**ASX Announcement**

25 July 2017

# C4 Conductor Delivers High Grade Zinc Intersection at Manindi

**Highlights:**

- Diamond drilling at the Manindi Zinc Project has intersected significant zinc mineralisation, including the following significant intercepts:

| | |
|---|---|
| **MND065** | • **16.07m @ 8.08% Zinc from 140.93** **(including 3.40m @ 12.20% Zinc)**<br>• **3.15m @ 6.91% Zinc from 126.15m** |
| **MND062** | • **12.87m @ 5.80% Zinc from 80m** **(including 8m @ 6.92% Zinc)** |
| **MND064** | • **3.32m @ 4.65%Zinc from 46.4m**<br>• **5.08m @ 6.11% Zinc from 55m** |
| **MND061** | • **1.50m @ 16.46% Zinc from 61m**<br>• **2.60m @ 5.43% Zinc from 70m**<br>• **2.64m @ 6.50% Zinc from 79.36m** |
| **MND060** | • **2.89m @ 9.26% Zinc from 103.83m** |

- The above intercept grades are comparable to or better than the existing JORC resource at Manindi which has an average grade of 6.52% Zinc for 1,075,859 tonnes using a 2% Zinc cut off
- The recent structural reinterpretation of the existing Kultarr resource, which has been confirmed by the drilling, shows that it dips approximately 70 degrees to the south west, and appears open both at depth and along strike and extends to the surface - **this has potential to add significant tonnage to the existing JORC resource**
- MND065 (see results above) was drilled into the C4 conductor adjacent to the Kultarr resource and shows the C4 conductor remains open up dip, down dip and along strike - **C4 has never been previously drill tested and shows potential for substantial additional tonnage**
- Downhole EM surveying of the holes has identified additional significant conductive bodies located up dip, down dip and along strike on or adjacent to the Felsic Mafic contact associated with the C4 conductor - **these will be drill tested in upcoming drill programmes**
- Detailed study of diamond core suggests a Bimodal origin to the zinc mineralisation - contrary to what was previously thought - Bimodal means the zinc mineralisation is hosted in both the mafic and the felsic rock sequences - **this is important as some of the world's largest zinc deposits are Bimodal**

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ASX CODE **MLS**

Diversified metals exploration company, Metals Australia Ltd (ASX: **MLS**) is pleased to provide an update on the results of the second phase diamond drilling program that was recently completed at the Manindi Project.

Commenting on the results, Director of Metals Australia, Gino D'Anna stated:

*"This drilling program, complemented by a downhole EM program, has returned grades and intercepts equivalent to or better than the average grade and thickness of the existing JORC resource. The results have also validated the new structural interpretation of the ore body to be south west dipping, which opens up the potential to substantially add to the size of the existing ore body. These results have been achieved in a relatively short time frame with only a limited drilling program, and provide a strong base to design follow up drilling and geophysical programs to add to the existing JORC resource.*

*Importantly, this drilling has confirmed the potential to add significant tonnage to our existing JORC resource at Manindi. The drilling has demonstrated that the Manindi resource remains open at depth as well as remaining open along strike in both directions. These results lay the foundation for the next stage of development at Manindi and we are very pleased with what has been achieved."*

## Drill Testing the C4 Conductor Target

Two diamond holes, MND060 and MND065, were drilled to test the C4 conductor target.

Diamond hole MND060 was designed to test for zinc mineralisation within the newly identified C4 conductor (See Figure 1.0). The hole intersected a thick 37m wide discontinuous zone of matrix to massive sulphide mineralisation in the interpreted position of the C4 conductor adjacent to the felsic-mafic contact returning **2.89m @ 9.26% Zinc from 103.83m downhole**. This is significant as it is outside the existing Kultarr resource and shows that significant mineralisation is present on the main felsic-mafic contact. The remainder of the mineralised zone returned only anomalous results in both zinc and copper. **The mineralised zone is completely open up dip to the surface, a distance of some 90m. It is also wide open along strike to the north and south.**

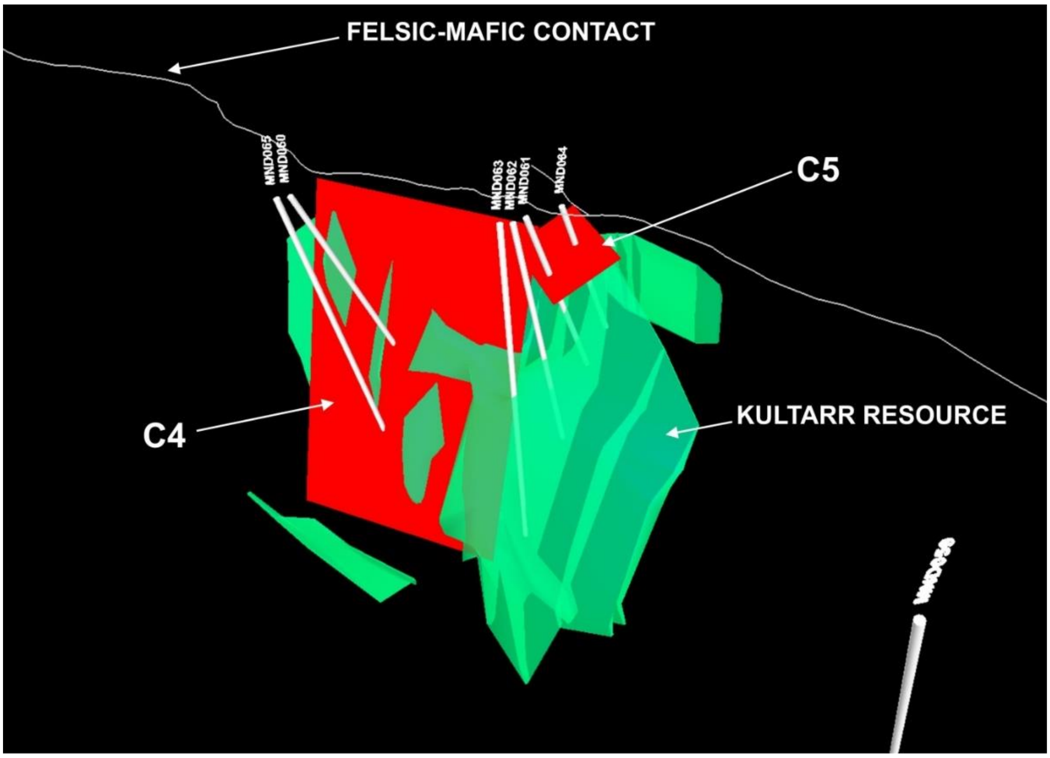


**Figure 1**: 3D model of Kultarr showing current resource outline in green and new conductor targets C4 and C5. Also shows location of diamond holes MND060 to MND065.

Diamond hole MND065 was drilled underneath hole MND060 on the same section to test for deeper extensions to the mineralisation intersected in MND060 and to test the Kultarr resource orientation at depth. It too was designed to pass through the C4 conductor on the interpreted felsic-mafic contact (See Figure 1.0). The hole intersected multiple heavy matrix to massive sulphide zinc mineralised zones over a width of 41m, down-dip from the mineralisation intersected in MND060, returning **3.15m @ 6.91% Zinc from 126.15m** in the interpreted C4 conductor position. Further down the hole at 140.93m the hole intersected **16.07m @ 8.08% Zinc (including 3.40m @ 12.20% Zinc from 151.00m)** associated with the Kultarr resource. Importantly structural orientation readings taken from core samples within hole MND065 strongly suggest a south westerly dip to the Kultarr resource.

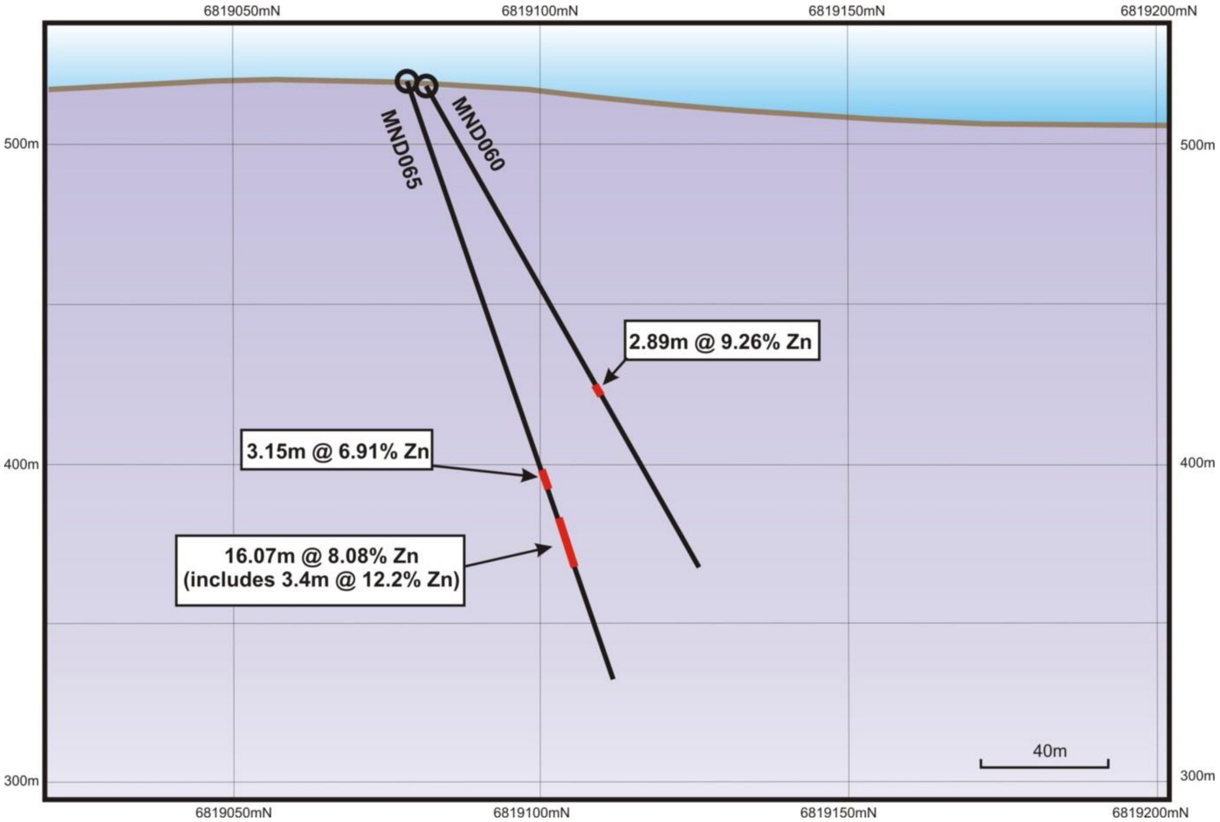


**Figure 2:**Cross-section showing significant intercepts in drill holes MND060 and MND065.

These intercept grades are better than the existing JORC resource which has an average grade of 6.52% Zinc.

Further drilling is required to ascertain the complex structural and lithological relationship between the C4 conductor mineralisation and the existing Kultarr resource as the two appear to be in relative close proximity.

## Drill Testing the C5 Conductor and Kultarr Resource

Four diamond holes MND061 to MND064 were drilled on the same section to test the C5 conductor target and also to test a portion of the Kultarr resource to determine whether the resource was potentially dipping off to the south west as suggested by the last drilling program conducted in January this year.

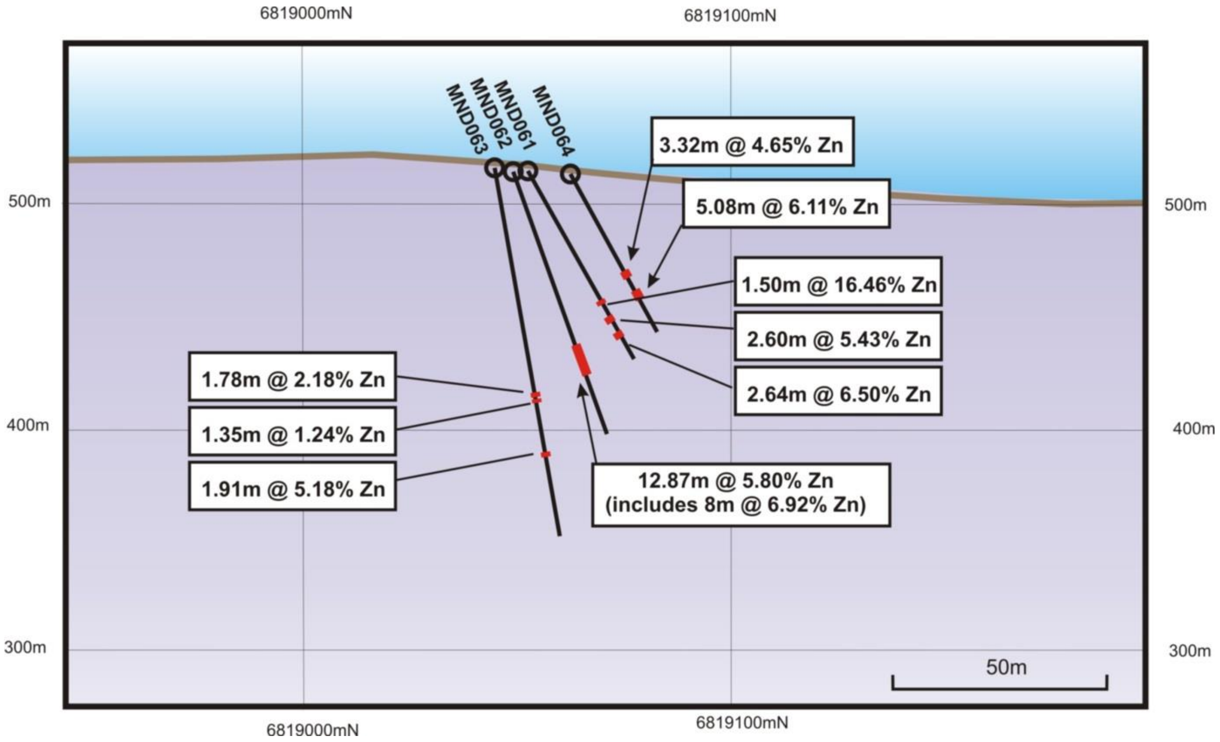


**Figure 3:**Cross-section showing significant zinc intercepts in drill holes MND061, MND062, MND063 and MND064.

The drilling at Kultarr has historically been oriented in a NE-SW direction at an approximate 60-degree dip. This drilling was mainly focused on testing what was interpreted as a vertical to steep east dipping remobilised secondary zones of massive zinc sulphide mineralisation within the footwall mafic rocks. MND061 to MND064 have increased the understanding of the geological setting and structure at Kultarr. It is now understood that the interpreted main source of zinc mineralisation, from where the secondary remobilised sulphides were sourced from, together with the main Kultarr resource are steep south west dipping. This suggests that the majority of historical drilling should have been oriented in a SW-NE direction to effectively test a south westerly dipping system. It also suggests that previous drilling from the east was not deep enough to test a south west dipping system leaving the main Kultarr resource potentially open down dip.

Diamond hole MND061 was designed to test for zinc mineralisation within the newly identified shallow C5 conductor but also test the top section of the Kultarr resource. The hole intersected a narrow 1.65m wide zone of remobilised semi massive sulphide mineralisation close to the surface at the C5 conductor location. It returned **1.10m @ 1.25% Zinc from 24m**. Further down the hole a discontinuous 22m wide zone of disseminated to semi massive sulphides was intersected. This zone returned multiple intersections including **1.50m @ 16.46% Zinc from 61m, 2.60m @ 5.43% Zinc from 70m** and **2.64m @ 6.50% Zinc** from 79.36m. Structural readings taken from key locations down the hole indicate a 70-75 degree south westerly dip to the Kultarr mineralisation.

Diamond hole MND062 was drilled behind hole MND061 to test the shallow C5 conductor along with the Kultarr resource further down the hole. Drilling intersected the C5 conductor at 31m downhole returning **1.50m @ 1.94% Zinc from 31m**. The hole also intersected a 15m wide zone of heavy disseminated to semi massive sulphide zinc mineralised zone associated with the Kultarr resource returning **12.87m @ 5.80% Zinc from 80m** (**including 8.00m @ 6.92% Zinc from 80m**). Structural data collected from the hole indicates a 65-75 degree south westerly dip to the main zinc mineralisation.

MND063 was drilled underneath MND062 on the same section to further test the C5 conductor and probe the deeper parts of the Kultarr resource. The hole did not intersect the westerly projection of the C5 conductor. Further down the hole only narrow zones of heavy disseminated to semi massive sulphide mineralisation associated with the lower levels of the Kultarr resource were intersected. The narrow nature of the Kultarr zone was complicated by the intrusion of several barren mafic dykes stopping out the main ore profile. Results include **1.78m @ 2.18% Zinc from 99.22m, 1.35m @ 1.24% Zinc from 102m** and **1.91m @ 5.18% Zinc from 119.52m**. The Kultarr resource remains open down dip based on a south westerly dip orientation.

Diamond hole MND064 was drilled above MND061 to test the surface projection of both the C5 conductor and the Kultarr resource. The hole passed through the C5 conductor at approximately 11m downhole intersecting a 3.80m wide zone of strongly oxidised sulphides (gossan) anomalous in zinc to 3640ppm. The interpreted up-dip projection of the Kultarr resource was intersected in two zones of heavy disseminated to semi massive sulphides returning **3.32m @ 4.65% Zinc from 46.40m** and **5.08m @ 6.11% Zinc from 55m**. **These two intersections are significant as they show the Kultarr resource extends up-dip all the way to the surface.** Current modelling has the resource starting at approximately 40m below surface with the base of complete oxidation at around 15-20m below surface. That leaves a window of approximately 20-25m of up-dip sulphides between the top of the resource and the base of complete oxidation that could be potentially added to the existing resource base.

The intercepts returned from holes MND061 to MND064 are comparable to or better than the existing JORC resource which averages 6.52% Zinc.

### DHEM

Two holes, MND058 and MND059 were drilled to the south of the Kultarr resource area for purposes of DHEM testing of the gap between the Kultarr and Kowari resource areas. The holes returned only anomalous zinc values with one intercept being **1.30m @ 1.25% Zinc from 179.7m** in hole MND059. DHEM analysis shows 3 off-hole conductors above drill hole MND058 which will be tested in subsequent drilling programs.

### C2 Conductor

Major EM target C2 located north of the Kultarr resource was not drill tested in the current program. It will be tested in subsequent drill programs together with other untested conductors. C2 remains a high priority target as it has the potential to increase the strike length of the Kultarr resource north for a further 350 metres.

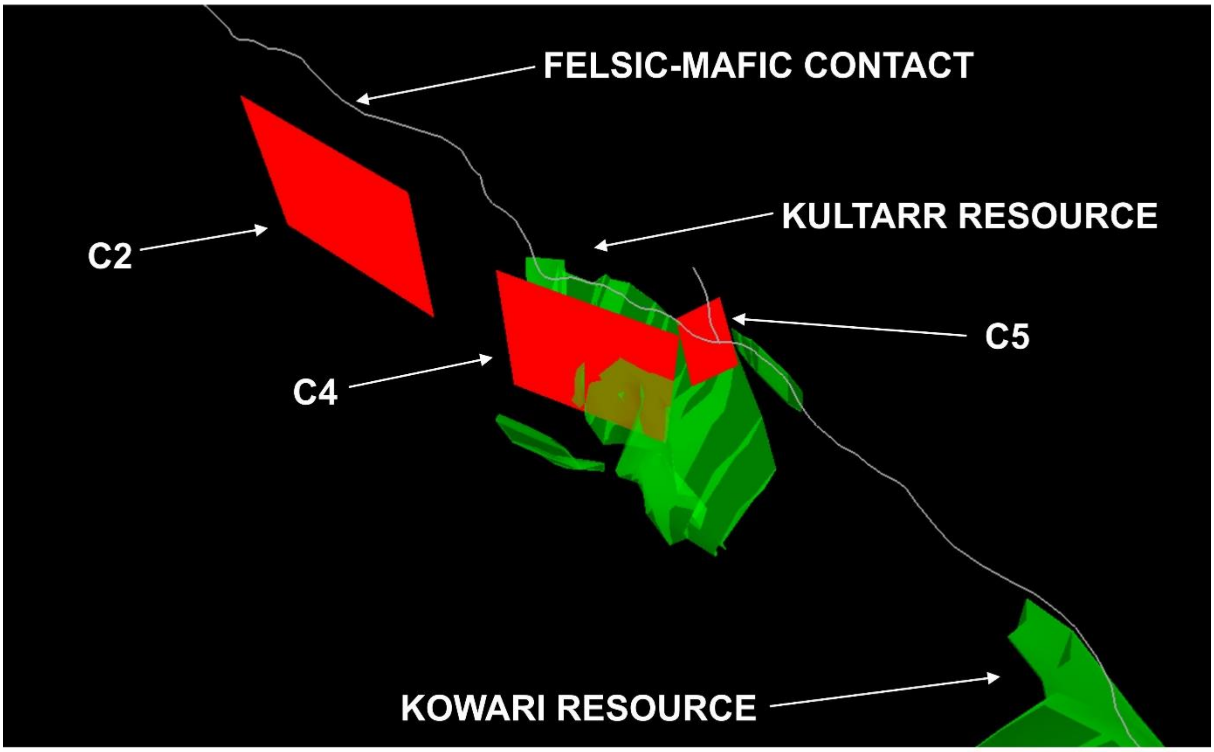


**Figure 4:** 3D model view of the C2, C4 and C5 conductors. Also plotted is the resource at Kultarr, the resource at Kowari and the felsic-mafic contact.

## Bimodal Origin to Zinc Mineralisation

Detailed logging of and study of diamond core MND060 to MND065 suggests a potential complex bimodal origin to the existing zinc mineralisation at Kultarr. A bimodal origin means the zinc mineralisation is hosted in both the felsic and mafic rock types as opposed to being hosted solely by either the mafic rocks or the felsic rocks. This is very important as some of the largest VMS zinc deposits around the world are bimodal.

## JORC 2012 MINERAL RESOURCE ESTIMATE

Earlier work by Metals resulted in an upgrade of the mineral resource to JORC 2012 standard as follows:

**Table 1 - Manindi JORC 2012 Mineral Resource Estimate.**

| **Resources** | | | **Metal Grade** | | | **Contained Metal** | | |
|---|---|---|---|---|---|---|---|---|
| *Category* | *Cut off (Zinc%)* | *Tonnage (t)* | *Zinc (%)* | *Copper (%)* | *Silver (g/t)* | *Zinc (t)* | *Copper (t)* | *Silver (oz)* |
| Measured | 0.5 | 48,785 | 8.20 | 0.34 | 7.22 | 3,999 | 166 | 11,320 |
| Indicated | 0.5 | 172,347 | 6.26 | 0.28 | 4.30 | 10,781 | 483 | 23,805 |
| Inferred | 0.5 | 1,447,039 | 4.27 | 0.22 | 2.77 | 61,774 | 3126 | 128,795 |
| Total | 0.5 | 1,668,172 | 4.59 | 0.23 | 3.06 | 76,553 | 3775 | 163,920 |
| Measured | 2.0 | 37,697 | 10.22 | 0.39 | 6.24 | 3,855 | 149 | 7,565 |
| Indicated | 2.0 | 131,472 | 7.84 | 0.32 | 4.60 | 10,309 | 421 | 19,439 |
| Inferred | 2.0 | 906,690 | 6.17 | 0.25 | 2.86 | 55,939 | 2267 | 83,316 |
| Total | 2.0 | 1,075,859 | 6.52 | 0.26 | 3.19 | 70,102 | 2837 | 110,321 |

Note: figures may not add up precisely due to rounding.

## Summary

The Company is extremely pleased with the results of the orientation drilling at Kultarr and the discovery of zinc mineralisation associated with the new C4 conductor.

The enhanced geological understanding and new approach to the geological and structural setting of the zinc mineralisation at Kultarr has delivered early success. The discovery of the new C4 zinc mineralised zone adjacent to the felsic-mafic contact plus the realisation of a south westerly dip to the main Kultarr resource has greatly increased the potential to discover additional zinc bearing massive sulphide zones down dip and along strike adding significant tonnage to the existing resource inventory.

Follow-up drill campaigns will be heavily focused on testing the deeper down-dip south westerly projection of the main Kultarr resource together with the along strike and down-dip potential of the C4 conductor on the felsic-mafic contact for additional zinc mineralised zones. Future drill holes will be oriented in a SW-NE direction at an approximate -60-degree dip, targeting what is interpreted to be the main source of zinc mineralisation on or adjacent to the felsic-mafic contact.

The Company believes that the existing resource base at Manindi **(being 1,075,859 tonnes at 6.52% Zinc grade at 2% Zinc cut off)** should be able to be substantially increased in tonnage by further drilling.

It should be noted that a number of the EM conductors remain untested by drilling. In particular, the C2 conductor to the north of Kultarr has not yet been drill tested. It will be tested in a subsequent drill campaign.

Previous detailed metallurgical test work carried out by the Company has demonstrated that Manindi ore is easily treated by conventional crush/grind and flotation to achieve excellent recovery to produce a saleable concentrate.

Metals looks forward to continuing its drilling campaign at Manindi focused on substantially increasing the resource base in the near future.

**For more information, please contact:**

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**Competent Person Statement**

The information in this announcement relating to geology, exploration results and the mineral resource estimate is based on information compiled by Mr Dean Goodwin, who is a consultant to Metals Australia Ltd. Mr Goodwin is a member of The Australian Institute of Geoscientists, a Recognised Professional Organisation by the Australian Joint Ore Reserves Committee, and has sufficient experience relevant to the style of mineralisation and types of deposits under consideration and to the activity which is being undertaken 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. Mr Goodwin consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.

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**JORC TABLE 1**
***Section 1 – Sample Techniques and Data***

| ***Criteria*** | ***Explanation*** |
|---|---|
| ***Sampling techniques*** | Sampling includes core<br>Exploration results are based on industry best practices, including sampling, assay methods, and appropriate quality assurance quality control (QAQC) measures.<br>Diamond core sampling was cut to ½ core with sampling breaks adjusted to geological boundaries. The assay method was 4 acid digest with ICPES. 33 standards were recorded in total. 14 lab Duplicates were recorded.<br>Downhole Time-domain Electromagnetic (DHTEM) surveys were conducted in drill-holes MND058, MND059, MND060, MND061, MND063 and MND065 in 2017 using 5 and 10m station spacing. |
| ***Drilling techniques*** | Diamond core size is HQ at the start of the holes and changed to NQ2 through the mineralised zone. All coordinates are quoted in GDA94 datum unless otherwise stated. |
| ***Drill sample recovery*** | The quality of analytical results was monitored by the use of internal laboratory procedures together with the use of certified standards, duplicates and blanks to ensure that results were representative and within acceptable ranges of accuracy and precision. |
| ***Logging*** | All logging was completed according to industry standard practice. Logging was completed using standard logging templates... The resulting data is uploaded to a Datashed database and validated. Once validated, the data is exported to modelling software for visual validation and interpretation. |
| ***Sub- sampling techniques and sample preparation*** | For all sample types, the nature, quality and appropriateness of the sample preparation technique is considered suitable as per industry best practice. |
| ***Quality of assay data and laboratory tests*** | The samples have been sorted, dried, crushed and pulverised. Primary preparation has been by crushing the whole sample.<br>Laboratories inserted their own standards and blanks at random intervals and to confirm high grade results. |
| ***Verification of sampling and assaying*** | All significant intercepts are reviewed and confirmed by senior personnel before release to the market.<br>All data is validated using the QAQCr reporter validation tool with Datashed. Visual validations are then carried out by senior staff members.<br>All EM survey data are recorded digitally and sent in electronic format to |

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| | Southern Geoscience Consultants for quality control and evaluation |
| ***Location of data points*** | Station positions were recorded with GPS system with expected accuracy of +/- 5m horizontal and +/ 10m vertical.<br>Radar-altitude data are used to calculate mean terrain clearance of airborne survey platforms. Topographic control is based on GPS heights and radar-altimeter data from airborne magnetic and electromagnetic surveys.<br>The Grid system used is GDA94 datum, MGA zone 50 projection<br>Down hole surveys were done for all holes with Single Shot Reflex |
| ***Data spacing and distribution*** | Diamond drill hole samples were composited to a nominal 1.0 m down-hole intervals for resource modelling. |
| ***Orientation of data in relation to geological structure*** | Orientation of sampling is as unbiased as possible based on the dominating mineralised structures and interpretation of the deposit geometry.<br>If structure and geometry is not well understood, sampling is orientated to be perpendicular to the general strike of stratigraphy and/or regional structure.<br>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this would be assessed and reported if considered material.<br>Drilling is at an angle to surface and is drilled to maximise perpendicular intersection with the known interpretation of the strike of previously intersected mineralisation. |
| ***Sample security*** | All samples remain in the custody of company geologists, and are fully supervised from point of field collection to laboratory drop-off. |
| ***Audits and reviews*** | None yet undertaken for this dataset. |

***Section 2 – Reporting of Exploration Results***

| ***Criteria*** | ***Explanation*** |
|---|---|
| ***Mineral, tenement and land tenure status*** | 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 operate in the area. |
| ***Exploration done by other parties*** | The 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 |

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|---|---|
| | geophysical technique being applied to the project.<br><br>The project has been drilled in 8 separate drill programs since 1971, with 389 holes having been completed. These include 109 diamond drillholes, 105 RC drillholes, 169 RAB drillholes and 8 percussion holes (. The deposits have never been mined. |
| ***Geology*** | 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) zinc deposit, comprising a series of lenses of zinc-dominated mineralisation that have been folded, sheared, faulted, and possibly intruded by later dolerite and gabbro. |
| ***Drillhole information*** | All relevant drillhole information is supplied in Appendix 2 and 3 of the announcement. |
| ***Data aggregation methods*** | All exploration results are reported by a length weighted average. This ensures that short lengths of high grade material receive less weighting than longer lengths of low grade material.<br><br>A cut-off grade has been applied to the data. In the case of data contained in Appendix 3 and the construction of mineralised envelopes using 3-D modelling software, a 0.5% Zinc cut-off was used. The cut-off was chosen as it reflects a distinction between mineralised and un-mineralised material. |
| ***Relationship between mineralisation widths and intercept lengths*** | The mineralisation at Manindi is complex in nature but confined to a series of approximately N-S striking zones located east of a gabbroic intrusion. The overall zone of lower grade mineralisation appears to be strata-bound following the complex N-S stratigraphy. Higher grade zones of zinc mineralisation are located within the lower grade envelope and these have more varying orientations. Overall the zone is steeply dipping to the west, A majority of the holes drilled to date dip steeply to the west and as such intersect the mineralisation at low angles. A smaller portion of the holes are drilled towards the east and intersect the mineralisation at high angles, resulting in close to true thickness intersections |
| ***Diagrams*** | A series of relevant diagrams are included in the body of the announcement. |
| ***Balanced reporting*** | Information relating to geophysical, geochemical and metallurgical test work is included in the announcement. Laboratory assay results are included for composite intersections above a 0.5% Zinc cut-off which represents the outlines of mineralised vs unmineralised material at Manindi. |
| ***Other substantive exploration data*** | This announcement contains the results of downhole geophysical surveys as follows;<br><br>Down-hole Time-domain Electromagnetic (DHTEM) Survey (Vortex |

| | |
|---|---|
| | Geophysics)<br>• 5m and 10m station spacing<br>• 200m x 200m TX Loop, 35A TX current<br>• SmarTEM 24 Receiver<br>• Zonge ZT-30 Transmitter<br>• BH-43 Coil Sensor<br>• A, U and V component readings at each station |
| ***Further work*** | Plans for further work are outlined in the body of the announcement |

### Appendix 1 – Manindi Drilling Collars

| Hole_ID | Hole_Type | Depth | Dip | Azimuth | Grid_ID | East | North | RL |
|---|---|---|---|---|---|---|---|---|
| MND058 | DD | 322.0 | -60 | 060 | MGA94_51 | 663349 | 6818681 | 506 |
| MND059 | DD | 237.4 | -60 | 060 | MGA94_51 | 663261 | 6818866 | 504 |
| MND060 | DD | 168.8 | -60 | 060 | MGA94_51 | 663156 | 6819086 | 515 |
| MND061 | DD | 94.4 | -60 | 060 | MGA94_51 | 663235 | 6819055 | 512 |
| MND062 | DD | 123.4 | -70 | 060 | MGA94_51 | 663229 | 6819051 | 513 |
| MND063 | DD | 166.5 | -80 | 060 | MGA94_51 | 663223 | 6819047 | 514 |
| MND064 | DD | 76.5 | -60 | 060 | MGA94_51 | 663252 | 6819065 | 511 |
| MND065 | DD | 191.7 | -70 | 060 | MGA94_51 | 663151 | 6819082 | 516 |

### Appendix 2 - Manindi Drill Intersections

### Zinc

| Hole_ID | mFrom | mTo | Intercept | Zinc |
|---|---|---|---|---|
| MND059 | 179.70 | 181.00 | 1.30m | 1.25% |
| MND060 | 103.83 | 106.72 | 2.89m | 9.26% |
| MND061 | 24.00 | 25.10 | 1.10m | 1.25% |
| | 61.00 | 62.50 | 1.50m | 16.46% |
| | 70.00 | 72.60 | 2.60m | 5.43% |
| | 79.36 | 82.00 | 2.64m | 6.50% |
| MND062 | 31.00 | 32.50 | 1.50m | 1.94% |
| | 80.00 | 92.87 | 12.87m | 5.80% |
| including | 80.00 | 88.00 | 8.00m | 6.92% |
| including | 91.00 | 92.87 | 1.87m | 9.55% |
| MND063 | 99.22 | 101.00 | 1.78m | 2.18% |
| | 102.00 | 103.35 | 1.35m | 1.24% |
| | 119.52 | 121.43 | 1.91m | 5.18% |
| MND064 | 46.40 | 49.72 | 3.32m | 4.65% |
| | 55.00 | 60.08 | 5.08m | 6.11% |
| MND065 | 126.15 | 129.30 | 3.15m | 6.91% |
| | 140.93 | 157.00 | 16.07m | 8.08% |
| including | 151.00 | 154.40 | 3.40m | 12.20% |