

26 October 2016

## **ST GEORGE COMMENCES AIRBORNE MAGNETIC SURVEY AT MT ALEXANDER**

### **HIGHLIGHTS:**

- **New aeromagnetic survey at Mt Alexander has commenced**
- **Survey will provide high resolution magnetic data that will assist in regional target generation**
- **All granted Mt Alexander tenements comprising an area of 174 sq km will be covered by the survey**
- **Potential to identify new ultramafic belts and other priority targets for massive nickel-copper sulphides**
- **The survey is an important exploration initiative that will add significant value to the Mt Alexander Project**

### **REGIONAL AEROMAGNETIC SURVEY**

St George Mining Limited (ASX: **SGQ**) ('St George Mining' or 'the Company') is pleased to announce that a new airborne magnetic survey has commenced at the high grade nickel-copper sulphide Mt Alexander Project in Western Australia.

The aeromagnetic survey will involve a total of 4,471 line kilometres being flown across all four granted tenements at Mt Alexander.

The survey will be flown on 50m line spacing with a sensor height of 40m and will capture high resolution data over all the project area, including north and south of the Cathedrals Belt and over the entire Mt Alexander greenstone belt.

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

"The new magnetic survey will provide high resolution data that will allow us to better identify any potential new belts and accelerate exploration with ground EM surveys and drilling.

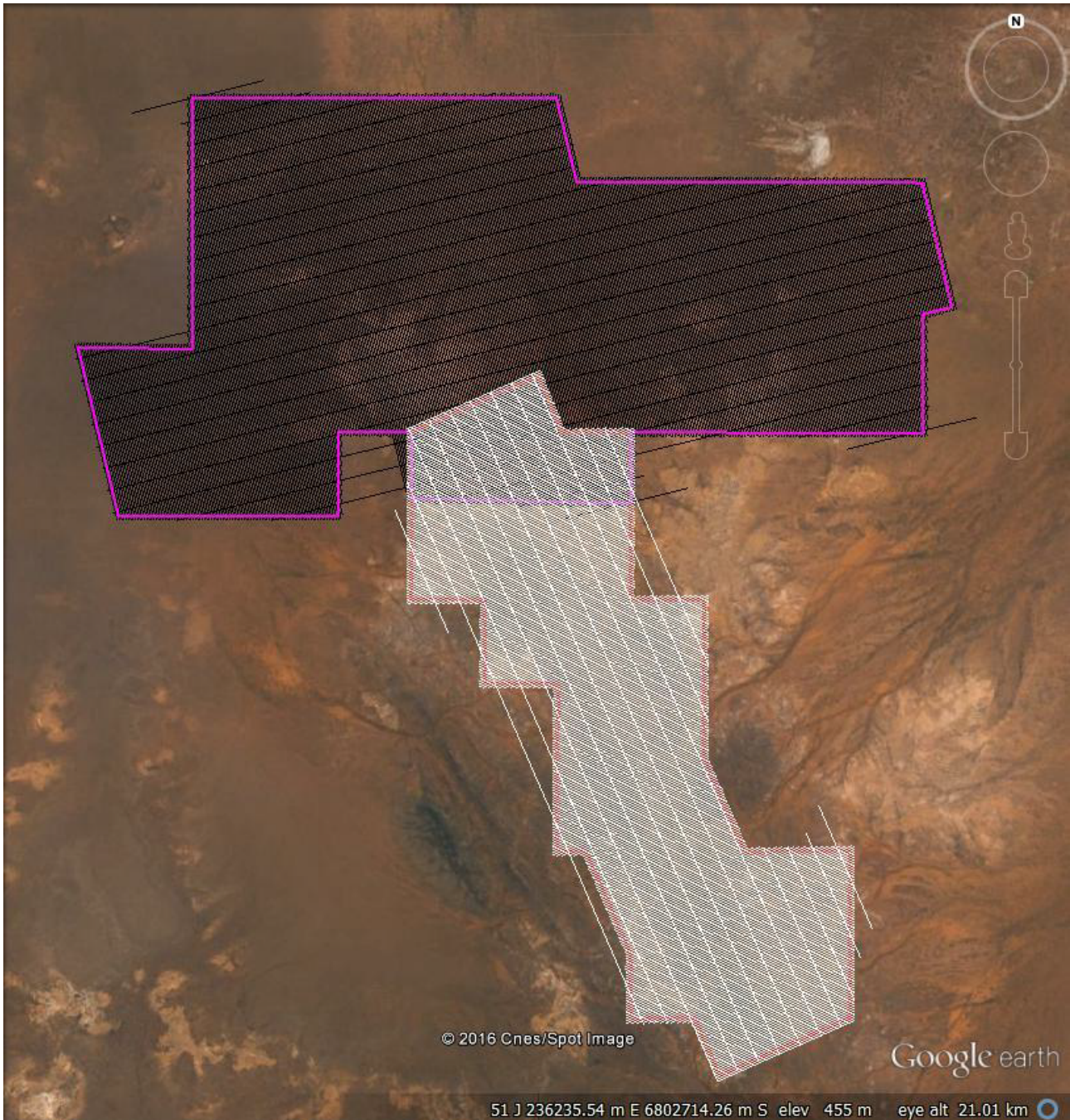
"The new data will also assist us in assessing the full extent of the main Mt Alexander greenstone belt which is still largely underexplored.

"Our successful exploration at the Cathedrals Belt has confirmed an extensive, high grade nickel-copper system at Mt Alexander. The new survey has the potential to identify additional high priority targets over a broader area, which would significantly increase the value of our Project."

The aeromagnetic survey has been designed as two separate areas with different flight orientations; see Figure 1.

The northern area will provide data to better define any east-northeast corridors parallel to the Cathedrals Belt.

The southern area will provide high resolution data of the north-northwest trending Mt Alexander greenstone belt. Potentially, this belt extends to the west undercover and has never been explored.



*Figure 1 – planned coverage of the airborne magnetic survey. Different flight orientations will be used for each of the northern and southern blocks of the survey area based on the interpreted orientation of the bedrock geology.*

The northern block of the survey includes Exploration Licence E29/954, owned 100% by St George. This tenement was only recently granted on 18 August 2016 and has never been explored.

The highly mineralised Cathedrals Belt may extend east into E29/954. The new magnetic data will allow us to identify any potential targets within this new tenement.

Processed data from the aeromagnetic survey will be available next month for geological interpretation.

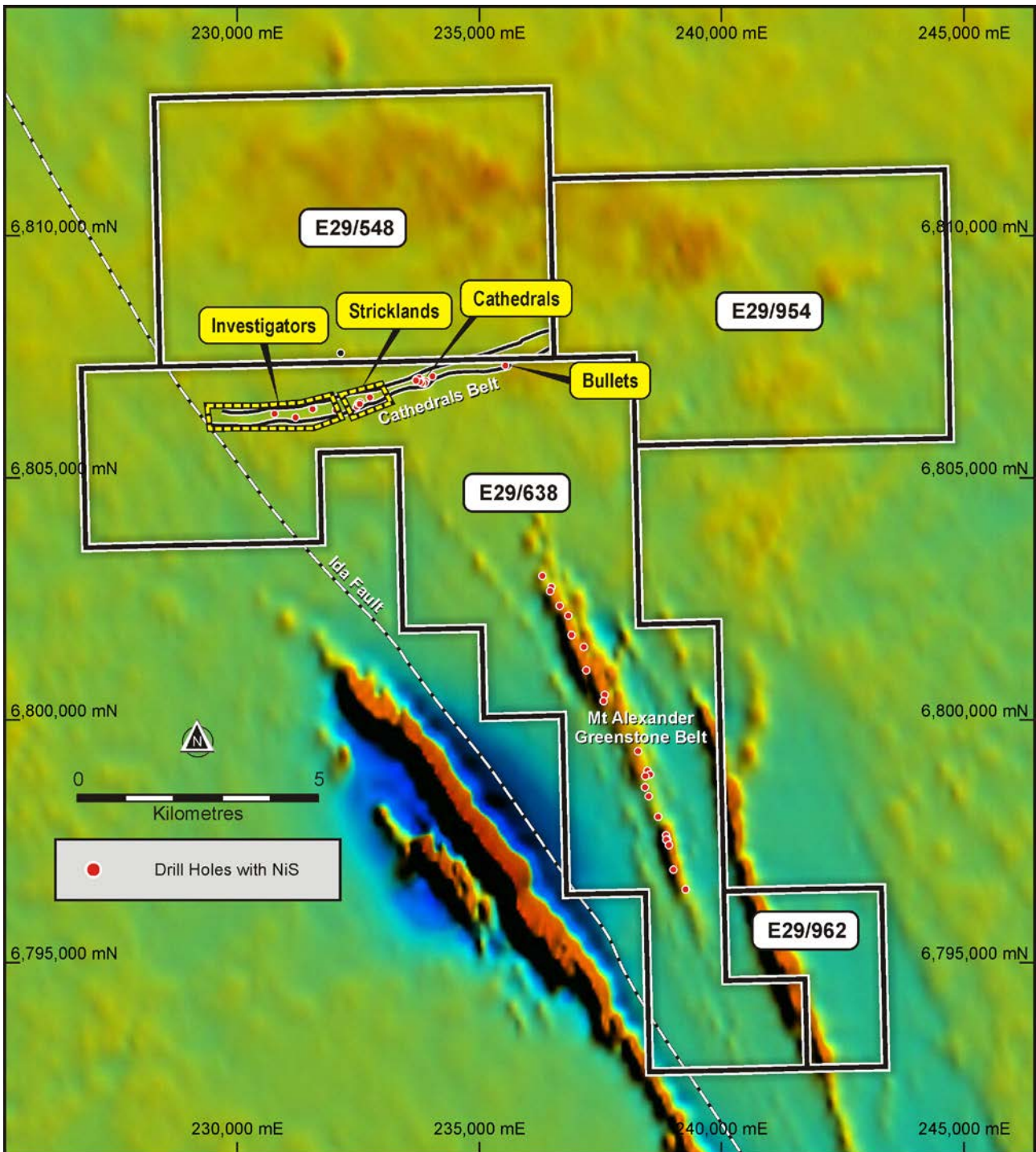


Figure 2 – a plan view of the Mt Alexander Project area over RTP magnetics showing the granted tenements to be covered by the new aeromagnetic survey. The map also highlights the potential extension of the Cathedrals Belt into the newly granted E29/954 (100% St George).

## **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 four granted exploration licences – E29/638, E29/548, E29/962 and E29/954.

The Cathedrals, Stricklands and Investigators nickel-copper discoveries are located on E29/638, which is held in joint venture by Western Areas Limited (25%) and St George (75%). 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.

## **For further information, please contact:**

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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 Matthew McCarthy, a Competent Person who is a Member of The Australian Institute of Geoscientists. Mr McCarthy is employed by St George Mining Limited.

Mr McCarthy 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 Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr McCarthy 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>	The sections of the core that are selected for assaying are marked up and then recorded on a sample sheet for cutting and sampling at the certified assay laboratory. Samples of HQ or NQ2 core are cut just to the right of the orientation line where available using a diamond core saw, with half core sampled lengthways for assay.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	Wherever possible the same side of the drill core is sampled to ensure sample is representative. Appropriate QAQC samples are inserted into the sequences as per industry best practice.
	<i>Aspects of the determination of mineralisation that are Material to the Public Report.</i>  <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>	Diamond core (both HQ and NQ2) is half-core sampled to geological boundaries no more than 1.5m and no less than 10cm. Samples less than 3kg are crushed to 10mm, dried and then pulverised to 75µm. Samples greater than 3kg are first crushed to 10mm then finely crushed to 3mm and input into the rotary splitters to produce a consistent output weight for pulverisation.  Pulverisation produces a 40g charge for fire assay. Elements determined from fire assay are gold (Au), platinum (Pt) and palladium (Pd) with a 1ppb detection limit. To determine other PGE concentrations (Rh, Ru, Os, Ir) a 25g charge for nickel sulphide collect fire assay is used with a 1ppb detection limit.  Other elements will be analysed using an acid digest and an ICP finish. These elements are: Ag, Al, As, Bi, Ca, Cd, Co, Cr, Fe, K, Li, Mg, Mn, Mo, Nb, Ni, P, Pb, S, Sb, Sn, Te, Ti, V, W, Zn. The sample is digested with nitric, hydrochloric, hydrofluoric and perchloric acids to effect as near to total solubility of the sample as possible. The sample is then analysed using ICP-AES or ICP-MS.  LOI (Loss on Ignition) will be completed on selected samples to determine the percentage of volatiles released during heating of samples to 1000°C.
<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>	Diamond drilling is completed using HQ sized coring equipment through the weathered zone (mostly saprock) with 3m barrels, and then HQ or NQ2 in fresh rock with 3m or 6m barrels as required. The core is oriented using ACT II electric core orientation.
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	Diamond core recoveries are recorded during drilling and reconciled during the core processing and geological logging. The core length recovered is measured for each run and recorded which is used to calculate core recovery as a percentage.

Criteria	JORC Code explanation	Commentary
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	Measures taken to maximise core recovery include using appropriate core diameter and shorter barrel length through the weathered zone, which at Cathedrals and Investigators is mostly <25m and Stricklands <45m depth. Primary locations for core loss in fresh rock are on geological contacts and structural zones, and drill techniques are adjusted accordingly, and if possible these zones are predicted from the geological modelling.
	<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>	No sample recovery issues have yet been identified that would impact on potential sample bias in the competent fresh rocks that host the mineralised sulphide intervals.
<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>	Geological logging is completed for all drill holes with lithology, alteration, mineralisation, structure and veining recorded. The logging is recorded digitally and imported in the St George Mining central database.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i>	Logging is both qualitative and quantitative depending on the field being captured. Core is photographed with one tray per photo and stored digitally.
	<i>The total length and percentage of the relevant intersections logged.</i>	All drill holes are geologically logged in full.
<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 HQ and NQ2 core is cut in half length ways just to the right of the orientation line where available using a diamond core saw. All samples are collected from the same side of the core where practicable.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	No non-core holes were completed in the recent drill program.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	The entire sample is pulverised to 75µm using LM5 pulverising mills. Samples are dried, crushed and pulverized to produce a homogenous representative sub-sample for analysis. A grind quality target of 90% passing 75µm is used.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Quality control procedures include submission of Certified Reference Materials (standards), duplicates and blanks with each sample batch. QAQC results are routinely reviewed to identify and resolve any issues.
	<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>	Duplicate samples are selected during sampling. Samples comprise two quarter core samples.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	The sample sizes are considered to be appropriate for base metal sulphide mineralisation and associated geology.
<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>	Diamond core samples are analysed for Au, Pt and Pd using a 40g lead collection fire assay; for Rh, Ru, Os, Ir using a 25g nickel sulphide collection fire assay; and for Ag, Al, As, Bi, Ca, Cd, Co, Cr, Fe, K, Li, Mg, Mn, Mo, Nb, Ni, P, Pb, S, Sb, Sn, Te, Ti, V, W, Zn using a four acid digest and ICP-AES or MS finish. The assay method and detection limits are appropriate for analysis of the elements required.

Criteria	JORC Code explanation	Commentary
	<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>	A handheld XRF instrument (Olympus Innov-X Spectrum Analyser) is used to systematically analyse the drill core onsite. One reading is taken per meter, however for any samples with matrix or massive sulphide mineralisation then five to ten samples are taken at set intervals per meter. The instruments are serviced and calibrated at least once a year. Field calibration of the XRF instrument using standards is periodically performed.  The handheld XRF results are only used for preliminary assessment and reporting of element compositions, prior to the receipt of assay results from the certified laboratory.
	<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>	Laboratory QAQC involves the use of internal lab standards using certified reference material (CRMs), blanks and pulp duplicates as part of in house procedures. The Company also submits a suite of CRMs, blanks and selects appropriate samples for duplicates.  Sample preparation checks for fineness are performed by the laboratory to ensure the grind size of 90% passing 75µm is being attained.
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Significant intersections are verified by the Exploration Manager of St George Mining.
	<i>The use of twinned holes.</i>	One twin hole (MAD28) was completed in the recent drill program.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Primary data is captured onto a laptop using acQuire software and includes geological logging, sample data and QA/QC information. This data, together with the assay data, is entered into the St George Mining central SQL database which is managed by external consultants.
	<i>Discuss any adjustment to assay data.</i>	No adjustments or calibrations will be made to any primary assay data reported.
<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>	Drill holes have been located and pegged using a DGPS system with an expected accuracy of +/-0.05mmm for easting, northing and elevation.  Downhole surveys are conducted using a single shot camera approximately every 30m during drilling to record and monitor deviations of the hole from the planned dip and azimuth. Post-drilling downhole gyroscopic surveys will be conducted, which provide much more accurate survey results.
	<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>	Elevation data has been acquired using DGPS surveying at individual collar locations and entered into the central database. A topographic surface has been created using this elevation data.
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	The recent diamond drill program targeted modelled EM conductors and other geological criteria for massive nickel-copper-PGE sulphide mineralisation. The spacing and distribution of the drill holes is appropriate to test the defined targets.
	<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>	Drilling is still largely reconnaissance exploration. The completed drilling at Cathedrals, Stricklands and Investigators is not sufficient to establish the degree of geological and grade continuity to support the definition of Mineral Resource and Reserves and the classifications applied under the 2012 JORC code.

Criteria	JORC Code explanation	Commentary
	<i>Whether sample compositing has been applied.</i>	No compositing has been applied to the exploration results.
<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>	Drill holes are planned as perpendicular as possible to the target EM plates to approximate true width. Most of the ultramafic units in the Cathedrals Belt dip shallow to the north and where possible drill holes have been planned to intersect perpendicular to dip. The orientation of key structures may be locally variable.
	<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>	No orientation based sampling bias has been identified in the data to date.
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	Chain of custody is managed by St George Mining. Core samples are stored in the secure facilities at Bureau Veritas laboratory in Perth. Transportation of core is managed by St George contractors and Bureau Veritas and actively track monitored.
<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><i>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.</i></p> <p><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></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>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<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-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>	<i>Deposit type, geological setting and style of mineralisation</i>	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



Criteria	JORC Code explanation	Commentary
		marks the boundary between the Kalgoorlie Terrane (and Eastern Goldfields Superterrane) to the east and the Youanmi Terrane to the west.  The Mt Alexander Project is prospective for further high-grade komatiite-hosted nickel-copper-PGE mineralisation (both greenstone and granite hosted) and also precious metal mineralisation (i.e. orogenic gold) that is typified elsewhere in the Yilgarn Craton.
<b>Drill hole information</b>	<i>A summary of all information material to the understanding of the exploration results including tabulation of the following information for all Material drill holes:</i> <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>	No drill hole information is relevant for this release.
<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>	Reported assay intersections are length and density weighted. Significant intersections are determined using both qualitative (i.e. geological logging) and quantitative (i.e. lower cut-off) methods.  For massive sulphide intersections the nominal lower cut-off is 2% for either nickel or copper. For disseminated, blebby and matrix sulphide intersections the nominal lower cut-off for nickel is 0.3%.
	<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>	Any high grade sulphide intervals internal to broader zones of sulphide mineralisation are reported as <i>included</i> intervals.  For example, any heavy disseminated or matrix sulphides with >1% nickel or copper directly on contact with massive sulphide mineralisation are grouped with the massive sulphides for calculating significant intersections and the massive sulphide mineralisation is reported as an <i>including</i> intersection.
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalent values have yet been used for reporting exploration results.
<b>Relationship between mineralisation widths and intercept lengths</b>	<i>These relationships are particularly important in the reporting of exploration results.</i>  <i>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>	Assay intersections are reported as down hole lengths. Drill holes were planned as perpendicular as possible to intersect the target EM plates so downhole lengths are near true width. Results from recent and ongoing drill programs will be reviewed further to confirm the relationship between downhole lengths and true widths.
<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>	Relevant maps and plans are 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 exploration results reported are representative of the mineralisation style with grades and/or widths reported in a consistent manner.

Criteria	JORC Code explanation	Commentary
<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>	No other exploration data collected to date is considered material or meaningful at this stage.
<b>Further Work</b>	<p><i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large – scale step – out drilling).</i></p> <p><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></p>	Further exploration is being planned from the results of the previous and recent diamond drill programs, and geophysical and geochemical programs. Upcoming work includes prospect and regional scale geophysical surveys including the aeromagnetic survey described in the release, and possible follow-up drill programs.