



EXTRACTIONS SURGE IN MT THIRSTY TESTWORK

ASX ANNOUNCEMENT

15th February 2019

BARRA RESOURCES LIMITED

A.B.N. 76 093 396 859

Corporate Details:

ASX Code: BAR
Market Cap: \$18.6M
@ 3.5c
Cash: \$2.3M (Dec)

Issued Capital:

530.89M Ordinary Shares
50M Options

Substantial Shareholders:

FMR Investments 15.4%
Mineral Resources Ltd 10.8%

DIRECTORS

MD & CEO: Sean Gregory
Chairman: Gary Berrell
Non-Exec: Jon Young
Non-Exec: Grant Mooney

PROJECTS

Mt Thirsty Co-Ni (50%)
Coolgardie Au (100%)

CONTACT DETAILS

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HIGHLIGHTS

- Significant improvements in metal extractions returned from leach optimisation test work on the master composite compared to those reported in the Scoping Study
 - Average cobalt leach extraction improved to 85% with some results as high as 88%
 - Average nickel leach extraction improved to 32% with some results as high as 37%
- Commensurately higher project revenues expected to be available for minimal additional reagents and costs
- Cobalt and nickel extractions were achieved on whole ore and therefore do not have to allow for additional losses from beneficiation
- The extractions were achieved using modest quantities of SO₂ for leaching without requiring the addition of supplemental acid
- Neutralisation tests show that iron and aluminium can be effectively precipitated after leaching prior to payable metals
- Engineering to enable capital estimation to a PFS level of accuracy scheduled to commence subject to JV funding

Barra's Managing Director and CEO Sean Gregory said "These high-quality technical results are expected to significantly improve the economics of the Mt Thirsty project. They will go a long way to mitigate the present temporary dip in cobalt spot pricing. The long-term outlook for cobalt remains strong as an essential and scarce ingredient for batteries to fuel the electric vehicle revolution."

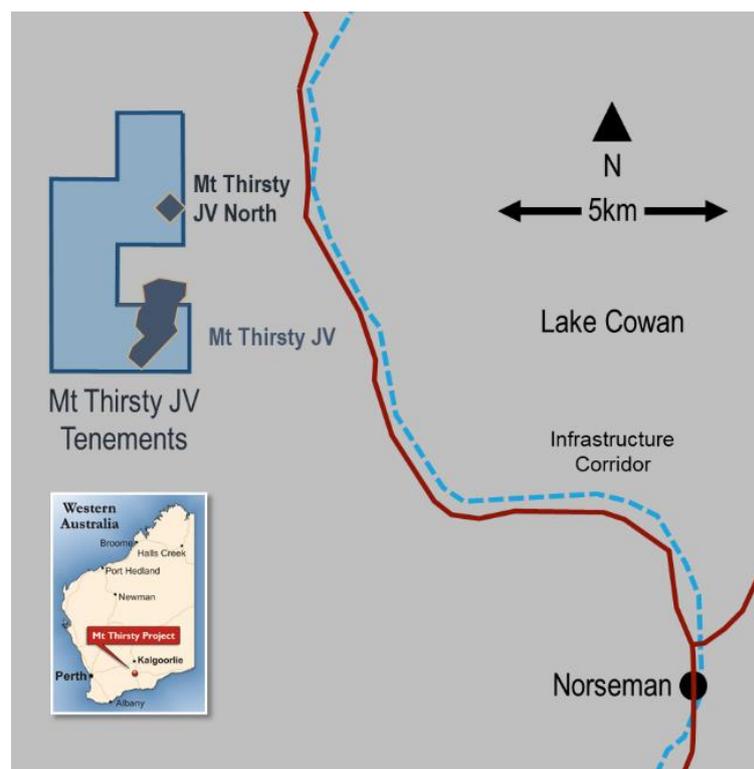


Figure 1 – Mt Thirsty Project location



Introduction

The Mt Thirsty Cobalt Nickel Project is located 16km northwest of Norseman, Western Australia (Figure 1). The project is jointly owned by Barra Resources Limited and Conico Limited, together the Mt Thirsty Joint Venture (MTJV).

The Project contains the Mt Thirsty Cobalt-Nickel Oxide Deposit that has the potential to emerge as a significant cobalt producer.

The MTJV is progressing a Pre-Feasibility Study (PFS) on the project utilising industry leading consultants led by Amec Foster Wheeler Australia Pty Ltd, trading as Wood.

Sample Collection

The test work reported here has been completed on samples made up from Reverse Circulation (RC) drill samples from six holes collected in November 2016 (Table 1, refer ASX Quarterly Report for December Quarter 2016). The PFS master composite was made up of a blend of approximately half upper-saprolite domain (upper) and half lower-saprolite domain (lower) at grades representative of the most important early years of the mine plan. These are the same drill holes blended ostensibly at the same ratios as those used in the master composite of the Scoping Study, making these reported results directly comparable.

Hole ID	Date Drilled	Easting	Northing	RL (m)	Depth (m)	Composite Intervals (m)
MTRC036	20/11/2016	372162	6447455	378	54	18-42
MTRC037	19/11/2016	372244	6447455	376	30	13-30
MTRC038	19/11/2016	372349	6447457	369	35	14-28
MTRC039	20/11/2016	371956	6447000	382	40	14-34
MTRC040	20/11/2016	372115	6447001	393	40	30-36
MTRC041	20/11/2016	372295	6446999	381	35	23-32

Table 1 – Drill holes used in the sample composites. All holes are vertical. Grid AGD84 Zone 51

Variability Test Work

Following on from the leaching test work on the individual upper and lower domain composites previously reported (refer ASX announcement 22/10/19), the next layer of variability was tested samples with a range of grades from each domain. The results in Table 2 illustrate that extraction can be correlated with feed grade in the range tested. This is consistent with the higher-grade samples having higher concentrations of the more easily leached asbolane mineral and the lower grade samples having more of the cobalt in the less easily leached goethite mineral. Note that these results are using the leaching parameters of the Scoping Study and are without the parameter optimisations achieved in Table 3.

Test ID	Sample Source	Domain	Cobalt Feed Grade (%)	Cobalt Extraction (%)	Nickel Extraction (%)	Cobalt Residue Grade (%)
HY6797	MTRC038 15-16m	Upper Medium-Grade	0.16	61	29	0.067
HY6795	MTRC036 25-26m	Upper Low-Grade	0.09	73	24	0.028
HY6800	MTRC041 24-25m	Lower High-Grade	0.21	83	30	0.043
HY6796	MTRC036 36-37m	Lower Medium-Grade	0.12	63	22	0.039
HY6934	MTRC038 25-26m	Lower Low-Grade	0.09	54	20	0.047

Table 2 – Variability leach results



QEMSCAN Analysis

QEMSCAN analysis was completed on the master composite sample. QEMSCAN is the quantitative evaluation of minerals using a fully automated scanning electron microscope. The technique is a very powerful tool to link the geological knowledge of the deposit to the metallurgical performance. It can be used to explain and predict observed results. The QEMSCAN results provide a wealth of information that has reaffirmed the reasons for the beneficiation performance previously reported (refer ASX announcement 22/10/18).

One specific observation from the QEMSCAN analysis that is relevant to the leaching optimisation is that 62% of the cobalt is present in manganese mineral (asbolane) which is readily leached with SO_2 (Figure 2). The remainder of the cobalt and most of the nickel is in the harder to leach goethite mineral. Lower nickel extractions are explained by 44% of the nickel being in the chlorite mineral which is not leached by the methods studied. Two separate reactions will be required to target the asbolane and the goethite. The Scoping Study results align with successfully leaching the asbolane and only a small proportion of the goethite. The opportunity in the PFS and in the leaching optimisation test work reported below are to:

- Leach the asbolane as rapidly and efficiently as possible; and
- Target the secondary nickel and cobalt mineralisation in goethite with minimal iron dissolution.

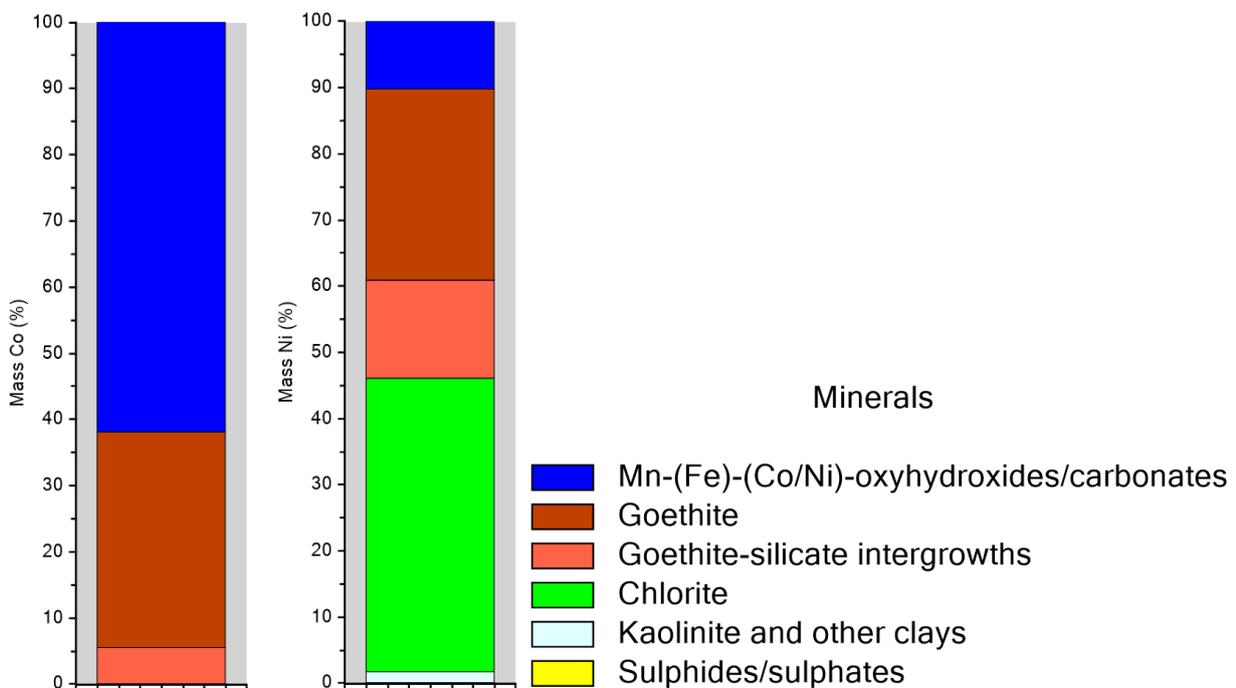


Figure 2 – QEMSCAN elemental deportment for Cobalt and Nickel



Leaching Optimisation Test Work

An additional 22 leach optimisation tests have been completed to date at ALS laboratories in Balcatta, bringing the total for the PFS to 35 tests. The results are an improvement on the variability samples reported above on unoptimised conditions as evident by the lower residue grades shown in Table 3.

The leaches optimised parameters such as SO₂ and other reagent addition rates, temperature, grind size, and residence times, with incremental improvements identified as the tests progressed.

Test ID	Cobalt Extraction (%)	Nickel Extraction (%)	Cobalt Residue Grade (%)
HY6884	81	31	0.040
HY6947	83	28	0.032
HY6933	86	31	0.029
HY6976	84	32	0.032
HY6977	84	28	0.030
HY7035	88	36	0.025
HY7036	82	27	0.035
HY7067	85	32	0.031
HY7132	85	29	0.030
HY7142	86	35	0.028
HY7143	86	33	0.028
HY7154	84	29	0.032
HY7155	88	37	0.024
HY7200	88	35	0.023
HY7201	83	31	0.034
HY7233	87	33	0.027
HY7234	84	29	0.031
HY7285	85	32	0.031
HY7286	88	35	0.025

Table 3 – Significant leach optimisation test work results ($\geq 81\%Co$ & $\geq 27\%Ni$)

Optimised extractions have been consistently achieved of 84-88% for cobalt and 31-37% for nickel. These results are a significant improvement to those recoveries achieved on a similar sample and used as a basis for the 2017 Scoping Study.

Neutralisation test work

The secondary leach reactions that target the goethite extract iron and aluminium in addition to manganese, cobalt, and nickel. The iron and aluminium need to be removed from the circuit prior to cobalt and nickel recovery which can lead to co-precipitation losses during neutralisation. Initial neutralisation test work has however indicated that with careful control of pH and additional reagent dosing, the iron and most of the aluminium can be precipitated ahead of the payable metals without co-precipitation (Figure 3).

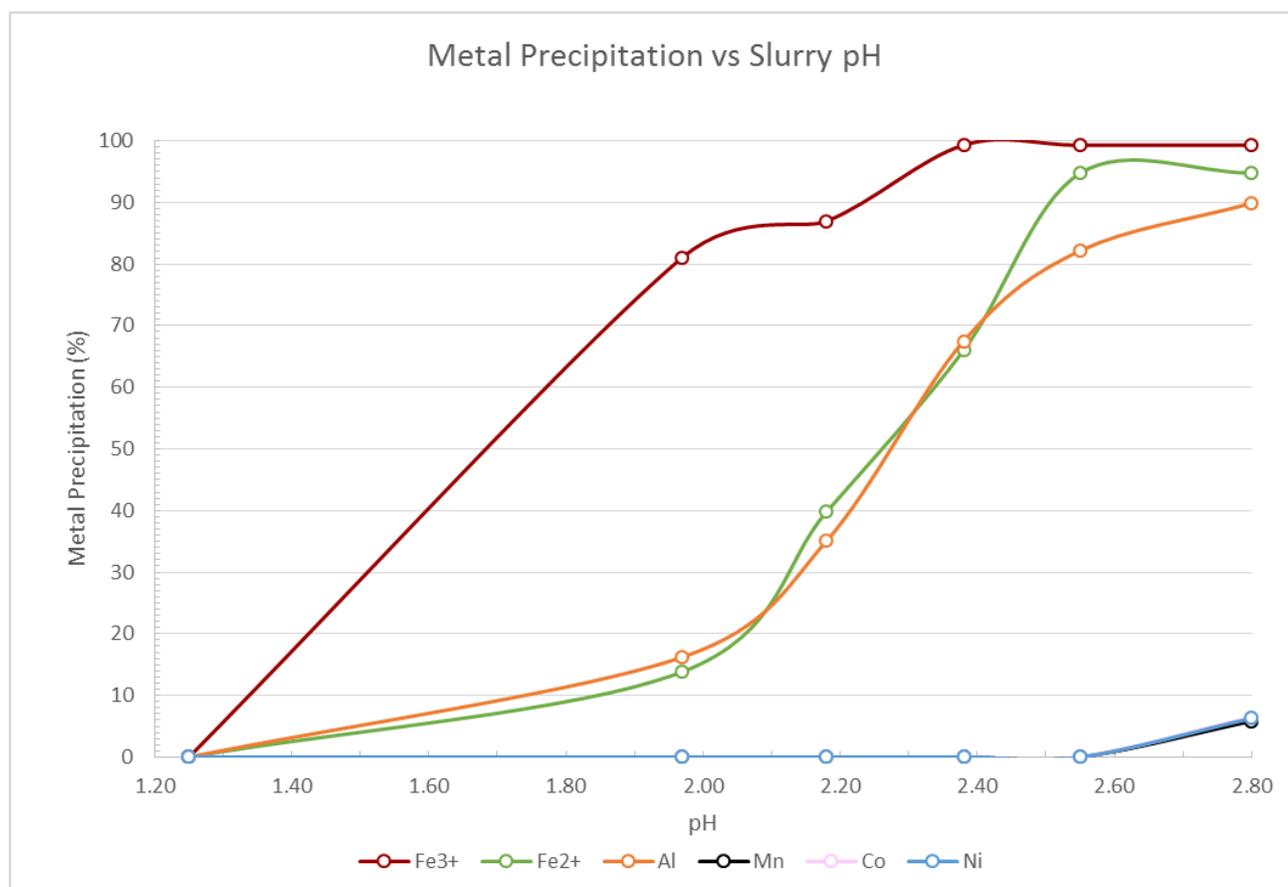


Figure 3 – Neutralisation test HY7252 showing successful precipitation of iron and aluminium ahead of payable metal precipitation at pH 2.4-2.6

Cobalt Market Outlook

The price for cobalt metal has corrected over the last 12 months from a high of US\$90,000/t in March to US\$33,000/t today. This has been due to short term supply exceeding demand as evident by LME warehouse levels which are now at their highest level in 7 years, since Info-mine began tracking cobalt then. The supply growth has been led by producers from the Democratic Republic of Congo, increasing their dominance of the market to above 70% and further exacerbating future supply shock risk.

Speculators had been purchasing and stockpiling physical cobalt in expectation of the electric vehicle (EV) revolution. EV sales are growing exponentially from a low base, particularly in China, however the mass adoption of EVs is still ahead of us. When this inevitably occurs, supply growth will be unable to keep pace with demand. Hence the rampant speculation that saw the cobalt price unsustainably rise this time last year.

Substitution away from Cobalt through the adoption of 811 cathode chemistry (8-parts nickel, 1-part manganese, 1-part cobalt) to displace 622 cathodes has proved more difficult than major battery manufacturers forecast. Even if this thrifting away from cobalt can be safely implemented, the demand growth is still forecast to significantly outstrip supply. The challenges of 811 cathode chemistry highlight the difficulty of technological change disrupting the need for cobalt in batteries within any reasonable investment time frame.

The recent correction of the cobalt price has been sharper than forecasts issued by all major banks as reported by Consensus Economics. Longer term, the fundamentals of the cobalt market remain exceptional with very few high-quality projects such as Mt Thirsty being expected to be available to meet the demand driven by EVs.



Next Steps

Bulk leach test work will now commence. The completion of the bulk leaches will confirm the results of the optimisation and neutralisation tests reported above and form the basis for the PFS design. The bulk leach will also manufacture samples for thickening and tailings test work.

The leaches completed to-date have been conducted on a master composite consisting of a 50/50 blend of upper and lower domains from previous RC drilling chosen to be representative of the early years of mining. The upper domain is known to have superior leach performance to the lower domain from leaches conducted during the beneficiation vs whole ore leach study (refer ASX announcement 22nd October 2018). The optimised leach extraction performance from the master composite will need to be deconvoluted into upper and lower performance for mine planning, initially by calculation, and then by tests on each domain at the optimised leaching conditions.

The results of this next step will also allow metallurgical regressions to be constructed to be combined with the imminent JORC 2012 upgraded Mineral Resource estimation to be used for mine planning and optimisation which is expected to unlock further significant value for the project.

Engineering of the processing plant, and capital and operating cost estimating to a PFS level of accuracy at optimised conditions is now ready to commence subject to funding approval by the JV, anticipated to be released in the current quarter.

SEAN GREGORY

Managing Director & CEO



DISCLAIMER

The interpretations and conclusions reached in this report are based on current geological and metallurgical theory and the best evidence available to the authors at the time of writing. It is the nature of all scientific conclusions that they are founded on an assessment of probabilities and, however high these probabilities might be, they make no claim for complete certainty. Any economic decisions that might be taken based on interpretations or conclusions contained in this report will therefore carry an element of risk.

This report contains forward-looking statements that involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this report. No obligation is assumed to update forward-looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

COMPETENT PERSONS STATEMENTS

The information in this report which relates to the drilling and collection of samples for Exploration Results for the Mt Thirsty Project is based on and fairly represents information compiled by Mr Michael J Glasson who is a Member of the Australian Institute of Geoscientists contracted to Conico Limited. Mr Glasson holds shares in Conico Ltd.

The information in this report which relates to the metallurgical test work for Exploration Results for the Mt Thirsty Project is based on and fairly represents information compiled by Mr Karel Osten who is a Member of the Australian Institute of Mining and Metallurgy and a full-time employee of Wood.

Messers Glasson and Osten have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (the JORC Code). They consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

JORC CODE, 2012 EDITION – TABLE 1 REPORT

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> 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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 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. 	<ul style="list-style-type: none"> 1m samples were split and collected at the drill rig. The remainder of the drill cuttings were immediately bagged and sealed in air tight bags to minimise drying and agglomeration of the clays. These samples were later used for compositing and metallurgical test work. The split samples were then dried and pulverised and a 40gm sub sample analysed for Co, Ni, Mn, Zn, Mg, Al & Fe using a four-acid digest with an ICP OES finish.
Drilling techniques	<ul style="list-style-type: none"> 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). 	<ul style="list-style-type: none"> RC drilling was completed with a 165mm face sampling hammer. All drilling was above the water table and there was no water injection used.



Criteria	JORC Code explanation	Commentary
Drill sample recovery	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Sample recovery was generally excellent in dry powdery clay which hosts the upper portion of the mineralisation. Any intervals with obvious poorer sample recovery were recorded in the logs. These were mostly in greenish puggy clay sections beneath the oxidised zone in the lower portion of the deposit. The cyclone was cleaned between each six metre rod (RC); riffle splitters were cleaned as required. There is no obvious relationship between grade and sample recovery. Most of the material drilled is strongly weathered, soft and fine grained. No significant sample bias is expected to have occurred due to preferential loss of fine/coarse material.
Logging	<ul style="list-style-type: none"> 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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> Logging is conducted in detail at the drill site by the site geologist, who routinely records weathering, lithology, alteration, mineralisation, or any other relevant features. It is considered to be logged at a level of detail to support appropriate Mineral Resource estimation and mining studies. All holes were logged in the field by MTJV geologists who have a long association and familiarity with the deposit. Logging is qualitative in nature. The entire length of each hole was logged in 1m intervals.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> If core, whether cut or sawn and whether quarter, half or all core taken. 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 representivity of samples. 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. Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> All RC drill chips were split with a rotary splitter. The remaining sample was bagged and placed on the ground. Sample preparation followed industry standard practice of drying, coarse crushing to -6mm, before pulverising to 90% passing 75 micron. To meet QAQC requirements duplicates were placed at irregular intervals in the sample stream, usually one or two duplicates per drill hole (approximately every 20-40m). For the RC drilling certified blanks (OREAS 24P) were placed in the sample stream at the rate of 1 in 100, at each hundredth sample. Additionally, two different certified standards were used in the sample stream (OREAS 72A and OREAS 162) at the rate of 2 standards per 100 samples. These were placed at the 25th and 75th number of every hundred samples. The Co values in the blank samples were higher than the provided values however they are below 80 ppm; comparatively low compared to the estimated resource values and therefore within acceptable ranges for blank samples. Overall there were only a small number of outliers in the duplicates collected and therefore the duplicate results are also considered satisfactory. Material being sampled is generally fine grained, and a 2-3kg sample from each metre is considered adequate.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. 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. 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. 	<ul style="list-style-type: none"> Samples were crushed and pulverised, and analysed for Co, Ni, Mn, Zn, Mg, Al & Fe using a four acid digest with an ICP OES finish (method AD02-ICP) by Bureau Veritas' Perth laboratory. These procedures are considered appropriate for the elements and style of mineralisation. Analysis is considered total. No geophysical tools have been used. The internal laboratory QAQC procedures included analysing its own suite of internal standards and blanks within every sample batch and also adding sample duplicates.
Verification of	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. 	<ul style="list-style-type: none"> Significant intersections are determined by company personnel and checked internally.



Criteria	JORC Code explanation	Commentary
sampling and assaying	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> A limited number of twinned RC holes and AC holes twinned by Sonic Core (SC) holes have been drilled. 5 of the 6 RC holes and the 3 AC holes are twins previous AC holes. Analysis of paired data representing AC and SC samples with proximity of approximately 5 m or less has given at least preliminary indications that some AC samples are yielding higher Co and Mn values than corresponding samples derived from SC. Population statistics however show the reverse and AC statistics are slightly lower grade on average than RC and SC. Individual sample numbers are generated and matched on site with down hole depths. Sample numbers are then used to match assays when received from the laboratory. Verification of data is managed and checked by company personnel with extensive experience. All data is stored electronically, with industry standard systems and backups. Data is not subject to any adjustments.
Location of data points	<ul style="list-style-type: none"> Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> Collar locations were determined by hand held GPS and are accurate to approximately +/- 5m. The grid system used is AGD84; AMG Zone 51 to match a previously established grid. A DTM and 2.5m spaced topographic contours have been prepared from ortho-photomaps and hole RLs are measured from these. This topographic control is considered quite adequate for the current purposes.
Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. 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. Whether sample compositing has been applied. 	<ul style="list-style-type: none"> All holes were sampled and assayed in 1m intervals and no other compositing has been applied during sample collection and assay laboratory preparation.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	<ul style="list-style-type: none"> The mineralisation is mostly contained within a flat lying weathering blanket and vertical holes achieve unbiased sampling in most cases. The mineralisation is mostly contained within a flat lying weathering blanket and vertical holes achieve unbiased sampling in most cases.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Samples were either taken directly from the drill site to the laboratory in Kalgoorlie or delivered to a dedicated cartage contractor in Norseman by company employees and or contractors.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> No audits or reviews were carried out for this metallurgical drilling as it is not considered warranted at this stage.

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	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	<ul style="list-style-type: none"> The exploration results relate to the Mt Thirsty Project, located approximately 16km north west of Norseman, Western Australia. The tenements are owned 50:50 (Mt Thirsty Joint Venture, MTJV) by Conico Ltd (through its subsidiary Meteore Metals Pty Ltd) and Barra Resources Ltd. The project includes Retention Licence R63/4, Exploration Licences E63/1267, and E63/1790 and Prospecting Licence P63/2045. Mining Lease applications have been lodged over R63/4 and E63/1267 and a General



Criteria	JORC Code explanation	Commentary
		<p>Purpose Lease application over E63/1790 and P63/2045. The exploration results referred to in this announcement are located on R63/4.</p> <ul style="list-style-type: none"> A NSR royalty is payable to a third party on any production from R63/4. The tenements lie within the Ngadju native title claim (WC99/002), and agreements between the claimants and the tenement holders are designed to protect Aboriginal heritage sites and facilitate access. There are no historical or wilderness sites or national parks or known environmental settings that affect the Mt Thirsty Project although the project area is located within the Great Western Woodlands. Meteore/Barra have secured tenure over the project area and there are no known impediments to obtaining a licence to operate in the area.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> The Mt Thirsty area was explored for nickel sulphide mineralisation in the late sixties and early seventies by Anaconda, Union Miniere, CRA, WMC/CNGC and others. Although no significant sulphide discoveries were made during that time, limonitic nickel/cobalt mineralisation was encountered but not followed up. In the 1990's Resolute-Samantha discovered high grade cobalt mineralisation in the oxidised profile above an orthocumulate peridotite. This oxide mineralisation is the subject of this announcement.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The Mt Thirsty Cobalt deposit mineralisation has developed as a result of weathering of ultramafic (peridotite) rocks located at the southern end of the Archaean Norseman - Wiluna greenstone belt. Most of the Co and some of the Ni mineralisation is associated with manganese oxides which have formed in the weathering profile.
Drill hole Information	<ul style="list-style-type: none"> A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> See table in main body of announcement
Data aggregation methods	<ul style="list-style-type: none"> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. 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. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> Not applicable. No equivalent values are used.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. If the geometry of the 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 	<ul style="list-style-type: none"> As the mineralised envelope is generally flat lying and nearly all holes were drilled vertically; down hole width is mostly considered to be true width.



Criteria	JORC Code explanation	Commentary
	known').	
Diagrams	<ul style="list-style-type: none"> Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	<ul style="list-style-type: none"> All diagrams contained in this document are generated from spatial data displayed in industry standard mining and GIS packages.
Balanced reporting	<ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	<ul style="list-style-type: none"> Not applicable.
Other substantive exploration data	<ul style="list-style-type: none"> Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	<ul style="list-style-type: none"> The leach composite sub-samples were approximately 850g on a dry solids basis mixed at 40% solids with synthetic hypersaline water. SO₂ was the main reagent used and no acid was added. Leaches were conducted at temperatures ranging from 60-90 degrees C for 16-30 hours. Leach extraction results are reported as an arithmetic average of the recoveries computed as metal in residue vs feed and as metal in solution vs calculated head grade. Leach extraction results are reported prior to losses expected in solution neutralisation and precipitation. For the Scoping Study, final product recoveries of 73.0% for cobalt and 21.5% were calculated from leach extractions of 79.5% and 25.6% respectively. For the PFS, losses of less than 4% are targeted subject to test work outcomes.
Further work	<ul style="list-style-type: none"> The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	<ul style="list-style-type: none"> The Mt Thirsty deposit is presently the subject of a PFS. Further test work will include bulk leaches, thickening and solid-liquid separation tests, tailing test work as well as additional variability leaches. Golders has been commissioned to upgrade the Mineral Resource from JORC 2004 to JORC 2012 to enable an Ore Reserve to be declared at the completion of a positive PFS.