

31 July 2019

## **DRILLING OF NICKEL-COPPER SULPHIDE TARGETS BEGINS AT MT ALEXANDER**

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### **HIGHLIGHTS:**

- **Major Drill Programme has commenced:**
  - **Diamond drilling of electromagnetic (EM) conductors is underway with 42 EM conductors prioritised for drilling**
  - **First target is an EM conductor at the Investigators Prospect with modelled conductivity of 82,000 Siemens**
  - **All EM conductors tested in the Cathedrals Belt to date have been confirmed as nickel-copper sulphides**
  - **Quantity and location of the EM conductors supports the potential to significantly increase the volume of high-grade mineralisation at Mt Alexander**
- **EM surveys in progress at the Cathedrals Belt:**
  - **Extensive EM surveys are ongoing at the Cathedrals Belt with potential to locate additional areas of high-grade nickel-copper sulphides**
  - **EM surveys in areas of conductive cover have recorded several anomalous responses, which are being reviewed ahead of being prioritised for drilling**
  - **High-powered EM survey over the northern section of the Cathedrals Belt has been completed with new data being reviewed**
  - **EM survey is being fast-tracked for the Fish Hook Prospect where a very strong nickel and copper soil anomaly has been identified**

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Growth focused Western Australian nickel company St George Mining Limited (ASX: **SGQ**) (“**St George**” or “**the Company**”) is pleased to announce that drilling of nickel-copper sulphide targets has commenced at the Mt Alexander Project, located in the north eastern Goldfields.

Diamond drilling has commenced on a continuous 24 hour basis with two 12 hour shifts per day. More than 6,000m of drilling is planned with additional targets expected to be added to the programme as results from ongoing EM surveys are reviewed.

**John Prineas, St George Mining’s Executive Chairman** said:

“With a large number of high priority EM targets to test, this is the most exciting drill programme we have launched at Mt Alexander to date.

“Many of the EM conductors to be drilled represent a large step out from known massive sulphide mineralisation, so there is excellent potential for this programme to significantly extend the footprint of high-grade nickel-copper sulphide mineralisation.

“In addition, ongoing EM surveys are identifying new EM targets in underexplored areas of the Cathedrals Belt – providing further support to the emerging large scale mineral potential at Mt Alexander.”

## DIAMOND DRILLING OF EM CONDUCTORS

The first three EM conductors scheduled for drilling are located at Investigators and are listed in Table 1.

The collars for the drill holes that will test these targets are shown in Figure 1, along with the location of other EM plates at Investigators.

The EM conductors all have electrical signatures that are consistent with massive nickel-copper sulphides, and are located in an area of the Cathedrals Belt where all EM conductors tested by drilling have been confirmed to be nickel-copper sulphide mineralisation.

The first EM conductor to be drilled is located approximately 50m to the north of the nickel-copper sulphides intersected in MAD45 – representing a large step-out to the known mineralised zone. This EM conductor has a strike length of 30m and conductivity of 82,000 Siemens.

The drill hole underway is modelled to intersect the EM conductor at 200m downhole.

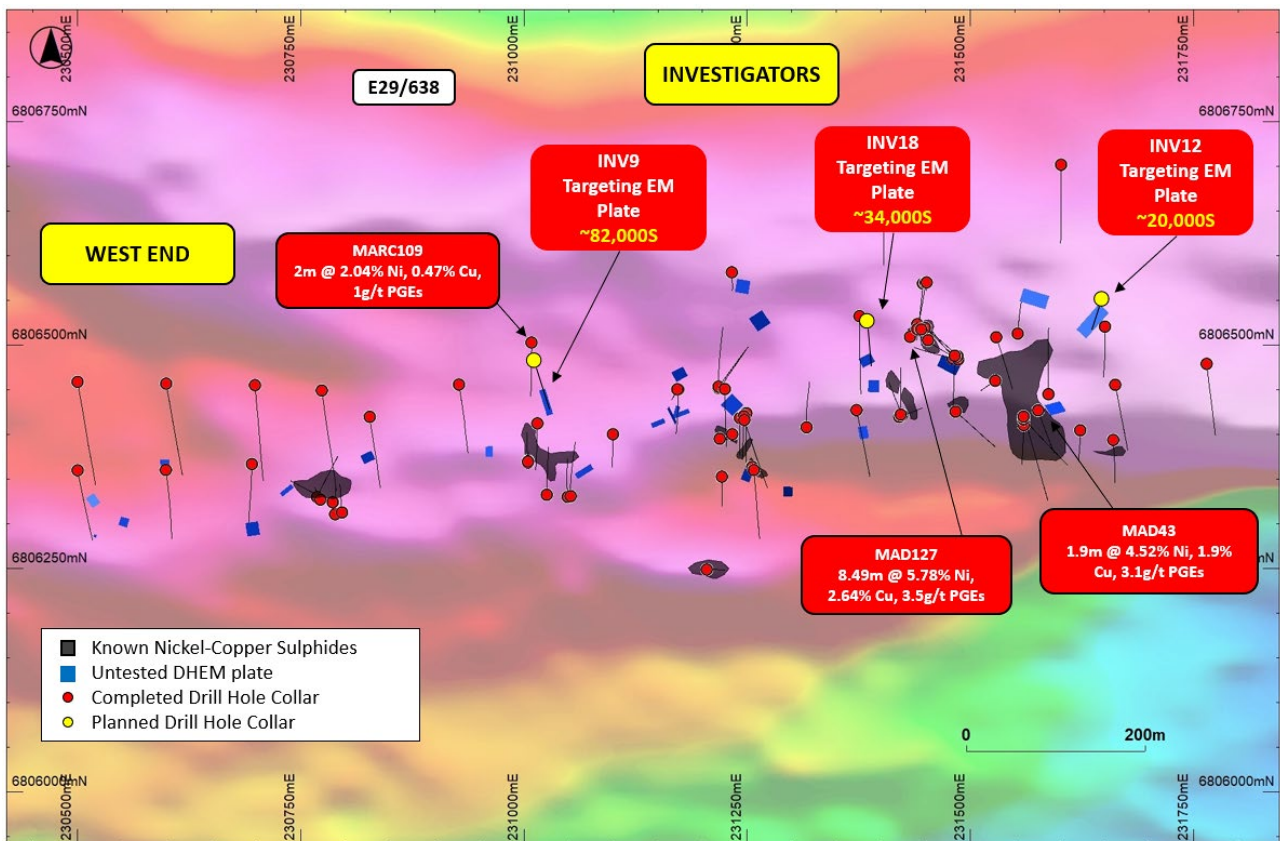


Figure 1 – plan view of Investigators Prospect with drill hole collar locations over SAM (MMC) survey data. Untested EM plates exist proximal to known nickel-copper sulphides and in locations which are large step-outs from the known mineralisation. The first three targets to be drilled in the current programme are highlighted.

Hole ID	Prospect	East	North	RL	Depth	Azimuth	Dip	Target
INV9	Investigators	231010	6806499	419	230	165	-71	EM plate 82,000 siemens
INV12	Investigators	231650	6806569	424.6	230	196	-77	EM plate 20,000 siemens
INV18	Investigators	231377	6806531	422.8	220	170	-75	EM plate 34,000 siemens

Table 1 – Details of first three EM conductors to be drilled, including drill hole collars

**EXTENSIVE SURFACE EM SURVEYS ARE ONGOING**

Figure 2 shows the areas to be surveyed in the current EM programme.

A high-powered fixed loop EM (FLEM) survey has just been completed over the northern section of the Cathedrals Belt, where the ultramafic units are interpreted to extend down-dip to the north and north-west. This area has potential to host a continuation of high-grade mineralisation at depth in the down-dip direction.

The FLEM survey has recorded several anomalous responses, which are being reviewed and interpreted by Newexco in conjunction with previous EM data for this area. Close spaced follow-up MLEM surveys will be used to help refine the modelling. Drill targets for this area are expected to be added to the drill programme currently underway.

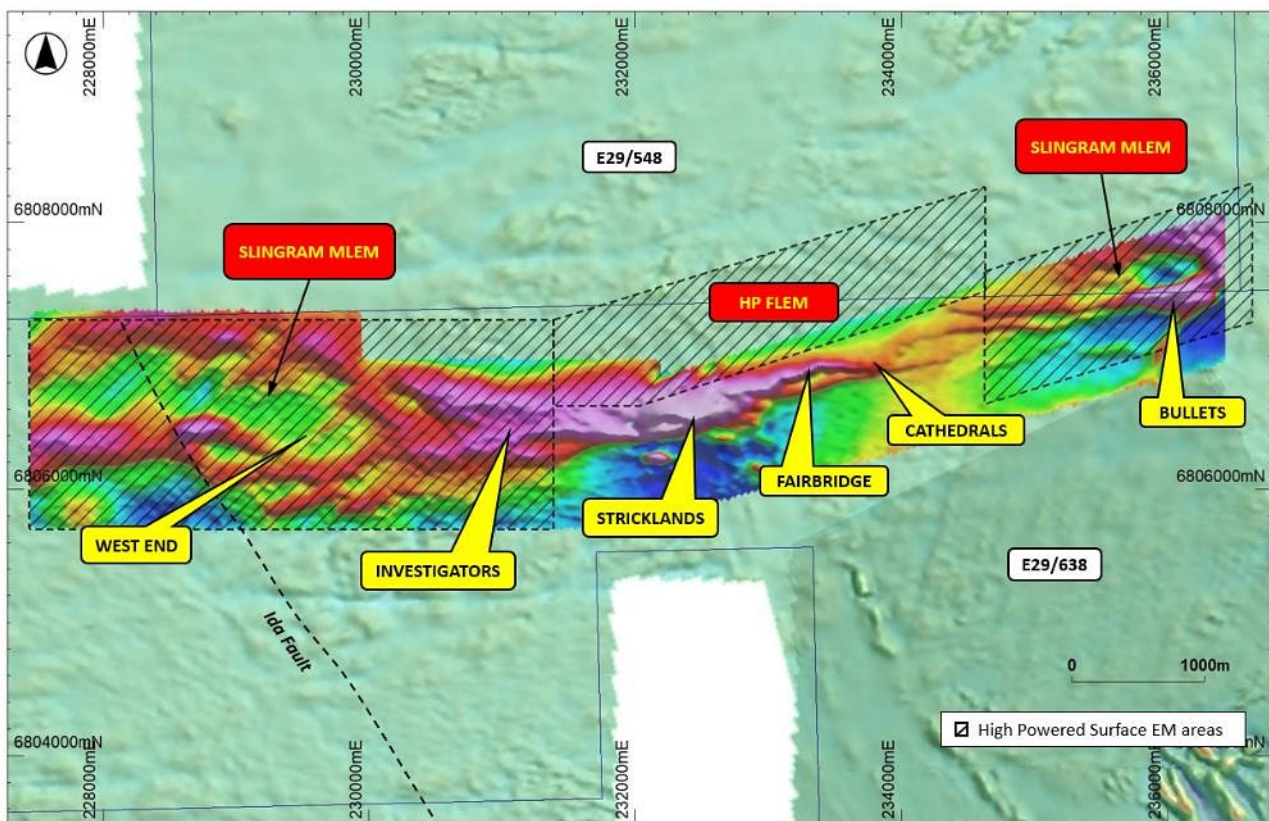


Figure 2 – Map showing survey areas of the new EM programme underway at the Cathedrals Belt (set against the latest SAM (MMC) survey data). The purple areas represent the strongest conductive responses and are interpreted to represent major faults within the Cathedrals corridor, a structural setting that is known to host nickel-copper sulphides in this Belt.

The moving loop EM (MLEM) survey is now in progress and is covering areas outside of current zones of known nickel-copper mineralisation, as shown in Figure 2. The MLEM survey will utilise both traditional and Slingram configurations – the latter uses a sensor inside *and* outside of the survey loop, which results in the effects of palaeo-drainage and conductive cover being minimised.

The MLEM survey commenced to the east of the Cathedrals Prospect. Already early results indicate an anomalous response along the interpreted eastern extension of the mineralised trend known to host nickel-copper sulphides at the Cathedrals Prospect. Any response will be followed up and assessed with a FLEM survey to help refine the EM modelling. The MLEM survey will move to the West End Prospect in the coming days.

In addition to the areas shown in Figure 2, the MLEM survey will be extended to the Fish Hook Prospect. The highly important nickel-copper soil anomaly identified at Fish Hook is co-incident with a magnetic feature that is interpreted to represent mineralised ultramafics. These positive early exploration results warrant immediate follow-up and the MLEM survey for Fish Hook has been fast-tracked accordingly.

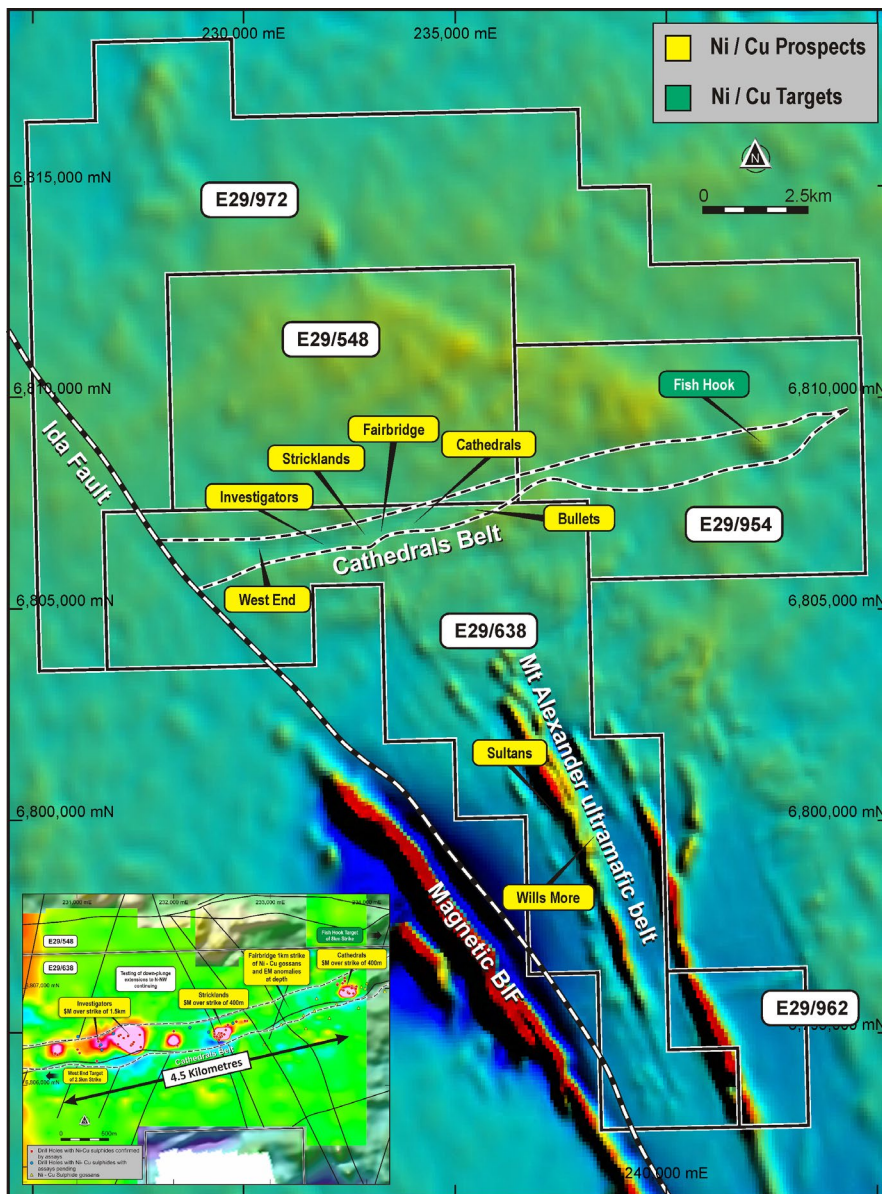


Figure 3 – map of the Mt Alexander tenements (against RTB magnetics) with key prospects highlighted.

The inset shows the 4.5km strike of the Cathedrals Belt where drilling has intersected large areas of high-grade nickel-copper sulphides.

***About the Mt Alexander Project:***

The Mt Alexander Project is located 120km south-southwest of the Agnew-Wiluna Belt, which hosts numerous world-class nickel deposits. The Project comprises five granted exploration licences – E29/638, E29/548, E29/962, E29/954 and E29/972.

The Cathedrals, Stricklands and Investigators nickel-copper-cobalt-PGE discoveries are located on E29/638, which is held in joint venture by St George Mining Limited (75%) and Western Areas Limited (25%). St George is the Manager of the Project, with Western Areas retaining a 25% non-contributing interest in the Project (in regard to E29/638 only) until there is a decision to mine.

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**Competent Person Statement:**

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Dave O'Neill, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy. Mr O'Neill is employed by St George Mining Limited to provide technical advice on mineral projects, and he holds performance rights issued by the Company.

Mr O'Neill 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 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr O'Neill consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The following sections are provided for compliance with requirements for the reporting of exploration results under the JORC Code, 2012 Edition.

**Section 1 Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<i>Nature and quality of sampling (eg 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.</i>	<p>The Down Hole Electromagnetic (DHEM) surveys were completed by two contracting companies – Vortex Geophysics and Merlin.</p> <p>The Vortex DHEM surveys were conducted using the Digi Atlantis system and VTX-100 transmitter generating 100amps and using a 0.5Hz base frequency. Downhole station spacing was 5m with 2.5m infills and used 200m, 150m and 100m surface loops.</p> <p>The Merlin DHEM surveys were conducted using the Digi Atlantis system and Phoenix TXU30 transmitter generating 80-90amps and using a 0.5Hz base frequency. Downhole station spacing was 5m with 2.5m infills and used 200m, 150m and 100m surface loops.</p>
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	<p>The drill hole is located prior to survey using a handheld global positioning system (GPS) and compared with the original collar coordinate as recorded post-drilling.</p> <p>Any anomalies that are recorded over at a 5m sample spacing are re-surveyed using a 2.5m sample spacing downhole.</p>
	<p><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></p> <p><i>In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘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 (eg submarine nodules) may warrant disclosure of detailed information.</i></p>	<p>The release refers to results from geophysical surveys; this section is not relevant to this release.</p>
<b>Drilling techniques</b>	<i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).</i>	<p>The release refers to results from geophysical surveys; a drill program to test the prioritised targets will commence in July 2019.</p>
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	<p>The release refers to results from geophysical surveys; a drill program will commence in July 2019.</p>
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	<p>The release refers to results from geophysical surveys; a drill program will commence in July 2019.</p>

Criteria	JORC Code explanation	Commentary
	<i>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.</i>	The release refers to results from geophysical surveys; a drill program will commence in July 2019.
<b>Logging</b>	<i>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.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
	<i>The total length and percentage of the relevant intersections logged.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
	<i>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.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
	<i>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.</i>	The Vortex DHEM surveys were conducted using the Digi Atlantis system and VTX-100 transmitter generating 100amps and using a 0.5Hz base frequency. Downhole station spacing was 5m with 2.5m infills and used 200m, 150m and 100m surface loops.  The Merlin DHEM surveys were conducted using the Digi Atlantis system and Phoenix TXU30 transmitter generating 80-90amps and using a 0.5Hz base frequency. Downhole station spacing was 5m with 2.5m infills and used 200m, 150m and 100m surface loops.

Criteria	JORC Code explanation	Commentary
	<i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
	<i>The use of twinned holes.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
	<i>Discuss any adjustment to assay data.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
<b>Location of data points</b>	<i>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.</i>	A handheld global positioning system (GPS) was used to determine accurate survey locations for the DHEM surveys (within 5m).
	<i>Specification of the grid system used.</i>	The grid system used at the Mt Alexander project is GDA94 (MGA), zone 51.
	<i>Quality and adequacy of topographic control.</i>	The handheld GPS has an accuracy greater than +/-5m for topographic control. This is sufficient accuracy as all downhole data is collected relative to the collar.
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	The downhole station spacing was 5m with 2.5m infills and used 200m, 150m and 100m surface loops.
	<i>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.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
	<i>Whether sample compositing has been applied.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
<b>Orientation of data in relation to geological structure</b>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	The DHEM survey tools are located in 50mm PVC piping within the drill holes, and provide 3 direction search coverage.
	<i>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.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	No audits or reviews have been conducted at this stage.



## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<b>Mineral Tenement and Land Status</b>	<p>Type, name/reference number, location and ownership including agreements or material issues with third parties including joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</p> <p>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.</p>	<p>The Mt Alexander Project is comprised of four granted Exploration Licences (E29/638, E29/548, E29/954 and E29/962). Tenement E29/638 is held in Joint Venture between St George (75% interest) and Western Areas (25% interest). E29/638 and E29/548 are also subject to a royalty in favour of a third party that is outlined in the ASX Release dated 17 December 2015 (as regards E29/638) and the ASX release dated 18 September 2015 (as regards E29/548).</p> <p>No environmentally sensitive sites have been identified on the tenements. A registered Heritage site known as Willsmore 1 (DAA identification 3087) straddles tenements E29/548 and E29/638.</p> <p>All four tenements are in good standing and no known impediments exist.</p>
<b>Exploration Done by Other Parties</b>	Acknowledgment and appraisal of exploration by other parties.	<p>Exploration on tenements E29/638 and E29/962 has been largely for komatiite-hosted nickel sulphides in the Mt Alexander Greenstone Belt. Exploration in the northern section of E29/638 (Cathedrals Prospect) and also limited exploration on E29/548 has been for komatiite-hosted Ni-Cu sulphides in granite terrane. No previous exploration has been identified on E29/954.</p> <p>The target lithological unit in the Mt Alexander Greenstone belt has historically been the Central Ultramafic Unit, which has been explored by a number of parties, most recently by Nickel West.</p> <p>High grade nickel-copper sulphides were discovered at the Mt Alexander Project in 2008. Drilling was completed to test co-incident electromagnetic (EM) and magnetic anomalies associated with nickel-copper-PGE enriched gossans in the northern section of current tenement E29/638. The drilling identified high grade nickel-copper mineralisation in granite-hosted ultramafic units and the discovery was named the Cathedrals Prospect. The tenements remain underexplored.</p>
<b>Geology</b>	Deposit type, geological setting and style of mineralisation	<p>The Mt Alexander Project is at the northern end of a western bifurcation of the Mt Ida Greenstones. The greenstones are bound to the west by the Ida Fault, a significant Craton-scale structure that marks the boundary between the Kalgoorlie Terrane (and Eastern Goldfields Superterrane) to the east and the Youanmi Terrane to the west.</p> <p>The Mt Alexander Project is prospective for komatiite and differentiated intrusion hosted nickel-copper-PGE mineralisation, and also precious metal mineralisation (i.e. orogenic gold) that is typified elsewhere in the Yilgarn Craton.</p>
<b>Drill hole information</b>	<p>A summary of all information material to the understanding of the exploration results including tabulation of the following information for all Material drill holes:</p> <ul style="list-style-type: none"> <li>• Easting and northing of the drill hole collar</li> <li>• Elevation or RL (Reduced Level – elevation above sea level in meters) of the drill hole collar</li> <li>• Dip and azimuth of the hole</li> <li>• Down hole length and interception depth</li> <li>• Hole length</li> </ul>	The release refers to results from geophysical surveys; a drill program will commence in March 2017.

Criteria	JORC Code explanation	Commentary
<b>Data aggregation methods</b>	<i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
	<i>Where aggregated 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>	The release refers to results from geophysical surveys; this section is not relevant to this release.
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
<b>Relationship between mineralisation widths and intercept lengths</b>	<i>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).</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
<b>Diagrams</b>	<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 plane view of drill hole collar locations and appropriate sectional views.</i>	A relevant prospect map showing geophysical results and previous mineralised drill intersections is shown in the body of the release.
<b>Balanced Reporting</b>	<i>Where comprehensive reporting of all Exploration Results is not practical, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting Exploration Results.</i>	The release refers to results from geophysical surveys; this section is not relevant to this release.
<b>Other substantive exploration data</b>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observation; 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>	All material or meaningful data collected has been reported.
<b>Further Work</b>	<i>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.</i>	Further exploration includes a Diamond and RC drill program to commence in July 2019, follow-up surface EM surveys and soil sampling.