CASSINI
RESOURCES LIMITED

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West Musgrave Project Operations Update

HIGHLIGHTS

- **Further Scoping Study (FSS) progressing positively.**
- **Comprehensive Metallurgical program approaching completion.**
- **Significant improvements in water supply outlook through identification of groundwater resources within the existing tenements.**
- **Positive energy study outcomes contemplating conventional and renewable options.**
- **Transport routes and options confirmed with expected cost reductions compared to prior studies.**
- **Numerous resource extension targets remain untested.**
- **Further Scoping Study on track for delivery in Q4 2017.**

Cassini Resources Limited (ASX:CZI) ("Cassini" or the "Company") is pleased to provide a market update regarding Further Scoping Study ("FSS") activities at the West Musgrave Project ("WMP" or the "Project"), located in Western Australia. This program of work represents the first stage of the Earn-in/JV Agreement with OZ Minerals Limited (ASX:OZL) ("OZ Minerals").

The key outcomes of the FSS are to increase confidence in metallurgical performance of a full range of mineralisation types within the Nebo-Babel deposits. These results will then be used to update previous mining and processing studies in order to determine optimal size of the operation. In addition, all capital and operating costs are being reviewed and updated for inclusion in the current study.

The Further Scoping Study (FSS) activities are progressing on schedule towards delivery in Q4 2017.

ACTIVITY	STATUS
Metallurgical Test Work	In Progress
Transport Logistics Study	Complete
Energy Study	Complete
Water Study	Complete
Resource Extension Drilling	Complete
Process Plant Design	In Progress
Geology & Resource Modelling	In Progress
Mine Optimisation and Design	In Progress
Study Compilation & Delivery	Delivery Q4

Metallurgical Testwork Program

Testwork in Cassini's initial scoping study was focused on the relatively high head grade ore domains, which would be processed through a 1.5 Mtpa treatment plant. The scope of the FSS testwork program has been designed to cover whole ore composites and variability samples which are representative of the ore domains and average head grades within the deposits, all of which are aligned with the increased project size development options.

The current testwork program will provide new results and increased confidence in the metallurgical recoveries at lower head grades across the primary, transitional and weathered ore domains, some of which were not previously tested. A significant component of the testwork included optimisation of the process flow sheet, and testing of alternative reagent regimes, all of which were aimed at further improving nickel and copper recoveries and concentrate grades.

FIGURE 1. Float testing of West Musgrave samples

Two master composite samples, each representing typical run of mine material, of the early and later years of a likely mine schedule, respectively, have also been tested. The program is progressing well with the completion of all testwork expected by the end of July.

Water Study

Water supply for the WMP was previously identified as one of the critical development aspects of the project.

Independent consultants, CDM Smith, have been engaged to review the water supply options for the project. The study included a detailed desktop assessment of all potential groundwater sources and incorporated the results from three groundwater exploration holes that were drilled in April this year to test paleochannel aquifers approximately 20km from Nebo-Babel. Water supply infrastructure concepts for multiple water demand scenarios and different groundwater sources were also developed and evaluated.

This study has shown that there are a number of water supply options for the WMP all of which could potentially be developed. In the 2015 scoping study, Cobb Depression, located over 130km from Nebo-Babel, was identified as a primary source of water for the project. The work in the current study has identified that nearby (<25km) paleochannel aquifers are highly likely to have the potential to support water requirements for the project. This option is expected to provide a more cost effective solution with lower risks with respect to tenure and access.

Final water study results will be published in the Further Scoping Study report.

Energy Study

WSP were engaged to undertake a study of power generation options for the project. Energy source options considered for conventional generation comprised diesel, gas and LNG. Renewable energy sources considered comprised wind, solar and a number of hybrid options using wind, solar, battery and diesel backup options.

In addition to updating diesel power generation assumptions, the study included high-level assessment of gas power generation, a first for the project. Gas power is generally a very cost effective power solution for projects with long mine life, which is required to offset high gas pipeline capital costs.

Renewable energy options included a more detailed assessment of the WMP area in order to identify areas that may provide improved wind resource for potentially siting a large wind farm. A new site has been identified within the project which has a theoretical 35% greater wind energy compared to the site that was previously contemplated. A wind mast is planned to be erected early in the PFS to collect base line data and confirm wind energy estimates that were used in the power generation assumptions.

The preferred power generation solution will depend on the scale of processing throughput and is not expected to be finalised until later stages of study.

Transport Logistics Study

Qube Bulk were engaged to undertake Transport Logistics Study, which has resulted in significantly lower concentrate transport costs compared to those used in the 2015 Scoping Study.

The Study has confirmed that the previous transport option of exporting concentrates through Esperance or Geraldton ports is still the preferred route. This option includes road transport along the Great Central Road to a central hub at Leonora, followed by rail transport to Esperance or road to Geraldton.

Qube has also provided transport costs for inbound mine consumables and evaluated back-loading options, which may have a potential to further reduce overall transport costs.

Babel Drill Results

The resource extension drill program at Babel targeted a number of modelled down hole electromagnetic conductors (DHEM), primarily outside the existing resource. There are a number of zones where mineralisation remains open, and these could provide future resource extensions.

The program has had some success in demonstrating this potential with a best result of 8m @ 0.50% Ni, 0.40% Cu, 0.01% Co and 0.28g/t PGE including 2m @ 1.21% Ni, 0.22% Cu, 0.03% Co and 0.41g/t PGE in CZC0160. This hole is located near the northern “roll-over” contact at Babel which has returned numerous high-grade results in previous drilling.

The down-plunge extension of the Startmeup Shoot was tested by holes CZC0156-158 but these holes have missed the host intrusion, most likely due to apparent down-faulting (Figure 2). This confirms the Company’s interpretation of a fault that displaces Babel and the Startmeup Shoot mineralisation downwards on the western margin of the deposit. Therefore the Startmeup Shoot probably does extend at depth and may be represented by a series of high-conductance plates at approximately 280m depth. This will be a priority for future resource extension drilling in later study phases.

Holes CZC0161 and 162 intersected the target DHEM plate but missed the target host rock and have therefore not adequately tested the potential extensions of high-grade mineralisation in CZC0129.

Geological interpretation and modelling of Nebo and Babel is completed and results are used in a resource update which is underway.

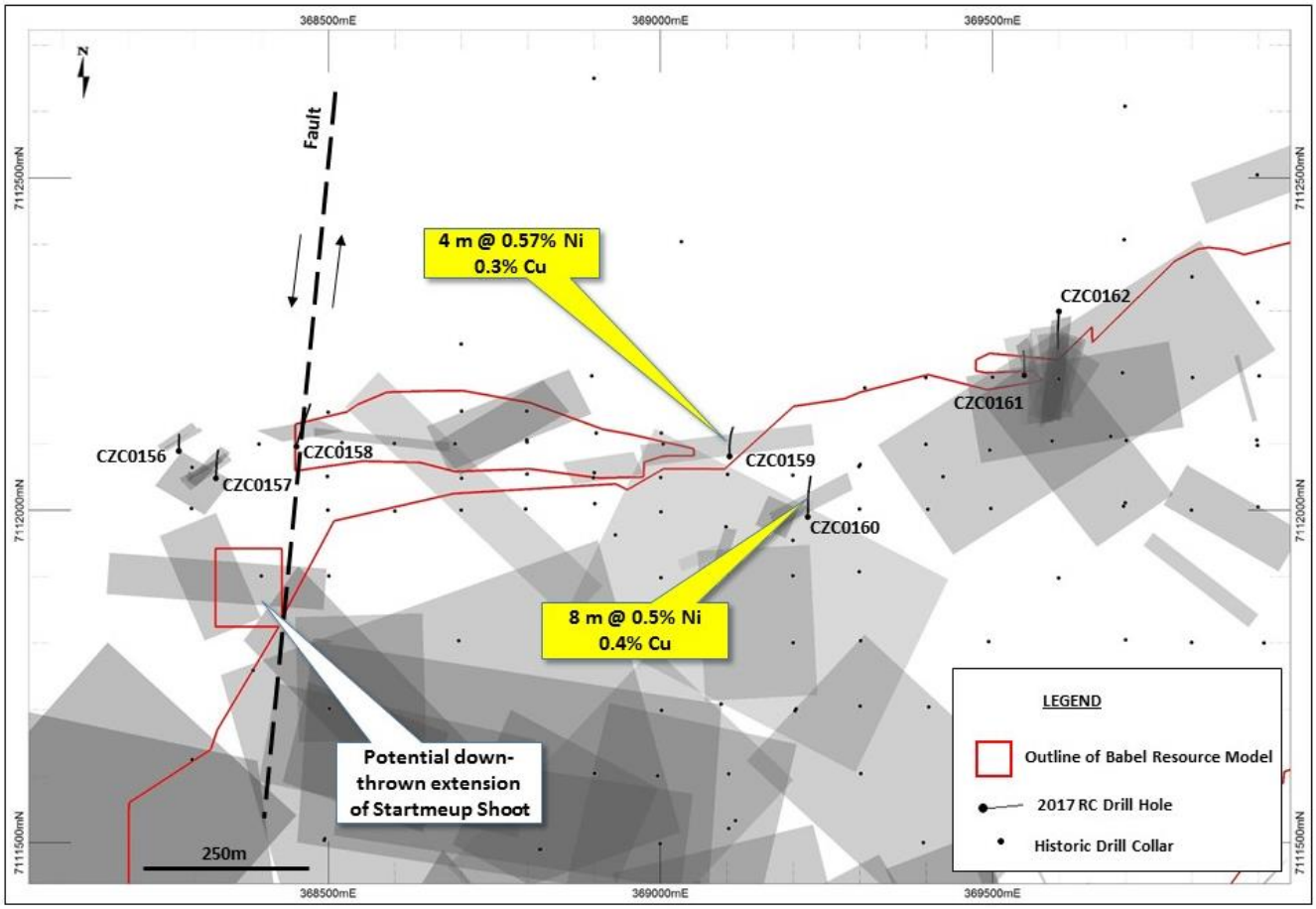

FIGURE 2. Babel Deposit plan showing target conductors and drill holes.

Table 1. Babel Significant drill intercepts.

HOLE ID	East	North	RL	Dip	Azi	EOH (m)	Intersection					
							From (m)	Width (m)	Ni %	Cu %	Co %	PGE g/t
CZC0156	368275	7112089	468	-70	360	70			NSI			
CZC0157	368331	7112048	468	-70	360	110			NSI			
CZC0158	368452	7112096	467	-75	10	120			NSI			
CZC0159	369104	7112081	467	-70	360	150	12	4	0.57	0.30	0.01	0.10
CZC0160	369222	7111990	467	-70	360	180	56	2	0.62	0.41	0.02	0.24
							84	2	0.26	0.45	0.01	0.11
							118	8	0.50	0.40	0.01	0.28
						including	118	2	1.21	0.22	0.03	0.41
CZC0161	369548	7112203	469	-70	360	125			NSI			
CZC0162	369600	7112299	468	-65	180	135			NSI			

NSI – No Significant Intersection

The Company is pleased with the progress and outcomes of the Further Scoping Study and will continue to provide updates as works are completed.

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About the Company

Cassini Resources Limited (ASX: CZI) is a base and precious metals developer and explorer based in Perth. In April 2014, the Company acquired its flagship West Musgrave Project (WMP), located in Western Australia. The WMP is a world-class asset which currently has over 850,000 tonnes of contained nickel and 1.8 million tonnes of contained copper in Resource. The WMP is a new mining camp with three existing nickel and copper sulphide deposits and a number of other significant regional exploration targets already identified. The WMP is the largest undeveloped nickel copper project in Australia.

In August 2016, Cassini entered into a three-stage $36M Earn-in/Joint Venture (JV) agreement with prominent Australian mining company OZ Minerals Ltd (ASX: OZL). The JV provides a clear pathway to a decision to mine and potential cash flow for the Company.

Cassini is also progressing its Mt Squires Gold Project in WA and an early stage zinc exploration project in the West Arunta region of WA.

Current Highlights:

- Cassini's West Musgrave project contains one of Australia's largest undeveloped nickel/copper deposits
- Cassini is free carried to a "decision to mine" via a 3 stage A$36m Earn-in/Joint Venture agreement with OZ Minerals
- Previous Scoping Study presented highly attractive economics, supporting a long life, open pit development
- Significant exploration upside across portfolio with Succoth Copper deposit and multiple other mineralised targets identified at additional deposits
- High impact A$8m regional exploration program to be executed in Stages 2 and 3 of the joint venture
- Track record of prudent investment and capital management with a CY2016 exploration / administration ratio of 1.5x (compares favourably to peer group average of 0.9x)[1]

Competent Persons Statement

The information in this report that relates to Exploration Results is based on information compiled or reviewed by Mr Greg Miles, who is an employee of the company. Mr Miles is a Member of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Miles consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

The Company is not aware of any new information or data, other than that disclosed in this report, that materially affects the information included in this report and that all material assumptions and parameters underpinning Exploration Results, Mineral Resource Estimates and Production Targets as reported in the market announcements dated 13, April 2015 and 7 December 2015, continue to apply and have not materially changed.

APPENDIX A

West Musgrave Project Mineral Resources Statement[1,2]

Prospect	Classification	Tonnes (Mt)	Ni (%)	Cu (%)	Co (ppm)	Au (ppm)	Pt (ppm)	Pd (ppm)
Nebo	Indicated	25.8	0.52	0.46	215	0.05	0.07	0.09
	Inferred	3.0	0.60	0.48	229	0.04	0.08	0.10
	Total	**28.9**	**0.53**	**0.46**	**217**	**0.05**	**0.07**	**0.09**
Babel	Indicated	69.7	0.39	0.42	139	0.07	0.10	0.12
	Inferred	104.5	0.38	0.40	135	0.08	0.11	0.12
	Total	**174.2**	**0.39**	**0.41**	**137**	**0.08**	**0.11**	**0.12**
Nebo + Babel	**Total**	**203.1**	**0.41**	**0.42**	**148**	**0.08**	**0.10**	**0.12**
Succoth	Inferred	156	0.06	0.60	-	0.02	0.04	0.11

NOTES:

1. Nebo-Babel Indicated and Inferred Mineral Resource (0.3%Ni cut-off), February 2015
2. Succoth Deposit Inferred Mineral Resource estimate (0.3% Cu cut-off), December 2015

ANNEXURE 1:

The following Tables are provided to ensure compliance with the JORC Code (2012) edition requirements for the reporting of the Exploration Results at the Babel deposit.

Section 1: Sampling Techniques and Data (Criteria in this section apply to all succeeding sections)

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 Nebo deposit was sampled using Reverse Circulation (RC) drill holes. Drill holes tested separate target and were not completed on a grid. A total of seven RC drillholes for 870 m were completed at Babel.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Drill hole locations were surveyed by handheld GPS units. The RC samples have been obtained by a cone splitter. Sampling has been carried out under Cassini protocols and QAQC procedures as per industry best practice.
	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. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	Reverse Circulation drilling was used to obtain 1m samples for Nebo from which approximately 3 kg was pulverised (total prep) to produce a sub sample for analysis by fused bead XRF for base metals and all other major and trace elements of interest. Gold, Pt and Pd were determined by FA/AAS finish (40 gram).
Drilling techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic etc) and details (e.g. core diameter, triple of standard tube, depth of diamond tails, face-sampling bit or other type, whether core is orientated and if so, by what method, etc).*	Reverse Circulation accounts for 100% of the drilling completed and comprises 140 mm diameter face sampling hammer drilling. Hole depths range from 70 to 180m.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	RC recoveries are visually logged and recorded in the database. Overall recoveries are >95% and there has been no significant sample recovery problems.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	RC samples are routinely checked for recovery, moisture and contamination.
	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.	The massive sulphide style of the mineralisation and the consistency of the mineralised intervals are considered to preclude any issue of sample bias due to material loss or gain.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	Drill chip samples have been geologically logged and the level of understanding of these variables increases with the maturity of the prospect.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging of RC samples at the West Musgraves Project recorded lithology, mineralogy, mineralisation, weathering, colour and other relevant features of the samples. Logging of chips is both qualitative (eg. colour) and quantitative (eg. mineral percentages).
	The total length and percentage of the relevant intersections logged.	All drillholes were logged in full.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Not applicable as samples are non-core.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	RC samples were collected on the rig using cone splitters. All samples in mineralised zones were dry.

Criteria	JORC Code explanation	Commentary
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The sample preparation of RC samples at the West Musgraves Project follows industry best practice in sample preparation involving oven drying, followed by pulverisation of the entire sample (total prep) using Essa LM5 grinding mills to a grind size of 90% passing 75 micron.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Field QC procedures involves the use of certified reference material (CRM) as assay standards, along with blanks and duplicates. The insertion rate of these averaged 1:20.
	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.	Field duplicates were taken on 2m intervals directly from the cone splitter on the drill rig.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are considered appropriate for the rock type, style of mineralisation (massive sulphides), the thickness and consistency of the intersections, the sampling methodology and percent value assay ranges for the primary elements at Babel.
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 analytical techniques used fused bead XRF for base metals and all other major and trace elements of interest. Gold, Pt and Pd were determined by FA/AAS finish (40 gram).
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	Hand held assay devices have not been reported.
	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.	Sample preparation for fineness were carried by the laboratory as part of their internal procedures to ensure the grind size of 90% passing 75 micron was being attained. Laboratory QAQC involves the use of internal lab standards using certified reference material, blanks, splits and replicates as part of the in-house procedures. Certified reference materials, having a good range of values, were inserted blindly and randomly. Results highlight that sample assay values are accurate and that contamination has been contained. Repeat or duplicate analysis for samples reveals that precision of samples is within acceptable limits.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Chips have been viewed by contract and Cassini geology staff.
	The use of twinned holes.	The reported drill holes have not been twinned.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Primary data was collected for the West Musgrave Project using a set of standard Field Marshal templates on laptop computers using lookup codes. The information was sent to Geobase Australia for validation and compilation into a SQL database server.
	Discuss any adjustment to assay data.	No adjustments or calibrations were made to any assay data
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.*	Reported holes have been located with a Garmin hand-held GPS and are assumed to be accurate to ±5m. This is considered appropriate for exploration drill holes. Downhole surveys were completed at 12 m then every 30m down hole.
	Specification of the grid system used.	The grid system for the West Musgraves Project is MGA_GDA95, Zone 52.

Criteria	JORC Code explanation	Commentary
	Quality and adequacy of topographic control.	The tenement package exhibits subdued relief with undulating hills and topographic representation is sufficiently controlled.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	The holes drilled were for exploration purposes and have not been drilled on a grid pattern. Drill hole spacing is considered appropriate for exploration purposes.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	The mineralised domains for Nebo and Babel have demonstrated sufficient continuity in both geological and grade continuity to support the definition of Mineral Resources and Reserves, and the classifications applied under the 2012 JORC Code.
	Whether sample compositing has been applied.	No compositing was applied.
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.*	Drill holes were planned to intersect the target zones at a perpendicular angle. The orientation of sampling is considered to be unbiased.
	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 orientation of drilling and key mineralised structure is not considered to have introduced sampling bias.
Sample security	*The measures taken to ensure sample security.*	Sample chain of custody is managed by Cassini. Samples for the West Musgraves Project are stored on site and delivered to Perth by recognised freight service and then to the assay laboratory by a Perth-based courier service. Whilst in storage the samples are kept in a locked yard.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	A review of the sampling techniques and data was carried out by CSA Global during September 2014. The sampling techniques and data were considered to be of sufficient quality to carry our resource estimation.

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	*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.*	Babel is located within Mining Leases M69/0072 and M69/0073. Through wholly owned subsidiary Wirraway Metals and Mining Pty Ltd, Cassini holds 100% of the leases comprising the West Musgrave Project (granted licences M69/0074, M69/0075, E69/1505, E69/1530, E69/2201, E69/2313, E69/3137, E69/3163, E69/3164, E69/3165, E69/3168, E69/3169) over which the previous operator retains a 2% NSR. The tenement sits within Crown Reserve 17614.
	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 tenements are in good standing and have an existing Aboriginal Heritage Access Agreements in place. No Mining Agreement has been negotiated.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	Previous exploration has been conducted by BHP Billiton and WMC. The work completed by BHP Billiton and WMC is considered by Cassini to be of a high standard.
Geology	*Deposit type, geological setting and style of mineralisation.*	The project lies within the West Musgrave Province of Western Australia, which is part of an extensive Mesoproterozoic orogenic belt. The Nebo-Babel and Succoth deposits lie within mafic intrusions of the Giles Complex (1068Ma) that has intruded into amphibolite facies orthogneiss country rock. Mineralisation is hosted within tubular chonolithic gabbronorite bodies and are expressed primarily as broad zones of disseminated sulphide and comagmatic or potentially remobilised accumulations of stronger mineralised, matrix to massive sulphides.
Drill hole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* • *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.*	A table listing this information is provided in the body of this report.
	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.	Not applicable, all information is included.
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.*	Weighted averages for the Babel deposit were calculated using parameters of a 0.4% Ni and/or Cu lower cut-off, minimum reporting length of 2m, maximum length of consecutive internal waste of 2m and the minimum grade of the final composite of 0.4% Ni and/or Cu.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the	Short lengths of high grade results use a nominal 1% Ni and/or Cu lower cut-off, no minimum reporting length and 2m maximum

Criteria	JORC Code explanation	Commentary
	procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	internal dilution.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Metal equivalent values are not 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').*	Mineralisation at Babel is a flat-lying, south-westerly plunging body of variably mineralised mafic rock. Mineralisation is generally intersected with approximate true-width down-hole lengths. Refer to Annexure 1 and Figures in body of text.
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 views.*	Refer to Figures in body of text.
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 Ni, Cu, PGE and Co results are reported.
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.*	All relevant exploration data is shown on figures, in text and Annexure 1.
Further work	*The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Cassini and its partner OZ Minerals are currently undertaking advanced scoping study work at the West Musgrave Project. Further resource definition drilling is likely to be conducted during a pre-feasibility study in conjunction with regional exploration programs including reconnaissance drilling and geophysics. All relevant diagrams and inferences have been illustrated in this report.