



## ASX Announcement

ASX: GML

17 August 2023

# New Deep Exploration Targets Identified by Seismic Survey at Montague Gold Project

Favourable targets for large-scale discoveries identified on known, live gold-bearing structures, as Gateway's hunt for step-change discoveries moves up a gear

### HIGHLIGHTS

- 2-Dimensional seismic survey completed over the western margin of the Montague Granodiorite.
- Survey completed to define the orientation of mineralised structures and the Montague Granodiorite Dome at depth.
- The survey has highlighted several targets below the existing Mineral Resources where potentially favourable structural sites exist that could host gold mineralisation at moderate depths, consistent with Gateway's focus on step-change discoveries at the 526koz Montague Gold Project.
- Survey to be used to design deep diamond holes, including those co-funded through the WA Government Exploration Incentive Scheme (EIS), with drilling scheduled to commence late-September early-October.

Gateway's Managing Director, Mr Mark Cossom, said: "Our decision to invest in an extensive 2D seismic survey at the Montague Gold Project has paid significant and immediate dividends. Our focus this year has been to up the ante on our exploration strategy, with a view to unlocking large-scale, breakthrough discoveries with the potential to transform the profile of the Project and add significant critical mass to our existing 526,000oz Resource inventory.

"The interpreted data from the survey has given us the first clear picture of the geology at depth below the known deposits along the Montague Granodiorite. Importantly, it has given us clear vectors to track extensions of the gold-hosting Montague-Boulder shear zone down-plunge of our existing resources. The results align well with our interpretation of the geology at surface and correlate with predicted extensions of the existing deposits at depth.

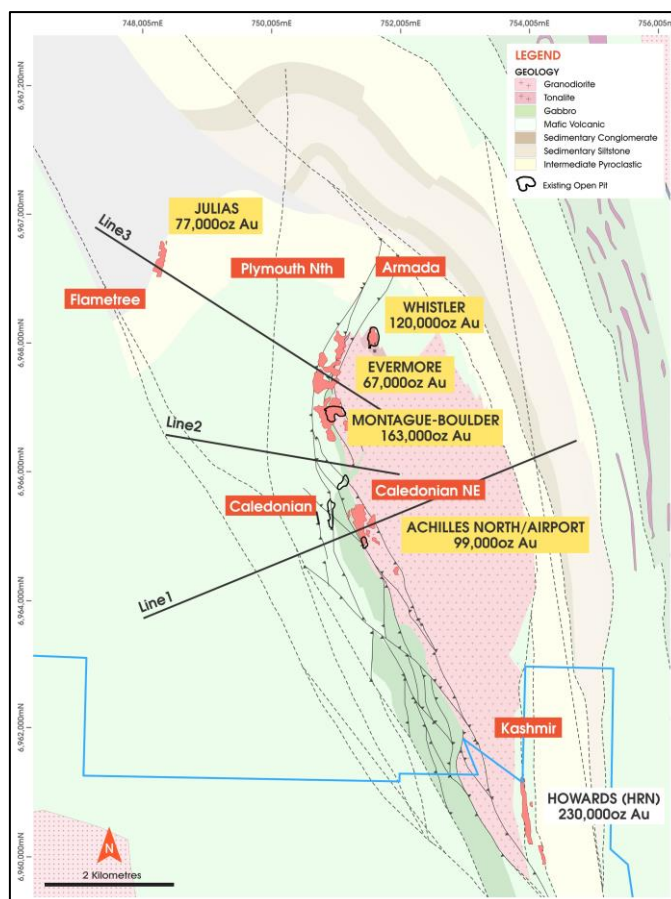
"This has given us some clear targets at depth to test with diamond drilling, and we are now moving ahead with planning for these deep holes, which are scheduled to commence in late September/early October. This will make the beginning of a very exciting phase of exploration at Montague.

"On other fronts, we recently completed another phase of air-core drilling across the Plymouth North, Achilles South and Montague East targets, and we are eagerly awaiting the results. Field work is also continuing at Montague with another air-core program planned to test the next phase of targets. This together with the deep drilling should generate a significant pipeline of news-flow through until the end of the year."

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**Figure (1): Montague Gold Project Mineral Resource locations with 2-dimensional seismic traverses.**

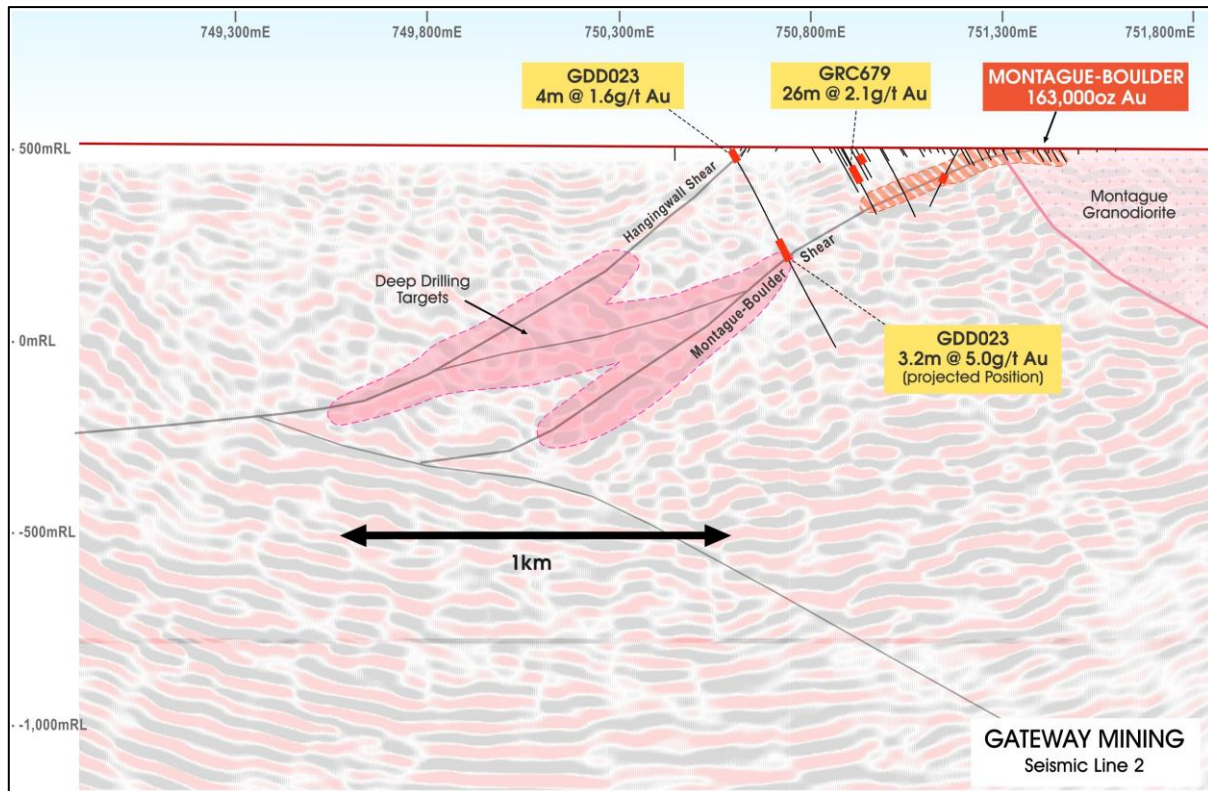
Gateway Mining Limited (ASX: GML) (**Gateway** or **Company**) is pleased to advise that it has received final results from a recent seismic geophysical survey undertaken at its 526,000oz<sup>1</sup> Montague Gold Project, located in the Murchison Gold District of Western Australia, resulting in the definition of a series of significant new deep drilling targets.

The survey represents an integral step in the identification of new large-scale targets below existing Mineral Resources, in line with Gateway’s strategy of pursuing step-change discoveries at the Montague Gold Project.

In May 2023, Gateway engaged geophysical contractors Ultramag to undertake a series of two-dimensional seismic survey traverses across the margin of the Montague Granodiorite. The traverse locations were focused on the western margin of the Granodiorite, where Gateway has already defined several Mineral Resources. The aims of the survey were:

- To determine more accurately the orientation of the known mineralised structures at depth, below existing defined mineralisation, and the interaction between these structures;
- To gain information on the attitude of the lower contacts of the Montague Granodiorite Dome, so that an overall model of the dome can be designed; and
- To identify any structural complexity or zones at depth below existing shallow exploration drilling data that may represent potentially “blind” exploration targets.

<sup>1</sup> 10,073,000t @ 1.6g/t Au for 526,000oz Indicated and Inferred. GML attributable 507,000oz Indicated and Inferred. See ASX Release dated 27 September 2022.



**Figure (2): Cross-section through seismic line 2, with interpreted major geological features. The deepest drill-hole completed on this deposit to date, GDD023, has been projected to this section. Note the orientation of the down-dip extension of the Montague-Boulder shear and the potential target zone created.**

The ultimate outcome of the survey was to identify suitable targets for deeper drilling to target high-grade mineralisation below the existing shallow Mineral Resources. As previously announced, Gateway has been successful in applying for co-funding of a deep diamond drilling program through the WA Government Exploration Incentive Scheme (EIS), for use at Montague.

The survey and subsequent geological interpretation exercise was highly successful, not only in identifying the key features at depth but also in highlighting exciting drilling targets for testing as part of the upcoming diamond drill program.

As illustrated in Figure 2, the Montague-Boulder Shear structure, which hosts the 163,000oz Montague-Boulder Mineral Resource<sup>2</sup>, can clearly be traced below the existing Mineral Resource to over 800m below surface. The deepest hole drilled into this structure to date is GDD023, which intersected **3.2m @ 5.0g/t Au from 314m**.<sup>3</sup>

However, the seismic data demonstrates not only that this structure continues at depth (along with high-grade gold mineralisation indicated in GDD023) but also that, at approximately 350-400m below surface, the structure appears to splay and flatten out, potentially joining with the mineralised hanging wall structure.

The recent reinterpretation of the structural framework of the Montague Project, utilising the consultants at Model Earth, indicates that a flattening of this orientation would generate dilation along the Montague-Boulder structure, and therefore represents a prime potential host site for gold-mineralised fluids. This target is a high priority for the upcoming diamond drilling program.

In addition, the seismic traverses have highlighted the persistence of major, east-dipping thrust faulting through the Achilles deposit (Figure 3). This orientation is observed in the historic Rosie open pit where the Montague Granodiorite has been thrust-up over the surrounding mafic sequence. Recent work by Gateway staff had postulated that several of these east-dipping thrusts were present in the Granodiorite east of the contact zone and could control the persistent gold mineralisation observed in shallow air-core and RC drilling over a +600m thickness. Historic intersections through this zone include<sup>4</sup>:

<sup>2</sup> 3,078,000t @ 1.7g/t Au for 163,000oz Indicated and Inferred. See ASX Release dated 27 September 2022.

<sup>3</sup> See ASX Release dated 21 July 2021.

<sup>4</sup> See ASX Release dated 24 October 2022.

- **GRC945: 12m @ 5.6g/t Au from 56m**
- **GRC941: 18m @ 2.0g/t Au from 31m within a broader 30m @ 1.3g/t Au from 31m**
- **GRC931: 14m @ 1.6g/t Au from 68m within a broader 63m @ 0.6g/t Au from 21m**
- **WRC012: 147m @ 0.4g/t Au from 21m**
- **AGRC001: 120m @ 0.4g/t Au from 80m**
- **WRC011: 47m @ 0.7g/t Au from 76m**

This zone of structural complexity, coupled with extensive gold mineralisation, presents the Achilles Deeps target area as another high-priority target for the upcoming diamond drilling program.

The seismic traverses also provided valuable information regarding the geometry of the Montague Granodiorite at depth. As illustrated in Figure 3, being intruded during deformation of the wider greenstone belt, the Granodiorite has taken on a detached “apricot pip” type geometry.

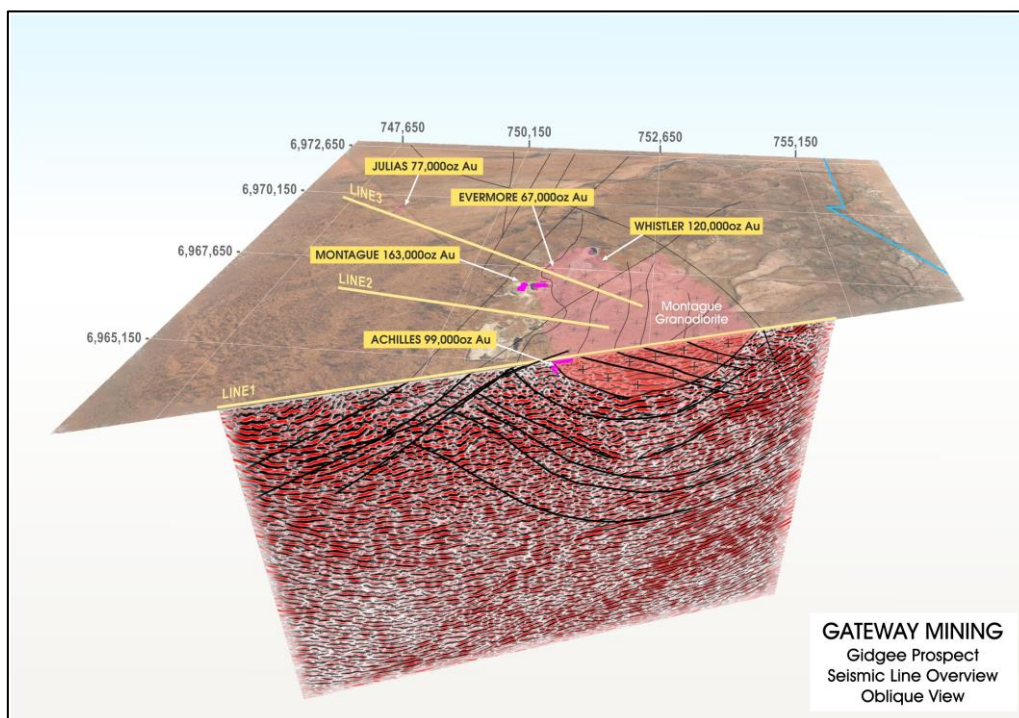
This geometry, coupled with the known presence of gold mineralised fluids being present through the deformation of the belt, opens the possibility of potential mineralised sites along the intrusion margin at depth in a classic “pressure shadow” position. Additional investigation of these potential sites will be undertaken with a view to developing conceptual drill targets for future testing.

### Ongoing Exploration Work

Gateway is currently compiling and interpreting the final results of the extensive soil geochemical survey completed over the northern extents of the highly mineralised Tokay Shear zone in June 2023. It is expected that this survey will result in the delineation of a series of new exploration targets to be investigated by first-pass drilling. The identification of these targets will allow for appropriate heritage surveys to be completed prior to drilling.

An air-core program testing the Plymouth North, Achilles South and Montague East targets was recently completed. These results are currently being received and compiled.

Field work has also continued at the Montague Project, with field crews having remobilised to site to undertake another air-core drill program testing the next phase of targets at Montague, including potential follow-up of encouraging results received from the first phase of drilling. It is expected that the rig will be on site drilling through to mid-September, with a diamond drill rig then expected to commence testing targets outlined in this release in late-September/early October.



**Figure (3): Oblique isometric view of seismic line 1 and interpreted geology and main deposit locations. Note the position of the current Achilles Mineral Resource on and above the main east-dipping thrust, and the repetition of these east-dipping structures through the granodiorite body.**

This released has been authorised by:

Mark Cossom  
Managing Director

***For and on behalf of  
GATEWAY MINING LIMITED***

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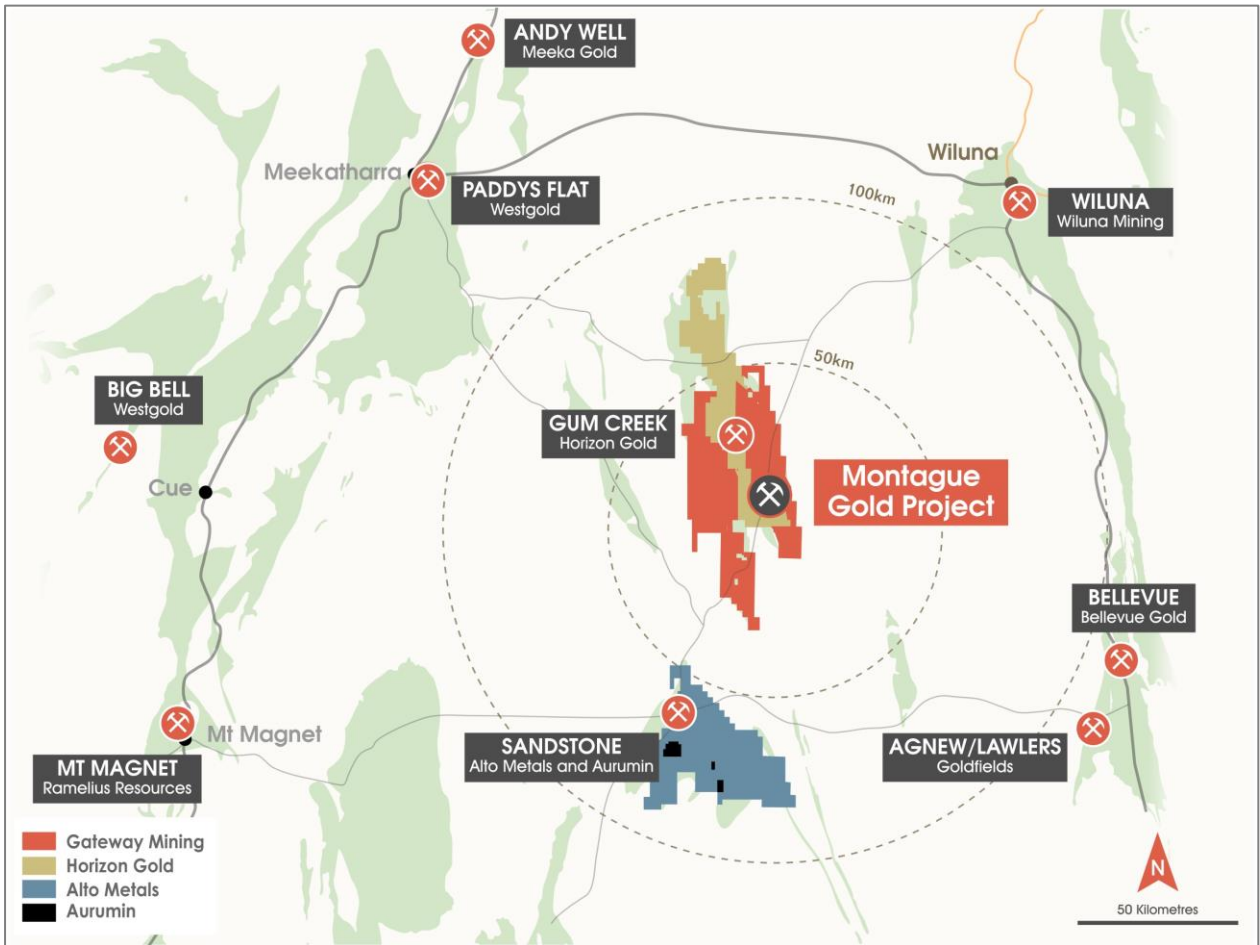
### **Competent Person Statement**

The information in this report that relates to Exploration Results is based on information compiled or reviewed by Mr Stuart Stephens who is a full-time employee of Gateway Mining Ltd and is a current Member of the Australian Institute of Geoscientists. Mr Stephens owns options in Gateway Mining Ltd. Mr Stephens has sufficient experience, which is relevant to the style of mineralisation and types of deposit under consideration and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Stephens consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

The information in this announcement that relates to Mineral Resources has been extracted from various Gateway ASX announcements and are available to view on the Company's website at [www.gatewaymining.com.au](http://www.gatewaymining.com.au) or through the ASX website at [www.asx.com.au](http://www.asx.com.au) (using ticker code "GML"). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement. 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 announcement.

# APPENDIX (1)

## About the Montague Gold Project



Montague Gold Project Tenement Location Diagram

**APPENDIX (2): MONTAGUE 2-DIMENSIONAL SEISMIC SURVEY JUNE 2023**  
**JORC Code, 2012 Edition**  
**Table 1**

**Section 2 Reporting of Exploration Results**  
**(Criteria listed in the preceding section also apply to this section.)**

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All tenements are held under Gateway Mining Ltd, except M57/429 (75% : 25% Estuary Resources Pty Ltd) and M57/485 (75% : 25% Estuary Resources Pty Ltd).</li> <li>• No Native Title claims are lodged over the tenements.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>• <i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Gold was discovered in the district during the gold rush era, first records of gold won from small-scale, high-grade workings include the Montague Mining Centre (1904-13). Renewed interest in the late 1960's included base metal exploration carried out within exposed stratigraphy of the Montague Ranges (Bungarra Ranges), exploration interest that broadened with the release of the Sandstone 1:250,000 aeromagnetic sheet in 1970 resulting in the staking of favourable magnetic anomalies by exploration companies.</li> <li>• Early explorers in the Montague Ranges included Anaconda Australia Inc. (1966-67), followed by International Nickel Australia (1971-75) evaluating a Gabbro - banded differentiated basic complex believed prospective for copper and/or nickel such as the Dulith Gabbro, USA. Strong geophysical and mineralised anomalism was encountered, however, copper-zinc enrichment was also encountered in adjacent felsic stratigraphy at Ed's Bore prospect, which was followed-up by CRA Exploration (1983-1990) to intersect polymetallic VMS enrichments at Bevan prospect (not substantively pursued).</li> <li>• At Montague, Western Mining Corporation (1976) conducted investigations for copper and gold including soil sampling and IP surveying, which was followed by CRA Exploration (1984-89) working concurrently with AMOCO Minerals Australia Company (1984) and Clackline Refractories Ltd (from 1985 - to later become Herald Resources) assessing/purchasing historic mine areas from Mr W.J. Griffiths of Sandstone. RAB drilling penetrating transported cover resulted in the virgin discoveries of NE Pit by AMOCO and Whistler deposit by CRA. Later noted explorers included Dalrymple Resources NL (1987-1990) intersecting gold at the Armada (Twister) prospect, and Arimco Mining (1990-98) intersecting gold at Lyle prospect, Victory West prospect, and copper at The Cup prospect (not substantively pursued).</li> <li>• The Montague Mining Centre produced approximately 150,000oz of gold</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>commencing in 1986 at Caledonian and NE Pits (Clackline), and continued at Montague Boulder from 1988 (Herald), and was to close in 1993 after completion of the Rosie Castle open cut (Herald). Whistler open cut was mined from November 1990 (Polaris Pacific NL) and ore toll treated through the Herald mill. Little attention was paid to mineralisation other than gold. Gateway Mining in joint venture with Herald Resources continued exploration of the Montague Mining Centre, Gateway also targeting poly-metallic intrusion related - VMS models in the district from 2006.</p> <ul style="list-style-type: none"> <li>• Airport, Airport Sth, S Bend, Rosie Nth, Rosie Sth mineralisation was discovered by Gateway Mining between 2007 and 2011 in RAB drilling and later defined by RC drilling.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Gateway's Montague Project is located in the Gidgee district in the Archean Yilgarn Craton of Western Australia approximately 630km NE of Perth and 70km north from the township of Sandstone on the eastern central portion of the Gum Creek Greenstone Belt, of the Southern Cross Province. Metamorphic grade of the Gum Creek Greenstone Belt is estimated to be low-grade greenschist facies.</li> <li>• Project lithology includes basalt/ash tuff/dolerite/gabbro, the Montague Granodiorite sub-volcanic intrusion (calc-alkaline - FI), dacite volcanic flow/s (FI), volcanoclastic sequences of felsic composition and epiclastic conglomerates, ultramafic intrusives and external orogenic granite plutons. Key regional characteristics of a Volcanic Arc Extensional Basin include calc-alkaline bimodal volcanic sequences associated with extensive iron formations. Later ENE-WSW orogenic compression event is characterised by NNW regional scale faults/unconformities, NNW shearing and folding, slaty cleavage has developed within sediments near a tight syncline fold closure within the NE area of the project.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>• <i>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:</i> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> </li> <li>• <i>If the exclusion of this information is justified on the basis that the information</i></li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>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.</i>	
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li><i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li><i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>	<ul style="list-style-type: none"> <li>Appropriate maps are included in the announcement.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li><i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></li> </ul>	<ul style="list-style-type: none"> <li>The accompanying document is considered to be a balanced report with a suitable cautionary note.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li><i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul>	<ul style="list-style-type: none"> <li>The area has been covered by detailed ground gravity and airborne magnetic surveys. Previous drilling by AC, RAB, RC and diamond methods has been carried out in the immediate area. However, the area covered by this drilling was considered to be ineffectively tested by historic drilling.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>Deep diamond drilling of targets generated from this survey will be undertaken.</li> </ul>