



# ASX ANNOUNCEMENT

26<sup>th</sup> April 2023

## MT THIRSTY MINERAL RESOURCE INCREASES BY OVER 145%

- Mineral Resource Estimate (Indicated & Inferred) at Mt Thirsty Cobalt-Nickel project increases by 146%<sup>1</sup>, for:
  - 66.2 million tonnes @ 0.06% cobalt; 0.43% nickel and 0.45% manganese**
- Deposit hosts the **second highest Co-Ni ratio** for similar predevelopment Co-Ni projects in Australia<sup>2</sup>
- Deposit **uniquely positioned to potentially produce pCAM**, containing all three elements (Co, Ni & Mn)
- Precursor Cathode Active Material (pCAM) is a **high-value product made of cobalt, nickel & manganese**
- Scoping Study already underway** leveraging of materially larger resource to support a longer life operation
- Scoping Study to access the **adoption of HPAL<sup>3</sup> & production of pCAM<sup>4</sup>** (expected early-July 2023)
- Addition of HPAL and pCAM to the Mt Thirsty project could **potentially transform project economics**
  - Comparable HPAL projects typically receive Co and Ni recoveries of 90% and 92%, respectively<sup>5</sup>
  - pCAM typically receives a ~50% pricing premium over intermediary products (MHP / MSP)<sup>6</sup>
- Ability to provide a **sustainable source of low-cost & ethical critical minerals** outside of DRC, PRC & RF<sup>7</sup>
- Updated Scoping Study to provide foundation for future studies & **potential consolidation to support an IPO**

Greenstone Resources Limited (ASX:GSR) (Greenstone or the Company) is pleased to report a 146% increase to the Mineral Resource Estimate (**MRE**) for the Mt Thirsty Co-Ni-Mn-Sc project (50% Greenstone Resources, 50% Conico Limited) (the **Project**). The Project is located just 16 kilometres North-Northwest of Norseman, Western Australia and is supported by a network of existing infrastructure (road, rail, port & power).

The updated global Mineral Resource estimate was undertaken by WSP Australia Pty Limited (**WSP**) and now totals 66.2 million tonnes @ 0.06% cobalt; 0.43% nickel and 0.45% manganese (Indicated and Inferred), which represents an increase of 39.3Mt (146%) over the previous MRE.

Importantly, large areas of the resource remain open at depth (Figure 3), and Scandium has not been included in current resource estimation, both of which will be assessed post the completion of the Scoping Study which is expected in early-July 2023.

**Managing Director and CEO, Chris Hansen, commented:** *“Previously the Mt Thirsty project had principally been viewed as a cobalt only project, with little attention given to the thick and continuous zones of overlying and outcropping nickel-manganese mineralisation. However, following the recent adoption of high-pressure acid leaching (HPAL), and the expected improvements in metal recoveries, the inclusion of this outcropping mineralisation in the Mineral Resource Estimate has the potential to transform the Mt Thirsty project into a long-life and low-cost operation.*

*Following the rapid adoption of electric vehicles over the past five years there has been a fundamental shift not only in underlying commodity demand, but also in the specific product requirements demanded by end-users, which has signalled a shift away from lower-value intermediary projects (e.g. mixed hydroxide precipitate) to higher-value refined*

<sup>1</sup> Increase from 2019 MRE of 26.9Mt (see ASX:GSR 9/10/2019) to 66.3Mt

<sup>2</sup> Refer to Figure 1

<sup>3</sup> High-Pressure Acid Leaching (HPAL)

<sup>4</sup> Precursor Cathode Active Material (pCAM)

<sup>5</sup> Based on comparable projects (ASX:NC1 22/12/2022; ASX:CLQ 25/06/2018)

<sup>6</sup> See ASX:GSR 03/04/2023

<sup>7</sup> Democratic Republic of the Congo, People's Republic of China, Russian Federation



products (e.g. pCAM). The Mt Thirsty project is uniquely positioned to take advantage of this fundamental shift, containing all three of the necessary elements (Co, Ni & Mn) to potentially produce a cathode precursor product on site and importantly capture these improved pricing premiums, with cathode precursors typically receiving a ~50% pricing premium over intermediary products (Figure 4).

More recently this unprecedented demand for critical minerals has served to highlight the geopolitical and ethical risks associated with establishing sustainable supply chains capable of meeting emission reduction targets. With Australia now positioning itself as a battery manufacturing powerhouse, we believe that Mt Thirsty can play a key role in supplying a low-cost, ethical and sustainable source of cobalt and nickel outside of the Democratic Republic of the Congo and Russia, who currently dominate global supply.”

### COBALT : NICKEL RATIO FOR COMPARABLE AUSTRALIAN PROJECTS



Figure 1: Australian hosted laterite deposits >50Mt; Measured, Indicated & Inferred resource grade. See below for tonnes and grades.<sup>8</sup>

### MT THIRSTY MINERAL RESOURCE

	Cut-off Grade (NiEq%)	Dry Tonnes (Mt)	Grade			Contained Metal		
			Ni (%)	Co (%)	Mn (%)	Ni (kt)	Co (kt)	Mn (kt)
<b>Mt Thirsty Main (MTTM)</b>								
Indicated	0.25	30.2	0.51	0.10	0.69	154.7	29.3	207.8
Inferred	0.25	31.9	0.35	0.03	0.24	110.4	9.3	76.6
<b>Total</b>	<b>0.25</b>	<b>62.1</b>	<b>0.43</b>	<b>0.06</b>	<b>0.46</b>	<b>265.1</b>	<b>38.5</b>	<b>284.4</b>
<b>Mt Thirsty North (MTTN)</b>								
Indicated	0.25	0.0	0.00	0.00	0.00	0.0	0.0	0.0
Inferred	0.25	4.2	0.43	0.05	0.29	17.9	2.0	11.8
<b>Total</b>	<b>0.25</b>	<b>4.2</b>	<b>0.43</b>	<b>0.05</b>	<b>0.29</b>	<b>17.9</b>	<b>2.0</b>	<b>11.8</b>
<b>Total</b>	<b>0.25</b>	<b>66.2</b>	<b>0.43</b>	<b>0.06</b>	<b>0.45</b>	<b>283.0</b>	<b>40.5</b>	<b>296.2</b>

Figure 2: Summary of 2023 Mineral Resource Estimate for Mt Thirsty

<sup>8</sup> Measured, Indicated & Inferred. ASX:CNQ 27/09/2020 (177.0 Mt @ 0.095% Co & 0.52% Ni); ASX:AUZ 18/10/2019 (115.8 Mt @ 0.065% Co & 0.634% Ni); ASX:JRV 24/05/2019 (93.3 Mt @ 0.05% Co & 0.63% Ni); ASX:NC1 30/06/2016 (215.8 Mt @ 0.07% Co & 0.91% Ni); ASX:ACB 18/03/2022 (90.0 Mt @ 0.051% Co & 0.73% Ni); ASX:ARL 15/11/2021 (553.9 Mt @ 0.037% Co & 0.575% Ni); ASX:AXN 02/08/2018 (85.2 Mt @ 0.065% Co & 1.03% Ni)



**MT THIRSTY MAIN (MTTM) CROSS-SECTIONS**

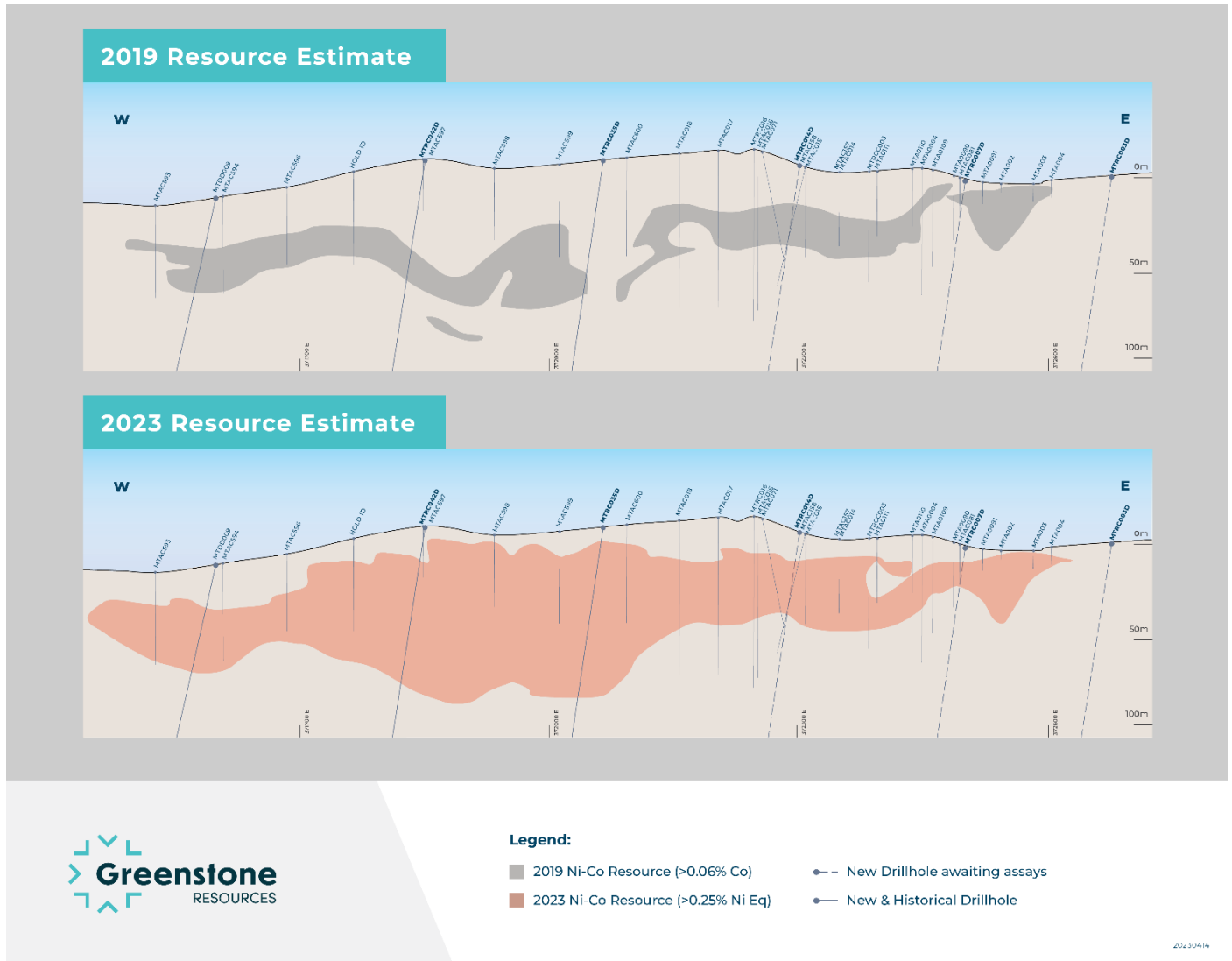


Figure 3: Mt Thirsty Main geological cross-sections showing near-surface resource additions. 2.5x vertical exaggeration. 6447700 N.

**SCOPING STUDY UPDATE**

**OVERVIEW**

Following the completion of the Pre-Feasibility Study (PFS) in early 2020, a number of project optimisation opportunities have subsequently been identified which may have a material impact on the Project economics, including the adoption of High-Pressure Acid Leaching (HPAL) and the addition of a cathode precursor plant to produce a Precursor Cathode Active Material (pCAM).

A specialist team of independent consultants has subsequently been engaged to undertake a Scoping Study, including Simulus Pty Ltd (Simulus) and WSP Australia Pty Limited (WSP).

Simulus is a leading hydrometallurgy and mineral processing services group that specialises in metallurgical test work, process simulation, engineering studies and the development of hydrometallurgical flowsheets. Simulus bring extensive HPAL experience, having been involved in the assessment, development, design, commissioning or operation of 22 nickel projects over the past 19 years.



WSP is a full-service mining consultancy with a global team of over 4,400 dedicated mining professionals covering geology, resource estimation, mining, processing and environmental. WSP’s mining team (formally Golder Associates) have extensive experience with the Mt Thirsty project, having previously undertaken the most recent Mineral Resource estimates and tailings design. As part of the Scoping Study, WSP will be undertaking an updated mine design, tailings management plan and associated site infrastructure design.

**ABOUT PRECURSOR CATHODE ACTIVE MATERIAL (PCAM)**

A precursor cathode active material (pCAM) is a substance that is used in the production of cathode materials for lithium-ion batteries, which are commonly used in electric vehicles. A pCAM is typically composed of a combination of cobalt, nickel, and manganese, along with other chemical additives that help to improve the performance and stability of the battery. Cathode materials are one of the key components of lithium-ion batteries required to decarbonise the global economy, as they determine the performance characteristics of the battery, such as energy density, power density, and cycle life.

The Mt Thirsty cobalt-nickel-manganese-scandium project is uniquely positioned containing all three of the principal constituents to produce the preferred 811 nickel-cobalt-manganese pCAM product (eight parts nickel, one part cobalt, and one part manganese). Importantly, the adoption of pCAM provides the ability to produce a significantly higher value product which typically receives a ~50% pricing premium over the intermediary product (MHP / MSP) that the Project was previously envisaged to produce (Figure 4). As such the production of pCAM has the potential to increase both payable metal content and as a result also increase revenue.

**NICKEL PRODUCT PAYABLE VS. SPOT PRICE**

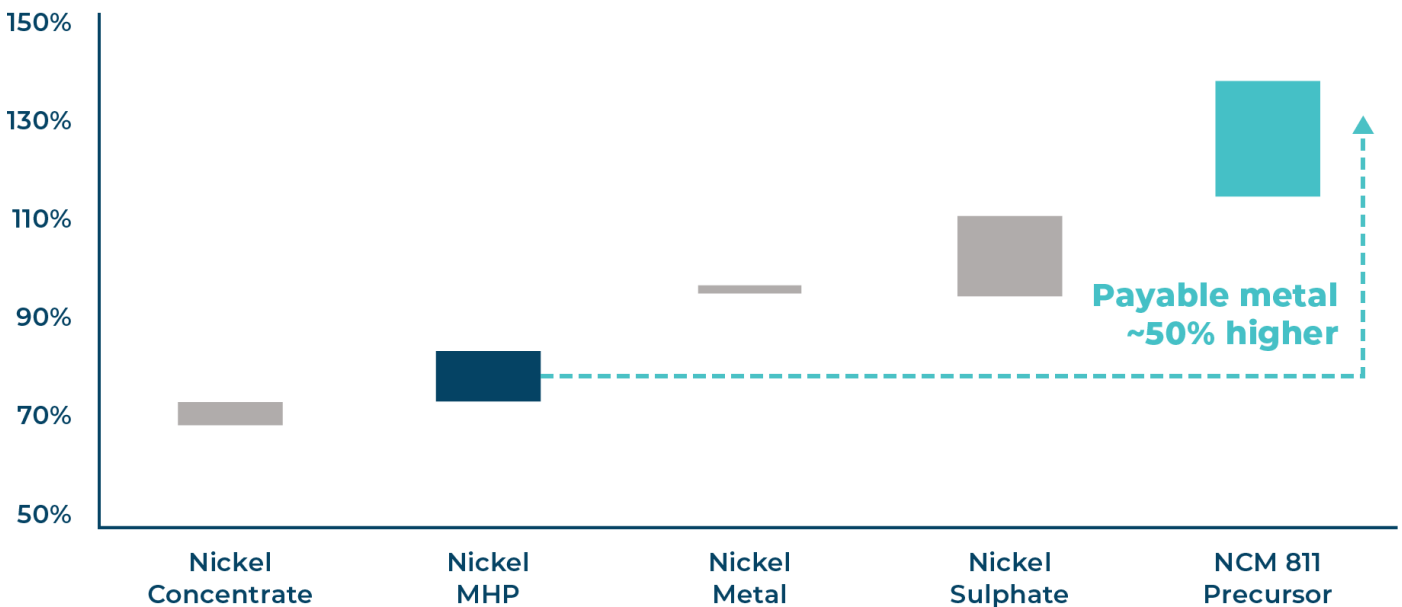
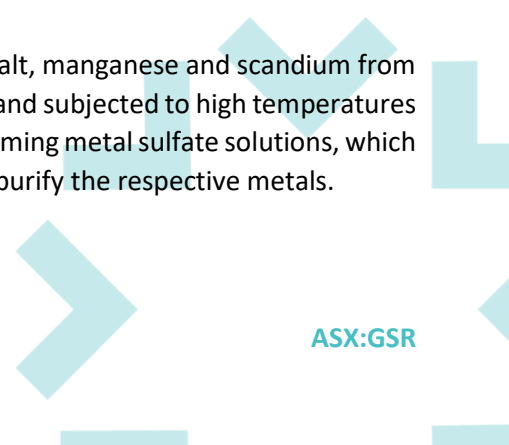


Figure 4: Illustration of nickel product payability vs metal spot price<sup>9</sup>

**ABOUT HIGH PRESSURE ACID LEACHING (HPAL)**

High pressure acid leaching (HPAL) is a process used to typically extract nickel, cobalt, manganese and scandium from oxide orebodies. During the HPAL process, the oxide ore is mixed with sulfuric acid and subjected to high temperatures and pressures in an autoclave vessel. The acid dissolves the metals from the ore, forming metal sulfate solutions, which are then subjected to a series of chemical and physical processes to separate and purify the respective metals.

<sup>9</sup> ASX:BSX 16/09/2022; Greenstone Analysis (25th & 75th percentile, last three years, 22% contained nickel, Shanghai Metals Market)





Numerous improvements have in HPAL have been realised over the past five years following the rapid adoption in Indonesia following the export ban on unrefined nickel ores. The new fifth generation of HPAL operations in Indonesia are being constructed at US\$30-35,000 per annual tonne of nickel, compared to an average of closer to US\$100,000 per annual tonne of nickel for the previous generation four plants<sup>10</sup>. These later generation plants are now ramping-up to nameplate capacity in less than 12 months (Figure 5).

**TIMELINE OF HPAL RAMP-UP**

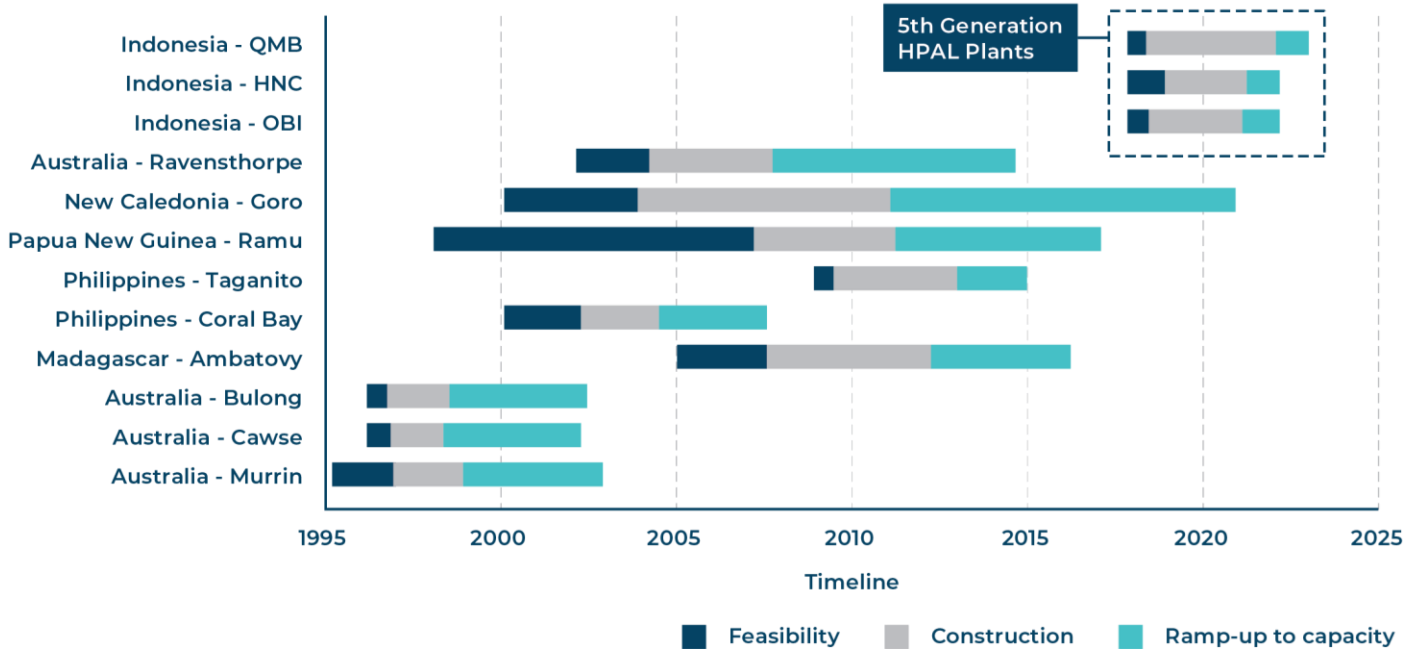


Figure 5: Timeline of HPAL plants from feasibility study to nameplate production<sup>11</sup>

The adoption of HPAL at Mt Thirsty is expected to materially improve both cobalt and nickel recoveries, serving to increase the amount of sellable metal and therefore increase life of mine revenue. The previously completed pre-feasibility study (ASX Announcement 20/2/2020) had elected to utilise atmospheric leaching, however despite extensive metallurgical test work, cobalt and nickel recoveries only averaged 74.3% and 22.3%, respectively. Comparable HPAL projects in Australia typical receive cobalt and nickel recoveries of 90.1% and 92.3%, respectively<sup>12</sup>.

The identification of scandium in the most recent drill campaign serves to highlight the potential to add a valuable by-product revenue stream, and while insufficient data currently exists to support the inclusion of scandium in the updated mineral resource estimate update, the HPAL test work will still assess the ability to produce a scandium oxide product.

Scandium is a rare earth metal that is highly valued for its unique properties, including high strength, light weight, and resistance to corrosion. It has a wide range of applications, including aerospace, defence, hydrogen fuel cells and electronics industries. In 2021 the global scandium market size was valued at US\$460.9 million, however this is projected to reach US\$977.3 million by 2030, growing at a forecasted Compounded Annual Growth Rate of 8.7% between 2022 to 2030<sup>13</sup>. The potential addition of scandium to the Co-Ni-Mn-Sc Mt Thirsty Project may provide a valuable by-product revenue stream. The current price of scandium oxide is A\$1,198,200/t; cobalt is A\$54,000/t; nickel is A\$34,700/t and manganese is A\$2,800/t<sup>14</sup>.

<sup>10</sup> <https://www.theassay.com/articles/analysis/the-rise-and-rise-of-indonesian-hpal-but-can-it-continue/>

<sup>11</sup> Wood Mackenzie

<sup>12</sup> ASX:NC1 22/12/2022; ASX:CLQ 25/06/2018

<sup>13</sup> <https://straitresearch.com/report/scandium-market>

<sup>14</sup> Shanghai Metals Market 04/04/2023; AUD:USD 0.68



**OVERVIEW OF PROPOSED FLOWSHEET**

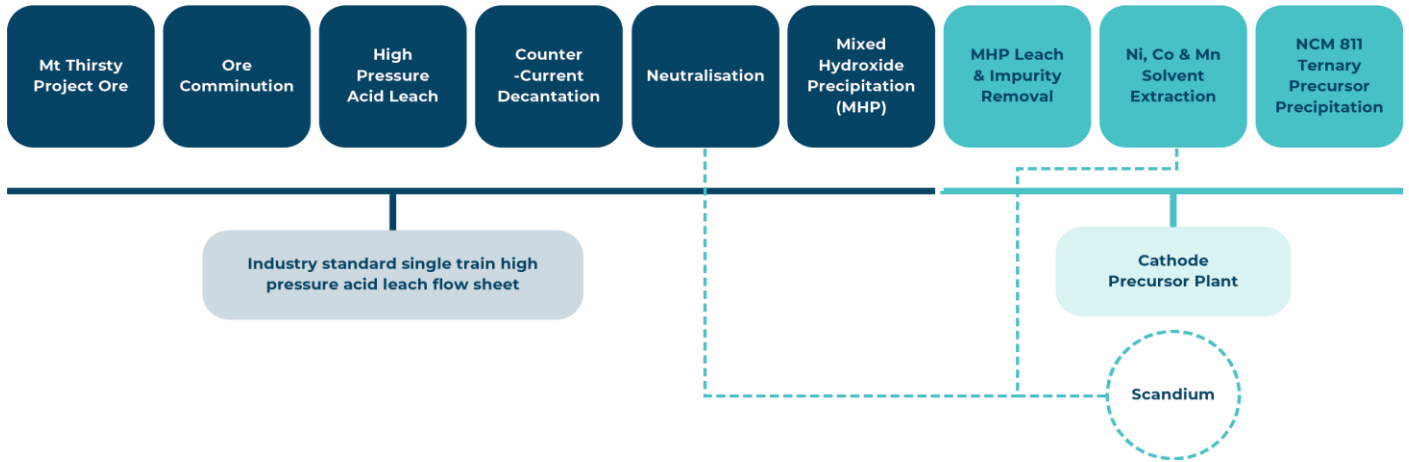


Figure 6: Overview of HPAL and pCAM flowsheet

The Scoping Study is underway and is expected to be completed by early-July (Figure 7). It is expected that the Scoping Study may provide a foundation for the potential future consolidation and IPO of the Mt Thirsty project later this year, followed by a Pre-Feasibility study, that will target a low-cost, ethical and sustainable source of cobalt and nickel outside of the Democratic Republic of the Congo and Russia.

**INDICATIVE SCOPING STUDY TIMELINE**

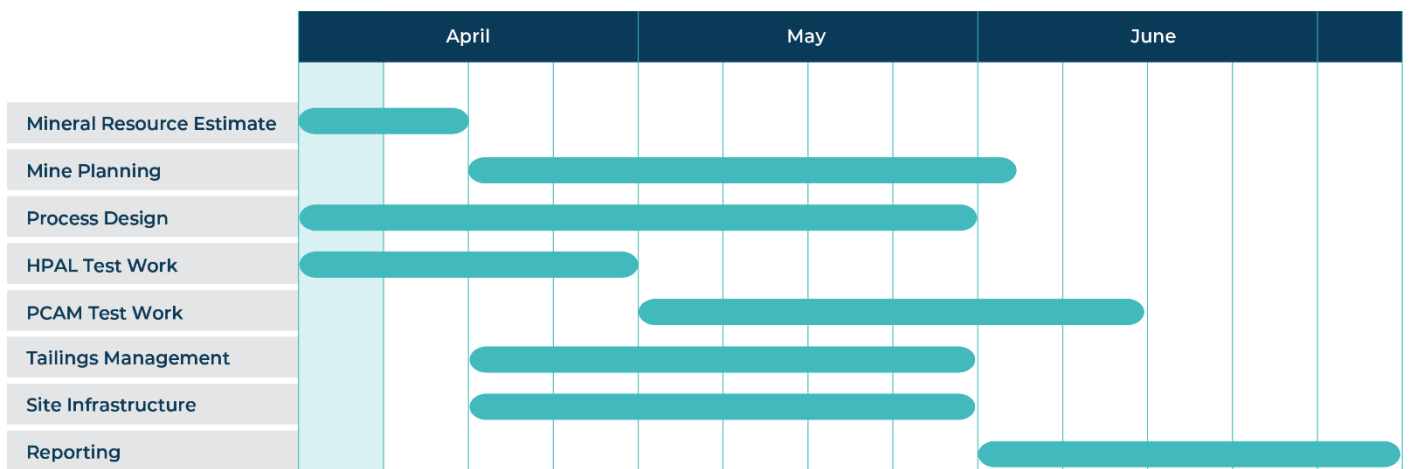


Figure 7: Indicative Scoping Study project timeline to completion.

**MT THIRSTY MATERIAL INFORMATION SUMMARY**

**MINERAL RESOURCE STATEMENT**

The Mineral Resource Statement for the Mt Thirsty Mineral Resource Estimate was prepared during 2023 and is reported according to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the 'JORC Code') 2012 edition.

The information in this announcement which relates to Mineral Resources is based on information provided to and compiled by Richard Gaze, who is a full-time employee of WSP Australia Pty Ltd, and a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Richard Gaze has sufficient relevant experience regarding the style of mineralisation and type of deposits under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in JORC 2012.

The Mineral Resources reported within this announcement utilises all drilling completed to 30 November 2018 using Ordinary Kriging interpolated block models. The Mineral Resource is reported above a 0.25% NiEq cut-off grade within an optimised pit shell to satisfy RPEEE.

	Cut-off Grade (NiEq%)	Dry Tonnes (Mt)	Grade			Contained Metal		
			Ni (%)	Co (%)	Mn (%)	Ni (kt)	Co (kt)	Mn (kt)
<b>Mt Thirsty Main (MTTM)</b>								
Indicated	0.25	30.2	0.51	0.10	0.69	154.0	29.3	208.4
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Indicated	0.25	0.0	0.00	0.00	0.00	0.0	0.0	0.0
Inferred	0.25	4.20	0.43	0.05	0.29	18.1	2.0	12.2
<b>Total</b>	<b>0.25</b>	<b>4.20</b>	<b>0.43</b>	<b>0.05</b>	<b>0.29</b>	<b>18.1</b>	<b>2.0</b>	<b>12.2</b>
<b>Total</b>	<b>0.25</b>	<b>66.3</b>	<b>0.43</b>	<b>0.06</b>	<b>0.45</b>	<b>283.7</b>	<b>40.5</b>	<b>297.1</b>

Figure 8: Summary of 2023 Mineral Resource Estimate for Mt Thirsty

## GEOLOGY AND GEOLOGICAL INTERPRETATION

The MTTM and MTTN deposits are hosted in a strongly weathered ultramafic peridotite rock, located between a sediment-ultramafic-basalt sequence to the west and a thick gabbro-pyroxenite unit to the east. Weathering and supergene enrichment processes have produced the deposit which is enriched in cobalt, nickel and manganese. The manganese and cobalt contents are particularly high compared to most nickel oxide deposits located in Western Australia. The oxide mineralisation typically starts from near surface to around 12 meters below the surface, where goethitic clays are present with an iron composition of around 30%. With depth, the colour of the goethitic clays darken as the asbolane (manganese oxide mineral) content increases. This darkening marks the start of the cobalt enriched, high-grade portion of the deposit. Further down the profile the goethitic iron oxide colouring, or dark colouring due to the asbolane, diminishes with greenish nontronite and serpentine minerals becoming dominant (lower saprolite). Near the bottom of the lower saprolite zone, chalcedonic banding is common. High-grade cobalt is almost always associated with dark asbolane. A typical cross section through the mineralisation is provided in Figure 3 (MTTM).

## DRILLING TECHNIQUES

### MT THIRSTY MAIN (MTTM)

The majority of samples have been obtained by drilling of 686 vertical air core (AC) holes on a close spaced grid to maximum depths of about 100 m within Retention Licence R63/4. A further eight holes were drilled by reverse circulation (RC) drilling, and another 21 holes by RAB drilling. An additional seven core holes (sonic drilling) were completed to obtain core for density measurements and to twin existing AC holes. A further seven AC holes were drilled in 2012, three in 2018, and six RC holes in 2016 to provide samples for metallurgical test work.

### MT THIRSTY NORTH (MTTN)

The majority of samples have been obtained by drilling of 30 vertical AC holes and one inclined hole on a close spaced grid to maximum depths of about 50 m within Exploration Licence E63/1267. All holes were used in the Mineral Resource Estimate.

## SAMPLING AND SUB-SAMPLING TECHNIQUES

### MT THIRSTY MAIN (MTTM)

In the 2006-2007 AC program (320 AC holes) samples were bagged and tube sampled. In subsequent programs all drill chips were split with either a rotary splitter or by hand with a riffle splitter and the remaining sample was placed on





the ground. Wet samples were carefully sampled on the ground by hand trowel in representative vertical slices through the entire pile.

The sonic core was removed from the plastic sleeves and logged. Selected portions were removed and kept intact for SG determinations. The remaining core was then cut in half with the right half side sampled for assaying.

Sample preparation followed industry standard practice of drying, coarse crushing to -6 mm, before pulverising to 90% passing 75 µm.

#### **MT THIRSTY NORTH (MTTN)**

All drill chips were collected in a cyclone and split by hand with a riffle splitter and the remaining sample was placed on the ground. There were no wet samples. Duplicate samples were obtained from the sample piles with a plastic scoop.

Sample preparation followed industry standard practice of drying, coarse crushing to -6 mm, before pulverising to 90% passing 75 µm.

#### **SAMPLE ANALYSIS METHOD**

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' Kalassay laboratory. These procedures are considered appropriate for the elements and style of mineralisation. Analysis is considered total.

#### **ESTIMATION METHODOLOGY**

##### **MT THIRSTY MAIN (MTTM)**

The block dimensions for the Mt Thirsty Cobalt deposit were determined based on drilling density, and mining assumptions.

Grade estimation was completed using Ordinary Kriging (**OK**) in WSP proprietary software. Grades were estimated for Co, Ni, Mn, Fe, Mg, Zn, and Al using 1 m composites. Grade estimation was completed in three passes.

The regolith horizons were estimated using hard boundaries for all variables. Grade estimates were made to the parent block volume of 10 × 25 × 2 m. No sub-celling is used.

Top cuts or spatial constraints were applied to Ni, Co, Mn, Fe, Mg, and Al to limit extrapolation of high-grade samples.

##### **MT THIRSTY NORTH (MTTN)**

The block dimensions for the Mt Thirsty North Cobalt-Nickel Deposit were determined based on drilling density, and mining assumptions.

Grade estimation was completed using Ordinary Kriging in WSP proprietary software. Grades were estimated for Co, Ni, Mn, Fe and Mg using 1 m composites.

The regolith horizons were estimated using hard boundaries for all variables. Grade estimates were made to the parent block volume of 20 × 50 × 2 m. Sub-cells of 10 × 25 × 2 m were used to provide reasonable resolution of geological boundaries.

High grade spatial constraints were applied to Ni, Co, and Mn to limit extrapolation of high-grade samples.





## CLASSIFICATION CRITERIA

Mineral Resources were classified in accordance with the Australasian Code for the Reporting of Identified Mineral Resources and Ore Reserves (JORC, 2012).

The classification of the Mineral Resource was completed by WSP geologists. The classification of Mineral Resources was considered appropriate on the basis of data density and quality, representativeness of sampling, geological confidence criteria, and estimation performance parameters.

## CUT-OFF GRADES

Mineral Resources are reported at a 0.25% Nickel Equivalent (NiEq) cut-off grade utilising the following assumptions:

	Price (US\$/t)	Recovery (%)	Payable Metal (%)
Nickel	53,000	92.0	85.0
Cobalt	23,000	92.0	70.0
Manganese	2,000	75.0	70.0

$$\text{NiEq} = (\text{Ni}\% \times \text{Ni Recovery \%} \times \text{Ni Payability \%}) + ((\text{Co}\% \times \text{Co Price} \times \text{Co Recovery \%} \times \text{Co Payability \%}) / \text{Ni Price}) + ((\text{Mn}\% \times \text{Mn Price} \times \text{Mn Recovery \%} \times \text{Mn Payability \%}) / \text{Ni Price})$$

## MINING FACTORS

This Mineral Resource statement assumes mining by conventional shallow open pit techniques. The geometry of the deposit is amenable to open pit mining and optimised pit shells were used to test for “reasonable prospects for eventual economic extraction” (RPEEE) and used to constrain the reporting of the Mineral Resource.

An allowance has been made for a mining buffer zone at tenement boundaries.

Metallurgical test work programmes are currently ongoing. Previous studies on other Co-Ni-Mn laterite deposits have demonstrated the potential for economic Co, Ni, and Mn extraction using HPAL to produce a Ni-Co mixed hydroxide precipitate product and a Mn-carbonate product.

Mineral Resources were reported within an RPEEE optimised pit shell, which assumed mining costs of \$US3.50/t; HPAL processing costs of US\$55.5/t and applied the below conditions:

	Price (US\$/t)	Recovery (%)	Payable Metal (%)
Nickel	63,600	92.0	85.0
Cobalt	27,600	92.0	70.0
Manganese	2,400	75.0	70.0

*This announcement is authorised by the Board of Directors.*

**- END -**

Chris Hansen

**Managing Director & Chief Executive Officer**  
**Greenstone Resources Limited**

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## **DISCLAIMER**

The interpretations and conclusions reached in this announcement are based on current geological 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 announcement will therefore carry an element of risk. This announcement contains forward-looking statements that involve several 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 announcement. 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 STATEMENT**

The information in this announcement which relates to Exploration Results and geological interpretation at Mt Thirsty is based on information compiled by Mr Glenn Poole an employee of Greenstone Resources Limited who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Poole consents to the inclusion in the announcement of the matters based on their information in the form and context in which it appears.

The information in this announcement which relates to Mineral Resources is based on information provided to and compiled by Richard Gaze, who is a full-time employee of WSP Australia Pty Ltd, and a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Richard Gaze has sufficient relevant experience regarding the style of mineralisation and type of deposits under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in JORC 2012. Mr Gaze consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

The company is not aware of any new information or data that materially affects the information presented and that the material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcements.



**LOCATION MAP**

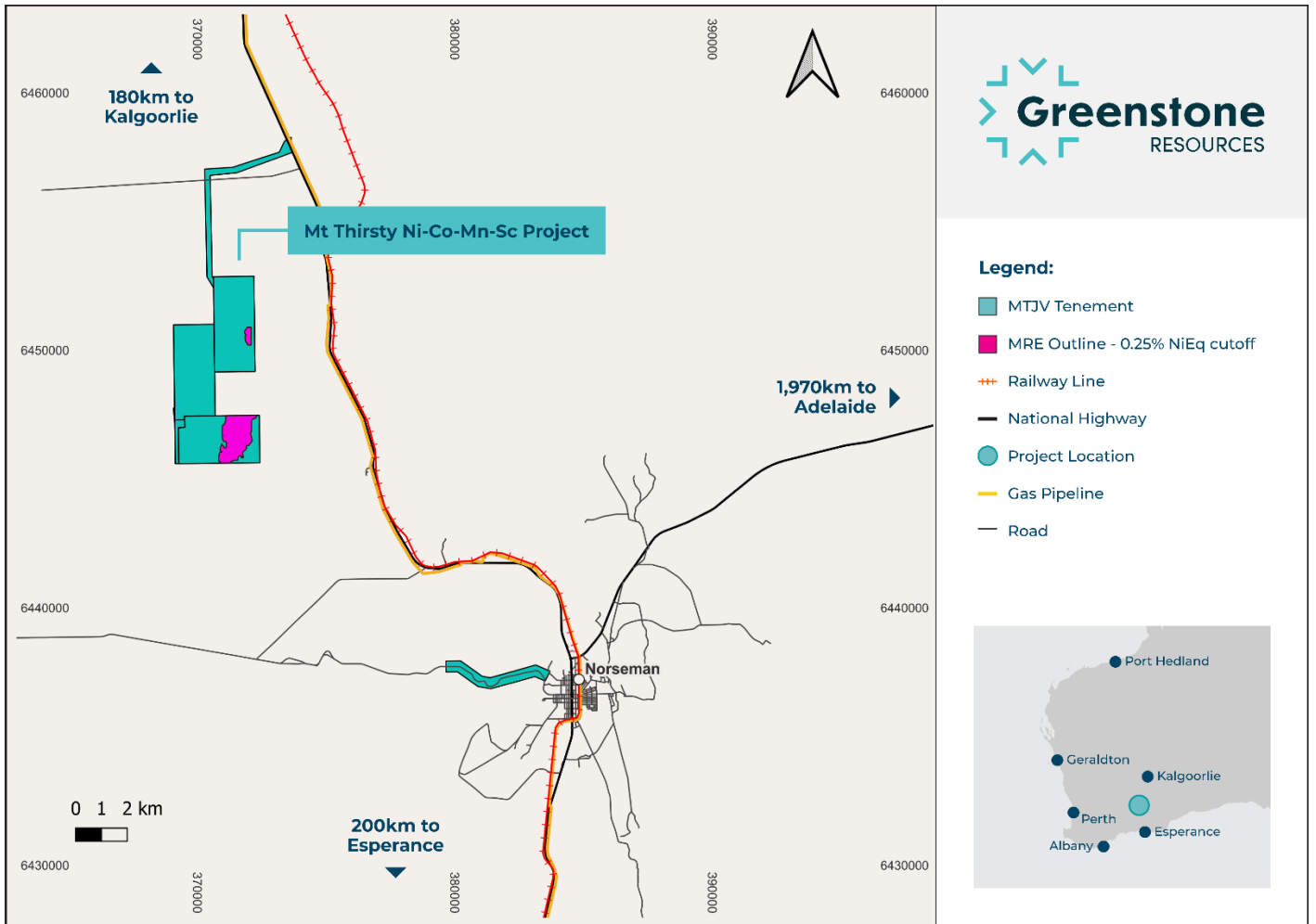


Figure 9: Location overview map for the Mt Thirsty Project



**THE FOLLOWING TABLE IS PROVIDED TO ENSURE COMPLIANCE WITH THE JORC CODE (2012 EDITION) FOR THE REPORTING OF MINERAL RESOURCES.**

The table below summarises the assessment and reporting criteria used for the Mt Thirsty Resource estimate and reflects the guidelines in Table 1 of The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2012).

JORC Code Assessment Criteria	Comment
<b>Section 1 Sampling Techniques and Data</b>	
<b>Sampling Techniques</b>	<b>MTTM:</b>
<p><i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>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 (e.g. ‘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 (e.g. submarine nodules) may warrant disclosure of detailed information.</i></p>	<p>The majority of samples have been obtained by drilling of 686 vertical air core (AC) holes on a close spaced grid to maximum depths of about 100 m within Retention Licence R63/4. A further eight holes were drilled by reverse circulation (RC) drilling, and another 21 holes by RAB drilling. An additional seven core holes (sonic drilling) were completed to obtain core for density measurements and to twin existing AC holes. A further seven AC holes were drilled in 2012, three in 2018, and six RC holes in 2016 to provide samples for metallurgical test work.</p> <p>Resource drilling was carried out on a campaign basis between 1996 and 2016, with 375 holes (363 AC, 8 RC, &amp; 7 SC) drilled by Barra Resources Ltd (2006-2008) and 149 AC holes by the Mt Thirsty Joint Venture (Barra Resources Ltd and Conico Ltd) from 2009-2016.</p> <p>Sampling details for the earlier AC and RAB holes drilled by Resolute are not well known but the AC holes are believed to have been carried out to industry standards and company reports indicate that they carried out QA/QC checks. Data appears consistent with more recent drilling campaigns.</p> <p>Holes were drilled on a regular spaced grid to below the base of the resource in most cases. Grid spacing is 50 m x 40 m or closer on the eastern side of deposit and 50 m x 80 m on western side. Most holes were sampled at even regular 1 m intervals.</p> <p>AC drilling was mostly used to obtain 1 m samples from which a 2 kg split was bagged and sent to the laboratory. The sample was then dried and pulverised and a 40 gm sub-sample analysed for Co, Ni, Mn, Zn, Mg, Al &amp; Fe using a four acid digest with an ICP OES finish.</p> <p><b>MTTN:</b></p> <p>The majority of samples have been obtained by drilling of 30 vertical air core (AC) holes and one inclined hole on a close spaced grid to maximum depths of about 50 m within Exploration Licence E63/1267. All holes were used in the Mineral Resource Estimate.</p> <p>Resource drilling was carried out in 2017 with all holes drilled by the Mt Thirsty Joint Venture (Barra Resources Ltd and Conico Ltd).</p> <p>Holes were drilled on a regular spaced grid to below the base of the resource in most cases. Grid spacing is 40 m x 100 m over the majority of the deposit. There is an area of 40 m by 50 m near the middle of the deposit. Most holes were sampled at even regular 1 m intervals.</p> <p>AC drilling was mostly used to obtain 1 m samples from which a 2 kg split was bagged and sent to the laboratory. The sample was then dried and</p>



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	pulverised and a 40 gm sub sample analysed for Co, Ni, Mn, Al, Mg & Fe using a four acid digest with an ICP OES finish.
<b>Drilling Techniques</b>	<b>MTTM &amp; MTTN:</b>
<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.), and details (e.g. 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.).</i>	AC blade drilling (85 mm hole diameter) was mostly used, with minor AC hammer in rare hard bands. Sonic drilling (97.5 mm diameter) was used for twin hole comparison and to recover core for density measurements. No core orientation was deemed necessary in these vertical holes.
<b>Drill Sample Recovery</b>	<b>MTTM &amp; MTTN:</b>
<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	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.
<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	Drill hole cuttings were collected in a cyclone, and subsequently reduced in volume with a sampling tube (pre 2009 Barra drilling), riffle or rotary splitter. The cyclone was cleaned between each three metre rod and every metre for wet samples; riffle splitters were cleaned as required. Water injection was kept to a minimum (water injection was not used for MTTN).
<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>	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.
<b>Logging</b>	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.
<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>	Logging is qualitative in nature.
<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.), photography.</i>	The entire length of each hole was logged in 1 m to 5 m intervals.
<i>The total length and percentage of the relevant intersections logged.</i>	
<b>Sub-Sampling Techniques and Sample Preparation</b>	<b>MTTM:</b>
<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	The sonic core was removed from the plastic sleeves and logged. Selected portions were removed and kept intact for SG determinations. The remaining core was then cut in half with the right half side sampled for assaying.
<i>If non-core, whether riffled, tube sampled, rotary split, etc., and whether sampled wet or dry.</i>	In the 2006-2007 AC program (320 AC holes) samples were bagged and tube sampled. In subsequent programs all drill chips were split with either a rotary splitter or by hand with a riffle splitter and the remaining sample was placed on the ground. Wet samples were carefully sampled on the ground by hand trowel in representative vertical slices through the entire pile.
<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	



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<p><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></p> <p><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></p> <p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<p>Sample preparation followed industry standard practice of drying, coarse crushing to -6 mm, before pulverising to 90% passing 75 micron.</p> <p>To meet QA/QC requirements duplicates were placed at irregular intervals in the sample stream, usually one or two duplicates per drill hole (approximately every 20-40 m). From 2009 certified blanks (OREAS 24P) were also placed in the sample stream at the rate of 1 in 100, at each hundredth sample. Additionally, two different certified standards were also used in the sample stream (OREAS 72A and OREAS 162) at the rate of 2 standards per 100 samples. These were placed at the 25<sup>th</sup> and 75<sup>th</sup> number of every hundred samples.</p> <p>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 410 duplicates collected and therefore the duplicate results are also considered satisfactory.</p> <p>Material being sampled is generally fine grained, and a 2-3 kg sample from each metre is considered adequate.</p> <p><b>MTTN:</b></p> <p>All drill chips were collected in a cyclone and split by hand with a riffle splitter and the remaining sample was placed on the ground. There were no wet samples. Duplicate samples were obtained from the sample piles with a plastic scoop.</p> <p>Sample preparation followed industry standard practice of drying, coarse crushing to -6 mm, before pulverising to 90% passing 75 µm.</p> <p>To meet QAQC requirements duplicates were placed at irregular intervals in the sample stream, one or two duplicates per drill hole. Certified blanks (OREAS 24P or 22e) were also placed in the sample stream at the rate of 1 in 50. Additionally, a certified standard was also used in the sample stream (OREAS 182) at the rate of 4 standards per 100 samples.</p> <p>Duplicates were collected from approx. 1 in every 20 samples.</p> <p>The Co values in the blank samples ranged from &lt;1 to 2 ppm in OREAS 22e and 42 to 49 ppm in OREAS24P, close to the provided values of 0.68 and 44 ppm Co respectively; comparatively low compared to the estimated resource values and within acceptable ranges for blank samples. Overall there were only a small number of outliers in the 41 duplicates collected and therefore the duplicate results are also considered satisfactory.</p> <p>On average Co values obtained from the OREAS 182 standards were 3.8% less than the provided value of 728 ppm and within an acceptable range (681 to 726 ppm). Ni values were on average 1.8% below the provided value of 7070 ppm.</p> <p>Material being sampled is generally fine grained, and a 2 3 kg sample from each metre is considered adequate.</p>
Quality of Assay Data and Laboratory Tests	



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<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></p> <p><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></p> <p><i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></p>	<p><b>MTTM &amp; MTTN:</b></p> <p>Samples were crushed and pulverised, and analysed for Co, Ni, Mn, Zn, Mg, Al &amp; Fe using a four acid digest with an ICP OES finish (method AD02-ICP) by Bureau Veritas' Kalassay laboratory. These procedures are considered appropriate for the elements and style of mineralisation. Analysis is considered total.</p> <p>No geophysical tools have been used.</p> <p>The internal laboratory QAQC procedures included analysing its own suite of internal standards and blanks within every sample batch and also adding sample duplicates.</p>
<p><b>Verification of Sampling and Assaying</b></p> <p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p> <p><i>The use of twinned holes.</i></p> <p><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></p> <p><i>Discuss any adjustment to assay data.</i></p>	<p><b>MTTM &amp; MTTN:</b></p> <p>Significant intersections are determined by company personnel and checked internally.</p> <p>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.</p> <p>Data is not subject to any adjustments.</p> <p><b>MTTM:</b></p> <p>A limited number of twinned RC holes and AC holes twinned by SC holes were drilled. 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.</p>
<p><b>Location of Data Points</b></p> <p><i>Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></p> <p><i>Specification of the grid system used.</i></p> <p><i>Quality and adequacy of topographic control.</i></p>	<p><b>MTTM &amp; MTTN:</b></p> <p>The grid system used is AGD84; AMG Zone 51 to match a previously established grid.</p> <p><b>MTTM:</b></p> <p>Collar locations were determined either by handheld GPS (for 149 AC holes) or differential GPS (for 363 AC holes) and are accurate to approximately +/- 5 m or 1 m respectively (northing and easting).</p> <p>A DTM and 2.5 m 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.</p> <p><b>MTTN:</b></p> <p>Collar locations were determined by handheld GPS and are accurate to approximately ±5 m (northing and easting).</p>





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	2.5 m 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.
<p><b>Data Spacing and Distribution</b></p> <p><i>Data spacing for reporting of Exploration Results.</i></p> <p><i>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.</i></p> <p><i>Whether sample compositing has been applied.</i></p>	<p><b>MTTM &amp; MTTN:</b></p> <p>The drill hole spacing is considered more than sufficient to establish the degree of geological and grade continuity for Mineral Resources estimation of this style of mineralisation.</p> <p>Most holes were sampled and assayed in 1 m intervals and no other compositing has been applied during sample collection and laboratory preparation.</p> <p><b>MTTM:</b></p> <p>Drill holes are generally spaced on a regular grid of either 40 m × 50 m or 80 m × 50 m.</p> <p><b>MTTN:</b></p> <p>Drill holes are generally spaced on a regular grid of 40 m × 100 m.</p>
<p><b>Orientation of Data in Relation to Geological Structure</b></p> <p><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></p> <p><i>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.</i></p>	<p><b>MTTM &amp; MTTN:</b></p> <p>The mineralisation is mostly contained within a flat lying weathering blanket and vertical holes achieve unbiased sampling in most cases.</p> <p>A few isolated very thick intersections are believed to be related to weathering down vertical structures and these were interpreted with limited areal extent to minimise bias.</p>
<p><b>Sample Security</b></p> <p><i>The measures taken to ensure sample security.</i></p>	<p><b>MTTM &amp; MTTN:</b></p> <p>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.</p>
<p><b>Audits and Reviews</b></p> <p><i>The results of any audits or reviews of sampling techniques and data.</i></p>	<p><b>MTTM &amp; MTTN:</b></p> <p>The drill hole database was validated by WSP prior to 2011 resource estimation with no significant errors arising.</p>
<b>Section 2 Reporting of Exploration Results</b>	
<p><b>Mineral Tenement and Land Tenure Status</b></p> <p><i>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.</i></p> <p><i>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.</i></p>	<p>The exploration results relate to the Mt Thirsty Project, located approximately 16 km 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 Greenstone 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 Purpose Lease application over E63/1790 and P63/2045. The mineral resource referred to in this announcement is located on R63/4.</p> <p>A 1.75% 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</p>



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	<p>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.</p> <p>Meteore/Greenstone have secured tenure over the project area and there are no known impediments to obtaining a licence to operate in the area.</p>
<p><b>Exploration Done by Other Parties</b></p> <p><i>Acknowledgment and appraisal of exploration by other parties.</i></p>	<p>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.</p>
<p><b>Geology</b></p> <p><i>Deposit type, geological setting and style of mineralisation.</i></p>	<p>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.</p>
<p><b>Drill hole information</b></p> <p><i>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:</i></p> <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>	<p>Not applicable.</p>
<p><b>Data aggregation methods</b></p> <p><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually material and should be stated.</i></p> <p><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></p> <p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	<p>Not applicable.</p>
<p><b>Relationship between mineralisation widths and intercept lengths</b></p> <p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p> <p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p>	<p>As the mineralisation is generally flat lying and nearly all holes were drilled vertically; down hole width is mostly considered to be true width.</p>



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<i>If it is not known and only the down-hole lengths are reported, there should be a clear statement to this effect (eg. 'downhole length, true width not known').</i>	
<b>Diagrams</b> <i>Where possible, maps and sections (with scales) and tabulations of intercepts should be included for any material discovery being reported if such diagrams significantly clarify the report.</i>	All diagrams contained in this document are generated from spatial data displayed in industry standard mining and GIS packages.
<b>Balance reporting</b> <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>	Not applicable.
<b>Other substantive exploration data</b> <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>	<b>MTTM:</b> A number of bulk samples have been collected and extensive metallurgical test work has been completed. There are no potential deleterious or contaminating substances. <b>MTTN:</b> No metallurgical test work was carried out on Mt Thirsty North samples. However due to their strong similarity to those from the main Mt Thirsty Cobalt-Nickel Deposit, Co and Ni are considered likely to be recoverable under similar metallurgical conditions.
<b>Further work</b> <i>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.</i>	The limits of the resource are almost fully defined and no further drilling for extensions is planned at this stage. Further infill drilling to upgrade Inferred Resource to Indicated status is contemplated.  Approx. 30 early AC holes have been identified as not being drilled deep enough to fully test the mineralised zone on the western side of the deposit and these may be redrilled in the future.  RAB drilling (15 holes) covers a small area of the Inferred resource. Replacement of these holes with AC was contemplated.  This mineral resource estimate is adequate for PFS level mining studies. Incorporation of geometallurgical parameters is recommended for DFS and detailed engineering studies.
<b>Section 3 Estimation and Reporting of Mineral Resources</b>	
<b>Database Integrity</b> <i>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.  Data validation procedures used.</i>	<b>MTTM &amp; MTTN:</b> An extract from the MTJV's master Acquire database was provided to WSP for this study.  On loading the database for modelling, WSP performed data checks including the verification of: <ul style="list-style-type: none"><li>– Collar depth with final sample depth.</li><li>– Collar RLs with topographic data where possible.</li><li>– Any overlapping intervals or gaps in the downhole data.</li><li>– Grid survey problems.</li><li>– Duplicate drill hole numbers and coordinates.</li><li>– Duplicate geological and assay intervals.</li></ul>



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	– Nominal surveys vs. precise surveys.
<p><b>Site Visits</b></p> <p><i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></p> <p><i>If no site visits have been undertaken indicate why this is the case.</i></p>	<p>WSP did not visit site for this resource update.</p> <p>Mr Glenn Poole has visited the site on numerous occasions in his role as chief geologist including oversight of recent drilling programmes.</p>
<p><b>Geological Interpretation</b></p> <p><i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i></p> <p><i>Nature of the data used and of any assumptions made.</i></p> <p><i>The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation.</i></p> <p><i>The factors affecting continuity both of grade and geology.</i></p>	<p><b>MTTM &amp; MTTN:</b></p> <p>A mineralisation interpretation for the Mt Thirsty Cobalt deposit was completed by MTJV personnel on hardcopy cross-sections and used to validate 3D modelling.</p> <p>Sample data analysed using Kmeans clustering to group data into like domains. This is checked against dominant logging codes.</p> <p>Kmeans cluster results are loaded into Leapfrog geological modelling software. Interpretation is in section then wireframed into 3D shapes using Leapfrog’s in-built modelling tools.</p>
<p><b>Dimensions</b></p> <p><i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</i></p>	<p><b>MTTM:</b></p> <p>The deposit has a strike length of approximately 2.5 km and a maximum plan width of about 900 m. The portion held by the MTJV is the southern 1.8 km of strike length contained within R63/4.</p> <p>The Mineral Resources estimates have been constrained by tenement boundaries.</p> <p><b>MTTN:</b></p> <p>The deposit has a strike length of approximately 850 m and a maximum plan width of about 200 m. The Mineral Resources estimates have been constrained by tenement boundaries.</p>
<p><b>Estimation and Modelling Techniques</b></p> <p><i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters, and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></p> <p><i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></p> <p><i>The assumptions made regarding recovery of by-products.</i></p>	<p><b>MTTM:</b></p> <p>The block dimensions for the Mt Thirsty Cobalt deposit were determined based on drilling density, and mining assumptions.</p> <p>Grade estimation was completed using Ordinary Kriging (OK) in WSP proprietary software. Grades were estimated for Co, Ni, Mn, Fe, Mg, Zn, and Al using 1 m composites. Grade estimation was completed in three passes.</p> <p>The regolith horizons were estimated using hard boundaries for all variables.</p> <p>Grade estimates were made to the parent block volume of 10 × 25 × 2 m. No sub-celling is used.</p> <p>Top cuts or spatial constraints were applied to Ni, Co, Mn, Fe, Mg, and Al to limit extrapolation of high-grade samples.</p> <p><b>MTTN:</b></p>



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<p><i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulfur for acid mine drainage characterisation).</i></p> <p><i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></p> <p><i>Any assumptions behind modelling of selective mining units.</i></p> <p><i>Any assumptions about correlation between variables.</i></p> <p><i>Description of how the geological interpretation was used to control the resource estimates.</i></p> <p><i>Discussion of basis for using or not using grade cutting or capping.</i></p> <p><i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></p>	<p>The block dimensions for the Mt Thirsty North Cobalt-Nickel Deposit were determined based on drilling density, and mining assumptions.</p> <p>Grade estimation was completed using Ordinary Kriging (OK) in WSP proprietary software. Grades were estimated for Co, Ni, Mn, Fe and Mg using 1 m composites.</p> <p>The regolith horizons were estimated using hard boundaries for all variables.</p> <p>Grade estimates were made to the parent block volume of 20 × 50 × 2 m. Sub-cells of 10 × 25 × 2 m were used to provide reasonable resolution of geological boundaries.</p> <p>High grade spatial constraints were applied to Ni, Co, and Mn to limit extrapolation of high-grade samples.</p>
<p><b>Moisture</b></p> <p><i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i></p>	<p><b>MTTM:</b></p> <p>The tonnages were estimated using wet bulk density. All Mineral Resources reported on a dry tonnage basis.</p> <p>Moisture determinations were completed on 142 samples and averages assigned to all blocks by regolith horizon.</p> <p><b>MTTN:</b></p> <p>The dry tonnages were estimated using dry bulk density.</p> <p>All grades are reported on a dry % basis.</p>
<p><b>Cut-off Parameters</b></p> <p><i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i></p>	<p>Mineral Resources are reported at a 0.25% Nickel Equivalent (NiEq) cut-off grade.</p> <p><b>NiEq Calculation:</b></p> <p>– <math>NiEq = (Ni\% \times Ni\ Recovery\ \% \times Ni\ Payability\ \%) + ((Co\% \times Co\ Price \times Co\ Recovery\ \% \times Co\ Payability\ \%) / Ni\ Price) + ((Mn\% \times Mn\ Price \times Mn\ Recovery\ \% \times Mn\ Payability\ \%) / Ni\ Price)</math></p> <p><b>Metal Prices (Revenue Factor 1.0):</b></p> <p>– Co Price: 53,000 US\$/t</p> <p>– Ni Price: 23,000 US\$/t</p> <p>– Mn Price: 2,000 US\$/t</p> <p><b>Metal Recovery:</b></p> <p>– Ni: 92%</p> <p>– Co: 92%</p> <p>– Mn: 75%</p>



JORC Code Assessment Criteria	Comment
	<p><b>Metal Payability:</b></p> <ul style="list-style-type: none"> <li>- Ni: 85%</li> <li>- Co: 70%</li> <li>- Mn: 70%</li> </ul>
<p><b>Mining Factors or Assumptions</b></p> <p><i>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution.</i></p> <p>It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</p>	<p>This Mineral Resource statement assumes mining by conventional shallow open pit techniques.</p> <p>Mineral Resources were reported within an RPEEE optimised pit shell, which applied the below parameters and conditions:</p> <ul style="list-style-type: none"> <li>- Mine Lease = 1</li> <li>- Mining Cost 3.5 US\$/t</li> <li>- HPAL Processing Cost 55.5 US\$/t</li> <li>- Recovery: Ni 92%, Co 92%, Mn 75%</li> <li>- Payability: Ni 85%, Co 70%, Mn 70%</li> <li>- Metal Prices (Revenue Factor of 1.2): <ul style="list-style-type: none"> <li>- Co Price: 63,600 US\$/t</li> <li>- Ni Price: 27,600 US\$/t</li> <li>- Mn Price: 2,400 US\$/t</li> </ul> </li> <li>- Royalties of 5.3%</li> </ul>
<p><b>Metallurgical Factors or Assumptions</b></p> <p><i>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</i></p>	<p>Metallurgical test work programmes are currently ongoing. Previous studies on other Co-Ni-Mn laterite deposits have demonstrated the potential for economic Co, Ni, and Mn extraction using high pressure acid leaching (HPAL) to produce a Ni-Co mixed sulphide product and a Mn-carbonate product.</p>
<p><b>Environmental Factors or Assumptions</b></p> <p><i>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</i></p>	<p>WSP is not aware of any environmental issues that would affect the eventual economic extraction of the deposit.</p>
<p><b>Bulk Density</b></p> <p>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</p>	<p>Wet bulk density, moisture, and dry bulk density was assigned to each of the regolith horizons. The wet bulk density values were derived from sonic drill holes samples during earlier modelling exercises.</p> <p>Moisture and dry bulk density values are derived from 142 core samples tested by the MTJV in 2018. Examination of results shows some variation</p>



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<p>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.</p> <p>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</p>	<p>in both moisture and dry bulk density as is expected through a laterite deposit.</p> <p>Mineral Resources for MTTM and MTTN were reported on a dry tonnage basis.</p>
<p><b>Classification</b></p> <p><i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></p> <p><i>Whether appropriate account has been taken of all relevant factors, i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data.</i></p> <p><i>Whether the result appropriately reflects the Competent Person(s)' view of the deposit.</i></p>	<p>Mineral Resources were classified in accordance with the Australasian Code for the Reporting of Identified Mineral Resources and Ore Reserves (JORC, 2012).</p> <p>The classification of the Mineral Resource was completed by WSP geologists. The classification of Mineral Resources was considered appropriate on the basis of data density and quality, representativeness of sampling, geological confidence criteria, and estimation performance parameters.</p>
<p><b>Audits or Reviews</b></p> <p><i>The results of any audits or reviews of Mineral Resource estimates.</i></p>	<p>No audits or reviews have been undertaken on this Mineral Resource estimate.</p>
<p><b>Discussion of Relative Accuracy/Confidence</b></p> <p><i>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i></p> <p><i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></p> <p><i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></p>	<p>The Mineral Resources are an estimate of the global <i>in situ</i> grades. No production data or tests are available to compare with this resource estimate.</p> <p>The relative accuracy is reflected in the Mineral Resource classification discussed above that is in line with industry acceptable standards.</p>

