

07 July 2021

# High priority base metal targets identified at Yarrambee

Golden Mile Resources Ltd (ASX:G88, "Golden Mile" or "the Company") is pleased to provide the preliminary results from a helicopter borne electromagnetic (HEM) survey on the Company's Yarrambee Project, which covers prospective portions of the Narndee Igneous Complex (NIC) approximately 500km north-east of Perth, within the Murchison Region of Western Australia (*Figure 1*).

#### **Highlights**

- ➤ 48 conductors interpreted to be related to bedrock conductors associated with target horizons considered prospective for base metals (Cu-Zn) mineralisation.
- Three exciting high priority base metal (Cu-Zn) target area identified for immediate follow up:
  - A cluster of anomalies (ND1-9 and Narndee South) associated with the Narndee prospect, where historical drilling and prospecting defined a copper-zinc (Cu-Zn) mineralised system analogous to the Golden Grove (EMR Capital) and DeGrussa (ASX:SFR) deposits
  - New compelling basement conductors (Lamdba, Chi and TBW) adjacent to but outside the known mineralised system at Narndee
  - Basement conductors identified in areas of conductive cover, opaque to earlier generation EM systems and geochemical surveying (Redleaf, NMS1, 2 and One Mile).
- ➤ 1,342 line-kilometre EXCITE<sup>TM</sup> helicopter-borne electromagnetic (HEM) survey flown over the Narndee Igneous Complex (NIC)
- ➤ Golden Mile is the largest landholder across the NIC with more than 800km² under tenure
- The Company is now planning a review of final processed data including magnetics to inform ground-based work to rapidly advance exploration on these exciting targets.

Commenting on the Yarrambee HEM survey results, Golden Mile's Managing Director James Merrillees said:

"This is an outstanding outcome from the Yarrambee EM survey with several clusters of high order anomalies associated with the mineralised base metal system at Narndee not tested by previous explorers.

"Although it is early days, we are very encouraged by the targets generated so far which support Golden Mile's view that there is significant potential within the Yarrambee tenement package for the discovery of additional mineralised systems.

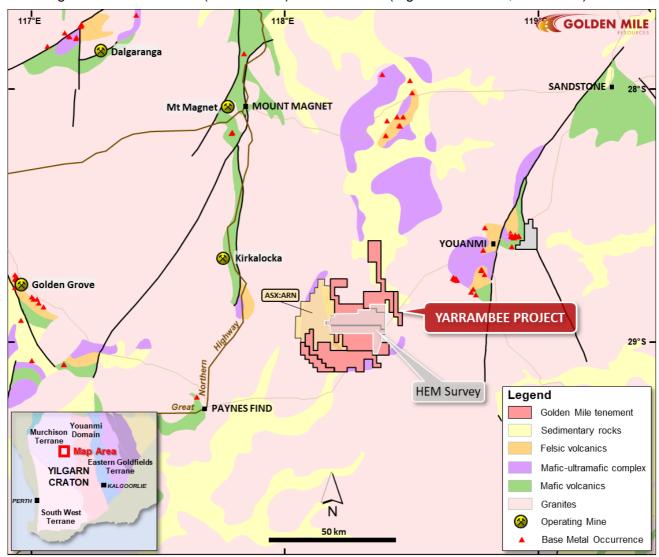
"A field reconnaissance trip is planned this month to ground truth the target areas, prior to receiving the final processed data with planned follow up to include ground-based geophysical surveys to define targets for drill testing in the coming months."



#### YARRAMBEE PROJECT

Having reviewed the preliminary data, Golden Mile is pleased to announce the identification of 48 bedrock conductors from a 1,342 line-kilometre, helicopter-borne electromagnetic (HEM) survey on the Company's Yarrambee Project in the Murchison Region, approximately 500km northeast of Perth, Western Australia (*Figure 1*).

The Yarrambee project is adjacent to Aldoro Resources (ARN:ASX) Narndee project and comprises more than 800km² of tenements covering the Narndee Igneous Complex (NIC), considered prospective for Ni-Cu-PGE mineralisation (e.g. Voisey's Bay, Nova, Julimar), and Volcanogenic Massive Sulfide (VMS Cu-Zn) mineralisation (e.g. Golden Gove, DeGrussa).



**Figure 1:** Golden Mile's Yarrambee Base Metals Project, Murchison Region, WA, with outline of June 2021 HEM survey.



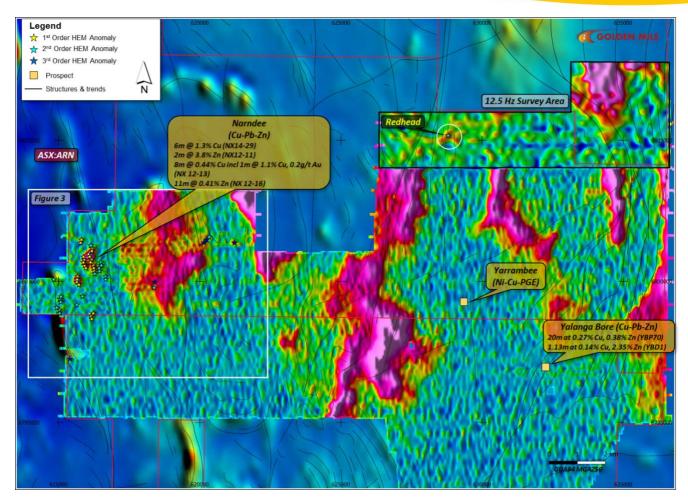


Figure 2: Yarrambee HEM survey. Main block image is 25Hz base channel 23 Bfield (Z component). Northeast block image is 12.5Hz base frequency (channel 457 Z component). Background image regional magnetics (RTP-TMI). Areas of broad conductive responses reflect conductive overburden (e.g. saline groundwater).

The Company's geophysical consultant has identified 48 individual conductors which are interpreted to be related to bedrock features. These are ranked into three groupings based on the amplitude and size of the anomalies (*Table 1*).

The largest cluster of interpreted bedrock conductors are proximal to the Narndee VMS (Cu-Zn) prospect. This cluster of anomalies represent high priority targets for follow up testing given their association with widespread surface copper and zinc anomalism, gossanous outcrop, mineralised structures, exhalative geology (BIFs and cherts) and felsic volcanism.

The Narndee target cluster includes (Figures 2 & 3):

• **ND1-9 and Narndee South**: A cluster of 26 anomalies associated with surface Cu-Zn anomalism, altered felsic volcanics, associated exhalites and gossans.

Most of these conductors appear to be untested or only lightly tested by previous drilling which intersected widespread zones of massive sulfides including (*refer Figure 2 and G88 ASX Announcement 11 March 2021*)<sup>1</sup>:

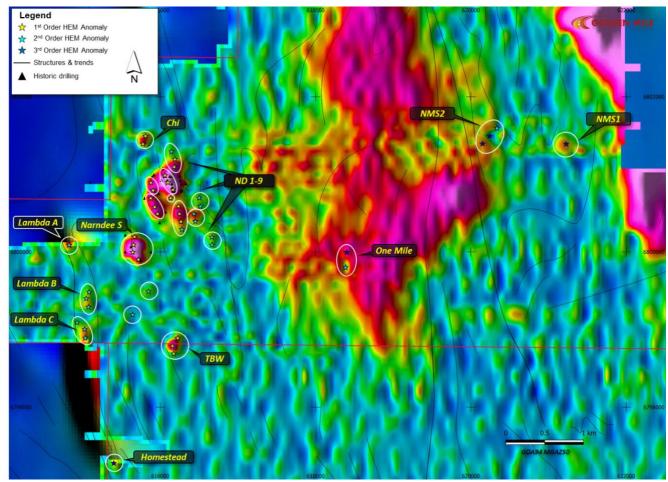
- 10m @ 1% Zn from 88m including 1m @ 5.89% Zn from 97m (NX12-04)
- o 2m @ 3.8% Zn from 78m (NX12-11)



- 8m @ 0.44% Cu from 53m including 1m @ 1.1% Cu and 0.2g/t Au (NX12-13)
- o 11m @ 0.41% Zn from 62m (NX12-16)
- **Chi**: A strong bedrock conductor north of the known Narndee Prospect associated with known surface copper anomalism
- **TBW**: A strong basement conductor to the south of Narndee, well outside the area where historical exploration focussed.

In addition to the high priority targets surrounding the Narndee prospect several other conductors were identified by the HEM survey including (*Figures 2 & 3*):

- Redhead: Probable bedrock conductor 'seen' through conductive cover using the 12.5Hz system and associated with a mapped gabbro (mafic) intrusive with no historical geochemistry or drilling.
- Lambda Group anomalies: Group of north-south trending probable bedrock conductors extending over more than 1km strike and bounded by a mineralised structural corridor.
- **NMS1, 2 and One Mile**: Group of six probable and possible bedrock conductors in an area of transported sheet wash likely opaque to previous surveys.



**Figure 3:** Yarrambee HEM survey, western end focused on targets surrounding the historical Narndee Cu-Zn prospect. Main image is 25Hz base channel 23 Bfield (Z component). Background image regional magnetics (RTP-TMI).



Table 1: Yarrambee Project: conductor ranking and count.

Anomaly Type	Description	N
First order	Clear bedrock anomalies	23
Second order	Probable, but subdued bedrock anomalies	20
Third order	Possible bedrock anomalies	5

#### **Yarrambee Prospect**

No bedrock conductors were identified over the Yarrambee magnetic/igneous complex and this target's potential to host economic Ni-Cu-PGE mineralisation has been downgraded.

#### **Yalanga Bore Prospect**

No bedrock conductors were identified at Yalanga Bore despite historical drill intersections reporting sulfide intervals associated with base metals intersections including (*refer Figure 2 and G88 ASX Announcement 11 March 2021*)<sup>1</sup>:

- 20m @ 0.27% Cu, 0.38% Zn from 42m (YBP70)
- 1.13m @ 0.14% Cu, 2.35% Zn from 110.95m (YBD1)

A review of the HEM data is underway to reconcile these results.

#### **FURTHER WORK**

Golden Mile plans to review the preliminary targets with the final processed EM and magnetic data anticipated later this month which will be used to rank and prioritise targets for follow up testing which will include ground geophysics (EM and gravity) to define targets for drill testing.

#### **HEM Survey Background**

Golden Mile's Yarrambee HEM survey was flown by geophysical contractors New Resolution Geophysics (NRG) with their proprietary Excite<sup>TM</sup> system on east-west oriented lines at 200m line spacing.

The survey included 20 lines of 100m infill over several of the bedrock targets and the northeast of the survey area was flown with the 12.5Hz base frequency system due to the extensive conductive cover in this area (*Figure 2*).

The aim of the survey was to identify conductors prospective for (*refer G88 ASX Announcement 7 May 2021*):

- Ni-Cu-PGE associated with mafic-ultramafic rocks of the NIC and
- VMS-style Cu-Zn-Pb mineralisation associated with felsic units of the Yaloginda Formation.



This Announcement has been approved for release by the Board of Golden Mile Resources Limited.

### For further information please contact:

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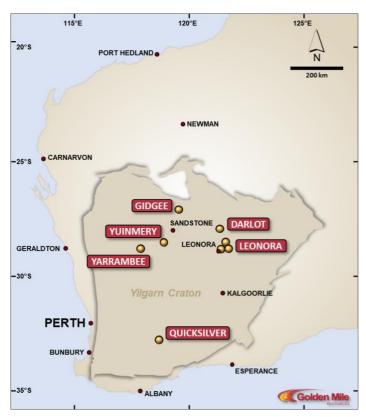
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Note 1: Refer ASX announcement on the said date for full details of these results. Golden Mile is not aware of any new information or data that materially affects the information included in the said announcement.

#### **About Golden Mile Resources Ltd**



Golden Mile Resources Ltd (Golden Mile; ASX: G88) is a Western Australian focused mineral exploration company with projects in the Eastern Goldfields, Murchison and South-West regions.

The Company's gold projects are located in the highly prospective Eastern Goldfields region, namely the Leonora (Benalla, Ironstone Well and Monarch prospects), Darlot and Yuinmery Gold Projects.

The Yarrambee Project, an ~816km² landholding located in the Narndee-Igneous Complex (NIC) in the Murchison region, is considered prospective for Ni-Cu-PGE as well as Cu-Zn VMS mineralisation.

The Company also holds the Quicksilver nickel-cobalt project, located about 350km south east of Perth.





#### **Competent Persons Statement**

The information in this report that relates to Exploration Results is based upon and fairly represents information compiled by Mr James Merrillees, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Merrillees is a full-time employee of the Company.

Mr Merrillees has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Merrillees consents to the inclusion in the report of the matter based on his information in the form and context in which it appears.

The Company confirms it is not aware of any new information or data that materially affects the exploration results set out in the in the original announcements referenced in this announcement and all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original announcements.

#### Forward-Looking Statements

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Golden Mile Resources Ltd (ASX: G88) planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may", "potential," "should," and similar expressions are forward-looking statements. Although Golden Mile Resources Ltd (ASX: G88) believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.



**ASX: G88** 

### Appendix 2: JORC Code, 2012 Edition – Table 1

### **Section 1 - Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>An Airborne Electromagnetic and Magnetic Survey was flown in June 2021 by New Resolution Geophysics (NRG), an independent geophysical contractor/service provider.</li> <li>Survey Type = Time Domain Helicopter-borne electromagnetics and Magnetics</li> <li>Equipment and data sampling specifications:</li> </ul>



Electromagnetic System	
Туре	Xcite™
Sensor Configuration	Coincident Tx-Rx
Weight	~450kg
Structure	Fully inflatable frame
Aircraft Type	AS350B Series
Engine Type	Turbine
Fuel Type	JetA1
Transmitter	
Diameter	18.4m
Number of turns	4
Current	275A
Dipole Moment	285,000 NIA
Base Frequency	25Hz
Waveform	Nominal square wave –
	typically 5.4mS ontime
Receiver	
Diameter	0.613m(effective) (X),
	1.0m (Z)
Number of turns	200 (X), 100 (Z)
Orientation	X & Z axis
Configuration	Concentric to Tx
Recording	Digitally at 625 kbps
Time gates	Extracted from streamed
	data – Typically 24 gates
Time gate windows	0.04ms to >11ms
Measurements	dB/dT
	& integrated B-field
Acquisition System	
Туре	NRG RDAS II
СРИ	Dual Core ARM 1.5Ghz
Operation Temperature	-10 to 65 Degrees C
Standard Sampling Rate	20 Hz (capable of >1kHz)
GPS Positioning	
Туре	Novatel DL-V3L1L2
Differential Correction	Post Processed
Code Tracked	C/A
Number of Satellites	12
Recording Rate	20 Hz
Recording Rate	20 Hz



Magnetometer Counter	
Type	NRG RDAC II
Internal System Noise	<0.0001 nT
Adc Inputs	24
Magnetometer Inputs	4
Recording Rate	20 Hz (capable of >1kHz)
Magnetometer Sensor	20112 (capable of >1x112)
Туре	Single Sensor Scintrex CS3
Measurement Range	15 000 – 105 000 nT
Gradient Tolerance	40 000 nT/m
Operating Temperature	-40 to +50 Degrees C
Recording Rate	20 Hz (capable of >1kHz)
Radar Altimeter (not recorded	1)
Туре	Free Flight
Operating range	0 - 762 m
Accuracy 0 - 10 m	+-0.3m
Accuracy 10 - 762 m	+-0.5m
Recording rate	20 Hz (capable of >1kHz)
Field Data Verification System	1
Processing Software	Geosoft Oasis Montaj and
Platforms	Proprietary Software
Base Station Magnetometer	
Туре	NRG VER2
Manufacturer	NRG Engineering
Range	15 000 to 105 000nT
Sensitivity Recording Rate	0.0006 nT VHz RMS 1Hz
Laser Altimeter	
Туре	SF11/C (Loop) and SF00(Heli)
Range	0 - 60 m and 0 - 250m
Resolution	1cm
Recording rate	20 Hz (capable of >1kHz)



Criteria	JORC Code explanation	Commentary
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).	N/A – geophysical survey results reported.
Drill sample recovery	<ul> <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>	N/A – geophysical survey results reported.
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	N/A – geophysical survey results reported.
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core 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>	N/A – geophysical survey results reported.
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>The helicopter-borne electromagnetic and magnetic survey was undertaken by New Resolution Geophysics (NRG), an independent geophysical contractor.</li> <li>The survey involved acquisition of airborne data at 200m line spacing on east-west lines orientated approximately perpendicular to the dominant stratigraphic and structural trends.</li> <li>A total of 1321 line-km were collected during the survey.</li> <li>Nominal survey altitudes of less than 40m EM, 45m magnetic sensor and 54m (helicopter) was employed which was dependent on safety considerations and the height of the tree canopy.</li> <li>A minimum line length of 3km was utilised for the flight path.</li> <li>The survey covered as area of approximately 250km².</li> <li>Data quality was considered to be of high quality.</li> </ul>



Criteria	JORC Code explanation	Commentary
		No gaps "drop-outs" were observed in any of the database fields
		<ul> <li>Filtering of raw data was minimal and very close to the final product.</li> <li>Laboratory procedures and associated QAQC are not applicable to the geophysical survey being reported</li> </ul>
Verification of sampling and	The verification of significant intersections by either independent or alternative company personnel.	N/A – geophysical survey results reported.
assaying	<ul> <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>	
Location of data points	<ul> <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> </ul>	<ul> <li>N/A – geophysical survey results reported</li> <li>Novatel DL-V3L1L2 with real time differential correction (12 satellites), 20 Hz recording rate was used for GPS positioning.</li> <li>The grid system used is the Geocentric Datum of Australia 1994 (GDA 94), MGA50.</li> </ul>
	Quality and adequacy of topographic control.	
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing, and distribution is sufficient to establish the degree of geological 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>	The HEM survey involved acquisition of airborne data at 200m line spacing, on east-west flight lines.
Orientation of data in relation to geological structure	<ul> <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>	The HEM survey involved acquisition of airborne data at 200m line spacing, on east- west flight lines broadly perpendicular to mapped stratigraphy and structures
Sample security	The measures taken to ensure sample security.	This is not recorded in the historical reports
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits of sampling techniques and data have been completed



**ASX: G88** 

### Section 2 - Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>The Yarrambee Project comprises granted tenements E59/2529, E59/2530, E59/2531, and E59/2532 and tenement applications E59/2533 and E59/2542 all held 100% by Golden Mile Resources Ltd.</li> <li>Golden Mile entered into a sale and purchase agreement with the tenement applicants which includes a 1% NSR</li> <li>Tenements are currently in good standing with no known impediments to exploration</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Previous exploration was undertaken by:</li> <li>BHP-Hunter Resources (1986-1989)</li> <li>Duval (1985)</li> <li>Anglo Australian Resources/Billiton/Normandy-Poseidon JV 1985-1992</li> <li>Windimurra Resources (1997-1998)</li> <li>Falconbridge-Apex (2006-2007)</li> <li>Apex/WMC JV (2006-2010)</li> <li>Maximus Resources (2010-2015)</li> <li>Legendre/Santa Fe Mining (2015-2018)</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The Yarrambee Project is located within the Youanmi Terrane of the Yilgarn Craton, close to a major structural boundary between the Murchison and Southern Cross Domains.</li> <li>Regional geology is dominated by Archaean granite-greenstone terranes (greenstone 2.8-3.0 billion years, granites 2.6-2.95 billion years) and the Windimurra Group of layered mafic intrusions (2.847 Ga ± 71Ma).</li> <li>The Narndee Igneous Complex forms the primary component of the Boodanoo Suite and is divided into three broad units of stratigraphy: Ultramafic Zone, Lower Zone and Main Zone.</li> <li>Golden Mile is focussed on the discovery of economic Ni-Cu-PGE mineralisation associated with intrusive rocks (chonoliths) analogous to Voisey's Bay within the layered complex, as well as VMS (Cu-Zn-Pb-Ag) mineralisation associated with the Yaloginda Formation.</li> </ul>
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</li> <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> <li>If the exclusion of this information is justified on the basis that the information</li> </ul>	N/A, no drilling is being reported.



Criteria	JORC Code explanation	Commentary
	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.	
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	N/A, no drilling is being reported.
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	N/A, no drilling is being reported.
Diagrams	<ul> <li>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.</li> </ul>	N/A, no drilling is being reported
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	N/A, no drilling is being reported
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.	<ul> <li>Historical exploration activity over the Yarrambee project area has included airborne magnetics and EM (REPTEM), surface lag sampling, and various shallow drilling programs</li> <li>Data will be compiled and reviewed to aid in forthcoming exploration programmes.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	Further work is discussed in the body of the announcement.