

## Counter-cyclical \$0 free-peg of Nationally Significant Nickel Deposit

Exploration Licence Application lodged over one of Australia's largest nickel deposits, containing ~1 million tonnes of Nickel and ~100 kilo tonnes of Cobalt

### Nico Young – NSW's Largest Nickel Deposit

- The Nico Young deposit contains ~1Mt of nickel and ~100kt of cobalt with a JORC 2012 compliant resource declared by the previous company, Jervois Mining Limited, in November 2017<sup>i1</sup>.
- The Administrator of Jervois Global Limited (Administrators Appointed – In Liquidation – “Jervois”) relinquished the Nico Young exploration licence, creating an opportunity for Legacy Minerals to peg this nationally significant deposit under Exploration Licence application ELA6901.
- There are no liabilities, encumbrances or private royalties associated with the Nico Young deposit, presenting the Company with exceptional optionality and leverage to Ni and Co prices.

**Table 1:** Nico Young 2017 Inferred Resource at a 0.6% NiEq cut-off<sup>i</sup>

Tonnes (Mt)	Ni grade (%)	Co grade (%)	Contained Ni metal (Kt)	Contained Co metal (Kt)
167.8	0.59	0.06	996.7	96.6

### About Jervois Global Ltd and Nico Young

- Global mining company Jervois held the Nico Young deposit as an early flagship asset in its portfolio as it grew to a \$1B market capitalisation<sup>ii</sup>.
- Jervois (Administrators Appointed/In Liquidation) recently entered into USA Chapter 11 Bankruptcy and its 100% subsidiary, Nico Young Pty Ltd, relinquished the Project<sup>iii</sup>.

### Nickel and Cobalt in NSW

- There are four major nickel-cobalt/scandium deposits in central NSW - Nico Young (LGM:ASX), Sunrise (Sunrise Energy Metals, SRL:ASX), Platina (Rio Tinto, RIO:ASX), and Melrose (Rimfire, RIM:ASX).
- Sunrise Energy Metals is Co-Chaired by Robert Friedland (~11% owner<sup>iv</sup>) and has a Measured and Indicated Resource of 160Mt at 0.56% Ni, 0.09% Co, and 71ppm Sc (0.35% NiEq cut-off)<sup>v</sup>.

### Highly Leveraged to the Nickel and Cobalt Price

- Currently at lows in the commodity price cycle, nickel-cobalt is oversupplied due to a flood of Chinese owned refinery product from Indonesia, significantly impacting markets.

### Strategy to Deliver Shareholder Value

- Legacy Minerals is actively looking to secure a partner for the Project. With its profile as one of Australia's largest nickel deposits, it immediately presents a significant opportunity for both national and international parties looking to secure a strategic deposit of critical minerals nickel and cobalt.
- The Company will minimise holding costs and preserve the asset until market conditions improve to realise value. Minimal holding costs are to be funded from Legacy's existing cash reserves.
- The Drake, Thomson, and Black Range Projects remain the Company's core focus, supported by its portfolio of joint ventures with Newmont, S2 Resources, Helix, and EarthAi.

### Cut-off Nickel Equivalent Calculations and Recovery Assumptions

A Ni-Eq metal equivalent was used for reporting the Ardnaree and Thudungra resources. The formula used for the metal equivalent was as follows: Ni-Eq = Ni% + (5 \* Co%). Metal prices for the Ni-Eq formula were taken as follows: Ni Price of US\$6/lb and Co Price of US\$30/lb. All elements included in the metal equivalent calculation have a reasonable potential to be sold and recovered based on current market conditions and metallurgical test work<sup>vi</sup>.

1 See 'Endnotes' on page 9 for references

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Legacy Minerals Holdings Limited (ASX: LGM, Legacy Minerals or the Company) is pleased to report a new Exploration Licence Application “Nico Young”, ELA6901 in NSW, Australia.

### **Management comment – Legacy Minerals CEO & Managing Director Christopher Byrne said:**

*“A free-peg, representing a zero-dollar acquisition cost, of a near 1-million tonne, nationally significant, JORC 2012 compliant, nickel-cobalt deposit is a great, long-term opportunity for our shareholders. Securing an exploration license application over the Nico Young Nickel-Cobalt Project represents a highly strategic, counter-cyclical move with immense upside.*

*Nico Young is the largest contained nickel deposit in NSW, which also hosts other major Ni-Co deposits including the nearby Robert Friedland-led Sunrise Energy Metals. Given the current depressed market conditions for nickel and cobalt, Legacy Minerals is leveraging this low-cost, counter-cyclical approach to position the Company to benefit from future strengthening in the nickel market through its 100% owned subsidiary Nickel Mines Pty Ltd.*

*This diversification adds optionality to the Company's overall asset base that ensures that Legacy has exposure to a range of precious metals and critical minerals for battery production. With our gold, copper, and silver focus at the Drake, Thomson, and Black Range Projects, and joint venture projects Bauloora and Glenlogan being explored by joint-venture partners Newmont and S2 Resources, shareholders have significant exposure to a multi-commodity, multi-project discovery and development opportunity.*

*Nico Young also allows Legacy Minerals to leverage the development work previously undertaken by Jervois Global, estimated at over \$25 million, including drilling campaigns and environmental studies, thereby reducing initial assessment costs and accelerating project advancement.”*

### **Summary of Previous Work<sup>1</sup>**

The Nico Young deposit sits over key exploration license application (ELA) 6901 (Thuddungra and Ardnaree) in rural New South Wales, Australia. The resource is located in the established mining and farming region of central west New South Wales, around 300 kilometres west of Wollongong and Sydney ports. Granting of the ELA would provide LGM 100% ownership of the licenses with no private royalties or other encumbrances over title. The Mineral Resource is favourably located geographically due to its proximity to the Cooper Basin gas pipeline, rail and major highways.

Since discovering the deposit in the late 1990's Jervois completed numerous studies involving drilling, various hydrometallurgical and pyrometallurgical process routes. The Nico Young deposit also contains variable levels of scandium. Initiatives were underway to ascertain if these scandium levels could be practically incorporated into a viable development plan. Likewise historical samples were not tested for platinum group metals, and an opportunity remains to reassess their potential presence and incorporation.

### **Summary of Key Assumptions<sup>1</sup>**

#### **Geology and Geological Interpretation**

The Young deposit is located within the Jindalee Beds sequence, on the western edge of a granodiorite complex. Mineralisation at Young is associated with laterisation of leached fluids from this granodiorite, resulting in enrichments of nickel, cobalt and scandium.

The lateritic profile typically comprises hematitic clay and limonitic clay overlying saprolite, which in turn overlies a weathered serpentinite unit. Scandium is concentrated in the upper layers, followed by cobalt enrichment within limonitic clay and saprolite, and then nickel enrichment within the saprolite and weathered serpentinite.

The Ardnaree deposit extends over 9km along strike and up to 700m across strike, with mineralisation present from surface to a maximum vertical depth of 56m. Average mineralisation thickness is 13m, with nearly 100% of mineralisation above 50m depth.

The Thuddungra deposit extends 5.9km along strike up to the northern boundary of the Jervois license and up to 715m across strike, with mineralisation present from 6m below the topography surface to a maximum vertical depth of 98m. Average mineralisation thickness is 22m, with 79% of mineralisation above 50m depth.

### **Drilling Techniques**

Several drilling campaigns have been carried out over the history of the Young resource from 1998 to 2014. At the Ardnaree deposit, drillholes were drilled on a total of 30 drill sections with drill spacing ranging from 90m to 650m along-strike, and averaging 100m across-strike. At the Thuddungra deposit, drillholes were drilled on a total of 18 drill sections with drill spacing ranging from 200m to 420m along-strike, and averaging 100m across-strike. All holes were drilled vertically, designed to intersect the sub-horizontal mineralisation at right angles.

Aircore drilling comprises 63% of all metres drilled at the Young deposit, with reverse circulation drilling (RC) comprising 35%. 3 diamond drillholes were drilled using triple-tube techniques. Drillhole collars were surveyed using DGPS survey equipment, accurate to within 10cm in both horizontal and vertical directions. The grid system used is MGA 94 (Zone 55).

### **Sampling and Sub-sampling**

Sampling techniques followed a systematic procedure over the history of the deposit, with the majority of holes sampled at 1m intervals, with minor 2m and 4m composite intervals. Aircore drilling was performed with a diameter of 85mm or 100mm, and 1m samples collected and split using a single-tier riffle splitter. RC holes were drilled using a down-the-hole hammer with a 100mm or 127mm face sampling bit, and 1m samples collected and split using a single-tier riffle splitter. Diamond drillholes were drilled using a PQ3 rotary pre-collar and a triple-tube HQ3 core barrel, with quarter-core 1m samples submitted for assay. One historic RC program utilised spear sampling from the sample pile.

Sample condition, sample weight and wet/dry samples were recorded for all drill samples collected. Most sample weights were in the range of 1-2kg. Wet samples were grab sampled, put into poly-weave cloth bags and left to dry before being put through the single-tier splitter.

Standards, blanks and field duplicates were included with samples submitted for assay during the 2014 drill campaign. All standards were certified industry-standard reference materials. 5% of assay pulps were sent to an independent umpire laboratory for verification of assay results.

### **Sample Analysis Method**

All assays were sent to ALS in Orange, NSW for sample preparation, with the sub-samples forwarded to ALS in Brisbane for analytical assay. Holes drilled before 2004 were assayed for Ni and Co by various assay methods, including IC3B, IC4, and AAS method A102 (nitric, perchloric, HF acid digestion, HCl leach, flame AAS determination). Half the samples were also assayed for scandium by the inductively coupled plasma atomic emission (ICP) method IC587. Limited information exists regarding these methods.

Holes drilled between 2004-2007 were assayed for Ni, Co by digestion with perchloric, nitric, hydrofluoric and hydrochloric acids, and then inductively coupled plasma atomic emission spectroscopy analytical technique (ME-ICP61s and ME-ICP85).

Holes drilled in 2008 were assayed for Ni, Co, Al<sub>2</sub>O<sub>3</sub>, CaO, Cr<sub>2</sub>O<sub>3</sub>, Fe, K<sub>2</sub>O, MgO, MnO, Na<sub>2</sub>O, Ni, P<sub>2</sub>O<sub>5</sub>, SiO<sub>2</sub> and TiO<sub>2</sub> using industry standard lithium meta/tetra borate fusion and ICP technique ME-ICP93.

Holes drilled from 2014 onwards were assayed for Ni, Co and other multi-grade elements by digestion with perchloric, nitric, hydrofluoric and hydrochloric acids, and then ICP technique ME-ICP61.

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### Estimation Methodology

A block model of parent cell size 150m (N) x 50m (E) x 2m (RL) sub-celled to 75m x 25m x 1m was used for resource estimation. Samples were composited to 1m intervals and flagged according to 3D lithology domains and geological surfaces. Spatial continuity was determined using variography analysis. Ordinary kriging was used to estimate Ni and Co grades into blocks using Surpac mining software. Two interpolation passes were performed, with the second pass employing expanded dimensions to populate all blocks in areas of sparse drill density. No capping was applied, as all samples were of the same population with low to moderate coefficients of variation and no extreme outliers present.

Bulk densities were assigned by lithology using average density determinations from diamond drillcore.

### Resource Classification

Mineral Resources have been classified as Inferred in accordance with the JORC Code 2012 guidelines. Classification of the resource involved several criteria, including drillhole spacing, sampling density, sampling locations, lithology, QAQC, bulk density and confidence in grade continuity. Blocks were classified as Inferred on the basis of the above criteria and this is considered appropriate given the nature of the existing data.

### Cut-off Grade

The Nico Young deposit has been reported using a cut-off of 0.6% NiEq. This cutoff takes both nickel and cobalt into consideration and was chosen to reflect reasonable prospects for economic extraction of the appropriate grade population.

### Mining and Metallurgical Methods and Parameters and other modifying factors

The present assumption is that the Young deposit will be mined using the low-cost opencut method. This assumption is made since (1) the deposit occurs near the surface and (2) the host rock laterite is relatively soft, hence easy to mine by open-cut method and does not require regular blasting. The other assumption is that the hauled ore will be crushed, and Ni and Co extracted at the minesite. Modelling studies are planned to determine mining factors such as pit design parameters, excavation rates and cost of the mining operation.

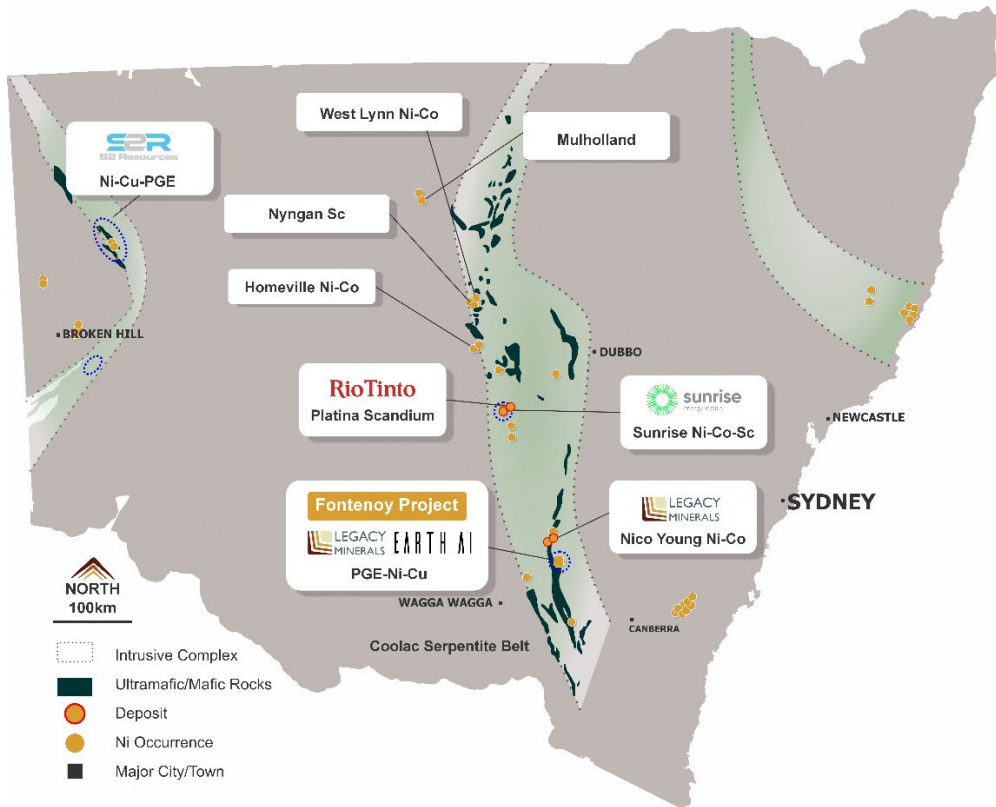
The amenability of the Ni-Co mineralisation to physical beneficiation was investigated by past and recent laboratory studies involving crushing, wet screening, sizing, heavy-liquid and magnetic separations. These studies showed that cobalt and nickel grades could be doubled, but this would be at the expense of rejecting a significant portion of the feed. Testwork proved the underlying assumptions that high pressure acid leach (HPAL) would extract most of the Ni-Co, consume less acid and leave iron largely in the solid residue. Direct Acid and Heap Leach were also shown to be suitable, but consumed more acid, extracted less nickel and cobalt, and more iron than HPAL.

Jervois believed that heap leach offers the most prospective technical and economically attractive option to develop the Nico Young deposit. Heap leach is significantly less energy intensive and lower capital cost than alternative HPAL and Direct acid Leach processes. It is an ideal method specifically for low-grade saprolite and weathered serpentinite-type laterite ores. Past column-leach tests undertaken by Jervois on a weathered serpentinite extracted between 75% and 80% of both nickel and cobalt. Heap leach extracts not only nickel and cobalt but also scandium. The scandium extraction rates have exceeded 80%. The successful extraction of scandium would be beneficial to mine economics.

The local area has favourable climatic conditions for the operation of the heap pads. The application of heap leach will produce mixed hydroxide (or sulphide), which can be converted to refined products such as nickel and cobalt sulphates, suitable for direct sale to battery manufacturers.

**Future Work**

Legacy Minerals remains committed to its Gold-Copper focused exploration and development opportunities throughout NSW and will remain the company’s focus into the future. The company will initially complete low-cost desktop compilation work and studies over the Nico Young project. An assessment of the historical data may present an early opportunity to review the potential presence of Sc and Platinum Group Elements. The company is actively looking to secure a partner for the project, and its profile as one of Australia’s largest nickel deposits immediately presents significant opportunities with both national and international parties looking to secure a strategic deposit of critical minerals nickel and cobalt.



**Figure 1.** Location of major nickel-cobalt/scandium deposits and occurrences in NSW

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Approved by the Board of Legacy Minerals Holdings Limited.

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Legacy Minerals confirms that it is not aware of any new information or data that materially affects the information included in this announcement. All material assumptions and technical parameters underpinning the estimates or production targets or forecast financial information derived from a production target (as applicable) in the latest of those ASX announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the latest of those announcements.

This announcement contains certain forward-looking statements. Forward looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside of the control of Legacy Minerals Holdings Limited (LGM). These risks, uncertainties and assumptions include commodity prices, currency fluctuations, economic and financial market conditions, environmental risks and legislative, fiscal or regulatory developments, political risks, project delay, approvals and cost estimates. Actual values, results or events may be materially different to those contained in this announcement. Given these uncertainties, readers are cautioned not to place reliance on forward-looking statements. Any forward-looking statements in this announcement reflect the views of LGM only at the date of this announcement. Subject to any continuing obligations under applicable laws and ASX Listing Rules, LGM does not undertake any obligation to update or revise any information or any of the forward-looking statements in this announcement to reflect changes in events, conditions or circumstances on which any forward-looking statements is based.

### COMPETENT PERSON'S STATEMENT

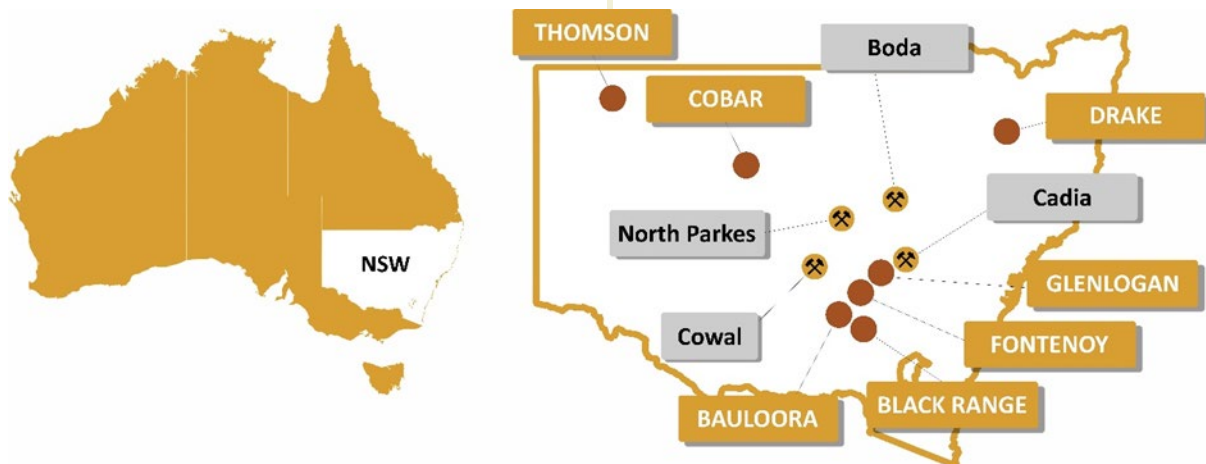
The information in this Report that relates to Exploration Targets and Exploration Results is based on information compiled by Thomas Wall, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr Wall is the Technical Director and a full-time employee of Legacy Minerals Pty Limited, the Company's wholly-owned subsidiary, and a shareholder of the Company. Mr Wall has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Wall consents to the inclusion of the matters based on this information in the form and context in which it appears in this announcement.

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## About Legacy Minerals

Legacy Minerals is an ASX-listed public company exploring gold, copper, and base-metal projects in NSW since 2017. The Company has ten projects that present significant opportunities for shareholders.

<p><b>Au-Ag Black Range</b> (EL9464, EL9589)</p> <p>Extensive low-sulphidation, epithermal system with limited historical exploration. Epithermal occurrences across 30km of strike.</p>	<p><b>Cu-Au Drake</b> (EL6273, EL9616, EL9727, ALA75)</p> <p>Large caldera (~150km<sup>2</sup>) with similar geological characteristics to other major pacific rim low-sulphidation deposits.</p>
<p><b>Cu-Au Rockley</b> (EL8926)</p> <p>Prospective for porphyry Cu-Au and situated in the Macquarie Arc Ordovician host rocks with historic high-grade copper mines that graded up to <b>23% Cu</b>.</p>	<p><b>Au-Cu (Pb-Zn) Cobar</b> (EL9511) <a href="#">Helix JV</a></p> <p>Undrilled targets next door to the Peak Gold Mines. Several priority geophysical anomalies and gold in lag up to <b>1.55g/t Au</b>.</p>
<p><b>Au-Ag Bauloora</b> (EL8994, EL9464) <a href="#">Newmont JV</a></p> <p>One of NSW's largest low-sulphidation, epithermal systems with a 27km<sup>2</sup> epithermal vein field.</p>	<p><b>Au Harden</b> (EL9657)</p> <p>Large historical high-grade quartz-vein gold mineralisation. Drilling includes <b>3.6m at 21.7g/t Au</b> 116m and <b>2m at 17.17g/t Au</b> from 111m.</p>
<p><b>Cu-Au Glenlogan</b> (EL9614) <a href="#">S2 Resources JV</a></p> <p>Large, undrilled magnetic anomaly underneath Silurian cover located 55kms from Cadia Valley.</p>	<p><b>Au-Cu Fontenoy</b> (EL8995) <a href="#">Earth AI JV</a></p> <p>Significant PGE, Au and Cu anomalism defined in soil sampling and drilling. Significant drill intercepts include <b>120m @ 0.3g/t PGE</b> from 298, and <b>79m at 0.27% Cu</b> from 1.5m.</p>
<p><b>Cu-Au Thomson</b> (EL9190, EL9194, EL9728)</p> <p>Prospective for intrusion-related gold and copper systems the Project contains numerous 'bullseye' magnetic and gravity anomalies that remain untested.</p>	<p><b>Ni-Co Nico Young</b> (ELA6901)</p> <p>Large, nickel-cobalt laterite deposit with a resource of 167.8Mt at 0.59% Ni, 0.06% Co for 996.7kt of nickel and 96.6kt cobalt.</p>



**Figure 2.** Location of Legacy Minerals' Projects in NSW, Australia, and major mines and deposits

## Appendix 1

Nico Young Mineral Resource

**Table 2. Inferred Mineral Resource by Project Area at 0.6% and 1.0% Ni equivalent cut-off grade<sup>1</sup>**

0.6% Ni equivalent cut off	Tonnes (Mt)	Ni %	Co %	Contained Ni metal (kt)	Contained Co metal (kt)
Ardnaree	53.6	0.66	0.05	355.6	24.6
Thuddungra	114.3	0.56	0.06	641.1	72.0
Total	167.8	0.59	0.06	996.7	96.6
Including.					
1.0% Ni equivalent cut off	Tonnes (Mt)	Ni %	Co %	Contained Ni metal (kt)	Contained Co metal (kt)
Ardnaree	14.5	0.88	0.07	127.6	10.3
Thuddungra	27.9	0.76	0.1	211.2	27.7
<b>Total</b>	<b>42.5</b>	<b>0.80</b>	<b>0.09</b>	<b>338.8</b>	<b>38.0</b>

**Table 3. Syerston Cobalt/Nickel Mineral Resource Estimate (0.35 Ni equivalent cut-off)<sup>y</sup>**

Classification Category	Tonnage (Mt)	Ni Grade %	Co Grade (%)	Sc Grade (ppm)	Contained Ni metal (kt)	Contained Co metal (kt)	Contained Sc Metals
Measured	69	0.65	0.11	61	450	73	4.2
Indicated	89	0.49	0.09	79	440	76	7
<b>Measured + Indicated</b>	<b>160</b>	<b>0.56</b>	<b>0.09</b>	<b>71</b>	<b>890</b>	<b>150</b>	<b>11</b>
Inferred	17	0.26	0.10	289	45	18	5

All reported tonnages are rounded to account for the relative precision of the estimate. Some figures may not add to the totals due to rounding. Nickel Equivalent cut-off (NiEq) = Nickel Grade + Cobalt Grade x Cobalt Price/Nickel Price x Cobalt Recovery/Nickel Recovery = Nickel Grade + Cobalt Grade x 3.69. Cobalt Price US\$30/lb. Cobalt Recovery 91.2%. Nickel Price US\$8.00/lb. Nickel Recovery 92.6%

## Endnotes

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<sup>i</sup> ASX Release JRV, 22 November 2017, Nico Young Cobalt-Nickel Laterite: Further Information Re Listing Rule 5.8.1.

<sup>ii</sup> [JRV ASX: AustralianSuper takes \\$100m hit from collapse of cobalt miner Jervois](#)

<sup>iii</sup> [JRV ASX: AustralianSuper takes \\$100m hit from collapse of cobalt miner Jervois](#)

<sup>iv</sup> ASX Release SRL, 29 August 2024, 2024 Annual Report

<sup>v</sup> ASX Release SRL, 28 September 2020, Sunrise Project Execution Plan

<sup>vi</sup> ASX Release JRV, 22 November 2017, Nico Young Cobalt-Nickel Laterite