

ASX Announcement 15 December 2022

# ASX:MLS

# Metals Australia Steps Up Lithium Exploration on its Tenements Within Patriot's Lithium Project in Quebec & on its High-Grade Lithium Project in WA

- Metals Australia has identified outstanding lithium potential on its 100%-owned tenements located within Patriot Battery Metals Inc.'s (PMET.TSXV, PAT.ASX) Corvette Lithium Project<sup>1</sup> in Quebec.
- > The Company will undertake remote-sensing data interpretation followed by intensive field work to delineate prospective lithium-bearing pegmatite zones within its highly prospective properties.

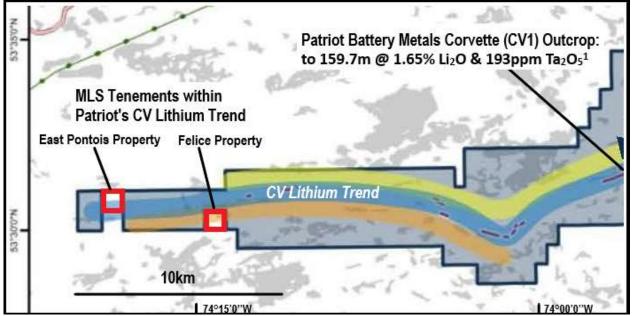


Figure 1: Metals Australia tenements within Patriot Battery Metals' Corvette Lithium Project in Quebec, Canada (Adapted from the Patriot Battery Metals Inc. Corporate Presentation, September 2022<sup>1</sup>)

- The high-value lithium mineral, petalite, has been identified as the predominant lithium mineral in high-grade samples from the Manindi Project in WA. Petalite is lower in iron than primary spodumene (and can be converted to a low-iron spodumene product), making it a superior source of lithium.
- Diamond Drilling is now testing the high-grade Foundation Pegmatite<sup>2</sup> at Manindi to obtain samples of petalite mineralisation for metallurgical testwork to generate a valuable, higher-grade concentrate.
- > Downstream hydrometallurgical processing testwork on the concentrate will follow, to directly produce very high-value lithium carbonate for the lithium-ion battery industry.

E: info@metalsaustralia.com.au T: +61 8 9481 7833 F: +61 8 9481 7835

Level 1, 8 Parliament Place West Perth, Western Australia 6005 ASX : **MLS** metalsaustralia.com.au



#### Metals Australia Chairman, Mike Scivolo, said:

"Metals Australia's exciting new exploration phase is based on recognition of the outstanding lithium potential of the Canadian and Australian properties within the Company's extensive battery metals portfolio.

"We look forward to advancing exploration at our tenements within Patriot Battery Metals' flagship Corvette Lithium Project, while the identification of the high-grade lithium mineral, petalite, has significantly elevated the potential of our Manindi Project in Western Australia to produce high-value lithium carbonate for lithiumion batteries and other high-technology metals products.

"These new lithium exploration programs are being launched as we eagerly anticipate the initial results of our spherical graphite and battery testwork on the Lac Rainy Graphite Project. The anticipated positive outcomes of this work will help drive the Company towards becoming a leading battery materials producer."

# **Outstanding lithium potential on Canadian tenements:**

Metals Australia Ltd ("MLS" or "the Company") is pleased to announce that it has identified outstanding lithium potential on its Canadian tenements located in the James Bay area of Quebec, Canada. Of particular interest are **two properties**, **East Pontois and Felice**, which are surrounded by the Corvette Lithium Project owned by Patriot Battery Metals Inc. ("Patriot") and sit on the CV Lithium Trend (see Figure 1). Patriot has announced results from Corvette including up to 159.7m @ 1.65% Li<sub>2</sub>O and 193ppm Ta<sub>2</sub>O<sub>5</sub><sup>1</sup> from below outcropping pegmatite within what appears to be a world-class lithium corridor.

Metals Australia will immediately commence remote-sensing data interpretation to identify and map lithium bearing pegmatites within its highly-prospective East Pontois and Felice properties, to be followed by field investigation, mapping and sampling to verify the outstanding lithium potential identified.

## High-value lithium mineral, petalite, identified at Manindi – new drilling in progress:

At the Company's Manindi Lithium Project in WA, X-Ray Diffraction (XRD) analyses (see Appendix 1) of drilling samples from the Foundation and Mulgara pegmatites, to determine the lithium mineralogy, has identified that the majority of the lithium in high-grade samples is the higher-grade lithium mineral, petalite. Significantly, petalite is an important ore of lithium and contains up to 5% Li<sub>2</sub>O, enhancing the quality of flotation concentrate grades that can be achieved.

**Petalite can also be converted to spodumene** and quartz under relatively low temperature and pressure conditions<sup>3</sup>. Petalite (and the secondary spodumene that can be formed from it) is lower in iron than primary spodumene, making it a more useful source of lithium than naturally occurring spodumene.

Drilling of the Foundation Pegmatite has produced **significant lithium-rubidium intersections, consistently above 1% Li<sub>2</sub>O, 0.3% Rb, along the entire 500m strike length of the LCT pegmatite identified<sup>3</sup>** (Figure 2).

A further diamond drillhole is testing below the highest-grade section of the Foundation pegmatite where previous hole, MNRC076 (Figure 2) intersected **13m @ 1.03% Li₂O, 0.27% Rb** from 62m in MNRC076 incl. **8m @ 1.40% Li2O, 0.31% Rb in MNRC076**<sup>2</sup>.

Diamond drill-core samples will be aggregated to generate a bulk metallurgical sample for flotation concentrate testwork prior to downstream hydrometallurgical leaching to generate high-value lithium carbonate as well as other products (e.g. rubidium) from the leaching of petalite and lepidolite.



# About the Manindi Lithium Project

The Company's flagship Manindi Project includes the Manindi Zinc resource and the Manindi Lithium Projects and comprises three granted mining leases (M57/227, M57/240 and M57/533) located in the Murchison District of Western Australia (see Figure 2, inset).

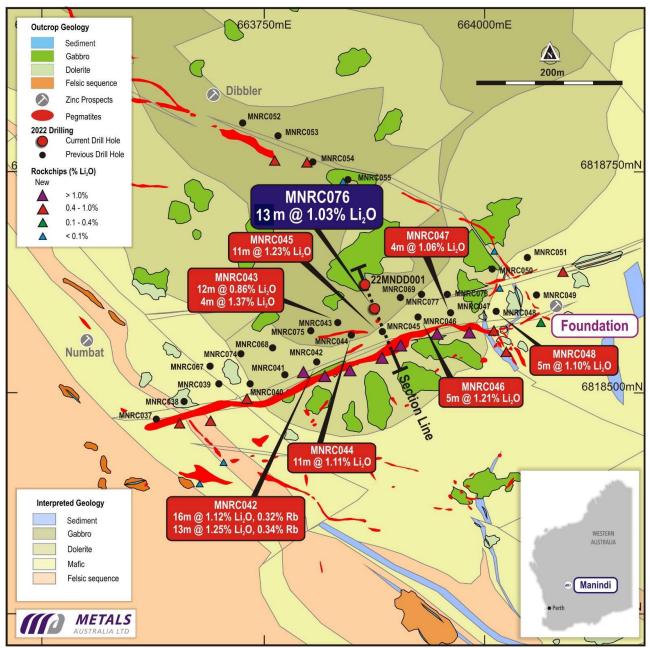


Figure 2: Manindi Lithium Project. High-Grade Foundation LCT pegmatite discovery showing significant drilling intersections to date and rock chip sample locations averaging >1% Li<sub>2</sub>O and >0.4% Rb over the entire strike-length<sup>3</sup>



The Company initially identified significant lithium-caesium-tantalum (LCT) pegmatites at the Manindi Project following re-sampling of previous diamond drillcore that targeted VHMS sulphide mineralisation at the **Mulgara** prospect. The re-sampling produced an outstanding intersection that included **15m @ 1.20%** Li<sub>2</sub>O from 34m, including **5m @ 1.53%** Li<sub>2</sub>O from 38m in MND018<sup>4</sup>.

Follow-up mapping and sampling, followed by RC drilling, identified at least three outcropping lithium bearing pegmatites at Mulgara with strike lengths of over 300m and widths of up to 25-30m<sup>5</sup>.

The Company recently identified a series of other, large, LCT pegmatites within a 3km corridor at the northwest end of the Manindi Mining Leases, including the Foundation Pegmatite<sup>6</sup> (Figure 2). Foundation is the largest pegmatite identified to date at Manindi at over 500m strike-length, trending in a southwest– northeast direction, and including multiple pegmatite outcrops across a 200m wide zone (see Figure 2).

Rockchip sample results averaging >1%  $Li_2O$  and >0.4% Rb, with up to 2.30%  $Li_2O$  and 0.70% Rb<sup>7</sup>, confirmed that Foundation is a high-grade LCT pegmatite.

A 44 hole, ~3,500m, RC drilling program<sup>9</sup> was completed earlier this year. Significant lithium-rubidium results were produced from the Foundation Pegmatite which include the following thick and high-grade intersections:

- 16m @ 1.12% Li<sub>2</sub>O, 0.32% Rb from 19m in MNRC042, incl. 13.0m @ 1.25% Li<sub>2</sub>O, 0.34% Rb<sup>8</sup>
- 11m @ 1.23% Li\_2O, 0.31% Rb from 16m in MNRC045, incl. 5m @ 1.47% Li\_2O, 0.30%  $Rb^8$

Samples from this drilling and an initial diamond hole, MND001<sup>9</sup>, were submitted for XRD analyses to determine the lithium mineralogy (spodumene, lepidolite and/or other lithium bearing minerals). This release details the results of the **XRD results which have identified the high-value lithium mineral petalite**.

Following the diamond drilling in this release Metallurgical testwork will be carried out on drillcore samples to generate flotation concentrate as well as examine downstream potential to produce high-value, lithium-carbonate product.

Positive outcomes from this work will lead to further drilling to generate a maiden JORC 2012 mineral resource.

This announcement was authorised for release by the Board of Directors.

#### \*\*\*ENDS\*\*\*

#### For further information, please refer to the Company's website or contact:

Michael Muhling Company Secretary Metals Australia Limited +61 (08) 9481 7833 Andrew Rowell White Noise Communications +61 400 466 226 andrew@whitenoisecomms.com



# **ABOUT METALS AUSTRALIA**

Metals Australia is an active exploration and mining development company listed on the Australian Securities Exchange (ASX:MLS) with a portfolio of battery minerals / metals and gold projects in the well-established mining provinces of Australia and Canada.

The Company's flagship Lac Rainy Graphite Project is located in a major graphite province in Quebec, Canada. Lac Rainy hosts a JORC-2012 graphite mineral resource that is one of the highest grade in the region, with potential to grow substantially. Metallurgical testwork has generated high-grade flotation concentrate results of up to 97% graphitic carbon (Cg)<sup>10</sup>. A bulk concentrate sample despatched to Germany is undergoing downstream spherical graphite and battery testwork to determine the quality of the Lac Rainy graphite for use in lithium-ion battery applications for the Electric Vehicle (EV) industry. Results from the spherical graphite and purification testwork phase are imminent.

In Western Australia, Metals Australia holds an 80% interest in **Manindi Project**, located around 500km northeast of Perth. The Company has been **drilling and defining the project's high-grade lithium pegmatite potential and extending the existing high-grade zinc with copper resources**. The Company has also identified **a new intrusive related vanadium-titanium discovery**<sup>11</sup> **with copper-nickel-cobalt sulphide potential**, where drilling is in progress.

Metals Australia recently purchased an 80% interest in Payne Gully Gold Pty Ltd which includes the **Warrambie, Tennant Creek and Murchison Projects**<sup>12</sup>. This gives the Company additional exposure to a suite of prospective battery metals and gold assets in Western Australia and the Northern Territory in known mineral provinces. At the Warrambie Project the Company has identified electromagnetic (EM) anomalies associated with interpreted intrusive units<sup>13</sup> analogous to the Andover nickel deposit (ASX:AZR)<sup>14</sup> and Sherlock Bay resource (ASX:SBR)<sup>15</sup>, both located along strike from the Warrambie Project.

Leveraging off its extensive corporate and exploration experience, Metals Australia's strategy is to create shareholder value through continued development of advanced battery minerals/metals projects and the discovery of new resources.

## CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION

This document contains forward-looking statements concerning Metals Australia Limited. Forward-looking statements are not statements of historical fact and actual events, and results may differ materially from those described in the forward-looking statements as a result of a variety of risks, uncertainties and other factors. Forward-looking statements are inherently subject to business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause the Company's actual results to differ materially from those expressed or implied in any forward-looking information provided by the Company, or on behalf of, the Company. Such factors include, among other things, risks relating to additional funding requirements, metal prices, exploration, development and operating risks, competition, production risks, regulatory restrictions, including environmental regulation and liability and potential title disputes.

Forward looking statements in this document are based on the company's beliefs, opinions and estimates of Metals Australia Limited as of the dates the forward-looking statements are made, and no obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.



# **COMPETENT PERSON STATEMENT**

The information in this report that relates to exploration results has been reviewed, compiled and fairly represented by Mr Nick Burn. Mr Burn is the Exploration Manager of Metals Australia Limited and a member of the AIG. Mr Burn has sufficient experience relevant to the style of mineralisation and type of deposits under consideration to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee ('JORC') Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Mr Burn consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

The information in this report that relates to Mineral Resources and Exploration Targets has been reviewed, compiled and fairly represented by Mr Jonathon Dugdale. Mr Dugdale is a Technical Advisor to Metals Australia Ltd and a Fellow of the Australian Institute of Mining and Metallurgy ('FAusIMM'). Mr Dugdale has sufficient experience, including over 34 years' experience in exploration, resource evaluation, mine geology and finance, relevant to the style of mineralisation and type of deposits under consideration to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee ('JORC') Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Mr Dugdale consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

### REFERENCES

- <sup>1</sup> Patriot Battery Metals Inc. (TSXV:PMET). Corporate Presentation, September 2022.
- <sup>2</sup> Metals Australia Ltd (ASX:MLS), 19 July 2022. Exceptional Lithium Pegmatite Intersections at Manindi.
- <sup>3</sup> Deer, W. A. (2004). Framework silicates: silica minerals, feldspathoids and the zeolites (2. ed.). London: Geological Soc. p. 296. ISBN 978-1-86239-144-4.
- <sup>4</sup> Metals Australia Ltd (ASX:MLS), 21 March 2017. High grade Lithium bearing Pegmatites discovered at Manindi
- <sup>5</sup> Metals Australia Ltd (ASX:MLS), 24 July 2018. Results of RC percussion drilling at Manindi Lithium Project.
- <sup>6</sup> Metals Australia Ltd (ASX:MLS), 20 October 2021. Lithium Pegmatite Corridor Extended to over 3km Strike length.
- <sup>7</sup> Metals Australia Ltd (ASX:MLS), 10 November 2021. High grade Lithium and Tantalum Results from Manindi.
- <sup>8</sup> Metals Australia Ltd (ASX:MLS), 16 May 2022. Further thick Lithium bearing intersections at Manindi.
- <sup>9</sup> Metals Australia Ltd (ASX:MLS), 19 July 2022. Exceptional Lithium Intersections at Foundation pegmatite, Manindi.
- <sup>10</sup> Metals Australia Ltd (ASX:MLS), 25 July 2022. 95% Graphite Concentrate Despatched to Germany for Battery-Testing.
- <sup>11</sup> Metals Australia Ltd (ASX:MLS), 29 September 2022. High Grade Titanium-Vanadium-Fe Intersection at Manindi.
- <sup>12</sup> Metals Australia Ltd (ASX:MLS), 16 June 2022. Metals Australia to Acquire Key Battery Metals Projects.
- <sup>13</sup> Metals Australia Ltd (ASX:MLS), 07 November 2022. EM Anomalies Nickel Sulphide Taregts at Warrambie.
- <sup>14</sup> Azure Minerals Limited (ASX:AZR), ASX release 30 March 2022. Azure Delivers Maiden Mineral Resource for Andover.
- <sup>15</sup> Sabre Resources Ltd (ASX:SBR), 12 June 2018. Resource Estimate for the Sherlock Bay Nickel-Copper- Cobalt Deposit.



| Sample name       | Petalite | Mica (Li)** | Amorphous* | Amphibole | Bervl | Calcite | Chlorite** | Dolomite | Potassium | Prehnite | Pyrite | Pyrolusite | Quartz | Na Plag. | Total |
|-------------------|----------|-------------|------------|-----------|-------|---------|------------|----------|-----------|----------|--------|------------|--------|----------|-------|
| Sample ID / Units | wt%      | wt%         | wt%        | wt%       | wt%   | wt%     | wt%        | wt%      | wt%       | wt%      | wt%    | wt%        | wt%    | wt%      | wt%   |
| 103932            |          | 6           | 10         |           |       |         |            |          | 2         |          |        |            | 27     | 55       | 100   |
| 103940            |          | 5           | 10         |           |       |         |            |          | 3         |          |        |            | 21     | 61       | 100   |
| 103955            |          | 4           | 14         | 3         |       | 4       | 18         | <0.5     | 4         | 18       |        |            | 25     | 9        | 99    |
| 103969            | <0.5     | 27          | 9          |           |       |         | 3          | <0.5     | 2         |          |        |            | 27     | 32       | 100   |
| 101388            |          | 30          | 11         |           | <0.5  |         | 2          | <0.5     | 1         | 2        |        | <0.5       | 25     | 29       | 100   |
| 101396            | <0.5     | 32          | 14         |           | <0.5  |         | 2          | <0.5     |           | 2        |        | <0.5       | 27     | 23       | 100   |
| 101523            | 1        | 25          | 13         |           | <0.5  |         | 2          | <0.5     |           | 2        |        |            | 27     | 30       | 100   |
| 101622            | 1        | 33          | 11         | <0.5      | <0.5  |         | 2          | <0.5     |           | 1        | <0.5   | <0.5       | 28     | 23       | 99    |
| 101969            | 34       | 19          | 9          | <0.5      | <0.5  |         | 1          |          | 2         | 1        | <0.5   | <0.5       | 17     | 17       | 100   |
| 100341            | 18       | 18          | 10         |           | <0.5  |         | 1          |          |           | 1        | <0.5   | <0.5       | 24     | 27       | 99    |
| 100467            | 1        | 29          | 11         |           | <0.5  |         | 2          | <0.5     | 1         | 1        | <0.5   | <0.5       | 27     | 27       | 99    |
| 100533            | 13       | 24          | 11         | <0.5      | <0.5  |         | 1          | <0.5     |           | 1        | 1      |            | 23     | 26       | 100   |
| 100541            | 3        | 29          | 12         | 1         | <0.5  |         | 2          | <0.5     |           | 1        | 1      | <0.5       | 26     | 25       | 100   |
| 103490            | 26       | 18          | 12         | <0.5      | <0.5  |         | 1          | <0.5     |           | 1        | <0.5   | <0.5       | 21     | 20       | 99    |
| 100140            | 1        | 25          | 11         | <0.5      | <0.5  |         | 1          |          | 3         | 1        |        | <0.5       | 26     | 32       | 100   |
| 100271            | 1        | 25          | 13         | <0.5      | <0.5  |         | <0.5       |          |           |          |        | <0.5       | 27     | 34       | 100   |
| 100444            | 12       | 24          | 12         | <0.5      | <0.5  |         | 1          | <0.5     | <0.5      |          |        | <0.5       | 24     | 27       | 100   |
| 100716            | 2        | 27          | 12         | <0.5      | <0.5  |         | 2          | <0.5     |           |          | <0.5   | <0.5       | 26     | 31       | 100   |
| 103682            | 12       | 25          | 12         | <0.5      | <0.5  |         | 1          |          | <0.5      |          |        | <0.5       | 25     | 25       | 100   |
| 101523 DUPLICATE  | 1        | 25          | 12         |           | <0.5  |         | 2          | <0.5     |           | 2        |        |            | 27     | 31       | 100   |

#### Appendix 1: X Ray Diffraction (XRD) results from selected samples of lithium bearing pegmatites at Manindi Project



#### Appendix 2 JORC Code, 2012 Edition – Table 1 - Section 1 Sampling Techniques and Data

| Criteria                 | JORC Code explanation   | Commentary   |
|--------------------------|---|--|
| Sampling<br>techniques   | <ul> <li>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 down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (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.</li> </ul> | Reverse circulation (RC) percussion drilling was used to obtain 1 m<br>samples, from which approximately 2-3 kg was sub-sampled and<br>pulverised to produce a sample for assay.<br>Samples for the current RC program are being analysed as 1m sample<br>or 4m composites as determined by geological logging.<br>Previous and current diamond drilling has been sampled at<br>approximate 1m intervals, utilising geological contacts where<br>necessary.<br>Rockchip samples reported in this release were grab samples of<br>pegmatite occurrences, collected in a calico bag and weighing<br>approximately 2 to 3 kg. |
| Drilling techniques      | <ul> <li>Drill type (e.g., core, reverse circulation, openhole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>   | Drilling type is (i) reverse circulation (RC) percussion drilling, using a 4.5"<br>face-sampling drill bit.<br>(ii) Diamond drilling is currently being undertaken by SD1000 rig<br>collecting HQ size core  |
| Drill sample<br>recovery | <ul> <li>Method of recording and assessing core and chip<br/>sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery<br/>and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample<br/>recovery and grade and whether sample bias<br/>may have occurred due to preferential loss/gain<br/>of fine/coarse material.</li> </ul>  | Sample recovery was visually assessed on basis of the volume of RC<br>percussion chip recovery and overall is considered to be good based on<br>the drilling records.<br>Standard RC percussion drilling techniques were utilised to maximise<br>sample recovery. The cyclone unit was routinely cleaned to limit<br>contamination and ensure representivity of the sample.<br>There is no apparent relationship between sample recovery and grade.<br>Diamond drill core recovery is considered high and is recorded by<br>standard geological techniques   |
| Logging                  | <ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>  | Chips from 1m RC percussion drilling intervals were logged according to<br>industry standard practice and representative samples stored in chip<br>trays. HQ core was logged to industry standard practice<br>Logging was qualitative in nature and recorded using standard logging<br>templates. The resulting data was uploaded to a Datashed database<br>and validated. Core photography was undertaken for records<br>100% of the RC chips and diamond core drilling was logged.   |

# ASX Announcement



| Criteria   | JORC Code explanation  | Commentary   |
|--|--|--|
| Sub-sampling<br>techniques and<br>sample preparation | <ul> <li>If core, whether cut or sawn and whether quarter, half or all cores taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all subsampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the</li> </ul> | RC percussion samples were collected for every metre drilled using a cone splitter installed beneath the rig cyclone. Each sample had a weight of approximately 2-3 kg. Duplicate samples of the same size were collected using a second collection point from the cone splitter at a frequency of approximately one duplicate per 20 samples. For all samples, the nature, quality and appropriateness of the sample preparation technique is considered suitable as per industry best practice. All samples were sent to the Bureau Veritas laboratory in Perth for sample preparation (codes PR001 and PR302) using standard codes of practices. All samples were processed by Intertek / Genalysis laboratories in Maddington, Perth and analysed using the 48 element "Lithium Package" (4A-Li/MS48). The sample preparation is considered appropriate for the sample size and grain size of the material being sampled and appropriate for the sample size ample type. |
|  | grain size of the material being sampled.  | Currently drilled HQ core is sampled over 1m intervals or geological contacts and was cut to quarter core for sample analysis. Duplicate analyses were collected at a 1 in 25 interval for check results with blanks inserted in the sample process at a similar spacing.  |
| Quality of assay<br>data and<br>laboratory tests     | <ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels</li> </ul>   | Previous assaying was completed by the Bureau Veritas (BV) laboratory<br>based in Perth, Western Australia. BV undertook a standard multi-<br>element assay procedures (codes PF100, PF101 and PF102) utilising a<br>peroxide fusion digestion technique followed by ICP-AES and ICP-MS<br>analysis.<br>Assaying for this current RC and diamond drill program is being<br>undertaken by Intertek Perth utilising their 4A-Li/MS48 (four acid<br>digest/ICP-MS) package.<br>The quality of the assay and laboratory procedures is considered to be<br>high and appropriate for the type of mineralisation. The technique<br>used is considered to be a total digestion.<br>A comprehensive QAQC program (1 in 25) including blank, standard<br>and duplicate samples were submitted by the Company for analysis<br>with the drilling samples. The results of the QAQC program have been  |
|  | of accuracy (i.e., lack of bias) and precision have been established.  | reviewed by the Company's consultant, who has not identified any<br>material concerns. Routine internal QAQC checks were also completed<br>by Intertek and the results are considered to be satisfactory with no<br>material concerns.   |
| Verification of<br>sampling and<br>assaying          | <ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>  | Significant intersections have been reviewed and verified by company<br>technical and management personnel.<br>Primary drilling data was documented in detailed electronic drill hole<br>logs. Primary assay data was received electronically from the analytical<br>laboratory. Data is uploaded to a Datashed geological database and<br>verified. No adjustments have been made to the reported assays other<br>than the calculation of Li <sub>2</sub> O , Ta <sub>2</sub> O <sub>5</sub> ,V <sub>2</sub> O <sub>5</sub> and TiO <sub>2</sub> grades from assay<br>data, as specified in the announcement.   |
| Location of data<br>points                           | <ul> <li>Accuracy and quality of surveys used to locate<br/>drill holes (collar and down-hole surveys),<br/>trenches, mine workings and other locations used<br/>in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>  | Drill hole collar and rock chip sample locations have been verified with<br>handheld GPS with a ±5 m degree of accuracy.<br>The grid system used is GDA94 datum, MGA zone 50 projection.<br>Topographic control is based on a digital terrain model (DTM) with an<br>accuracy of ±5m.  |
| Data spacing and<br>distribution                     | <ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing, and distribution is sufficient to establish the degree of geological</li> </ul>   | Data spacing is 1 m intervals downhole. Drill holes spaced at<br>approximately 20 m intervals along strike of the Kultarr resource.<br>The drilling intersection announced presents sufficient data to establish   |



| Criteria   | JORC Code explanation  | Commentary  |
|--|--|---|
|  | and grade continuity appropriate for the Mineral<br>Resource and Ore Reserve estimation  | the degree of geological and grade continuity required for estimation<br>of a resource. Further drilling will be carried out before a revised<br>resource estimate is produced.                           |
|  | procedure(s) and classifications applied.<br>Whether sample compositing has been applied.  | No sample compositing has been applied.   |
| Orientation of data<br>in relation to<br>geological<br>structure | <ul> <li>Whether the orientation of sampling achieves<br/>unbiased sampling of possible structures and the<br/>extent to which this is known, considering the<br/>deposit type.</li> <li>If the relationship between the drilling<br/>orientation and the orientation of key<br/>mineralised structures is considered to have<br/>introduced a sampling bias, this should be<br/>assessed and reported if material.</li> </ul> | The drilling and sampling orientation is not considered to have resulted<br>in a true width intersection of the zinc or titanium mineralised zones<br>(see figure 1, cross section).                      |
|  |  | Given the nature of the deposit type, the drilling and the sampling is<br>considered to achieve unbiased sampling as the sulphide body has<br>been tested from hangingwall to footwall.                   |
| Sample security  | • The measures taken to ensure sample security.  | Industry standard chain of custody followed, with samples collected,<br>transported and delivered to a secure freight depot by Company<br>geologist. Samples were shipped directly to the analytical lab. |
| Audits or reviews  | • The results of any audits or reviews of sampling techniques and data.  | The Company's consultant has reviewed the sampling and assay data<br>for completeness and quality control and has not identified any<br>material concerns.  |

#### JORC Code, 2012 Edition – Table 1 - Section 2 Reporting of Exploration Results

| Criteria                                      | JORC Code explanation  | Commentary  |
|---|--|---|
| Mineral tenement<br>and land tenure<br>status | <ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul> | The Company controls an 80% Interest in three granted Mining<br>Licences in Western Australia covering the known mineralisation and<br>surrounding area.<br>The licences are M57/227, M57/240 and M57/533. The licence reports<br>and expenditure are all in good standing at the time of reporting.<br>There are no known impediments with respect to operating in the area. |
| Exploration done by other parties             | • Acknowledgment and appraisal of exploration by other parties.  | The Manindi zinc deposits were identified by WMC in the early 1970s<br>and have been extensively explored using surface and geophysical<br>techniques prior to drilling. Mapping and soil geochemistry preceded<br>airborne, and surface geophysical techniques being applied to the<br>project.  |
|   |  | The Project has been drilled in 8 separate drill programs since 1971,<br>with a total of 393 holes having been completed. These include 109<br>diamond drillholes, 109 RC drillholes, 169 RAB drillholes and 8<br>percussion holes.   |
|   |  | The zinc deposits have never been mined.  |
|   |  | The Project has not previously been explored for lithium mineralisation or vanadium bearing titanium at Manindi West.   |
| Geology                                       | • Deposit type, geological setting and style of mineralisation.  | The mineralisation at Manindi is hosted within an Archaean felsic and<br>mafic volcanic sequence. The sequence has been extensively deformed<br>by regional metamorphism and structural event related to the Youanmi<br>Fault and emplacement of the Youanmi gabbro intrusion and other<br>later granitic phases.   |
|   |  | The Manindi zinc-copper mineralisation is considered to be a volcanogenic massive sulphide (VMS) deposit, comprising a series of lenses of zinc-dominated mineralisation that have been folded, sheared, faulted, and possibly intruded by later dolerite and gabbro.   |
|   |  | Pegmatite dykes crosscut the felsic and mafic rock sequences at a high  |



| Criteria   | JORC Code explanation   | Commentary   |
|--|---|--|
|  |   | angle and are interpreted to have intruded along structures that transect<br>the area. The dykes that occur in the area are considered to be of the<br>lithium-caesium-tantalum type (LCT) and some contain visible lepidolite<br>mineralisation.  |
|  |   | Initial exploration of the Manindi West magnetic 'high' identified a steeply dipping mafic intrusive under 20m of cover.   |
| Drill hole<br>Information  | <ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul> | A summary of all information material to the understanding of the<br>previous lithium exploration results is included in the announcement,<br>see Appendix 1 of the announcement by Metals Australia Ltd, 24 July<br>2018. "Results of RC percussion drilling program at Manindi Lithium<br>Project".<br>A summary of previous exploration at Kultarr is included in the<br>announcement by Metals Australia Ltd, 25 July 2017. "C4 Conductor<br>delivers High Grade Zinc Intersection at Manindi" |
| Data aggregation<br>methods  | <ul> <li>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.</li> <li>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>  | Exploration results are reported as a length weighted average grade.<br>This ensures that short lengths of high-grade material receive less<br>weighting than longer lengths of low-grade material.<br>Where aggregate intercepts incorporate short lengths of high-grade<br>results within longer lengths of lower grade results, these zones have<br>been reported separately.<br>No maximum or minimum grade truncations have been applied.<br>No metal equivalents are reported.               |
| Relationship<br>between<br>mineralisation<br>widths and<br>intercept lengths | <ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known').</li> </ul>  | The orientation and dip of the reported zinc diamond drill hole<br>22MND002 was designed to investigate the potential for down plunge<br>Zn mineralisation and an interpreted EM plate anomaly. The reported<br>mineralised intersections are therefore not true width.<br>Diamond drill hole 22MND003 at Manindi West is investigating the<br>thickness of the covered mafic intrusive and seeking the hanging wall of<br>the intrusive.  |
| Diagrams   | <ul> <li>Appropriate maps and sections (with scales) and<br/>tabulations of intercepts should be included for<br/>any significant discovery being reported These<br/>should include, but not be limited to a plan view<br/>of drill hole collar locations and appropriate<br/>sectional views.</li> </ul>   | Appropriate maps and sectional views are included in the body of the announcement.   |
| Balanced reporting   | • Where comprehensive reporting of all<br>Exploration Results is not practicable,   | Full and representative reporting of previous relevant results in announcement by Metals Australia Ltd, 24 July 2018. "Results of RC   |

# ASX Announcement



| Criteria                              | JORC Code explanation   | Commentary  |
|---------------------------------------|---|---|
|                                       | representative reporting of both low and high<br>grades and/or widths should be practiced<br>avoiding misleading reporting of Exploration<br>Results.   | percussion drilling program at Manindi Lithium Project".<br>With respect to previous zinc exploration, see a summary of previous<br>exploration at Kultarr included in the announcement by Metals Australia<br>Ltd, 25 July 2017. "C4 Conductor delivers High Grade Zinc Intersection at<br>Manindi"  |
| Other substantive<br>exploration data | Other exploration data, if meaningful and<br>material, should be reported including (but not<br>limited to): geological observations; geophysical<br>survey results; geochemical survey results; bulk<br>samples – size and method of treatment;<br>metallurgical test results; bulk density,<br>groundwater, geotechnical and rock<br>characteristics; potential deleterious or<br>contaminating substances. | There are no other substantive exploration data.  |
| Further work                          | <ul> <li>The nature and scale of planned further work<br/>(e.g., tests for lateral extensions or depth<br/>extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of<br/>possible extensions, including the main<br/>geological interpretations and future drilling<br/>areas, provided this information is not<br/>commercially sensitive.</li> </ul>                | Further drilling to test the grade, thickness and continuity of vanadium-<br>titanium-sulphide mineralisation at the Manindi West Prospect.<br>Metallurgical testwork to determine separation properties of ilmentite<br>from magnetite then concentration of vanadium-magnetite<br>concentrate.<br>DHEM surveying of diamond drillholes at Manindi West to investigate<br>the extent of sulphide mineralisation. |