

ASX Announcement
03 May 2022
ASX:MLS

Excellent Lithium - Rubidium Drill Hits from Manindi Pegmatites

- Including High-Grade 16m at 1.12% Li₂O, 0.32% Rb from Foundation
- ➤ A total of 33 RC holes for 2,635m completed of a minimum 3,500m drilling program¹ testing the Lithium-Cesium-Tantalum (Rubidium) (LCT) pegmatites at the Manindi project in Western Australia.
- ➤ Initial results from the first seven holes include thick, high-grade, lithium (Li₂O) and rubidium (Rb) intersections from the Foundation LCT Pegmatite discovery:
 - o 16m @ 1.12% Li₂O, 0.32% Rb from 19m (down hole) in MNRC042,
 - including 13.0m @ 1.25% Li₂O, 0.34% Rb from 21m,
 - 12m @ 0.86% Li₂O, 0.30% Rb from 62m (down hole) in MNRC043,
 - including <u>4.0m @ 1.37% Li₂O, 0.33% Rb</u> from 68m,
- Assay results still awaited from additional thick intersections of lithium-bearing pegmatite under the highest-grade part of the Foundation Pegmatite, where rockchip results of up to 2.30% Li₂O and 0.70% Rb were previously reported²
- Assays also still to come from drilling below previous Mulgara pegmatite intersections (including 8m @ 1.06% Li₂O from 18m incl. 3m @ 1.65% Li₂O in MNRC030³,⁴), which also intersected thick pegmatite intervals with visible lithium bearing minerals.
- Further, follow-up drilling of the Foundation Pegmatite underway to extend the thick pegmatite intersections to depth and complete a 40m x 40m grid of pierce points to allow initial JORC 2012 resource estimation.
- ➤ Diamond drilling planned to test depth extensions of key pegmatites and to obtain samples for metallurgical lithium (and Rb, Ta) concentration testwork.

Metals Australia Chairman, Mike Scivolo, said, "The results of only the first seven holes in the Manindi Lithium Project RC drilling program have already produced thick and high-grade lithium intersections.

"We look forward to seeing the results from under the highest-grade part of the Foundation Pegmatite as well as from the thick intersections of lithium bearing pegmatite at Mulgara.

"It's early days but it looks like the Company is onto a significant LCT pegmatite discovery at Manindi and we are well funded to be able to drill-out a substantial lithium resource at the Project."



Metals Australia Ltd (ASX: MLS) (MLS or the Company) is delighted to announce results from the first seven, of up to 45 holes being drilled to test lithium bearing pegmatites at the Company's Manindi Project ("Manindi" or "Project"). Manindi is located 20 km southwest of the Youanmi Gold Mine in the Murchison District of Western Australia (see location, Figure 1).

A total of 33 RC holes for 2,635m have been completed to date of the minimum 3,500m reverse circulation (RC) drilling program to systematically test the key LCT pegmatites discovered at Manindi.

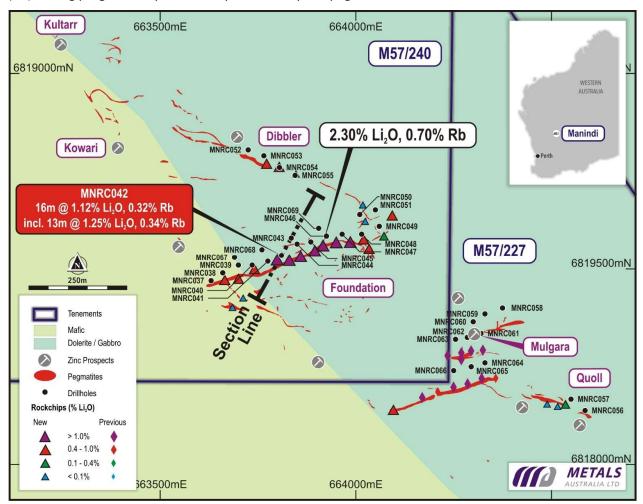


Figure 1: Manindi Lithium Project, mapped pegmatites with rockchip and drillhole locations

These results are from only the first seven holes that tested the lower grade, western end of the 500m strike length **Foundation Pegmatite** (Figure 1). Significant lithium-rubidium results were produced from all seven holes and the two eastern most holes from the start of the higher-grade part of the Foundation Pegmatite produced thick and high-grade intersections that include:

- o 16m @ 1.12% Li₂O, 0.32% Rb from 19m (down hole) in MNRC042,
 - including 13.0m @ 1.25% Li₂O, 0.34% Rb from 21m,
- 12m @ 0.86% Li₂O, 0.30% Rb from 62m (down hole) in MNRC043,
 - including 4.0m @ 1.37% Li₂O, 0.33% Rb from 68m,

These intersections from the Foundation Pegmatite approximate true width and indicate continuity of a moderately north dipping pegmatite zone from surface to at least 60m vertical depth (see Figure 2 below).



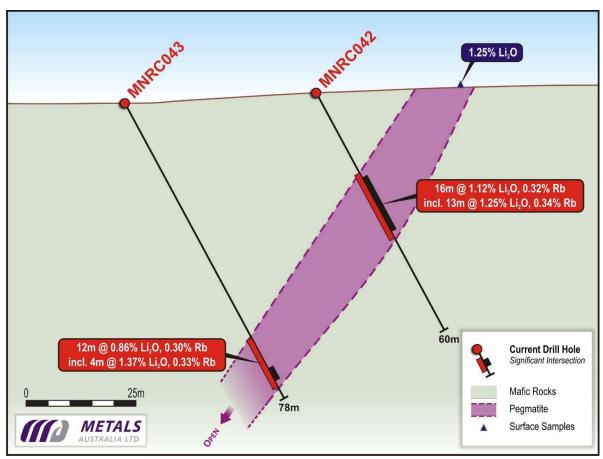


Figure 2: Cross section through the Foundation Pegmatite with the results of MNRC042 and MNRC043

The intersections in drillholes MNRC042 and MNRC043 correlate with the western end of the highest-grade part of the Foundation Pegmatite (see Figure 1), where **previous rockchip sample results indicate grades ranging from 1.2% Li₂O to 2.3% Li₂O².**

A further seven RC holes that have tested the Foundation Pegmatite to the east along strike have intersected thick (>10m) intervals of lithium-bearing pegmatite from under the highest grade rockchip samples, with results still to come.

Based on the excellent results to date a further five RC holes will test the Foundation Pegmatite below these intersections, as well as complete infill drilling to a 40m x 40m grid along the entire 500m strike length of the Foundation Pegmatite. **This will allow a maiden Inferred JORC 2012 resource to be estimated.**

In addition, drilling of the Mulgara Pegmatites, 500m southeast of Foundation, has produced significant intersections of lithium bearing pegmatite at depth, extending the mineralisation to over 100m below surface.

The current Mulgara RC drilling has tested all three of the Mulgara LCT pegmatites and includes deeper drilling under previous high-grade lithium - tantalum RC drilling intersections³ (see Figure 3 below), including:

- 8m @ 1.06% Li₂O from 18m incl. 3m @ 1.65% Li₂O with up to 1.96% Li₂O in MNRC030^{3,4}
- 8m @ 1.00% Li₂O, 158ppm Ta₂O₅ from 32m, and 7m @ 1.29% Li₂O, 242ppm Ta₂O₅ from 42 m incl. 5m @ 1.53% Li₂O in MNRC033^{3,4}



RC drillhole MNRC061 intersected 17m of lithium bearing pegmatite from 109m downhole (see Photo 1 below) and MNRC062 intersected 12m of lithium bearing pegmatite from 118m downhole, on the same section as the 8m @ 1.00% Li₂O and 7m @ 1.29% Li₂O intersections in MNRC033 (see section, Figure 4)^{3,4}.



Photo 1: Intersection of LCT pegmatite from 109m to 126m in MNRC061 with purple Li-Rb bearing minerals

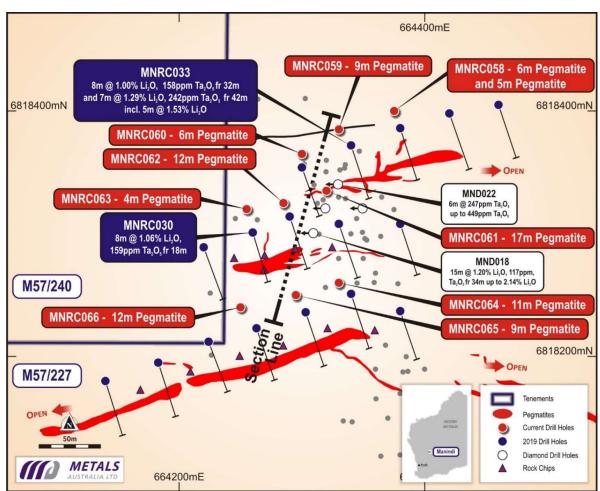


Figure 3: Mulgara LCT Pegmatites with rockchip and recent and previous drill hole locations



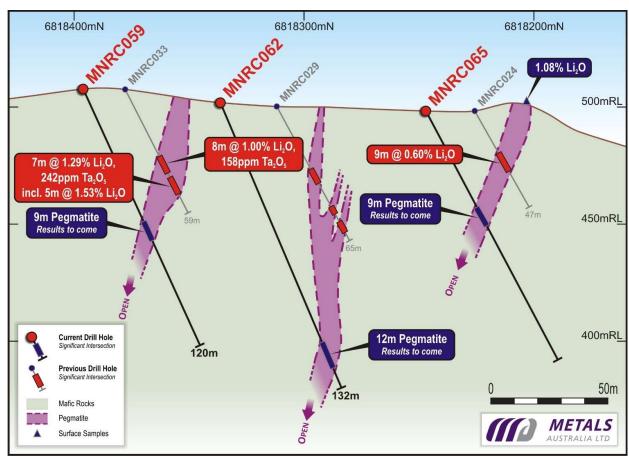


Figure 4: Cross section through Mulgara LCT Pegmatites with recent and previous drill hole intersections

Upon receipt of all results, further (diamond) drilling is planned to confirm the mineralogy of the intersections and provide metallurgical samples for lithium (rubidium, tantalum) concentrate testwork. The completion of this drilling will allow the Company to estimate the resource potential of the key pegmatites on the Manindi Lithium Project, including the **Foundation Pegmatite** and the **Mulgara Pegmatites**.

The current drilling program includes up to 45 holes for a minimum of 3,500m and is being carried out with the following objectives:

- i) Initial RC drilling of the **Foundation Pegmatite** at approximately 40m section spacing along the entire 500m strike length, as well as other nearby pegmatites e.g. Dibbler and Quoll (Figure 1), and,
- ii) Following up the previous high-grade lithium and tantalum drilling results at **Mulgara** with both deeper drilling on key sections and extension drilling along strike of the three LCT pegmatites identified to date (see Figures 1 and 3).

Drillholes range from 60m depth in areas of initial testing, to 120m depth on sections where there are existing significant intersections (e.g. Mulgara) or as immediate follow-up below encouraging new pegmatite intersections (e.g. Foundation).

Table 1 lists all significant intersections from the seven holes with results received to date.

Appendix 1 includes details of drillholes completed to date with identified pegmatite intersection intervals.

Remaining drillhole samples are being processed by Intertek, Perth, for a full suite of analyses, including Li, Rb, Ce, Ta, as well as other associated elements.



Table 1: Manindi Lithium Project, significant drilling intersections to date:

Drillhole	From	То	Interval (m)	Li₂O %	Rb%	Ta₂0₅ ppm	Cs₂O ppm	Cut-off
MNRC037	49	50	1	0.22	0.19	11.0	236.8	0.2% Li ₂ O
MNRC038	12	19	7	0.04	0.11	40.9	39.2	<0.1% Li ₂ O
	17	24	7	0.39	0.29	103.6	62.7	0.2% Li ₂ O
MNRC039	33	38	5	0.29	0.18	83.7	41.9	0.1% Li ₂ O
	44	50	6	0.34	0.27	83.3	45.1	0.1% Li ₂ O
NANID COAO	27	30	3	0.44	0.32	98.6	71.1	0.2% Li ₂ O
MNRC040	45	50	5	0.40	0.29	95.7	52.7	0.2% Li ₂ O
NANIDCOA1	18	26	8	0.64	0.35	104.6	97.8	0.3% Li ₂ O
MNRC041	31	47	16	0.33	0.26	79.7	47.7	0.1% Li ₂ O
incl.	38	42	4	0.71	0.36	75.5	76.8	0.6% Li ₂ O
MNRC042	19	35	16	1.12	0.32	81.7	79.5	0.3% Li ₂ O
incl.	21	34	13	1.25	0.34	83.0	83.8	1.0% Li ₂ O
MNRC043	60	75	15	0.74	0.33	87.2	88.4	0.2% Li ₂ O
incl.	62	74	12	0.86	0.30	67.3	79.3	0.3% Li ₂ O
incl.	68	72	4	1.37	0.33	50.5	93.2	1.0% Li ₂ O

About the Manindi Lithium Project:

The Manindi Project includes three granted mining leases in the fertile Youanmi Igneous geological complex, located approximately 20 km southwest of the Youanmi Gold Mine in the Murchison District of Western Australia (see location inset, Figure 1).

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.

Lithium-tantalum mineralisation is concentrated adjacent to pegmatite contacts exhibiting coarser grained and more abundant lepidolite +/- spodumene crystals (see Photo 2 below).

The pegmatites overall strike-length is not limited to surface outcrop as detailed airborne magnetics strongly suggests far more extensive development of pegmatite structures exist subsurface.

Re-sampling of previous diamond drillcore that targeted VHMS sulphide mineralisation at Mulgara, produced intersections including:

- 15m @ 1.20% Li₂O from 34m, including 5m @ 1.53% Li₂O from 38m in MND018, and,
- 3m @ 1.00% Li₂O from 41m in MND022⁵ (see locations, Figure 3).

Following the positive identification of lithium bearing LCT pegmatites at Manindi, a shallow RC percussion drilling program was completed in 2018^{3,4} at the **Mulgara Prospect** to test the three outcropping pegmatite dykes identified (Figure 3). A total of 17 RC percussion drill holes were completed along three traverses during this drilling program, for a total of 837 m of drilling. Hole collars were located at approximately 40 metre intervals along the traverses.





Photo 2: Mulgara LCT Pegmatite, with lithium minerals including lepidolite (mauve), Manindi Project, WA
Significant intersections produced from this RC drilling program at Mulgara included^{3,4}:

- MNRC030: 8m @ 1.06% Li₂O from 18m incl. 3m @ 1.65% Li₂O with up to 1.96% Li₂O
- MNRC032: 7m @ 599ppm Ta₂0₅
- MNRC033: 8m @ 1.00% Li₂O, 158ppm Ta₂O₅ from 32m, and 7m @ 1.29% Li₂O, 242ppm Ta₂O₅ from 42 m incl. 5m @ 1.53% Li₂O

Preliminary flotation tests on previous diamond drilling samples produced concentrates with grades up to 3.05% Li₂O and lithium recovery of up to 77% from a concentrated 30% of the mass feed⁶. Flotation tails contained significant tantalite mineralisation (Ta₂O₅) that could also be recovered and provide additional upside to the potential economics of the project.

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.

Recent mapping and systematic rockchip sampling resulted in the identification of other LCT pegmatites within a 3km corridor at the northwest end of the Manindi Mining Leases. The highlight of this work was the identification of the Foundation Pegmatite⁷ that is the largest pegmatite identified to date at Manindi. The Foundation Pegmatite has a 500m strike-length, trending in a southwest–northeast direction, and includes multiple pegmatite outcrops across a 200m wide zone in a northwest-southeast direction (see Figure 1).

Rockchip sample results^{2,7} averaging >1% Li₂O with Cs, Ta and >0.4% Rb and up to 2.30% Li₂O and 0.70% Rb², confirm that Foundation is a high-grade LCT pegmatite. These results compare favourably with previous results from rockchip sampling of the Mulgara pegmatites (Figures 1 and 3) that produced high-grade results of up to 2.84% Li₂O, 296 ppm Ta₂O₅ and up to 746ppm Cs₂O⁶.

Following planned diamond drill testing, further metallurgical testwork will be designed to optimise lithium and rubidium recovery and differentiate the tantalum mineralisation, prior to developing a lithium-rubidium-tantalum processing flowsheet.

The Company then plans to initiate scoping studies into a Manindi mining and processing operation.



About Metals Australia:

Metals Australia is actively exploring a number of other highly prospective battery metals projects within Western Australia and in Quebec, Canada.

Manindi Project, Western Australia

In addition to lithium, Manindi is also a highly prospective zinc project.

The Manindi Zinc Project hosts a JORC 2012, Measured, Indicated & Inferred resource of 1.08Mt @ 6.52% Zn for 70,102t Zn (2% Zn cut-off)⁸ (including Measured: 37.7kt @ 10.22% Zn, 0.39% Cu, 6.24 g/t Ag; Indicated: 131.5kt @ 7.84% Zn, 0.32% Cu, 4.60 g/t Ag and Inferred: 906.7kt @ 6.17% Zn, 0.25% Cu, 2.86 g/t Ag).

A number of target zones for extensions and repeats of the zinc resources remain to be tested, close to the existing resource and on parallel trends. Drilling to date has been limited to a depth of approximately 250m.

Lac Rainy Graphite Project, Quebec, Canada

The Lac Rainy Graphite Project is located in Quebec, Canada, in close proximity to the operating mines around Fermont and is 100% owned by Metals Australia. The Lac Rainy Graphite Project hosts **a JORC 2012 Indicated and Inferred Resource of 13.3Mt @ 11.5% Total Graphitic Carbon (Cg⁹)** (including Indicated: 9.6Mt @ 13.1% Cg and Inferred 3.7Mt @ 7.3% Cg).

In 2020, Metals Australia completed a Phase 1 Scoping Study highlighting the significant economic attractiveness of the Lac Rainy project¹⁰.

Recently completed Phase 2 metallurgical tests produced very encouraging results¹¹ based on the optimum flowsheet developed from 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.
- 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.
- iii) Carbon recovery in open-circuit tests ranging from 69.4% to 85.6%. Subsequent 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% Cg¹³.
- iv) The flow-sheet development program has significantly improved the open-circuit conditions of the rougher, primary cleaning and secondary cleaning flotation circuits

The last stages of the Phase 2 testwork are generating a bulk concentrate, high-purity, flake-graphite sample to be sent to specialist battery grade graphite testing group, ProGraphite GmbH (**ProGraphite**) in Germany. ProGraphite will conduct specialist downstream testwork, including spheroidization and purification, targeting 99.9% Cg purification upgrade. This will be followed by battery testwork to determine the quality of the Lac Rainy graphite products for use in lithium-ion battery applications in the Electric Vehicle (EV) industry.

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 an EM-TDEM survey that confirmed areas of identified mineralisation and identified new targets to be field tested across the extensive 15km strike corridor of identified targets¹².

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 EM-TDEM survey. The preliminary processed results of this heliborne Magnetic (MAG) and Time-Domain Electromagnetic (TDEM) survey has 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/anomalies¹³.

References

- ¹ Metals Australia Ltd, 21 March, 2022. Thick Intersections of lithium bearing pegmatite at Manindi Project.
- ² Metals Australia Ltd, 02 March 2022. Outstanding Lithium & Rubidium Rockchip Results for Manindi Project.
- ³ Metals Australia Ltd, 12 June 2018. Lithium pegmatite drilling program commences at Manindi Lithium Project.
- ⁴ Metals Australia Ltd, 24 July 2018. Results of RC percussion drilling program at Manindi Lithium Project.
- Metals Australia Ltd, 21 March 2017. High Grade Lithium Bearing Pegmatites Discovered at Manindi.
- ⁶ Metals Australia Ltd, 13 April 2018. Preliminary Metallurgical Test program underway at Manindi Lithium Project.
- ⁷Metals Australia Ltd, 10 November 2021. High Grade Lithium-Tantalum Results from Manindi Pegmatites.
- ⁸ Metals Australia Ltd, 12 January 2017. Metals Australia commences drilling at Greenfield and Resource Extension Targets at Manindi Zinc Deposit.
- ⁹ Metals Australia Ltd, 15 June 2020. Metals Australia delivers High Grade Maiden JORC Resource at Lac Rainy Graphite Project, Quebec.
- ¹⁰ Metals Australia Ltd, 3 February 2021. Lac Rainy Graphite Study delivers strong economics with Significant Economic upside.
- ¹¹ Metals Australia Ltd, 28 February 2022. Outstanding 96.8% Flake Graphite Concentrate for Lac Rainy.
- ¹² Metals Australia Ltd, 31 January 2022. Quarterly Activities Report for the Quarter Ended 31 December 2021.
- ¹³ Metals Australia Ltd, 29 April 2022. Quarterly Activities Report for the Quarter Ended 31 March 2022.

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

ENDS

For background, 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 and Mineral Resources 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 Australian Institute of Geoscientists (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.

With respect to Mineral Resource estimates, 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 (see References). 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 1: Drilling details and LCT pegmatite intersections reported to date:

Prospect	Hole_ID	Easting	Northing	Dip°	Azi.°	Drilled	Pegmatite in	tersection
Foundation	MNRC037	663630	6818470	-60	160	60	4-8m	4m
Foundation	MNRC038	663660	6818490	-60	160	57	14-18m	4m
Foundation	MNRC039	663700	6818510	-60	160	60	6-52m	46m
Foundation	MNRC040	663735	6818510	-60	160	60	21-57m	36m
Foundation	MNRC041	663775	6818520	-60	160	60	18-49m	31m
Foundation	MNRC042	663810	6818535	-60	160	60	19-36m	17m
Foundation	MNRC043	663835	6818580	-60	160	78	59-75m	16m
Foundation	MNRC044	663850	6818565	-60	160	60	11-22m	11m
Foundation	MNRC045	663885	6818570	-60	160	60	16-27m	11m
Foundation	MNRC046	663925	6818585	-60	160	60	11-17m	6m
Foundation	MNRC047	663965	6818590	-60	160	60	8-15m	7m
Foundation	MNRC048	664015	6818590	-60	160	60	10-17m	7m
Foundation	MNRC049	664060	6818610	-60	160	60	13-14m	1m
Foundation	MNRC050	664010	6818640	-60	160	60	49-55m	6m
Foundation	MNRC051	664050	6818652	-60	160	60	9-14m	5m
Foundation	MNRC067	663690	6818530	-60	160	80	37m	1m
Foundation	MNRC068	663760	6818550	-60	160	80	53-55m	2m
Foundation	MNRC069	663905	6818605	-60	160	90	70-82m	12m
Dibbler	MNRC052	663725	6818805	-60	200	60	4-6m	2m
Dibbler	MNRC053	663765	6818790	-60	200	60	3-5m	2m
Dibbler	MNRC054	663805	6818760	-60	200	60	3-5m	2m
Dibbler	MNRC055	663845	6818740	-60	200	60	3-5m	2m
Quoll	MNRC056	664550	6818167	-60	200	60	3-5m	2m
Quoll	MNRC057	664586	6818138	-60	200	60	13-16m	3m
Mulgara	MNRC058	664375	6818400	-60		120	54-60m,63-68m	6m
Mulgara	MNRC059	664300	6818365	-60	160	120	62-70m,112-	8m
Mulgara	MNRC060	664330	6818385	-60	160	120	39-45m	6m
Mulgara	MNRC061	664320	6818335	-60	160	132	109-126m	17m
Mulgara	MNRC062	664285	6818325	-60	160	132	118-130m	12m
Mulgara	MNRC063	664255	6818320	-60	160	120	42-46m	4m
Mulgara	MNRC064	664330	6818260	-60	160	120	46-57m	11m
Mulgara	MNRC065	664295	6818250	-60	160	120	40-49m	9m
Mulgara	MNRC066	664250	6818240	-60	160	120	40-52m	12m
Total 33 R	C holes					2635		



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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• 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	Reverse circulation (RC) percussion drilling was used to obtain $1\mathrm{m}$ samples, from which approximately 2-3 kg was sub-sampled and pulverised to produce a sample for assay.
·	gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	Samples for the current RC program are being analysed as 1m sample or 4m composites as determined by geological logging.
	 Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. 	Previous diamond drilling has also been sampled at approximate 1m intervals, utilising geological contacts where necessary.
	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.	Rockchip samples reported in this release were grab samples of pegmatite occurrences, collected in a calico bag and weighing approximately 2 to 3 kg.
Drilling techniques	 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). 	Drilling type is reverse circulation (RC) percussion drilling, using a 4.5" face-sampling drill bit.
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 	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.
recovery	 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. 	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.
		There is no apparent relationship between sample recovery and grade.
Logging	 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 	Chips from $1m$ RC percussion drilling intervals were logged according to industry standard practice and representative samples stored in chip trays.
	studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc)	Logging was qualitative in nature and recorded using standard logging templates. The resulting data was uploaded to a Datashed database and validated.
	 photography. The total length and percentage of the relevant intersections logged. 	100% of the drilling was logged.
Sub-sampling techniques and sample preparation	 If core, whether cut or sawn and whether quarter, half or all cores taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. 	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.
	 Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	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 dry and presented to the lab "as is".
		Rockchip 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 type.



Criteria	JORC Code explanation	Commentary		
Quality of assay data and	 The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in 	Previous assaying was completed by the Bureau Veritas (BV) laboratory based in Perth, Western Australia. 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.		
laboratory tests	determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of auality control procedures adopted (e.g., standards, blanks, duplicates, external	Assaying for this current RC program is being undertaken by Intertek Perth utilising their 4A-Li/MS48 (four acid digest/ICP-MS) package.		
	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.	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.		
		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.		
Verification of sampling and	 The verification of significant intersections by either independent or alternative company personnel. 	Significant intersections have been reviewed and verified by company technical and management personnel.		
assaying	 The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	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 other than the calculation of Li_2O and Ta_2O_5 grades from assay data, as specified in the announcement.		
Location of data	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys),	Drill hole collar locations have been verified with handheld GPS with a ±5 m degree of accuracy.		
points	trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used.	The grid system used is GDA94 datum, MGA zone 50 projection.		
	 Quality and adequacy of topographic control. 	Topographic control is based on a digital terrain model (DTM) with an accuracy of ±5m.		
Data spacing and distribution	 Data spacing for reporting of Exploration Results. Whether the data spacing, and distribution is sufficient to establish the degree of geological and 	Data spacing is $1\mathrm{m}$ intervals downhole drill holes spaced at approximately 40 m intervals along 3 traverses, as discussed in the announcement.		
	grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	Insufficient data is available to establish the degree of geological and grade continuity required for estimation of a resource.		
	Whether sample compositing has been applied.	No sample compositing has been applied for pegmatite sampling.		
Orientation of data in relation to	 Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 	The drilling and sampling orientation is considered to have resulted in a true width intersection of the mineralised pegmatite dykes.		
	 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. 	Given the nature of the deposit type, the drilling and the sampling is therefore considered to achieve unbiased sampling.		
Sample security	The measures taken to ensure sample security.	Industry standard chain of custody followed, with samples collected, transported and delivered to a secure freight depot by Company geologist or 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 for completeness and quality control and has not identified any material concerns.		



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

Criteria	RC Code explanation		Commentary
Mineral tenement and land tenure status	ohtaining a licence to operate in the area	The Company controls an 80% Interest in three granted Mining Licences in Western Australia covering the known mineralisation and surrounding area.	
		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.	
		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 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.
		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.	
		The zinc deposits have never been mined.	
		The Project has not previously been explored for lithium.	
Geology	Deposit type, geological setting and style of mineralisation.	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.	
		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 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.	
Drill hole Information	tabulation of the following information of the drill hole easting and northing of the drill hole elevation or RL (Reduced Level – election and azimuth of the hole down hole length and interception of hole length. If the exclusion of this information is just	e collar evation above sea level in metres) of the drill hole collar depth tified on the basis that the information is not Material to the understanding of the report, the Competent Person	A summary of all information material to the understanding of the previous 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".



Criteria	JORC Code explanation	Commentary		
Data aggregation methods	• 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	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.		
	should be stated. Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Where aggregate intercepts incorporate short lengths of high-grade results within longer lengths of lower grade results, these zones have been reported separately.		
		No maximum or minimum grade truncations have been applied.		
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents are reported.		
Relationship between mineralisation widths and intercept lengths	 These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known'). 	The orientation and dip of the reported drill holes were designed to intersect the pegmatite dykes that host lithium mineralisation as close as possible to perpendicular to their strike and dip. Reported mineralised intersections are therefore considered to be close to true width.		
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for	Appropriate maps and sections are included in body of the announcement (see Figures 1 to 4).		
	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.	Table 1 includes all significant intercepts and drillhole locations are shown in plan view on Figures 1 and 3.		
		Figures 2 and 4 are appropriate sectional views.		
Balanced reporting	reporting of both low and high grades and/or widths should be practiced avoiding misleading reporting of Exploration Results.	Full and representative reporting of relevant previous results in announcement by Metals Australia Ltd, 24 July 2018. "Results of RC percussion drilling program at Manindi Lithium Project".		
		Full and representative reporting of both low and high-grade intersections with widths are included in Table 1 of this release.		
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Other substantive exploration data	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.	There are no other substantive exploration data.		
Further work	 The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	Systematic rockchip sampling then further drilling is underway to test the grade, thickness and continuity of lithium mineralisation at the Manindi Project, as discussed in the announcement.		