

# CAZALY RESOURCES LIMITED

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## HIGH COBALT GRADES RETURNED FROM BUNGONIA PROJECT

- High grade Cobalt in rock chip samples to 1.40% Co, 8 of 34 samples above 1.0% Co with an overall average of 0.62% Co
- Sampling undertaken over several prospects over a 15km strike extent
- Project covers 242 sq km including historic Cobalt workings
- Limited modern exploration to date
- High potential for extensions to known mineralised bodies and the discovery of new Cobalt sources
- Primary basement C
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- Cobalt mineralisation targets yet to be tested
- Cazaly Resources has a 100% interest in the project

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Cazaly Resources Limited (ASX: CAZ, “Cazaly” or “the Company”) is pleased to announce results from first pass reconnaissance mapping and rock chip sampling on its **Bungonia Cobalt** project in New South Wales. Results confirm the presence of shallow high grade cobalt mineralisation associated with manganese enriched quartz sandstone units.

The project is held under Exploration Licence EL8483, covers approximately 242 sq.km and is located 130km north east of Canberra and 25km south east of Goulburn in New South Wales. Previous exploration defined several areas of significant cobalt and nickel mineralisation some of which have been historically mined as early as the 1890's. Cobalt mineralisation occurs as flat lying residual on hills extending for several hundred metres associated with mangiferous deposits. The deposits typically contain relatively rich cobalt values, with minor nickel and copper credits, and have been worked historically with high cobalt recoveries.

The areal extent and assay results from historic work point to significant potential to extend known deposits as well as make new discoveries within the project area. The potential is highlighted by the results of rock chip grades from this programme of up to 1.4% cobalt along with historic mining from several locations.

## **Background Information**

Historic records show that cobalt was produced in the region from the late 1800's to early 1900's. Intermittent exploration for manganese, cobalt and, more recently, bauxite has been undertaken by North Broken Hill, Stuart Metals (Cobalt Resources NL), Central West Gold NL, McIntyre Mines Pty Ltd, VAM Ltd and ABx2 Pty Ltd. Shallow percussion and RAB drilling was carried out on several prospects and pre JORC estimates for cobalt were completed. This data is being compiled and assessed but is not considered of sufficient quality to be used in any estimation today under current JORC guidelines. This work confirmed widespread occurrences of coarse-grained arenaceous sediments (grits) with variable concentrations of manganese oxide-cobalt mineralisation up to 700m long and between 0.5 to 6m in thickness. A primary source of cobalt within basement was highlighted in historic work as a target for further exploration drilling in the area.

In addition to drilling, metallurgical test work was also undertaken with excellent recoveries of 83.2% cobalt, 79.5% copper and 85.9% nickel returned from acid leaching of a 80 kilogram sample containing 1.15% cobalt, 0.39% copper and 0.26% nickel (North Broken Hill Pty Ltd - GS1980/315).

## **Cazaly Rock Chip Sampling**

In total the Company has recently collected 34 rock chip samples from 6 targets within the project area on properties where access has been negotiated with landowners or from road verges. Several areas were visited where historic data indicated exposed arenaceous cobalt/manganese bearing units. The areas sampled during this first phase work represent a small percentage of known mineralisation throughout the entire project area. It is expected that access to other areas will be possible as follow-up programs are prepared. A table of results is shown in Table 1.

### **Inverary: 13 samples collected with an average of 0.48% Co, peak value 1.40% Co**

Cobalt/manganese bearing sandstone grits were sampled over timbered flat hill tops across approximately 700m of exposure. Other evidence of mineralisation is documented in historic work in the area with similar grades for the Inverary Group of prospects.

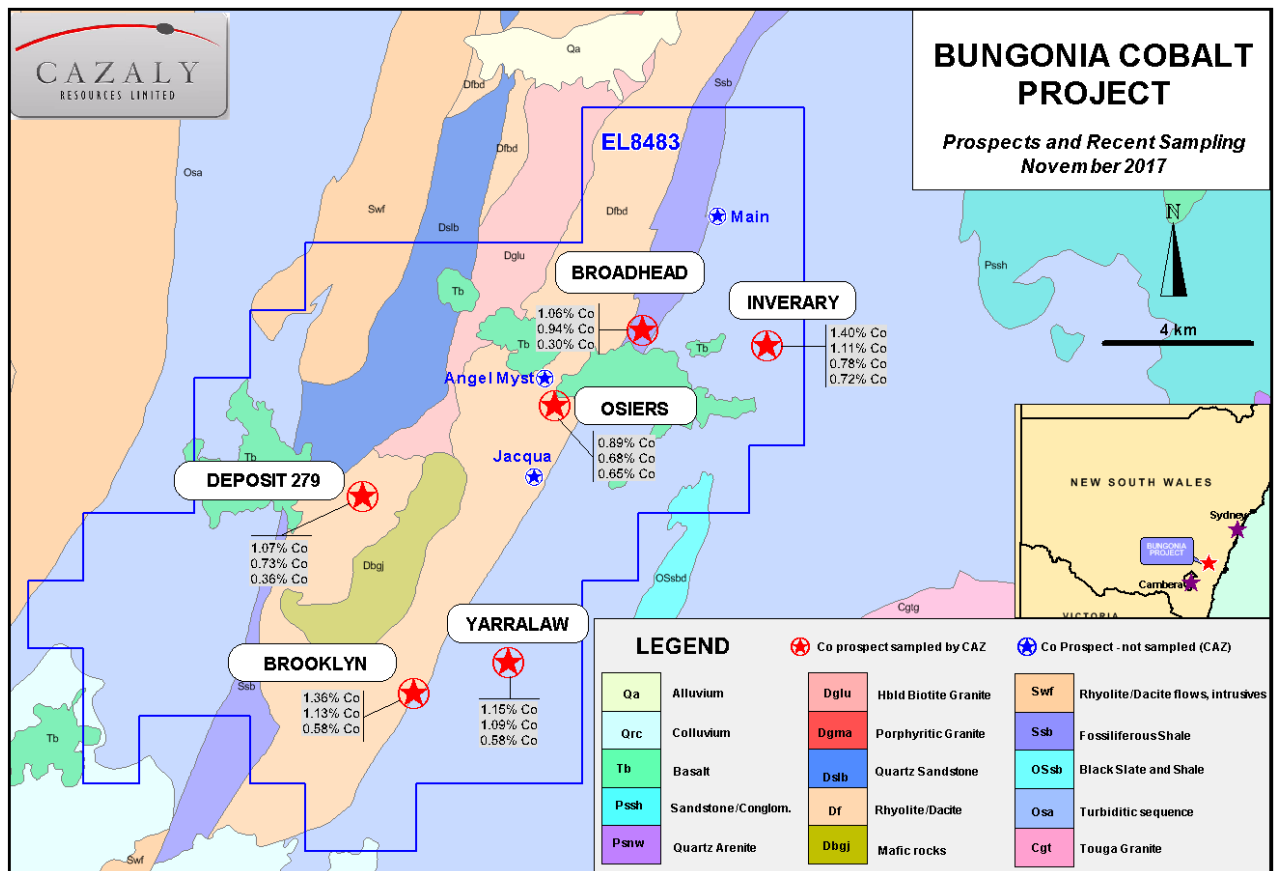
### **Broadhead: 3 samples collected with an average of 0.77% Co, peak value 1.06% Co**

This prospect was not documented in previous work and occurs in a road cutting 3km west of the Inverary Group of prospects. An outcrop of manganiferous grits was sampled and results highlight the potential for discovery of new cobalt mineralisation within the project

### **Osiers: 7 samples collected with an average of 0.4% Co, peak value 0.89% Co**

This group comprises historic deposits 1 km south of Angel Myst. The principal deposit was not able to be accessed during the program which is described in work by Stuart Metals as

being open to the north having potential to contain extensions and additional cobalt bearing grits.



**Figure 1. Geology, key prospects & recent sampling - Bungonia Cobalt Project**

**Brooklyn: 4 samples collected with an average of 0.89% Co, peak value 1.36% Co**

A cluster of cobalt/manganese deposits in the central southern area of the project. The deposits are poorly exposed apart from road cuttings which were accessible for sampling. A large flat elevated area of about 1000m<sup>2</sup> east of the road is documented as hosting the bulk of mineralisation and future access to these areas is being negotiated with landowners.

**Yarralaw: 6 samples collected with an average of 0.66% Co, peak value 1.15% Co**

Several exposures of cobalt/manganese bearing sandstone occur along Yarralaw Road over a distance of 1.5km. These documented prospects lie within the south east of the project area and occur within fine to medium grained quartz sandstone exposed in road cuttings and verges. Potential exists in this area to extend the area of outcrop with mapping and further sampling.

**Deposit 279: 3 samples collected with an average of 0.72% Co, peak value 1.07% Co**

Deposit 279 is a historically documented cobalt prospect within the central western part of the project. It occurs on a large rise with significant potential to host extensions and other potentially “blind” cobalt deposits.

**TABLE 1: Cazaly Rock Chip Sampling, November 2017**

SampleID	Prospect	GDA_North	GDA_East	Co_%	Cu_ppm	Li_ppm	Mn_%	Ni_ppm	Zn_ppm
BGR001	Inverary Group	6134609	774240	0.66	1130	178	0.61	826	272
BGR002	Inverary Group	6134609	774240	0.51	1240	179	0.65	767	280
BGR003	Inverary Group	6134576	774194	0.72	1640	221	0.84	996	356
BGR004	Inverary Group	6134576	774194	0.78	1530	241	0.88	1010	343
BGR005	Inverary Group	6134672	774339	0.00	107	2.3	0.01	110	126
BGR006	Inverary Group	6134672	774339	0.00	48	0.4	0.00	86	80
BGR007	Inverary Group	6134890	774628	0.30	806	121	0.34	351	161
BGR008	Inverary Group	6134904	774874	0.00	13	0.3	0.00	4	10
BGR009	Inverary Group	6134692	774790	0.03	86	9	0.06	54	37
BGR010	Inverary Group	6134692	774790	0.11	134	27.3	0.06	132	48
BGR011	Inverary Group	6134741	774753	1.40	2170	456	0.89	1320	375
BGR012	Inverary Group	6134827	774694	1.11	1240	334	0.52	1460	284
BGR013	Inverary Group	6134831	774500	0.63	2020	734	0.71	4660	626
BGR014	Broadhead	6135285	771201	1.06	2580	821	0.94	4070	732
BGR015	Broadhead	6135285	771201	0.94	1360	343	1.34	1580	503
BGR016	Broadhead	6135285	771201	0.30	413	82.9	0.51	582	170
BGR017	Osiers Group	6133456	768857	0.68	1310	241	0.60	896	300
BGR018	Osiers Group	6133456	768857	0.03	106	3.4	0.14	75	90
BGR021	Osiers Group	6133206	768545	0.65	1790	204	0.92	966	370
BGR022	Osiers Group	6133206	768545	0.89	1640	297	0.69	667	581
BGR023	Osiers Group	6133206	768545	0.53	1560	217	0.85	849	319
BGR024	Yarralaw Group	6125867	768521	0.58	1120	709	0.59	1360	642
BGR025	Yarralaw Group	6125867	768521	0.54	1130	544	0.54	1230	679
BGR026	Yarralaw Group	6126350	767209	1.09	1720	1270	0.72	1050	715
BGR027	Yarralaw Group	6126350	767209	0.58	1290	645	0.50	606	496
BGR028	Yarralaw Group	6126350	767209	1.15	1060	904	0.55	1100	516
BGR029	Brooklyn Group	6125667	764756	1.36	2050	548	1.09	1630	705
BGR030	Brooklyn Group	6125667	764756	1.13	1610	447	0.88	1330	531
BGR031	Brooklyn Group	6125546	764734	0.58	1680	789	0.63	2480	552
BGR032	Brooklyn Group	6125546	764734	0.49	1190	606	0.47	1610	399
BGR033	Yarralaw Group	6126215	767312	0.01	53.5	12.7	0.01	55	40
BGR034	Deposit 279	6130982	763368	0.36	903	297	0.36	692	261
BGR035	Deposit 279	6130982	763368	1.07	2230	1160	1.12	2820	662
BGR036	Deposit 279	6130982	763368	0.73	1250	814	0.90	1980	437

## **Summary**

Numerous historic occurrences of cobalt bearing sedimentary units of Tertiary age have been confirmed by recent rock chip sampling at the Bungonia Cobalt Project in NSW. No systematic modern exploration for cobalt has been completed at the project despite historic work indicating potential for further extensions to these bodies as well as the discovery of new cobalt deposits, including blind ore bodies beneath Tertiary cover and the potential for basement primary cobalt mineralisation. The high cobalt grades encountered in this work at several prospects over a 15km strike extent shows the great potential of the region to host several small scale but rich cobalt deposits.

Most historic work has focussed on 3 deposits out of more than 15 known occurrences. Very little historic drilling has been completed, some of which is documented as being ineffective due to encountering hard manganiferous grits that prevented proper assessment. The company will continue to expand and assess historic data sets while finalising access with key landowners in the area. Exploration will continue to further assess and rate the known prospects in order to prioritise for drilling in 2018.



**Figure 2. Typical coarse grained Mn-Co grit sample at Bungonia**

### **ENDS**

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#### Competent Person's Statement

The information contained herein that relates to Exploration Results, Mineral Resources, Targets or Ore Resources and Reserves is based on information compiled or reviewed by Mr Clive Jones and Mr Don Horn, who are employees of the Company. Mr Jones is a Member of the Australasian Institute of Mining and Metallurgy and Mr Horn is a member of the Australian Institute of Geoscientists. Mr Jones and Mr Horn have sufficient experience which is relevant to the style of mineralisation and types of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Jones and Mr Horn consent to the inclusion of their names in the matters based on the information in the form and context in which it appears.

## ANNEXURE 1.

### JORC Code, 2012 Edition – Table 1

#### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"><li>• 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.</li><li>• Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li><li>• Aspects of the determination of mineralisation that are Material to the Public Report.</li><li>• In cases where 'industry standard' work has been done this would be relatively simple (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.</li></ul>	<ul style="list-style-type: none"><li>• 34 rock chip samples were collected at surface.</li><li>• Fist sized representative samples from outcrop were collected to a maximum weight of 3kg and averaging 1-1.5kg.</li><li>• Rock chip samples were sent to Bureau Veritas in Perth, sorted, crushed and pulverized to -75µm, split to produce a 40g charge for Aqua Regia digest and analysis for Au, Ag, Al, As, Co, Cr, Cu, Fe, Li, Mn, Mo, Ni, P, Pb, Sc, Sn, Sr, Ti, U, V, W Zn and Zr by ICP and OES or MS finish.</li></ul>
Drilling techniques	<ul style="list-style-type: none"><li>• 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).</li></ul>	<ul style="list-style-type: none"><li>• No drilling conducted</li></ul>

Criteria	JORC Code explanation	Commentary
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling conducted</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Geological information for each sample site has been recorded.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Additional samples were collected from single locations where considered necessary for representation</li> <li>• No field duplicates samples were considered necessary for first pass reconnaissance</li> <li>• Appropriate sampling protocols were used to maximise representivity.</li> </ul>
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All rock chip samples were analysed using a 40g aqua regia digest with an MS finish. This is considered a partial digest Technique however in weathered samples it is considered to approximate a total digest assay.</li> <li>• The laboratory inserted standards, blanks and duplicate samples. Results are within tolerable limits</li> </ul>

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>All data has been checked internally by senior CAZ staff</li> <li>Location data was collected using a handheld GPS and maps. Locational data is validated using GIS software in the office.</li> <li>No adjustment to assay data has been made</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>All location points were collected using handheld GPS in MGA 94 – Zone 55</li> <li>The error in locational data is expected to be up to 10m in easting and northing and up to 20m in RL.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Sample spacing was adequate for first pass reconnaissance work of this nature and a product of access and exposure of the targeted lithologies</li> <li>The rock chip sampling does not give adequate information on geological and grade continuity and can't be used for the purpose of Mineral Resource estimation</li> <li>No compositing of samples was conducted</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>There is not enough information available from this sampling to determine an average grade or to determine sample bias</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Samples were delivered by CAZ staff directly to the laboratory in Perth Western Australia. The laboratory managed security of samples during prep and analysis</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Data is audited and reviewed in house by senior staff.</li> </ul>

## 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	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or</li> </ul>	<ul style="list-style-type: none"> <li>All sampling is located within granted EL8483, which is held 100% by CAZ</li> </ul>



Criteria	JORC Code explanation	Commentary
land tenure status	<p>material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</p> <ul style="list-style-type: none"> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<p>through wholly owned subsidiary company Sammy Resources Pty Ltd (<b>Sammy</b>). <b>Sammy</b> signed Access Agreement for exploration with several property owners enabling access for sampling.</p> <ul style="list-style-type: none"> <li>The tenement is in good standing with no known impediments</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Historic holders of the Project area include Stuart Metals (Cobalt Resources NL), Central West Gold NL, McIntyre Mines Pty Ltd, North Broken Hill Ltd, VAM Ltd and ABx2 Pty Ltd</li> <li>Stuart Metals (Cobalt Resources NL) conducted shallow RAB drilling but failed to penetrate deeper than 10m due to hard stratigraphy. Previous drilling had been conducted by VAM, North Broken Hill and McIntyre Mines with some success.</li> <li>Rock chip sample programs were undertaken by Stuart Metals (Cobalt Resources NL) and North Broken Hill</li> <li>All previous work is being compiled and added to the project data base</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Tertiary sandstone ("grit") hosted cobalt and manganese mineralization associated with leaching or lateritisation. Base metal and gold mineralization is also targeted.</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling conducted</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades)</li> </ul>	<ul style="list-style-type: none"> <li>No weighted averages, aggregates or metal equivalent values are reported</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>and cut-off grades are usually Material and should be stated.</i></p> <ul style="list-style-type: none"> <li>• <i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></li> <li>• <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling conducted</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Refer to Maps, Figures and Diagrams in the document</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All sample results from the program are reported in the document</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All meaningful and material information is reported</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially</i></li> </ul>	<ul style="list-style-type: none"> <li>• Further mapping and geochemical sampling is planned followed by drilling is expected to commence within Q1-2 2018</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>sensitive.</i>	