28 February 2014
ASX: GRR

GRANGE RESOURCES LIMITED

Australia's most experienced magnetite producer

UPDATED SOUTHDOWN PROJECT RESOURCE & RESERVE STATEMENT

HIGHLIGHTS

- **Mineral Resources and Ore Reserves for the Southdown Project magnetite deposit in Western Australia updated as at 31 December 2013.**
- **Reflects minor updates from those reported on 15 February 2012 and at the completion of the Feasibility Study on 30 April 2012.**
- **Mineral Resources total 1.256.9Mt @ 33.7% DTR**
- **Ore Reserves total 387.7Mt @ 35.6% DTR**
- **24.4Mt of the Inferred Resource located within the final pit design remains to be converted to reserve.**
- **The attached updated Southdown Project Mineral Resource & Ore Reserve has been compiled in accordance with JORC 2012**

Grange Resources Limited (**ASX: GRR**) (**"Grange"** or the **"Company")** is pleased to advise that the Mineral Resources and Ore Reserves Estimates for the Southdown Project have been updated to be reported in compliance with the 2012 JORC Code. The Mineral Resources and Ore Reserves were previously published in April 2012. Minor updates to the weathering surfaces have been completed since then, resulting in a slight increase in Mineral Resources as shown in Table 1. Ore Reserves as shown in Table 2 have decreased slightly due to limitations imposed by compliance with environmental approval conditions; however a further 24.4Mt of Inferred Resource located within the final pit design is yet to be converted to Reserve.

Table 1 - Southdown Mineral Resource Estimate as at 31 December 2013 (Above a cut-off of 10% DTR)

	Measured Resources	Indicated Resources	Inferred Resources	Total Resources
Tonnes (Mt)	423.0	86.8	747.1	1,256.9
DTR (%)	37.8	38.7	30.9	33.7
DTC Fe (%)	69.6	69.7	69.5	69.5
DTC Al_2O_3 (%)	1.31	1.23	1.24	1.26
DTC SiO_2 (%)	1.23	1.27	1.42	1.34
DTC P (%)	0.002	0.003	0.003	0.003
DTC S (%)	0.45	0.48	0.61	0.54
DTC LOI (%)	-2.94	-2.98	-2.86	-2.90
DTC CaO (%)	0.164	0.173	0.203	0.186
DTC K_2O (%)	0.009	0.008	0.013	0.011
DTC MgO (%)	0.166	0.156	0.166	0.165
DTC Mn (%)	0.034	0.036	0.042	0.038
DTC Na_2O (%)	0.04	0.03	0.03	0.04
DTC TiO_2 (%)	0.40	0.34	0.36	0.37
DTC V (%)	0.022	0.017	0.024	0.023

Notes - Elemental and oxide compositions were measured from Davis Tube Concentrate

Table 2 – Southdown Ore Reserve Estimate
As at 31 December 2013

	Proved Reserves	Probable Reserves	Total Reserves
Tonnes (Mt)	384.6	3.1	**387.7**
DTR (%)	35.6	41.7	**35.6**
SiO2 (%)	1.25	1.19	1.25
Al2O3 (%)	1.32	1.14	1.32
CaO (%)	0.16	0.21	0.17
MgO (%)	0.17	0.15	0.17
TiO2 (%)	0.42	0.33	0.41
Na2O (%)	0.04	0.04	0.04
K2O (%)	0.01	0.006	0.01
P (%)	0.002	0.003	0.002
S (%)	0.49	0.40	0.50
Mn (%)	0.036	0.038	0.036
V (%)	0.024	0.015	0.024
LOI (%)	-2.912	-2.956	- 2.912

Notes – Elemental and oxide compositions are estimated for the concentrate product

SOUTHDOWN PROJECT

The Southdown project mine site is located within the South West region of Western Australia approximately 90 km northeast of Albany. The main access to the project site is via the South Coast Highway which bisects the deposit. The Project is a joint venture between Grange (70%) and SRT Australia Pty Ltd (SRTA) (30%). SRTA is jointly owned by Sojitz Corporation, a Japanese global trading company, and Kobe Steel, the fourth largest Japanese steel maker.

GEOLOGY & TENURE

The Southdown Project lies within the Albany-Fraser Orogen, a high grade metamorphic belt formed during the Mesoproterozoic as a result of the convergence of the Western Australian and Mawson Cratons. The host rocks are highly deformed granulite facies orthogneiss of the Dalyup Gneiss from the Biranup Zone of the Kepa Kurl Booya Province.

The Southdown Magnetite Deposit comprises an east-west striking zone of quartz-magnetite gneiss and granulite, hosted by a quartz-biotite dominant metasedimentary gneiss and migmatite assemblage. Aeromagnetic data and drilling confirms that the magnetite mineralisation has a strike length of approximately 12 km and dips at 60 to 65 degrees to the south. A low intensity magnetic anomaly extends a further 7km to the east for a total length of 19km.

The deposit occupies the core of a gently east plunging, overturned tight isoclinal syncline with a steeply south dipping axial surface. The deposit is offset by moderately northeast dipping dextral reverse faults and subsidiary steeply southeast dipping sinistral faults. The magnetite mineralisation is poorly exposed but forms a low east west trending ridge which is more prominent in the western half of the deposit but largely buried beneath 20-80m of Pallinup FM sands/silts. The magnetite mineralisation outcrops in only a few locations within the western portion of the deposit.

The western portion of the deposit is located entirely within mine lease M70/1309, with the eastern portion located within exploration licence E70/2512. A group of other exploration licences and general purpose leases comprise the total mining tenement holding which surrounds the deposit and covers all proposed infrastructure areas associated with a potential mining operation.

DRILLING, SAMPLING & ANALYSIS

The Southdown deposit has been extensively drilled, with a comprehensive database of 401 diamond drill holes which inform the resource model, for 102km of drilling. Drilling was conducted on approximately 100m spaced sections orientated perpendicular to the overall orebody strike. On-section spacing (down-dip) varies but is commonly 50-100m. The mineralisation is sub-vertical and the holes are typically inclined at -60°. Drill core recoveries are excellent, generally >98%.

All drill collars have been surveyed using real time kinematic GPS. Down hole surveys in the majority of holes have been conducted using north seeking gyro instruments.

Diamond core was a combination of HQ and NQ sizes, with some PQ and 6 inch core for metallurgical test work. Sample intervals were based on geological contacts and generally between 1 and 3m in length. All core samples were half core, generated by diamond sawing. Density determinations for all mineralised samples were undertaken on site using the water immersion method. Samples were sent to a NATA accredited laboratory to be dried, crushed, split and pulverised to nominally 98% passing 75µm for Davis Tube Recovery (DTR) determination.

Davis Tube Recovery is the fundamental unit of ore grade measurement 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. Thus DTR can be used to predict the concentrate contained within the ore, which is far more relevant than an analysis for total iron. The DTR is a physical test, dependent on the actual liberation of the magnetite from its gangue elements. This liberation is directly related to the grind distribution and just as no two orebodies grind in the same way, no two orebodies can assume the same pulverizing technique in the DTR. The recoverable magnetite from the Davis Tube is called Davis Tube Concentrate (DTC) and is weighed to determine the proportion of the original sample which is recovered. The DTC is then analysed by X-Ray Fluorescence (XRF) to assess the Total Fe, SiO2, Al2O3, S, TiO2, Na2O, K2O, CaO, MgO, Mn, P and V.

During the Southdown Feasibility Study (2011-12) a significant bias was identified in XRF analyses from samples analysed during 2005-2006. The major impact was significantly higher SiO_2 values from the DTC, with lesser impacts on other elements. It is believed that variable wash times in the DTR method at that time caused this bias. An extensive program of re-analysing 10% of samples from the period defined the bias, enabling statistical algorithms developed by SGS Mineral Services to be applied to that data to correct the bias. This correction has been thoroughly reviewed internally and by external consultants including Golder (who developed the initial resource models) and Optiro (who undertook the peer review of the resource and reserve models for the Feasibility Study).

GEOLOGICAL INTERPRETATION AND RESOURCE ESTIMATION

The Southdown Resource Model has been updated leading to a slight increase in total tonnage at similar grades. The update reflects a revision of weathering surfaces which has resulted in material previously incorrectly classed as oxidised now being included in the Resource. Oxidised material is still excluded from the Resource. This updated Resource model was utilised for the Reserve calculation for the Feasibility Study but has not had a material impact on the Reserve.

The Southdown mineralisation is subdivided into 4 zones by faults (Figure 1) which laterally offset the stratigraphy by up to 100m, which would otherwise be continuous for the full strike extent of 11km of the model. Being hosted in a synformal structure, the depth extent is reasonably well defined by the fold hinge. The mineralisation has a total width of up to 100m, and ranges in depth below ground level from 50 to >550m.

The geological wireframes were developed using interpretations on 100m spaced vertical sections, perpendicular to the strike. The work was all done in Geovia Surpac using a cut-off grade of 10%DTR to guide wireframe boundaries. Sections were cut showing drill hole traces with lithology and DTR information, as well as traces of modelled faults, overlying sediments and oxidation surfaces. Interpretations were completed for each of the main rock types present within the mineralized horizons. Sectional interpretations were wireframed in 3D, taking particular care around the offsetting faults.

Drill hole sample data was flagged as ore in the database within the domain wireframes interpreted for each zone and rock type. Sample data was generally of 3 metre downhole lengths however in the minor rock type domains there are many narrower intervals.

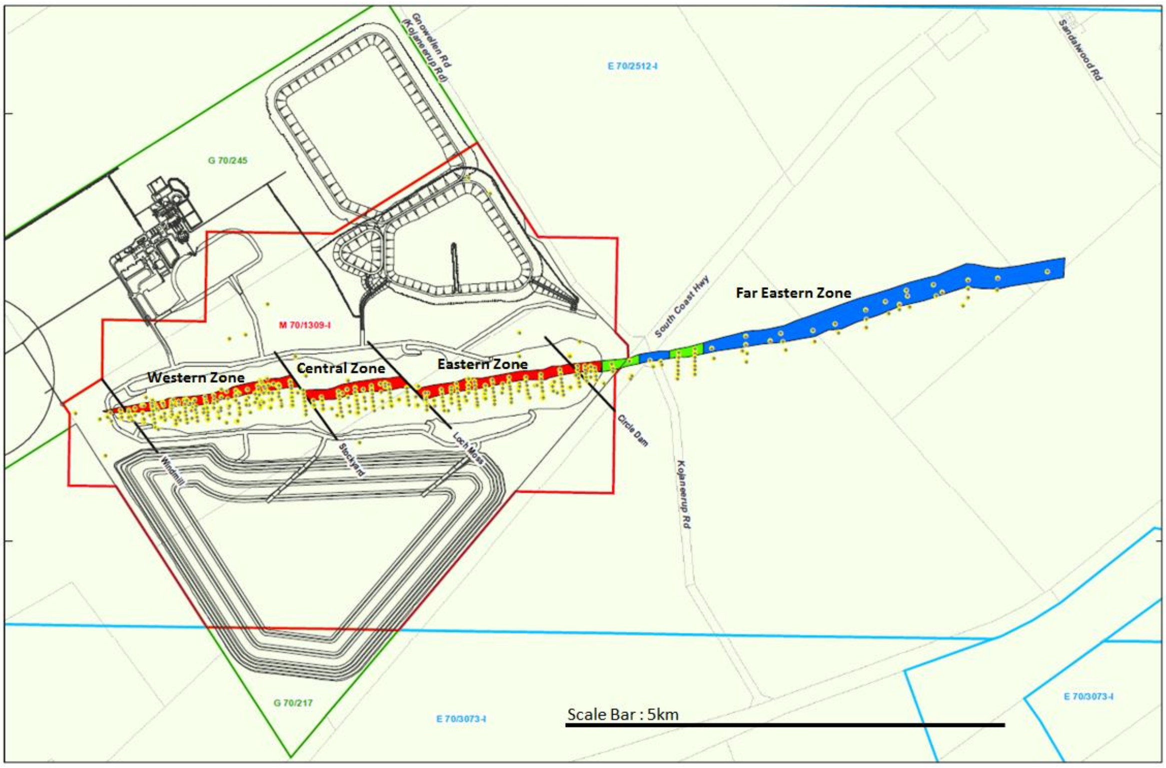


Figure 1: Locality Diagram

To ensure that all sample data was incorporated in the estimation, all samples were included and weighted by length. Elemental compositions of the DTR concentrate were also weighted by the corresponding DTR value for that sample. No top cuts have been applied to the current model due to the limited influence of outliers.

Accumulated attributes (values after weightings applied) were subjected to variographic analysis undertaken by BMGS Perth in order to develop modelling parameters. The block model was constructed using a 20mE by 20mN by 12mRL parent block size with sub-celling to 10mE by 10mN by 6mRL. The estimation was undertaken using Ordinary Kriging for all attributes. All tonnages were estimated on a dry basis. No mining factors have been applied to the resource model. Table 1 depicts the Mineral Resource Estimate as at December 2013, reported above a cut-off of 10% DTR. Totals may not sum exactly due to rounding.

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. Classification surfaces were constructed for the entire deposit utilising the factors above. The classification was written to the block model based on relative position with respect to the surfaces. Mineralised Zones have generally been extrapolated 50-100m to the base of the interpreted synclinal structure owing to the high reliability of the interpretation as tested in several locations along the strike. In the Far East Zone the extrapolation of 150-200m to the interpreted base of the syncline is supported by detailed structural data and interpretation on drilled sections, as well as a 3D inversion model produced by Southern Geoscience Consultants. Approximately 35% of the Inferred

Resources have been extrapolated beyond the limits of current drilling to fill the interpreted synclinal structure. Figure 2 illustrates the distribution of the resource categories over the full 11km extent of the model.

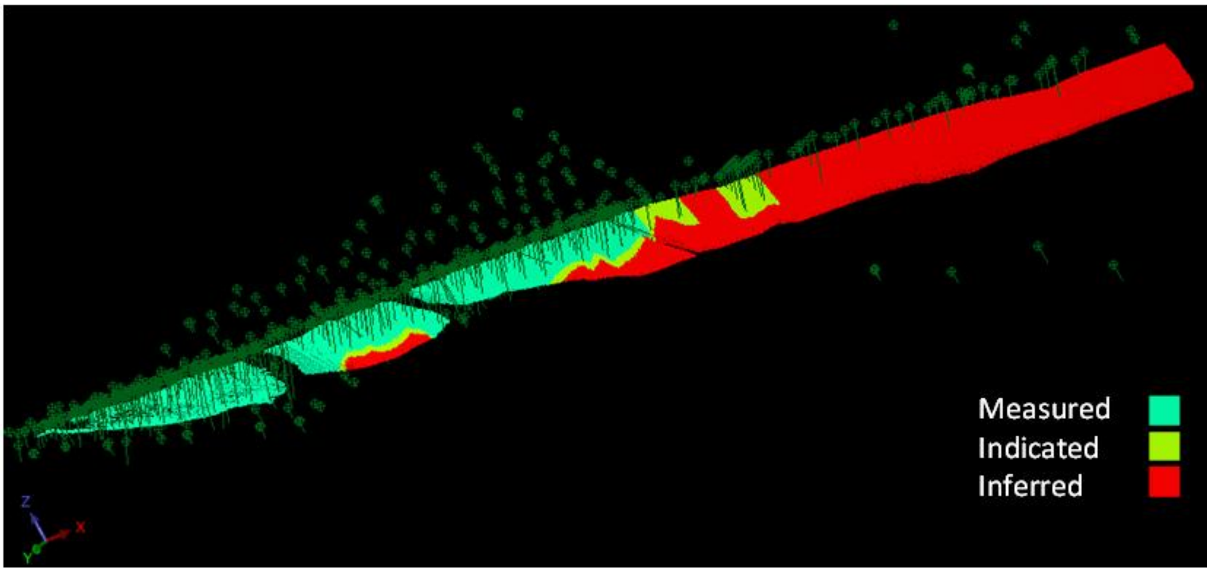


Figure 2: Orthographic Representation of Resource Classifications and Drilling

The Resource model estimates have been validated against previous model estimates using swath plots and visual inspection of the model around new drill hole data in section. A range of lower cut-offs was used in the Grade –Tonnage curve as shown below in Figure 3.

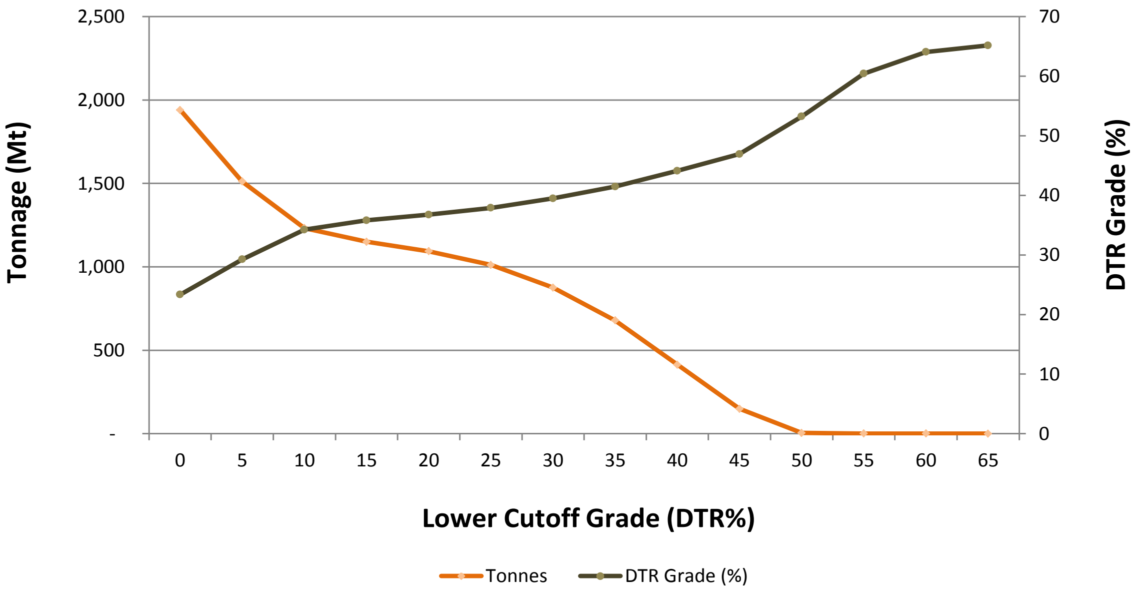


Figure 3: Grade – Tonnage Curve for all resource categories

ESTIMATION OF ORE RESERVES

The Ore Reserves for the Southdown Project were estimated as part of a +/-15% Feasibility Study into the development of an integrated magnetite project comprising mining, concentrating and export of the final product through proposed new facilities at the Port of Albany. The Ore Reserves are based on the Mineral Resource model, sdn_resource1205.mdl.

A cut-off grade of 10% Davis Tube Concentrate mass recovery (DTR) has been used for reporting which is above the marginal cut-off of 9% (DTR). The Ore Reserves are reported within a detailed staged pit design which is based on Whittle open pit optimisation. The optimisation was carried out including Measured and Indicated Mineral Resource categories and using a gross FOB price at Albany of US$111.07/dmt concentrate.

Mining will be undertaken by conventional bulk mining methods utilising hydraulic face shovels, dump trucks and drill and blast. The overall pit slopes used for the design and optimisation are based on geotechnical studies compiled by Mining One for the Feasibility Study. The Reserve block model includes an allowance for likely mining dilution based on a regularisation of the Resource Model. The regularisation has added approximately 1% tonnage and reduced the DTR by 4%. No mining loss has been allowed for beyond the effects of regularisation. Minimum mining widths are based upon the scheduled resource blocks sizes of 50 m in width. The bench mining width has not been restricted and the full width of the ore will be utilised. The Smallest Mining Unit (SMU) assumed is 10 m x 10 m x 12 m in the X, Y and Z direction respectively to coincide with the ore reserve blocks.

Some Inferred Mineral Resources (24.4Mt) are located within the overall pit design. These are excluded from the stated Ore Reserve and but has been included in the LOM Schedule to ensure appropriate application of metallurgical factors to all blocks. The impact of this material on the overall schedule is not considered to be material to the viability of the Project. The Feasibility Study has considered all infrastructure associated with the selected mining and processing methods.

As part of the Feasibility Study a programme of metallurgical drilling and pilot plant test work was undertake to mimic the proposed concentrator design and to determine the metallurgical factors and Concentrate Magnetite recovery. The concentrate recovery is 0.981 x DTR which equates to 98.1% recovery of potential magnetically recoverable material. There are no metallurgical factors applied to concentrate compositions except for Sulphur which has been set at 0.08% on the basis of flotation test work completed to date. Tails Density has been set at 1.7 t/m^3.

Currently the Project has secured primary State and Federal environmental approvals, with the Federal EPBC approval for the mine site in progress. The Project is largely located within freehold land; however some locations along pipeline alignments are subject to Native Title Claims. Discussions with representatives of the Claimant Groups are well advanced. The majority of land acquisitions and agreements with various parties for land access are in place or in an advanced state with no impediment expected to prevent them being finalised in a timely manner. The majority of mining tenements are in place. Two aspects are outstanding – a general purpose lease over the processing area, and a miscellaneous licence over the desalination pipeline. Both tenements will be progressed once negotiations with the relevant land owner are concluded.

Capital costs were estimated during the +/-15% Feasibility Study using subject matter experts and supported by budget quotes in most circumstances. Operating costs were derived by firsthand experience gained at the Savage River Mine, and via industry experience of the relevant consultants involved in the Feasibility Study. A market study by CRU (Specialist Matter Experts in the market analysis for mining and metals) was used as the basis of the exchange rate, market expectations and product pricing.

All Measured Resources have been converted to Proven Ore Reserves and all Indicated Resources have been converted to Probable Ore Reserves within the ultimate pit design. There is a small amount of Inferred Resources contained within the pit design which does not form part of the Ore Reserve by definition. There have been no Measured Resources which have been classified at Probable Ore Reserves.

The Competent Person considers the global Ore Reserve to have a high degree of confidence due to the extensive and rigorous studies undertaken, and the extensive experience of the SDJV and their consultants in developing Ore Reserves for Savage River and other deposits. A decreased level of accuracy is expected for the elemental compositions of the concentrate owing to the difficulty in predicting conversion factors from DTR concentrate to actual concentrate. These factors will be deposit specific and can only be determined accurately once production data is available. The risk to the Reserve however is considered negligible due to extensive related test work and experience in processing magnetite ores.

The Ore Reserves were estimated with the assistance of Golder Associates, and peer reviewed by Optiro during the Feasibility Study.

JORC CODE 2012 TABLE 1 - SOUTHDOWN PROJECT

SECTION 1 - SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg 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.*	• The deposit was sampled using diamond drill holes (DD) on a nominal 100m x 50m grid spacing. A total of 401 DD holes were drilled for 102,000 m. Holes were generally angled at -60° towards grid north to optimally intersect the mineralised zones.
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	• Diamond core was used to obtain the best possible sample quality for lithology, geotechnical, grade and density information.
	• *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 (eg '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.*	• Diamond core was a combination of HQ and NQ sizes, some triple tube. Sample intervals were controlled based on geological contacts and generally between 1 and 3 meters in length. • All core samples were continuous through mineralised zones to capture all intervals, and half cored by diamond sawing by following the orientation line to ensure consistent sampling. • Samples were dried, crushed, split and pulverised to nominally 98% passing 75µm for Davis Tube Recovery (DTR) determination. • All samples are analysed for DTR, with Total Fe, SiO_2, Al_2O_3, S, TiO_2, Na_2O, K_2O, CaO, MgO, Mn, P, V and LOI analysed from the Davis Tube concentrate.

Criteria	JORC Code explanation	Commentary
	Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).*	• All samples used in the resource estimation were sourced from diamond drill core of either HQ or NQ size with Reverse Circulation (RC) precollars. • Some core was drilled using triple tube techniques however the excellent core recoveries have found that standard tube methods are suitable
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	• Core recoveries were recorded in the acQuire database. Core recoveries are generally high in the mineralised zones at Southdown (>98%) and there are no significant core recovery issues. • Drilling penetration rates were controlled in order to maximise recovery in ore zones. • No relationship between sample recovery and grade is known at Southdown.
Logging	• *Whether core and chip samples have been geologically and geo-technically logged to a level of detail to support appropriate Mineral Resource estimation, mining*	• Core samples have had detailed geological and structural logs completed. Basic geotechnical logging was undertaken routinely with detailed geotechnical logging on a selected series of oriented holes. • Some early drill holes used RC/open hole percussion techniques for precollaring. Only

Criteria	JORC Code explanation	Commentary
	studies and metallurgical studies. • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	basic lithological logging was recorded for these portions. • Logging is a combination of qualitative and quantitative methods, recording details for lithology, alteration, mineralisation, shearing, weathering, and structure/basic geotechnical. All drill core was photographed wet and dry. • All drill core was fully logged.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise*	• As standard practice core was half core sampled, with the exception of core sampled for metallurgical testing that was full core sampled. • No non-core samples have been used for resource estimation purposes. • Core was cut using a diamond impregnated saw blade on site at the Southdown core farm. The ore is moderately foliated and cutting is generally perpendicular to the foliation. Standard procedure is to cut along the orientation line. If a line was not present a black line was drawn on to provide a consistent reference for cutting. • The sample preparation of diamond core follows industry best practice in sample preparation involving oven drying 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. • Standard core cutting and sample handling procedures are followed to minimise possible contamination between samples. This is a minimal risk owing to the quantum of grades (ie

Criteria	JORC Code explanation	Commentary
	representivity of samples.	tens of percent). • No quality control samples were collected at this stage.
	• *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.*	• Hand held magnetic susceptibility readings are taken for every metre of drill core. There is a strong correlation between DTR and magnetic susceptibility enabling the calibration of magnetic susceptibility to DTR to serve as a general check on DTR values and sample integrity. • Sample preparation techniques are industry standard for magnetite ores.
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• The sample sizes are considered to be appropriate based on the style of mineralization, the thickness and consistency of the intersections and assay range for the primary analysis (% recoverable magnetite concentrate).
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• The primary assay technique is Davis Tube Recovery (DTR) on a 10g sample, followed by Total Fe, SiO_2, Al_2O_3, S, TiO_2, Na_2O, K_2O, CaO, MgO, Mn, P and V via XRF with LOI on the Davis Tube Concentrate (DTC). All techniques are considered total. DTR is the most appropriate assay technique for determination of magnetite recovery.
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make*	• Magnetic susceptibility instruments are used to provide indications of grade on the drill core to assist with sample selection. • These do not form part of the formal resource or reserve estimate at any time.

Criteria	JORC Code explanation	Commentary
	and model, reading times, calibrations factors applied and their derivation, etc. • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Certified reference materials are inserted at a rate of 1 in 50. Coarse and preparation duplicates are undertaken at a rate of 1 in 50, each with lab repeats undertaken at a rate of 1 in 20. Sizing checks on the grinding are performed at a rate of 1 in 10. • Data analysis has been performed and the data demonstrates sufficient accuracy and precision for use in Mineral Resource estimation for deposits of this type.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Significant intersections are verified by alternative company personnel. • No twinned holes have been drilled. • Primary data is captured directly to standard template acQuire database log sheets using 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. All procedures are maintained in the Core Handling Manual. • During the Southdown Feasibility Study (2011-12) a significant bias was identified in XRF analyses from samples analysed during 2005-2006. The major impact was significantly higher SiO2 values from the DTR Concentrate, with lesser impacts on other elements. • It is believed that variable wash times in the DTR method at that time caused this bias. • An extensive program of re-analysing 10% of samples from the period defined the bias enabling statistical algorithms developed by SGS Mineral Services to be applied to that data to

Criteria	JORC Code explanation	Commentary
		correct the bias. • This correction has been thoroughly reviewed internally, and by external consultants including Golder (who developed the initial resource models and methodology) and Optiro (who undertook the peer review of the resource and reserve models for the Feasibility Study).
Location of data points	• *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.*	• All drill collars are surveyed by contract surveyors using high resolution RTK GPS with an expected accuracy of +/- 100mm in easting, northing and elevation. For downhole surveys, the majority of holes are surveyed using a north seeking gyro with stations every 5-10m downhole with an expected accuracy of +/-1 degree in azimuth and +/-0.1 degree in inclination. Where gyro surveys are unable to be conducted single-shot Eastman dips at 30m spacing downhole are utilised. Hole azimuths for these are assumed to be straight (as compass data is not useable due to the magnetic nature of the mineralisation). Analysis of gyro data indicates this is a reasonable assumption with little deviation observed.
	• *Specification of the grid system used.*	• The grid system used is MGA GDA94 Zone 50.
	• *Quality and adequacy of topographic control.*	• The topographic surface in the vicinity of the deposit has been developed using an airborne LIDAR survey conducted in 2010 which produced 0.5m contours.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	• The nominal drill hole spacing is 100m (between section) and by 50-100m (on section).
	• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and*	• Data spacing and distribution are analysed in semi-variograms and provide geo-statistical ranges for use in resource categorisation. The sample spacing is appropriate to provide a defensible resource classification to 2012 JORC Code standard.

Criteria	JORC Code explanation	Commentary
	Ore Reserve estimation procedure(s) and classifications applied. • *Whether sample compositing has been applied.*	• The mineralised domains have demonstrated sufficient continuity in both geological and grade continuity to support the definition of Mineral Resource and Reserves, and the classifications applied under the 2012 JORC Code. • No compositing is undertaken and all data used is length weighted.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	• The majority of drill holes are oriented to achieve intersection angles as close to perpendicular to the mineralization as is practicable. • No orientation based sampling bias has been identified in the data at this point.
Sample security	• *The measures taken to ensure sample security.*	• All samples are logged and bagged by site geological staff and sent to contracted laboratories. • All samples are tracked in the database from cutting to return from the laboratory.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• During the Southdown Feasibility Study (2011-12) a significant bias was identified in XRF analyses from samples analysed during 2005-2006. The major impact was significantly higher SiO_2 values from the DTR Concentrate, with lesser impacts on other elements. • It is believed that variable wash times in the DTR method at that time caused this bias. • An extensive programme of re-analysing 10% of samples from the period defined the bias enabled statistical algorithms developed by SGS Mineral Services to be applied to that data to

Criteria	JORC Code explanation	Commentary
		correct the bias. • This correction has been thoroughly reviewed internally, and by external consultants, including Golder (who developed the initial resource models and methodology) and Optiro (who undertook the peer review of the resource and reserve models for the Feasibility Study). • The Resource model was formally peer reviewed by Golder Associates and Optiro.

SECTION 2 - REPORTING OF EXPLORATION RESULTS

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *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.*	• All mining tenure is held jointly by the participants in the Southdown Joint Venture (SDJV) – Grange Resources Ltd (70%) and SRT Australia Pty Ltd (30%). • Mining Lease M70/1309 is held by the SDJV participants over the western half of the identified Mineral Resource. Land tenure is predominantly freehold farming land with some road reserves managed by Main Roads WA and the City of Albany. This lease expires in Nov 2033. • Exploration License E70/2512 surrounds the immediate area of the mine lease and extends eastward to cover the eastern half of the identified Mineral Resource as well as the eastern extension of the magnetic anomaly. Land tenure is predominantly freehold farming land with some road reserves managed by Main Roads WA and the City of Albany. This license was granted in Oct 2003 and currently requires annual renewal. • Exploration License E70/3073 surrounds E70/2512 and encompasses the entire immediate project area. Land tenure is predominantly freehold farming land with some road reserves managed by Main Roads WA and the City of Albany. It has several Reserves and a small sliver of National Park excised from the area. The initial 5 year License expires in May 2014 and no impediment is expected to the granting of a further 5 year extension. • Exploration License E70/3896 lies within E70/3073 on its southern margin. Land tenure is predominantly freehold farming land with some road reserves managed by the City of Albany. It has several Reserves excised from the area. The initial 5 year License expires in April 2016 and no impediment is expected to the granting of a further 5 year extension.

Criteria	JORC Code explanation	Commentary
		• General Purpose Lease G70/217 is situated on the southern margin of the Mine Lease completing coverage of the proposed Project area. Land tenure is entirely freehold farming land. The Lease expires in August 2029. • General Purpose Lease G70/245 is currently under application to cover the northern part of the Project area which is the proposed site of mining and processing infrastructure. The area is located within E70/2512. Grant of the Lease is waiting on land owner consent which is currently being negotiated in conjunction with a purchase option agreement. • There are no native title issues relating to the current mining tenure. Extensive consultation with local aboriginal groups has been undertaken to appropriately manage several heritage sites within the tenements.
	• *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.*	• All mining tenements are managed to be maintained in good stead. There are no known impediments to retaining current or future tenement requirements.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Regional-scale aeromagnetic geophysical surveying by the Australian Bureau of Mineral Resources (BMR) identified the magnetic anomaly in 1983. • Initial exploration was commenced by the Southdown Mining Syndicate and CRA Exploration between 1984 and 1986. In 1987 Portman Mining Ltd completed 40 drill holes to prove up the western 2km of the deposit and undertook scout drilling along the eastern 13km of strike of the anomaly. • No work was undertaken between 1988 and 2003, when Grange Resources Ltd purchased the western portion of the property. • Rio Tinto drilled 23 diamond holes on the eastern

Criteria	JORC Code explanation	Commentary
		portion in 2005-2006 before Grange purchased the exploration license in 2007.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Southdown Project lies within the Albany-Fraser Orogen, a high grade metamorphic belt formed as part of the larger Albany-Fraser-Wilkes Orogen during the Mesoproterozoic as a result of the convergence of the Western Australian and Mawson Cratons. • The host rocks are highly deformed granulite facies orthogneiss of the Dalyup Gneiss from the Biranup Zone of the Kepa Kurl Booya Province. • The Southdown Magnetite Deposit comprises an east-west striking zone of Proterozoic age quartz-magnetite gneiss and granulite hosted by a quartz-biotite dominant metasedimentary gneiss and migmatite assemblage. Aeromagnetic data and drilling confirms that the magnetite mineralisation has a strike length of approximately 12 km and dips at 60-65 degrees to the south. A low intensity magnetic anomaly extends a further 7 km to the east for a total length of 19 km. • The deposit occupies the core of a gently east plunging, overturned tight isoclinal syncline with a steeply south dipping axial surface. The deposit is offset by moderately northeast dipping dextral reverse faults and subsidiary steeply southeast dipping sinistral faults. • The magnetite mineralisation is poorly exposed but forms a low east-west trending ridge; this is more prominent in the western half of the deposit but largely buried beneath 20-80 m of Pallinup FM sands/silts. The magnetite mineralisation outcrops in only a few locations within the western portion of the deposit.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of*	• The Southdown deposit has been extensively drilled, with a comprehensive database of 401 diamond drill holes which inform the Resource Model for 102 Km of drilling. • Drill hole information is included in tables

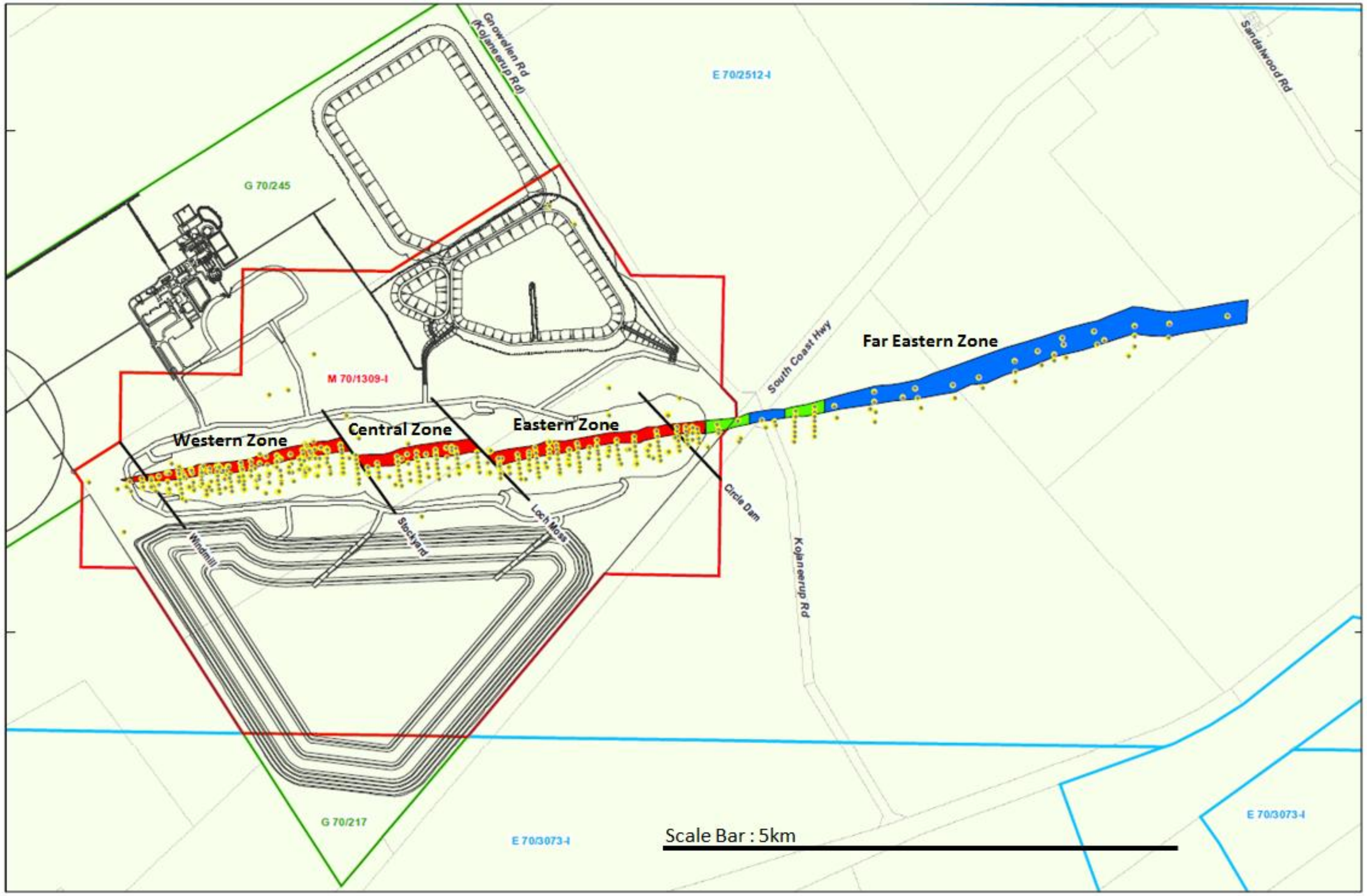
Criteria	JORC Code explanation	Commentary
	the following information for all Material drill holes: ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and 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.*	appended to this Statement.
Data aggregation methods	• *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.* • *Where aggregate intercepts incorporate short lengths of high*	• Average interval grades were determined by averaging all samples weighted by sample length. • Intervals are selected using a 10% DTR cut-off. • Internal intervals below 10% DTR have been included unless they are >5m in length • There is no cutting of high grade results. • As magnetite is a bulk commodity, no high/low grade portions of intervals are reported, the entire orebody width is reported in each

Criteria	JORC Code explanation	Commentary
	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. • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	intercept. • No metal equivalent values have been reported
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation 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').*	• The mineralisation generally dips at 60-65 degrees to the south. Drill holes are generally oriented to the north at 60 degrees. • All intervals have been reported in the attached tables as down hole intervals.
Diagrams	• *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*	• A locality plan and typical cross sections for each deposit area are included below.

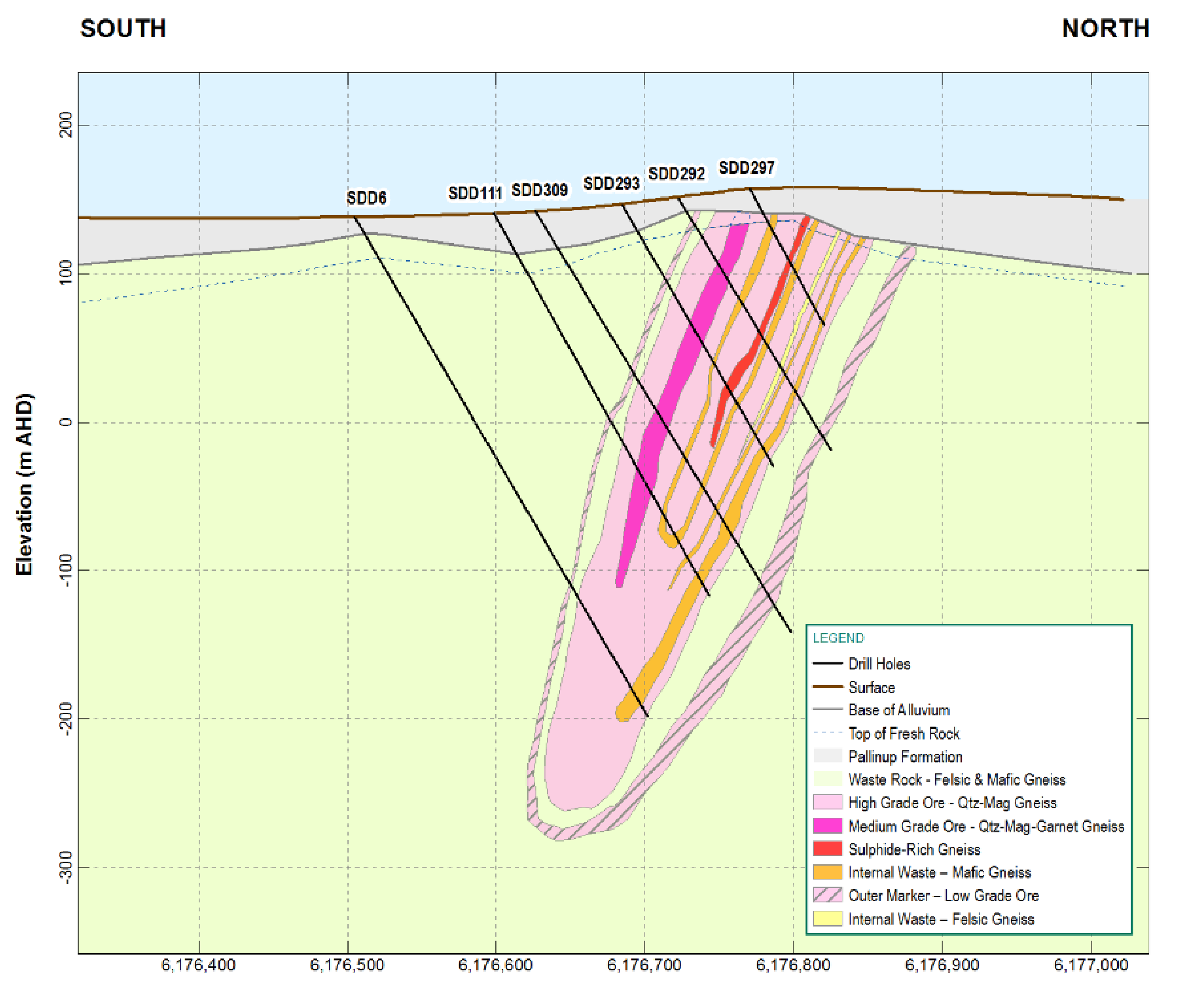
Criteria	JORC Code explanation	Commentary
	views.	
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• All drilling results have been reported in the attached tables.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• Extensive work has been undertaken on the deposit since 2005, culminating in the completion of a Feasibility Study (FS) in 2012. This has included: o Extensive airborne and ground geophysical surveys and interpretations, o Detailed geotechnical logging and interpretation of wall stability and infrastructure foundations, o Metallurgical and petrologic studies, including 3 bulk samples for pilot plant testwork using drill core (22t, 27t and 41 t each), o Geochemical testwork for ARD potential, o Exhaustive mining, processing, groundwater, environmental, heritage and social studies.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	• The western portion of the deposit (West, Central and East Zones) is essentially ready to move into the detailed engineering stage prior to construction. • Further resource definition drilling is required for the eastern portion (Far East Zone) to upgrade the Inferred resources. There is potential to define some additional resource further east; however, the intensity of the magnetic anomaly is gradually decreasing. • As the deposit is hosted in a synclinal structure,

Criteria	JORC Code explanation	Commentary
		there is no potential for significant extensions to the depth.
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• The diagrams below indicate the location of areas referred to in the point above.

Southdown – Locality Plan showing Mineral Resource with planned infrastructure

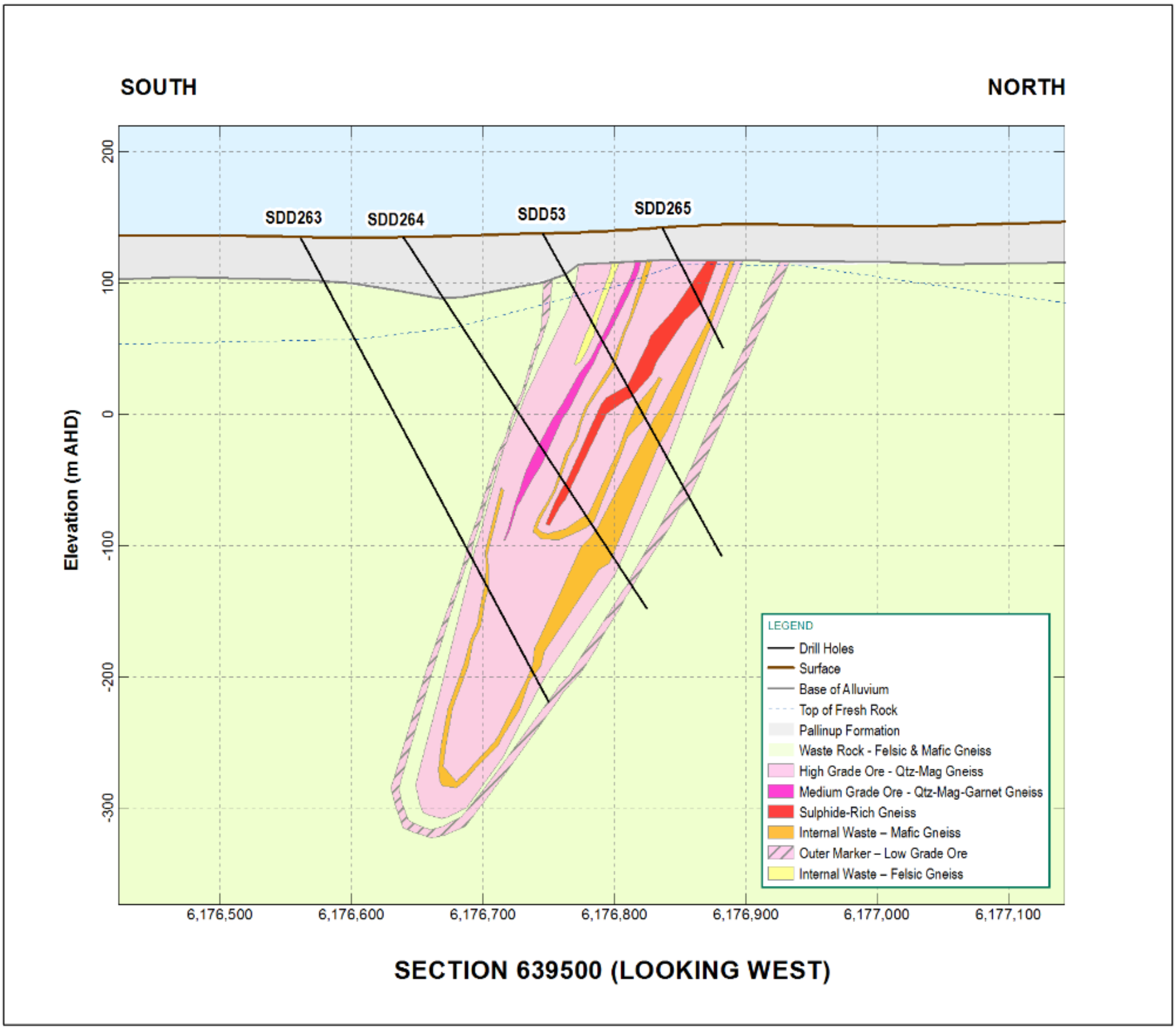


Typical Cross Section for the Western Zone 638,000mE

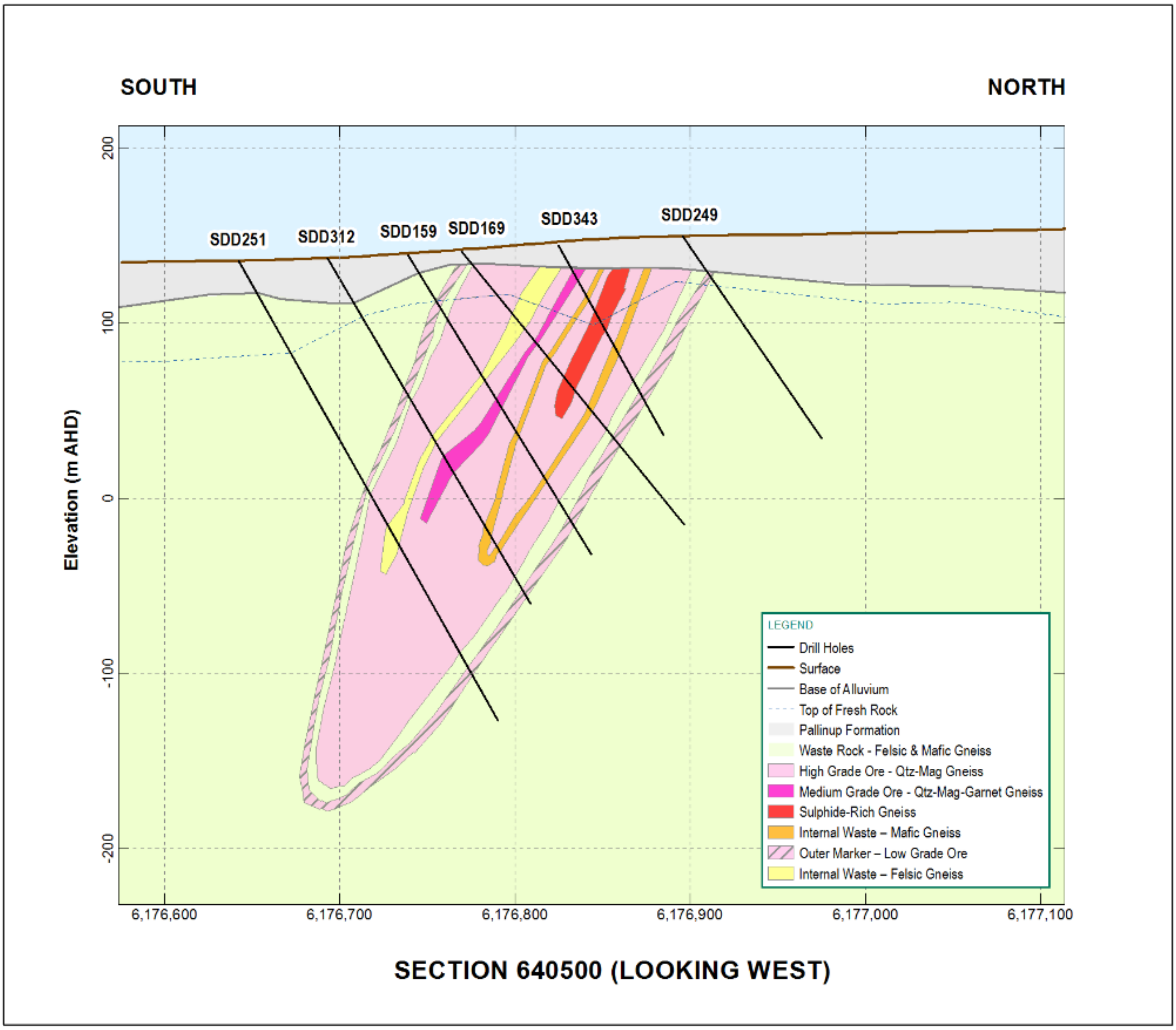


SECTION 638000 (LOOKING WEST)

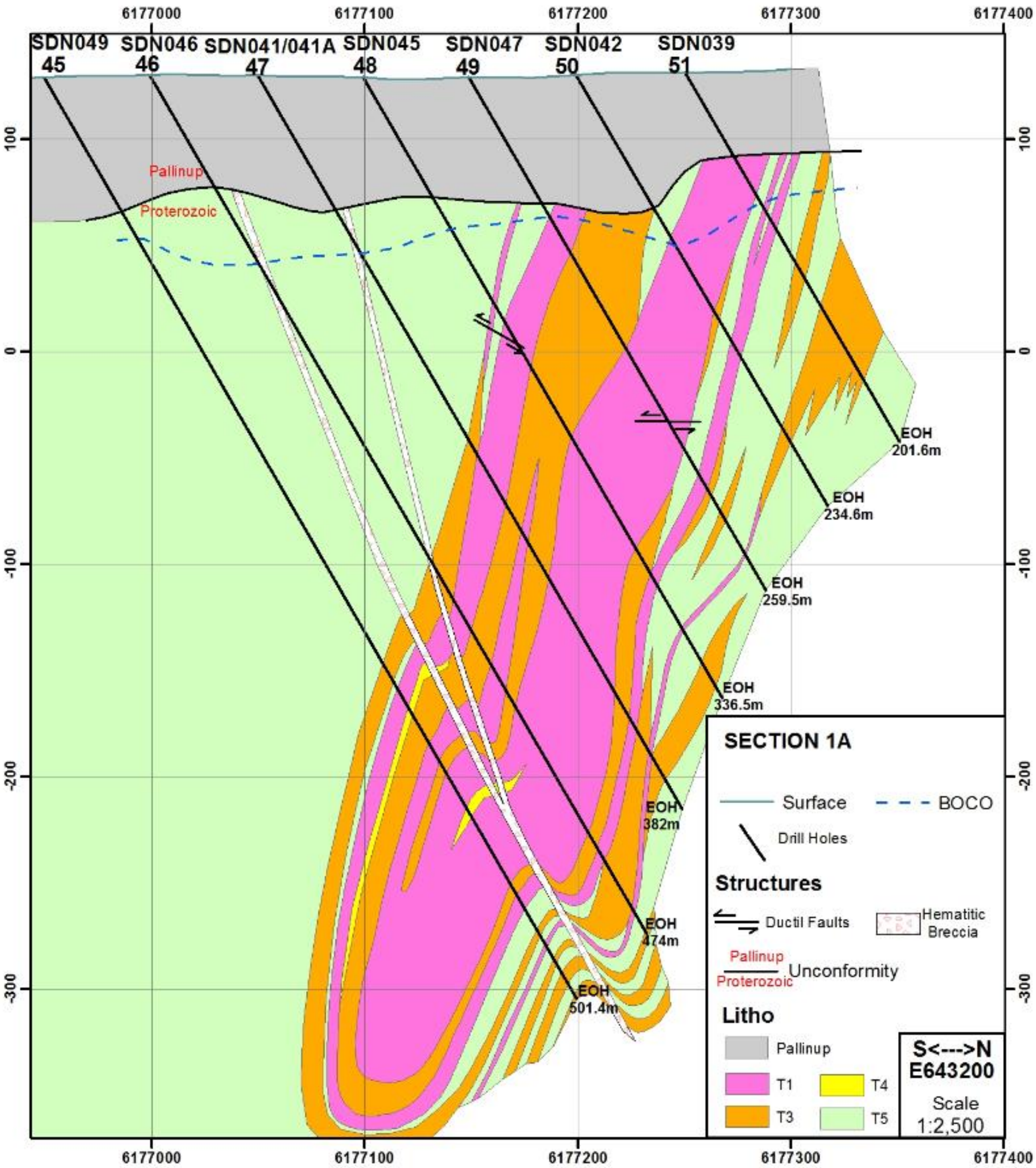
Typical Cross Section for Central Zone 639,500mE



Typical Cross Section for Eastern Zone 640,500mE



Typical Cross Section for Far Eastern Zone 643,200mE



SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES

Criteria	JORC Code explanation	Commentary

Database integrity	• *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.*
	
	• *Data validation procedures used.*
		• In May 2011 an acQuire database was implemented at Southdown, significantly strengthening the validation and controls on data entry and import.
		• Historic data was rigorously validated to ensure it was at a similar standard on migration to the new database
		• Visual validation in 3D is utilised by the plotting of sections with block grades, drill hole assays and geology intervals displayed.
		• The database has strict security levels which limits access for various purposes to reduce the risk of accidental changes to the data.
		
		• Validation of the database occurs at distinct stages:
		  ○ Data entry – data is entered into acQuire data entry forms, controlled by lookup lists and ranges of acceptable values
		  ○ On entry to the database – data is cross-checked visually
		  ○ 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	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	• The Competent Person has worked on the Project since 2009 and had responsibility for the execution of all studies and drilling programmes. • The Competent Person has undertaken frequent visits to the site and worked closely with consultants in compiling the resource estimate.

Criteria	JORC Code explanation	Commentary
	• *If no site visits have been undertaken indicate why this is the case.*	• Not applicable
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	• Successive drill programmes have consistently intersected the geological model as expected, providing a high degree of confidence in the geological interpretation. • There is some degree of uncertainty relating to the depth of the synclinal structure in the Far East Zone as it has very limited drill testing. It is, however, supported by detailed structural measurements taken from drill core and 3D inversion modelling of ground magnetic data.
	• *Nature of the data used and of any assumptions made.*	• The geological wireframes were developed using interpretations on 100m spaced vertical sections, perpendicular to the strike. The work was all done in Geovia Surpac. • Sections were cut showing drill hole traces with lithology and DTR information, as well as traces of modelled faults, overlying sediments and oxidation surfaces. • Interpretations were completed for each of the main rock types present within the mineralized horizons. • Sectional interpretations were wireframed in 3D, taking particular care around the offsetting faults.
	• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*	• The robustness of the geological model has indicated that alternative models are unlikely. Alternatives will be considered during future drilling of the Far Eastern Zone to ensure the appropriate interpretation is made.
	• *The use of geology in guiding and controlling Mineral Resource estimation.*	• Geology, lithology and structure are used to guide and control the interpretation and wireframing of ore lenses in preparation for resource estimation. • In particular, wireframes are based on lithology,

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td>The factors affecting continuity both of grade and geology.</td><td>DTR, mineralogy (sulphides an garnet), and fault boundaries.
The location within a synclinal structure controls the depth extent, with units easily traceable through the limbs and into the hinge zone. At the meter scale local variations occur around parasitic folding but this is not expected to have a material effect on the Mineral Resource.
Strike extent is highly continuous over the 11km defined thus far, with the exception of offsets by three moderately northeast dipping dextral reverse faults which have 50-100m lateral displacements.</td></tr>
<tr><td>Dimensions</td><td>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</td><td>The Southdown mineralisation is divided into 4 zones by faults which offset the stratigraphy; mineralisation would otherwise be continuous over the full strike extent.
Being hosted in a synformal structure, the depth extent is reasonably well defined by the fold hinge.
<table><tr><th>Zone</th><th>Strike Extent</th><th>Width Extent</th><th>Depth Extent</th></tr><tr><td>Western Zone</td><td>2,200</td><td>100</td><td>480</td></tr><tr><td>Central Zone</td><td>1,200</td><td>100</td><td>450</td></tr><tr><td>Eastern Zone</td><td>2,000</td><td>100</td><td>520</td></tr><tr><td>Far Eastern Zone</td><td>5,700</td><td>100</td><td>570</td></tr></table></td></tr>
<tr><td>Estimation and modeling techniques</td><td>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</td><td>The variographic studies and resource estimation were undertaken by BMGS Perth using Gemcom Surpac software.
The resource estimation was performed using Ordinary Kriging (OK).
No top cuts have been applied to the current model due to the limited influence of outliers.
Sample data was generally of 3 metre downhole lengths; however, in the minor rock type domains there are many narrower intervals. To ensure that all sample data was incorporated in the estimation, no samples within the ore zones were omitted and samples were weighted by length.</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	computer software and parameters used.	• Elemental compositions of the DTR concentrate were also weighted by the corresponding DTR value for that sample. • Accumulated attributes (values after weightings were applied) were subjected to variographic analysis to develop modelling parameters. • Search parameters used for each pass are tabled below.

Southdown Search Parameters - All Attributes								
Pass	Bearin g (Z)	Plunge (X)	Dip (Y)	Major Axis (m)	Major/ Semi-major Ratio	Major/ Minor Ratio	Min Samples	Max Samples
1	80	0	-80	200	1	10	4	32
2	80	0	-80	400	1	10	4	32
3	80	0	-80	600	1	10	2	32

Criteria	JORC Code explanation	Commentary
		• The block model was constructed using a 20 mE by 20 mN by 12 mRL parent block size with sub-celling to 10 mE by 10 mN by 6 mRL.
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	• New model estimates are compared against previous model estimates using swath plots and visual inspection of the model around new drill hole data in section. • This deposit is yet to be developed and does not have any production data for reconciliation.
	• *The assumptions made regarding recovery of by-products.*	• No by product recoveries have been considered.
	• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*	• Concentrate grades and deleterious elements (impurities) all have variography completed where samples were available and are estimated using ordinary kriging during the resource estimate.
	• *In the case of block model interpolation, the block*	• Analysis has been undertaken by BMGS Perth to determine the appropriate block size for the drill

Criteria	JORC Code explanation	Commentary
	size in relation to the average sample spacing and the search employed.	hole spacing. The optimum kriging efficiency was determined to be 20mNx20mEx12mZ using the West Zone as a test area. • Sample density is generally 100m between sections and 50-100m down dip.
	• *Any assumptions behind modelling of selective mining units.*	• No selective mining unit had been determined at the time of estimation
	• *Any assumptions about correlation between variables.*	• There is a strong correlation between DTR and density which is described below in the Bulk Density section. There is also a strong correlation between Total Fe in concentrate and DTR as almost all Fe is associated with the magnetite. No correlations were assumed in the estimation process.
	• *Description of how the geological interpretation was used to control the resource estimates.*	• Drill hole sample data was flagged as ore in the database within the domain wireframes interpreted for each zone and rock type. Composites extracted from the database for each domain are therefore controlled by the geological interpretation.
	• *Discussion of basis for using or not using grade cutting or capping.*	• No top cuts have been applied to the current model due to the limited influence of outliers.
	• *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 previous model estimates by swath plots and visual inspection of the model around new drill hole data in section. • This deposit is yet to be developed and does not have any production data to reconcile against.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are estimated on a dry basis. • Limited moisture determinations have been made in the past which indicate negligible moisture within the highly competent drill core.

Criteria	JORC Code explanation	Commentary
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The cut-off grade of 10% DTR is based on a natural break in the grade-tonnage curve and is supported by economic analysis undertaken during the Feasibility Study.
Mining factors or assumptions	• *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.*	• The selective mining unit determined during the Feasibility Study is 10 mE x 10 mN x 12 mRL, assuming standard truck and shovel mining methods. • No mining factors (i.e. dilution, ore loss, recoverable resources at selective mining block size) have been applied. • Significant internal dilution bands are wireframed and modelled during estimation. • Analysis of sub-grade mineralised samples (<10% DTR) has provided average DTR and concentrate grades which have been applied to blocks external to the mineralised units. This will be used to account for external dilution at the reserve estimation stage.
Metallurgical factors or assumptions	• *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*	• DTR has been incorporated into the model as a measure of metallurgical recovery in the magnetic separation process. This is based on the performance of DTR at Grange Resources' Savage River mine, where it has been employed as a proven measure of delineating ore and waste, and in modelling the anticipated recoveries through the magnetic separation process for over 40 years. • No further metallurgical recovery factors have been applied to the resource model.

Criteria	JORC Code explanation	Commentary
	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.	
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a green fields 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.*	• Waste rock: extensive waste rock geochemistry studies have been undertaken to develop an ARD management plan. Potentially acid forming waste will be identified using field tests and disposed of in encapsulated dumps as part of the environmental permit conditions. • Tailings are disposed of as sediment beaches in engineered tailing ponds. The Tailings management plan is part of the environmental permit conditions.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the*	• All samples used in the estimation had density determinations carried out using the water displacement method. The full sample was used

Criteria	JORC Code explanation	Commentary
	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 deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	in each determination. • Standard practice is for every ore sample to have a density determination carried out using the full sample of half core. • Samples were not dried prior to determinations, however due to the highly competent nature of the drill core and extended period of natural drying waiting for processing, the samples are assumed to be dry. Random measurements consistently showed immaterial moisture values. • The ore zones at Southdown are very competent and void space is not considered significant to make allowance for in the density determination method. • The calliper method was used for all waste rocks between 2005 and 2011 to generate a large dataset of waste densities. These values were not used in the resource estimation.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution*	• 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. • The Competent Person has taken consideration of the relative confidence in tonnage/grade information and the reliability of input data, as well as the confidence in the geological interpretations, in allocating classification categories.

Criteria	JORC Code explanation	Commentary
	of the data). • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The classification categories applied reflect the Competent Person's views on the deposit.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• Optiro undertook a peer review of the Mineral Resource and Ore Reserve as part of the Feasibility Study. They found "the resource model to be a robust estimate of the Southdown Mineral Resource". Optiro raised several issues but acknowledged they would be of minor concern, with the exception of considering the factoring of historic assays in the classification stage. This is discussed below. • Golder also reviewed the Resource Model for the Feasibility Study, having completed the previous resource models and largely defining the methodology used in the current model.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate*	• The Competent Person considers the Mineral Resource estimate to have a high degree of confidence for the western portion of the deposit (excluding the Far East Zone). • Many phases of drilling have tested the geological interpretation and previous resource models, and consistently found them to be accurate. • In particular drill holes targeting the base of the deposit in the keel of the syncline have repeatedly intersected the interpreted units as expected, thus supporting the extension of measured resources to the base of the keel. • The factoring of 2005/2006 DTC XRF results introduces a level of risk in estimating the impurities in the final concentrate product. The SDJV and the Competent Person have assessed this risk and determined that it is not sufficient to downgrade the resource classification for the following reasons: o There is a broad spread of post 2006 infill drilling throughout the areas of 2005/2006

Criteria	JORC Code explanation	Commentary
	• *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.*	drill holes providing support to the estimation. ○ The historical issues affected only SiO2 in a significant manner; other elements had relatively minor adjustments. ○ Volume/Tonnage of ore was not affected, DTR was not affected. ○ Robust testwork reported by SGS provides confidence that the approach is valid. ○ QAQC on the duplicate samples from the 2005/2006 results demonstrated the current Davis Tube method is valid, and correlated with QAQC for the 2011/12 analytical results, thus validating the majority of the database. • The Far East Zone has demonstrated a broad continuity; however, variation in geometry along its strike requires additional drilling to delineate where changes occur. An Inferred classification is deemed appropriate for this area. • The resource classification as applied by the Competent Person is believed to be relevant to estimates at the scale of the SMU, i.e. local mining.
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• This project is yet to proceed to development stage and does not have any production data for reconciliation.

SECTION 4 - ESTIMATION AND REPORTING OF ORE RESERVES

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• The Mineral Resource model for Southdown Deposit has been developed by BMGS Perth as part of an ongoing Feasibility Study and any information in this statement which relates to Mineral Resources is based on data compiled by Ben Pollard who is a full-time employee of BMGS Perth and a Member of the Australasian Institute of Mining and Metallurgy. The Mineral Resource model was identified as sdn_resource1205.mdl. • The stated Mineral Resource is inclusive of the Ore Reserve
Site visits	• *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.*	• The Competent Person has had more than 10 years of experience in an open pit Magnetite mine at senior operational management and technical level. • The Competent Person has worked on this Project since 2008, has had several visits to the site and worked extensively with the consultants undertaking studies in relation to developing ore reserves for the project. • No applicable
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.The Code requires that a study*	• This report is part of a detailed Feasibility Study that was completed in July 2012. The information used for estimation and reporting of this Ore Reserve is based upon that Feasibility Study, and has an accuracy of +/- 15%

Criteria	JORC Code explanation	Commentary
	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.	
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• A cut-off grade of 10% Davis Tube Concentrate mass recovery (DTR) has been used for reporting which is above the marginal cut-off of 9% (DTR).
Mining factors or assumptions	• *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 optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining*	• The Ore Reserves are reported within a detailed staged pit design which is based on Whittle open pit optimisation. The optimisation was carried out including Measured and Indicated Mineral Resource categories and using a gross FOB price at Albany of US$111.07/dmt concentrate. • Mining will be undertaken by conventional bulk mining methods utilising hydraulic face shovels, dump trucks and drill and blast.

Criteria	JORC Code explanation	Commentary
	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.*	• The overall pit slopes used for the design and optimisation are based on geotechnical studies compiled by Mining One for the Feasibility Study.
	• *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).*	• The Whittle optimisation was undertaken on the Resource Model available prior to the Feasibility Study, identified as sdok_020709.bmf. This model was considered appropriate for optimisation as additional drilling during the Feasibility Study was largely infill in nature and comparisons were later undertaken to ensure the infill drilling did not materially change the model with respect to the optimisation.
	• *The mining dilution factors used.* • *The mining recovery factors used.*	• The Reserve block model includes an allowance for likely mining dilution based on a regularisation of the Resource Model. The regularisation has added approximately 1% tonnage and reduced the DTR by 4%. No mining loss has been allowed for beyond the effects of regularisation.
	• *Any minimum mining widths used.*	• Minimum mining widths are based upon the scheduled resource blocks sizes of 50 m in width. The bench mining width has not been restricted and the full width of the ore will be utilised. The Smallest Mining Unit (SMU) assumed is 10 m x 10 m x 12 m in the X, Y and Z direction respectively coincide with the ore reserve blocks.
	• *The manner in which*	• Some Inferred Mineral Resources (24.4Mt) are located within the overall pit design. These are excluded from the stated Ore Reserve and have also been excluded

Criteria	JORC Code explanation	Commentary
	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.*	from the LOM Schedule to ensure appropriate application of metallurgical factors to all blocks. • The Feasibility Study has considered all infrastructure associated with the selected mining and processing methods
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *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 domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or*	• The Concentrator comprises primary crushing, primary, secondary and tertiary grinding, magnetic separation and sulphur flotation. Concentrate is pumped by a slurry pipeline for drying and ship loading at the Port Albany. This methodology is standard process for magnetite operations. • This process uses standard methodologies which are well tested in the industry, in particular at Grange Resources' existing magnetite mine at Savage River in Tasmania. • As part of the Feasibility Study a programme of metallurgical drilling and pilot plant test work was undertake to mimic the proposed Concentrator design and to determine the metallurgical factors and Concentrate Magnetite recovery. The concentrate recovery is 0.981 x DTR which equates to 98.1% recovery of potential magnetically recoverable material. • Concentrate recovery has a linear relationship with the Mineral Resource DTR • There are no metallurgical factors applied to the Ore Reserve mine schedule which determines what is

Criteria	JORC Code explanation	Commentary
	allowances made for deleterious elements.	produced in concentrate except for Sulphur. Sulphur has been set at 0.08% on the basis of flotation test work completed to date. • Tails Density has been set at 1.7 t/m3.
	• *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.*	• 3 bulk samples for pilot plant testwork using drill core (22t, 27t and 41 t each) have been collected. All samples have been selected from drill core on regular spacing on section and along strike to be considered as representative of the Ore Reserve.
	• *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	• The Ore Reserve and metallurgical processing methodologies have taken into account the specification of the concentrate produced under the process defined in the Feasibility Study.
Environmental	• *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*	The Southdown Magnetite Mine has been assessed under Part IV of the Environmental Protection Act 1986 (WA). Environmental applications for the Southdown Magnetite and Kemaman Pellet Plant Project commenced in 2005 and primary environmental approvals gained since include the following: • Southdown Magnetite mine, slurry pipeline to Albany and Albany Port infrastructure works for up to 11 Mt/a product. Ministerial Statement 816 dated 24 November 2009 approved the 6.6 to 7.0 Mt/a Southdown mining project. A further approval was granted under Section 45c of the Environmental Protection Act 1986 to increase production up to 11 Mt/a. • Albany Port Authority's Port Expansion Project (dredging the entrance to Princess Royal Harbour and within King George Sound). The WA Minister

Criteria	JORC Code explanation	Commentary
	storage and waste dumps should be reported.	for Environment issued Ministerial Statement 846 on 18 November 2010 approving the Albany Port Expansion Project. • Albany Port Authority's Port Expansion Project Environment Protection and Biodiversity Conservation (EPBC) Act approval (EPBC Referral 2006/2540) dated 11 June 2010. • Cape Riche Seawater Desalination Plant to construct and operate a 12GL/annum seawater desalination plant (approximately 30 km south of Southdown Magnetite mine) to supply water for the mine operations. Ministerial Statement 904 dated 18 July 2012. • EPBC Act approval gained for the Muja to Wellstead Transmission Line in 2012 to provide power to the mine site during operations. • State Clearing Permit approval gained for the Muja to Wellstead Transmission Line in 2012 under the Western Power Purpose Permit. The following approvals are also in progress: • EPBC Act approval for the mine, slurry pipeline, associated infrastructure and desalination plant. The project was referred to the department of Sustainability, Environment, Water, Population and Communities (SEWPaC) who are now the Department of the Environment (DotE) in July 2011. Dewatering and offset studies are currently underway to progress this approval. • Currently, there are two registered Native Title applications that cover the areas allocated for the Southdown Project in Australia. Consultation with the registered Native Title body, the South West Aboriginal Land and Sea Council (SWALSC), has been ongoing and will continue to feature. • An Aboriginal heritage survey of the mine site in 2005/6, revealed a total of seven archaeological sites containing artefacts. All the sites have been identified, recorded and mapped under Section 16 Aboriginal Heritage Act 1972. A Section 18 application under Aboriginal Heritage Act 1972 was submitted for

Criteria	JORC Code explanation	Commentary
		Ministerial consideration. Ministerial consent to disturb the sites was received in January 2012. Follow up Aboriginal Heritage surveys were conducted during 2012 on areas not previously surveyed. A number of sites have been identified which will be the subject of another Section 18 application, planned for submission in 2014.
Infrastructure	• *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.*	• The Feasibility Study included assessment, capital and operating costs for:- • mine infrastructure and associated workshops, • tails storage facility, • concentrator, • power, • water supply by desalination plant, • accommodation, • slurry pipeline, • concentrate dewatering facility and • ship loading • The majority of land acquisitions and agreements with various parties are in place or in an advanced state with no reason to expect they should not be finalised in a timely manner.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.*	• Capital costs were estimated during the +/- 15% Feasibility Study using subject matter experts and supported by budget quotes in most circumstances. • The Whittle optimiser was used as a tool to derive an economic pit outline which is then used as the basis for mine design. The software uses profit maximisation algorithms to generate pit shells. The cost inputs used in the Whittle optimiser were based upon the Pre-Feasibility Study. • It is important to note that the Whittle Optimisation, almost in all pricing scenarios, tends to include the entire ore zone in the geological structure and has been modified as part of the mine design to

Criteria	JORC Code explanation	Commentary
		accommodate the environmental and mining permitting constraints and has been used a guide for mine design. • The following costs used for the Whittle optimiser were based upon a concentrate production of 10,000,000 mtpa and derived from industry experience at Savage River and relevant consultants:- ○ Mining: A$bcm = 6.72 – 0.0139 × Bench RL (m). ○ Concentrator: A$/Milled Ore Tonne = 7.61 ○ Slurry Transport: A$/t concentrate = 0.83 ○ Albany – Filtration/Dewatering: A$/t concentrate = 1.52 ○ Cape Riche – Desalination: A$/t concentrate = 1.32 ○ Albany – Materials Handling: A$/t concentrate = 0.45 ○ Albany – Port: A$/t concentrate = 1.50 ○ Australian Overheads: A$/t concentrate = 2.64 • No additional dilution or mining recovery has been added as part of the Whittle process but is considered include in the Ore Reserve. • Geotechnical parameters used in the Whittle optimiser were as follows:- • Overall wall angles in degrees <table><tr><th>Area</th><th>North Wall</th><th>South Wall</th></tr><tr><td>Oxidised</td><td>20.8</td><td>21.4</td></tr><tr><td>Fresh</td><td>52.3</td><td>56.1</td></tr></table> • Revenue factor 0.75 (pit shell 7) has 99% undiscounted cash flow, 97% of the ore tonnes and 91% of the waste tonnes compared the revenue factor 1.0 pit shell. Pit shell 7 was selected to base the final pit design on. The Whittle pit shell selected meets the requirement for the open pit area to be less than 400 ha as per Environmental Protection

Criteria	JORC Code explanation	Commentary
		Authority Ministerial Statement 816.
	• *Allowances made for the content of deleterious elements.*	• No allowances have been made for deleterious elements as the process has been designed to produce concentrate within specification.
	• *The source of exchange rates used in the study.*	• A market study by Specialist Matter Experts in mining and metals was used as the basis of the exchange rate, market expectations and product pricing.
	• *Derivation of transportation charges.*	• Shipping rates are not included as all concentrate is Free On Board at the Port of Albany.
	• *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.*	• No allowances have been made for deleterious elements as the process has been designed to produce concentrate within specification.
	• *The allowances made for royalties payable, both Government and private.*	• All applicable royalties have been included in the operating costs
Revenue factors	• *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.*	• Concentrate tonnage and grade are sourced directly from the Ore Reserve model as provided by the use of DTR determinations for all samples. • Pricing assumptions are based on an average for the life of mine of US$111.07/dmt of Concentrate Free On Board at Albany at an exchange rate US$:A$ 1.00

Criteria	JORC Code explanation	Commentary
	• *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• Pricing assumptions have been sourced from a market study by Specialist Matter Experts in mining and metals
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.*	• Grange Resources has an operating mine at Savage River in Tasmania and presently sells Concentrate and Pellet into the Australian and Asian Markets. • Extensive market knowledge has been supplemented by marketing analysis undertaken by Specialist Matter Experts in mining and metals
	• *A customer and competitor analysis along with the identification of likely market windows for the product.*	• A market study by Specialist Matter Experts in mining and metals was used as the basis of the exchange rate, market expectations and product pricing.
	• *Price and volume forecasts and the basis for these forecasts.*	• A market study by Specialist Matter Experts in mining and metals was used as the basis of the exchange rate, market expectations and product pricing.
	• *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• Not applicable
Economic	• *The inputs to the economic analysis to produce the net*	• The Feasibility Study was completed in July 2012 to a study accuracy of +/-15% and demonstrated the

Criteria	JORC Code explanation	Commentary
	present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	following economic evaluation:- ○ NPV10% of A$1,008 million an ungeared IRR of 16.6%. ○ Capex estimate A$2.885 billion including EPCM, owners' costs and contingency of A$0.535 billion. ○ Total operating costs estimate of A$58.5 per tonne of concentrate (excluding royalties) (Free On Board Port of Albany). • The NPV is most sensitive to product price and exchange rate
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• Extensive community consultation has occurred with impacted stakeholders and interested parties as part of the Feasibility Study and in gaining environmental approvals:- ○ Adjacent landholders ○ South West Aboriginal Land and Sea Council ○ South Coast NRM ○ City of Albany ○ Albany Community ○ Great Southern Economic Development Commission ○ Wellstead Community ○ Albany Aviation Community Consultation Group ○ Munda Biddi Trail Working group ○ Gnowangerup Shire
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.*	 • No material naturally occurring risks have been identified to date which may impact the Ore Reserve.

Criteria	JORC Code explanation	Commentary
	• *The status of material legal agreements and marketing arrangements.*	• All agreements and arrangements are well advanced and will be concluded once the Project reaches the Financial Investment Decision.
	• *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.*	• The majority of mining tenements are in place. Two aspects are outstanding – a general purpose lease over the processing area, and a miscellaneous licence over the desalination pipeline. Both tenements will be progressed once negotiations with the relevant land owner are concluded. • Several environmental approvals are actively being progressed. There are no impediments expected for their approval. • Secondary approvals such as the Works Approval, Project Management Plan and Mining Proposal will be progressed once the project passes FID, with no impediments to their ultimate approval foreseen at this stage.
Classification	• *The basis for the classification of the Ore Reserves into*	• All Measured Resources have been converted to Proven Ore Reserves and all Indicated Resources have been converted to Probable Ore Reserves within the

Criteria	JORC Code explanation	Commentary
	varying confidence categories.	ultimate pit design. • There is a small amount of Inferred Resources contained within the pit design, but not classified as Ore Reserves.
	• *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The Competent Person has reviewed and agreed with the classification.
	• *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• There have been no Measured Resources which have been classified at Probable Ore Reserves.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• Snowden (2008) - High Level Review of Grange Resources Southdown Project, February 2008 • Optiro (2012) – Audit of Ore Resource and Ore Reserve, June 2012 • Evans & Peck – Independent Technical Engineer – Technical Due Diligence on Feasibility Study Oct 2012 • SGS Minerals Metallurgy- Review and audit of Davis Tube Recovery with regard to Quality Assurance (QA) and Quality Control (QC), June 2012
Discussion of relative accuracy/ confidence	• *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*	• The Competent Person considers that the relative accuracy and confidence in the Ore Reserves is appropriate for the generally-accepted error ranges understood by the reserve confidence categories which have been allocated. • This statement of relative accuracy and confidence

Criteria	JORC Code explanation	Commentary
	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*	level relates to the global estimate of the Ore Reserves • A decreased level of accuracy is expected for the elemental compositions of the concentrate owing to the difficulty in predicting conversion factors from DTR concentrate to actual concentrate. These factors will be deposit specific and can only be determined accurately once production data is available. The risk to the Reserve however is considered immaterial due to extensive related test work and experience in processing magnetite ores. • As the mine is not yet in operation there are no production figures to reconcile the Ore Reserve against.

Criteria	JORC Code explanation	Commentary
	Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. • *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.*	

Competent Person Statements

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

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

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

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

-ENDS-

For further information, please contact:

Investors:
Wayne Bould
Managing Director & CEO
Grange Resources Limited
+ 61 3 6430 0222
Or visit www.grangeresources.com.au

DRILL HOLE DATA

Pursuant to the guidelines established in the JORC Code (2012 Edition), the following table represents the drill hole intercepts which support the Mineral Resource estimate for the Southdown Project.

Zone	HOLEID	EAST	NORTH	RL	DIP	AZIMUTH	FROM	TO	HOLE DEPTH
CZ	PMS47	639,074.7	6,176,729.1	150.8	- 90.0	360.0	17.73	41	41
CZ	PMS48	639,576.4	6,176,805.6	138.4	- 90.0	360.0	23.69	48	48
CZ	PMS49	639,576.9	6,176,845.6	140.3	- 90.0	360.0	23.75	63	63
CZ	SDD11	639,628.6	6,176,731.7	136.0	- 60.6	353.6	74.19	216.86	237.85
CZ	SDD12	639,423.7	6,176,727.7	138.4	- 59.7	355.9	51.73	196.99	237.7
CZ	SDD131	639,828.4	6,176,791.3	140.5	- 60.0	353.0	69.27	188.09	194.3
CZ	SDD132	639,615.1	6,176,830.9	139.1	- 60.0	353.0	23.48	102.45	152.3
CZ	SDD133	639,448.1	6,176,529.9	136.4	- 60.0	353.0	297.97	401.49	411.3
CZ	SDD134	639,259.6	6,176,501.2	135.9	- 60.2	342.7	288.54	387.89	396.6
CZ	SDD135	639,072.9	6,176,460.0	135.4	- 60.0	352.9	301.59	399.1	413.2
CZ	SDD136	639,234.1	6,176,701.9	144.4	- 56.6	349.9	47.04	173.29	191.3
CZ	SDD137	639,244.0	6,176,651.1	140.7	- 59.9	352.0	103.9	231.82	244.8
CZ	SDD138	639,036.3	6,176,709.6	149.1	- 60.0	353.0	27.78	137.81	164.4
CZ	SDD139	639,042.9	6,176,660.5	144.2	- 60.2	349.6	50.69	190.14	212.6
CZ	SDD14	639,441.0	6,176,578.3	135.8	- 59.6	351.6	228.92	353.03	402.6
CZ	SDD140	639,050.4	6,176,610.3	140.5	- 58.7	352.0	103.53	237.61	248.3
CZ	SDD141	638,829.0	6,176,692.7	146.4	- 60.0	353.0	36.15	116.09	144.3
CZ	SDD142	638,837.9	6,176,642.9	142.8	- 60.4	353.6	69.5	213.28	225.3
CZ	SDD143	638,844.5	6,176,595.1	139.6	- 60.7	353.1	120.68	258.38	265.9
CZ	SDD145	638,733.4	6,176,641.7	140.9	- 60.0	353.0	38.2	137.37	146.4
CZ	SDD15	639,249.0	6,176,601.3	139.1	- 59.6	354.0	161.18	287.8	330.7
CZ	SDD16	639,254.0	6,176,552.0	137.7	- 59.2	353.0	217.3	330.38	378.7
CZ	SDD163	639,443.2	6,176,573.3	135.7	- 60.2	352.7	223.64	346	370.7
CZ	SDD17	639,428.3	6,176,678.5	136.5	- 59.9	352.3	112.96	249.84	297.6
CZ	SDD172	639,935.0	6,176,688.1	136.3	- 60.5	355.4	183.28	297.52	305.3
CZ	SDD18	639,840.3	6,176,691.6	136.1	- 61.3	352.7	162.74	290.77	331.6
CZ	SDD180	639,647.8	6,176,583.0	134.1	- 60.0	353.0	271.61	375.75	426.6
CZ	SDD19	639,636.9	6,176,680.0	135.0	- 60.9	353.4	136.43	295.59	310.6
CZ	SDD192	640,052.0	6,176,660.0	135.0	- 60.0	353.0	240.8	332.27	348.3
CZ	SDD193	639,230.8	6,176,746.9	149.2	- 60.0	353.7	18.71	139.88	168.9
CZ	SDD20	639,063.4	6,176,511.6	136.9	- 60.0	353.5	217.6	340.34	372.7
CZ	SDD209	639,410.8	6,176,821.0	144.4	- 60.0	355.7	25.64	94.59	119.4
CZ	SDD212	639,225.2	6,176,792.7	153.5	- 60.9	351.9	23.48	98.61	125.4
CZ	SDD257	639,029.8	6,176,753.4	153.5	- 59.8	353.4	19.36	94.35	102.65
CZ	SDD258	639,129.6	6,176,772.9	154.8	- 59.5	350.4	15.47	98.47	108.4
CZ	SDD259	639,142.0	6,176,686.4	145.0	- 60.3	350.2	44.89	182.57	190.47
CZ	SDD260	639,160.0	6,176,516.4	136.5	- 60.9	353.6	246.62	356.74	375.73
CZ	SDD261	639,317.2	6,176,773.9	146.6	- 60.7	351.8	25.27	127.35	140.6
CZ	SDD262	639,343.3	6,176,550.5	137.0	- 60.3	351.8	247.68	366.32	374.97
CZ	SDD263	639,519.8	6,176,836.9	141.5	- 61.8	345.4	30.36	89.39	102.4
CZ	SDD264	639,530.5	6,176,745.6	137.3	- 59.9	353.9	55.64	199.67	280.57
CZ	SDD265	639,551.4	6,176,561.3	133.9	- 60.7	352.2	285.93	390.35	401.5
CZ	SDD269	639,963.7	6,176,805.1	144.2	- 61.3	278.5	137.46	201.31	201.31
CZ	SDD47	638,850.1	6,176,543.8	137.6	- 60.9	355.1	178.79	347.86	361.2
CZ	SDD48	638,952.2	6,176,545.8	138.1	- 60.0	350.0	152.27	284.41	288.8
CZ	SDD49	639,055.6	6,176,561.2	138.3	- 62.0	352.5	153.23	282.28	306.5
CZ	SDD50	639,154.2	6,176,584.7	138.9	- 60.5	354.7	145.53	269.8	324.6
CZ	SDD51	639,335.4	6,176,633.7	138.1	- 62.3	353.7	141.43	262.42	273.6
CZ	SDD52	639,435.4	6,176,628.6	135.9	- 61.2	352.7	168.61	299.62	327.6
CZ	SDD53	639,542.2	6,176,639.4	134.6	- 59.2	352.5	167.35	306.01	338.2
CZ	SDD54	639,643.6	6,176,627.7	134.9	- 61.7	353.9	220.88	346.05	366.5
CZ	SDD55	639,738.4	6,176,656.8	134.7	- 61.4	350.8	188.29	315.75	322.6
CZ	SDD56	639,835.1	6,176,742.6	138.7	- 59.7	353.4	97.12	223.3	223.3
CZ	SDD57	639,845.1	6,176,641.0	134.4	- 58.2	351.2	216.18	324.15	330.9
CZ	SDD58	639,951.7	6,176,590.8	132.9	- 62.0	353.0	304.74	381.47	390.7
CZ	SDD60	640,060.8	6,176,582.2	132.7	- 62.0	353.0	344.68	395.3	423.6
CZ	SDD87	639,850.3	6,176,595.0	133.8	- 60.0	353.0	282.37	372.52	393.6
CZ	SDD88	639,621.9	6,176,792.6	137.5	- 60.0	353.0	27.39	148.4	164.1

Zone	HOLEID	EAST	NORTH	RL	DIP	AZIMUTH	FROM	TO	HOLE DEPTH
CZ	SDD89	639,416.9	6,176,776.2	140.9	- 60.0	353.0	27.25	138.58	159.5
CZ	SDD90	639,328.7	6,176,683.8	140.0	- 61.2	354.9	89.75	219.15	237.4
EZ	PMS51	640,075.3	6,176,728.6	138.6	- 90.0	360.0	28.28	35	35
EZ	SDD1	641,628.7	6,176,952.6	135.8	- 61.2	352.7	17.65	141.51	303.95
EZ	SDD10	640,047.8	6,176,681.0	135.8	- 60.3	352.8	19.51	150.74	215
EZ	SDD100	641,225.0	6,176,868.4	143.0	- 60.8	357.2	50.38	144.02	175.8
EZ	SDD101	641,141.3	6,176,758.1	135.6	- 59.5	355.2	171.74	262.25	276.5
EZ	SDD102	641,032.9	6,176,814.4	140.0	- 60.5	347.8	68.78	187.29	204.6
EZ	SDD103	641,045.7	6,176,715.0	134.9	- 59.9	351.9	194.66	283.63	297.7
EZ	SDD104	640,941.1	6,176,738.9	136.2	- 60.3	346.4	138.14	238.05	246.4
EZ	SDD105	640,836.1	6,176,790.4	140.2	- 60.1	354.4	50.95	172.76	204.6
EZ	SDD106	640,848.1	6,176,691.2	136.3	- 60.1	355.3	171.1	263.91	285.8
EZ	SDD107	640,742.0	6,176,720.8	137.4	- 59.3	351.0	111.09	220.3	259.6
EZ	SDD108	640,633.6	6,176,771.9	140.1	- 60.2	348.1	40.01	158	186.7
EZ	SDD109	640,646.5	6,176,671.0	136.7	- 60.2	345.1	153.03	248.77	276.7
EZ	SDD110	640,431.4	6,176,692.9	137.7	- 59.7	356.9	79.85	201.43	221.5
EZ	SDD111	640,512.4	6,176,692.9	137.1	- 59.6	356.7	97	212.53	228.8
EZ	SDD112	641,849.8	6,176,808.7	131.7	- 61.2	354.6	271.71	383.96	408.2
EZ	SDD113	642,139.8	6,176,845.9	131.9	- 60.5	350.5	343.72	421.1	425
EZ	SDD114	641,826.4	6,177,002.0	134.1	- 60.6	353.3	16.78	131.57	150.3
EZ	SDD115	641,622.9	6,177,002.5	136.5	- 60.1	346.4	16.1	79.87	86.8
EZ	SDD116	641,395.7	6,176,947.9	141.3	- 59.6	350.8	14.87	83.7	126.8
EZ	SDD117	641,022.8	6,176,913.9	150.3	- 60.5	351.3	19.02	77.46	107.2
EZ	SDD118	640,834.1	6,176,843.7	144.0	- 60.3	351.1	15.03	115.8	134
EZ	SDD119	640,418.0	6,176,793.6	145.6	- 59.9	352.2	13.85	95.37	120.7
EZ	SDD120	640,239.4	6,176,727.8	140.6	- 60.2	350.9	26.89	135.15	153.7
EZ	SDD13	640,259.5	6,176,580.0	133.2	- 60.0	353.0	188.49	270.22	310.2
EZ	SDD130	640,040.7	6,176,730.9	138.6	- 60.0	352.6	26.16	97.45	109.1
EZ	SDD164	640,434.6	6,176,635.3	135.1	- 60.8	353.5	148.66	249.85	275.6
EZ	SDD165	641,028.6	6,176,856.3	144.3	- 60.0	353.0	22.09	137.35	144.9
EZ	SDD166	641,844.7	6,176,855.0	131.6	- 59.1	350.8	164.19	292.28	297.7
EZ	SDD171	640,442.7	6,176,591.3	133.9	- 60.9	351.8	216.62	291.6	308.2
EZ	SDD172	639,935.0	6,176,688.1	136.3	- 60.5	355.4	35.7	84.19	305.3
EZ	SDD181	640,234.7	6,176,772.1	142.9	- 60.5	351.0	22.2	84.92	123
EZ	SDD182	640,411.2	6,176,839.2	148.4	- 59.8	349.4	20.75	46.65	75
EZ	SDD183	640,620.1	6,176,868.2	146.8	- 59.4	351.2	7.35	56.57	84
EZ	SDD184	640,828.6	6,176,888.6	148.3	- 60.4	351.2	10.58	68.39	90
EZ	SDD185	641,821.6	6,177,048.5	134.2	- 59.9	351.4	21.5	64.51	78.5
EZ	SDD186	641,661.3	6,176,709.5	132.3	- 59.9	352.5	337	422.17	456.3
EZ	SDD187	641,423.3	6,176,675.9	134.2	- 60.3	353.7	309.48	389.69	396.6
EZ	SDD188	641,252.5	6,176,675.1	135.0	- 59.4	354.2	267.19	340.95	363.8
EZ	SDD189	641,055.5	6,176,621.8	135.2	- 58.9	352.3	313.56	368.19	390.3
EZ	SDD190	640,858.0	6,176,601.8	135.5	- 60.2	354.0	288.99	346.59	369.9
EZ	SDD192	640,052.0	6,176,660.0	135.0	- 60.0	353.0	29.3	181.98	348.3
EZ	SDD194	641,920.8	6,176,961.2	132.3	- 59.4	353.3	124	218.06	241.8
EZ	SDD195	641,915.3	6,177,005.8	132.9	- 59.5	1.0	143.45	148.7	148.7
EZ	SDD197	641,934.6	6,176,870.7	131.0	- 60.0	353.0	197.29	333.86	357.2
EZ	SDD2	641,831.2	6,176,951.2	133.5	- 60.5	352.0	42.8	193.23	216.7
EZ	SDD204	642,049.0	6,176,890.4	130.8	- 60.5	351.1	265	342.9	356.9
EZ	SDD213	640,654.6	6,176,586.9	135.3	- 59.5	354.2	258.14	321.06	360.3
EZ	SDD292	640,549.2	6,176,824.8	144.5	- 60.3	0.5	13.37	90.16	123.6
EZ	SDD293	640,549.5	6,176,769.4	140.9	- 49.7	359.5	20.43	133.03	410
EZ	SDD3	641,398.9	6,176,899.0	138.8	- 60.5	349.7	13.49	143.23	210.8
EZ	SDD302	641,148.4	6,176,838.2	141.3	- 50.5	1.2	58.18	171.12	408.78
EZ	SDD304	641,980.2	6,177,045.0	132.5	- 50.5	232.5	126.71	260.7	320.77
EZ	SDD306	641,551.1	6,176,863.2	134.4	- 61.6	0.4	102.68	235.21	253.11
EZ	SDD308	640,745.7	6,176,668.6	136.4	- 60.7	1.3	177.46	274.02	295.16
EZ	SDD309	640,549.3	6,176,738.9	138.8	- 59.8	359.1	54.55	174.21	200.13

Zone	HOLEID	EAST	NORTH	RL	DIP	AZIMUTH	FROM	TO	HOLE DEPTH
EZ	SDD313	640,348.9	6,176,799.7	145.5	-60.7	1.4	9.2	79.72	110
EZ	SDD319	640,349.2	6,176,765.2	143.4	-60.1	358.4	10.17	115.59	150.48
EZ	SDD322	640,349.6	6,176,715.7	140.1	-60.0	359.1	38.77	168.4	190.16
EZ	SDD326	640,349.2	6,176,666.3	136.9	-60.7	1.4	96.1	209.94	231.46
EZ	SDD327	640,749.4	6,176,816.6	142.2	-60.5	1.8	33.98	132.61	153.4
EZ	SDD329	640,749.0	6,176,766.8	139.1	-60.4	357.9	61.04	181.84	204.58
EZ	SDD331	641,148.0	6,176,807.4	138.4	-60.5	358.2	111.85	206.54	228.45
EZ	SDD338	640,949.0	6,176,838.3	142.6	-60.2	2.1	22.52	142.67	174.31
EZ	SDD345	640,948.8	6,176,786.1	138.6	-59.9	0.7	86.27	200.86	228.53
EZ	SDD4	641,239.1	6,176,767.8	135.3	-60.3	351.7	175.89	258.57	315.9
EZ	SDD5	640,424.3	6,176,741.2	141.3	-60.8	353.0	24.08	153.71	200.7
EZ	SDD59	640,054.3	6,176,632.0	133.8	-62.0	353.0	82.64	185.71	210.6
EZ	SDD6	640,521.3	6,176,642.3	135.6	-60.0	354.0	156.43	258.86	301.7
EZ	SDD61	640,158.0	6,176,581.0	134.0	-61.3	359.3	165.75	254.58	276.7
EZ	SDD63	640,266.5	6,176,528.7	132.8	-60.0	353.0	262.37	313.51	372.6
EZ	SDD64	640,247.2	6,176,681.0	138.0	-59.8	352.3	60.27	181	197.9
EZ	SDD65	640,353.2	6,176,614.5	134.7	-59.9	349.7	158.94	256.56	291.6
EZ	SDD66	640,437.5	6,176,641.5	135.4	-60.1	353.8	139.79	244.33	255.65
EZ	SDD67	640,448.8	6,176,544.4	134.3	-60.0	353.0	281.16	321.25	330.2
EZ	SDD68	640,626.4	6,176,824.1	143.6	-59.9	352.4	14.31	103.71	159.7
EZ	SDD69	640,651.5	6,176,620.1	135.9	-59.0	351.1	213.64	295.04	345.6
EZ	SDD7	640,640.0	6,176,723.4	137.9	-60.3	355.4	94.07	204.56	226.9
EZ	SDD70	640,844.3	6,176,742.4	137.6	-60.0	356.5	112.17	216.42	246.6
EZ	SDD71	640,854.4	6,176,647.2	135.6	-60.9	356.9	228.37	308.2	335.7
EZ	SDD72	641,028.3	6,176,862.0	144.9	-60.2	354.9	20.2	134.73	170.1
EZ	SDD73	641,040.0	6,176,768.8	136.5	-60.3	349.1	131.3	234.33	282.6
EZ	SDD74	641,049.3	6,176,666.4	134.4	-60.0	352.9	254.59	330.28	351.5
EZ	SDD75	641,225.1	6,176,916.5	147.5	-60.7	354.0	4.37	105.69	123.6
EZ	SDD76	641,235.8	6,176,820.1	138.3	-60.4	355.8	114.06	200.47	234
EZ	SDD77	641,331.8	6,176,822.1	136.2	-61.2	351.5	110.96	222.87	242.4
EZ	SDD78	641,412.3	6,176,800.5	134.1	-60.5	352.9	147.04	263.95	284.1
EZ	SDD79	641,421.7	6,176,699.0	133.9	-60.8	348.5	259.9	348.29	377.3
EZ	SDD8	642,047.4	6,176,883.0	130.7	-60.8	324.1	226.49	363.69	406.7
EZ	SDD80	641,542.9	6,176,761.5	132.9	-60.6	355.3	231.85	330.15	344.2
EZ	SDD81	641,636.6	6,176,902.3	134.7	-59.2	352.2	69.63	198.54	215.6
EZ	SDD82	641,741.4	6,176,797.8	132.1	-60.5	351.3	218.98	331.3	347.1
EZ	SDD83	641,842.6	6,176,860.2	131.7	-60.2	350.6	175.22	314.99	335.1
EZ	SDD84	641,927.6	6,176,917.0	132.0	-60.5	351.1	132.71	273.94	281
EZ	SDD86	640,252.8	6,176,633.1	135.6	-60.0	356.3	119.86	225.96	249.9
EZ	SDD9	641,642.6	6,176,851.6	133.4	-60.5	351.4	140.18	268.03	311.7
EZ	SDD91	641,246.6	6,176,720.2	134.4	-60.0	350.8	225.13	296.95	318.5
EZ	SDD92	641,401.8	6,176,851.2	135.8	-60.5	356.2	63.1	203.46	242.4
EZ	SDD93	641,415.7	6,176,751.5	133.9	-60.0	354.6	206.22	309.8	320
EZ	SDD94	641,536.3	6,176,812.5	133.2	-59.4	357.3	168.97	278.64	293
EZ	SDD95	641,649.3	6,176,804.7	132.4	-60.5	355.3	204.13	315.38	375.4
EZ	SDD96	641,657.0	6,176,755.1	132.4	-60.7	352.8	266.98	366.03	390.2
EZ	SDD97	641,838.3	6,176,904.5	132.6	-60.1	355.8	106.11	246.79	251.2
FEZ	DD05SDN001	643,422.0	6,177,135.0	129.4	-60.2	342.9	159.75	300.3	300.3
FEZ	DD05SDN002	643,396.2	6,177,252.6	129.8	-61.1	343.2	66.26	154.52	179
FEZ	DD05SDN003	644,202.2	6,177,427.0	128.1	-60.6	345.7	69.36	142.76	161.4
FEZ	DD05SDN004	644,261.1	6,177,231.5	128.0	-60.3	346.5	191.49	412.36	421.3
FEZ	DD05SDN005	645,990.3	6,178,005.3	125.7	-59.6	341.8	53.34	124.84	229.4
FEZ	DD05SDN006	646,026.0	6,177,870.6	124.5	-58.4	340.0	56.52	315.05	350
FEZ	DD05SDN007	645,672.5	6,177,935.9	128.2	-60.6	342.2	28.05	74.56	185.1
FEZ	DD05SDN008	645,689.4	6,177,870.2	126.8	-58.9	349.6	38.62	164.48	245
FEZ	DD05SDN009	645,426.1	6,177,800.5	128.4	-59.2	336.8	53.55	141.13	224
FEZ	DD05SDN010	644,837.4	6,177,544.3	127.6	-60.0	349.1	72.31	248.51	263
FEZ	DD06SDN012	644,881.0	6,177,434.3	126.5	-60.9	344.6	152.23	409.52	431.2

Zone	HOLEID	EAST	NORTH	RL	DIP	AZIMUTH	FROM	TO	HOLE DEPTH
FEZ	DD06SDN013	645,470.5	6,177,658.2	127.3	- 59.5	347.3	121.34	357.6	377.5
FEZ	DD06SDN014	642,436.7	6,177,113.2	132.4	- 60.7	343.5	25.17	56.95	192.3
FEZ	DD06SDN015	642,445.0	6,176,899.9	130.3	- 61.4	339.0	234.74	354.43	379
FEZ	DD06SDN016	646,736.4	6,177,935.4	122.9	- 59.6	341.7	120.82	302.7	302.7
FEZ	DD06SDN017	646,742.9	6,178,074.1	125.3	- 60.0	357.4	69.72	178.48	272.7
FEZ	DD06SDN018	642,463.1	6,176,931.8	130.6	- 61.3	354.6	201.33	340.16	372.3
FEZ	DD06SDN020	645,716.5	6,177,740.1	126.0	- 59.5	343.4	109.75	335	335
FEZ	DD06SDN021	642,670.2	6,177,115.0	131.7	- 59.6	350.0	55.75	138.32	234.3
FEZ	DD06SDN022	644,227.2	6,177,335.0	127.8	- 61.3	349.5	96.63	261.16	316
FEZ	DD06SDN023	642,710.1	6,177,044.6	130.9	- 58.4	334.7	98.24	229.55	283.5
FEZ	PMS50	641,978.3	6,176,985.5	132.2	- 90.0	360.0	46.09	47	47
FEZ	PMS58	645,588.5	6,177,710.5	128.9	- 55.0	360.0	102.16	113.6	113.6
FEZ	PMS59	641,977.4	6,176,914.6	131.2	- 55.0	360.0	110.85	116	116
FEZ	SDD113	642,139.8	6,176,845.9	131.9	- 60.5	350.5	244.3	312.53	425
FEZ	SDD113	642,139.8	6,176,845.9	131.9	- 60.5	350.5	317.38	329.1	425
FEZ	SDD156	642,026.6	6,177,032.4	132.1	- 60.5	346.0	25.18	106	132.7
FEZ	SDD194	641,920.8	6,176,961.2	132.3	- 59.4	353.3	49.82	124	241.8
FEZ	SDD195	641,915.3	6,177,005.8	132.9	- 59.5	1.0	18.46	111.1	148.7
FEZ	SDD196	641,909.7	6,177,050.8	132.7	- 59.7	356.8	11.81	57.21	100.8
FEZ	SDD198	642,234.9	6,177,024.1	131.8	- 59.6	358.9	25.11	139.06	178.8
FEZ	SDD199	642,227.7	6,177,067.3	132.2	- 60.4	351.0	25.19	84.5	112.9
FEZ	SDD200	642,241.3	6,176,978.9	130.9	- 61.8	350.8	55.08	206.84	221.9
FEZ	SDD204	642,049.0	6,176,890.4	130.8	- 60.5	351.1	145.88	235.16	356.9
FEZ	SDD304	641,980.2	6,177,045.0	132.5	- 50.5	232.5	23.36	126.62	320.77
FEZ	SDD304	641,980.2	6,177,045.0	132.5	- 50.5	232.5	126.62	126.71	320.77
FEZ	SDD98	642,033.5	6,176,981.5	131.7	- 60.0	353.0	28.43	172.11	182.3
FEZ	SDD99	642,040.6	6,176,936.6	131.5	- 60.0	353.0	80.54	230.69	292.3
FEZ	SDN024	644,600.0	6,177,337.0	127.0	- 61.1	348.3	170.65	465.69	492.4
FEZ	SDN025	645,206.0	6,177,497.0	123.4	- 61.1	1.2	218.2	464.69	516.16
FEZ	SDN026	646,397.9	6,177,948.7	122.4	- 60.0	358.4	130.42	340.69	360.65
FEZ	SDN027	645,200.9	6,177,700.4	127.6	- 58.7	359.6	68.56	212.27	309.2
FEZ	SDN028	642,999.9	6,176,899.0	130.3	- 60.0	350.5	368.6	466.3	531.4
FEZ	SDN029	643,006.0	6,177,097.7	130.1	- 60.0	354.9	121.6	240.8	338.9
FEZ	SDN030	645,203.2	6,177,600.2	126.5	- 59.7	357.3	91.48	326.47	444.2
FEZ	SDN031	646,400.6	6,177,846.8	122.1	- 59.8	359.4	263.14	470.91	478.58
FEZ	SDN032	643,002.7	6,176,998.1	130.1	- 60.5	0.1	231.67	356.35	396.41
FEZ	SDN034	643,796.4	6,177,294.1	128.7	- 60.5	357.8	69.26	222.6	348.3
FEZ	SDN035	643,808.9	6,177,197.4	128.5	- 60.2	357.8	164.65	343.01	384.4
FEZ	SDN036	643,009.1	6,177,206.6	131.0	- 60.2	0.5	64.63	93.8	345.62
FEZ	SDN037	643,800.0	6,177,094.4	128.6	- 60.8	359.1	316.47	472.08	498.28
FEZ	SDN038	643,798.4	6,177,394.8	131.3	- 60.9	358.4	71.72	102.89	252.64
FEZ	SDN039	643,199.6	6,177,248.1	130.6	- 60.0	358.9	55.76	84.98	198.61
FEZ	SDN040	643,007.7	6,177,151.4	130.6	- 60.1	360.0	51.28	173.81	231.58
FEZ	SDN041A	643,197.3	6,177,051.8	130.0	- 62.5	359.0	208.09	352.8	382
FEZ	SDN042	643,199.6	6,177,198.8	130.4	- 59.5	359.7	77.45	152.51	234.6
FEZ	SDN043	643,004.2	6,177,047.0	130.0	- 60.0	0.1	172.42	301.07	328.56
FEZ	SDN044	646,399.0	6,178,051.0	123.0	- 59.4	359.2	127.81	254.87	283.82
FEZ	SDN045	643,200.3	6,177,102.5	130.2	- 59.8	356.9	131.5	276.1	336.5
FEZ	SDN046	643,199.4	6,177,000.1	130.5	- 61.3	357.1	284.54	422.65	474.05
FEZ	SDN047	643,199.9	6,177,148.8	129.8	- 61.1	359.2	75.21	225.95	259.55
FEZ	SDN048	643,003.0	6,176,951.2	130.1	- 60.1	1.6	317.38	415.59	450.3
FEZ	SDN049	643,200.3	6,176,948.7	129.7	- 60.3	359.1	332.73	450.23	501.5
WZ	PMS1	636,900.2	6,176,565.5	155.2	- 90.0	360.0	29.16	49	49
WZ	PMS11	638,124.0	6,176,862.5	155.0	- 90.0	360.0	17.56	42.42	80.2
WZ	PMS12	638,136.3	6,176,842.0	154.4	- 90.0	360.0	6.95	73	73
WZ	PMS13	638,153.5	6,176,812.3	152.2	- 90.0	360.0	12.64	102.75	102.75
WZ	PMS15	637,868.3	6,176,724.8	152.2	- 90.0	360.0	31.35	72	72
WZ	PMS16	638,182.0	6,176,747.4	147.1	- 55.0	327.7	24.5	137.32	154.9

Zone	HOLEID	EAST	NORTH	RL	DIP	AZIMUTH	FROM	TO	HOLE DEPTH
WZ	PMS17	637,842.6	6,176,749.2	155.3	- 90.0	360.0	25.59	45.3	45.3
WZ	PMS18	637,659.7	6,176,683.8	152.1	- 90.0	360.0	23.88	53.5	53.5
WZ	PMS19	637,338.2	6,176,650.4	151.0	- 90.0	360.0	21.47	42	42
WZ	PMS20	636,890.8	6,176,541.7	153.2	- 55.0	22.7	36.03	105.96	125.4
WZ	PMS21	638,312.0	6,176,821.0	147.2	- 90.0	360.0	14.75	40	40
WZ	PMS22	638,333.2	6,176,791.2	146.7	- 55.0	360.0	17.58	145.22	149.8
WZ	PMS23	638,319.9	6,176,738.2	143.9	- 55.0	360.0	67.11	191.05	191.05
WZ	PMS25	638,327.4	6,176,835.3	147.1	- 55.0	360.0	31.01	95.72	99
WZ	PMS26	637,827.1	6,176,701.6	149.3	- 55.0	360.0	32.94	146.2	146.2
WZ	PMS27	637,825.7	6,176,755.4	156.2	- 55.0	360.0	38.19	79.08	100
WZ	PMS28	637,816.5	6,176,659.2	145.7	- 55.0	360.0	54.32	184.85	191.1
WZ	PMS29	637,574.8	6,176,656.6	150.5	- 55.0	360.0	31.46	119.22	130
WZ	PMS3	636,887.4	6,176,586.7	158.8	- 90.0	360.0	17.11	79	79
WZ	PMS30	637,572.4	6,176,607.1	144.7	- 55.0	360.0	51.33	177.07	182.8
WZ	PMS31	637,571.9	6,176,706.7	156.3	- 55.0	360.0	36.84	51.68	61.3
WZ	PMS32	637,324.0	6,176,610.4	148.1	- 55.0	360.0	27.3	112.07	117
WZ	PMS33	637,073.6	6,176,564.2	152.7	- 55.0	360.0	32.11	124.34	129
WZ	PMS34	637,073.8	6,176,616.1	159.6	- 55.0	360.0	34.8	78.9	84
WZ	PMS35	637,072.5	6,176,516.1	149.3	- 55.0	360.0	81.59	163.6	168
WZ	PMS36	636,572.0	6,176,498.3	146.4	- 55.0	360.0	41.01	97.98	107.8
WZ	PMS37	636,571.6	6,176,448.2	145.1	- 55.0	360.0	120.55	136.26	146.8
WZ	PMS38	636,572.8	6,176,537.2	148.0	- 55.0	360.0	36.58	65.06	67.1
WZ	PMS39	636,821.9	6,176,474.6	145.9	- 55.0	360.0	92.09	147.82	152.8
WZ	PMS4	636,873.7	6,176,607.9	160.5	- 90.0	360.0	14.14	66.76	67
WZ	PMS41	637,320.0	6,176,552.9	144.7	- 55.0	360.0	74.79	187.6	193
WZ	PMS42	637,573.0	6,176,554.0	142.0	- 55.0	360.0	110.91	228.92	234
WZ	PMS43	637,071.8	6,176,461.1	146.8	- 55.0	360.0	135.95	207.55	210
WZ	PMS44	638,074.5	6,176,667.9	144.2	- 55.0	360.0	99.76	224.18	231.4
WZ	PMS45	638,267.7	6,176,839.4	148.3	- 55.0	240.0	30	219.86	219.86
WZ	PMS46	638,326.7	6,176,693.9	140.7	- 55.0	360.0	128.15	262.14	262.5
WZ	PMS5	636,862.3	6,176,626.4	160.9	- 90.0	360.0	16.45	40.24	79
WZ	PMS7	638,178.3	6,176,774.4	150.1	- 90.0	360.0	20	35	35
WZ	PMS8	638,166.1	6,176,788.6	150.8	- 90.0	360.0	16.36	27	27
WZ	PMS9	638,117.3	6,176,878.3	152.4	- 55.0	147.7	21.61	300	300
WZ	SDD122	637,077.4	6,176,635.7	160.3	- 60.5	336.1	8.31	60.5	150.9
WZ	SDD144	638,739.2	6,176,589.6	139.0	- 59.1	353.7	363.1	457.66	480.9
WZ	SDD146	638,549.4	6,176,740.5	144.3	- 59.2	356.0	117.59	256.91	265.7
WZ	SDD147	638,481.9	6,176,736.1	144.2	- 59.8	357.2	110.1	244.36	255.5
WZ	SDD148	638,486.7	6,176,682.9	141.6	- 60.0	353.0	176.1	303.66	318.3
WZ	SDD149	637,860.9	6,176,606.8	141.3	- 59.7	355.6	126.01	253.33	262.1
WZ	SDD150	636,995.8	6,176,491.1	148.3	- 60.1	356.2	101.11	170.64	185.8
WZ	SDD151	638,631.3	6,176,629.8	139.7	- 60.6	354.9	281.48	400.29	417
WZ	SDD152	638,112.9	6,176,566.2	138.6	- 59.8	354.2	254.31	357.74	462.8
WZ	SDD153	638,489.4	6,176,634.0	140.0	- 60.0	353.3	233.33	347.21	351.7
WZ	SDD154	638,639.3	6,176,579.6	138.1	- 60.0	353.0	320.56	426.29	432.3
WZ	SDD155	638,645.0	6,176,529.1	137.5	- 59.4	353.1	446.1	510.05	513.7
WZ	SDD157	638,326.8	6,176,735.8	143.6	- 59.1	356.1	76.4	214.95	221.3
WZ	SDD158	638,089.7	6,176,766.4	153.5	- 60.0	353.0	5.4	122.85	137.3
WZ	SDD159	637,976.5	6,176,684.6	146.3	- 59.8	355.2	62.67	194.46	203.4
WZ	SDD160	637,827.2	6,176,650.4	144.7	- 59.7	354.7	64.08	198.55	212.1
WZ	SDD161	637,496.3	6,176,505.5	140.8	- 59.4	353.1	158.31	256.07	258.7
WZ	SDD162	638,096.6	6,176,708.9	147.3	- 58.3	351.2	57.53	59.57	201.8
WZ	SDD162	638,096.6	6,176,708.9	147.3	- 58.3	351.2	60.37	189.63	201.8
WZ	SDD167	637,075.7	6,176,559.3	151.9	- 60.7	353.2	40.99	130.56	144.4
WZ	SDD168	636,865.2	6,176,477.7	146.1	- 61.3	353.5	97.46	154.37	180.3
WZ	SDD169	636,859.6	6,176,528.0	149.9	- 60.0	353.9	34.62	107.53	120.3
WZ	SDD170	636,572.7	6,176,517.8	147.0	- 59.8	356.1	14.67	80.32	96.4
WZ	SDD173	638,475.0	6,176,783.4	145.6	- 60.5	358.1	54.82	200.48	234.5

Zone	HOLEID	EAST	NORTH	RL	DIP	AZIMUTH	FROM	TO	HOLE DEPTH
WZ	SDD174	638,083.4	6,176,813.8	155.7	-61.7	348.0	6.15	73.64	120.2
WZ	SDD175	638,492.4	6,176,591.3	139.5	-60.9	1.4	317.23	423.76	448.1
WZ	SDD176	638,361.9	6,176,578.7	138.6	-60.0	353.0	295.45	401.97	444.4
WZ	SDD177	637,877.9	6,176,482.6	138.1	-60.6	354.8	292.04	378.08	414.8
WZ	SDD178	638,470.3	6,176,826.3	146.1	-60.0	346.7	19.5	150.79	225.5
WZ	SDD179	637,634.1	6,176,437.9	139.0	-60.1	357.1	279.93	353.65	390.5
WZ	SDD205	636,486.5	6,176,492.7	147.5	-60.1	349.0	42.52	88.27	155.4
WZ	SDD206	636,480.1	6,176,537.6	149.4	-60.3	354.0	9.82	49.45	146.2
WZ	SDD207	638,625.0	6,176,675.0	141.8	-61.8	359.5	219.75	351.7	368.6
WZ	SDD208	638,619.6	6,176,718.2	144.0	-60.7	352.9	155.94	207.03	328.8
WZ	SDD208	638,619.6	6,176,718.2	144.0	-60.7	352.9	207.19	299.25	328.8
WZ	SDD210	638,613.2	6,176,766.0	146.0	-60.5	351.9	80.8	145.56	347.2
WZ	SDD211	638,465.6	6,176,869.8	145.2	-61.0	355.3	24.82	96.8	137.1
WZ	SDD214	636,355.2	6,176,502.6	150.6	-60.3	352.3	13.46	61.06	72.13
WZ	SDD217	636,737.8	6,176,496.8	145.8	-60.3	353.2	52.04	110.93	127.16
WZ	SDD218	636,847.5	6,176,612.0	159.9	-61.0	353.0	12.3	37.9	63.34
WZ	SDD219	636,852.6	6,176,568.1	155.1	-60.5	351.5	15.74	73.23	82.1
WZ	SDD22	638,359.7	6,176,601.1	139.1	-59.6	353.1	238.79	350.96	408.5
WZ	SDD220	636,982.3	6,176,587.4	160.1	-60.3	353.5	14.8	85.71	96.3
WZ	SDD222	637,094.4	6,176,656.7	160.2	-60.6	352.0	10.3	43.16	51.5
WZ	SDD223	637,103.5	6,176,593.9	153.4	-60.6	350.9	27.42	104.06	117.34
WZ	SDD224	637,157.7	6,176,602.6	151.4	-59.6	348.6	21.6	106.33	114.53
WZ	SDD227	637,225.0	6,176,648.7	153.4	-60.2	353.0	16.32	55.5	67.2
WZ	SDD228	637,236.2	6,176,564.0	146.6	-60.5	354.5	56.42	157.37	168.7
WZ	SDD229	637,257.8	6,176,384.8	141.3	-60.0	352.5	279.09	308.8	324.14
WZ	SDD23	638,108.5	6,176,615.8	140.1	-60.0	355.2	169.83	287.44	320.4
WZ	SDD230	637,229.1	6,176,605.5	149.6	-59.3	351.4	32.67	114.35	126.52
WZ	SDD232	637,250.2	6,176,429.2	142.0	-59.1	352.7	216.92	276.73	288.37
WZ	SDD233	637,292.0	6,176,613.0	148.9	-60.2	352.0	20.09	20.12	127.97
WZ	SDD233	637,292.0	6,176,613.0	148.9	-60.2	352.0	26.32	114.25	127.97
WZ	SDD234	637,302.7	6,176,525.2	143.9	-60.2	352.0	124.83	206.9	225.6
WZ	SDD237	637,358.1	6,176,574.6	145.1	-60.1	351.8	44.99	166.03	177.2
WZ	SDD238	637,469.3	6,176,688.4	153.8	-59.1	352.2	18.41	56.49	192.57
WZ	SDD239	637,480.9	6,176,602.3	145.7	-60.0	352.4	35.53	152.7	165.07
WZ	SDD24	637,874.4	6,176,506.6	138.6	-60.3	353.0	242.87	342.4	357.2
WZ	SDD240	637,503.1	6,176,426.0	139.0	-59.9	350.9	279.3	347.45	357.4
WZ	SDD241	637,476.1	6,176,643.7	149.0	-60.5	352.6	27.6	106.87	120.21
WZ	SDD242	637,491.0	6,176,556.1	142.9	-60.6	352.2	89.64	202.61	213.06
WZ	SDD243	637,496.5	6,176,464.5	139.9	-59.6	351.3	213.07	312.22	334.04
WZ	SDD244	637,612.0	6,176,627.9	145.9	-60.2	352.3	37.56	165	174.22
WZ	SDD245	637,721.4	6,176,750.0	158.2	-60.2	352.0	13.4	44.43	63.5
WZ	SDD246	637,732.6	6,176,662.3	147.6	-60.0	352.9	24.92	158.71	170.3
WZ	SDD247	637,753.7	6,176,484.7	138.7	-60.3	350.4	264.28	348.86	359.22
WZ	SDD248	637,845.6	6,176,727.5	151.9	-60.0	352.9	24.47	112.24	122.3
WZ	SDD249	637,965.6	6,176,770.4	156.9	-60.2	352.9	19.71	93.35	104.27
WZ	SDD25	638,354.1	6,176,650.7	139.2	-62.1	353.0	187.74	309.47	317.2
WZ	SDD250	637,986.2	6,176,596.8	140.1	-59.8	352.9	169.67	288.6	296.22
WZ	SDD251	637,994.9	6,176,504.6	138.2	-59.0	352.6	288.57	383.34	390.67
WZ	SDD252	638,112.2	6,176,589.1	139.1	-60.8	354.0	212.9	331.64	342.55
WZ	SDD253	638,203.6	6,176,828.1	150.4	-59.7	352.0	8	83.7	231.45
WZ	SDD254	638,215.0	6,176,739.6	145.1	-60.0	349.8	47.57	181.6	192.4
WZ	SDD255	638,236.4	6,176,561.2	138.0	-59.7	353.0	279.04	381.36	386.75
WZ	SDD256	638,333.2	6,176,818.4	147.0	-59.9	350.0	9.93	119.7	132.4
WZ	SDD26	637,624.2	6,176,512.0	139.8	-60.9	353.7	166.55	273.64	325.6
WZ	SDD27	637,629.7	6,176,462.1	139.1	-59.3	353.6	230.63	319.3	346.8
WZ	SDD28	637,372.9	6,176,453.0	141.5	-59.8	353.8	217.8	288.77	322.8
WZ	SDD29	637,378.8	6,176,399.4	139.9	-60.0	353.0	267.36	326.12	394.8
WZ	SDD310	637,950.5	6,176,649.0	143.6	-60.4	0.6	97.88	120	120

Zone	HOLEID	EAST	NORTH	RL	DIP	AZIMUTH	FROM	TO	HOLE DEPTH
WZ	SDD312	637,949.6	6,176,598.3	140.6	- 59.9	1.3	162.75	174	174
WZ	SDD314	638,150.4	6,176,729.1	146.6	- 70.9	2.4	48.95	70.3	70.3
WZ	SDD315	637,650.4	6,176,525.6	139.8	- 60.5	359.4	167.31	189.4	189.4
WZ	SDD317	637,156.8	6,176,626.8	153.6	- 59.5	1.7	18.2	83.57	141.62
WZ	SDD32	636,870.9	6,176,426.0	144.0	- 60.0	353.0	147.4	193.09	210.6
WZ	SDD320	637,249.6	6,176,650.7	152.8	- 60.0	357.9	18.4	57.22	120.3
WZ	SDD323	637,350.4	6,176,537.4	143.6	- 60.1	1.1	97.69	105.43	105.43
WZ	SDD324	637,750.3	6,176,580.3	141.2	- 60.7	359.5	133.98	141.45	141.45
WZ	SDD328	636,750.1	6,176,579.5	153.1	- 60.6	359.5	7.2	47.7	138.24
WZ	SDD330	636,950.2	6,176,449.8	145.4	- 60.2	358.6	137.91	195.03	258.6
WZ	SDD332	636,750.4	6,176,425.7	143.3	- 60.5	2.3	162.09	167.65	216.08
WZ	SDD333	637,650.6	6,176,563.3	141.2	- 60.4	2.1	121.74	135.5	135.5
WZ	SDD334	637,150.7	6,176,450.6	144.1	- 59.7	2.1	175.05	189.37	189.37
WZ	SDD336	636,851.1	6,176,577.4	156.0	- 60.3	2.5	9.77	66.1	150.4
WZ	SDD337	636,977.1	6,176,618.7	162.4	- 60.4	1.9	24.15	55.87	96.28
WZ	SDD340	638,252.2	6,176,730.5	143.3	- 60.6	358.7	61.97	84.27	84.27
WZ	SDD343	638,048.5	6,176,722.8	150.2	- 59.0	358.6	36.87	170.61	197.51
WZ	SDD346	638,050.0	6,176,624.4	141.1	- 60.1	2.4	148.86	277.8	332.65
WZ	SDD39	636,999.4	6,176,439.3	145.5	- 60.7	352.3	152.02	207.25	279.6
WZ	SDD40	637,245.6	6,176,474.3	143.0	- 60.7	353.6	164.27	236.09	306.1
WZ	SDD41	637,366.8	6,176,499.9	142.5	- 61.0	353.1	160.3	241.76	256.6
WZ	SDD42	637,496.0	6,176,510.1	141.0	- 60.4	353.9	147.64	246.13	255.6
WZ	SDD43	637,743.3	6,176,561.9	140.4	- 59.9	353.4	142.61	252.59	273.5
WZ	SDD44	637,868.4	6,176,554.9	139.4	- 61.3	353.8	182.3	292.4	303.3
WZ	SDD45	638,096.3	6,176,714.5	147.9	- 60.8	350.9	51.85	188.21	209.7
WZ	SDD46	638,227.2	6,176,649.4	139.8	- 60.3	352.5	159.71	290.19	293.1
WZ	SDD62	637,122.2	6,176,421.4	144.6	- 60.2	352.7	201.84	256.66	270.6