

23 December 2019

DRILLING SUCCESS CONTINUES AT MT ALEXANDER

<u>Two new drill holes completed at the Cathedrals Prospect to test EM conductors with both holes intersecting nickel-copper sulphides:</u>

- MAD175 and MAD176 were drilled to test high priority EM conductors at the Cathedrals
 Prospect located along strike from known high-grade mineralisation
- Intersection of nickel-copper sulphides in both holes confirms further continuity of mineralisation

Metallurgical drill hole completed at the Investigators Prospect:

MAD177 was drilled at the Investigators Prospect as a twin hole of MAD127 which returned assays of:

8.49m @ 5.8% Ni, 2.6% Cu, 0.18% Co and 3.61 g/t PGEs from 183.9m, including
6.39m @ 6.5% Ni, 2.8% Cu, 0.21% Co and 3.68 g/t PGEs from 184.4m

 Drill core from MAD177 will be used to complete further metallurgical test work in Perth and in Canada as part of the scoping studies underway for a potential mining operation at Mt Alexander

<u>Below</u>: Photograph of drill core tray for MAD177 showing a 6.15m thick interval of massive nickel-copper sulphides intersected from 184.75m downhole, with average XRF values of 8.1% Ni, 2.69% Cu (XRF values are preliminary and metal values are to be confirmed by laboratory assays):





<u>Extensive moving loop electromagnetic (MLEM) survey underway across the Cathedrals Belt</u> with positive early results:

- Radar Prospect: EM anomaly identified to the west of the MAD152 discovery hole (6m @ 2.14% Ni, 0.74% Cu and 1.62 g/t PGEs from 46m)
- Stricklands Prospect: EM anomalies identified down-plunge of the high-grade mineralisation intersected in MARC128 (5m @ 2.97% Ni, 1.04% Cu, 1.02 g/t PGEs from 83m) and in MAD71 (17.45m @ 3.01% Ni, 1.31% Cu, 0.13% Co and 1.68g/t total PGEs from 37.45m)
- Interpretation and modelling of collected survey data is in progress, with surveys for Fish Hook and West End Prospects yet to be completed

Multi-rig drilling programme planned for 2020:

- Drilling will resume at Mt Alexander early in 2020 with multiple diamond and reverse circulation (RC) rigs to be deployed
- Drilling will focus on testing new EM conductors, testing down-plunge extensions of known high-grade mineralisation and completing resource definition of the shallow deposits at the Cathedrals Belt

Growth-focused Western Australian nickel company St George Mining Limited (ASX: **SGQ**) ("**St George**" or "**the Company**") is pleased to announce further significant results from ongoing exploration at its flagship Mt Alexander Project, located in the north-eastern Goldfields.

John Prineas, St George Mining's Executive Chairman, said:

"Step-out drilling across the Cathedrals Belt continues to intersect nickel-copper sulphides over a broad area – providing evidence of the growing potential size of the high-grade deposits associated with the Belt.

"The discovery in 2019 of high-grade nickel-copper sulphides at the Radar Prospect extended the east-west strike of mineralisation in the Cathedrals Belt to more than 5.5km – giving weight to the geological interpretation that if the mineral system is that long, it must also be deeper than currently defined.

"Deeper drilling along the Belt has commenced and it is consistently finding more mineralisation in the same north-northwest direction, showing a strong vector for potentially larger, intrusive-style nickel sulphide deposits at depth.

"Strong targets are also emerging at the West End and Fish Hook Prospects – two unexplored areas which have the potential to deliver a new greenfields discovery.

"Laboratory assays have confirmed our nickel-copper sulphides as some of the highest grade discoveries in Western Australia. The potential high value of our discoveries is further emphasised by the high cobalt and palladium present in the mineralisation.

"We are excited by the outlook for 2020 – a year where we will continue to establish the scale of the mineralisation at Mt Alexander as well as progressing preliminary scoping studies for potential mining operations."



CATHEDRALS PROSPECT - EM TARGETS AND CONTINUITY OF MINERALISATION CONFIRMED

MAD175 and MAD176 were completed to test two high priority EM conductors at the Cathedrals Prospect situated along strike from known high-grade nickel-copper sulphides.

Both holes intersected nickel-copper sulphides as predicted by the EM modelling, maintaining the very high success rate of EM targets within the Cathedrals Belt being confirmed as nickel-copper sulphide mineralisation.

Two mineralised ultramafic units are present at the Cathedrals Prospect – the upper ultramafic and the lower ultramafic. MAD175 was completed to a downhole depth of 237.8m and intersected nickel-copper sulphides in the interpreted position for the continuation of the lower ultramafic unit.

MAD176 was completed to a downhole depth of 250m and intersected nickel-copper sulphides in the interpreted extensions of both the lower and upper ultramafic units.

Geological logging for both holes is presented below. Laboratory assays are pending and will confirm the metal values for the mineralisation intersected.

MAD175 Interval	Style of Mineralisation
160.32m to 161.6m	Ultramafic with moderate disseminated and stringer sulphides increasing with depth (10-20% sulphides comprising pentlandite (pn), chalcopyrite (cp) and pyrrhotite (po)
161.6m to 161.87m	Massive sulphides (100% sulphides comprising pn, cp, po)
161.87m to 164.10m	Ultramafic with moderate blebby and stringer sulphides (20% sulphides comprising pn, cp, po)
164.10m to 164.72m	Massive sulphides (100% sulphides comprising pn, cp, po)
164.72m to 165.10m	Remobilised sulphides in granite (5% sulphides comprising pn, cp, po)

MAD176 Interval	Style of Mineralisation		
	<u>Upper Ultramafic</u>		
77.30m to 79.40m	Ultramafic – no significant sulphides observed		
79.40m to	Ultramafic with blebby sulphides (10% sulphides comprising pentlandite (pn),		
79.68m	chalcopyrite (cp) and pyrrhotite (po)		
184.5m to 185.3m	Lower Ultramafic Ultramafic with moderate disseminated and stringer sulphides (20% sulphides comprising pn, cp, po)		
185.3m to 185.61m	Ultramafic with moderate to strong blebby sulphides (20% sulphides comprising pn, cp, po)		
187.40m to 187.61m	Ultramafic with strong stringer sulphides (20% sulphides comprising pn, cp, po)		



The results in MAD175 and MAD176 confirm further continuity of mineralisation between the known high-grade massive sulphide lenses at the Cathedrals Prospect – see Figure 1.

Downhole EM (DHEM) surveys will be completed in these holes to search for further potential conductive mineralisation around the holes.

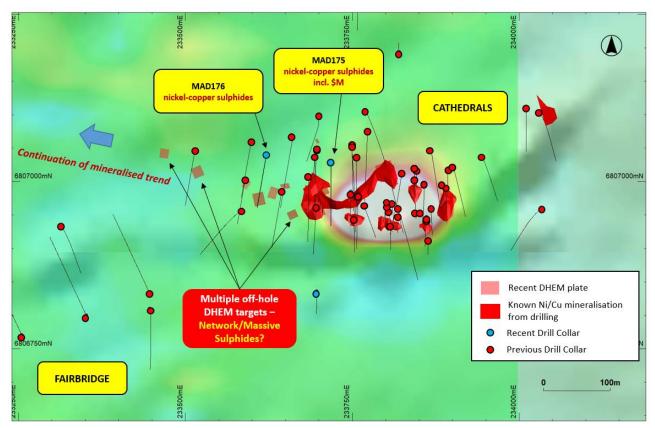


Figure 1 – plan view map of the Cathedrals Prospect (set against SAMSON EM data in Channel 25) highlighting the location of MAD175 and MAD176 along strike from known high-grade massive sulphides. Untested EM conductors, which may represent further continuity of mineralisation, are also shown.

MLEM SURVEY - POSITIVE EARLY RESULTS

The new MLEM survey is underway across the Cathedrals Belt with some encouraging results from the data collected to date. The optimised MLEM survey uses a high temperature SQUID (superconducting quantum interference device) sensor that serves to minimise noise levels from conductive cover.

In addition, the survey is utilising both traditional in-loop and Slingram configurations – the latter uses a sensor outside of the survey loop, which further minimises any interference from conductive cover.

Progress of the MLEM survey has been good, but extreme weather conditions have slowed production rates due to total fire bans and restrictions on using electrical equipment and moving vehicles on those days.

Early results from the MLEM survey are summarised below, with modelling of drill targets in progress:

• **Radar Prospect** – an EM anomaly has been recorded over two survey lines (200m apart) and to the immediate west of the high-grade mineralisation intersected in MAD152.



- **Stricklands Prospect** a series of EM anomalies has been recorded down-plunge of the high-grade mineralisation intersected in MAD71 and MARC128.
- Bullets Prospect no EM anomaly was recorded at Bullets. The MLEM survey is expected to detect
 massive and semi-massive sulphide mineralisation. Mineralisation intersected at Bullets to date
 has been disseminated nickel-copper sulphides. Bullets remains prospective for further discovery
 of nickel-copper sulphides and a geologically focused drill programme will be designed to test this
 area further.

The MLEM survey will pause for the Christmas break and is scheduled to resume in the first week of January 2020. The survey will resume at the Fish Hook Prospect and then mobilise to the West End Prospect.

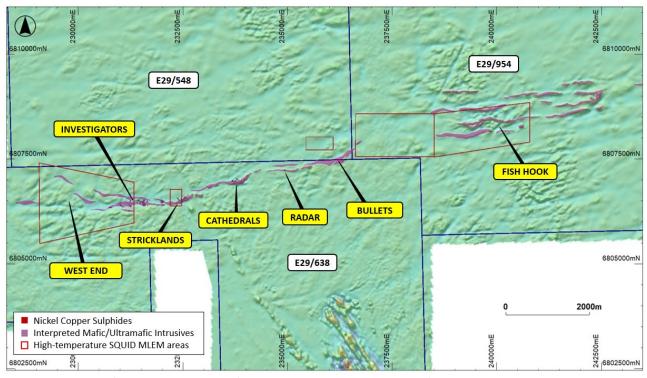


Figure 2 – map of the Cathedrals Belt (against RTP 1VD magnetic data) showing the key prospects and the areas planned for SQUID MLEM surveys.

SCOPING STUDY – ENVIRONMENTAL STUDIES AND METALLURGICAL TESTWORK

Environmental Work:

Field surveys regarding flora and fauna base line studies at Mt Alexander were completed in November/December 2019 by Western Botanical and Bamford Consulting Ecologists. The surveys have not identified any rare flora or potential issues to date, with final reports pending.

These surveys will be used to prepare an environmental impact assessment that can support potential mining proposals for Mt Alexander.

Metallurgical Testwork:

Drill hole MAD177 was drilled for the purpose of providing samples for further metallurgical testwork which will be completed with third party contractors in Perth and in Canada.

MAD177 was completed to a downhole depth of 210.1m and intersected a thick interval of nickel-copper sulphides from 181.7m downhole. Geological logging of the hole is as follows:



MAD177 Interval	Style of Mineralisation
181.37m to 184.75	Ultramafic with disseminated, blebby and stringer sulphides increasing with depth (10-20% sulphides comprising pentlandite (pn), chalcopyrite (cp) and pyrrhotite (po)
184.75m to	Massive sulphides with average XRF readings of 8.1% Ni and 2.69% Cu* (100%
190.9m	sulphides comprising pn, cp, po)
190.9m to	Ultramafic with disseminated, blebby and stringer sulphides (20% sulphides
193.8m	comprising pn, cp, po)

^{*} Laboratory assays are pending and are required to confirm the nickel and copper grades that have been estimated using portable XRF analysis

<u>Below</u>: Photograph of drill core for MAD177 at approx. 190m downhole showing massive nickel-copper sulphides with a thick pentlandite vein that returned spot XRF values of 28% Ni (spot XRF values are not representative of the grades across a mineralised interval and laboratory assays are required to confirm the nickel grades for the interval).



Preliminary metallurgical testwork completed by St George in October 2016 with Strategic Metallurgy Pty Ltd in Perth produced outstanding results, reflecting the high quality of the mineralisation at the Cathedrals Belt (for details on this earlier testwork, see our ASX Release dated 20 October 2016 'Strong Results Continue at Mt Alexander').

Key results from the earlier metallurgical test work are summarised as follows:

- <u>Separate concentrates:</u> Separate flotation of copper and nickel concentrates was achieved using standard re-agents.
- <u>18% Nickel</u>: Nickel recovery of 89.4% with an **18%** nickel concentrate produced (>13%Ni is considered saleable concentrate).
- <u>32% Copper:</u> Copper recovery of 85.8% with a **32**% copper concentrate produced (>24%Cu is considered saleable concentrate).
- <u>Cobalt</u>: Cobalt in the nickel concentrate grading **0.55**%Co, which would attract smelter credits.
- PGEs (80% Palladium): Excellent recoveries of Platinum Group Elements (PGEs), with 13.5g/t PGEs + Au in the nickel concentrate and 3.2g/t PGEs + Au in the copper concentrate. The PGEs in the nickel concentrate would attract very significant smelter credits, with palladium (Pd) comprising approximately 80% of these PGEs.



The proposed new metallurgical testwork will look to confirm these excellent results with a view to developing a flowsheet capable of producing separate saleable copper and nickel concentrates at high recoveries from a potential mining operation at Mt Alexander.

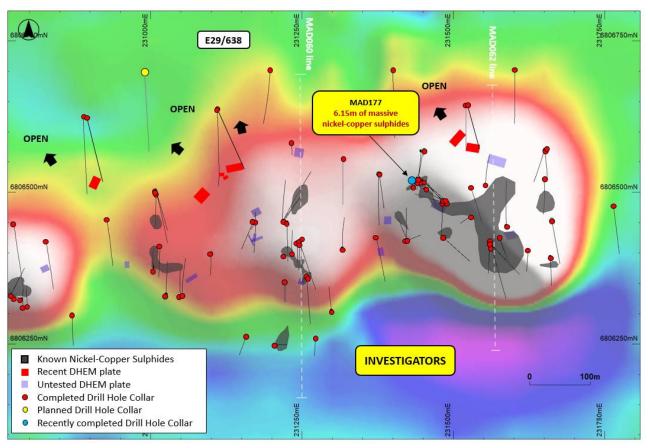


Figure 3 – plan view map of the Investigators Prospect (set against SAMSON EM data in Channel 25) highlighting the location of MAD177. Known nickel-copper sulphides and untested EM plates are also shown. The Prospect area has an east-west strike of 1.5km and is open to the north-northwest.

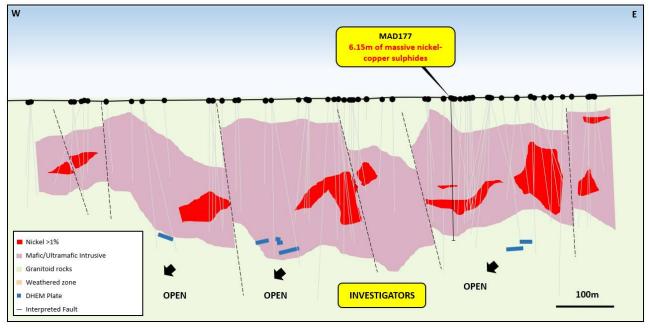


Figure 4 - schematic long section (+/-50m, looking north) of part of the Investigators Prospect showing the location of MAD177 and the extensive strike of mineralisation across the host mafic-ultramafic intrusive.



SULTANS PROSPECT – FURTHER DRILLING COMPLETED

MAD178 was the final hole completed in the current drill programme, and was designed to test down-dip of massive nickel sulphides intersected at the Sultans Prospect.

MAD178 was completed to a downhole depth of 300.8m and intersected intercalating mafic-ultramafic sequences, some with sulphide mineralisation – typically 1-5% sulphides comprising pyrite, chalcopyrite and pyrrhotite. Pentlandite was not visually observed, but laboratory assays will confirm the metal values of the mineralisation.

Geological interpretation and logging of MAD178 are ongoing.

DRILL PROGRAMME

Table 1 contains details of the completed drill holes for the current drill programme at Mt Alexander.

DHEM surveys on the recently completed drill holes will be carried out once the MLEM survey across the Cathdrals Belt is finished, expected by late January 2020.

Drilling at Mt Alexander will resume early in 2020, with the drill programme for 2020 to be finalised once the results of the geophysical surveys are reviewed and new EM targets are modelled.

The 2020 drill programme will focus on testing new EM targets, testing down-plunge extensions of known high-grade mineralisation and completing resource definition of the shallow deposits at the Cathedrals Belt. Multiple drill rigs will be deployed as required.

Hole ID	Prospect	East	North	RL	Depth	Azi	Dip	Target
MAD144	Investigators	231010	6806499	419	230	165	-71	EM plate 82,000 siemens
MAD145	Investigators	231650	6806569	424.6	230	196	-77	EM plate 20,000 siemens
MAD146	Investigators	231377	6806531	422.8	220	170	-75	EM plate 34,000 siemens
MAD147	Investigators	231299	6806305	422	150.8	353	-75	EM plate 30,000 siemens
MAD148	Investigators	231234	6806400	421	210.9	358	-80	EM plate 28,000 siemens
MAD149	Investigators	231219	6806454	421	240.6	28	-68	EM Plate 20,000 siemens
MAD150	Investigators	231170	6806452	421	217	201	-78	EM Plate 15,000 siemens
MAD151	Fairbridge	233270	6807080	423	330.5	155	-70	Stratigraphic hole



MAD152	Radar	234933	6807257	414	81.7	180	-70	EM Plate 30,000 siemens
MAD153	Cathedrals	233627	6807171	420	450	155	-65	Stratigraphic hole
MAD154	Stricklands	232284	6806673	442	450	135	-65	Stratigraphic hole
MAD155	Investigators	231925	6806510	420	120.8	120.8	-70	EM Plate 8,000 siemens
MAD156	Investigators	231651	6806571	426	220.1	220.1	-78	EM plate 30,000 siemens
MAD157	Investigators	231008	6806504	418.7	220.1	220.1	-78	EM plate 89,000 siemens
MAD158	Investigators	231174	6806451	420	211.2	211.2	-85	EM Plate 8,000 siemens
MAD159	Investigators	231982	6806672	431	300	300	-65	Step-out Stratigraphic hole
MAD160	Investigators	231110	6806639	420	300	300	-65	Step-out Stratigraphic hole
MAD161	Investigators	230883	6806625	420	300.9	177	-65	Step-out Stratigraphic hole
MAD162	Stricklands	232299.7	6806600	440.9	168.7	122	-65	Stratigraphic hole
MAD163	Radar	234918.7	6807240	413.7	81.4	177	-70	Radar step- out
MAD164	Radar	234932	6807283	413.7	81.4	177	-70	Radar step- out
MAD165	Bullets	235969.6	6807452	429.9	102.7	150	-65	SAM Stratigraphic hole
MAD166	Investigators	231923.3	6806507	429.2	140	236	-69	EM plate 5,000 siemens
MAD167	Stricklands	232284.3	6806673	442.4	250	170	-65	Step-out Stratigraphic hole
MAD168	Investigators	231502.9	6806658	423	301	177	-70	Step-out Stratigraphic hole



MAD169	Investigators	231319	6806633	420.2	301	177	-65	Step-out Stratigraphic hole
MAD170	Investigators	230998	6806697	420	351.9	177	-65	Step-out Stratigraphic hole
MAD171	Investigators	231831	6806648	427.8	250	177	-65	Step-out Stratigraphic hole
MAD172	Investigators	230888.8	6806624	418.9	290.5	168	-65	EM plate 25,000 siemens
MAD173	Investigators	231110.5	6806636	419.9	301	164	-70	EM plate 10,000 siemens
MAD174	Investigators	231502.9	6806658	423	262	158	-69	EM plate 5,000 siemens
MAD175	Cathedrals	233718.7	6807048	420.9	237.8	179	-61	EM plate
MAD176	Cathedrals	233624.4	6807034	421.6	250	186	-72	EM plate
MAD177	Investigators	231438.3	6806515.5	423	210.1	360	-90	Metallurgical hole/twin MAD127
MAD178	Sultans	238465	6799057	457.3	300.8	250	-60	Stratigraphic
MARC123	West End	228729	6806529	407	226	180	-65	SAM Stratigraphic hole
MARC124	Investigators	230871	6806300	418	155	180	-70	SAM Stratigraphic hole
MARC125	Investigators	231158	6806262	421	101	200	-70	SAM Stratigraphic hole
MARC126	Investigators	231272	6806262	422	89	180	-70	SAM Stratigraphic hole
MARC127	West End	230701	6806679	417	203	180	-65	SAM Stratigraphic hole
MARC128	Stricklands	232361	6806549	441	166	96	-76	EM Plate 10,000 siemens



MARC129	West End	230552	6806287	416	143	180	-70	SAM Stratigraphic hole
MARC130	Bullets	236227	6807439	420	120	150	-65	SAM Stratigraphic hole
MARC131	Bullets	236184	6807516	420	154	150	-65	SAM Stratigraphic hole

Table 1 – drill holes completed and underway in current drill programme at Mt Alexander.

Based on the intersection angle of the drilling with the modelled ultramafic unit, downhole widths are interpreted to be close to true widths.

Nickel and copper values shown above for recently completed drill holes are based on portable XRF analysis. They are preliminary in nature. A conclusive determination of the nickel, copper, cobalt and PGE values of the sulphide mineralisation will be confirmed when laboratory assays are available.

Average XRF readings in the massive sulphide interval are based on at least four readings per metre (unless otherwise stated) and are not length and density weighted.

Metal content for intervals of disseminated sulphides are not accurately determined by portable XRF analysis and estimates for this style of mineralisation are based on geological logging.

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 section is 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)

JORC Code explanation	Commentary
Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the	Drilling programmes are completed by Reverse Circulation (RC) and Diamond Core drilling. Surface Electro-Magnetic (EM) surveys are completed by GAP geophysics.
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.	Diamond Core Sampling: 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.
	RC Sampling: All samples from the RC drilling are taken as 1m samples for laboratory assay.
	<i>EM Surveying:</i> All data is collected in a Moving Loop (MLEM) survey configuration using MLEM TX transmitter with a SMARTem 24 receiver.
	Appropriate QAQC samples (standards, blanks and duplicates) are inserted into the sequences as per industry best practice. Samples are collected using cone or riffle splitter. Geological logging of RC chips is completed at site with representative chips being stored in drill chip trays.
	Onsite XRF analysis is conducted on the fines from RC chips using a hand-held Olympus Innov-X Spectrum Analyser. These results are used for onsite interpretation and preliminary assessment subject to final geochemical analysis by laboratory assays.
Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	RC Sampling: Samples are taken on a one metre basis and collected using uniquely numbered calico bags. The remaining material for that metre is collected and stored in a green plastic bag marked with that specific metre interval. The cyclone is cleaned with compressed air after each plastic and calico sample bag is removed. If wet sample or clays are encountered then the cyclone is opened and cleaned manually and with the aid of a compressed air gun. A blank sample is inserted at the beginning of each hole, and a duplicate sample is taken every 50 th sample. A certified sample standard is also added according to geology, but at no more than 1:50 samples.
	Geological logging of RC chips is completed at site with representative chips being stored in drill chip trays. Downhole surveys of dip and azimuth are conducted using a single shot camera every 30m, and using a downhole Gyro when required, to detect deviations of the hole from the planned dip and azimuth. The drill-hole collar locations are recorded using a hand-held GPS, which has an accuracy of +/- 5m. All drill-hole collars will be surveyed to a greater degree of accuracy using a certified surveyor at a later date.
	Diamond Core Sampling: For diamond core samples, certified sample standards were added as every 25 th sample. Core recovery calculations are made through a reconciliation of the actual core and the driller's records. Downhole surveys of dip and azimuth were conducted using a single shot camera every 30m to detect deviations of the hole from the planned dip and azimuth. The drill-hole collar locations are recorded using a hand-held GPS, which has an accuracy of +/- 5m. All drill-hole collars will be surveyed to a greater degree of accuracy using a certified surveyor at a later date.
	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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or

Criteria	JORC Code explanation	Commentary
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg	RC Sampling: A 1m composite sample is taken from the bulk sample of RC chips that may weigh in excess of 40 kg. Each sample collected for assay typically weighs 2-3kg, and once dried, is prepared for the laboratory as per the Diamond samples below.
	'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	Diamond Core Sampling: 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.
	mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	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 .
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diametre, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is	Diamond Core Sampling: The collars of the diamond holes were drilled using RC drilling down through the regolith to the point of refusal or to a level considered geologically significant to change to core. The hole was then continued using HQ diamond core until the drillers determined that a change to NQ2 coring was required.
	oriented and if so, by what method, etc).	The core is oriented and marked by the drillers. The core is oriented using ACT Mk II electric core orientation.
		RC Sampling: The RC drilling uses a 140 mm diametre face hammer tool. High capacity air compressors on the drill rig are used to ensure a continuously sealed and high pressure system during drilling to maximise the recovery of the drill cuttings, and to ensure chips remain dry to the maximum extent possible.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Diamond Core Sampling: 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.
		RC Sampling: RC samples are visually checked for recovery, moisture and contamination. Geological logging is completed at site with representative RC chips stored in chip trays.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	RC Sampling: Samples are collected using cone or riffle splitter. Geological logging of RC chips is completed at site with representative chips being stored in drill chip trays.
		Diamond Core Sampling: 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 <20m and Stricklands <40m 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.

Criteria	JORC Code explanation	Commentary			
	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.	To date, 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.			
Logging	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.	Geological logging is carried out on all drill holes with lithology, alteration, mineralisation, structure and veining recorded.			
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging of diamond core and RC samples records litholog mineralogy, mineralisation, structures (core only), weathering, color and other noticeable features. Core was photographed in both dand wet form.			
	The total length and percentage of the relevant intersections logged.	All drill holes are geologically logged in full and detailed lithogeochemical information is collected by the field XRF unit. The data relating to the elements analysed is used to determine further information regarding the detailed rock composition.			
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Diamond Core Sampling: Diamond core was drilled with HQ and NQ2 size and sampled as complete half core to produce a bulk sample for analysis. Intervals selected varied from 0.3 – 1m (maximum) The HC and NQ2 core is cut in half length ways just to the right of the orientation line where available using a diamond core saw. Al samples are collected from the same side of the core where practicable.			
		Assay preparation procedures ensure the entire sample is pulverised to 75 microns before the sub-sample is taken. This removes the potential for the significant sub-sampling bias that can be introduced at this stage.			
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	RC samples are collected in dry form. Samples are collected using cone or riffle splitter when available. Geological logging of RC chips is completed at site with representative chips being stored in drill chip trays.			
	For all sample types, the nature, quality and appropriateness of the sample preparation	RC Sampling: Sample preparation for RC chips follows a standard protocol.			
	technique.	The entire sample is pulverised to 75 μ m 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 75 μ m is used.			
	Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	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.			
		RC Sampling: Field QC procedures maximise representivity of RC samples and involve the use of certified reference material as assay standards, along with blanks, duplicates and barren washes.			
		Diamond Core Sampling: Drill core is cut in half lengthways and the total half-core submitted as the sample. This meets industry standards where 50% of the total sample taken from the diamond core is submitted.			

Criteria	JORC Code explanation	Commentary				
	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.	Duplicate samples are selected during sampling. Samples comprise two quarter core samples for Diamond Core. Duplicate RC samples are captured using two separate sampling apertures on the splitter.				
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes are considered to be appropriate to correctly represent base metal sulphide mineralisation and associated geology based on: the style of mineralisation (massive and disseminated sulphides), the thickness and consistency of the intersections and the sampling methodology.				
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	For RC sampling, a 30 gram sample will be fire assayed for gold, platinum and palladium. The detection range for gold is $1-2000$ ppbAu, and $0.5-2000$ ppb for platinum and palladium. This is believed to be an appropriate detection level for the levels of these elements within this specific mineral environment. However, should Au, Pt or Pd levels reported exceed these levels; an alternative assay method will be selected.				
		All other metals will be analysed using an acid digest and an ICP finish. The sample is digested with nitric, hydrochloric, hydrofluoric and perchloric acids to effect as near to total solubility of the sample as possible. The solution containing samples of interest, including those that need further review, will then be presented to an ICP-OES for the further quantification of the selected elements.				
		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.				
	For geophysical tools, spectrometres, handheld XRF instruments, etc, the parametres used in determining the analysis including instrument	MLEM: 200m x 200m loops with 50m stations were used for the MLEM surveys. The MLEM TX transmitter uses a base frequency of 0.25 or 0.5Hz and 100amps. The SMARTem 24 is a fluxgate receiver.				
	make and model, reading times, calibrations factors applied and their derivation, etc.	XRF: A handheld XRF instrument (Olympus Innov-X Spectrum Analyser) is used to systematically analyse the drill core and RC sample piles onsite. One reading is taken per metre, however for any core samples with matrix or massive sulphide mineralisation then multiple samples are taken at set intervals per metre. The instruments are serviced and calibrated at least once a year. Field calibration of the XRF instrument using standards is periodically performed (usually daily).				
		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.				
	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision	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.				
	have been established.	Sample preparation checks for fineness are performed by the laboratory to ensure the grind size of 90% passing $75\mu m$ is being attained.				
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Significant intersections are verified by the Company's technical staff.				
	The use of twinned holes.	No twinned holes have been planned for the current drill programme other than as disclosed in the ASX Release.				

Criteria	JORC Code explanation	Commentary
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	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.
	Discuss any adjustment to assay data.	No adjustments or calibrations will be made to any primary assay data collected for the purpose of reporting assay grades and mineralised intervals. For the geological analysis, standards and recognised factors may be used to calculate the oxide form assayed elements, or to calculate volatile free mineral levels in rocks.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations	Drill holes and EM stations have been located and pegged using a DGPS system with an expected accuracy of +/-5m for easting, northing and elevation.
	used in Mineral Resource estimation.	Downhole surveys are conducted using a single shot camera approximately every 30m or downhole Gyro 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 more accurate survey results.
	Specification of the grid system used.	The grid system used is GDA94, MGA Zone 51.
	Quality and adequacy of topographic control.	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.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	The spacing and distribution of holes is not relevant to the drilling programs which are at the exploration stage rather than definition drilling.
	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.	The completed drilling at the Project 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.
	Whether sample compositing has been applied.	No compositing has been applied to the exploration results.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The drill holes are drilled to intersect the modelled mineralised zones at a near perpendicular orientation (unless otherwise stated). However, the orientation of key structures may be locally variable and any relationship to mineralisation has yet to be identified.
	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.	No orientation based sampling bias has been identified in the data to date.
Sample security	The measures taken to ensure sample security.	Chain of Custody is managed by the Company until samples pass to a duly certified assay laboratory for subsampling and assaying. The RC sample bags are stored on secure sites and delivered to the assay laboratory by the Company or a competent agent. When in transit, they are kept in locked premises. Transport logs have been set up to track the progress of samples.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Sampling techniques and procedures are regularly reviewed internally, as is data. To date, no external audits have been completed on the drilling programme.

Section 2 Reporting of Exploration Results (Criteria listed in section 1 will also apply to this section where relevant)

Criteria	JORC Code explanation	Commentary
Mineral Tenement and Land Status	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.	The Mt Alexander Project is comprised of five granted Exploration Licences (E29/638, E29/548, E29/954, E29/962 and E29/972). 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).
	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.	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. All five tenements are in good standing with no known impediments.
Exploration Done by Other Parties	Acknowledgment and appraisal of exploration by other parties.	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 Belt) and also limited exploration on E29/548 has been for mafic/ultramafic intrusion related Ni-Cu-PGE sulphides. No historic exploration has been identified on E29/954 or E29/972.
		High grade nickel-copper-PGE 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.
Geology	Deposit type, geological setting and style of mineralisation	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.
		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.
Drill hole information	A summary of all information material to the understanding of the exploration results including tabulation of the following information for all Material drill holes: • Easting and northing of the drill hole collar • Elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • Dip and azimuth of the hole • Down hole length and interception depth • Hole length	Drill hole collar locations are shown in the maps and tables included in the body of the relevant ASX releases.
Data aggregation methods	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.	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%.

Criteria	JORC Code explanation	Commentary
	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.	Any high-grade sulphide intervals internal to broader zones of sulphide mineralisation are reported as included intervals.
		Any disseminated, matrix, brecciated or stringer sulphides with (usually) >1% nickel or copper 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 including intersection.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values are used for reporting exploration results.
Relationship between mineralisation widths and intercept lengths	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.	Assay intersections are reported as down hole lengths. Drill holes are planned as perpendicular as possible to intersect the target EM plates and geological targets so downhole lengths are usually interpreted to be near true width.
Diagrams	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.	A prospect location map, cross section and long section are shown in the body of relevant ASX Releases.
Balanced Reporting	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 of Exploration Results.	Reports on recent exploration can be found in ASX Releases that are available on our website at www.stgm.com.au : The exploration results reported are representative of the mineralisation style with grades and/or widths reported in a consistent manner.
Other substantive exploration data	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.	All material or meaningful data collected has been reported.
Further Work	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.	A discussion of further exploration work underway is contained in the body of recent ASX Releases. Further exploration will be planned based on ongoing drill results, geophysical surveys and geological assessment of prospectivity.