854	9390.135	119.189	-54.912	86.295	170.4	172.4	185
ND200104	6903.31	9836.85	341.88	-55.23	270.04	198	201.7	296.2
ND200104	6903.31	9836.85	341.88	-55.23	270.04	201.7	202.5	296.2
ND200104	6903.31	9836.85	341.88	-55.23	270.04	202.5	225.5	296.2
ND200104	6903.31	9836.85	341.88	-55.23	270.04	225.5	234	296.2
ND200104	6903.31	9836.85	341.88	-55.23	270.04	234	243.2	296.2
ND200104	6903.31	9836.85	341.88	-55.23	270.04	243.2	255.2	296.2
ND200104	6903.31	9836.85	341.88	-55.23	270.04	255.2	256.2	296.2
ND200104	6903.31	9836.85	341.88	-55.23	270.04	256.2	257.3	296.2
ND200104	6903.31	9836.85	341.88	-55.23	270.04	257.3	258.3	296.2
ND200104	6903.31	9836.85	341.88	-55.23	270.04	258.3	263	296.2
ND200104	6903.31	9836.85	341.88	-55.23	270.04	263	285.8	296.2



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
ND200104	6903.31	9836.85	341.88	-55.23	270.04	285.8	287.7	296.2
ND200111	6979.676	9739.838	341.881	-47.21	271.33	213	221.2	380.1
ND200111	6979.676	9739.838	341.881	-47.21	271.33	221.2	271.3	380.1
ND200111	6979.676	9739.838	341.881	-47.21	271.33	271.3	277.3	380.1
ND200111	6979.676	9739.838	341.881	-47.21	271.33	277.3	278.1	380.1
ND200111	6979.676	9739.838	341.881	-47.21	271.33	278.1	283.3	380.1
ND200111	6979.676	9739.838	341.881	-47.21	271.33	283.3	304.4	380.1
ND200111	6979.676	9739.838	341.881	-47.21	271.33	304.4	313.1	380.1
ND200111	6979.676	9739.838	341.881	-47.21	271.33	313.1	315.1	380.1
ND200111	6979.676	9739.838	341.881	-47.21	271.33	315.1	326.5	380.1
ND200111	6979.676	9739.838	341.881	-47.21	271.33	326.5	331	380.1
ND200111	6979.676	9739.838	341.881	-47.21	271.33	331	342	380.1
ND200111	6979.676	9739.838	341.881	-47.21	271.33	342	349.7	380.1
ND200111	6979.676	9739.838	341.881	-47.21	271.33	349.7	350.5	380.1
NDDH0501	6822.06	9189.93	184.96	-69	268.83	102.9	110.55	483.9
NDDH0501	6822.06	9189.93	184.96	-69	268.83	110.55	111.8	483.9
NDDH0501	6822.06	9189.93	184.96	-69	268.83	111.8	115.8	483.9
NDDH0501	6822.06	9189.93	184.96	-69	268.83	115.8	125.9	483.9
NDDH0501	6822.06	9189.93	184.96	-69	268.83	125.9	127	483.9
NDDH0501	6822.06	9189.93	184.96	-69	268.83	127	142	483.9
NDDH0501	6822.06	9189.93	184.96	-69	268.83	142	158.7	483.9
NDDH0501	6822.06	9189.93	184.96	-69	268.83	158.7	174.94	483.9
NDDH0501	6822.06	9189.93	184.96	-69	268.83	174.94	176.95	483.9
NDDH0501	6822.06	9189.93	184.96	-69	268.83	176.95	181.5	483.9
NDDH0501	6822.06	9189.93	184.96	-69	268.83	181.5	191.25	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	206.4	213	483.9
NDDH0501	6822.06	9189.93	184.96	-69	268.83	213	228.45	483.9
NDDH0501	6822.06	9189.93	184.96	-69	268.83	228.45	236.55	483.9
NDDH0501	6822.06	9189.93	184.96	-69	268.83	236.55	243	483.9
NDDH0501	6822.06	9189.93	184.96	-69	268.83	276.8	322	483.9
NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	435.55	436.25	783.1
NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	541.25	544	783.1
NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	544	565.81	783.1
NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	565.81	565.89	783.1
NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	565.89	569.11	783.1
NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	569.11	573.61	783.1
NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	573.61	582.7	783.1
NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	582.7	591.6	783.1
NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	591.6	598	783.1



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	598	600	783.1
NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	600	635.6	783.1
NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	635.6	641.15	783.1
NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	641.15	664.05	783.1
NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	664.05	669.3	783.1
NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	669.3	684.45	783.1
NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	684.45	693	783.1
NDDH0503	6449.18	9540.12	260.48	-59.25	90.91	693	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	129.45	168	333.95
NDDH0504	6657.56	9388.61	117.62	-57.05	89.13	168	170	333.95
NDDH0504	6657.56	9388.61	117.62	-57.05	89.13	170	249.83	333.95
NDDH0504	6657.56	9388.61	117.62	-57.05	89.13	249.83	259.3	333.95
NDDH0504	6657.56	9388.61	117.62	-57.05	89.13	259.3	263	333.95
NDDH0504	6657.56	9388.61	117.62	-57.05	89.13	263	267.24	333.95
NDDH0504	6657.56	9388.61	117.62	-57.05	89.13	267.24	304.5	333.95
NDDH0504	6657.56	9388.61	117.62	-57.05	89.13	304.5	305.9	333.95
NDDH0504	6657.56	9388.61	117.62	-57.05	89.13	305.9	315.1	333.95
NDDH0505	6671.36	9485.02	111.99	-53.06	91.43	56	60	314.8
NDDH0505	6671.36	9485.02	111.99	-53.06	91.43	60	64.7	314.8
NDDH0505	6671.36	9485.02	111.99	-53.06	91.43	64.7	99.85	314.8
NDDH0505	6671.36	9485.02	111.99	-53.06	91.43	99.85	103.8	314.8
NDDH0505	6671.36	9485.02	111.99	-53.06	91.43	103.8	202.32	314.8
NDDH0505	6671.36	9485.02	111.99	-53.06	91.43	202.32	204.85	314.8
NDDH0505	6671.36	9485.02	111.99	-53.06	91.43	204.85	245.7	314.8
NDDH0505	6671.36	9485.02	111.99	-53.06	91.43	245.7	248.6	314.8
NDDH0505	6671.36	9485.02	111.99	-53.06	91.43	248.6	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	146.4	170	351.35
NDDH0506	6642.49	9292.96	126.69	-59.45	92.84	170	182	351.35
NDDH0506	6642.49	9292.96	126.69	-59.45	92.84	182	185.9	351.35
NDDH0506	6642.49	9292.96	126.69	-59.45	92.84	185.9	226	351.35
NDDH0506	6642.49	9292.96	126.69	-59.45	92.84	226	244	351.35
NDDH0506	6642.49	9292.96	126.69	-59.45	92.84	244	254.2	351.35
NDDH0506	6642.49	9292.96	126.69	-59.45	92.84	254.2	264	351.35
NDDH0506	6642.49	9292.96	126.69	-59.45	92.84	264	268	351.35
NDDH0506	6642.49	9292.96	126.69	-59.45	92.84	268	293.05	351.35
NDDH0506	6642.49	9292.96	126.69	-59.45	92.84	293.05	298.2	351.35
NDDH0506	6642.49	9292.96	126.69	-59.45	92.84	298.2	337.1	351.35
NDDH0506	6642.49	9292.96	126.69	-59.45	92.84	337.1	349.4	351.35



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
NDDH0507	6542.32	9734.73	241.28	-54.84	94.71	302.45	341.1	560.5
NDDH0507	6542.32	9734.73	241.28	-54.84	94.71	341.1	342.6	560.5
NDDH0507	6542.32	9734.73	241.28	-54.84	94.71	342.6	382.7	560.5
NDDH0507	6542.32	9734.73	241.28	-54.84	94.71	382.7	384.3	560.5
NDDH0507	6542.32	9734.73	241.28	-54.84	94.71	384.3	401.13	560.5
NDDH0507	6542.32	9734.73	241.28	-54.84	94.71	401.13	410.2	560.5
NDDH0507	6542.32	9734.73	241.28	-54.84	94.71	410.2	476.6	560.5
NDDH0507	6542.32	9734.73	241.28	-54.84	94.71	476.6	484.1	560.5
NDDH0507	6542.32	9734.73	241.28	-54.84	94.71	484.1	486	560.5
NDDH0507	6542.32	9734.73	241.28	-54.84	94.71	486	488	560.5
NDDH0507	6542.32	9734.73	241.28	-54.84	94.71	488	499.7	560.5
NDDH0507	6542.32	9734.73	241.28	-54.84	94.71	499.7	504.6	560.5
NDDH0507	6542.32	9734.73	241.28	-54.84	94.71	504.6	507.3	560.5
NDDH0508	6455.2	9644.22	254.94	-55.45	89.55	282	286	477.4
NDDH0508	6455.2	9644.22	254.94	-55.45	89.55	292	296	477.4
NDDH0508	6455.2	9644.22	254.94	-55.45	89.55	316	348	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	436.25	446.6	477.4
NDDH0508	6455.2	9644.22	254.94	-55.45	89.55	455.8	460	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	289.95	304.3	603.4
NDDH0601	6485.09	9867.3	295.68	-48.2	74.57	432	526	603.4
NDDH0601	6485.09	9867.3	295.68	-48.2	74.57	526	534	603.4
NDDH0602	7140.54	9954.83	352.08	-45.37	267.48	472.85	478	750.1
NDDH0602	7140.54	9954.83	352.08	-45.37	267.48	478	553.2	750.1
NDDH0602	7140.54	9954.83	352.08	-45.37	267.48	675.8	678	750.1
NDDH0602	7140.54	9954.83	352.08	-45.37	267.48	686	697.5	750.1
NDDH0606	6615.67	9054.26	201.85	-54.06	89.134	47.6	57.4	285.5
NDDH0606	6615.67	9054.26	201.85	-54.06	89.134	74	76.2	285.5
NDDH0606	6615.67	9054.26	201.85	-54.06	89.134	158	164.7	285.5
NDDH0606	6615.67	9054.26	201.85	-54.06	89.134	164.7	182.6	285.5
NDDH0606	6615.67	9054.26	201.85	-54.06	89.134	182.6	188.2	285.5
NDDH0606	6615.67	9054.26	201.85	-54.06	89.134	188.2	211.1	285.5
NDDH0606	6615.67	9054.26	201.85	-54.06	89.134	211.1	216.9	285.5
NDDH0606	6615.67	9054.26	201.85	-54.06	89.134	216.9	240.6	285.5
NDDH0606	6615.67	9054.26	201.85	-54.06	89.134	240.6	243.4	285.5
NDDH0606	6615.67	9054.26	201.85	-54.06	89.134	243.4	275.5	285.5
NDDH0607	6606.536	8991.057	206.8	-56.25	88.54	29.9	64.2	317.5
NDDH0607	6606.536	8991.057	206.8	-56.25	88.54	91.9	106.5	317.5
NDDH0607	6606.536	8991.057	206.8	-56.25	88.54	247.9	268.06	317.5



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
NDDH0607	6606.536	8991.057	206.8	-56.25	88.54	268.06	317.5	317.5
NDDH0608	6666.98	9641.15	127.82	-55.11	270.91	0	20	107.3
NDDH0608	6666.98	9641.15	127.82	-55.11	270.91	36	58	107.3
NDDH0608	6666.98	9641.15	127.82	-55.11	270.91	71	75	107.3
NDDH0608	6666.98	9641.15	127.82	-55.11	270.91	101	105.8	107.3
NDDH0609	6670.324	9591.288	122.01	-55.19	273.94	15.7	30.25	201.5
NDDH0609	6670.324	9591.288	122.01	-55.19	273.94	54	63	201.5
NDDH0609	6670.324	9591.288	122.01	-55.19	273.94	88.5	98.6	201.5
NDDH0609	6670.324	9591.288	122.01	-55.19	273.94	141.8	148	201.5
NDDH0610	6672.043	9586.944	122.079	-54.81	230.42	3.2	6.4	130.5
NDDH0610	6672.043	9586.944	122.079	-54.81	230.42	40	56	130.5
NDDH0610	6672.043	9586.944	122.079	-54.81	230.42	84.7	88	130.5
NDDH0611	6698.912	9464.161	110.782	-55.81	296.06	71.5	85	181.5
NDDH0611	6698.912	9464.161	110.782	-55.81	296.06	121.9	124.1	181.5
NDDH0612	6697.271	9461.92	110.766	-55.51	260.62	61.9	66.8	146.6
NDDH0612	6697.271	9461.92	110.766	-55.51	260.62	93.5	127.65	146.6
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	2.7	3.75	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	17	19	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	59.9	94.7	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	94.7	94.9	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	94.9	134.1	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	134.1	139.45	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	139.45	142	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	142	148	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	148	149	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	149	159	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	159	196.5	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	196.5	197.1	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	197.1	209.2	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	209.2	213.9	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	213.9	222.7	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	222.7	226.5	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	226.5	233.1	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	233.1	271.5	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	271.5	273.05	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	273.05	280.7	315.5
NDDH0613	6670.637	9648.64	128.377	-53.09	92.11	280.7	294.3	315.5
NDDH0614	6810.811	8995.886	207.939	-52.63	250.37	127.1	135.35	276.3
NDDH0614	6810.811	8995.886	207.939	-52.63	250.37	135.35	137.05	276.3
NDDH0614	6810.811	8995.886	207.939	-52.63	250.37	137.05	138.65	276.3



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
NDDH0614	6810.811	8995.886	207.939	-52.63	250.37	138.65	139.9	276.3
NDDH0614	6810.811	8995.886	207.939	-52.63	250.37	139.9	149.2	276.3
NDDH0614	6810.811	8995.886	207.939	-52.63	250.37	149.2	152.8	276.3
NDDH0614	6810.811	8995.886	207.939	-52.63	250.37	152.8	169	276.3
NDDH0614	6810.811	8995.886	207.939	-52.63	250.37	169	170.95	276.3
NDDH0614	6810.811	8995.886	207.939	-52.63	250.37	170.95	191.6	276.3
NDDH0614	6810.811	8995.886	207.939	-52.63	250.37	191.6	193	276.3
NDDH0614	6810.811	8995.886	207.939	-52.63	250.37	222	237.75	276.3
NDDH0614	6810.811	8995.886	207.939	-52.63	250.37	244	275	276.3
NDDH0615	6840.69	9083.07	197.31	-63.54	313.2	147.3	150.5	263.6
NDDH0615	6840.69	9083.07	197.31	-63.54	313.2	150.5	154.2	263.6
NDDH0615	6840.69	9083.07	197.31	-63.54	313.2	154.2	164.5	263.6
NDDH0615	6840.69	9083.07	197.31	-63.54	313.2	164.5	165	263.6
NDDH0615	6840.69	9083.07	197.31	-63.54	313.2	192	196.1	263.6
NDDH0615	6840.69	9083.07	197.31	-63.54	313.2	196.1	199	263.6
NDDH0615	6840.69	9083.07	197.31	-63.54	313.2	199	201	263.6
NDDH0615	6840.69	9083.07	197.31	-63.54	313.2	201	204.6	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	230.25	233.5	263.6
NDDH0615	6840.69	9083.07	197.31	-63.54	313.2	233.5	239.65	263.6
NDDH0615	6840.69	9083.07	197.31	-63.54	313.2	239.65	249.2	263.6
NDDH0615	6840.69	9083.07	197.31	-63.54	313.2	249.2	255.3	263.6
NDDH0615	6840.69	9083.07	197.31	-63.54	313.2	255.3	260.75	263.6
NDDH0616	6842.9	9081.66	197.6	-61.71	272.79	137	141	287.7
NDDH0616	6842.9	9081.66	197.6	-61.71	272.79	141	147	287.7
NDDH0616	6842.9	9081.66	197.6	-61.71	272.79	147	150.8	287.7
NDDH0616	6842.9	9081.66	197.6	-61.71	272.79	150.8	185.5	287.7
NDDH0616	6842.9	9081.66	197.6	-61.71	272.79	185.5	186.9	287.7
NDDH0616	6842.9	9081.66	197.6	-61.71	272.79	186.9	199	287.7
NDDH0616	6842.9	9081.66	197.6	-61.71	272.79	199	201.4	287.7
NDDH0616	6842.9	9081.66	197.6	-61.71	272.79	201.4	202.5	287.7
NDDH0616	6842.9	9081.66	197.6	-61.71	272.79	202.5	204	287.7
NDDH0616	6842.9	9081.66	197.6	-61.71	272.79	204	239.2	287.7
NDDH0616	6842.9	9081.66	197.6	-61.71	272.79	239.2	244.4	287.7
NDDH07002	6790.43	8690.88	205.86	-56.18	269.99	144.5	145.9	225.4
NDDH07002	6790.43	8690.88	205.86	-56.18	269.99	145.9	193	225.4
NDDH07002	6790.43	8690.88	205.86	-56.18	269.99	193	194	225.4
NDDH07002	6790.43	8690.88	205.86	-56.18	269.99	194	195	225.4
NDDH07002	6790.43	8690.88	205.86	-56.18	269.99	195	196	225.4



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
NDDH07002	6790.43	8690.88	205.86	-56.18	269.99	196	198.8	225.4
NDDH07002	6790.43	8690.88	205.86	-56.18	269.99	198.8	199.3	225.4
NDDH07002	6790.43	8690.88	205.86	-56.18	269.99	199.3	200.8	225.4
NDDH07022	6767.49	8840.53	215.75	-60.26	264.85	112	121	243.2
NDDH07022	6767.49	8840.53	215.75	-60.26	264.85	121	125	243.2
NDDH07022	6767.49	8840.53	215.75	-60.26	264.85	125	147	243.2
NDDH07022	6767.49	8840.53	215.75	-60.26	264.85	147	149.5	243.2
NDDH07022	6767.49	8840.53	215.75	-60.26	264.85	149.5	152	243.2
NDDH07022	6767.49	8840.53	215.75	-60.26	264.85	152	158.1	243.2
NDDH07022	6767.49	8840.53	215.75	-60.26	264.85	172.77	179.74	243.2
NDDH07023	6810	8990	203	-53.23	273.46	120	126.8	204.2
NDDH07023	6810	8990	203	-53.23	273.46	126.8	128.8	204.2
NDDH07023	6810	8990	203	-53.23	273.46	128.8	130.8	204.2
NDDH07023	6810	8990	203	-53.23	273.46	130.8	168.5	204.2
NDDH07023	6810	8990	203	-53.23	273.46	168.5	170.5	204.2
NDDH07023	6810	8990	203	-53.23	273.46	170.5	178	204.2
NDDH08035	6801.999	9533.603	70.817	-90	0	0	25	25
NDDH09054	6709	10143.68	324.17	-49.275	95.2	67.7	134.3	163.7
NDDH09055	6704.64	10186.25	324.93	-49.225	87.58	91.5	107	149.6
NDDH09055	6704.64	10186.25	324.93	-49.225	87.58	107	126.6	149.6
NDDH09056	6712.029	10041.17	320.244	-59.3	97.34	49.8	54.2	118.4
NDDH09056	6712.029	10041.17	320.244	-59.3	97.34	89.8	105.1	118.4
NDDH09056	6712.029	10041.17	320.244	-59.3	97.34	105.1	110.6	118.4
NDDH09063	6872.747	10275.956	334.552	-49.1	285.19	189.7	192.6	259.5
NDDH09063	6872.747	10275.956	334.552	-49.1	285.19	192.6	195.5	259.5
NDDH09064	6630.287	9990.097	297.587	-50	92.24	40	67.85	349.3
NDDH09064	6630.287	9990.097	297.587	-50	92.24	172	180	349.3
NDDH09064	6630.287	9990.097	297.587	-50	92.24	219	233	349.3
NDDH09065	6945.092	9939.886	322.072	-50.67	270.57	257.25	285	329.2
NDDH09065	6945.092	9939.886	322.072	-50.67	270.57	285	298.5	329.2
NDDH10066	6940.798	10040.789	322.719	-52.7	264.3	225	250	368.5
NDDH10066	6940.798	10040.789	322.719	-52.7	264.3	250	253.1	368.5
NDDH10066	6940.798	10040.789	322.719	-52.7	264.3	298	300.5	368.5
NDDH10067	6621.28	10139.979	306.086	-47.59	95.374	79	112	296.3
NDDH10067	6621.28	10139.979	306.086	-47.59	95.374	201.51	202.9	296.3
NDDH10067	6621.28	10139.979	306.086	-47.59	95.374	226	228	296.3
NDDH10067	6621.28	10139.979	306.086	-47.59	95.374	228	262.15	296.3
NDDH10067	6621.28	10139.979	306.086	-47.59	95.374	262.15	264.9	296.3
NDDH10068	6686.573	10089.867	290.077	-49.68	88.55	80.91	82	206.5
NDDH10068	6686.573	10089.867	290.077	-49.68	88.55	84.5	87.7	206.5



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
NDDH10068	6686.573	10089.867	290.077	-49.68	88.55	87.7	90	206.5
NDDH10068	6686.573	10089.867	290.077	-49.68	88.55	90	126	206.5
NDDH10068	6686.573	10089.867	290.077	-49.68	88.55	126	129	206.5
NDDH10068	6686.573	10089.867	290.077	-49.68	88.55	129	148.7	206.5
NDDH10068	6686.573	10089.867	290.077	-49.68	88.55	148.7	167.6	206.5
NDDH10069	6707.544	9939.829	275.308	-50.63	93.55	61.55	62.7	177.8
NDDH10069	6707.544	9939.829	275.308	-50.63	93.55	62.7	80.5	177.8
NDDH10070	6894.271	10036.886	306.162	-49.75	295.18	148.9	180.7	295.1
NDDH10070	6894.271	10036.886	306.162	-49.75	295.18	180.7	210.3	295.1
NDDH10070	6894.271	10036.886	306.162	-49.75	295.18	210.3	234.6	295.1
NDDH10070	6894.271	10036.886	306.162	-49.75	295.18	234.6	242	295.1
NDDH10070	6894.271	10036.886	306.162	-49.75	295.18	242	247.15	295.1
NDDH10070	6894.271	10036.886	306.162	-49.75	295.18	258.4	260.34	295.1
NDDH10071	7014.83	10126.39	335.62	-52.5	254.03	373.2	406.8	510
NDDH10071	7014.83	10126.39	335.62	-52.5	254.03	406.8	408.25	510
NDDH10071	7014.83	10126.39	335.62	-52.5	254.03	478.4	486.7	510
NMAP08010	6529.13	9085.66	190	0	87.6	99.52	111.39	136
NP2018_05	6779.406	9882.194	32.673	-48.47	259.5	0	0.5	292.5
NP2018_05	6779.406	9882.194	32.673	-48.47	259.5	0.5	3.5	292.5
NP2018_05	6779.406	9882.194	32.673	-48.47	259.5	3.5	70	292.5
NP2018_05	6779.406	9882.194	32.673	-48.47	259.5	77	81	292.5
NP2018_05	6779.406	9882.194	32.673	-48.47	259.5	223.98	225.4	292.5
NP2018_05	6779.406	9882.194	32.673	-48.47	259.5	241.94	255.95	292.5
NP8845	6622	9141	281	-90	0	0	12	12
NP8865	6740	9215	255	-90	0	0	3	3
NPRC07009	6719.31	9105.78	148.24	-57.876	337.203	0	9	72
NPRC07009	6719.31	9105.78	148.24	-57.876	337.203	9	37	72
NPRC07010	6716.86	9112.73	147.41	-61.841	252.096	0	4	71
NPRC07010	6716.86	9112.73	147.41	-61.841	252.096	4	29	71
NPRC07010	6716.86	9112.73	147.41	-61.841	252.096	29	42	71
NPRC07011	6716.84	9081.36	151.2	-64.572	296.1	0	19	70
NPRC07011	6716.84	9081.36	151.2	-64.572	296.1	19	23.05	70
NPRC07011	6716.84	9081.36	151.2	-64.572	296.1	23.05	26	70
NPRC07011	6716.84	9081.36	151.2	-64.572	296.1	26	39	70
NPRC07011	6716.84	9081.36	151.2	-64.572	296.1	39	50	70
NPRC07012	6718	9077.23	151.6	-53.825	251.115	0	44	80
NPRC07012	6718	9077.23	151.6	-53.825	251.115	44	49	80
NPRC07014	6703.78	9029.5	156.09	-64.757	296.175	5	6.72	88
NPRC07014	6703.78	9029.5	156.09	-64.757	296.175	6.72	14	88
NPRC07014	6703.78	9029.5	156.09	-64.757	296.175	14	15	88



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
NPRC07014	6703.78	9029.5	156.09	-64.757	296.175	15	17	88
NPRC07014	6703.78	9029.5	156.09	-64.757	296.175	17	18	88
NPRC07014	6703.78	9029.5	156.09	-64.757	296.175	18	26	88
NPRC07016	6701.35	8978.04	160.96	-56.411	256.423	0	7	120
NPRC07016	6701.35	8978.04	160.96	-56.411	256.423	7	11	120
NPRC07016	6701.35	8978.04	160.96	-56.411	256.423	11	56	120
NPRC07016	6701.35	8978.04	160.96	-56.411	256.423	56	57	120
NPRC07016	6701.35	8978.04	160.96	-56.411	256.423	87	94	120
NPRC07017	6686.57	8839.52	175.13	-56.739	270.464	16	17	60
NPRC07017	6686.57	8839.52	175.13	-56.739	270.464	17	25	60
NPRC07017	6686.57	8839.52	175.13	-56.739	270.464	25	37	60
NPRC07017	6686.57	8839.52	175.13	-56.739	270.464	37	49	60
NPRC07018	6678.09	8792.69	179.77	-63.2	270.365	0	17	41
NPRC07018	6678.09	8792.69	179.77	-63.2	270.365	17	18	41
NPRC07018	6678.09	8792.69	179.77	-63.2	270.365	18	40	41
NPRC07019	6692.85	8889.9	170.32	-66.2	271.242	0	15	91
NPRC07019	6692.85	8889.9	170.32	-66.2	271.242	15	25	91
NPRC07019	6692.85	8889.9	170.32	-66.2	271.242	25	37	91
NPRC07019	6692.85	8889.9	170.32	-66.2	271.242	37	40	91
NPRC07019	6692.85	8889.9	170.32	-66.2	271.242	40	71	91
NPRC07019	6692.85	8889.9	170.32	-66.2	271.242	78	79	91
NPRC07020	6781.54	8917.09	216.36	-53.5	279.032	115	119	154
NPRC07020	6781.54	8917.09	216.36	-53.5	279.032	119	143	154
NPRC07020	6781.54	8917.09	216.36	-53.5	279.032	143	144.72	154
NPRC07020	6781.54	8917.09	216.36	-53.5	279.032	144.72	152	154
NPRC07021	6817.76	8889.58	218.09	-59.748	266.562	166	168	195
NPRC07021	6817.76	8889.58	218.09	-59.748	266.562	168	170	195
NPRC07021	6817.76	8889.58	218.09	-59.748	266.562	170	176	195
NPRC07021	6817.76	8889.58	218.09	-59.748	266.562	176	195	195
NPRC09039	6713.8	9000.85	140.1	-50.52	273.15	7	9	40
NPRC09039	6713.8	9000.85	140.1	-50.52	273.15	9	14	40
NPRC09039	6713.8	9000.85	140.1	-50.52	273.15	14	35	40
NPRC09040	6709.82	8991.8	139.72	-49.11	274.26	6	19	60
NPRC09040	6709.82	8991.8	139.72	-49.11	274.26	19	20	60
NPRC09040	6709.82	8991.8	139.72	-49.11	274.26	20	38	60
NPRC09040	6709.82	8991.8	139.72	-49.11	274.26	38	40	60
NPRC09041	6727.07	8989.34	139.96	-49.63	267.24	21	22	60
NPRC09041	6727.07	8989.34	139.96	-49.63	267.24	22	23	60
NPRC09041	6727.07	8989.34	139.96	-49.63	267.24	23	25	60
NPRC09041	6727.07	8989.34	139.96	-49.63	267.24	25	33	60



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
NPRC09041	6727.07	8989.34	139.96	-49.63	267.24	33	35	60
NPRC09041	6727.07	8989.34	139.96	-49.63	267.24	35	60	60
NPRC09042	6725.14	9015	139.81	-48.4	270	6	7	50
NPRC09042	6725.14	9015	139.81	-48.4	270	7	15	50
NPRC09042	6725.14	9015	139.81	-48.4	270	15	16	50
NPRC09042	6725.14	9015	139.81	-48.4	270	16	41	50
NPRC09043	6748.44	9040	139.64	-50.4	270	9	12	65
NPRC09043	6748.44	9040	139.64	-50.4	270	12	16	65
NPRC09043	6748.44	9040	139.64	-50.4	270	16	51	65
NPRC09043	6748.44	9040	139.64	-50.4	270	51	53	65
NPRC09043	6748.44	9040	139.64	-50.4	270	53	64	65
NPRC09043	6748.44	9040	139.64	-50.4	270	64	65	65
NPRC09044	6746.74	9015	139.08	-50.5	270	15	17	70
NPRC09044	6746.74	9015	139.08	-50.5	270	17	25	70
NPRC09044	6746.74	9015	139.08	-50.5	270	25	30	70
NPRC09044	6746.74	9015	139.08	-50.5	270	30	57	70
NPRC09044	6746.74	9015	139.08	-50.5	270	57	70	70
NPRC09045	6731.34	9002.5	139.85	-50.2	270	23	26	60
NPRC09045	6731.34	9002.5	139.85	-50.2	270	26	27	60
NPRC09045	6731.34	9002.5	139.85	-50.2	270	27	30	60
NPRC09045	6731.34	9002.5	139.85	-50.2	270	30	51	60
NPRC09045	6731.34	9002.5	139.85	-50.2	270	51	52	60
NPRC09046	6754.17	10189.39	335.31	-49.6	80.51	29	67.02	85
NPRC09046	6754.17	10189.39	335.31	-49.6	80.51	67.02	70	85
NPRC09047	6743.89	10213.5	334.9	-49.1	95.03	29	47.2	75
NPRC09047	6743.89	10213.5	334.9	-49.1	95.03	47.2	72	75
NPRC09048	6738.615	10144.844	322.991	-49.7	90.17	30	100	100
NPRC09051	6735.13	10087.13	321.92	-49.5	87.04	25	27	70
NPRC09051	6735.13	10087.13	321.92	-49.5	87.04	27	58	70
NPRC09052	6760.43	10039.937	321.623	-49.5	79.59	4	32	70
NPRC09053	6757.992	9995.216	321.293	-49.37	85.48	4	6	70
NPRC09053	6757.992	9995.216	321.293	-49.37	85.48	6	7	70
NPRC09058	6740.552	10337.775	323.678	-48.1	93.6	43	44	82
NPRC09058	6740.552	10337.775	323.678	-48.1	93.6	44	47	82
NPRC09058	6740.552	10337.775	323.678	-48.1	93.6	47	48	82
NPRC09059	6757.432	10313.374	322.806	-53.5	89.3	18	23	58
NPRC09059	6757.432	10313.374	322.806	-53.5	89.3	23	31	58
NPRC09059	6757.432	10313.374	322.806	-53.5	89.3	31	35	58
NPRC09060	6743.544	10304.493	322.724	-46.1	117.4	52	53	82
NPRC09060	6743.544	10304.493	322.724	-46.1	117.4	53	54	82



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
NPRC09061	6742.29	10392.04	336.48	-46.6	86	10	19	76
NPRC09061	6742.29	10392.04	336.48	-46.6	86	19	23	76
NPRC09061	6742.29	10392.04	336.48	-46.6	86	23	37	76
NPRC09061	6742.29	10392.04	336.48	-46.6	86	37	48	76
NPRC09061	6742.29	10392.04	336.48	-46.6	86	48	56	76
NPRC09062	6731.72	10376.557	336.36	-47.4	99.5	50	56	76
NPRC09062	6731.72	10376.557	336.36	-47.4	99.5	56	64	76
NPRC10072	6711.54	9989.97	275.82	-53.7	90.4	51	57	124
NPRC10072	6711.54	9989.97	275.82	-53.7	90.4	57	59	124
NPRC10072	6711.54	9989.97	275.82	-53.7	90.4	59	78	124
NPRC10073	6741.96	9932.04	275.9	-48.5	128.1	6	11.43	91
NPRC10073	6741.96	9932.04	275.9	-48.5	128.1	11.43	28	91
NPRC10076	6670.836	8790.003	100.615	-53.08	89.694	0	22	119
NPRC10076	6670.836	8790.003	100.615	-53.08	89.694	22	41.42	119
NPRC10076	6670.836	8790.003	100.615	-53.08	89.694	41.42	49	119
NPRC10076	6670.836	8790.003	100.615	-53.08	89.694	49	82	119
NPRC10076	6670.836	8790.003	100.615	-53.08	89.694	82	88	119
NPRC10076	6670.836	8790.003	100.615	-53.08	89.694	88	100	119
NPRC10076	6670.836	8790.003	100.615	-53.08	89.694	100	108	119
NPRC10076	6670.836	8790.003	100.615	-53.08	89.694	108	114	119
NPRC10077	6747.469	10390.084	304.683	-48	270	75	79	100
NPRC10079	6747.98	10339.884	304.017	-48.9	272.1	62	84	100
NPRC10086	6688.686	8589.535	167.37	-60.4	273.39	37	45	105
NPRC10086	6688.686	8589.535	167.37	-60.4	273.39	45	51	105
NPRC10086	6688.686	8589.535	167.37	-60.4	273.39	51	54	105
NPRC10086	6688.686	8589.535	167.37	-60.4	273.39	54	55	105
NPRC10086	6688.686	8589.535	167.37	-60.4	273.39	55	58	105
NPRC10086	6688.686	8589.535	167.37	-60.4	273.39	58	59	105
NPRC10086	6688.686	8589.535	167.37	-60.4	273.39	59	66	105
NPRC10086	6688.686	8589.535	167.37	-60.4	273.39	66	69	105
NPRC10086	6688.686	8589.535	167.37	-60.4	273.39	69	72	105
NPRC10086	6688.686	8589.535	167.37	-60.4	273.39	72	94	105
NPRC10087	6718.978	8600.912	168.552	-59.37	258.57	94	102	114
NPRC10087	6718.978	8600.912	168.552	-59.37	258.57	102	103	114
NPRC10087	6718.978	8600.912	168.552	-59.37	258.57	103	106	114
NPRC10087	6718.978	8600.912	168.552	-59.37	258.57	106	112	114
NPRC10087	6718.978	8600.912	168.552	-59.37	258.57	112	113	114
NPRC10087	6718.978	8600.912	168.552	-59.37	258.57	113	114	114
NPRC10089	6719.726	8764.998	95.247	-60.79	227.054	18	21	108
NPRC10089	6719.726	8764.998	95.247	-60.79	227.054	21	32	108



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
NPRC10089	6719.726	8764.998	95.247	-60.79	227.054	32	37	108
NPRC10089	6719.726	8764.998	95.247	-60.79	227.054	37	54	108
NPRC10089	6719.726	8764.998	95.247	-60.79	227.054	54	55	108
NPRC10089	6719.726	8764.998	95.247	-60.79	227.054	55	57	108
NPRC10089	6719.726	8764.998	95.247	-60.79	227.054	68	74	108
NPRC10091	6648.356	8690	153.67	-55.8	94.233	1	32	84
NPRC10091	6648.356	8690	153.67	-55.8	94.233	32	35	84
NPRC10091	6648.356	8690	153.67	-55.8	94.233	35	38	84
NPRC10091	6648.356	8690	153.67	-55.8	94.233	38	39	84
NPRC10091	6648.356	8690	153.67	-55.8	94.233	39	60	84
NPRC10091	6648.356	8690	153.67	-55.8	94.233	60	84	84
NPRC10092	6674.934	8550.535	167.556	-59.7	257.742	21	40	66
NPRC10092	6674.934	8550.535	167.556	-59.7	257.742	40	42	66
NPRC10092	6674.934	8550.535	167.556	-59.7	257.742	42	53	66
NPRC10092	6674.934	8550.535	167.556	-59.7	257.742	53	65	66
NPRC10092	6674.934	8550.535	167.556	-59.7	257.742	65	66	66
NPUG2018_01	7383.34	9087.21	343.76	-57.948	257.312	1029.65	1031.65	1121.9
NPUG2018_01	7383.34	9087.21	343.76	-57.948	257.312	1031.65	1033.4	1121.9
NPUG2018_02	7046.824	9942.885	276.751	-68.879	265.075	646	669.6	875
NPUG2018_02	7046.824	9942.885	276.751	-68.879	265.075	669.6	685.7	875
NPUG2018_02	7046.824	9942.885	276.751	-68.879	265.075	685.7	730.9	875
NPUG2018_02	7046.824	9942.885	276.751	-68.879	265.075	730.9	753.1	875
NPUG2018_02	7046.824	9942.885	276.751	-68.879	265.075	753.1	758.7	875
NPUG2018_02	7046.824	9942.885	276.751	-68.879	265.075	758.7	762.15	875
NPUG2018_02	7046.824	9942.885	276.751	-68.879	265.075	813.45	823	875
NPUG2018_02	7046.824	9942.885	276.751	-68.879	265.075	834.1	844.35	875
NPUG2018_03	7044.24	9941.983	276.336	-65.294	264.373	570.6	579.8	758.9
NPUG2018_03	7044.24	9941.983	276.336	-65.294	264.373	579.8	659.7	758.9
NPUG2018_03	7044.24	9941.983	276.336	-65.294	264.373	659.7	667.3	758.9
NPUG2018_03	7044.24	9941.983	276.336	-65.294	264.373	684.9	688.5	758.9
NPUG2018_04	7022.968	10084.887	289.778	-64.745	276.985	550.3	577	997
NPUG2018_04	7022.968	10084.887	289.778	-64.745	276.985	577	614.1	997
NPUG2018_04	7022.968	10084.887	289.778	-64.745	276.985	614.1	615.15	997
NPUG2018_04	7022.968	10084.887	289.778	-64.745	276.985	615.15	619	997
NPUG2018_04	7022.968	10084.887	289.778	-64.745	276.985	619	625.15	997
NPUG2018_04	7022.968	10084.887	289.778	-64.745	276.985	641.15	649.25	997
NPUG2018_04	7022.968	10084.887	289.778	-64.745	276.985	671.1	677.6	997
NPUG2018_04	7022.968	10084.887	289.778	-64.745	276.985	774.7	789	997
NPUG2018_05	7334.168	9137.293	343.606	-53.93	273.088	774.1	785.9	1088.1
NPUG2018_05	7334.168	9137.293	343.606	-53.93	273.088	785.9	795.2	1088.1



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
NPUG2018_05	7334.168	9137.293	343.606	-53.93	273.088	795.2	800.7	1088.1
NPUG2018_05	7334.168	9137.293	343.606	-53.93	273.088	800.7	807.88	1088.1
NPUG2018_05	7334.168	9137.293	343.606	-53.93	273.088	807.88	810.6	1088.1
NPUG2018_05	7334.168	9137.293	343.606	-53.93	273.088	810.6	817.8	1088.1
NPUG2018_05	7334.168	9137.293	343.606	-53.93	273.088	817.8	837.2	1088.1
NPUG2018_05	7334.168	9137.293	343.606	-53.93	273.088	837.2	838.4	1088.1
NPUG2018_05	7334.168	9137.293	343.606	-53.93	273.088	838.4	845.6	1088.1
NPUG2018_05	7334.168	9137.293	343.606	-53.93	273.088	845.6	913	1088.1
NPUG2018_05	7334.168	9137.293	343.606	-53.93	273.088	913	918.3	1088.1
NPUG2018_05	7334.168	9137.293	343.606	-53.93	273.088	1034	1058.9	1088.1
NPUG2018_06	7331.796	9138.796	343.242	-49.58	269.778	716.1	724.2	887.5
NPUG2018_06	7331.796	9138.796	343.242	-49.58	269.778	724.2	727.6	887.5
NPUG2018_06	7331.796	9138.796	343.242	-49.58	269.778	727.6	737.9	887.5
NPUG2018_06	7331.796	9138.796	343.242	-49.58	269.778	737.9	740.35	887.5
NPUG2018_06	7331.796	9138.796	343.242	-49.58	269.778	740.35	750.35	887.5
NPUG2018_06	7331.796	9138.796	343.242	-49.58	269.778	750.35	751.85	887.5
NPUG2018_06	7331.796	9138.796	343.242	-49.58	269.778	751.85	754.1	887.5
NPUG2018_06	7331.796	9138.796	343.242	-49.58	269.778	754.1	762.5	887.5
NPUG2018_06	7331.796	9138.796	343.242	-49.58	269.778	762.5	765.35	887.5
NPUG2018_06	7331.796	9138.796	343.242	-49.58	269.778	765.35	782	887.5
NPUG2018_06	7331.796	9138.796	343.242	-49.58	269.778	782	786.3	887.5
NPUG2018_06	7331.796	9138.796	343.242	-49.58	269.778	786.3	802.4	887.5
NPUG2018_06	7331.796	9138.796	343.242	-49.58	269.778	802.4	810.8	887.5
NPUG2018_06	7331.796	9138.796	343.242	-49.58	269.778	810.8	841.08	887.5
NPUG2018_06	7331.796	9138.796	343.242	-49.58	269.778	841.08	850.5	887.5
NPUG2018_07	7025.229	10085.067	289.616	-72.25	268.151	755.8	765.2	939.3
NPUG2018_07	7025.229	10085.067	289.616	-72.25	268.151	765.2	786.4	939.3
NPUG2018_07	7025.229	10085.067	289.616	-72.25	268.151	786.4	790.4	939.3
NPUG2018_07	7025.229	10085.067	289.616	-72.25	268.151	790.4	796.3	939.3
NPUG2018_07	7025.229	10085.067	289.616	-72.25	268.151	796.3	798	939.3
NPUG2018_07	7025.229	10085.067	289.616	-72.25	268.151	798	803.6	939.3
NPUG2018_07	7025.229	10085.067	289.616	-72.25	268.151	803.6	812.9	939.3
NPUG2018_07	7025.229	10085.067	289.616	-72.25	268.151	812.9	819.5	939.3
NPUG2018_07	7025.229	10085.067	289.616	-72.25	268.151	856.6	883.2	939.3
NPUG2018_08	7321.731	9293.556	345.767	-51.533	270.697	709.63	719.5	827.1
NPUG2018_08	7321.731	9293.556	345.767	-51.533	270.697	719.5	730.8	827.1
NPUG2018_08	7321.731	9293.556	345.767	-51.533	270.697	730.8	736.2	827.1
NPUG2018_08	7321.731	9293.556	345.767	-51.533	270.697	736.2	737.3	827.1
NPUG2018_08	7321.731	9293.556	345.767	-51.533	270.697	737.3	743	827.1
NPUG2018_08	7321.731	9293.556	345.767	-51.533	270.697	743	760.5	827.1



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
NPUG2018_08	7321.731	9293.556	345.767	-51.533	270.697	760.5	764.6	827.1
NPUG2018_08	7321.731	9293.556	345.767	-51.533	270.697	764.6	807	827.1
NPUG2018_08	7321.731	9293.556	345.767	-51.533	270.697	807	814.1	827.1
NPUG2018_08	7321.731	9293.556	345.767	-51.533	270.697	814.1	827.1	827.1
NPUG2018_09	7320.973	9293.568	345.31	-54.57	271.09	811	821.9	983.3
NPUG2018_09	7320.973	9293.568	345.31	-54.57	271.09	821.9	822.2	983.3
NPUG2018_09	7320.973	9293.568	345.31	-54.57	271.09	822.2	825.4	983.3
NPUG2018_09	7320.973	9293.568	345.31	-54.57	271.09	825.4	826.5	983.3
NPUG2018_09	7320.973	9293.568	345.31	-54.57	271.09	826.5	841	983.3
NPUG2018_09	7320.973	9293.568	345.31	-54.57	271.09	841	843	983.3
NPUG2018_09	7320.973	9293.568	345.31	-54.57	271.09	843	884.5	983.3
NPUG2018_09	7320.973	9293.568	345.31	-54.57	271.09	884.5	897.9	983.3
NPUG2018_10	7324.031	9481.995	351.197	-53.014	265.9	783.85	787.6	1115
NPUG2018_10	7324.031	9481.995	351.197	-53.014	265.9	787.6	792	1115
NPUG2018_10	7324.031	9481.995	351.197	-53.014	265.9	792	835.41	1115
NPUG2018_10	7324.031	9481.995	351.197	-53.014	265.9	835.41	837.65	1115
NPUG2018_10	7324.031	9481.995	351.197	-53.014	265.9	837.65	839.78	1115
NPUG2018_10	7324.031	9481.995	351.197	-53.014	265.9	839.78	841.95	1115
NPUG2018_10	7324.031	9481.995	351.197	-53.014	265.9	841.95	888.5	1115
NPUG2018_10	7324.031	9481.995	351.197	-53.014	265.9	888.5	889.9	1115
NPUG2018_10	7324.031	9481.995	351.197	-53.014	265.9	985	991.5	1115
NPUG2018_10	7324.031	9481.995	351.197	-53.014	265.9	1044	1055	1115
NPUG2018_11	6590.512	10308	276.735	-61.388	136.31	241	261	638.6
NPUG2018_11	6590.512	10308	276.735	-61.388	136.31	277.3	286	638.6
NPUG2018_11	6590.512	10308	276.735	-61.388	136.31	342.5	348.3	638.6
NPUG2018_11	6590.512	10308	276.735	-61.388	136.31	387	400.3	638.6
NPUG2018_11	6590.512	10308	276.735	-61.388	136.31	440.35	464	638.6
NPUG2018_11	6590.512	10308	276.735	-61.388	136.31	464	478	638.6
NPUG2018_11	6590.512	10308	276.735	-61.388	136.31	478	482	638.6
NPUG2018_11	6590.512	10308	276.735	-61.388	136.31	482	557.95	638.6
NPUG2018_11	6590.512	10308	276.735	-61.388	136.31	557.95	565	638.6
NPUG2018_12	7323	9482.057	351.15	-50.205	269.079	692.7	713.9	968.2
NPUG2018_12	7323	9482.057	351.15	-50.205	269.079	713.9	715.7	968.2
NPUG2018_12	7323	9482.057	351.15	-50.205	269.079	715.7	733	968.2
NPUG2018_12	7323	9482.057	351.15	-50.205	269.079	733	743.7	968.2
NPUG2018_12	7323	9482.057	351.15	-50.205	269.079	743.7	768	968.2
NPUG2018_12	7323	9482.057	351.15	-50.205	269.079	768	769.9	968.2
NPUG2018_12	7323	9482.057	351.15	-50.205	269.079	769.9	807.8	968.2
NPUG2018_12	7323	9482.057	351.15	-50.205	269.079	807.8	811.8	968.2
NPUG2018_12	7323	9482.057	351.15	-50.205	269.079	867.5	891.55	968.2



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
NPUG2018_12	7323	9482.057	351.15	-50.205	269.079	937.84	938.79	968.2
NPUG2018_13	6971.421	10216.16	294.859	-70.53	260.018	660.2	665	956.7
NPUG2018_13	6971.421	10216.16	294.859	-70.53	260.018	665	669.7	956.7
NPUG2018_13	6971.421	10216.16	294.859	-70.53	260.018	669.7	673.5	956.7
NPUG2018_13	6971.421	10216.16	294.859	-70.53	260.018	673.5	747.8	956.7
NPUG2018_13	6971.421	10216.16	294.859	-70.53	260.018	747.8	771	956.7
NPUG2018_13	6971.421	10216.16	294.859	-70.53	260.018	779.7	780.7	956.7
NPUG2018_13	6971.421	10216.16	294.859	-70.53	260.018	818.9	855.2	956.7
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	669.8	684	1133
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	684	686.75	1133
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	686.75	716.25	1133
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	716.25	717.7	1133
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	717.7	722.55	1133
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	722.55	724.3	1133
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	724.3	741.2	1133
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	741.2	744	1133
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	744	761.2	1133
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	761.2	761.55	1133
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	761.55	777.65	1133
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	777.65	781.3	1133
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	781.3	786.4	1133
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	786.4	788.8	1133
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	788.8	808.2	1133
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	808.2	809.4	1133
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	882.6	899.5	1133
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	925	934.3	1133
NPUG2018_14	7290.303	9614.262	350.437	-53.284	269.466	943.4	945.8	1133
NPUG2018_15	7381.824	9086.942	343.83	-50.8	265.152	773.6	776.9	972.78
NPUG2018_15	7381.824	9086.942	343.83	-50.8	265.152	776.9	802.2	972.78
NPUG2018_15	7381.824	9086.942	343.83	-50.8	265.152	802.2	805	972.78
NPUG2018_15	7381.824	9086.942	343.83	-50.8	265.152	805	814.8	972.78
NPUG2018_15	7381.824	9086.942	343.83	-50.8	265.152	871.8	884.3	972.78
NPUG2018_15	7381.824	9086.942	343.83	-50.8	265.152	894	899.1	972.78
NPUG2018_16	7199.384	9804.691	342.744	-66.92	258.79	866.65	882.8	1148.6
NPUG2018_16	7199.384	9804.691	342.744	-66.92	258.79	882.8	889.2	1148.6
NPUG2018_16	7199.384	9804.691	342.744	-66.92	258.79	889.2	905.62	1148.6
NPUG2018_16	7199.384	9804.691	342.744	-66.92	258.79	905.62	907	1148.6
NPUG2018_16	7199.384	9804.691	342.744	-66.92	258.79	907	918.09	1148.6
NPUG2018_16	7199.384	9804.691	342.744	-66.92	258.79	918.09	919.61	1148.6
NPUG2018_16	7199.384	9804.691	342.744	-66.92	258.79	919.61	922.34	1148.6



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
NPUG2018_16	7199.384	9804.691	342.744	-66.92	258.79	922.34	934	1148.6
NPUG2018_16	7199.384	9804.691	342.744	-66.92	258.79	934	949.3	1148.6
NPUG2018_16	7199.384	9804.691	342.744	-66.92	258.79	949.3	950.5	1148.6
NPUG2018_16	7199.384	9804.691	342.744	-66.92	258.79	950.5	954.45	1148.6
NPUG2018_16	7199.384	9804.691	342.744	-66.92	258.79	954.45	956.82	1148.6
NPUG2018_16	7199.384	9804.691	342.744	-66.92	258.79	956.82	961	1148.6
NPUG2018_16	7199.384	9804.691	342.744	-66.92	258.79	961	969.45	1148.6
NPUG2018_16	7199.384	9804.691	342.744	-66.92	258.79	969.45	978	1148.6
NPUG2018_16	7199.384	9804.691	342.744	-66.92	258.79	1028	1030.5	1148.6
NPUG2018_16	7199.384	9804.691	342.744	-66.92	258.79	1087.9	1104	1148.6
NPUG2018_16	7199.384	9804.691	342.744	-66.92	258.79	1108	1122.1	1148.6
NPUG2018_17	7196.893	9804.419	342.764	-57.405	263.101	642.3	649.2	1022.2
NPUG2018_17	7196.893	9804.419	342.764	-57.405	263.101	668	678	1022.2
NPUG2018_17	7196.893	9804.419	342.764	-57.405	263.101	678	687	1022.2
NPUG2018_17	7196.893	9804.419	342.764	-57.405	263.101	687	696.3	1022.2
NPUG2018_17	7196.893	9804.419	342.764	-57.405	263.101	696.3	698.85	1022.2
NPUG2018_17	7196.893	9804.419	342.764	-57.405	263.101	698.85	707.1	1022.2
NPUG2018_17	7196.893	9804.419	342.764	-57.405	263.101	707.1	711.6	1022.2
NPUG2018_17	7196.893	9804.419	342.764	-57.405	263.101	711.6	736.3	1022.2
NPUG2018_17	7196.893	9804.419	342.764	-57.405	263.101	736.3	738	1022.2
NPUG2018_17	7196.893	9804.419	342.764	-57.405	263.101	738	755.1	1022.2
NPUG2018_17	7196.893	9804.419	342.764	-57.405	263.101	755.1	755.7	1022.2
NPUG2018_17	7196.893	9804.419	342.764	-57.405	263.101	755.7	778.2	1022.2
NPUG2018_17	7196.893	9804.419	342.764	-57.405	263.101	778.2	789.55	1022.2
NPUG2018_17	7196.893	9804.419	342.764	-57.405	263.101	789.55	794.2	1022.2
NPUG2018_17	7196.893	9804.419	342.764	-57.405	263.101	840.1	848.8	1022.2
NPUG2018_17	7196.893	9804.419	342.764	-57.405	263.101	912.7	934.5	1022.2
NPUG2018_18b	7197.891	9803.277	342.892	-64.01	269.08	819.9	822.7	1028.5
NPUG2018_18b	7197.891	9803.277	342.892	-64.01	269.08	822.7	828.3	1028.5
NPUG2018_18b	7197.891	9803.277	342.892	-64.01	269.08	828.3	835.85	1028.5
NPUG2018_18b	7197.891	9803.277	342.892	-64.01	269.08	835.85	845.2	1028.5
NPUG2018_18b	7197.891	9803.277	342.892	-64.01	269.08	868.9	874.1	1028.5
NPUG2018_18b	7197.891	9803.277	342.892	-64.01	269.08	970.4	984.1	1028.5
NPUG2018_19	6970.59	10217.081	295.244	-46.499	279.85	290.8	300.7	723.51
NPUG2018_19	6970.59	10217.081	295.244	-46.499	279.85	314	315.5	723.51
NPUG2018_19	6970.59	10217.081	295.244	-46.499	279.85	378.8	384	723.51
NPUG2018_19	6970.59	10217.081	295.244	-46.499	279.85	399.85	406.4	723.51
NRC200509	6717.1	9756.8	221.8	-55	140.4	62	91.51	152
NRC200509	6717.1	9756.8	221.8	-55	140.4	91.51	98.43	152
NRC200509	6717.1	9756.8	221.8	-55	140.4	98.43	102.66	152



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
NRC200509	6717.1	9756.8	221.8	-55	140.4	102.66	108.31	152
NRC200509	6717.1	9756.8	221.8	-55	140.4	108.31	137.35	152
NRC200509	6717.1	9756.8	221.8	-55	140.4	137.35	144	152
NRC200509	6717.1	9756.8	221.8	-55	140.4	144	152	152
NRC200510	6764.5	9754.99	220.2	-59.5	176.28	0	68.2	140
NRC200510	6764.5	9754.99	220.2	-59.5	176.28	68.2	94.81	140
NRC200510	6764.5	9754.99	220.2	-59.5	176.28	94.81	140	140
NRC200611	6804.908	9031.819	202.801	-58.96	267.68	98	106	202
NRC200611	6804.908	9031.819	202.801	-58.96	267.68	106	170	202
NRC200611	6804.908	9031.819	202.801	-58.96	267.68	170	172	202
NRC200612	6777.39	9171.709	149.833	-56.341	245.467	28	30	180
NRC200612	6777.39	9171.709	149.833	-56.341	245.467	30	38	180
NRC200612	6777.39	9171.709	149.833	-56.341	245.467	38	42	180
NRC200612	6777.39	9171.709	149.833	-56.341	245.467	42	48	180
NRC200612	6777.39	9171.709	149.833	-56.341	245.467	48	54	180
NRC200612	6777.39	9171.709	149.833	-56.341	245.467	54	68	180
NRC200612	6777.39	9171.709	149.833	-56.341	245.467	68	76	180
NRC200612	6777.39	9171.709	149.833	-56.341	245.467	76	88	180
NRC200612	6777.39	9171.709	149.833	-56.341	245.467	88	106	180
NRC200612	6777.39	9171.709	149.833	-56.341	245.467	106	110	180
NRC200612	6777.39	9171.709	149.833	-56.341	245.467	110	118	180
NRC200612	6777.39	9171.709	149.833	-56.341	245.467	158	168	180
NRC200613	6793.534	9231.484	150.227	-58.4	267.943	38	44	196
NRC200613	6793.534	9231.484	150.227	-58.4	267.943	44	50	196
NRC200613	6793.534	9231.484	150.227	-58.4	267.943	50	52	196
NRC200613	6793.534	9231.484	150.227	-58.4	267.943	52	64	196
NRC200613	6793.534	9231.484	150.227	-58.4	267.943	64	76	196
NRC200613	6793.534	9231.484	150.227	-58.4	267.943	76	90	196
NRC200613	6793.534	9231.484	150.227	-58.4	267.943	90	94	196
NRC200613	6793.534	9231.484	150.227	-58.4	267.943	94	104	196
NRC200613	6793.534	9231.484	150.227	-58.4	267.943	172	194	196
NRC200614	6796.932	8991.752	207.957	-59.13	268.78	104	122	196
NRC200614	6796.932	8991.752	207.957	-59.13	268.78	122	124	196
NRC200614	6796.932	8991.752	207.957	-59.13	268.78	124	125.99	196
NRC200614	6796.932	8991.752	207.957	-59.13	268.78	125.99	134	196
NRC200614	6796.932	8991.752	207.957	-59.13	268.78	134	154	196
NRC200614	6796.932	8991.752	207.957	-59.13	268.78	154	160	196
NRC200615	6746.407	8788.299	211.485	-60.75	272.96	86	100	170
NRC200615	6746.407	8788.299	211.485	-60.75	272.96	100	108	170
NRC200615	6746.407	8788.299	211.485	-60.75	272.96	108	112	170



Table 15 - North Pit Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
NRC200615	6746.407	8788.299	211.485	-60.75	272.96	112	114	170
NRC200615	6746.407	8788.299	211.485	-60.75	272.96	114	124	170
NRC200615	6746.407	8788.299	211.485	-60.75	272.96	124	142	170

Table 16 Long Plains Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
IMI28	348036.0	5396583.0	280.0	-47.0	259.0	24.4	83.3	166.7
IMI29	348011.0	5396883.0	263.0	-50.0	258.0	111.9	115.2	182.9
IMI29	348011.0	5396883.0	263.0	-50.0	258.0	141.6	151.2	182.9
IMI29	348011.0	5396883.0	263.0	-50.0	258.0	79.4	90.3	182.9
IMI29	348011.0	5396883.0	263.0	-50.0	258.0	16.5	36.3	182.9
IMI30	348311.0	5395383.0	230.0	-45.0	255.0	128.5	157.0	192.0
IMI30	348311.0	5395383.0	230.0	-45.0	255.0	98.4	110.8	192.0
IMI30	348311.0	5395383.0	230.0	-45.0	255.0	58.2	83.1	192.0
IMI35	347976.0	5397188.0	253.0	-85.0	257.0	65.2	79.8	137.8
IMI46	347976.0	5397188.0	253.0	-44.0	257.0	98.5	116.5	233.5
IMI46	347976.0	5397188.0	253.0	-44.0	257.0	30.9	46.4	233.5
LPC06001	347832.3	5396884.2	274.3	10.0	97.4	52.0	52.1	136.0
LPC06001	347832.3	5396884.2	274.3	10.0	97.4	85.7	97.3	136.0
LPC06001	347832.3	5396884.2	274.3	10.0	97.4	115.4	122.0	136.0
LPC06002	347824.7	5396929.2	275.5	7.6	73.1	72.0	72.1	182.5
LPC06002	347824.7	5396929.2	275.5	7.6	73.1	140.0	142.3	182.5
LPC06002	347824.7	5396929.2	275.5	7.6	73.1	151.0	156.0	182.5
LPC06003	347878.8	5396989.0	278.3	5.4	99.5	18.1	31.0	115.5
LPC06003	347878.8	5396989.0	278.3	5.4	99.5	86.0	90.0	115.5
LPC06004	347789.9	5396998.1	274.6	-22.7	74.1	184.0	185.4	222.0
LPC06005	347839.9	5397087.9	262.6	6.8	102.3	29.0	29.0	157.0
LPC06005	347839.9	5397087.9	262.6	6.8	102.3	70.5	71.2	157.0
LPC06006	347800.3	5397139.9	251.4	1.5	96.4	66.2	98.9	232.0
LPC06006	347800.3	5397139.9	251.4	1.5	96.4	121.2	141.9	232.0
LPC06006	347800.3	5397139.9	251.4	1.5	96.4	166.9	169.2	232.0
LPC06007	347794.8	5397184.6	238.6	11.0	94.8	85.0	104.0	226.0
LPC06007	347794.8	5397184.6	238.6	11.0	94.8	117.8	125.3	226.0
LPC06007	347794.8	5397184.6	238.6	11.0	94.8	130.6	146.2	226.0
LPC06008	347937.0	5396682.3	282.4	2.3	90.2	4.1	28.0	56.5
LPC06008	347937.0	5396682.3	282.4	2.3	90.2	43.3	56.5	56.5
LPC06009	347994.8	5396703.8	287.8	-2.6	71.5	35.1	39.0	75.5
LPC06010	347968.4	5396582.5	277.1	6.8	86.4	8.0	48.9	111.0
LPC06010	347968.4	5396582.5	277.1	6.8	86.4	72.0	79.0	111.0
LPC06011	347955.3	5396486.3	269.4	7.2	93.1	12.0	22.4	90.5
LPC06011	347955.3	5396486.3	269.4	7.2	93.1	69.1	73.1	90.5
LPC06012	347996.7	5396384.1	264.2	11.9	91.2	32.0	33.0	35.0



Table 16 Long Plains Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
LPC06012	347996.7	5396384.1	264.2	11.9	91.2	9.0	15.1	35.0
LPDD1103	348437.0	5394660.0	259.3	-54.3	89.6	71.0	76.0	293.2
LPDD1103	348437.0	5394660.0	259.3	-54.3	89.6	123.5	137.5	293.2
LPDD1103	348437.0	5394660.0	259.3	-54.3	89.6	184.3	186.0	293.2
LPDD1103	348437.0	5394660.0	259.3	-54.3	89.6	232.0	245.5	293.2
LPDD1204	348295.4	5394950.2	259.4	-59.6	94.1	97.2	143.6	488.3
LPDD1204	348295.4	5394950.2	259.4	-59.6	94.1	175.1	215.0	488.3
LPDD1204	348295.4	5394950.2	259.4	-59.6	94.1	220.2	297.3	488.3
LPDD1204	348295.4	5394950.2	259.4	-59.6	94.1	297.3	352.0	488.3
LPDD1205	348194.8	5395260.0	240.7	-57.4	84.4	24.0	31.2	278.5
LPDD1205	348194.8	5395260.0	240.7	-57.4	84.4	66.6	120.7	278.5
LPDD1205	348194.8	5395260.0	240.7	-57.4	84.4	120.7	145.0	278.5
LPDD1205	348194.8	5395260.0	240.7	-57.4	84.4	166.9	179.6	278.5
LPDD1212	348080.5	5396392.0	267.1	-59.8	268.0	219.9	235.2	301.3
LPDD1212	348080.5	5396392.0	267.1	-59.8	268.0	124.0	132.1	301.3
LPDD1212	348080.5	5396392.0	267.1	-59.8	268.0	145.4	159.1	301.3
LPDD1212	348080.5	5396392.0	267.1	-59.8	268.0	265.3	269.0	301.3
LPDD1212	348080.5	5396392.0	267.1	-59.8	268.0	55.1	61.3	301.3
LPDD1215	348123.4	5396480.0	271.8	-57.0	273.3	204.6	252.2	301.4
LPDD1215	348123.4	5396480.0	271.8	-57.0	273.3	178.1	189.9	301.4
LPDD1218	348088.8	5396580.1	282.3	-60.0	270.0	101.5	232.1	288.1
LPDD1218	348088.8	5396580.1	282.3	-60.0	270.0	74.0	81.2	288.1
LPDD1220	348083.7	5396676.4	275.6	-52.3	259.3	178.8	207.5	236.6
LPDD1220	348083.7	5396676.4	275.6	-52.3	259.3	61.0	165.9	236.6
LPDD1223	347995.5	5396772.0	290.5	-73.5	281.0	142.3	201.2	300.0
LPDD1223	347995.5	5396772.0	290.5	-73.5	281.0	33.1	103.3	300.0
LPDD1228	347988.9	5397078.4	263.7	-60.8	274.5	111.9	156.5	270.2
LPDD1228	347988.9	5397078.4	263.7	-60.8	274.5	79.7	107.0	270.2
LPDD1228	347988.9	5397078.4	263.7	-60.8	274.5	24.5	52.4	270.2
LPDD1229	348007.1	5397181.1	254.7	-60.0	270.0	175.1	183.8	261.8
LPDD1229	348007.1	5397181.1	254.7	-60.0	270.0	74.4	83.9	261.8
LPDD1301	347991.7	5397130.3	262.2	-61.0	270.0	131.0	167.0	201.8
LPDD1301	347991.7	5397130.3	262.2	-61.0	270.0	37.0	48.9	201.8
LPDD1302	347992.2	5397130.3	262.1	-71.0	270.0	192.5	203.7	228.7
LPDD1302	347992.2	5397130.3	262.1	-71.0	270.0	72.0	78.0	228.7
LPDD1306	347795.3	5396931.7	276.3	-47.0	88.6	173.5	243.0	488.2
LPDD1306	347795.3	5396931.7	276.3	-47.0	88.6	278.2	300.0	488.2
LPDD1307	347845.6	5396939.3	283.4	-49.5	94.3	93.0	145.0	260.5
LPDD1307	347845.6	5396939.3	283.4	-49.5	94.3	158.7	174.0	260.5
LPDD1307	347845.6	5396939.3	283.4	-49.5	94.3	203.9	209.3	260.5
LPDD1309	347948.2	5396780.6	290.5	-69.5	92.7	46.3	172.9	284.7
LPDD1309	347948.2	5396780.6	290.5	-69.5	92.7	242.9	257.1	284.7
LPDD1310	348081.8	5396676.7	270.0	-74.1	270.0	154.0	309.8	309.8
LPDD1311	348070.8	5396534.4	281.9	-70.9	261.2	162.6	241.0	271.6



**ANNUAL RESOURCE & RESERVE STATEMENT
DECEMBER 2019**



GRANGE
RESOURCES



Table 16 Long Plains Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
LPDD1311	348070.8	5396534.4	281.9	-70.9	261.2	120.0	129.0	271.6
LPDD1312	348090.0	5396160.0	262.5	-65.0	270.0	101.0	153.6	222.2
LPDD1313	348133.6	5396058.8	258.6	-72.0	279.3	172.0	206.4	298.8
LPDD1313	348133.6	5396058.8	258.6	-72.0	279.3	170.2	172.0	298.8
LPDD1313	348133.6	5396058.8	258.6	-72.0	279.3	128.3	166.5	298.8
LPDD1314	348159.5	5395961.3	251.1	-69.9	259.0	190.0	228.4	283.8
LPDD1314	348159.5	5395961.3	251.1	-69.9	259.0	150.8	183.1	283.8
LPDD1314	348159.5	5395961.3	251.1	-69.9	259.0	78.0	119.1	283.8
LPDD1315	348156.0	5395864.4	246.3	-76.0	270.0	175.3	204.7	312.7
LPDD1315	348156.0	5395864.4	246.3	-76.0	270.0	83.0	137.2	312.7
LPDD1315	348156.0	5395864.4	246.3	-76.0	270.0	5.0	43.0	312.7
LPDD1316	348158.5	5395867.8	246.3	-50.0	209.0	197.6	216.6	303.6
LPDD1316	348158.5	5395867.8	246.3	-50.0	209.0	140.8	171.3	303.6
LPDD1316	348158.5	5395867.8	246.3	-50.0	209.0	8.4	39.1	303.6
LPDD1318	347988.9	5397078.4	263.7	-75.8	274.5	143.7	220.0	245.9
LPDD1318	347988.9	5397078.4	263.7	-75.8	274.5	112.6	121.0	245.9
LPDD1318	347988.9	5397078.4	263.7	-75.8	274.5	34.2	69.1	245.9
LPDDH0707	347942.1	5397183.3	262.0	-55.3	268.4	52.3	89.6	156.2
LPDDH0707	347942.1	5397183.3	262.0	-55.3	268.4	37.0	46.7	156.2
LPDDH0707	347942.1	5397183.3	262.0	-55.3	268.4	5.0	23.9	156.2
LPDDH100	347993.0	5397029.0	260.0	-50.0	255.0	111.0	154.2	181.0
LPDDH100	347993.0	5397029.0	260.0	-50.0	255.0	78.0	105.0	181.0
LPDDH100	347993.0	5397029.0	260.0	-50.0	255.0	32.8	46.7	181.0
LPDDH101	347945.5	5397030.4	274.9	-50.0	255.0	34.9	80.0	95.0
LPDDH101	347945.5	5397030.4	274.9	-50.0	255.0	26.1	28.0	95.0
LPDDH102	347896.2	5397018.7	275.8	-50.0	255.0	0.0	10.0	49.0
LPDDH103	348038.0	5397041.0	249.0	-50.0	255.0	180.6	199.0	199.0
LPDDH103	348038.0	5397041.0	249.0	-50.0	255.0	144.2	175.6	199.0
LPDDH103	348038.0	5397041.0	249.0	-50.0	255.0	81.7	96.5	199.0
LPRC07001	347942.2	5397124.9	267.4	-60.4	270.1	52.0	125.0	160.0
LPRC07001	347942.2	5397124.9	267.4	-60.4	270.1	7.0	36.0	160.0
LPRC07002	347936.1	5397080.0	266.9	-70.8	270.2	54.0	119.0	154.0
LPRC07002	347936.1	5397080.0	266.9	-70.8	270.2	34.0	45.6	154.0
LPRC07003	347891.0	5396985.0	280.0	-68.8	94.9	21.0	120.0	184.0
LPRC07003	347891.0	5396985.0	280.0	-68.8	94.9	123.0	163.0	184.0
LPRC07003	347891.0	5396985.0	280.0	-68.8	94.9	179.5	184.0	184.0
LPRC07004	347895.8	5396985.0	282.1	-56.0	92.3	2.1	41.0	160.0
LPRC07004	347895.8	5396985.0	282.1	-56.0	92.3	54.0	92.0	160.0
LPRC07004	347895.8	5396985.0	282.1	-56.0	92.3	102.0	121.0	160.0
LPRC07005	347908.0	5397133.7	263.9	-60.5	270.0	6.0	70.0	167.0
LPRC07006	347896.8	5397082.1	265.9	-70.4	270.4	23.0	66.0	93.0
LPRC1113	348042.6	5396380.1	271.2	-60.1	269.2	144.0	155.0	220.0
LPRC1113	348042.6	5396380.1	271.2	-60.1	269.2	29.3	33.3	220.0



Table 16 Long Plains Drill Hole Intercepts

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
LPRC1113	348042.6	5396380.1	271.2	-60.1	269.2	79.1	88.4	220.0
LPRC1113	348042.6	5396380.1	271.2	-60.1	269.2	200.0	203.0	220.0
LPRC1114	347973.9	5396383.2	266.9	-58.1	273.8	6.0	17.0	103.0
LPRC1114	347973.9	5396383.2	266.9	-58.1	273.8	45.0	58.0	103.0
LPRC1116	348044.8	5396479.9	281.3	-57.1	269.4	47.0	114.0	200.0
LPRC1116	348044.8	5396479.9	281.3	-57.1	269.4	29.0	42.0	200.0
LPRC1117	347972.8	5396480.0	274.6	-58.7	273.0	3.5	15.0	100.0
LPRC1121	348007.5	5396674.8	290.5	-55.7	266.8	74.0	111.0	196.0
LPRC1121	348007.5	5396674.8	290.5	-55.7	266.8	1.5	49.0	196.0
LPRC1122	347950.0	5396679.9	287.2	-60.3	269.5	0.0	16.0	106.0
LPRC1127	347929.0	5396879.6	292.6	-59.7	276.2	0.0	21.0	100.0
LPRC1127	347929.0	5396879.6	292.6	-59.7	276.2	65.0	73.0	100.0
LPRC1209	348156.7	5396270.1	258.9	-57.3	262.9	127.0	131.0	131.0
LPRC1210	348075.1	5396280.1	262.1	-59.3	271.3	135.0	170.0	200.0
LPRC1210	348075.1	5396280.1	262.1	-59.3	271.3	7.0	22.0	200.0
LPRC1210	348075.1	5396280.1	262.1	-59.3	271.3	42.3	57.5	200.0
LPRC1211	348013.9	5396278.7	258.8	-59.5	277.1	37.0	61.0	88.0
LPRC1224	347996.1	5396774.1	290.5	-58.2	272.1	95.6	141.0	200.0
LPRC1224	347996.1	5396774.1	290.5	-58.2	272.1	24.8	76.0	200.0
LPRC1225	347943.3	5396780.4	290.4	-61.3	276.2	25.4	66.0	100.0
LPRC1308	347949.1	5396780.6	290.6	-48.0	92.0	39.3	61.0	166.0
LPRC1308	347949.1	5396780.6	290.6	-48.0	92.0	127.0	136.0	166.0
LPRC1310	348085.2	5396674.6	275.7	-74.0	270.0	150.8	153.0	153.0
LPRC1317	348091.7	5396161.5	262.5	-65.0	90.0	17.0	28.0	149.0
LPRC1317	348091.7	5396161.5	262.5	-65.0	90.0	51.0	62.0	149.0
MC29	347888.1	5397120.9	263.8	-49.3	258.8	8.0	30.8	348.0
rtae1	347991.0	5397143.0	257.0	-45.0	255.0	90.0	145.0	195.0
rtae1	347991.0	5397143.0	257.0	-45.0	255.0	72.1	73.0	195.0
rtae1	347991.0	5397143.0	257.0	-45.0	255.0	26.0	35.0	195.0

Table 17 - South Deposit Drill Hole Intercepts 31 December 2012

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
IMDD001	4422.5	5477.3	310.1	-50.0	278.9	106.3	176.3	206.3
IMDD002	4436.8	5362.1	290.7	-50.0	283.4	87.5	104.7	175.3
IMDD002	4436.8	5362.1	290.7	-50.0	283.4	104.7	124.6	175.3
IMDD003	4348.1	5334.9	298.1	-50.0	271.6	98.2	142.1	167.2
IMDD004	4342.2	5410.9	307.2	-49.5	274.3	58.7	85.2	123.0
IMDD005	4337.7	5468.9	313.9	-50.0	273.7	130.5	134.5	134.5
IMDD006	4242.2	5387.3	307.9	-50.0	273.4	33.0	40.9	87.0
IMDD007	4504.0	5262.7	285.4	-50.0	94.3	74.2	85.7	151.5
IMDD007	4504.0	5262.7	285.4	-50.0	94.3	85.7	144.3	151.5



Table 17 - South Deposit Drill Hole Intercepts 31 December 2012

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
IMDD008	4237.0	5252.1	310.5	-50.0	299.9	56.6	95.5	95.5
IMDD009	4490.8	5427.0	307.2	-58.0	282.3	38.0	45.0	117.3
IMDD010	4399.7	5430.0	309.3	-50.0	273.7	38.6	116.9	124.5
IMDD011	4398.0	5321.4	295.6	-61.0	274.3	92.6	106.1	141.7
IMDD011	4398.0	5321.4	295.6	-61.0	274.3	122.0	127.7	141.7
IMDD012	4290.8	5414.7	307.4	-50.2	276.9	40.4	86.1	136.0
IMDD013	4553.8	5283.6	258.2	-49.0	93.4	81.8	82.3	136.0
IMDD014	4302.5	5305.0	298.4	-49.0	276.7	70.5	125.4	146.8
IMDD015	4364.3	5302.2	297.5	-56.1	96.3	93.0	158.0	188.1
IMDD016	4257.6	5281.3	304.4	-52.0	94.5	150.1	229.4	239.0
IMDD017	4290.9	5395.6	305.0	-51.5	273.4	13.0	59.5	65.5
IMDD019	4285.2	5514.7	311.2	-55.0	269.5	196.0	253.3	259.0
IMDD019	4285.2	5514.7	311.2	-55.0	269.5	253.3	259.0	259.0
IMDD020	4499.1	5306.9	271.5	-50.5	90.4	4.9	24.9	79.5
IMDD020	4499.1	5306.9	271.5	-50.5	90.4	24.9	61.8	79.5
IMDD021	4295.3	5363.9	301.3	-51.0	265.4	5.7	19.0	264.5
IMDD021	4295.3	5363.9	301.3	-51.0	265.4	154.2	209.7	264.5
IMDD021	4295.3	5363.9	301.3	-51.0	265.4	209.7	222.5	264.5
IMDD021	4295.3	5363.9	301.3	-51.0	265.4	234.0	240.5	264.5
IMDD022	4385.4	5505.7	311.4	-52.0	274.4	180.6	219.6	279.5
IMDD022	4385.4	5505.7	311.4	-52.0	274.4	219.6	223.3	279.5
IMDD023	4394.3	5372.9	303.6	-57.5	278.1	5.5	26.0	234.5
IMDD023	4394.3	5372.9	303.6	-57.5	278.1	154.2	179.2	234.5
IMDD023	4394.3	5372.9	303.6	-57.5	278.1	187.7	199.2	234.5
IMDD024	4203.1	5460.3	313.9	-49.0	274.3	106.1	139.8	149.3
IMDD025	4199.9	5240.6	283.5	-54.0	267.5	45.5	111.0	114.3
IMDD026	4201.5	5306.4	283.6	-48.0	270.6	124.0	147.1	237.1
IMDD026	4201.5	5306.4	283.6	-48.0	270.6	147.1	206.9	237.1
IMDD027	4201.3	5500.1	313.3	-56.7	270.2	143.6	200.8	218.7
IMDD027	4201.3	5500.1	313.3	-56.7	270.2	200.8	205.1	218.7
IMDD029	4131.0	5295.0	301.0	-51.1	268.4	155.2	308.8	345.5
IMDD030	4132.9	5249.6	294.9	-51.5	287.4	90.6	98.0	169.7
IMDD030	4132.9	5249.6	294.9	-51.5	287.4	121.9	129.0	169.7
IMDD030	4132.9	5249.6	294.9	-51.5	287.4	134.5	154.0	169.7
IMDD032	4097.3	5224.9	291.6	-46.0	268.5	84.1	90.2	155.5
IMDD032	4097.3	5224.9	291.6	-46.0	268.5	100.3	105.9	155.5
IMDD033	4095.1	5272.3	294.8	-59.5	89.2	213.9	354.0	390.4
IMDD034	4052.8	5250.5	295.6	-54.7	90.4	245.9	313.1	403.9
IMDD035	4094.1	5266.1	294.6	-51.0	270.0	133.6	151.2	223.2
IMDD035	4094.1	5266.1	294.6	-51.0	270.0	151.2	171.3	223.2
IMDD035	4094.1	5266.1	294.6	-51.0	270.0	188.0	196.0	223.2
IMDD036	4102.7	5325.8	293.6	-60.0	88.1	105.7	267.0	287.0



Table 17 - South Deposit Drill Hole Intercepts 31 December 2012

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
IMDD038	4055.6	5267.2	295.1	-52.0	270.4	158.5	182.3	244.0
IMDD038	4055.6	5267.2	295.1	-52.0	270.4	182.3	193.0	244.0
IMDD039	4052.6	5220.6	295.7	-51.0	268.4	98.5	104.5	148.8
IMDD039	4052.6	5220.6	295.7	-51.0	268.4	104.5	119.8	148.8
SDDD1201	4181.1	5547.6	291.2	-52.3	279.6	190.2	269.5	312.7
SDDD1202	4054.7	5301.0	287.9	-57.5	83.4	156.7	236.7	267.7
SDDD1203	4129.3	5486.1	292.3	-54.7	277.0	127.0	136.0	136.0
SDDD1204	4141.3	5513.1	291.6	-56.2	87.7	168.0	219.2	249.4
SDDD1205	4300.0	5096.9	219.7	-46.2	87.4	209.2	229.9	281.6
SDDD1205	4300.0	5096.9	219.7	-46.2	87.4	229.9	232.4	281.6
SDDD1206	4250.0	5102.0	213.4	-49.4	92.2	159.0	173.8	218.9
SDDD1206	4250.0	5102.0	213.4	-49.4	92.2	173.8	177.4	218.9

Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
C88107	6423.00	7651.00	137.00	-90.00	0.00	9.00	18.00	18.00
C88108	6421.00	7631.00	141.00	-90.00	0.00	9.66	18.00	18.00
C88116	6395.00	7674.00	137.00	-90.00	0.00	0.00	18.80	21.00
C88118	6379.00	7439.00	152.00	-90.00	0.00	0.00	2.67	30.00
C88119	6380.00	7410.00	152.00	-90.00	0.00	0.00	6.00	30.00
C88121	6398.00	7319.00	152.00	-90.00	0.00	2.89	3.00	3.00
C88122	6406.00	7344.00	152.00	-90.00	0.00	0.00	30.00	30.00
C88123	6410.00	7365.00	152.00	-90.00	0.00	6.00	30.00	30.00
C88124	6408.00	7394.00	152.00	-90.00	0.00	0.00	12.00	30.00
C88124	6408.00	7394.00	152.00	-90.00	0.00	18.00	30.00	30.00
C88126	6425.00	7418.00	142.00	-90.00	0.00	0.00	8.28	12.00
C88127	6422.00	7444.00	140.00	-90.00	0.00	0.00	18.00	18.00
C88128	6420.00	7471.00	140.00	-90.00	0.00	0.00	9.00	18.00
C88128	6420.00	7471.00	140.00	-90.00	0.00	9.00	18.00	18.00
C88130	6452.00	7443.00	140.00	-90.00	0.00	0.00	3.00	3.00
C88131	6448.00	7413.00	140.00	-90.00	0.00	0.00	18.00	18.00
C88132	6452.00	7393.00	142.00	-90.00	0.00	0.00	18.00	18.00
C88133	6361.00	7585.00	150.00	-90.00	0.00	24.00	30.00	30.00
C88134	6362.00	7565.00	150.00	-90.00	0.00	0.00	30.00	30.00
C88135	6369.00	7536.00	150.00	-90.00	0.00	12.00	21.00	30.00
C88136	6378.00	7526.00	150.00	-90.00	0.00	0.00	30.00	30.00
C88137	6387.00	7519.00	150.00	-90.00	0.00	0.00	30.00	30.00
C88139	6391.00	7538.00	150.00	-90.00	0.00	0.00	33.00	33.00
C88140	6388.00	7563.00	150.00	-90.00	0.00	0.00	21.00	21.00
C88141	6380.00	7587.00	150.00	-90.00	0.00	1.93	33.00	33.00



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
C88142	6362.00	7605.00	150.00	-90.00	0.00	1.00	21.00	30.00
C88143	6380.00	7502.00	150.00	-90.00	0.00	21.00	39.00	39.00
C88145	6476.00	7639.00	127.00	-90.00	0.00	2.95	21.00	24.00
C88145	6476.00	7639.00	127.00	-10.00	90.00	21.00	24.00	24.00
C88146	6482.00	7529.00	130.00	-6.00	40.00	0.00	12.00	12.00
C88147	6444.00	7389.00	142.00	-90.00	0.00	0.00	6.08	15.00
C88148	6425.00	7391.00	141.00	-90.00	0.00	0.00	21.00	21.00
C88149	6440.00	7364.00	142.00	-90.00	0.00	0.00	17.37	24.00
C88150	6437.00	7342.00	143.00	-90.00	0.00	0.00	3.00	3.00
C88151	6435.00	7322.00	145.00	-90.00	0.00	0.00	24.00	24.00
C88152	6414.00	7328.00	144.00	-90.00	0.00	0.00	18.00	18.00
C88153	6418.00	7350.00	144.00	-90.00	0.00	0.00	21.00	21.00
C88154	6422.00	7370.00	144.00	-90.00	0.00	0.00	27.00	27.00
C88155	6432.00	7410.00	144.00	-90.00	0.00	0.00	18.00	18.00
C88156	6376.00	7366.00	155.00	-90.00	0.00	0.00	24.00	24.00
C88157	6375.00	7338.00	155.00	-90.00	0.00	0.00	27.00	27.00
C88158	6362.00	7643.00	153.00	-90.00	0.00	0.00	27.00	27.00
CD101	6524.20	7226.80	331.10	-45.00	267.80	0.00	30.80	182.90
CD101	6524.20	7226.80	331.10	-45.00	267.80	30.80	67.40	182.90
CD101	6524.20	7226.80	331.10	-45.00	267.80	67.40	117.30	182.90
CD101	6524.20	7226.80	331.10	-45.00	267.80	150.10	155.78	182.90
CD102	6514.20	7413.30	270.90	-45.00	268.50	3.70	15.20	167.60
CD102	6514.20	7413.30	270.90	-45.00	268.50	22.60	41.80	167.60
CD102	6514.20	7413.30	270.90	-45.00	268.50	41.80	48.50	167.60
CD102	6514.20	7413.30	270.90	-45.00	268.50	48.50	70.10	167.60
CD102	6514.20	7413.30	270.90	-45.00	268.50	75.30	97.80	167.60
CD102	6514.20	7413.30	270.90	-45.00	268.50	107.00	144.80	167.60
CD103	6488.90	7043.90	345.70	-45.00	269.00	24.70	45.40	174.70
CD103	6488.90	7043.90	345.70	-45.00	269.00	45.40	115.80	174.70
CD103	6488.90	7043.90	345.70	-45.00	269.00	132.60	166.10	174.70
CD104	6552.30	6956.80	342.50	-45.00	275.00	31.10	36.30	347.60
CD104	6552.30	6956.80	342.50	-45.00	275.00	80.80	88.10	347.60
CD104	6552.30	6956.80	342.50	-45.00	275.00	163.70	204.80	347.60
CD104	6552.30	6956.80	342.50	-45.00	275.00	231.00	272.50	347.60
CD104	6552.30	6956.80	342.50	-45.00	275.00	272.50	291.49	347.60
CD104	6552.30	6956.80	342.50	-45.00	275.00	316.10	325.50	347.60
CD105	6560.20	7672.70	212.80	-45.00	268.14	76.80	111.90	204.22
CD105	6560.20	7672.70	212.80	-45.00	268.14	116.40	139.90	204.22
CD105	6560.20	7672.70	212.80	-45.00	268.14	139.90	153.60	204.22
CD105	6560.20	7672.70	212.80	-45.00	268.14	158.80	174.00	204.22



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD105	6560.20	7672.70	212.80	-45.00	268.14	174.00	185.90	204.22
CD105	6560.20	7672.70	212.80	-45.00	268.14	192.00	204.22	204.22
CD106	6440.10	7583.70	217.40	-45.00	91.50	7.90	12.32	158.80
CD106	6440.10	7583.70	217.40	-45.00	91.50	34.10	39.80	158.80
CD106	6440.10	7583.70	217.40	-45.00	91.50	112.50	118.30	158.80
CD106	6440.10	7583.70	217.40	-45.00	91.50	135.00	155.40	158.80
CD108	6600.40	7413.30	266.90	-45.00	270.00	9.80	17.96	285.00
CD108	6600.40	7413.30	266.90	-45.00	270.00	28.30	34.10	285.00
CD108	6600.40	7413.30	266.90	-45.00	270.00	109.40	120.70	285.00
CD108	6600.40	7413.30	266.90	-45.00	270.00	135.60	161.80	285.00
CD108	6600.40	7413.30	266.90	-45.00	270.00	161.80	173.40	285.00
CD108	6600.40	7413.30	266.90	-45.00	270.00	173.40	183.50	285.00
CD108	6600.40	7413.30	266.90	-45.00	270.00	183.50	197.20	285.00
CD108	6600.40	7413.30	266.90	-45.00	270.00	200.15	211.50	285.00
CD108	6600.40	7413.30	266.90	-45.00	270.00	222.80	245.70	285.00
CD108	6600.40	7413.30	266.90	-45.00	270.00	245.70	270.10	285.00
CD109	6407.50	6876.30	323.00	-61.00	270.00	0.72	16.09	142.60
CD109	6407.50	6876.30	323.00	-61.00	270.00	46.30	62.20	142.60
CD109	6407.50	6876.30	323.00	-61.00	270.00	66.28	66.95	142.60
CD110	6406.29	6790.64	321.75	-55.00	270.00	0.00	3.62	303.60
CD110	6406.29	6790.64	321.75	-55.00	270.00	46.00	59.27	303.60
CD110	6406.29	6790.64	321.75	-55.00	270.00	59.27	132.30	303.60
CD110	6406.29	6790.64	321.75	-55.00	270.00	152.40	192.90	303.60
CD110	6406.29	6790.64	321.75	-55.00	270.00	199.00	208.80	303.60
CD110	6406.29	6790.64	321.75	-55.00	270.00	221.60	255.70	303.60
CD110	6406.29	6790.64	321.75	-55.00	270.00	271.30	298.70	303.60
CD111	6600.10	7587.10	226.00	-45.00	270.00	1.20	22.90	152.40
CD111	6600.10	7587.10	226.00	-45.00	270.00	103.60	107.90	152.40
CD112	6363.00	6690.40	306.70	-45.00	270.00	12.20	32.90	142.30
CD112	6363.00	6690.40	306.70	-45.00	270.00	52.10	142.30	142.30
CD113	6578.80	7043.90	332.20	-45.00	270.00	66.40	71.60	359.70
CD113	6578.80	7043.90	332.20	-45.00	270.00	180.10	194.50	359.70
CD113	6578.80	7043.90	332.20	-45.00	270.00	194.50	208.20	359.70
CD113	6578.80	7043.90	332.20	-45.00	270.00	252.10	255.70	359.70
CD113	6578.80	7043.90	332.20	-45.00	270.00	255.70	263.30	359.70
CD113	6578.80	7043.90	332.20	-45.00	270.00	300.80	306.30	359.70
CD113	6578.80	7043.90	332.20	-45.00	270.00	309.40	323.40	359.70
CD113	6578.80	7043.90	332.20	-45.00	270.00	327.70	348.10	359.70
CD114	6286.50	6461.80	315.50	-45.00	270.00	47.90	72.41	227.40
CD114	6286.50	6461.80	315.50	-45.00	270.00	72.41	104.90	227.40



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD114	6286.50	6461.80	315.50	-45.00	270.00	139.00	187.37	227.40
CD114	6286.50	6461.80	315.50	-45.00	270.00	199.18	217.89	227.40
CD115	6298.10	6598.00	308.50	-55.00	270.00	48.50	128.60	128.60
CD116	6221.60	6371.20	304.90	-55.00	270.00	29.30	37.20	274.30
CD116	6221.60	6371.20	304.90	-55.00	270.00	37.20	88.10	274.30
CD116	6221.60	6371.20	304.90	-55.00	270.00	100.00	123.10	274.30
CD116	6221.60	6371.20	304.90	-55.00	270.00	196.60	228.90	274.30
CD117	6614.20	7142.70	308.60	-55.00	270.00	125.00	128.90	335.30
CD117	6614.20	7142.70	308.60	-55.00	270.00	152.70	167.90	335.30
CD117	6614.20	7142.70	308.60	-55.00	270.00	264.00	274.30	335.30
CD117	6614.20	7142.70	308.60	-55.00	270.00	308.50	317.30	335.30
CD117	6614.20	7142.70	308.60	-55.00	270.00	321.60	335.30	335.30
CD118	6607.10	7227.40	309.80	-45.00	270.00	115.80	151.80	243.80
CD118	6607.10	7227.40	309.80	-45.00	270.00	174.70	198.31	243.80
CD119	6141.40	6186.80	272.80	-55.00	270.00	47.20	51.50	243.80
CD119	6141.40	6186.80	272.80	-55.00	270.00	59.70	63.62	243.80
CD119	6141.40	6186.80	272.80	-55.00	270.00	71.30	88.10	243.80
CD119	6141.40	6186.80	272.80	-55.00	270.00	98.50	118.00	243.80
CD119	6141.40	6186.80	272.80	-55.00	270.00	118.00	133.20	243.80
CD119	6141.40	6186.80	272.80	-55.00	270.00	139.30	189.30	243.80
CD119	6141.40	6186.80	272.80	-55.00	270.00	201.50	206.70	243.80
CD119	6141.40	6186.80	272.80	-55.00	270.00	210.29	238.70	243.80
CD120	6187.40	6746.40	269.00	-45.00	90.00	6.70	15.50	221.10
CD120	6187.40	6746.40	269.00	-45.00	90.00	32.30	37.50	221.10
CD120	6187.40	6746.40	269.00	-45.00	90.00	46.60	47.24	221.10
CD120	6187.40	6746.40	269.00	-45.00	90.00	47.24	49.01	221.10
CD120	6187.40	6746.40	269.00	-45.00	90.00	49.01	58.80	221.10
CD120	6187.40	6746.40	269.00	-45.00	90.00	82.90	93.90	221.10
CD120	6187.40	6746.40	269.00	-45.00	90.00	108.50	144.80	221.10
CD120	6187.40	6746.40	269.00	-45.00	90.00	192.90	212.80	221.10
CD121	6398.40	7326.00	314.00	-55.00	90.00	4.60	18.30	323.40
CD121	6398.40	7326.00	314.00	-55.00	90.00	24.70	34.96	323.40
CD121	6398.40	7326.00	314.00	-55.00	90.00	39.60	101.80	323.40
CD121	6398.40	7326.00	314.00	-55.00	90.00	101.80	134.10	323.40
CD121	6398.40	7326.00	314.00	-55.00	90.00	134.10	167.14	323.40
CD121	6398.40	7326.00	314.00	-55.00	90.00	167.14	175.60	323.40
CD121	6398.40	7326.00	314.00	-55.00	90.00	249.90	269.67	323.40
CD200101	6355.72	7640.28	99.71	-54.30	88.32	0.00	10.30	314.40
CD200101	6355.72	7640.28	99.71	-54.30	88.32	10.30	25.60	314.40
CD200101	6355.72	7640.28	99.71	-54.30	88.32	85.10	93.60	314.40



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD200101	6355.72	7640.28	99.71	-54.30	88.32	105.20	128.91	314.40
CD200101	6355.72	7640.28	99.71	-54.30	88.32	128.91	147.00	314.40
CD200101	6355.72	7640.28	99.71	-54.30	88.32	147.00	155.30	314.40
CD200101	6355.72	7640.28	99.71	-54.30	88.32	155.30	167.70	314.40
CD200101	6355.72	7640.28	99.71	-54.30	88.32	174.73	199.60	314.40
CD200101	6355.72	7640.28	99.71	-54.30	88.32	207.00	237.70	314.40
CD200101	6355.72	7640.28	99.71	-54.30	88.32	278.70	281.10	314.40
CD200101	6355.72	7640.28	99.71	-54.30	88.32	289.90	299.50	314.40
CD200102	6346.03	7689.64	105.08	-49.30	89.96	0.00	16.20	304.50
CD200102	6346.03	7689.64	105.08	-49.30	89.96	64.79	102.50	304.50
CD200102	6346.03	7689.64	105.08	-49.30	89.96	102.50	127.42	304.50
CD200102	6346.03	7689.64	105.08	-49.30	89.96	127.42	146.80	304.50
CD200102	6346.03	7689.64	105.08	-49.30	89.96	150.30	167.70	304.50
CD200102	6346.03	7689.64	105.08	-49.30	89.96	167.70	171.40	304.50
CD200102	6346.03	7689.64	105.08	-49.30	89.96	191.50	205.52	304.50
CD200102	6346.03	7689.64	105.08	-49.30	89.96	205.52	226.01	304.50
CD200102	6346.03	7689.64	105.08	-49.30	89.96	231.00	258.00	304.50
CD200102	6346.03	7689.64	105.08	-49.30	89.96	263.20	274.00	304.50
CD200103	6335.99	7739.99	110.07	-50.00	93.22	2.60	19.63	326.80
CD200103	6335.99	7739.99	110.07	-50.00	93.22	70.30	92.60	326.80
CD200103	6335.99	7739.99	110.07	-50.00	93.22	92.60	114.40	326.80
CD200103	6335.99	7739.99	110.07	-50.00	93.22	120.60	139.70	326.80
CD200103	6335.99	7739.99	110.07	-50.00	93.22	146.00	158.50	326.80
CD200103	6335.99	7739.99	110.07	-50.00	93.22	181.00	215.50	326.80
CD200103	6335.99	7739.99	110.07	-50.00	93.22	216.86	217.06	326.80
CD200103	6335.99	7739.99	110.07	-50.00	93.22	223.70	246.40	326.80
CD200103	6335.99	7739.99	110.07	-50.00	93.22	250.40	262.20	326.80
CD200103	6335.99	7739.99	110.07	-50.00	93.22	270.80	317.40	326.80
CD200104	6353.07	7840.12	111.30	-48.73	88.01	47.43	54.60	281.40
CD200104	6353.07	7840.12	111.30	-48.73	88.01	54.60	72.70	281.40
CD200104	6353.07	7840.12	111.30	-48.73	88.01	80.60	110.80	281.40
CD200104	6353.07	7840.12	111.30	-48.73	88.01	132.30	139.08	281.40
CD200104	6353.07	7840.12	111.30	-48.73	88.01	139.08	150.60	281.40
CD200104	6353.07	7840.12	111.30	-48.73	88.01	252.20	255.10	281.40
CD200105	6346.25	7890.37	111.97	-48.34	88.59	0.00	12.40	292.70
CD200105	6346.25	7890.37	111.97	-48.34	88.59	59.30	76.40	292.70
CD200105	6346.25	7890.37	111.97	-48.34	88.59	80.50	82.50	292.70
CD200105	6346.25	7890.37	111.97	-48.34	88.59	87.59	101.60	292.70
CD200105	6346.25	7890.37	111.97	-48.34	88.59	113.20	157.00	292.70
CD200105	6346.25	7890.37	111.97	-48.34	88.59	157.00	166.42	292.70



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD200105	6346.25	7890.37	111.97	-48.34	88.59	166.42	176.00	292.70
CD200105	6346.25	7890.37	111.97	-48.34	88.59	193.63	225.20	292.70
CD200105	6346.25	7890.37	111.97	-48.34	88.59	225.20	240.20	292.70
CD200105	6346.25	7890.37	111.97	-48.34	88.59	242.50	254.10	292.70
CD200105	6346.25	7890.37	111.97	-48.34	88.59	267.90	271.90	292.70
CD200106	6353.97	7815.16	110.51	-48.15	96.00	51.31	52.40	270.10
CD200106	6353.97	7815.16	110.51	-48.15	96.00	53.70	85.18	270.10
CD200106	6353.97	7815.16	110.51	-48.15	96.00	93.40	99.40	270.10
CD200106	6353.97	7815.16	110.51	-48.15	96.00	134.12	136.65	270.10
CD200106	6353.97	7815.16	110.51	-48.15	96.00	187.60	212.30	270.10
CD200106	6353.97	7815.16	110.51	-48.15	96.00	234.10	255.00	270.10
CD200107	6355.62	7940.19	112.19	-47.84	89.15	0.00	3.87	275.70
CD200107	6355.62	7940.19	112.19	-47.84	89.15	58.90	61.60	275.70
CD200107	6355.62	7940.19	112.19	-47.84	89.15	116.80	124.90	275.70
CD200107	6355.62	7940.19	112.19	-47.84	89.15	130.20	147.00	275.70
CD200107	6355.62	7940.19	112.19	-47.84	89.15	156.60	179.90	275.70
CD200107	6355.62	7940.19	112.19	-47.84	89.15	179.90	208.60	275.70
CD200107	6355.62	7940.19	112.19	-47.84	89.15	232.69	233.59	275.70
CD200107	6355.62	7940.19	112.19	-47.84	89.15	235.60	245.00	275.70
CD200108	6361.00	7990.00	112.00	-50.00	90.00	0.00	11.96	250.00
CD200108	6361.00	7990.00	112.00	-50.00	90.00	63.27	84.27	250.00
CD200108	6361.00	7990.00	112.00	-50.00	90.00	113.04	123.47	250.00
CD200108	6361.00	7990.00	112.00	-50.00	90.00	147.57	166.51	250.00
CD200108	6361.00	7990.00	112.00	-50.00	90.00	166.51	175.14	250.00
CD200108	6361.00	7990.00	112.00	-50.00	90.00	197.91	198.40	250.00
CD200108	6361.00	7990.00	112.00	-50.00	90.00	198.40	199.14	250.00
CD200108	6361.00	7990.00	112.00	-50.00	90.00	199.96	230.66	250.00
CD200108	6361.00	7990.00	112.00	-50.00	90.00	241.35	244.77	250.00
CD200109	6353.65	7990.07	112.94	-48.15	89.40	2.43	2.45	363.20
CD200109	6353.65	7990.07	112.94	-48.15	89.40	13.00	19.75	363.20
CD200109	6353.65	7990.07	112.94	-48.15	89.40	72.30	93.70	363.20
CD200109	6353.65	7990.07	112.94	-48.15	89.40	120.80	130.30	363.20
CD200109	6353.65	7990.07	112.94	-48.15	89.40	153.50	171.81	363.20
CD200109	6353.65	7990.07	112.94	-48.15	89.40	171.82	179.90	363.20
CD200109	6353.65	7990.07	112.94	-48.15	89.40	202.40	232.60	363.20
CD200109	6353.65	7990.07	112.94	-48.15	89.40	243.30	246.20	363.20
CD200109	6353.65	7990.07	112.94	-48.15	89.40	263.20	290.20	363.20
CD200109	6353.65	7990.07	112.94	-48.15	89.40	305.70	321.10	363.20
CD200109	6353.65	7990.07	112.94	-48.15	89.40	321.10	345.80	363.20
CD200201	5921.36	6000.00	224.24	-45.07	92.44	39.30	50.40	280.20



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD200301	6197.14	6140.11	249.27	-42.00	270.24	60.40	66.60	252.00
CD200301	6197.14	6140.11	249.27	-42.00	270.24	133.30	150.40	252.00
CD200301	6197.14	6140.11	249.27	-42.00	270.24	158.20	161.00	252.00
CD200301	6197.14	6140.11	249.27	-42.00	270.24	162.00	173.20	252.00
CD200301	6197.14	6140.11	249.27	-42.00	270.24	178.70	199.75	252.00
CD200301	6197.14	6140.11	249.27	-42.00	270.24	218.10	243.80	252.00
CD200302	5898.99	6189.62	206.47	-43.65	91.44	112.40	115.50	293.00
CD200302	5898.99	6189.62	206.47	-43.65	91.44	120.72	141.89	293.00
CD200302	5898.99	6189.62	206.47	-43.65	91.44	141.89	142.40	293.00
CD200302	5898.99	6189.62	206.47	-43.65	91.44	142.40	142.60	293.00
CD200302	5898.99	6189.62	206.47	-43.65	91.44	150.70	185.25	293.00
CD200302	5898.99	6189.62	206.47	-43.65	91.44	196.70	202.70	293.00
CD200302	5898.99	6189.62	206.47	-43.65	91.44	202.70	213.20	293.00
CD200302	5898.99	6189.62	206.47	-43.65	91.44	231.70	247.70	293.00
CD200302	5898.99	6189.62	206.47	-43.65	91.44	247.70	259.60	293.00
CD200302	5898.99	6189.62	206.47	-43.65	91.44	277.10	280.90	293.00
CD200303	5899.32	6235.08	201.27	-44.00	90.00	120.40	139.90	297.40
CD200303	5899.32	6235.08	201.27	-44.00	90.00	156.81	165.00	297.40
CD200303	5899.32	6235.08	201.27	-44.00	90.00	191.40	202.70	297.40
CD200303	5899.32	6235.08	201.27	-44.00	90.00	202.70	214.20	297.40
CD200303	5899.32	6235.08	201.27	-44.00	90.00	221.50	250.10	297.40
CD200303	5899.32	6235.08	201.27	-44.00	90.00	250.10	266.80	297.40
CD200303	5899.32	6235.08	201.27	-44.00	90.00	284.90	290.90	297.40
CD200304	6015.90	6274.01	158.08	-55.36	91.42	1.17	16.50	190.00
CD200304	6015.90	6274.01	158.08	-55.36	91.42	32.27	32.50	190.00
CD200304	6015.90	6274.01	158.08	-55.36	91.42	42.26	45.70	190.00
CD200304	6015.90	6274.01	158.08	-55.36	91.42	76.75	88.74	190.00
CD200304	6015.90	6274.01	158.08	-55.36	91.42	88.74	94.22	190.00
CD200304	6015.90	6274.01	158.08	-55.36	91.42	108.40	131.30	190.00
CD200304	6015.90	6274.01	158.08	-55.36	91.42	131.30	144.40	190.00
CD200304	6015.90	6274.01	158.08	-55.36	91.42	144.40	158.20	190.00
CD200304	6015.90	6274.01	158.08	-55.36	91.42	172.70	182.77	190.00
CD200305	6029.61	6322.97	156.73	-50.12	89.17	2.25	3.30	196.10
CD200305	6029.61	6322.97	156.73	-50.12	89.17	56.40	72.90	196.10
CD200305	6029.61	6322.97	156.73	-50.12	89.17	80.80	102.80	196.10
CD200305	6029.61	6322.97	156.73	-50.12	89.17	107.61	143.80	196.10
CD200305	6029.61	6322.97	156.73	-50.12	89.17	149.90	164.60	196.10
CD200305	6029.61	6322.97	156.73	-50.12	89.17	172.00	177.50	196.10
CD200306	6048.33	6371.62	156.72	-51.00	90.00	15.40	23.30	199.70
CD200306	6048.33	6371.62	156.72	-51.00	90.00	51.03	74.20	199.70



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD200306	6048.33	6371.62	156.72	-51.00	90.00	104.00	112.50	199.70
CD200306	6048.33	6371.62	156.72	-51.00	90.00	120.32	140.40	199.70
CD200306	6048.33	6371.62	156.72	-51.00	90.00	153.90	164.70	199.70
CD200306	6048.33	6371.62	156.72	-51.00	90.00	167.30	174.80	199.70
CD200306	6048.33	6371.62	156.72	-51.00	90.00	181.50	191.70	199.70
CD200307	6006.70	6419.85	180.62	-51.00	90.00	140.00	160.50	280.00
CD200307	6006.70	6419.85	180.62	-51.00	90.00	190.84	202.21	280.00
CD200307	6006.70	6419.85	180.62	-51.00	90.00	222.18	260.34	280.00
CD200308	6012.16	6461.93	177.28	-52.68	92.46	155.90	166.30	286.90
CD200308	6012.16	6461.93	177.28	-52.68	92.46	174.50	199.70	286.90
CD200308	6012.16	6461.93	177.28	-52.68	92.46	214.50	219.00	286.90
CD200308	6012.16	6461.93	177.28	-52.68	92.46	219.00	234.60	286.90
CD200308	6012.16	6461.93	177.28	-52.68	92.46	234.60	246.30	286.90
CD200308	6012.16	6461.93	177.28	-52.68	92.46	259.40	275.40	286.90
CD200309	6096.77	6090.80	237.71	-38.67	269.25	55.80	57.01	202.10
CD200309	6096.77	6090.80	237.71	-38.67	269.25	67.50	72.40	202.10
CD200309	6096.77	6090.80	237.71	-38.67	269.25	128.60	133.70	202.10
CD200309	6096.77	6090.80	237.71	-38.67	269.25	181.00	195.80	202.10
CD200310	6312.77	6321.35	265.01	-45.00	270.00	56.87	75.40	91.00
CD200310	6312.77	6321.35	265.01	-45.00	270.00	89.13	91.00	91.00
CD200401	6131.02	6641.27	155.52	-50.50	90.00	59.80	61.90	216.00
CD200401	6131.02	6641.27	155.52	-50.50	90.00	95.80	100.30	216.00
CD200401	6131.02	6641.27	155.52	-50.50	90.00	100.30	120.00	216.00
CD200401	6131.02	6641.27	155.52	-50.50	90.00	122.40	152.50	216.00
CD200401	6131.02	6641.27	155.52	-50.50	90.00	168.70	177.70	216.00
CD200402	6078.88	6553.31	165.83	-50.00	90.00	96.00	102.70	280.50
CD200402	6078.88	6553.31	165.83	-50.00	90.00	116.60	136.70	280.50
CD200402	6078.88	6553.31	165.83	-50.00	90.00	141.70	166.50	280.50
CD200402	6078.88	6553.31	165.83	-50.00	90.00	166.50	186.80	280.50
CD200402	6078.88	6553.31	165.83	-50.00	90.00	212.20	220.10	280.50
CD200403	6156.56	6705.33	149.06	-50.00	102.00	53.53	64.59	249.90
CD200403	6156.56	6705.33	149.06	-50.00	102.00	89.40	118.80	249.90
CD200403	6156.56	6705.33	149.06	-50.00	102.00	118.80	120.80	249.90
CD200403	6156.56	6705.33	149.06	-50.00	102.00	157.20	178.50	249.90
CD200403	6156.56	6705.33	149.06	-50.00	102.00	210.50	218.20	249.90
CD200403	6156.56	6705.33	149.06	-50.00	102.00	235.70	239.70	249.90
CD201	6407.20	6876.30	322.90	-55.00	270.00	0.44	13.13	46.90
CD201	6407.20	6876.30	322.90	-55.00	270.00	30.20	46.90	46.90
CD202	6319.40	6868.10	299.90	-55.00	270.00	0.00	20.86	47.20
CD202	6319.40	6868.10	299.90	-55.00	270.00	32.60	47.20	47.20



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD203	6255.70	6868.10	287.10	-55.00	90.00	1.38	39.19	61.00
CD203	6255.70	6868.10	287.10	-55.00	90.00	39.19	57.35	61.00
CD20303	6425.00	7674.00	137.00	-90.00	0.00	14.79	17.50	21.00
CD20303	6425.00	7674.00	137.00	-90.00	0.00	20.79	21.00	21.00
CD204	6255.10	6868.10	287.10	-55.00	270.00	13.40	63.40	63.40
CD205	6394.40	6952.50	321.70	-45.00	90.00	17.99	31.40	48.20
CD205	6394.40	6952.50	321.70	-45.00	90.00	31.40	42.10	48.20
CD206	6363.90	6952.50	309.60	-45.00	90.00	0.00	7.11	57.30
CD206	6363.90	6952.50	309.60	-45.00	90.00	19.25	37.80	57.30
CD206	6363.90	6952.50	309.60	-45.00	90.00	52.10	52.80	57.30
CD206	6363.90	6952.50	309.60	-45.00	90.00	52.80	53.57	57.30
CD206	6363.90	6952.50	309.60	-45.00	90.00	53.57	57.30	57.30
CD207	6340.00	6954.00	301.10	-45.00	90.00	0.00	15.82	59.40
CD207	6340.00	6954.00	301.10	-45.00	90.00	20.04	39.79	59.40
CD207	6340.00	6954.00	301.10	-45.00	90.00	44.10	56.15	59.40
CD208	6544.10	7043.90	343.30	-45.00	270.00	16.20	19.50	85.60
CD209	6438.90	7045.10	336.00	-45.00	270.00	0.00	39.60	45.70
CD209	6438.90	7045.10	336.00	-45.00	270.00	44.20	45.70	45.70
CD210	6400.50	7044.20	329.80	-45.00	270.00	0.00	11.90	47.50
CD210	6400.50	7044.20	329.80	-45.00	270.00	29.30	39.00	47.50
CD211	6496.20	7134.80	346.20	-45.00	270.00	0.61	11.60	57.90
CD211	6496.20	7134.80	346.20	-45.00	270.00	16.20	21.60	57.90
CD211	6496.20	7134.80	346.20	-45.00	270.00	34.40	48.50	57.90
CD212	6456.60	7135.40	336.20	-45.00	270.00	0.00	33.80	33.80
CD213	6434.90	7135.30	330.90	-45.00	270.00	0.00	20.22	46.90
CD213	6434.90	7135.30	330.90	-45.00	270.00	20.22	36.90	46.90
CD213	6434.90	7135.30	330.90	-45.00	270.00	36.90	46.90	46.90
CD215	6324.00	6788.00	301.30	-45.00	90.00	39.30	46.00	46.00
CD216	6489.50	7618.80	240.50	-60.00	270.00	12.80	25.00	76.20
CD216	6489.50	7618.80	240.50	-60.00	270.00	25.00	67.40	76.20
CD217	6294.70	6787.30	296.80	-45.00	90.00	39.30	51.50	52.10
CD218	6266.40	6787.90	288.80	-45.00	90.00	14.30	20.40	60.40
CD218	6266.40	6787.90	288.80	-45.00	90.00	32.60	60.40	60.40
CD219	6452.00	7323.00	323.60	-45.00	270.00	10.10	41.10	64.90
CD219	6452.00	7323.00	323.60	-45.00	270.00	49.40	57.00	64.90
CD219	6452.00	7323.00	323.60	-45.00	270.00	59.70	64.90	64.90
CD220	6232.60	6786.10	281.20	-45.00	90.00	31.70	39.90	51.80
CD220	6232.60	6786.10	281.20	-45.00	90.00	43.60	51.80	51.80
CD221	6496.00	7321.00	318.60	-45.00	270.00	19.20	50.90	62.50
CD221	6496.00	7321.00	318.60	-45.00	270.00	58.80	62.50	62.50



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD222	6181.00	6789.00	264.20	-45.00	90.00	17.10	28.00	54.90
CD222	6181.00	6789.00	264.20	-45.00	90.00	51.32	54.90	54.90
CD223	6552.00	7228.60	324.90	-45.00	270.00	1.80	42.70	42.70
CD224	6472.00	7227.00	336.40	-45.00	270.00	1.15	12.50	57.60
CD224	6472.00	7227.00	336.40	-45.00	270.00	23.80	55.50	57.60
CD226	6415.70	7410.00	305.50	-55.00	270.00	13.70	33.50	82.30
CD226	6415.70	7410.00	305.50	-55.00	270.00	45.70	59.10	82.30
CD227	6279.50	6690.00	287.50	-55.00	270.00	0.00	25.30	106.70
CD227	6279.50	6690.00	287.50	-55.00	270.00	25.30	49.92	106.70
CD227	6279.50	6690.00	287.50	-55.00	270.00	55.84	106.70	106.70
CD228	6448.30	7419.00	311.20	-55.00	270.00	0.00	10.10	70.10
CD228	6448.30	7419.00	311.20	-55.00	270.00	18.60	38.10	70.10
CD228	6448.30	7419.00	311.20	-55.00	270.00	43.30	62.80	70.10
CD229	6444.40	7272.50	329.80	-45.00	270.00	0.00	36.92	97.50
CD229	6444.40	7272.50	329.80	-45.00	270.00	37.40	42.37	97.50
CD229	6444.40	7272.50	329.80	-45.00	270.00	53.90	61.00	97.50
CD229	6444.40	7272.50	329.80	-45.00	270.00	79.50	91.38	97.50
CD229	6444.40	7272.50	329.80	-45.00	270.00	97.48	97.50	97.50
CD230	6435.20	7226.80	331.90	-45.00	270.00	49.70	54.60	82.90
CD231	6504.70	7273.10	324.90	-45.00	270.00	16.80	34.70	92.70
CD231	6504.70	7273.10	324.90	-45.00	270.00	34.70	72.46	92.70
CD231	6504.70	7273.10	324.90	-45.00	270.00	72.46	87.50	92.70
CD232	6241.40	6605.30	291.90	-55.00	270.00	0.00	6.43	70.40
CD233	6537.00	7272.80	316.90	-45.00	270.00	23.80	80.20	80.20
CD234	6432.50	7364.00	315.30	-45.00	270.00	4.00	29.30	61.90
CD234	6432.50	7364.00	315.30	-45.00	270.00	32.60	44.20	61.90
CD234	6432.50	7364.00	315.30	-45.00	270.00	59.40	61.90	61.90
CD235	6285.60	6915.60	287.00	-45.00	90.00	0.00	15.10	91.70
CD235	6285.60	6915.60	287.00	-45.00	90.00	17.31	33.70	91.70
CD235	6285.60	6915.60	287.00	-45.00	90.00	45.26	77.89	91.70
CD235	6285.60	6915.60	287.00	-45.00	90.00	77.89	78.00	91.70
CD235	6285.60	6915.60	287.00	-45.00	90.00	78.00	89.60	91.70
CD236	6358.10	6830.30	303.00	-45.00	90.00	0.00	13.40	91.60
CD236	6358.10	6830.30	303.00	-45.00	90.00	39.00	51.20	91.60
CD237	6479.70	7089.00	342.90	-45.00	90.00	10.10	26.20	91.40
CD237	6479.70	7089.00	342.90	-45.00	90.00	36.43	36.94	91.40
CD237	6479.70	7089.00	342.90	-45.00	90.00	57.60	71.30	91.40
CD238	6348.10	6915.60	309.80	-45.00	90.00	0.00	4.45	99.40
CD238	6348.10	6915.60	309.80	-45.00	90.00	7.18	51.24	99.40
CD238	6348.10	6915.60	309.80	-45.00	90.00	62.59	64.99	99.40



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD238	6348.10	6915.60	309.80	-45.00	90.00	74.71	86.40	99.40
CD239	6281.30	6553.50	310.19	-55.00	270.00	17.40	39.30	79.25
CD239	6281.30	6553.50	310.19	-55.00	270.00	65.83	79.25	79.25
CD240	6192.30	6544.97	277.03	-55.00	270.00	16.90	59.70	59.70
CD241	6296.00	6640.00	296.80	-45.00	90.00	11.60	22.85	56.10
CD241	6296.00	6640.00	296.80	-45.00	90.00	39.60	44.87	56.10
CD242	6178.30	6420.60	290.60	-45.00	90.00	0.00	1.20	91.40
CD242	6178.30	6420.60	290.60	-45.00	90.00	29.60	40.77	91.40
CD242	6178.30	6420.60	290.60	-45.00	90.00	40.90	71.90	91.40
CD243	6242.30	6553.20	298.40	-55.00	270.00	0.00	15.20	103.60
CD243	6242.30	6553.20	298.40	-55.00	270.00	36.66	94.20	103.60
CD244	6203.00	6509.00	281.50	-45.00	90.00	0.00	4.09	82.60
CD244	6203.00	6509.00	281.50	-45.00	90.00	10.70	18.93	82.60
CD245	6419.70	7090.00	327.80	-45.00	90.00	3.05	14.90	91.70
CD245	6419.70	7090.00	327.80	-45.00	90.00	14.90	27.40	91.70
CD245	6419.70	7090.00	327.80	-45.00	90.00	42.70	70.70	91.70
CD246	6495.30	7354.50	301.40	-45.00	270.00	2.28	15.20	91.70
CD246	6495.30	7354.50	301.40	-45.00	270.00	15.20	49.40	91.70
CD246	6495.30	7354.50	301.40	-45.00	270.00	53.90	76.20	91.70
CD246	6495.30	7354.50	301.40	-45.00	270.00	76.20	91.70	91.70
CD247	6497.10	7357.00	301.20	-55.00	90.00	0.00	22.90	91.40
CD247	6497.10	7357.00	301.20	-55.00	90.00	37.80	50.90	91.40
CD247	6497.10	7357.00	301.20	-55.00	90.00	58.80	86.30	91.40
CD247	6497.10	7357.00	301.20	-55.00	90.00	86.52	86.70	91.40
CD248	6379.80	7001.00	320.30	-45.00	90.00	0.00	10.70	91.40
CD248	6379.80	7001.00	320.30	-45.00	90.00	21.30	34.40	91.40
CD248	6379.80	7001.00	320.30	-45.00	90.00	46.60	55.20	91.40
CD248	6379.80	7001.00	320.30	-45.00	90.00	55.20	91.40	91.40
CD249	6315.50	7002.00	290.30	-45.00	90.00	0.00	12.20	91.40
CD249	6315.50	7002.00	290.30	-45.00	90.00	12.20	24.40	91.40
CD249	6315.50	7002.00	290.30	-45.00	90.00	24.40	57.90	91.40
CD249	6315.50	7002.00	290.30	-45.00	90.00	63.40	71.60	91.40
CD249	6315.50	7002.00	290.30	-45.00	90.00	76.80	82.90	91.40
CD250	6354.80	7090.00	311.10	-45.00	90.00	23.32	60.00	80.50
CD250	6354.80	7090.00	311.10	-45.00	90.00	67.40	74.40	80.50
CD251	6299.00	7090.90	296.10	-45.00	90.00	7.30	54.30	91.40
CD252	6452.30	7184.10	336.60	-45.00	270.00	29.60	63.40	97.50
CD254	6552.00	7180.00	328.80	-43.00	270.00	6.40	46.60	79.20
CD254	6552.00	7180.00	328.80	-43.00	270.00	46.60	62.80	79.20
CD302	6006.10	6324.30	231.60	-45.00	90.00	9.80	22.10	243.80



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD302	6006.10	6324.30	231.60	-45.00	90.00	35.10	44.20	243.80
CD302	6006.10	6324.30	231.60	-45.00	90.00	49.20	54.90	243.80
CD302	6006.10	6324.30	231.60	-45.00	90.00	62.30	81.70	243.80
CD302	6006.10	6324.30	231.60	-45.00	90.00	104.50	112.90	243.80
CD302	6006.10	6324.30	231.60	-45.00	90.00	124.80	136.60	243.80
CD302	6006.10	6324.30	231.60	-45.00	90.00	136.60	146.40	243.80
CD302	6006.10	6324.30	231.60	-45.00	90.00	155.00	169.60	243.80
CD302	6006.10	6324.30	231.60	-45.00	90.00	183.50	188.60	243.80
CD302	6006.10	6324.30	231.60	-45.00	90.00	199.30	208.50	243.80
CD302	6006.10	6324.30	231.60	-45.00	90.00	222.50	226.90	243.80
CD303	6113.00	6416.00	269.60	-45.00	90.00	30.60	46.00	201.20
CD303	6113.00	6416.00	269.60	-45.00	90.00	92.00	99.50	201.20
CD303	6113.00	6416.00	269.60	-45.00	90.00	99.50	105.25	201.20
CD303	6113.00	6416.00	269.60	-45.00	90.00	105.25	130.90	201.20
CD303	6113.00	6416.00	269.60	-45.00	90.00	145.10	154.20	201.20
CD305	6128.00	6599.00	247.80	-47.00	90.00	8.20	41.50	204.20
CD305	6128.00	6599.00	247.80	-47.00	90.00	85.80	91.10	204.20
CD305	6128.00	6599.00	247.80	-47.00	90.00	97.50	125.30	204.20
CD305	6128.00	6599.00	247.80	-47.00	90.00	145.50	148.00	204.20
CD305	6128.00	6599.00	247.80	-47.00	90.00	148.00	172.70	204.20
CD305	6128.00	6599.00	247.80	-47.00	90.00	172.70	201.90	204.20
CD305	6128.00	6599.00	247.80	-47.00	90.00	234.24	238.29	204.20
CD307	6136.80	6681.80	238.10	-45.00	90.00	11.30	22.10	243.80
CD307	6136.80	6681.80	238.10	-45.00	90.00	33.50	61.70	243.80
CD307	6136.80	6681.80	238.10	-45.00	90.00	80.90	96.50	243.80
CD307	6136.80	6681.80	238.10	-45.00	90.00	106.40	134.00	243.80
CD307	6136.80	6681.80	238.10	-45.00	90.00	137.00	145.70	243.80
CD307	6136.80	6681.80	238.10	-45.00	90.00	145.70	163.05	243.80
CD307	6136.80	6681.80	238.10	-45.00	90.00	163.05	173.40	243.80
CD307	6136.80	6681.80	238.10	-45.00	90.00	214.60	234.20	243.80
CD308	6220.00	6830.00	274.70	-48.00	90.00	13.09	15.83	286.82
CD308	6220.00	6830.00	274.70	-48.00	90.00	25.30	47.50	286.82
CD308	6220.00	6830.00	274.70	-48.00	90.00	47.50	78.00	286.82
CD308	6220.00	6830.00	274.70	-48.00	90.00	84.90	111.60	286.82
CD308	6220.00	6830.00	274.70	-48.00	90.00	113.06	123.30	286.82
CD308	6220.00	6830.00	274.70	-48.00	90.00	162.50	195.20	286.82
CD308	6220.00	6830.00	274.70	-48.00	90.00	206.60	222.20	286.82
CD308	6220.00	6830.00	274.70	-48.00	90.00	250.10	254.70	286.82
CD309	6224.00	6900.00	273.30	-45.00	90.00	6.10	37.80	240.20
CD309	6224.00	6900.00	273.30	-45.00	90.00	44.20	81.07	240.20



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD309	6224.00	6900.00	273.30	-45.00	90.00	83.91	87.78	240.20
CD309	6224.00	6900.00	273.30	-45.00	90.00	92.20	122.70	240.20
CD309	6224.00	6900.00	273.30	-45.00	90.00	171.75	174.07	240.20
CD309	6224.00	6900.00	273.30	-45.00	90.00	174.35	191.29	240.20
CD309	6224.00	6900.00	273.30	-45.00	90.00	203.56	208.66	240.20
CD309	6224.00	6900.00	273.30	-45.00	90.00	212.90	240.20	240.20
CD401	6526.00	7002.00	301.30	-60.00	90.00	6.82	7.33	119.35
CD401	6526.00	7002.00	301.30	-60.00	90.00	106.20	119.35	119.35
CD403	6438.00	6990.00	265.00	-45.00	90.00	0.00	12.95	171.67
CD403	6438.00	6990.00	265.00	-45.00	90.00	83.05	88.40	171.67
CD403	6438.00	6990.00	265.00	-45.00	90.00	109.54	118.02	171.67
CD405	6302.00	7318.00	241.00	-55.00	90.00	110.80	125.50	179.95
CD405	6302.00	7318.00	241.00	-55.00	90.00	153.69	172.06	179.95
CD405	6302.00	7318.00	241.00	-55.00	90.00	172.23	179.95	179.95
CD406	6268.00	6811.00	228.60	-45.00	270.00	5.80	52.61	100.78
CD406	6268.00	6811.00	228.60	-45.00	270.00	54.62	77.00	100.78
CD407	6457.00	7182.00	221.00	-60.00	90.00	11.70	66.57	168.45
CD409	6482.00	7631.00	202.00	-50.00	270.00	0.00	5.45	152.91
CD409	6482.00	7631.00	202.00	-50.00	270.00	5.45	61.30	152.91
CD409	6482.00	7631.00	202.00	-50.00	270.00	92.93	98.22	152.91
CD410	6485.00	7440.00	206.00	-60.00	90.00	7.50	10.28	163.08
CD410	6485.00	7440.00	206.00	-60.00	90.00	10.28	22.00	163.08
CD410	6485.00	7440.00	206.00	-60.00	90.00	39.52	47.10	163.08
CD410	6485.00	7440.00	206.00	-60.00	90.00	66.80	78.40	163.08
CD411	6297.00	6690.00	231.00	-60.00	90.00	0.00	9.03	149.96
CD411	6297.00	6690.00	231.00	-60.00	90.00	9.68	25.50	149.96
CD411	6297.00	6690.00	231.00	-60.00	90.00	40.70	49.50	149.96
CD411	6297.00	6690.00	231.00	-60.00	90.00	123.50	135.40	149.96
CD412	6253.00	6416.00	267.00	-50.00	90.00	45.90	49.70	115.70
CD412	6253.00	6416.00	267.00	-50.00	90.00	94.80	100.18	115.70
CD413	6135.00	6788.00	233.00	-55.00	90.00	141.26	151.94	169.86
CD414	6539.00	7172.50	272.70	-60.00	90.00	10.75	20.20	128.03
CD414	6539.00	7172.50	272.70	-60.00	90.00	27.28	61.47	128.03
CD501	6134.50	6461.40	239.20	-50.00	270.00	0.00	34.80	115.50
CD502	6040.60	6186.90	238.60	-55.00	270.00	20.37	43.60	140.00
CD502	6040.60	6186.90	238.60	-55.00	270.00	43.71	52.10	140.00
CD504	6487.00	7416.20	194.30	-45.00	270.00	0.00	4.00	134.00
CD504	6487.00	7416.20	194.30	-45.00	270.00	6.50	23.40	134.00
CD504	6487.00	7416.20	194.30	-45.00	270.00	23.40	57.01	134.00



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD504	6487.00	7416.20	194.30	-45.00	270.00	68.18	86.50	134.00
CD504	6487.00	7416.20	194.30	-45.00	270.00	103.30	107.00	134.00
CD506	6014.10	6186.80	238.10	-50.00	90.00	0.00	23.50	136.40
CD506	6014.10	6186.80	238.10	-50.00	90.00	27.60	33.45	136.40
CD506	6014.10	6186.80	238.10	-50.00	90.00	41.42	61.50	136.40
CD506	6014.10	6186.80	238.10	-50.00	90.00	68.00	87.90	136.40
CD506	6014.10	6186.80	238.10	-50.00	90.00	94.30	97.65	136.40
CD506	6014.10	6186.80	238.10	-50.00	90.00	97.65	109.80	136.40
CD506	6014.10	6186.80	238.10	-50.00	90.00	114.15	125.30	136.40
CD507	6446.20	7675.10	178.80	-45.00	90.00	0.00	3.10	101.60
CD507	6446.20	7675.10	178.80	-45.00	90.00	3.10	16.80	101.60
CD507	6446.20	7675.10	178.80	-45.00	90.00	16.80	91.90	101.60
CD508	6453.30	7497.90	184.50	-50.00	90.00	16.90	52.00	116.10
CD508	6453.30	7497.90	184.50	-50.00	90.00	52.00	65.00	116.10
CD508	6453.30	7497.90	184.50	-50.00	90.00	65.00	65.21	116.10
CD508	6453.30	7497.90	184.50	-50.00	90.00	65.21	73.80	116.10
CD508	6453.30	7497.90	184.50	-50.00	90.00	74.24	81.20	116.10
CD508	6453.30	7497.90	184.50	-50.00	90.00	81.20	106.20	116.10
CD509	6200.00	6502.90	223.30	-55.00	90.00	0.00	12.28	29.00
CD509	6200.00	6502.90	223.30	-55.00	90.00	13.14	19.30	29.00
CD510	6435.70	7227.50	199.10	-50.00	270.00	0.00	16.30	81.90
CD510	6435.70	7227.50	199.10	-50.00	270.00	25.84	30.01	81.90
CD511	6321.70	6954.00	204.50	-60.00	270.00	3.00	24.90	66.70
CD512	6438.50	7225.50	198.30	-45.00	90.00	0.00	5.50	143.00
CD512	6438.50	7225.50	198.30	-45.00	90.00	5.50	13.80	143.00
CD512	6438.50	7225.50	198.30	-45.00	90.00	16.80	51.62	143.00
CD512	6438.50	7225.50	198.30	-45.00	90.00	82.80	92.80	143.00
CD513	6233.30	6690.50	209.70	-50.00	270.00	0.00	28.21	80.50
CD513	6233.30	6690.50	209.70	-50.00	270.00	39.45	53.50	80.50
CD514	6344.50	7000.00	203.70	-45.00	90.00	0.00	7.90	146.00
CD514	6344.50	7000.00	203.70	-45.00	90.00	15.00	41.00	146.00
CD514	6344.50	7000.00	203.70	-45.00	90.00	45.86	50.53	146.00
CD514	6344.50	7000.00	203.70	-45.00	90.00	54.10	82.00	146.00
CD514	6344.50	7000.00	203.70	-45.00	90.00	103.60	112.90	146.00
CD514	6344.50	7000.00	203.70	-45.00	90.00	122.30	135.66	146.00
CD515	6078.40	6277.70	238.90	-55.00	270.00	17.04	67.03	104.30
CD515	6078.40	6277.70	238.90	-55.00	270.00	88.10	96.41	104.30
CD516	6119.40	6415.40	240.40	-60.00	90.00	10.70	16.70	151.20
CD516	6119.40	6415.40	240.40	-60.00	90.00	56.50	75.20	151.20
CD516	6119.40	6415.40	240.40	-60.00	90.00	86.90	100.70	151.20



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD516	6119.40	6415.40	240.40	-60.00	90.00	116.60	140.60	151.20
CD517	5898.00	6000.00	222.50	-40.00	90.00	63.60	72.20	152.40
CD517	5898.00	6000.00	222.50	-40.00	90.00	81.76	85.40	152.40
CD520	5968.00	6096.20	213.23	-40.00	90.00	21.90	38.10	158.30
CD520	5968.00	6096.20	213.23	-40.00	90.00	48.80	54.94	158.30
CD520	5968.00	6096.20	213.23	-40.00	90.00	84.45	103.51	158.30
CD520	5968.00	6096.20	213.23	-40.00	90.00	116.20	134.30	158.30
CD601	6222.00	6645.00	209.00	-45.00	90.00	3.50	29.20	117.10
CD601	6222.00	6645.00	209.00	-45.00	90.00	49.80	83.31	117.10
CD601	6222.00	6645.00	209.00	-45.00	90.00	83.31	94.40	117.10
CD602	6173.00	6503.00	213.00	-45.00	270.00	0.00	19.30	146.60
CD602	6173.00	6503.00	213.00	-45.00	270.00	56.10	68.34	146.60
CD603	6135.80	6417.00	214.70	-45.00	270.00	78.00	81.50	140.00
CD604	6332.00	6689.40	243.20	-50.00	90.00	11.30	26.50	113.30
CD604	6332.00	6689.40	243.20	-50.00	90.00	99.60	100.70	113.30
CD605	6424.10	7586.00	170.80	-45.00	270.00	60.60	83.90	151.00
CD605	6424.10	7586.00	170.80	-45.00	270.00	92.00	106.30	151.00
CD606	6424.10	7586.00	170.80	-45.00	90.00	9.00	15.60	184.00
CD606	6424.10	7586.00	170.80	-45.00	90.00	31.10	50.00	184.00
CD606	6424.10	7586.00	170.80	-45.00	90.00	50.00	59.70	184.00
CD606	6424.10	7586.00	170.80	-45.00	90.00	127.50	141.20	184.00
CD606	6424.10	7586.00	170.80	-45.00	90.00	150.50	155.10	184.00
CD606	6424.10	7586.00	170.80	-45.00	90.00	155.10	162.30	184.00
CD606	6424.10	7586.00	170.80	-45.00	90.00	174.60	180.10	184.00
CD607	6398.30	7181.30	187.50	-45.00	270.00	49.62	61.48	149.50
CD608	6360.00	7090.20	190.90	-40.00	90.00	49.00	58.70	169.50
CD608	6360.00	7090.20	190.90	-40.00	90.00	75.90	83.80	169.50
CD608	6360.00	7090.20	190.90	-40.00	90.00	107.40	108.70	169.50
CD609	6360.00	7090.20	190.90	-45.00	270.00	0.20	13.00	91.80
CD611	6349.20	6832.00	229.50	-40.00	90.00	6.43	17.80	140.00
CD611	6349.20	6832.00	229.50	-40.00	90.00	77.60	84.80	140.00
CD611	6349.20	6832.00	229.50	-40.00	90.00	121.00	126.00	140.00
CD612	6410.00	7498.50	173.20	-40.00	270.00	65.50	70.50	97.40
CD613	6436.00	7090.00	222.50	-40.00	90.00	17.60	31.80	169.00
CD613	6436.00	7090.00	222.50	-40.00	90.00	75.40	84.40	169.00
CD613	6436.00	7090.00	222.50	-40.00	90.00	117.20	125.21	169.00
CD614	6149.00	6279.50	230.29	-40.00	90.00	0.50	23.63	118.00
CD614	6149.00	6279.50	230.29	-40.00	90.00	31.80	37.40	118.00
CD614	6149.00	6279.50	230.29	-40.00	90.00	94.55	96.28	118.00
CD701	6444.20	7539.50	172.30	-45.00	90.00	6.30	20.70	194.30



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD701	6444.20	7539.50	172.30	-45.00	90.00	49.40	68.69	194.30
CD701	6444.20	7539.50	172.30	-45.00	90.00	69.20	82.00	194.30
CD701	6444.20	7539.50	172.30	-45.00	90.00	106.70	113.50	194.30
CD701	6444.20	7539.50	172.30	-45.00	90.00	126.70	130.00	194.30
CD701	6444.20	7539.50	172.30	-45.00	90.00	144.60	152.40	194.30
CD701	6444.20	7539.50	172.30	-45.00	90.00	167.20	172.15	194.30
CD702	6427.00	7440.00	174.30	-45.00	90.00	0.00	34.50	119.10
CD702	6427.00	7440.00	174.30	-45.00	90.00	34.50	55.60	119.10
CD702	6427.00	7440.00	174.30	-45.00	90.00	58.25	71.40	119.10
CD702	6427.00	7440.00	174.30	-45.00	90.00	84.10	90.30	119.10
CD702	6427.00	7440.00	174.30	-45.00	90.00	96.65	114.20	119.10
CD703	6420.00	7364.00	175.70	-43.00	90.00	0.00	11.55	155.60
CD703	6420.00	7364.00	175.70	-43.00	90.00	11.55	22.30	155.60
CD703	6420.00	7364.00	175.70	-43.00	90.00	25.30	69.00	155.60
CD703	6420.00	7364.00	175.70	-43.00	90.00	75.60	82.50	155.60
CD703	6420.00	7364.00	175.70	-43.00	90.00	82.50	90.00	155.60
CD703	6420.00	7364.00	175.70	-43.00	90.00	90.00	98.10	155.60
CD703	6420.00	7364.00	175.70	-43.00	90.00	98.10	104.90	155.60
CD703	6420.00	7364.00	175.70	-43.00	90.00	113.50	130.10	155.60
CD703	6420.00	7364.00	175.70	-43.00	90.00	141.00	148.90	155.60
CD704	6411.70	7317.50	176.00	-40.00	90.00	0.00	11.80	98.50
CD704	6411.70	7317.50	176.00	-40.00	90.00	13.90	30.00	98.50
CD704	6411.70	7317.50	176.00	-40.00	90.00	31.20	50.30	98.50
CD704	6411.70	7317.50	176.00	-40.00	90.00	53.10	71.40	98.50
CD704	6411.70	7317.50	176.00	-40.00	90.00	77.39	90.90	98.50
CD705	6423.00	7273.00	176.20	-40.00	90.00	0.00	37.20	131.20
CD705	6423.00	7273.00	176.20	-40.00	90.00	37.20	52.60	131.20
CD705	6423.00	7273.00	176.20	-40.00	90.00	71.50	78.90	131.20
CD705	6423.00	7273.00	176.20	-40.00	90.00	78.90	90.50	131.20
CD706	6381.00	7136.00	190.50	-40.00	90.00	65.80	70.50	115.85
CD706	6381.00	7136.00	190.50	-40.00	90.00	70.50	75.85	115.85
CD707	6304.90	7001.00	193.50	-40.00	90.00	0.00	4.50	112.50
CD707	6304.90	7001.00	193.50	-40.00	90.00	52.30	98.00	112.50
CD708	6259.80	6873.50	196.20	-45.00	90.00	18.00	58.06	120.50
CD708	6259.80	6873.50	196.20	-45.00	90.00	59.17	88.10	120.50
CD708	6259.80	6873.50	196.20	-45.00	90.00	98.20	111.00	120.50
CD709	6166.20	6640.80	201.60	-45.00	90.00	0.00	3.75	100.50
CD709	6166.20	6640.80	201.60	-45.00	90.00	24.00	28.55	100.50
CD709	6166.20	6640.80	201.60	-45.00	90.00	53.10	76.50	100.50
CD709	6166.20	6640.80	201.60	-45.00	90.00	86.00	93.92	100.50



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD709	6166.20	6640.80	201.60	-45.00	90.00	100.39	100.50	100.50
CD711	6151.50	6369.50	205.20	-40.00	90.00	0.00	5.50	91.50
CD711	6151.50	6369.50	205.20	-40.00	90.00	9.00	52.50	91.50
CD712	6098.80	6234.50	208.30	-40.00	270.00	0.00	13.30	144.00
CD712	6098.80	6234.50	208.30	-40.00	270.00	28.80	44.00	144.00
CD712	6098.80	6234.50	208.30	-40.00	270.00	44.00	78.30	144.00
CD712	6098.80	6234.50	208.30	-40.00	270.00	78.30	113.40	144.00
CD712	6098.80	6234.50	208.30	-40.00	270.00	123.70	139.50	144.00
CD713	6359.00	7043.00	192.70	-40.00	90.00	0.00	0.65	112.00
CD713	6359.00	7043.00	192.70	-40.00	90.00	26.20	42.00	112.00
CD713	6359.00	7043.00	192.70	-40.00	90.00	46.20	56.00	112.00
CD713	6359.00	7043.00	192.70	-40.00	90.00	92.70	98.30	112.00
CD714	6149.50	6462.50	204.30	-45.00	90.00	5.80	21.40	131.60
CD714	6149.50	6462.50	204.30	-45.00	90.00	23.25	48.10	131.60
CD714	6149.50	6462.50	204.30	-45.00	90.00	52.39	52.49	131.60
CD714	6149.50	6462.50	204.30	-45.00	90.00	83.53	83.60	131.60
CD714	6149.50	6462.50	204.30	-45.00	90.00	83.60	99.70	131.60
CD715	6219.50	6500.00	202.80	-50.00	270.00	50.19	52.77	91.40
CD715	6219.50	6500.00	202.80	-50.00	270.00	76.50	76.79	91.40
CD716	6500.00	7719.70	158.00	-40.00	270.00	0.00	49.58	157.20
CD716	6500.00	7719.70	158.00	-40.00	270.00	49.93	51.10	157.20
CD716	6500.00	7719.70	158.00	-40.00	270.00	51.20	66.60	157.20
CD716	6500.00	7719.70	158.00	-40.00	270.00	66.60	90.60	157.20
CD716	6500.00	7719.70	158.00	-40.00	270.00	90.60	110.20	157.20
CD716	6500.00	7719.70	158.00	-40.00	270.00	119.40	141.00	157.20
CD716	6500.00	7719.70	158.00	-40.00	270.00	141.00	148.90	157.20
CD717	6237.00	6830.00	197.20	-50.00	90.00	0.00	3.50	120.00
CD717	6237.00	6830.00	197.20	-50.00	90.00	24.30	33.60	120.00
CD717	6237.00	6830.00	197.20	-50.00	90.00	60.80	80.80	120.00
CD717	6237.00	6830.00	197.20	-50.00	90.00	89.10	94.30	120.00
CD717	6237.00	6830.00	197.20	-50.00	90.00	100.25	111.28	120.00
CD717	6237.00	6830.00	197.20	-50.00	90.00	111.28	120.00	120.00
CD718	6193.10	6736.50	199.50	-45.00	90.00	27.30	42.60	129.40
CD718	6193.10	6736.50	199.50	-45.00	90.00	54.52	55.03	129.40
CD718	6193.10	6736.50	199.50	-45.00	90.00	55.03	55.85	129.40
CD718	6193.10	6736.50	199.50	-45.00	90.00	55.85	65.26	129.40
CD718	6193.10	6736.50	199.50	-45.00	90.00	79.20	107.90	129.40
CD719	6233.90	6688.80	200.30	-40.00	90.00	0.00	4.50	120.00
CD719	6233.90	6688.80	200.30	-40.00	90.00	4.50	9.40	120.00
CD719	6233.90	6688.80	200.30	-40.00	90.00	9.40	18.70	120.00



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD719	6233.90	6688.80	200.30	-40.00	90.00	20.90	25.91	120.00
CD719	6233.90	6688.80	200.30	-40.00	90.00	35.75	76.60	120.00
CD719	6233.90	6688.80	200.30	-40.00	90.00	102.85	104.12	120.00
CD720	6244.50	6599.50	201.85	-45.00	90.00	7.00	12.72	104.70
CD720	6244.50	6599.50	201.85	-45.00	90.00	12.99	26.30	104.70
CD720	6244.50	6599.50	201.85	-45.00	90.00	26.30	48.70	104.70
CD720	6244.50	6599.50	201.85	-45.00	90.00	48.70	64.50	104.70
CD720	6244.50	6599.50	201.85	-45.00	90.00	94.15	95.20	104.70
CD721	6107.50	6325.00	207.25	-40.00	90.00	0.00	8.00	103.50
CD721	6107.50	6325.00	207.25	-40.00	90.00	32.90	45.70	103.50
CD721	6107.50	6325.00	207.25	-40.00	90.00	68.90	75.00	103.50
CD722	6075.00	6235.00	208.30	-45.00	90.00	0.00	12.50	90.00
CD722	6075.00	6235.00	208.30	-45.00	90.00	17.50	51.70	90.00
CD722	6075.00	6235.00	208.30	-45.00	90.00	51.70	58.30	90.00
CD723	6041.60	6140.00	233.30	-45.00	270.00	10.20	29.90	76.50
CD723	6041.60	6140.00	233.30	-45.00	270.00	35.00	44.70	76.50
CD724	6115.00	6139.70	240.90	-45.00	270.00	32.20	44.90	102.00
CD724	6115.00	6139.70	240.90	-45.00	270.00	53.11	64.35	102.00
CD724	6115.00	6139.70	240.90	-45.00	270.00	72.40	96.91	102.00
CD725	6400.00	7628.80	159.75	-40.00	90.00	44.04	80.00	204.00
CD725	6400.00	7628.80	159.75	-40.00	90.00	84.85	95.00	204.00
CD725	6400.00	7628.80	159.75	-40.00	90.00	95.00	123.00	204.00
CD725	6400.00	7628.80	159.75	-40.00	90.00	192.30	197.30	204.00
CD726	6360.50	6958.10	194.00	-40.00	90.00	3.80	16.00	89.00
CD726	6360.50	6958.10	194.00	-40.00	90.00	17.12	27.30	89.00
CD726	6360.50	6958.10	194.00	-40.00	90.00	31.20	51.28	89.00
CD726	6360.50	6958.10	194.00	-40.00	90.00	54.19	67.57	89.00
CD726	6360.50	6958.10	194.00	-40.00	90.00	69.54	72.98	89.00
CD726	6360.50	6958.10	194.00	-40.00	90.00	74.15	74.20	89.00
CD727	6294.60	6787.60	198.30	-40.00	90.00	0.00	11.20	100.00
CD727	6294.60	6787.60	198.30	-40.00	90.00	15.20	33.00	100.00
CD727	6294.60	6787.60	198.30	-40.00	90.00	62.50	90.00	100.00
CD727	6294.60	6787.60	198.30	-40.00	90.00	91.80	97.40	100.00
CD728	6139.70	6498.80	204.80	-45.00	90.00	0.00	9.50	99.70
CD728	6139.70	6498.80	204.80	-45.00	90.00	24.80	52.00	99.70
CD728	6139.70	6498.80	204.80	-45.00	90.00	60.50	62.40	99.70
CD728	6139.70	6498.80	204.80	-45.00	90.00	62.40	73.00	99.70
CD729	6132.60	6553.00	203.00	-40.00	90.00	41.20	47.10	164.50
CD729	6132.60	6553.00	203.00	-40.00	90.00	56.80	64.40	164.50
CD729	6132.60	6553.00	203.00	-40.00	90.00	64.64	78.08	164.50



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD729	6132.60	6553.00	203.00	-40.00	90.00	96.90	130.70	164.50
CD729	6132.60	6553.00	203.00	-40.00	90.00	131.20	149.14	164.50
CD729	6132.60	6553.00	203.00	-40.00	90.00	149.14	149.65	164.50
CD729	6132.60	6553.00	203.00	-40.00	90.00	149.65	149.95	164.50
CD730	6062.60	6279.00	208.10	-40.00	90.00	0.00	20.50	126.00
CD730	6062.60	6279.00	208.10	-40.00	90.00	33.90	53.20	126.00
CD730	6062.60	6279.00	208.10	-40.00	90.00	64.80	77.30	126.00
CD731	6386.00	7227.20	178.00	-40.00	90.00	35.70	52.50	110.00
CD732	6414.30	7182.00	179.10	-50.00	90.00	0.00	7.19	105.50
CD801	6450.50	7364.20	143.00	-45.00	270.00	0.00	8.80	98.50
CD801	6450.50	7364.20	143.00	-45.00	270.00	10.29	16.86	98.50
CD801	6450.50	7364.20	143.00	-45.00	270.00	34.00	58.30	98.50
CD801	6450.50	7364.20	143.00	-45.00	270.00	65.50	81.81	98.50
CD802	6465.00	7410.90	143.15	-45.00	90.00	0.00	12.47	85.00
CD802	6465.00	7410.90	143.15	-45.00	90.00	13.12	17.00	85.00
CD802	6465.00	7410.90	143.15	-45.00	90.00	17.00	35.00	85.00
CD802	6465.00	7410.90	143.15	-45.00	90.00	35.00	75.40	85.00
CD802	6465.00	7410.90	143.15	-45.00	90.00	75.40	78.50	85.00
CD803	6470.30	7439.50	141.70	-45.00	270.00	0.00	1.54	91.20
CD803	6470.30	7439.50	141.70	-45.00	270.00	4.29	25.70	91.20
CD803	6470.30	7439.50	141.70	-45.00	270.00	28.80	54.44	91.20
CD803	6470.30	7439.50	141.70	-45.00	270.00	54.44	86.80	91.20
CD804	6449.80	7272.20	145.40	-40.00	270.00	44.90	66.50	80.80
CD804	6449.80	7272.20	145.40	-40.00	270.00	70.10	73.60	80.80
CD805	6458.60	7719.50	128.60	-45.00	90.00	0.00	0.73	57.00
CD805	6458.60	7719.50	128.60	-45.00	90.00	2.40	19.70	57.00
CD805	6458.60	7719.50	128.60	-45.00	90.00	42.30	49.40	57.00
CD806	6186.10	6462.60	154.80	-45.00	270.00	46.82	54.00	54.00
CD807	6015.00	6235.40	155.90	-50.00	90.00	0.40	28.90	80.30
CD807	6015.00	6235.40	155.90	-50.00	90.00	28.90	42.10	80.30
CD807	6015.00	6235.40	155.90	-50.00	90.00	67.90	75.60	80.30
CD807	6015.00	6235.40	155.90	-50.00	90.00	75.60	80.30	80.30
CD808	6042.80	6278.80	147.00	-45.00	90.00	0.00	16.30	80.30
CD808	6042.80	6278.80	147.00	-45.00	90.00	40.70	45.70	80.30
CD808	6042.80	6278.80	147.00	-45.00	90.00	45.70	52.70	80.30
CD808	6042.80	6278.80	147.00	-45.00	90.00	52.70	75.70	80.30
CD808	6042.80	6278.80	147.00	-45.00	90.00	75.70	80.30	80.30
CD810	6124.90	6502.10	155.10	-45.00	90.00	28.38	38.31	77.00
CD810	6124.90	6502.10	155.10	-45.00	90.00	52.84	70.50	77.00
CD811	6446.80	7540.90	130.70	-50.00	90.00	0.00	0.83	100.00



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD811	6446.80	7540.90	130.70	-50.00	90.00	10.72	17.20	100.00
CD811	6446.80	7540.90	130.70	-50.00	90.00	17.20	27.60	100.00
CD811	6446.80	7540.90	130.70	-50.00	90.00	27.60	51.86	100.00
CD811	6446.80	7540.90	130.70	-50.00	90.00	53.49	58.80	100.00
CD811	6446.80	7540.90	130.70	-50.00	90.00	80.00	95.30	100.00
CD812	6445.90	7677.60	126.90	-45.00	90.00	0.00	9.53	117.00
CD812	6445.90	7677.60	126.90	-45.00	90.00	19.90	23.50	117.00
CD812	6445.90	7677.60	126.90	-45.00	90.00	23.50	33.00	117.00
CD812	6445.90	7677.60	126.90	-45.00	90.00	33.00	65.30	117.00
CD812	6445.90	7677.60	126.90	-45.00	90.00	65.30	73.70	117.00
CD812	6445.90	7677.60	126.90	-45.00	90.00	85.90	111.90	117.00
CD813	6470.10	7625.50	128.30	-50.00	270.00	0.00	42.90	90.00
CD813	6470.10	7625.50	128.30	-50.00	270.00	54.90	85.50	90.00
CD901	6573.40	7745.00	145.00	-54.00	270.00	105.00	115.00	301.50
CD901	6573.40	7745.00	145.00	-54.00	270.00	124.40	162.10	301.50
CD901	6573.40	7745.00	145.00	-54.00	270.00	164.00	255.80	301.50
CD901	6573.40	7745.00	145.00	-54.00	270.00	264.20	292.50	301.50
CD901	6573.40	7745.00	145.00	-54.00	270.00	292.50	299.50	301.50
CD903	5926.00	6158.30	209.50	-50.00	90.00	107.30	113.40	241.30
CD903	5926.00	6158.30	209.50	-50.00	90.00	115.55	118.50	241.30
CD903	5926.00	6158.30	209.50	-50.00	90.00	127.60	171.00	241.30
CD903	5926.00	6158.30	209.50	-50.00	90.00	181.86	202.01	241.30
CD903	5926.00	6158.30	209.50	-50.00	90.00	210.34	211.51	241.30
CD903	5926.00	6158.30	209.50	-50.00	90.00	214.40	224.40	241.30
CD904	5942.20	6325.10	192.50	-50.00	90.00	178.80	187.30	272.00
CD904	5942.20	6325.10	192.50	-50.00	90.00	196.80	197.95	272.00
CD904	5942.20	6325.10	192.50	-50.00	90.00	197.95	198.12	272.00
CD904	5942.20	6325.10	192.50	-50.00	90.00	198.12	219.30	272.00
CD904	5942.20	6325.10	192.50	-50.00	90.00	227.60	264.60	272.00
CD905	6061.80	6499.90	173.00	-50.00	90.00	95.29	109.05	247.00
CD905	6061.80	6499.90	173.00	-50.00	90.00	123.30	126.50	247.00
CD905	6061.80	6499.90	173.00	-50.00	90.00	138.30	142.30	247.00
CD905	6061.80	6499.90	173.00	-50.00	90.00	152.10	178.40	247.00
CD905	6061.80	6499.90	173.00	-50.00	90.00	196.80	212.03	247.00
CD905	6061.80	6499.90	173.00	-50.00	90.00	212.03	212.04	247.00
CD905	6061.80	6499.90	173.00	-50.00	90.00	212.05	230.70	247.00
CD905	6061.80	6499.90	173.00	-50.00	90.00	237.92	242.40	247.00
CD906	6163.00	6780.00	168.50	-50.00	83.00	96.80	107.70	236.70
CD906	6163.00	6780.00	168.50	-50.00	83.00	114.48	136.80	236.70
CD906	6163.00	6780.00	168.50	-50.00	83.00	143.00	161.20	236.70



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CD908	6599.00	7540.00	183.00	-53.00	270.00	82.40	92.30	250.00
CD908	6599.00	7540.00	183.00	-53.00	270.00	93.70	97.10	250.00
CD908	6599.00	7540.00	183.00	-53.00	270.00	128.50	139.10	250.00
CD908	6599.00	7540.00	183.00	-53.00	270.00	153.18	169.67	250.00
CD908	6599.00	7540.00	183.00	-53.00	270.00	169.96	224.40	250.00
CD908	6599.00	7540.00	183.00	-53.00	270.00	238.20	250.00	250.00
CD910	6111.00	6599.00	160.00	-45.00	90.00	93.04	93.51	242.00
CD910	6111.00	6599.00	160.00	-45.00	90.00	116.20	134.10	242.00
CD910	6111.00	6599.00	160.00	-45.00	90.00	134.53	166.81	242.00
CD910	6111.00	6599.00	160.00	-45.00	90.00	201.17	201.27	242.00
CD911	6007.00	6095.00	222.00	-60.00	90.00	0.00	24.00	111.00
CD911	6007.00	6095.00	222.00	-60.00	90.00	58.00	84.00	111.00
CD911	6007.00	6095.00	222.00	-60.00	90.00	110.92	111.00	111.00
CD913	5948.00	6045.00	222.00	-60.00	90.00	28.00	42.00	96.00
CD913	5948.00	6045.00	222.00	-60.00	90.00	70.18	80.08	96.00
CDDH07001	6421.05	7816.59	111.71	-53.56	72.63	4.76	13.36	20.00
CDDH07001	6421.05	7816.59	111.71	-53.56	72.63	13.36	20.00	20.00
CDDH07002	6419.03	7816.03	111.54	-86.27	244.45	5.60	20.00	20.00
CDDH13011	6017.12	6673.00	188.58	-50.62	91.34	280.75	287.80	410.00
CDDH13012	6056.43	6746.77	193.83	-59.73	91.48	279.30	300.50	400.00
CDDH13012	6056.43	6746.77	193.83	-59.73	91.48	305.60	311.20	400.00
CDDH13012	6056.43	6746.77	193.83	-59.73	91.48	328.20	360.93	400.00
CDDH13012	6056.43	6746.77	193.83	-59.73	91.48	360.93	364.37	400.00
CDDH13013	6174.86	6829.12	168.98	-53.71	126.79	99.00	111.00	262.10
CDDH13013	6174.86	6829.12	168.98	-53.71	126.79	121.53	138.25	262.10
CDDH13013	6174.86	6829.12	168.98	-53.71	126.79	145.40	167.90	262.10
CDDH13013	6174.86	6829.12	168.98	-53.71	126.79	174.10	184.90	262.10
CDDH13013	6174.86	6829.12	168.98	-53.71	126.79	186.90	212.90	262.10
CDDH13013	6174.86	6829.12	168.98	-53.71	126.79	222.30	233.60	262.10
CDDH13014	6175.23	6829.95	169.14	-52.04	81.07	82.72	92.30	315.20
CDDH13014	6175.23	6829.95	169.14	-52.04	81.07	112.30	120.90	315.20
CDDH13014	6175.23	6829.95	169.14	-52.04	81.07	199.90	218.00	315.20
CDDH13014	6175.23	6829.95	169.14	-52.04	81.07	243.50	255.50	315.20
CDDH13014	6175.23	6829.95	169.14	-52.04	81.07	271.10	281.62	315.20
CDDH13014	6175.23	6829.95	169.14	-52.04	81.07	281.62	281.63	315.20
CDDH13014	6175.23	6829.95	169.14	-52.04	81.07	281.63	292.40	315.20
CDDH13014	6175.23	6829.95	169.14	-52.04	81.07	296.10	308.98	315.20
CDDH13015	6263.19	6927.95	155.05	-57.38	112.68	89.37	90.89	229.80
CDDH13015	6263.19	6927.95	155.05	-57.38	112.68	116.29	117.98	229.80
CDDH13015	6263.19	6927.95	155.05	-57.38	112.68	133.60	140.60	229.80



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CDDH13015	6263.19	6927.95	155.05	-57.38	112.68	148.60	171.10	229.80
CDDH13015	6263.19	6927.95	155.05	-57.38	112.68	171.10	174.80	229.80
CDDH13015	6263.19	6927.95	155.05	-57.38	112.68	182.30	184.00	229.80
CDDH13015	6263.19	6927.95	155.05	-57.38	112.68	190.57	208.70	229.80
CDDH13016	6264.22	6930.42	155.01	-50.97	77.19	102.57	113.78	230.10
CDDH13016	6264.22	6930.42	155.01	-50.97	77.19	121.90	128.43	230.10
CDDH13016	6264.22	6930.42	155.01	-50.97	77.19	145.82	161.05	230.10
CDDH13016	6264.22	6930.42	155.01	-50.97	77.19	177.33	187.12	230.10
CDDH13016	6264.22	6930.42	155.01	-50.97	77.19	187.12	191.50	230.10
CDDH13016	6264.22	6930.42	155.01	-50.97	77.19	191.50	212.97	230.10
CDDH13017	6176.23	6828.28	168.23	-51.97	98.46	76.33	86.67	278.30
CDDH13017	6176.23	6828.28	168.23	-51.97	98.46	112.30	122.40	278.30
CDDH13017	6176.23	6828.28	168.23	-51.97	98.46	124.30	159.15	278.30
CDDH13017	6176.23	6828.28	168.23	-51.97	98.46	164.10	177.00	278.30
CDDH13017	6176.23	6828.28	168.23	-51.97	98.46	238.00	243.30	278.30
CDDH13018	6338.83	7000.72	144.49	-63.85	90.02	45.30	54.17	163.70
CDDH13018	6338.83	7000.72	144.49	-63.85	90.02	60.55	82.24	163.70
CDDH13018	6338.83	7000.72	144.49	-63.85	90.02	82.24	82.82	163.70
CDDH13018	6338.83	7000.72	144.49	-63.85	90.02	82.82	102.70	163.70
CDDH13018	6338.83	7000.72	144.49	-63.85	90.02	109.15	138.80	163.70
CDDH13018	6338.83	7000.72	144.49	-63.85	90.02	138.80	148.00	163.70
CDDH13019	6323.90	7087.32	139.92	-56.50	116.73	28.50	52.62	195.20
CDDH13019	6323.90	7087.32	139.92	-56.50	116.73	72.70	106.80	195.20
CDDH13019	6323.90	7087.32	139.92	-56.50	116.73	110.50	127.00	195.20
CDDH13019	6323.90	7087.32	139.92	-56.50	116.73	130.80	163.80	195.20
CDDH13019	6323.90	7087.32	139.92	-56.50	116.73	170.00	186.55	195.20
CDDH13020	6323.92	7088.57	139.93	-54.70	81.62	38.20	49.60	219.60
CDDH13020	6323.92	7088.57	139.93	-54.70	81.62	59.35	81.00	219.60
CDDH13020	6323.92	7088.57	139.93	-54.70	81.62	93.45	124.30	219.60
CDDH13020	6323.92	7088.57	139.93	-54.70	81.62	130.00	139.80	219.60
CDDH13020	6323.92	7088.57	139.93	-54.70	81.62	150.11	174.35	219.60
CDDH13020	6323.92	7088.57	139.93	-54.70	81.62	174.35	195.40	219.60
CDDH13021	6323.51	7090.78	139.72	-48.83	54.88	52.80	56.70	246.50
CDDH13021	6323.51	7090.78	139.72	-48.83	54.88	65.23	68.05	246.50
CDDH13021	6323.51	7090.78	139.72	-48.83	54.88	69.10	98.30	246.50
CDDH13021	6323.51	7090.78	139.72	-48.83	54.88	122.20	148.40	246.50
CDDH13021	6323.51	7090.78	139.72	-48.83	54.88	151.90	179.90	246.50
CDDH13021	6323.51	7090.78	139.72	-48.83	54.88	181.60	185.10	246.50
CDDH13021	6323.51	7090.78	139.72	-48.83	54.88	189.60	202.40	246.50
CDDH13021	6323.51	7090.78	139.72	-48.83	54.88	210.40	228.10	246.50



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CDDH14001	6294.11	6850.43	141.64	-59.16	89.75	0.00	9.60	314.20
CDDH14001	6294.11	6850.43	141.64	-59.16	89.75	16.98	19.37	314.20
CDDH14001	6294.11	6850.43	141.64	-59.16	89.75	19.53	37.79	314.20
CDDH14001	6294.11	6850.43	141.64	-59.16	89.75	44.80	54.00	314.20
CDDH14001	6294.11	6850.43	141.64	-59.16	89.75	98.42	109.25	314.20
CDDH14001	6294.11	6850.43	141.64	-59.16	89.75	110.34	118.60	314.20
CDDH14001	6294.11	6850.43	141.64	-59.16	89.75	189.40	197.90	314.20
CDDH14001	6294.11	6850.43	141.64	-59.16	89.75	258.15	262.00	314.20
CDDH14002	6314.81	6900.14	140.75	-60.15	90.51	18.00	23.30	150.70
CDDH14002	6314.81	6900.14	140.75	-60.15	90.51	90.42	91.52	150.70
CDDH14002	6314.81	6900.14	140.75	-60.15	90.51	91.52	93.70	150.70
CDDH14002	6314.81	6900.14	140.75	-60.15	90.51	95.90	98.90	150.70
CDDH14002	6314.81	6900.14	140.75	-60.15	90.51	99.14	106.38	150.70
CDDH14003	6342.98	6950.19	140.46	-59.38	89.98	0.00	0.35	135.10
CDDH14003	6342.98	6950.19	140.46	-59.38	89.98	99.02	99.26	135.10
CDDH14004	6392.66	7050.16	152.20	-60.06	89.94	32.50	44.92	115.80
CDDH14004	6392.66	7050.16	152.20	-60.06	89.94	66.40	72.40	115.80
CDDH14004	6392.66	7050.16	152.20	-60.06	89.94	72.40	76.45	115.80
CDDH14005	6396.75	7100.15	153.15	-60.04	90.91	5.90	18.29	120.80
CDDH14005	6396.75	7100.15	153.15	-60.04	90.91	30.95	49.00	120.80
CDDH14005	6396.75	7100.15	153.15	-60.04	90.91	63.75	76.15	120.80
CDDH14005	6396.75	7100.15	153.15	-60.04	90.91	78.20	87.30	120.80
CDDH14005	6396.75	7100.15	153.15	-60.04	90.91	87.30	95.80	120.80
CDDH14006	6403.49	7150.27	153.73	-59.16	90.22	33.02	33.35	122.20
CDDH14006	6403.49	7150.27	153.73	-59.16	90.22	46.38	53.51	122.20
CDDH14006	6403.49	7150.27	153.73	-59.16	90.22	67.55	77.80	122.20
CDDH14006	6403.49	7150.27	153.73	-59.16	90.22	102.18	112.35	122.20
CP2018_01	6485.02	7204.29	166.17	-54.14	90.32	0.00	5.37	212.00
CP2018_01	6485.02	7204.29	166.17	-54.14	90.32	28.92	33.78	212.00
CP2018_02	6331.39	7398.26	132.22	-47.90	87.48	42.04	58.10	255.50
CP2018_02	6331.39	7398.26	132.22	-47.90	87.48	109.62	127.93	255.50
CP2018_02	6331.39	7398.26	132.22	-47.90	87.48	127.93	149.99	255.50
CP2018_02	6331.39	7398.26	132.22	-47.90	87.48	186.27	190.30	255.50
CP2018_02	6331.39	7398.26	132.22	-47.90	87.48	200.97	209.54	255.50
CP2018_02	6331.39	7398.26	132.22	-47.90	87.48	227.70	227.72	255.50
CP2018_02	6331.39	7398.26	132.22	-47.90	87.48	248.78	251.80	255.50
CP2018_03	6331.97	7242.69	136.59	-65.86	90.00	61.82	84.92	211.30
CP2018_03	6331.97	7242.69	136.59	-65.86	90.00	133.32	134.61	211.30
CP2018_03	6331.97	7242.69	136.59	-65.86	90.00	136.08	147.20	211.30
CP2018_03	6331.97	7242.69	136.59	-65.86	90.00	189.80	211.30	211.30



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CP2018_04	6331.08	7243.70	136.53	-46.41	58.59	50.30	68.35	221.90
CP2018_04	6331.08	7243.70	136.53	-46.41	58.59	104.77	117.09	221.90
CP2018_04	6331.08	7243.70	136.53	-46.41	58.59	121.12	174.96	221.90
CP2018_04	6331.08	7243.70	136.53	-46.41	58.59	174.96	183.03	221.90
CP2018_05	6332.48	7401.90	132.07	-51.06	116.79	46.17	68.15	200.50
CP2018_05	6332.48	7401.90	132.07	-51.06	116.79	107.10	121.12	200.50
CP2018_05	6332.48	7401.90	132.07	-51.06	116.79	121.12	133.89	200.50
CP2018_05	6332.48	7401.90	132.07	-51.06	116.79	133.89	183.71	200.50
CP2018_06a	6327.72	7484.72	126.98	-63.13	67.57	47.66	50.09	150.30
CP2018_06a	6327.72	7484.72	126.98	-63.13	67.57	72.24	95.88	150.30
CP2018_06a	6327.72	7484.72	126.98	-63.13	67.57	117.29	122.95	150.30
CP2018_07	6329.62	7399.55	132.10	-68.10	90.23	67.69	110.80	132.50
CP2018_08a	6409.45	7359.83	152.61	-52.39	72.35	1.14	30.59	222.50
CP2018_08a	6409.45	7359.83	152.61	-52.39	72.35	88.51	96.42	222.50
CP2018_08a	6409.45	7359.83	152.61	-52.39	72.35	98.26	111.16	222.50
CP2018_08a	6409.45	7359.83	152.61	-52.39	72.35	121.97	130.92	222.50
CP2018_08a	6409.45	7359.83	152.61	-52.39	72.35	133.38	159.91	222.50
CP2018_08a	6409.45	7359.83	152.61	-52.39	72.35	160.92	167.33	222.50
CP2018_09a	6326.79	7486.01	126.93	-49.95	36.76	96.44	138.86	157.00
CP2018_12	6365.73	7856.44	110.32	-44.20	143.04	40.00	48.60	333.50
CP2018_12	6365.73	7856.44	110.32	-44.20	143.04	49.54	59.65	333.50
CP2018_12	6365.73	7856.44	110.32	-44.20	143.04	62.27	96.26	333.50
CP2018_12	6365.73	7856.44	110.32	-44.20	143.04	142.66	150.74	333.50
CP2018_12	6365.73	7856.44	110.32	-44.20	143.04	153.85	162.94	333.50
CP2018_12	6365.73	7856.44	110.32	-44.20	143.04	188.69	194.91	333.50
CP2018_12	6365.73	7856.44	110.32	-44.20	143.04	201.84	227.46	333.50
CP2018_12	6365.73	7856.44	110.32	-44.20	143.04	229.11	230.75	333.50
CP2018_12	6365.73	7856.44	110.32	-44.20	143.04	240.93	257.42	333.50
CP2018_12	6365.73	7856.44	110.32	-44.20	143.04	257.42	275.58	333.50
CP2018_12	6365.73	7856.44	110.32	-44.20	143.04	324.84	329.49	333.50
CP2018_13	6327.72	7484.72	126.98	-48.78	90.08	34.15	39.64	274.00
CP2018_13	6327.72	7484.72	126.98	-48.78	90.08	52.72	63.92	274.00
CP2018_13	6327.72	7484.72	126.98	-48.78	90.08	75.84	78.49	274.00
CP2018_13	6327.72	7484.72	126.98	-48.78	90.08	132.81	134.13	274.00
CP2018_13	6327.72	7484.72	126.98	-48.78	90.08	142.66	157.24	274.00
CP2018_13	6327.72	7484.72	126.98	-48.78	90.08	157.24	171.10	274.00
CP2018_13	6327.72	7484.72	126.98	-48.78	90.08	186.32	219.24	274.00
CP2018_13	6327.72	7484.72	126.98	-48.78	90.08	226.20	251.04	274.00
CP8877	6491.00	7699.00	129.00	-90.00	0.00	0.00	4.30	21.00
CP8877	6491.00	7699.00	129.00	-90.00	0.00	9.00	21.00	21.00



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
CP8879	6472.00	7696.00	127.00	-90.00	0.00	0.00	3.00	3.00
CP8880	6465.00	7677.00	127.00	-90.00	0.00	0.00	3.00	3.00
CP8881	6457.00	7653.00	127.00	-90.00	0.00	0.00	6.00	6.00
CP8883	6461.00	7627.00	127.00	-90.00	0.00	0.00	21.00	21.00
CP8884	6455.00	7628.00	127.00	-90.00	0.00	0.00	3.00	3.00
CP8885	6459.00	7612.00	127.00	-90.00	0.00	0.00	21.00	21.00
CP8886	6464.00	7657.00	128.00	-90.00	0.00	0.00	6.00	6.00
CP8887	6456.00	7591.00	127.00	-90.00	0.00	0.00	1.14	21.00
CP8887	6456.00	7591.00	127.00	-90.00	0.00	12.00	21.00	21.00
CP8888	6453.00	7572.00	127.00	-90.00	0.00	0.00	21.00	21.00
CP8889	6454.00	7541.00	129.00	-90.00	0.00	6.00	18.00	24.00
CP8890	6462.00	7512.00	129.00	-90.00	0.00	0.00	11.24	24.00
CP8890	6462.00	7512.00	129.00	-90.00	0.00	13.34	24.00	24.00
CP8891	6476.00	7518.00	128.00	-90.00	0.00	0.06	24.00	24.00
CP8892	6475.00	7541.00	129.00	-90.00	0.00	0.65	21.70	24.00
CP8892	6475.00	7541.00	129.00	-90.00	0.00	22.79	24.00	24.00
CP8893	6485.00	7460.00	128.00	-90.00	0.00	0.00	24.00	24.00
CP8894	6474.00	7481.00	129.00	-90.00	0.00	0.00	24.00	24.00
CP8895	6485.00	7502.00	128.00	-90.00	0.00	0.00	24.00	24.00
CP8896	6469.00	7500.00	129.00	-90.00	0.00	0.00	24.00	24.00
CP8897	6473.00	7678.00	128.00	-90.00	0.00	0.00	6.00	6.00
CP8898	6481.00	7699.00	128.00	-90.00	0.00	0.00	0.92	3.00
CPSTH1	6406.65	6997.93	159.25	-54.68	110.30	0.00	12.00	29.50
CPSTH2	6404.77	7012.28	157.21	-53.29	111.16	0.00	29.50	29.50
DH014	6660.00	7870.00	140.00	-60.00	274.00	258.50	268.80	469.70
DH014	6660.00	7870.00	140.00	-60.00	274.00	272.20	291.10	469.70
DH014	6660.00	7870.00	140.00	-60.00	274.00	307.50	349.00	469.70
DH014	6660.00	7870.00	140.00	-60.00	274.00	355.10	356.30	469.70
DH014	6660.00	7870.00	140.00	-60.00	274.00	368.80	417.60	469.70
DH018	6558.00	8042.00	155.40	-55.00	270.00	111.66	145.40	193.20
DH018	6558.00	8042.00	155.40	-55.00	270.00	160.16	169.80	193.20
DH018	6558.00	8042.00	155.40	-55.00	270.00	169.80	172.80	193.20
DH019	6552.00	8195.00	161.50	-60.00	270.00	20.62	77.61	150.00
DH019	6552.00	8195.00	161.50	-60.00	270.00	77.62	81.78	150.00
DH019	6552.00	8195.00	161.50	-60.00	270.00	83.67	84.30	150.00
DH019	6552.00	8195.00	161.50	-60.00	270.00	85.78	87.50	150.00
DH023	6252.00	6736.00	284.00	-46.00	270.00	0.00	32.35	90.50
DH023	6252.00	6736.00	284.00	-46.00	270.00	32.59	84.94	90.50
DH023	6252.00	6736.00	284.00	-46.00	270.00	88.40	90.50	90.50
DH039	6642.50	8187.00	143.75	-80.00	274.00	144.20	146.46	167.00



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
DH039B	6642.50	8187.00	143.80	-80.00	274.00	150.63	153.89	320.30
DH039B	6642.50	8187.00	143.80	-80.00	274.00	212.50	312.93	320.30
DH042	6725.00	7860.00	145.00	-80.00	270.30	539.50	555.80	697.80
DH042	6725.00	7860.00	145.00	-80.00	270.30	570.10	695.60	697.80
DH048	6577.00	8341.50	195.10	-60.00	274.00	73.80	88.38	101.50
GT001	6355.28	7940.68	111.75	-43.50	270.00	0.00	14.69	161.34
ND049	6490.70	8019.90	179.00	-45.00	270.00	28.35	37.81	136.00
ND049	6490.70	8019.90	179.00	-45.00	270.00	44.16	59.69	136.00
ND049	6490.70	8019.90	179.00	-45.00	270.00	61.83	98.00	136.00
ND049	6490.70	8019.90	179.00	-45.00	270.00	102.90	119.65	136.00
ND066	6463.32	7928.74	154.71	-43.00	267.92	13.53	67.90	127.00
ND066	6463.32	7928.74	154.71	-43.00	267.92	67.90	90.48	127.00
ND067	6412.17	7990.06	154.96	-51.00	89.30	0.00	0.91	151.50
ND067	6412.17	7990.06	154.96	-51.00	89.30	22.60	48.19	151.50
ND067	6412.17	7990.06	154.96	-51.00	89.30	53.36	75.64	151.50
ND067	6412.17	7990.06	154.96	-51.00	89.30	75.64	77.70	151.50
ND067	6412.17	7990.06	154.96	-51.00	89.30	122.30	128.30	151.50
ND068	6530.80	8089.56	146.52	-45.00	269.10	58.81	61.80	197.00
ND068	6530.80	8089.56	146.52	-45.00	269.10	61.80	84.30	197.00
ND068	6530.80	8089.56	146.52	-45.00	269.10	87.10	94.05	197.00
ND068	6530.80	8089.56	146.52	-45.00	269.10	94.05	98.09	197.00
ND068	6530.80	8089.56	146.52	-45.00	269.10	131.80	133.80	197.00
ND068	6530.80	8089.56	146.52	-45.00	269.10	145.80	148.60	197.00
ND069	6539.71	8141.51	146.47	-47.00	269.50	50.60	68.80	139.00
ND069	6539.71	8141.51	146.47	-47.00	269.50	77.57	78.03	139.00
ND069	6539.71	8141.51	146.47	-47.00	269.50	78.03	78.09	139.00
ND069	6539.71	8141.51	146.47	-47.00	269.50	78.09	93.80	139.00
ND070	6514.60	8239.37	153.19	-45.00	88.22	4.00	45.70	163.00
ND070	6514.60	8239.37	153.19	-45.00	88.22	46.34	52.31	163.00
ND070	6514.60	8239.37	153.19	-45.00	88.22	85.50	93.50	163.00
ND074	6510.74	8297.89	157.00	-45.00	87.91	0.00	13.80	148.50
ND074	6510.74	8297.89	157.00	-45.00	87.91	19.00	46.60	148.50
ND078	6440.30	8141.70	139.20	-45.00	91.98	29.29	61.51	151.00
ND078	6440.30	8141.70	139.20	-45.00	91.98	61.55	61.57	151.00
ND078	6440.30	8141.70	139.20	-45.00	91.98	69.40	108.83	151.00
ND078	6440.30	8141.70	139.20	-45.00	91.98	115.80	138.70	151.00
ND078	6440.30	8141.70	139.20	-45.00	91.98	140.28	142.40	151.00
ND079	6477.70	8087.70	125.80	-37.00	270.35	0.00	12.30	91.60
ND079	6477.70	8087.70	125.80	-37.00	270.35	21.60	29.37	91.60
ND079	6477.70	8087.70	125.80	-37.00	270.35	40.10	51.30	91.60



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
ND079	6477.70	8087.70	125.80	-37.00	270.35	58.60	71.30	91.60
ND093	6618.40	8348.80	163.90	-38.00	270.00	99.96	106.92	200.00
ND095	6519.90	8440.40	168.80	-40.00	90.00	79.27	85.90	177.50
NP026	6444.00	8040.00	203.10	-90.00	0.00	54.00	75.00	75.00
NP027	6425.00	7990.00	210.20	-90.00	0.00	9.00	32.92	90.00
NP027	6425.00	7990.00	210.20	-90.00	0.00	36.01	57.00	90.00
NP028	6463.00	7993.00	185.40	-90.00	0.00	0.00	12.00	81.00
NP028	6463.00	7993.00	185.40	-90.00	0.00	21.00	81.00	81.00
NP030	6520.00	8189.00	159.70	-90.00	0.00	0.00	39.00	39.00
NP031	6424.00	7894.00	167.80	-90.00	0.00	0.00	36.00	36.00
NP032	6487.00	7990.00	166.20	-60.00	270.00	0.00	12.00	60.00
NP032	6487.00	7990.00	166.20	-60.00	270.00	30.00	51.94	60.00
NP032	6487.00	7990.00	166.20	-60.00	270.00	51.94	60.00	60.00
NP033	6451.00	7891.00	150.80	-90.00	0.00	0.00	27.00	27.00
SL001	6404.00	7989.90	215.40	-60.00	270.00	0.00	24.00	24.00
SL002	6400.00	7940.00	199.00	-60.00	270.00	4.00	15.00	70.00
SL003	6381.70	8029.70	183.10	-60.00	90.00	22.23	39.09	70.00
SL004	6353.40	7893.70	174.50	-60.00	270.00	9.00	43.00	43.00
SL005	6378.50	7888.10	172.90	-60.00	90.00	16.00	65.00	65.00
SL006	6450.20	7891.30	151.60	-60.00	270.00	0.00	1.98	30.00
SL006	6450.20	7891.30	151.60	-60.00	270.00	23.00	30.00	30.00
SL007	6466.20	7947.50	166.00	-40.00	270.00	23.00	34.00	34.00
SL009	6549.70	7939.80	110.00	0.00	270.00	50.00	75.00	163.00
SL009	6549.70	7939.80	110.00	0.00	270.00	75.00	92.91	163.00
SL009	6549.70	7939.80	110.00	0.00	270.00	101.50	103.53	163.00
SL009	6549.70	7939.80	110.00	0.00	270.00	115.05	133.28	163.00
SL009	6549.70	7939.80	110.00	0.00	270.00	142.47	151.89	163.00
SL010	6523.10	7890.80	107.10	0.00	270.00	29.00	43.78	124.00
SL010	6523.10	7890.80	107.10	0.00	270.00	43.78	44.00	124.00
SL010	6523.10	7890.80	107.10	0.00	270.00	44.00	59.00	124.00
SL010	6523.10	7890.80	107.10	0.00	270.00	89.00	95.00	124.00
SL010	6523.10	7890.80	107.10	0.00	270.00	95.00	119.00	124.00
SL010	6523.10	7890.80	107.10	0.00	270.00	119.00	124.00	124.00
SL012	6508.90	8090.60	167.70	-20.00	270.00	18.00	39.00	71.00
SL012	6508.90	8090.60	167.70	-20.00	270.00	39.00	51.00	71.00
SL012	6508.90	8090.60	167.70	-20.00	270.00	51.58	51.68	71.00
SL012	6508.90	8090.60	167.70	-20.00	270.00	51.68	63.00	71.00
SL013	6505.80	7990.10	161.60	-60.00	270.00	0.00	5.00	78.00
SL013	6505.80	7990.10	161.60	-60.00	270.00	61.00	70.00	78.00
SLP07001	6438.15	7823.13	110.06	-72.00	73.00	0.00	1.27	18.00



ANNUAL RESOURCE & RESERVE STATEMENT
DECEMBER 2019



GRANGE
RESOURCES



Table 18 Centre Pit Combined Drill-hole Intersects as at 31 Dec 2019

hole_id	x	y	z	dip	azimuth	depth_from	depth_to	max_depth
SLP07002	6427.14	7816.89	111.25	-70.00	77.00	0.00	2.63	18.00
SLP07002	6427.14	7816.89	111.25	-70.00	77.00	2.63	3.59	18.00
SLP07002	6427.14	7816.89	111.25	-70.00	77.00	3.59	17.29	18.00
SLP07004	6402.69	7810.45	111.26	-73.00	94.00	0.00	18.00	18.00
SLP07005	6383.30	7807.47	111.84	-73.00	100.00	4.00	16.18	18.00