

# EXTENSIVE COBALT-COPPER MINERALISATION INTERSECTED AT OPUWO COBALT PROJECT

## HIGHLIGHTS

- Mineralisation intersected in wide spaced drilling over 11 km of strike, including a 1.9 km zone confirmed by first assay results.
- Strong cobalt-copper mineralisation confirmed in assays from first four holes:
  - 19 m @ 1,292 ppm cobalt, 0.62% copper and 0.71% zinc (DOFR04)
  - 7 m @ 1,716 ppm cobalt, 0.49% copper and 0.61% zinc (DOFR06)
  - 6 m @ 1,213 ppm cobalt, 0.55% copper and 0.39% zinc (DOFR03)
  - 4 m @ 1,290 ppm cobalt, 0.57% copper and 0.45% zinc (DOFR05)
- Notable higher grade zones within the above intersections of:
  - 7 m @ 1,321 ppm cobalt, 1.11% copper and 1.10% zinc (DOFR04)
  - 2 m @ 3,075 ppm cobalt, 0.41% copper and 1.13% zinc (DOFR06)
- Total of 20 holes completed to date for 1,627 metres, with drilling continuing to test 30 km of prospective strike extent within the Project. Further assay results to be reported in the coming weeks.
- Diamond drilling to commence early May, providing samples for first pass metallurgical testing.
- First pass metallurgical testing program, preliminary mining studies and resource definition drilling programs planned to provide input into Project Scoping Study, scheduled for completion before the end of 2017.

Celsius Resources Limited ("Celsius" or "the Company") is pleased to announce highly encouraging initial assay results from drilling at the Opuwo Cobalt Project ("Project") in Namibia. Sample assays from the first four holes confirm strong cobalt-copper mineralisation at locations approximately 400 metres west and 1,500 metres east of the two historical holes drilled in 2015, extending the strike length of mineralisation confirmed by drilling assays to 1.9 km (Figure 1).

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#### **Discussion of Results**

Significant intercepts from each hole, using a cutoff grade of 500 ppm cobalt (Appendix 1), are:

- 19 m @ 1,292 ppm cobalt, 0.62% copper and 0.71% zinc, from 87 m (DOFR04)
- 7 m @ 1,716 ppm cobalt, 0.49% copper and 0.61% zinc, from 66 m (DOFR06)
- 6 m @ 1,213 ppm cobalt, 0.55% copper and 0.39% zinc, from 46 m (DOFR03)
- 4 m @ 1,290 ppm cobalt, 0.57% copper and 0.45% zinc, from 44 m (DOFR05)

Within these zones, higher grade intersections were encountered, most notably:

- 7 m @ 1,321 ppm cobalt, 1.11% copper and 1.10% zinc, from 87 m (DOFR04)
- 2 m @ 3,075 ppm cobalt, 0.41% copper and 1.13% zinc, from 69 m (DOFR06)

Celsius Managing Director, Brendan Borg commented:

"These first results exceeded our expectations in terms of grade and thickness, and we are very pleased that we have now intersected the target unit over a distance of some 11 km. The presence of higher grade zones of cobalt and copper within the mineralised zone identified to date provide confidence that there is significant upside still to be uncovered at Opuwo. We look forward to progressing our rapid evaluation of this Project, located in a very attractive jurisdiction, with excellent infrastructure."

It is important to note that the mineralisation extends to surface and outcrops in many places and that, based on the assay data to date, grades appear to increase with depth. This is currently considered to be due to near surface weathering of the sulphides hosting the mineralisation. Diamond drilling will be implemented in coming weeks to test for down dip extensions of the mineralisation.

It should also be noted that some drillholes were designed to intersect the mineralised zone at right angles and provide an approximate true thickness, whilst other holes are oblique to the mineralisation. Oriented diamond core will be used in conjunction with structural measurements of outcrop to confirm the geometry of the Dolomite Ore Formation (DOF) horizon and mineralisation hosted within it.

#### **Current Drill Program**

Drilling is ongoing at the Opuwo Cobalt Project with a total of twenty shallow RC holes completed for 1,627 metres. This initial phase of drilling is designed to test a 20 km (of a total 30 km) strike length of the cobalt-copper mineralised DOF horizon. Wide spaced drilling has been completed across approximately 11 km of strike, with the mineralised horizon intersected in each drill 'fence' to date (Figures 2 and 3). Geophysical data is being used to assist with drill targeting in areas of poor outcrop.

The Company is highly encouraged by these initial results, with average grades and thicknesses improving upon the two discovery holes drilled in 2015, and is optimistic that a significant tonnage of cobalt, copper and zinc can be defined at Opuwo.



Exploration is continuing in partnership with the Company's joint venture partner, Gecko Exploration, led by Dr. Rainer Ellmies, who discovered Namibia's first significant cobalt mineralisation at the Opuwo Cobalt Project in 2012.

Diamond drilling will commence in early May, providing samples for first pass metallurgical testing. The planned metallurgical studies, along with preliminary mining studies and resource definition drilling, are expected to contribute to a Scoping Study for the Project, planned for completion before the end of 2017.

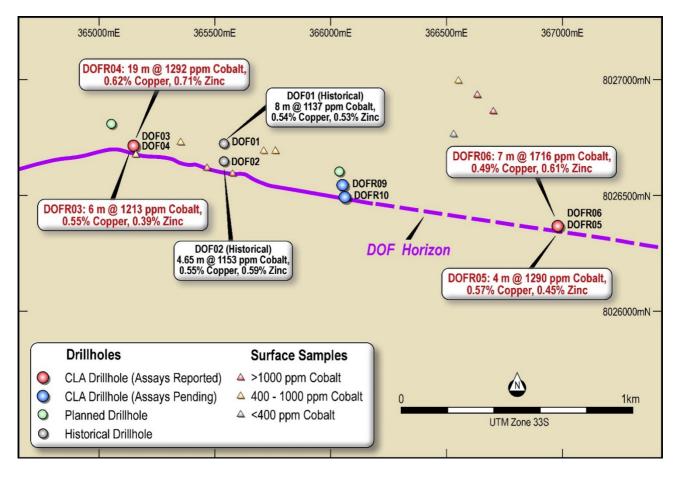


Figure 1: Drilling Assay Results extending mineralised strike to 1.9 km



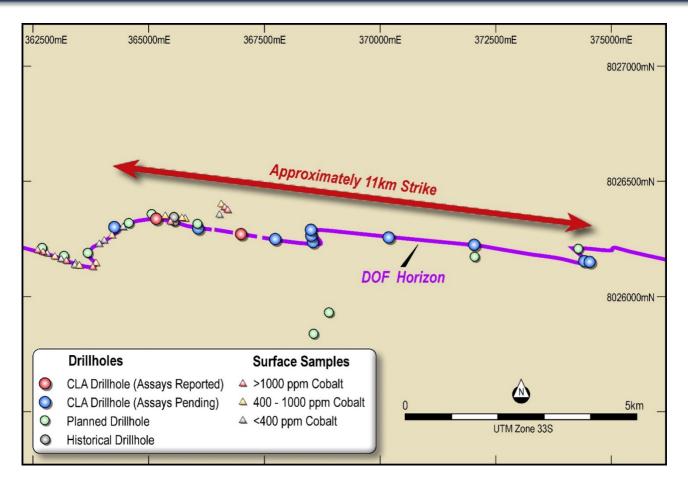


Figure 2: Drilling completed by Celsius resources extending mineralised strike to over 11 km



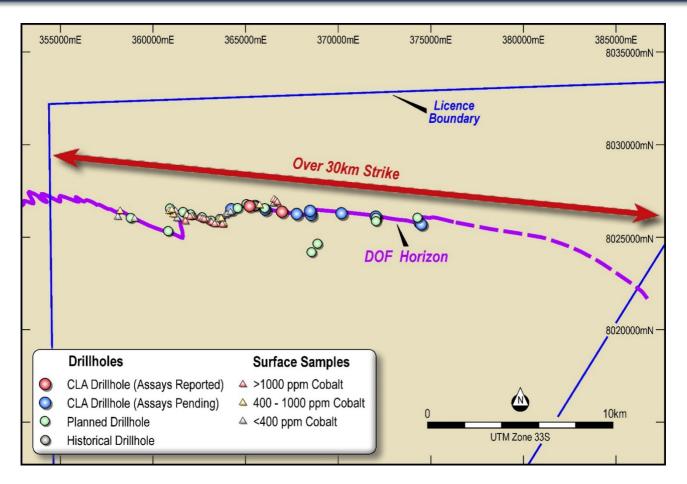


Figure 3: Strike length of mapped and interpreted DOF at the Project

#### Background on the Opuwo Cobalt Project

The Opuwo Cobalt Project is located in northwestern Namibia, approximately 800 km by road from the capital, Windhoek, and approximately 750 km from the port at Walvis Bay (Figure 4). The Project has excellent infrastructure, with the regional capital of Opuwo approximately 30 km to the south, where services such as accommodation, fuel, supplies, and an airport and hospital are available. Good quality bitumen roads connect Opuwo to Windhoek and Walvis Bay. The Ruacana hydro power station (320 MW), which supplies the majority of Namibia's power, is located nearby, and a 66 kV transmission line passes through the eastern boundary of the Project.

The identification of the geological similarities of the DOF horizon with the "Ore Shale" of the Central African Copperbelt and the discovery of Namibia's first significant cobalt mineralisation at the Opuwo Cobalt Project goes back to exploration activities led by Dr. Rainer Ellmies. Despite intensive surface exploration by previous explorers, only seven drill holes had tested the DOF horizon prior to the current phase of exploration. Only the recently drilled holes, DOF01 and DOF02, were assayed for cobalt, with significant results comprising:

- 8 m @ 1137 ppm cobalt, 0.54% copper and 0.53% zinc, from 60.4 m (DOF02)
- 4.65 m @ 1153 ppm cobalt, 0.55% copper, 0.59% zinc, from 106.65 m (DOF01)



Celsius is gaining exposure to the Project via the following stages of expenditure on exploration:

- An initial 30% interest will be earned by expenditure of \$500,000 within 6 months of exercising the option to proceed,
- a further 30% to be earned following expenditure of a further \$1,000,000 within 12 months of completing the stage 1 earn in, and
- a final 16% to be earned following expenditure of a further \$1,000,000 within 6 months of completing the stage 2 earn in.

Following the earning of the 76% interest all parties will be required to contribute to exploration.

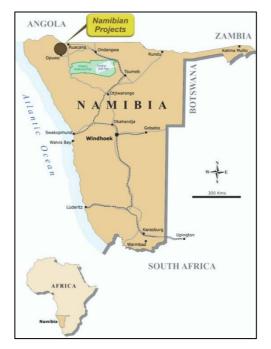


Figure 4: Location of the Opuwo Cobalt Project, Namibia

#### **Background on Cobalt**

Cobalt has a diverse range of metallurgical and chemical uses ranging from aircraft engines to rechargeable batteries. Strong demand for rechargeable batteries has been the biggest growth driver for cobalt consumption and demand is forecast to continue to increase as batteries are increasingly adopted in households and vehicles. Cobalt cathode chemistry continues to be the product of choice for applications requiring thin, flexible and high energy density batteries with the best possible cycle life. Furthermore, automotive related demand for cobalt containing battery materials is expected to rapidly increase in coming years with increasing sales of plug in hybrid and fully electric vehicles.

In its 2016 market outlook respected industry group CRU stated: "The refined cobalt market will fall into a 3,000 tonne deficit this year following seven years of overcapacity and oversupply. CRU anticipates prices to increase onward into 2017 as global demand for refined cobalt exceeds the 100,000 tonne mark and mine and refined supply tightens."



Cobalt resources and production are concentrated in the Democratic Republic of Congo, which has close to half of the world's cobalt reserves and accounts for more than half of the world's production. The balance of the world's cobalt is concentrated in Australia, Cuba, Zambia, New Caledonia, Canada, Russia and Brazil. Notably, the United States has no domestic resources of cobalt ore. As a result of the industrial importance of cobalt and the concentration of supply, cobalt is classed as a strategic mineral by the USGS and as a critical raw material by the EU.

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#### **Celsius Resources Contact Information**

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#### **Competent Persons Statement**

Information in this report relating to Exploration Results is based on information reviewed by Mr. Brendan Borg, who is a Member of the Australasian Institute of Mining and Metallurgy and Managing Director of Celsius Resources. Mr. Borg has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Borg consents to the inclusion of the data in the form and context in which it appears. The Exploration Results are based on standard industry practices for drilling, logging, sampling, assay methods including quality assurance and quality control measure as detailed in Appendix 2.



### Appendix 1. CLA Drilling at the Opuwo Cobalt Project

Hole ID	Easting (UTM Zone 33S)	Northing (UTM Zone 33S)	Dip	Azimuth (mag)	Final Depth (m)	Intercept From (m)	Intercept To (m)	Interval (m)	Cobalt (ppm)	Copper (%)	Zinc (%)	Manganese (%)
DOFR03	365148	8026718	-55	180	58	46	52	6	1,213	0.55	0.39	1.43
DOFR04	365148	8026720	-90	180	112	87	106	19	1,292	0.62	0.71	1.75
including						87	94	7	1,321	1.11	1.10	1.53
DOFR05	366981	8026370	-55	180	55	44	48	4	1,290	0.57	0.45	1.69
DOFR06	366981	8026373	-90	180	86	66	73	7	1,716	0.49	0.61	1.92
including						69	71	2	3,075	0.41	1.13	3.17
DOFR07	367745	8026254	-55	180	50	Results Pending						
DOFR08	367742	8026266	-90	180	99	Results Pending						
DOFR09	366049	8026549	-55	180	87			R	esults Pend	ing		
DOFR10	366060	8026497	-90	180	66			R	esults Pend	ing		
DOFR11	370176	8026304	-55	180	70			R	esults Pend	ing		
DOFR12	370176	8026305	-90	180	90			R	esults Pend	ing		
DOFR13	372034	8026137	-55	180	50			R	esults Pend	ing		
DOFR14	372034	8026138	-85	180	70			R	esults Pend	ing		
DOFR15	374531	8025781	-55	200	130			R	esults Pend	ing		
DOFR16	374421	8025771	-55	200	70			R	esults Pend	ing		
DOFR17	374422	8025788	-90	200	70			R	esults Pend	ing		
DOFR18	368497	8026351	-55	180	117			R	esults Pend	ing		
DOFR19	368526	8026224	-55	180	99			R	esults Pend	ing		
DOFR20	368497	8026469	-55	180	80			R	esults Pend	ing		
DOFR21	364230	8026530	-55	180	87			R	esults Pend	ing		
DOFR22	364230	8026530	-80	180	81	Results Pending						

Note: Significant intersections reported using a cutoff grade of 500 ppm (0.05%) cobalt



Appendix 2. The following tables are provided to ensure compliance with the JORC Code (2012) requirements for the reporting of Exploration Results for the Opuwo Cobalt Project

#### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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. 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> <li>Reverse Circulation (RC) drilling using standard equipment.</li> <li>Sampling was undertaken at one metre intervals.</li> <li>Drilling designed to intersect the DOF horizon based on mapped or interpreted location.</li> </ul>
Drilling techniques	<ul> <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>	Reverse circulation percussion.
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>Recovery generally recorded as good, with poor recovery in a small number of samples due to groundwater.</li> </ul>



Criteria	JORC Code explanation	Commentary
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Drilling logged in detail on a metre by metre basis.</li> <li>Lithology, alteration and oxidation logged qualitatively.</li> <li>Sulphide and quartz vein content logged quantitatively.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>RC drill samples split using a rig mounted cone splitter.</li> <li>Field duplicates collected to confirm representivity of sampling.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul> <li>Samples were assayed prepared at Activation Laboratories Limited (ACTLABS) Windhoek laboratory, and assayed at ACTLABS in Ancaster, Canada. A total acid digestion sample preparation method and ICP finish were utilised.</li> <li>No geophysical tools were used to determine any element concentration in these results.</li> <li>The drilling program included field duplicates, standards and blanks that were inserted into the drill sequence, in addition to the standard QA/QC samples and procedures used by the laboratory. No abnormalities were detected.</li> </ul>
Verification of sampling and assaying	<ul> <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,</li> </ul>	<ul> <li>Mineralised zones reported in assays correspond approximately with the zones as logged in the field, and the tenor of grades is consistent with previous drilling and surface sampling.</li> <li>No twin holes have yet been drilled, however, several of the RC holes will be twinned by diamond holes in the coming months.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul><li>data storage (physical and electronic) protocols.</li><li>Discuss any adjustment to assay data.</li></ul>	<ul> <li>An electronic database containing collars, geological logging and assays is maintained by the Company.</li> <li>No adjustment to assay data has been made.</li> </ul>
Location of data points	<ul> <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> <li>All sampling located by hand held GPS.</li> <li>UTM grid WGS84 Zone 33 (South).</li> <li>Holes will be surveyed using Differential GPS (DGPS) prior to potential resource modelling.</li> </ul>
Data spacing and distribution	<ul> <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> <li>Drill spacing approximately every 500 – 1,000 metres along the strike of the DOF horizon (based on mapping / interpretation).</li> <li>Optimum drill spacing to delineate a Mineral Resource not yet known. To be determined from assay data / assessment of grade variability.</li> </ul>
Orientation of data in relation to geological structure	<ul> <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> <li>Drilling of angled holes aimed to test perpendicular to DOF horizon. Some holes were designed to be oblique to mineralisation.</li> <li>Further drilling will better determine the orientation of the geological features and mineralisation and enable any biases to be determined.</li> </ul>
Sample security	The measures taken to ensure sample security.	Drill samples delivered to laboratory by senior Celsius or Gecko Namibia staff.
Audits or reviews	The results of any audits or reviews     of sampling techniques and data.	No review has been carried out.

#### Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>The Opuwo Cobalt Project comprises a single Exclusive Prospective License EPL4346 owned by Kunene Resources (Pty) Ltd.</li> <li>The license is undergoing the renewal process for a further two year term from June 2017.</li> </ul>



Criteria	JORC Code explanation	Commentary
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	• Previous work carried out by Kunene Resources includes geological mapping, outcrop sampling, soil sampling, high resolution magnetic and radiometric data and hyperspectral data. Two holes were drilled in 2015, which intersected cobalt, copper and zinc mineralisation.
Geology	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul> <li>Copper-cobalt mineralisation is developed in a sedimentary package of likely Nosib succession. Arkose quartzitic sandstones and conglomerates of the footwall Nosib Formation are exposed to the west and southwest</li> <li>The upper Nosib or Ombombo Formation consists of a sequence of finely intercalated siltstones and shales with minor sandstone, marlstone, limestone and dolostone layers.</li> </ul>
Drill hole Information	<ul> <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> <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>	All information detailed in Appendix 1.
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	• Simple length weighted averages were used for reporting of significant intercepts. Significant intercepts were reported using a cutoff grade of 500 ppm (or 0.05%) cobalt. One intercept of significantly higher cobalt and one instance of significantly higher copper/zinc were also highlighted.
Relationship between mineralisation widths and	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> </ul>	<ul> <li>Orientation of drilling vs dip of DOF horizon likely means that the downhole length reported for the DOF is not true width.</li> <li>Determination of the orientations and thickness of mineralisation will be possible with further drilling, and in particular, diamond drilling, which is scheduled to commence in May, 2017.</li> </ul>



Criteria	JORC Code explanation	Commentary
intercept lengths	<ul> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul> <li>Refer Figures 1 to 3. Sectional views will be compiled once an accurate assessment can be made of the geometry of the mineralisation.</li> </ul>
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul> <li>All holes for which results have been received contained significant intersections and have been reported.</li> </ul>
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	Geophysical and geological datasets detailed in previous releases.
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Planned further work detailed in this, and previous releases, and in figures. This work includes comprises drill testing along a significant portion of the mapped/interpreted mineralised unit.</li> </ul>