

2 August 2021

# SOIL ASSAYS HIGHLIGHT EXCITING POTENTIAL FOR NICKEL-COPPER SULPHIDE MINERALISATION IN UNEXPLORED AREA OF MT ALEXANDER

- Assays for the soil geochemical survey in progress at St George's 100% owned E29/1041 return highly anomalous values for nickel, copper and chromium
- Anomalous soil values overlie a strong magnetic linear trend that is interpreted to represent a series of intrusive units
- Soil anomaly has a strike of more than 1,600m, with assay values for nickel and copper exceeding those observed in soil surveys at the nickel-copper sulphide-bearing Cathedrals Belt
- The shape and distribution of the anomalous soil values match the shape of the magnetic trend, further supporting the interpretation that the magnetic feature may represent a fertile intrusive unit similar to the highly mineralised Cathedrals Belt
- Drilling at the new Carnac Prospect on E29/1041 is scheduled for mid to late August

Growth-focused Western Australian nickel company St George Mining Limited (ASX: **SGQ**) ("**St George**" or "**the Company**") is pleased to announce the identification of a highly anomalous nickel-copper soil anomaly in an unexplored area at its flagship Mt Alexander Project, located in the north-eastern Goldfields.

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

"The results of the soil survey at E29/1041 are very exciting and warrant high-priority follow-up at this unexplored area of the Mt Alexander Project.

"The peak soil values at E29/1041 are coincident with the strong magnetic features and provide a compelling target for potential nickel-copper sulphide mineralisation.

"These anomalous soil values are higher than anything we have seen at the Cathedrals Belt, where a number of high-grade nickel-copper sulphide discoveries have already been made.

"The drill rig currently engaged at our Paterson Project has another two weeks' work to do there before it will be mobilised to Mt Alexander to begin drilling on E29/1041 – at the newly named Carnac Prospect.

"Drilling and exploration to date at Mt Alexander has successfully focused on the Cathedrals Belt, where numerous discoveries of high-grade nickel-copper sulphides have been made.

"That success has encouraged us to ramp up field work across the broader Mt Alexander tenement package and we are delighted that our systematic exploration on this 100%-owned tenure – where there has been no previous exploration – has already identified some exciting opportunities."



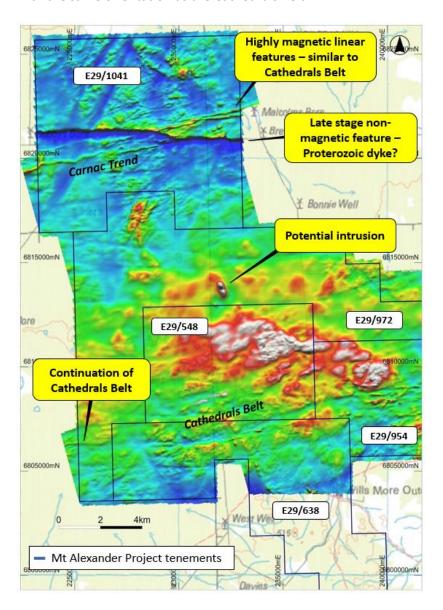
#### Exploration at E29/1041:

The potential at E29/1041 was first recognised in a review of historical regional government magnetic data for the tenement, which showed two distinct magnetic trends with an east-west strike of approximately 8km that are potentially analogous to the similarly oriented Cathedrals Belt.

Rock chip sampling and field mapping at the tenement were completed earlier in 2021 by St George. XRF analysis of rock chips from the area of the magnetic trends recorded metal values of up to 2,475ppm Ni and 105ppm Cu in the mafic rocks. These values are interpreted as being too elevated for barren Proterozoic dolerite dykes and more indicative of potential intrusive-style rocks.

These encouraging early results warranted follow-up exploration. An orientation geochemical soil survey at E29/1041 was commenced on widely spaced 200m traverses with coverage over the two distinct magnetic trends – an area of interest that is now named the Carnac Prospect.

In addition to the soil sampling, a high-resolution airborne magnetic survey with 100m line spacing was completed by St George at E29/1041. The data confirmed the presence of two distinct magnetic trends that cut across each other. The main east-northeast trend shows a series of strong, linear magnetic features – with the same orientation as the Cathedrals Belt.



Significantly, the features within E29/1041 appear to have a stronger magnetic response than at the Cathedrals Belt and may represent a series of intrusive units analogous to the Cathedrals Belt.

For further details of the new magnetic survey, see our ASX Release dated 7 April 2021 'Update – Mt Alexander Nickel-Copper Sulphide Project'.

Figure 1 – New magnetic data image (1VD) for E29/1041 and E29/972 showing a number of magnetic features that warrant priority follow-up testing for potential mineralised intrusive units.



#### Soil geochemical survey at Carnac Prospect:

The orientation soil survey was designed to investigate the magnetic trends for the presence of intrusive units and any associated nickel-copper mineralisation.

To date, 465 soil samples have been collected with a further 533 samples planned for collection. Samples are being submitted for laboratory assaying for a suite of 30 elements.

Figure 2 shows the coverage of the soil survey so far.

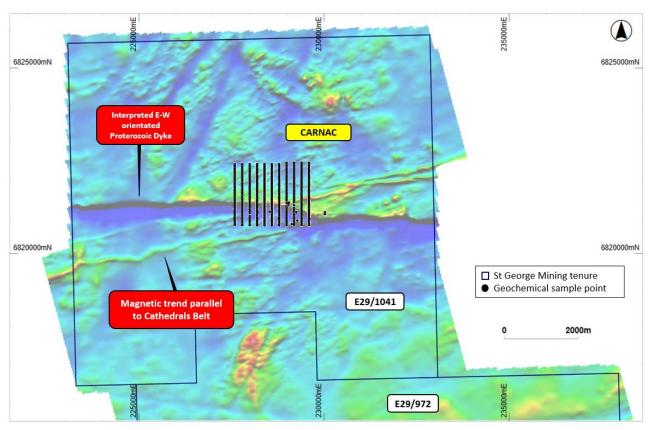


Figure 2 – map (1VD magnetic data) showing the current coverage of the soil survey at E29/1041 as well as detail of the magnetic features.

The laboratory assays received to date have returned highly anomalous values for nickel, copper and chromium, which can be summarised as follows:

- Consistent nickel values >200ppm Ni over a 1,600m strike length with peak values of 544ppm Ni
- Consistent copper values >50ppm Cu over a 1,600m strike length with peak values of 97ppm Cu
- Consistent chromium values >400ppm Cr over a 1,600m strike length with peak values of 810ppm Cr

The distribution of the anomalous soil values correlates to the shape of the strong linear magnetic trend; see Figure 3. This strongly supports the interpretation that the magnetic trend may represent a mafic intrusive unit with potential to host nickel-copper sulphide mineralisation.

Chromium (Cr) is a reliable indicator element for identifying the Cathedrals Belt host intrusive unit. At the Carnac Prospect, Cr values correlate well with the magnetic trends.



Figure 3 shows a plot of nickel values from the soils. The strongest anomalous values are coincident with an inflection point and apparent thickening of the magnetic feature. All of the magnetic units at Carnac show some elevated nickel values.

The confirmation of anomalous soil values with these magnetic features is highly encouraging as similar magnetic features drilled in the Cathedrals Belt have been confirmed as favourable settings for nickel-copper sulphide deposits.

The soil survey sampling is continuing across the eastern extension of the Carnac magnetic feature, with anomalous soil values open in this direction.

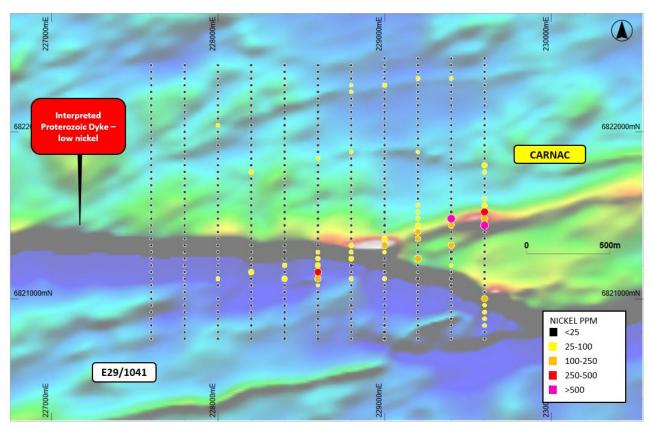


Figure 3 – map (1VD magnetic data) showing the clear association between the Carnac magnetic features and anomalous nickel values. Note a number of parallel features have been identified.

#### Proposed drilling:

A number of priority targets have been defined at Carnac based on our interpretation of the results of the soil survey in conjunction with the high-resolution magnetic data.

An air core/reverse circulation drill programme has been designed to test these targets. The drill rig currently at St George's Paterson Project will be deployed to Mt Alexander at the conclusion of the Paterson campaign in about two weeks.

A Programme of Works for drilling at E29/1041 has been approved by the Department of Mines, Industry Regulation and Safety.



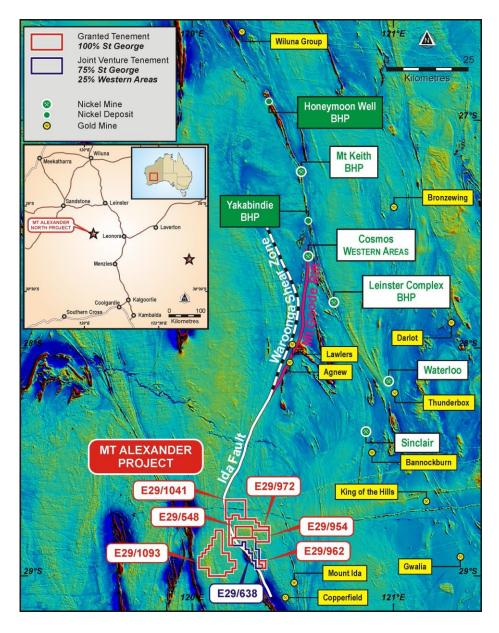


Figure 4 – map (over TMI magnetics) showing the tenement package of the Mt Alexander Project, which is located to the south-west of major nickel projects in the Agnew-Wiluna Belt – a globally significant region for nickel sulphide production.

#### COVID-19:

St George continues to manage its operations in compliance with COVID-19 regulations issued by State and Commonwealth authorities. We will continue to proactively manage drilling and other field programmes to protect the health and safety of our team and service providers.

Border restrictions and snap lockdowns in Western Australia and elsewhere have impacted on the movement of personnel for drill rig crews, which has been constraining the availability of drill rigs. St George is in close contact with its drilling contractors to best manage access and continuity to drilling services.

#### **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 six granted exploration licences – E29/638, E29/548, E29/962, E29/954, E29/972 and E29/1041.

The Cathedrals, Stricklands, Investigators and Radar 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.



Authorised for release by the Board of St George Mining Limited.

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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)

Criteria	JORC Code explanation	Commentary
Sampling techniques	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.	Each soil sample is taken from a manually excavated pit approximately 300mm deep (depending on the nature of the sampling medium). The loose material at the bottom of the pit is placed through a series of sieves, with the fine fraction of the 180micron sieve placed into pre-numbered paper geochemical sample envelope.  The sample envelopes are then sent to a certified laboratory for assay.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Each sample is sourced from the loose material at the bottom of the sample pit which is considered to be representative of the profile being targeted.
	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 '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.	A single sample are taken on a predetermined spacing and collected using uniquely numbered calico bags. Each sample collected for assay typically weighs 50g, and once dried, is prepared for the laboratory.
		Pulverisation further reduces the particle size with 90% of the material passing 75micron.
		The sample is then assayed using the Aqua Regia Digest method.
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, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	N/A
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	N/A
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	N/A

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 soil profile or sampling methods.
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.	Each sample is recorded for the type and nature of the soil. The surface topography and type is recorded at the sample location.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	The logging is both qualitive and quantitive in nature, with sample recovery and volume being recorded,
	The total length and percentage of the relevant intersections logged.	N/A
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	N/A
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	All soils samples were dry when sampled.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Samples are dried, crushed and pulverized to produce a homogenous representative sub-sample for analysis.
	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, appropriate with the type of sampling, with each sample batch. QAQC results are routinely reviewed to identify and resolve any issues.
	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.	The sample material is sourced from the bottom of the pits with efforts made to reduce the amount of surficial 'float' material entering the sample. Sieving of the sample helps to homogenise and reduce size fraction of the sample
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes are considered to be appropriate to screen for the geochemical signatures of base metal sulphide mineralisation and associated geology.
Quality of	The nature, quality and appropriateness of the	The soil samples are analysed using an Aqua Regia Digest.
assay data and laboratory tests	assaying and laboratory procedures used and whether the technique is considered partial or total.	Al, Ca, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, P, S, Ti, V, Zn have been determined by Inductively Coupled Plasma (ICP) Optical Emission Spectrometry.
		Ag, As, Au(AR), Ba, Cd, Li, Mo, Pb, Pd, Pt, Sc, Sr, Y, Zr have been determined by Inductively Coupled Plasma (ICP) Mass Spectrometry.
		The assay method and detection limits are appropriate for analysis of the elements required.

Criteria	JORC Code explanation	Commentary
	For geophysical tools, spectrometres, handheld XRF instruments, etc, the parametres used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	A handheld XRF instrument (Olympus Innov-X Spectrum Analyser) is used to provide an initial assay of the geochemical sample onsite. One reading is taken per sample. 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 and assays are verified by the Company's Technical Director and Consulting Field Geologist.
	The use of twinned holes.	N/A
	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 from 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 used in Mineral Resource estimation.	The sample locations are determined by using a handheld GPS system with an expected accuracy of +/-5m for easting, northing and elevation. This is considered adequate for the type and purpose of the surveys.
	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 specific location across the project, including drill collars, and entered into the central database. A topographic surface has been created using this elevation data. The local elevation data is also captured with the handheld GPS when sampling.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	The soil samples were taken at 20m intervals along the geochemical survey lines.
	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.	N/A
	Whether sample compositing has been applied.	No compositing has been applied to the exploration results.

Criteria	JORC Code explanation	Commentary
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 soil samples are taken at regular intervals, at a near perpendicular orientation (unless otherwise stated). across the interpreted strike of the Cathedrals Belt. However, the orientation of key structures may be locally variable and any relationship to potential 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 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. The chain of custody passes upon delivery of the samples to the assay laboratory.
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 the data. The soils programme has been reviewed by third parties and consultant geologists.

# 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 six granted Exploration Licences (E29/638, E29/548, E29/954, E29/962, E29/972 and E29/1041). 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 komatiite-hosted Ni-Cu sulphides in granite terrane. No historic exploration has been identified on E29/954 or E29/972.
		Mafic-Ultramafic intrusion related 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 and East-West orientated 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 interpreted 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.

Criteria	JORC Code explanation	Commentary
		The Mt Alexander Project is prospective for further high-grade nickel-mineralisation (both komatiite and mafic-ultramafic intrusive 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
	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.	sulphide intersections the nominal lower cut-off for nickel is 0.3%.  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.
iagrams	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 <a href="https://www.stgm.com.au">www.stgm.com.au</a> :  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	All material or meaningful data collected has been reported.

Criteria	JORC Code explanation	Commentary
	samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
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.