

ASX Announcement  
29 June 2022

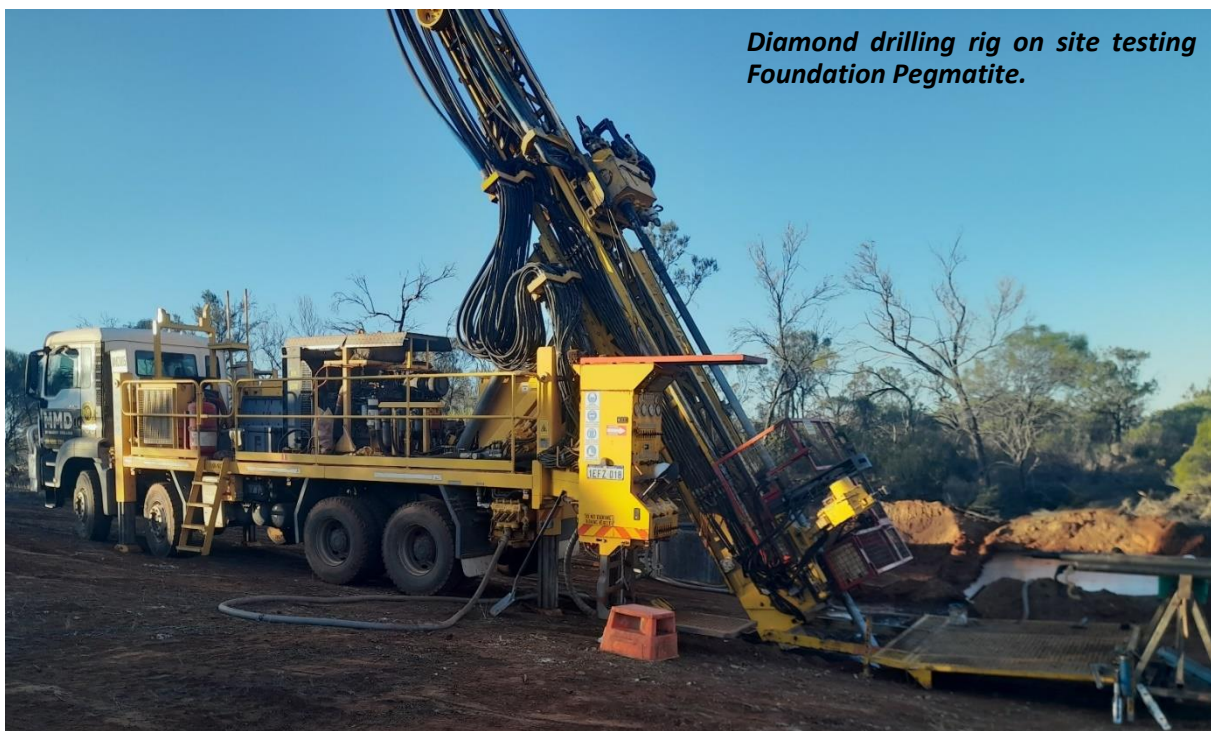
ASX:MLS

## Diamond Drilling Commenced Testing Key Battery Minerals Targets at the Flagship Manindi Project in Western Australia

➤ The focussed diamond drilling program at the Manindi Battery Minerals Project has commenced testing three key battery minerals resource discovery targets that include:

- i) **Extensions of the Foundation Pegmatite at depth** below previous, **high-grade lithium-rubidium intersections** incl. **11m @ 1.23% Li<sub>2</sub>O, 0.31% Rb** from 16m in MNRC045<sup>1</sup>, incl. **5m @ 1.47% Li<sub>2</sub>O, 0.30% Rb** from 16m, and incl. **2m @ 1.73% Li<sub>2</sub>O, 0.64% Rb** from 25m<sup>1</sup>,
- ii) **Depth and strike extensions of the high-grade zinc mineralisation at Kultarr Prospect** to the southeast, down-plunge of the previously announced spectacular intersection of **68m @ 3.09% Zn, 0.20% Cu**, from 89m in MNRC070, incl. **24.0m @ 6.47% Zn, 0.29% Cu** from 100m<sup>2</sup>,
- iii) The mafic / ultramafic intrusive target at **Manindi West** below the **intersection of vanadium bearing titaniferous magnetite with zones of nickel-copper-cobalt sulphide mineralisation** in MNRC070<sup>3</sup>. The intersections have been updated with **high-grade titanium results** now received and include:

**82m @ 0.30% V<sub>2</sub>O<sub>5</sub>, 28% Fe, 11.5% TiO<sub>2</sub>, 0.02% Ni, 0.03% Cu, 148ppm Co**, from 48m, incl. **70m @ 0.32% V<sub>2</sub>O<sub>5</sub>, 29% Fe, 12.2% TiO<sub>2</sub>, 0.02% Ni, 0.03% Cu, 159ppm Co** from 48m, incl. **27m @ 0.35% V<sub>2</sub>O<sub>5</sub>, 35% Fe, 14.8% TiO<sub>2</sub>, 0.03% Ni, 0.05% Cu, 221ppm Co** from 48m.



*Diamond drilling rig on site testing Foundation Pegmatite.*

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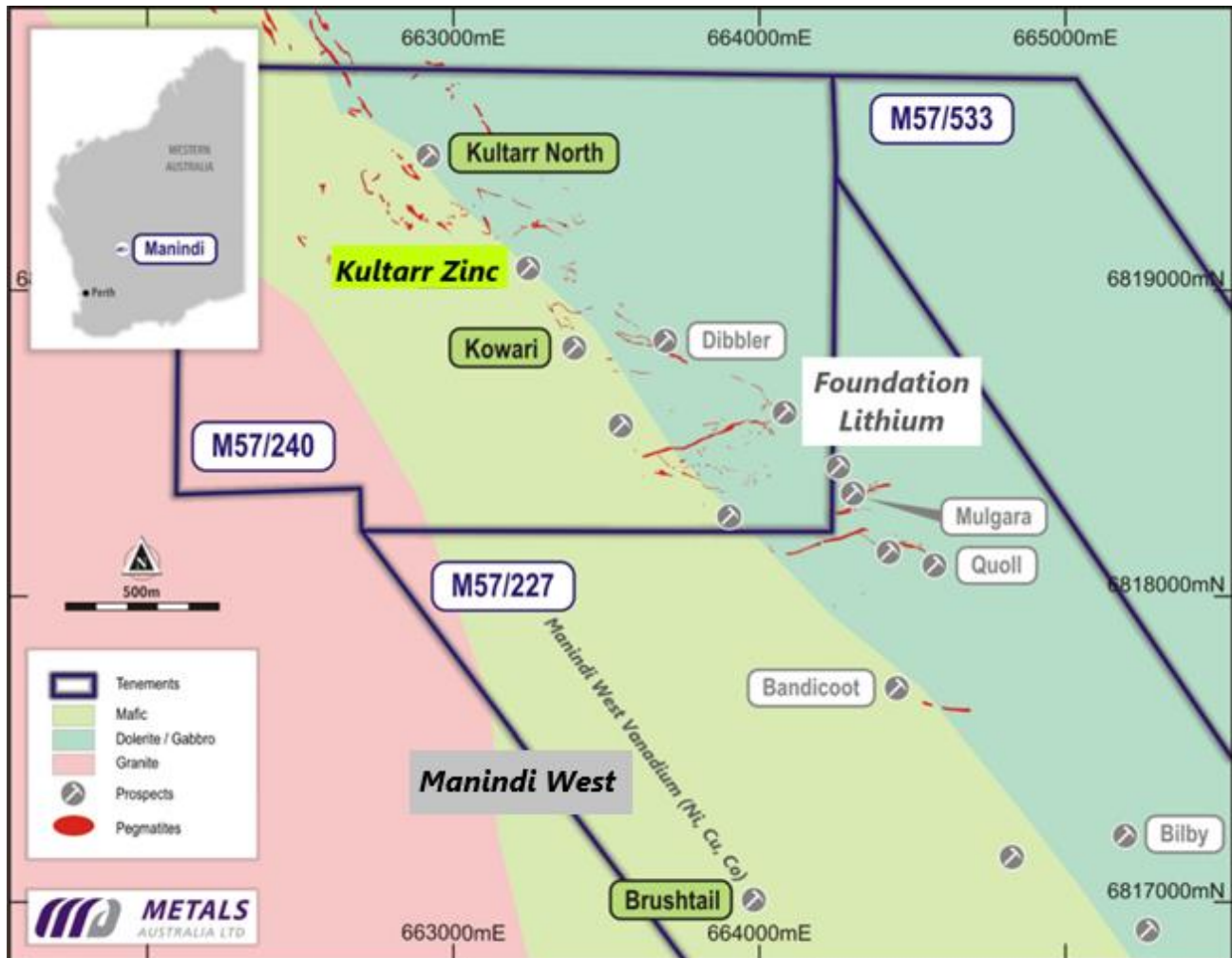
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Metals Australia Ltd (“MLS” or “the Company”) is pleased to announce that the **diamond drilling program has commenced testing key battery minerals targets** at the Company’s flagship Manindi Project (“Manindi” or “the Project”). Manindi is located 20 km southwest of Youanmi in the Murchison District of Western Australia (see location, Figure 1 below).



**Figure 1: Manindi Project. Location of Kultarr and Kowari zinc prospects and key lithium prospects**

The diamond drilling program will include three holes for up to 700m, specifically testing the three battery minerals resource targets that have been identified at Manindi that include:

- Extensions of the **Foundation Pegmatite** at depth below previous, high-grade lithium-rubidium intersections (e.g., **11m @ 1.23% Li<sub>2</sub>O, 0.31% Rb** from 16m in MNRC045<sup>1</sup>, including **5m @ 1.47% Li<sub>2</sub>O, 0.30% Rb** from 16m, and incl. **2m @ 1.73% Li<sub>2</sub>O, 0.64% Rb** from 25m<sup>1</sup>) (Figure 2),
- Strike and depth extensions to the southeast extensions of the high-grade zinc with copper mineralisation intersected at the **Kultarr Zinc-Copper Prospect** of **68m @ 3.09% Zn, 0.20% Cu** from 89m in MNRC070, incl. **24.0m @ 6.47% Zn, 0.29% Cu** from 100m<sup>2</sup> (Figure 3), and,
- The mafic/ultramafic intrusive at Manindi West where diamond drilling will test below the vanadium bearing titaniferous magnetite intersection with zones of nickel-copper-cobalt sulphide mineralisation in MNRC070<sup>3</sup> of **82m @ 0.30% V<sub>2</sub>O<sub>5</sub>, 28% Fe, 11.5% TiO<sub>2</sub>, 0.02% Ni, 0.03% Cu, 148ppm Co**, from 48m including **70m @ 0.32% V<sub>2</sub>O<sub>5</sub>, 29% Fe, 12.2% TiO<sub>2</sub>, 0.02% Ni, 0.03% Cu, 159ppm Co** from 48m and including **27m @ 0.35% V<sub>2</sub>O<sub>5</sub>, 35% Fe, 14.8% TiO<sub>2</sub>, 0.03% Ni, 0.05% Cu, 221ppm Co** (Figures 4 and 5).



## Diamond Drilling to test the High-Grade Foundation Lithium Pegmatite Discovery:

The new diamond drilling program has already commenced with a large diameter (HQ) diamond hole testing through the higher-grade section of the **500m strike-length Foundation Pegmatite**, down dip of the highest-grade lithium-rubidium pegmatite zone where previous thick and high-grade intersections were recently announced<sup>1</sup>, including (see location, Figure 2):

- **11m @ 1.23% Li<sub>2</sub>O, 0.31% Rb** from 16m (down hole) in MNRC045<sup>1</sup>, including **5m @ 1.47% Li<sub>2</sub>O, 0.30% Rb** from 16m, and, including **2m @ 1.73% Li<sub>2</sub>O, 0.64% Rb** from 25m.

The diamond drilling will also obtain metallurgical samples for mineragraphy to determine the lithium-bearing mineral assemblage (e.g., lepidolite vs spodumene) and the relative proportions of these minerals. Metallurgical testwork will also be carried out to determine lithium-rubidium (tantalum) concentration properties.

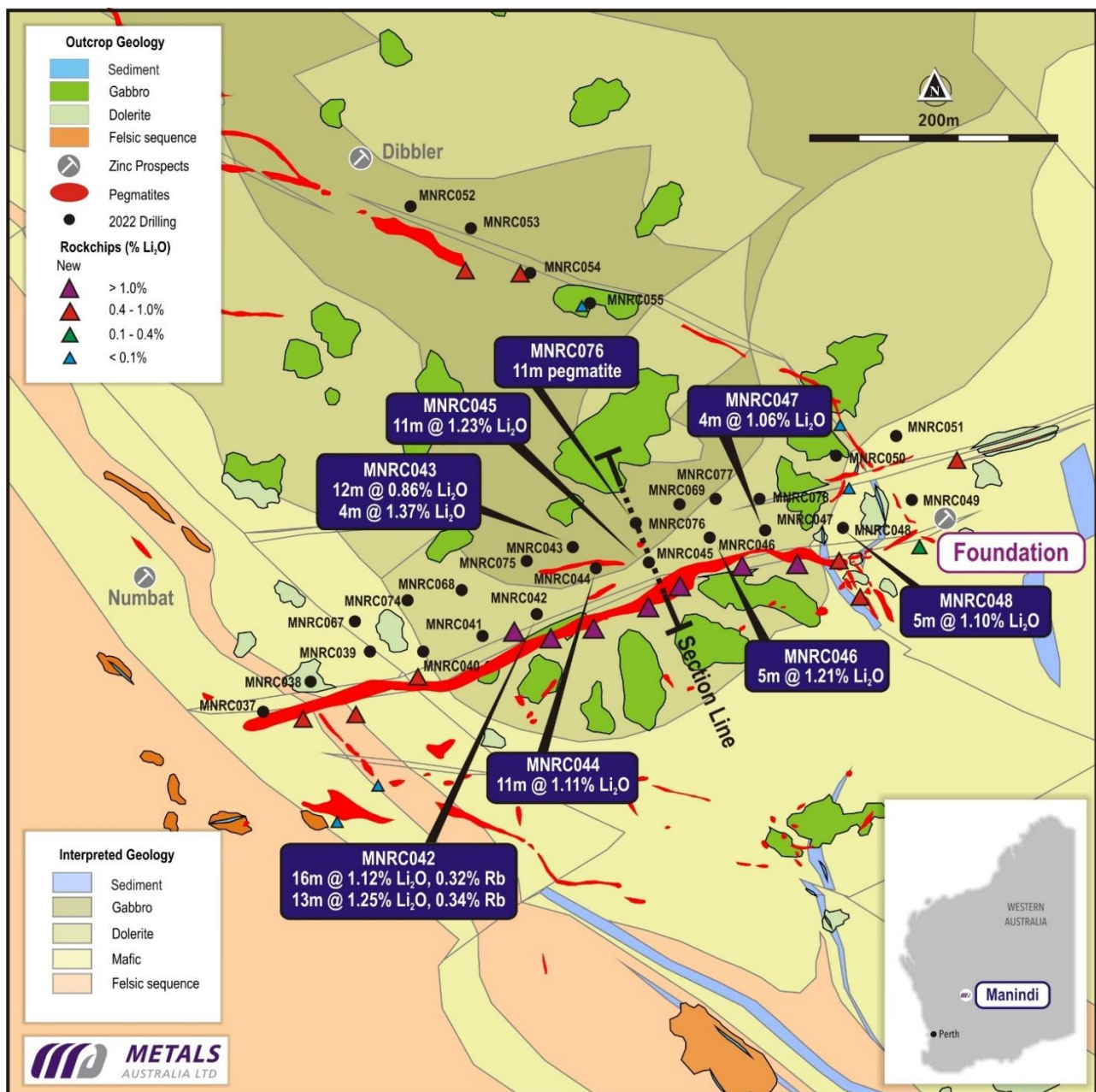


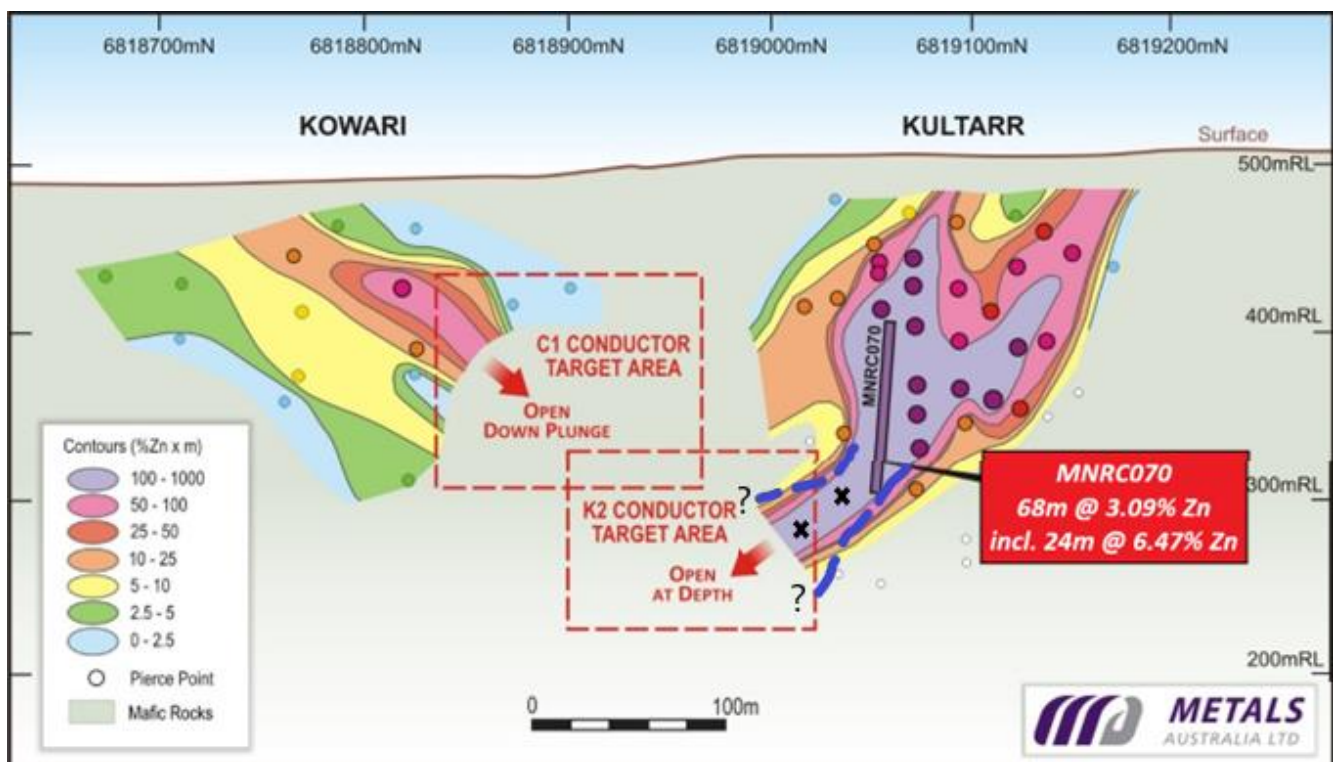
Figure 2: Manindi lithium Project, Foundation pegmatite, downhole intercepts and rockchip sample locations

### Diamond Drilling to Test High-Grade Zinc Resource Extensions:

The new diamond drilling program will also test for depth and strike extensions to the previously announced high-grade intersection in **MNRC070 of 68m @ 3.09% Zn, 0.20% Cu, 2.33 g/t Ag from 89m, including 24.0m @ 6.47% Zn, 0.29% Cu, 3.58 g/t Ag from 100m<sup>2</sup>**. This exceptional reverse circulation (RC) drilling intersection extended the high-grade zinc mineralisation at the Kowari Prospect ("Kowari" or "the Prospect") down plunge to the west of previous high-grade intersections<sup>2</sup> (see longitudinal projection, Figure 3).

Previous electromagnetic (EM) surveys show EM anomalies at depth below both the Kultarr (K2 anomaly) and Kowari (C1 anomaly) zones<sup>2</sup> (Figure 3). The high-grade intersection in MNRC070 confirmed that the high-grade zinc mineralisation extends beyond the previous drilling and **opened-up potential to significantly expand the high-grade zinc resources at the prospect.**

**Diamond drilling will test this projected down-plunge extension of the high-grade zinc mineralisation in the area where EM surveys indicate significant extensions may be present.**



**Figure 3: Kultarr and Kowari Longitudinal Projection with MNRC070 Intersection and diamond drilling targets**

### The Manindi West Vanadium-Titanium Magnetite and Nickel-Copper-Cobalt Sulphide Prospect:

The Company previously announced a significant **vanadium (iron, titanium) intersection with zones of nickel-copper-cobalt sulphide mineralisation in from MNRC071**. This was the first drillhole that has tested the **Manindi West target<sup>3</sup>**. This RC drill hole tested an EM anomaly associated with a major northwest trending magnetic zone of more than 3 kilometre (km) strike length and 1 km wide, located to the southwest and parallel to the corridor that contains the Kowari and Kultarr zinc resources (see Figures 1 and 4).

**MNRC071** passed through a zone of felsics and pegmatite and oxidised material before intersecting a fresh, magnetic mafic intrusive unit from 48m downhole and continued in this unit, interspersed with pegmatite dykes, for the entire length of the hole to 130m depth. High vanadium, iron and now the recently received over-limit titanium values in the mafic intrusive produced an overall intersection of **82m @ 0.30% V<sub>2</sub>O<sub>5</sub>, 27.5% Fe and 11.5% TiO<sub>2</sub> from 48m downhole that included 70m @ 0.32% V<sub>2</sub>O<sub>5</sub>, 29% Fe, 12.2% TiO<sub>2</sub>, 0.02% Ni, 0.03% Cu, 159ppm Co from 48m including 27m @ 0.35% V<sub>2</sub>O<sub>5</sub>, 35% Fe, 14.8% TiO<sub>2</sub>, 0.03% Ni, 0.05% Cu, 221ppm Co.**



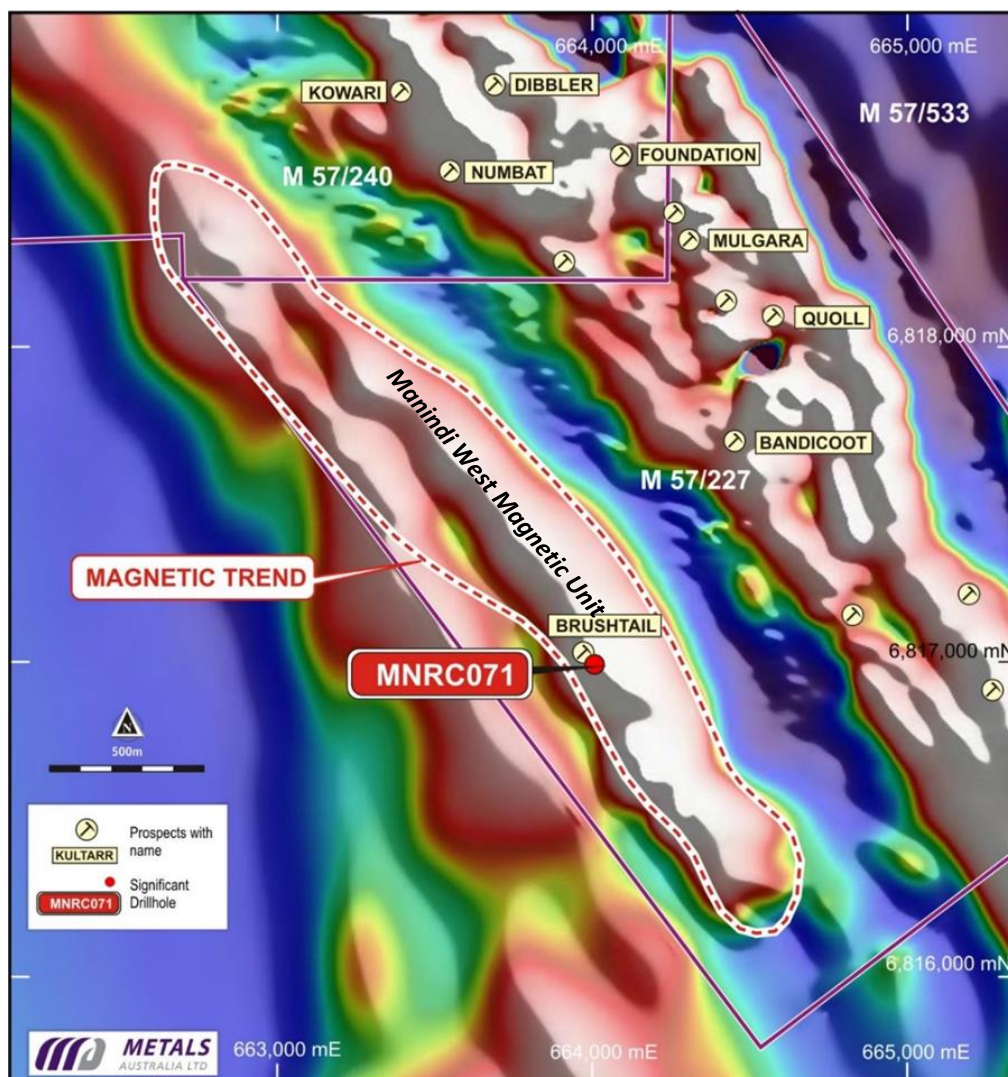
This zone also included sulphide mineralisation that produced significant nickel, copper and cobalt results including:

- **6m @ 0.08% Ni, 0.11% Cu, 506ppm Co (0.32% V<sub>2</sub>O<sub>5</sub>, 39.3% Fe, 21.9% TiO<sub>2</sub>) from 59m incl. 2m @ 0.13% Ni, 0.08% Cu, 779ppm Co (0.21% V<sub>2</sub>O<sub>5</sub>, 36.2% Fe, 15.6% TiO<sub>2</sub>) from 59m**

The high iron, titanium and vanadium levels throughout the mafic intrusive intersected by MNRC071 are associated with magnetite rich zones interpreted to be associated with the lower layers of the western Youanmi mafic-ultramafic Complex. The mineralisation appears to be very similar to the Youanmi Vanadium Project of Venus Metals (ASX:VMC) within the same mafic complex 20km to the northeast of the Manindi Project and has potential to host higher-grade vanadium-titanium mineralisation at the base of the intrusive, similar to the high-grade Australian Vanadium deposit (ASX:AVL) near Meekatharra, 300km to the northwest of Manindi.

There is also potential for higher-grade massive sulphide accumulations at the base of the intrusive. The diamond drilling will aim to test the key contact zones and will be followed up with down-hole EM to detect the extent of in-hole and off-hole conductors in the area.

In addition, a series of regional gravity profiles are currently being carried out over both the Manindi West and Kultarr zinc trends in order to outline the extent of the mafic intrusive complexes and define contact zones for further testing.



**Figure 4: Total magnetic intensity (TMI) image showing Manindi West magnetic unit and MNRC071 location**

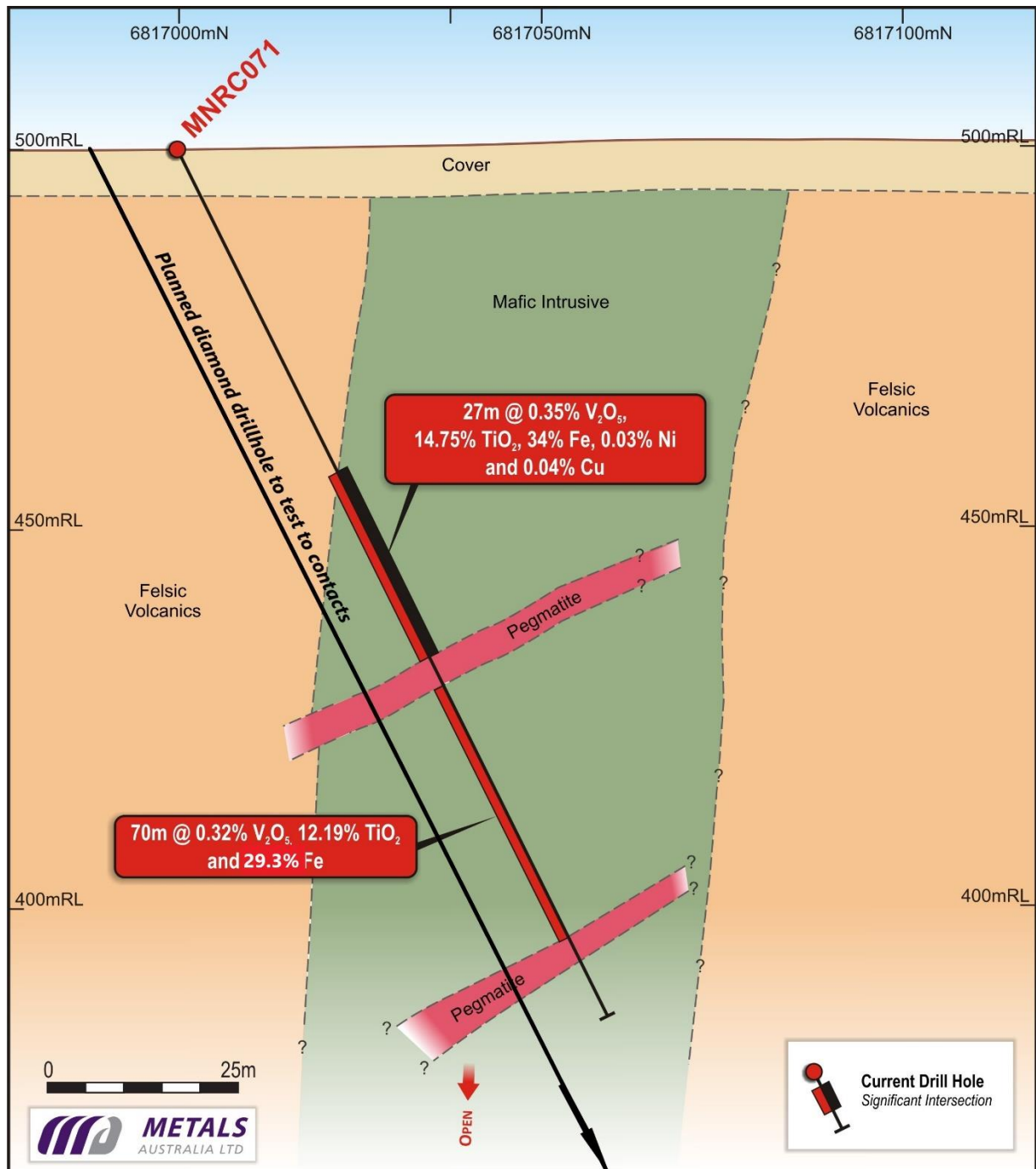


Figure 5: Cross Section through the MNRC071 intersection at Manindi West with planned diamond drilling

Table 1 below shows significant intersections in MNRC071:

Hole ID	From	To	M	V2O5%	Fe %	TiO <sub>2</sub> %	Ni %	Cu %	Co ppm	Bi ppm
<b>MNRC071</b>	48	130	82	<b>0.30</b>	<b>27.80</b>	<b>11.51</b>	0.018	0.030	148	5.88
incl.	48	118	70	<b>0.32</b>	<b>29.26</b>	<b>12.19</b>	0.020	0.032	159	5.15
incl.	48	100	52	<b>0.36</b>	<b>31.91</b>	<b>13.27</b>	0.024	0.038	183	4.14
incl.	48	75	27	<b>0.35</b>	<b>34.84</b>	<b>14.75</b>	0.029	0.045	221	2.21
& incl.	59	65	6	<b>0.32</b>	<b>39.27</b>	<b>21.94</b>	0.081	<b>0.112</b>	<b>506</b>	4.50
incl.	59	61	2	0.21	<b>36.15</b>	<b>15.57</b>	<b>0.132</b>	0.083	<b>779</b>	<b>8.94</b>
& incl.	89	90	1	<b>0.54</b>	<b>39.85</b>	<b>16.03</b>	0.030	<b>0.158</b>	179	<b>14.91</b>
& incl.	97	98	1	<b>0.49</b>	<b>38.79</b>	<b>11.21</b>	0.052	<b>0.120</b>	328	<b>75.23</b>

## About Metals Australia

Metals Australia is actively exploring a number of highly prospective battery minerals (and base and precious metals) projects within Western Australia and Quebec, Canada.

The immediate objectives of the Company are to build the value of its key battery minerals resource projects through drilling and initial studies to determine economic value and development potential.

### Manindi Project

The flagship Manindi Project includes the Manindi Zinc and Manindi Lithium Projects and comprises three granted mining leases (M57/227, M57/240 and M57/533) located in the Murchison District of Western Australia (Figure 1, inset) in close proximity to the Golden Grove Base Metals Mine and the Youanmi Gold Mine.

The Manindi Zinc Project includes the high-grade **Kultarr** and **Kowari Zinc deposits** (Figure 2), located close to the northern end of the Project at the boundary between a sequence of mafic intrusive units and mafic volcanics and felsics to the west.

These deposits already host a JORC 2012, **Measured, Indicated & Inferred Mineral Resource of 1.08Mt @ 6.52% Zn, 0.26% Cu, 3.2g/t Ag for 70,102t Zn (2% Zn cut-off)<sup>4</sup>** (including a Measured: 37.7kt @ 10.22% Zn, 0.39% Cu, 6.2g/t Ag; Indicated: 131.5kt @ 7.84% Zn, 0.32% Cu, 4.6g/t Ag and Inferred: 906.7kt @ 6.17% Zn, 0.25% Cu, 2.9g/t Ag).

The zinc-copper prospects are regarded as volcanic hosted massive sulphides (VHMS) type, similar to the nearby Golden Grove deposits.

The recently announced spectacular zinc intersection in **MNRC070 of 68m @ 3.09% Zn, 0.20% Cu, 2.33 g/t Ag** from 89m, including **24.0m @ 6.47% Zn, 0.29% Cu, 3.58 g/t Ag** from 100m<sup>2</sup> has opened up **potential to significantly grow the high-grade zinc with copper resources at the Project** through extending identified zones, including through the current diamond drilling program, and testing for deeper repeats and other key VHMS targets identified through geophysical modelling.

The Company also recently announced a substantial intersection of mafic hosted vanadium bearing titanomagnetite with zones of nickel-copper-cobalt sulphide mineralisation from the previously un-drilled Manindi West magnetic trend (Figures 1 and 4) that included an overall intersection of **82m @ 0.30% V<sub>2</sub>O<sub>5</sub>, 27.8% Fe and 11.5% TiO<sub>2</sub>** from 48m downhole incl. **27m @ 0.35% V<sub>2</sub>O<sub>5</sub>, 34.8% Fe, 14.75% TiO<sub>2</sub>, 0.03% Ni, 0.05% Cu, 221ppm Co<sup>3</sup>**.

The Manindi Lithium Project is described below and includes a series of lithium bearing pegmatites, generally striking east-west, within a 3km strike-length corridor that transect the same mafic intrusive / mafic volcanic boundary as the zinc deposits (Figure's 1 and 2).

### Manindi Lithium Project:

Detailed surface mapping carried out at Mulgara and Warabi, situated approximately 1.3km SE of the Kultarr and Kowari zinc resources (Figure 1), previously identified at least three lithium bearing pegmatites outcropping at surface with strike lengths of over 300m and widths of up to 25-30m.

Re-sampling of previous diamond drillcore that targeted VHMS sulphide mineralisation at Mulgara, produced intersections including<sup>5</sup>:

- **15m @ 1.20% Li<sub>2</sub>O from 34m, including 5m @ 1.53% Li<sub>2</sub>O from 38m in MND018, and,**
- **3m @ 1.00% Li<sub>2</sub>O from 41m in MND022.**

Following the positive identification of lithium-caesium-tantalum (LCT) pegmatites at Manindi, a shallow RC percussion drilling program was completed in 2018,<sup>5,6,7</sup> at the **Mulgara Prospect** to test the three outcropping pegmatite dykes identified. Significant intersections produced from this RC drilling program at Mulgara included<sup>6,7</sup>:

- **MNRC030: 8m @ 1.06% Li<sub>2</sub>O from 18m incl. 3m @ 1.65% Li<sub>2</sub>O with up to 1.96% Li<sub>2</sub>O**
- **MNRC033: 8m @ 1.00% Li<sub>2</sub>O from 32m, and 7m @ 1.29% Li<sub>2</sub>O, from 42 m incl. 5m @ 1.53% Li<sub>2</sub>O**

**Preliminary flotation tests on previous diamond drilling samples produced concentrates with grades up to 3.05% Li<sub>2</sub>O and lithium recovery of up to 77% from a concentrated 30% of the mass feed<sup>8</sup>.** Potential for further improvements in the metallurgical results is high given that the previous tests carried out were scoping level in nature and that the flowsheet had not been optimised for the Manindi mineralization.

The Company recently identified other LCT pegmatites within a 3km corridor at the northwest end of the Manindi Mining Leases. This includes the **Foundation Pegmatite<sup>9</sup>** (Figure 1) that 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 in a northwest-southeast direction (see Figures 1 and 2)

**Rockchip sample results averaging >1% Li<sub>2</sub>O with Cs, Ta and >0.4% Rb and up to 2.30% Li<sub>2</sub>O and 0.70% Rb<sup>9</sup>, confirm that Foundation is a high-grade LCT pegmatite** (Figure 3). These results compare favourably with previous results from rockchip sampling of the **Mulgara pegmatites** that produced high-grade results of up to **2.84% Li<sub>2</sub>O, 296 ppm Ta<sub>2</sub>O<sub>5</sub> and up to 746ppm Cs<sub>2</sub>O<sup>5</sup>.**

The Company recently completed a 44 hole, ~3,500m, RC drilling program<sup>9</sup> that tested the Foundation and Mulgara Pegmatites (Figure 1) as well as other nearby zones (e.g., Dibbler, Quoll). Significant lithium-rubidium results have been produced from results received to date from the Foundation Pegmatite, including the following **thick and high-grade intersections<sup>10,11</sup>:**

- **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>10</sup>**
- **11m @ 1.23% Li<sub>2</sub>O, 0.31% Rb from 16m in MNRC045, incl. 5m @ 1.47% Li<sub>2</sub>O, 0.30% Rb<sup>11</sup>**

Final results from the remaining holes in the program are expected to be received shortly.

Following the diamond drilling in this release, further metallurgical testwork will be carried out to optimise lithium and rubidium recovery and differentiate the tantalum mineralisation, prior to developing a processing flowsheet. The Company then plans to initiate scoping studies into a Manindi lithium mining and processing operation.

#### **Lac Rainy Graphite Project, Quebec, Canada**

The Company's other flagship, the Lac Rainy Graphite Project ("Lac Rainy" or the "Project"), is located in Quebec, Canada, in close proximity to the operating mines around Fermont and is 100% owned by Metals Australia. The Project hosts a **JORC 2012 Indicated and Inferred Resource of 13.3Mt @ 11.5% Total Graphitic Carbon (Cg)<sup>12</sup>** (including Indicated: 9.6Mt @ 13.1% Cg and Inferred: 3.7Mt @ 7.3% Cg).

In 2021 Metals Australia completed a Phase 1 **Scoping Study that highlighted the significant economic potential of the Lac Rainy Graphite Project<sup>13</sup>.**

Recently completed Phase 2 metallurgical tests have produced very encouraging results<sup>13</sup> based on the optimum flowsheet developed through testing of a composite sample from the high-grade Lac Rainy Graphite Project grading **16.2% Cg**. Highlights of the Phase 2 testing program are as follows:

- i) Optimised tests produced a combined, -150µm and +150µm, **concentrate grade of 96.8% Cg**, which is at the upper end of the targeted purity range of 95% to 97% Cg<sup>14</sup>.
- ii) The proportion of larger flake recovered under these optimised grinding and flotation conditions was 13.9% in the +150µm fraction, **at a very high purity of 97.4% Cg<sup>14</sup>.**
- iii) Locked closed circuit (LCT) testwork produced a **very-high overall recovery into the concentrate of 95.1% Cg**. Concentrate grade was maintained in target range at 95.5% Cg<sup>14</sup>.

The flow-sheet development program has significantly improved the conditions of the rougher, primary cleaning and secondary cleaning flotation circuits.

**The Company is now very close to finalising the generation of the bulk, high-purity, flake-graphite concentrate sample, targeting 5 to 10kg of material at a grade of >94% Cg.**



This bulk flake-graphite concentrate sample will shortly be sent to ProGraphite in Germany, to conduct specialist downstream testwork; including spheroidization and purification, to be followed by battery testwork to determine the quality of the Lac Rainy graphite products for use in lithium-ion battery applications.

This downstream testwork will provide impetus to discussions with potential off-take and/or funding partners to assist driving the Lac Rainy Project towards feasibility, development and production.

#### **Eade-Felicie-Pontois Copper-Gold-Polymetallic Projects, Canada**

The Eade-Felicie-Pontois Copper-Gold-Polymetallic Projects are located in northern Quebec, Canada, in the Lac Grande Greenstone Belt. The Company has received the results of a Time-Domain Electromagnetic (TDEM) and heliborne Magnetic (MAG) survey that confirmed areas of identified mineralisation and identified new targets to be field tested across the extensive 15km strike corridor of identified targets<sup>15</sup>.

The Company recently completed a reconnaissance fieldwork program over high priority target areas and, based on re-evaluation of the geophysical interpretation and a more intensive and systematic fieldwork program, will be finalising plans for an initial drilling campaign.

#### **Lac du Marcheur Copper-Cobalt Project, Canada**

The Lac du Marcheur Copper-Cobalt Project is located in central Quebec, Canada, in close proximity to the Chilton Copper-Cobalt project. An initial field program was undertaken by the Company in 2017 which confirmed the historical high-grade copper and cobalt occurrences and prospects on surface.

The Company has recently completed an airborne TDEM and MAG survey over the entire tenement area. The preliminary processed results of these surveys have highlighted several conductors aligned and coincident with magnetic trends/lineaments trending NW-SE to NNE-SSW. These conductors/anomalies may be associated with graphitic and/or sulphidic zones and field work will be carried out to identify the source of the conductors/anomalies<sup>15</sup>.

#### **New Battery Metals and Precious Metals Projects through Payne Gully Acquisition**

The Company recently announced an Agreement to purchase 80% of Payne Gully Gold Pty Ltd ("Payne Gully")<sup>16</sup> which holds a suite of highly prospective nickel, gold and copper-gold tenements in Western Australia and the Northern Territory, including:

- a) The **Warrambie Project** located between Sabre Resources' Sherlock Bay nickel sulphide deposit<sup>17</sup> and the Andover massive nickel sulphide discovery<sup>18</sup> in Western Australia's Pilbara region. Warrambie is highly prospective for mafic intrusive nickel-copper-cobalt-PGE sulphide mineralisation.
- b) The **Murchison Project**, including five tenements along strike from major gold deposits including the >5Moz Big Bell<sup>19</sup> and the >3Moz Mt Gibson mine<sup>20</sup> in Western Australia's Murchison Province. The Murchison Project tenements are highly prospective for gold, Ni-Cu-Co-PGE and lithium mineralisation.
- c) The **Tennant Creek Project** in the Northern Territory which includes three tenements along strike from Warrego high-grade copper-gold deposit<sup>21</sup> and a tenement southeast of Tennant Creek along strike from Tennant Minerals (ASX:TMS) Bluebird copper-gold discovery<sup>22</sup>. All tenements are considered highly prospective for iron-oxide-copper-gold (IOCG) deposits.

The acquisition of Payne Gully, which is subject to general meeting approval, will enhance the Company's portfolio of battery metals and gold projects with multiple targets in Tier 1 jurisdictions - Western Australia and Northern Territory.

## References

- <sup>1</sup> Metals Australia Ltd, 26 May 2022. Multiple High-Grade Lithium Intersections from Manindi Pegmatites.
- <sup>2</sup> Metals Australia Ltd, 24 May 2022. Exceptional 68m @ 3.09% Zinc Intersection at Manindi.
- <sup>3</sup> Metals Australia Ltd, 09 June 2022. Substantial Vanadium (Iron-Titanium) Intersection at Manindi.
- <sup>4</sup> Metals Australia Ltd, 25 July 2017. C4 Conductor Delivers High Grade Zinc Intersection at Manindi.
- <sup>5</sup> Metals Australia Ltd, 21 March 2017. High Grade Lithium Bearing Pegmatites Discovered at Manindi.
- <sup>6</sup> Metals Australia Ltd, 12 June 2018. Lithium pegmatite drilling program commences at Manindi Lithium Project.
- <sup>7</sup> Metals Australia Ltd, 24 July 2018. Results of RC percussion drilling program at Manindi Lithium Project.
- <sup>8</sup> Metals Australia Ltd, 13 April 2018. Preliminary Metallurgical Test program underway at Manindi Lithium Project.
- <sup>9</sup> Metals Australia Ltd, 10 November 2021. High Grade Lithium-Tantalum Results from Manindi Pegmatites.
- <sup>10</sup> Metals Australia Ltd, 3 May 2022. Excellent Drill Hits from Manindi pegmatites.
- <sup>11</sup> Metals Australia Ltd, 16 May 2022. Thick Lithium Bearing Pegmatite Intersections at Manindi.
- <sup>12</sup> Metals Australia Ltd, 15 June 2020. Metals Australia delivers High Grade Maiden JORC Resource at Lac Rainy Graphite Project, Quebec.
- <sup>13</sup> Metals Australia Ltd, 3 February 2021. Lac Rainy Graphite Study delivers strong economics with Significant Economic upside.
- <sup>14</sup> Metals Australia Ltd, 28 February 2022. Outstanding 96.8% Flake Graphite Concentrate for Lac Rainy.
- <sup>15</sup> Metals Australia Ltd, 28 April 2022. Quarterly Activities Report for the Quarter Ended 31 March 2022.
- <sup>16</sup> Metals Australia Ltd, 16 June 2022. Metals Australia Acquires Key Battery Metals Projects.
- <sup>17</sup> Sabre Resources Ltd (ASX:SBR), 12th June 2018. Resource Estimate for the Sherlock Bay Nickel-Copper- Cobalt Deposit.
- <sup>18</sup> Azure Minerals Limited (ASX:AZR), ASX release 30th March 2022. Azure Delivers Maiden Mineral Resource for Andover.
- <sup>19</sup> [Portergeo.com.au/database/mineinfo.asp?mineid=mn238](https://portergeo.com.au/database/mineinfo.asp?mineid=mn238). Big Bell, Western Australia. 31 December 2018.
- <sup>20</sup> Capricorn Metals Ltd (ASX:CMM), 28th July 2021. Capricorn Acquires 2.1 Million Ounce Mt Gibson Gold Project. <sup>21 21 2</sup>
- <sup>21</sup> [Portergeo.com.au/database/mineinfo.asp?mineid=mn040](https://portergeo.com.au/database/mineinfo.asp?mineid=mn040). Tennant Creek - Gecko, Warrego, White Devil, Nobles Nob, Juno, Peko, Argo, Orlando, TC8. Northern Territory, NT, Australia.
- <sup>22</sup> 08 March 2022. Tennant Minerals (ASX. TMS): Spectacular 50m @ 2.70% copper intersection at Bluebird.

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

**\*\*\*ENDS\*\*\***

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

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## Cautionary Statement regarding Forward-Looking information

*This document contains forward-looking statements concerning Metals Australia Ltd. 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 Ltd 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.*



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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <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>	<p>Reverse circulation (RC) percussion drilling was used to obtain 1 m samples, from which approximately 2-3 kg was sub-sampled and pulverised to produce a sample for assay.</p> <p>Previous diamond drilling has also been sampled at approximate 1m intervals, utilising geological contacts where necessary.</p>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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).</li> </ul>	Drilling type is reverse circulation (RC) percussion drilling, using a 4.5" face-sampling drill bit.
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<p>Sample recovery was visually assessed on basis of the volume of RC percussion chip recovery and overall is considered to be good based on the drilling records.</p> <p>Standard RC percussion drilling techniques were utilised to maximise sample recovery. The cyclone unit was routinely cleaned to limit contamination and ensure representivity of the sample.</p> <p>There is no apparent relationship between sample recovery and grade.</p>
<b>Logging</b>	<ul style="list-style-type: none"> <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>	<p>Chips from 1m RC percussion drilling intervals were logged according to industry standard practice and representative samples stored in chip trays.</p> <p>Logging was qualitative in nature and recorded using standard logging templates. The resulting data was uploaded to a Datashed database and validated.</p> <p>100% of the drilling was logged.</p>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <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 sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<p>Assaying for this current RC program is being undertaken by Intertek Perth utilising their 4A /MS48 (four acid digest/ICP-MS) package.</p> <p>The quality of the assay and laboratory procedures is considered to be high and appropriate for the type of mineralisation. The technique used is considered to be a total digestion.</p> <p>A comprehensive QAQC program (1 in 25) including blank, standard and duplicate samples were submitted by the Company for analysis with the drilling samples. The results of the QAQC program have been reviewed by the Company's consultant, who has not identified any material concerns. Routine internal QAQC checks were also completed by Intertek and the results are considered to be satisfactory with no material concerns, being sampled and appropriate for the sample type, being sampled and appropriate for the sample type.</p>

Criteria	JORC Code explanation	Commentary
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <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 of accuracy (i.e., lack of bias) and precision have been established.</li> </ul>	<p>Previous drill sample assaying was completed by the Bureau Veritas (BV) laboratory based in Perth, Western Australia.</p> <p>BV undertook a standard multi-element assay procedures (codes PF100, PF101 and PF102) utilising a peroxide fusion digestion technique followed by ICP-AES and ICP-MS analysis.</p> <p>Assaying for this current RC program is being undertaken by Intertek Perth utilising their 4A /MS48 (four acid digest/ICP-MS) package. Gold and PGE assays will be completed by fire assay/ ICP-MS analysis.</p> <p>The quality of the assay and laboratory procedures is considered to be high and appropriate for the type of mineralisation. The technique used is considered to be a total digestion.</p> <p>A comprehensive QAQC program including blank, standard and duplicate samples were submitted by the Company for analysis with the drilling samples. The results of the QAQC program have been reviewed by the Company's consultant, who has not identified any material concerns.</p>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <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>	<p>Significant intersections have been reviewed and verified by company technical and management personnel.</p> <p>Primary drilling data was documented in detailed electronic drill hole logs. Primary assay data was received electronically from the analytical laboratory. Data is uploaded to a Datashed geological database and verified. No adjustments have been made to the reported assays (Appendix 1).</p>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<p>Drill hole collar and rock chip sample locations have been verified with handheld GPS with a <math>\pm 5</math> m degree of accuracy.</p> <p>The grid system used is GDA94 datum, MGA zone 50 projection.</p> <p>Topographic control is based on a digital terrain model (DTM) with an accuracy of <math>\pm 5</math>m.</p>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<p>Data spacing is 1 m intervals downhole. Drill holes spaced at approximately 20 m intervals along strike of the Kultarr resource.</p> <p>The drilling intersection announced presents sufficient data to establish the degree of geological and grade continuity required for estimation of a resource. Further drilling will be carried out before a revised resource estimate is produced.</p> <p>No sample compositing has been applied.</p>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<p>The drilling and sampling orientation is not considered to have resulted in a true width intersection of the zinc mineralised zone (see figure 1, cross section).</p> <p>Given the nature of the deposit type, the drilling and the sampling is considered to achieve unbiased sampling as the sulphide body has been tested from hangingwall to footwall.</p>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<p>Industry standard chain of custody followed, with samples collected, transported and delivered to a secure freight depot by Company geologist. Samples were shipped directly to the analytical lab.</p>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<p>The Company's consultant has reviewed the sampling and assay data for completeness and quality control and has not identified any material concerns.</p>

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <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>	<p>The Company controls an 80% Interest in three granted Mining Licences in Western Australia covering the known mineralisation and surrounding area.</p> <p>The licences are M57/227, M57/240 and M57/533. The licence reports and expenditure are all in good standing at the time of reporting.</p> <p>There are no known impediments with respect to operating in the area.</p>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<p>The Manindi zinc deposits were identified by WMC in the early 1970s and have been extensively explored using surface and geophysical techniques prior to drilling. Mapping and soil geochemistry preceded airborne, and surface geophysical techniques being applied to the project.</p> <p>The Project has been drilled in 8 separate drill programs since 1971, with a total of 393 holes having been completed. These include 109 diamond drillholes, 109 RC drillholes, 169 RAB drillholes and 8 percussion holes.</p> <p>The zinc deposits have never been mined.</p> <p>The Project has not previously been explored for lithium.</p>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<p>The mineralisation at Manindi is hosted within an Archaean felsic and mafic volcanic sequence. The sequence has been extensively deformed by regional metamorphism and structural event related to the Youanmi Fault and emplacement of the Youanmi gabbro intrusion and other later granitic phases.</p> <p>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.</p> <p>Pegmatite dykes crosscut the felsic and mafic rock sequences at a high angle and are interpreted to have intruded along structures that transect the area. The dykes that occur in the area are considered to be of the lithium-caesium-tantalum type (LCT) and some contain visible lepidolite mineralisation.</p>
<b>Drill Information</b>	<ul style="list-style-type: none"> <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 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> </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>	<p>A summary of all information material to the understanding of the previous lithium exploration results is included in the announcement, see Appendix 1 of the announcement by Metals Australia Ltd, 24 July 2018. “Results of RC percussion drilling program at Manindi Lithium Project”.</p> <p>A summary of previous exploration at Kultarr is included in the announcement by Metals Australia Ltd, 25 July 2017. “C4 Conductor delivers High Grade Zinc Intersection at Manindi”</p>



Criteria	JORC Code explanation	Commentary
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li><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></li> <li><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></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<p>Exploration results are reported as a length weighted average grade. This ensures that short lengths of high-grade material receive less weighting than longer lengths of low-grade material.</p> <p>Where aggregate intercepts incorporate short lengths of high-grade results within longer lengths of lower grade results, these zones have been reported separately.</p> <p>No maximum or minimum grade truncations have been applied.</p> <p>No metal equivalents are reported.</p>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>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').</i></li> </ul>	<p>The orientation and dip of the reported zinc RC drill hole MNRC070 was designed to investigate the potential for down plunge Zn mineralisation and an interpreted EM plate anomaly. The reported mineralised intersections are therefore not true width.</p>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li><i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>	<p>Appropriate maps and sectional views are included in the body of the announcement.</p>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li><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 avoiding misleading reporting of Exploration Results.</i></li> </ul>	<p>Full and representative reporting of previous relevant results in announcement by Metals Australia Ltd, 24 July 2018. "Results of RC percussion drilling program at Manindi Lithium Project".</p> <p>With respect to previous zinc exploration, see a summary of previous exploration at Kultarr included in the announcement by Metals Australia Ltd, 25 July 2017. "C4 Conductor delivers High Grade Zinc Intersection at Manindi"</p>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li><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></li> </ul>	<p>There are no other substantive exploration data.</p>
<b>Further work</b>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>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></li> </ul>	<p>Further drilling to test the grade, thickness and continuity of lithium mineralisation at the Manindi Project, as discussed in the previous announcements.</p> <p>Further diamond drill testing to determine down plunge extensions of the Kultarr mineral resource.</p>