

Monday 2<sup>nd</sup> September, 2019

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### Portfolio Stock Developments

**St George Mining** - (ASX: SGQ, Share Price: \$0.17, Market Cap: \$62m, coverage initiated @ \$0.175 in May 2016)



### Key Catalyst

***Thick zone of high-grade nickel-copper sulphides intersected in first hole within a new target area of the Cathedrals Belt known as Radar, with a 7.5m mineralised interval from 44.2m down-hole.***

SGQ has figured prominently in our coverage universe since initiation in May 2016, with the company remaining strongly committed to regional exploration at its Mt Alexander project in WA's goldfields region. SGQ set the market alight during late 2017 on the back of exciting high-grade drilling results that intersected nickel-copper-cobalt-PGE sulphides. The composition of the mineralisation within the Cathedrals Belt, comprising an elevated copper-nickel ratio, cobalt and PGE values and basalt host rocks, is more akin to an intrusive mineral system – like Raglan, Voiseys Bay and Norilsk - rather than typical Kambalda-style extrusive deposits. Preliminary metallurgical test-work has confirmed that Mt Alexander will produce a high-value saleable concentrate that will be sought-after by smelters, with grades of 18% nickel and 32% copper, along with high values for cobalt/PGEs that will provide valuable smelter credits.

## Latest Activity

### **Mt Alexander Exploration Update**

SGQ has released details of a new discovery of nickel-copper sulphides at its Mt Alexander Project, with drill-hole MAD152 targeting the newly-named Radar prospect and intersecting nickel-copper sulphide mineralisation at a depth of between 44.2m and 51.7m down-hole (including intervals of massive nickel-copper sulphides).

MAD152 was drilled to test a new EM conductor identified by EM surveys undertaken by SGQ during August. Massive sulphides with average XRF readings of 6% Ni and 1.92% Cu were noted from 49.07m to 50.01m, whilst massive sulphides with average XRF readings of 5.48% Ni and 1.77% Cu were noted from 50.05m to 51.6m.



**Figure 1:** Drill-core with heavily disseminated sulphides from the interval at 46.3m to 48.7m downhole in MAD152 at the Radar Prospect

### Technical Significance

The intercept within MAD152 represents a new discovery in an unexplored section of the Cathedrals Belt that has opened up an opportunity to drill out a new high-grade prospect. This, along with the advanced Investigators, Stricklands and Cathedrals Prospects, could add substantial volumes of mineralisation to a potential resource at Mt Alexander.

The discovery also supports the effectiveness of the current exploration techniques utilised within the Cathedrals Belt, particularly the critical role of EM surveys in identifying nickel-copper sulphide targets.

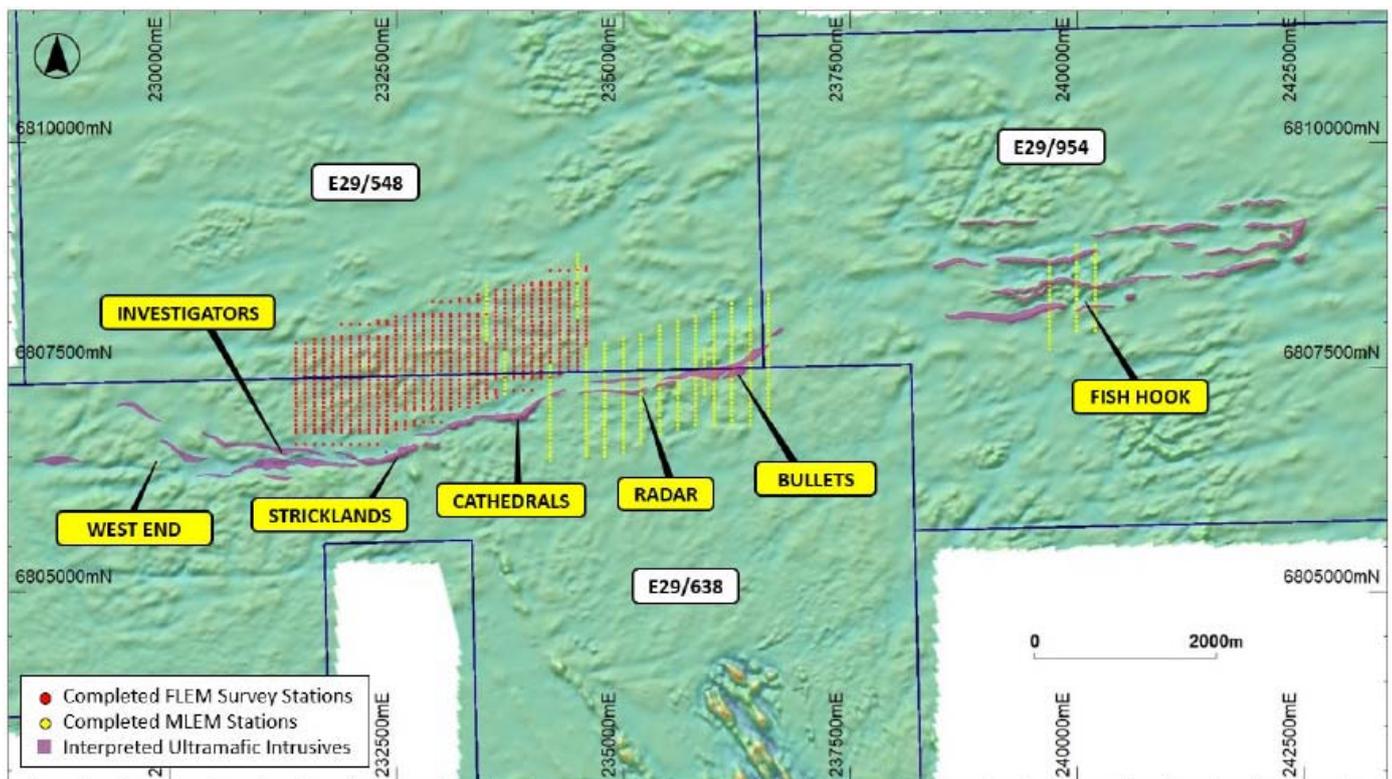
The discovery has confirmed the prospectivity of unexplored areas within the Cathedrals Belt for further high-grade mineralisation. In particular, the prospectivity of newly-identified EM anomalies at the largely

unexplored West End and Fish Hook prospects (located on the western and eastern extensions of the Cathedrals Belt respectively), is significantly elevated by the latest success at Radar.

The discovery has extended the east-west strike of known high-grade nickel-copper sulphides along the Cathedrals Belt to 5.5km, with another 10.5km of the Cathedrals Belt remaining either unexplored or underexplored. There is also mineralised potential down-dip, associated with structures that are interpreted to be the likely source through which mafic/ultramafic intrusions hosting nickel-copper sulphides, have passed upwards from the Earth's mantle.

## Next Steps

A DHEM survey will be completed within hole MAD152 next week in order to try and identify potential mineralised extensions around the hole, as well as to help plan follow-up drilling. MAD153 is currently being drilled at the Cathedrals Prospect - a deep hole with a planned depth of 450m targeting an area that has never been drilled before. It is designed to test the down-dip potential of the known shallow high-grade mineralisation at the Cathedrals Prospect and for potential repetitions of mineralisation at depth below the upper zone of mineralisation.



**Figure 2:** Map of the Mt Alexander tenements (against RTP 1VD magnetic data) with key prospects on the Cathedrals Belt highlighted. New targets generated at Bullets and Fish Hook have potential to significantly extend the strike of mineralisation along the 16km Cathedrals Belt.

## Project Overview

The MLEM survey that was completed during August over a 2.2km east-west strike of the Cathedrals Belt, from the Cathedrals Prospect in the west to the Bullets Prospect in the east, identified two stand-out EM anomalies.

The first EM anomaly, Radar (which was drilled by MAD152), is located 1km to the east of the Cathedrals Prospect, adjacent to a nickel-copper gossan and coincident with a linear magnetic feature that's known to represent mineralised mafic/ultramafic intrusions in other parts of the Cathedrals Belt.

The second EM anomaly is located a further 1km east at the Bullets Prospect, along strike from a historical drill intersection of nickel-copper sulphides made by BHP and co-incident with a larger magnetic feature. Drilling of the EM conductor at Bullets is scheduled to commence next week.

A small MLEM survey was completed at the Fish Hook Prospect to test the cover conditions in the area, which will assist in optimising future EM surveys. The Fish Hook area has about 10m of sand cover and appears to be geologically similar to the Radar Prospect, with the same linear magnetic features. In light of the success in drilling the EM conductor at Radar, the two EM anomalies that have been identified at Fish Hook are emerging as very exciting drill targets.

A comprehensive soil survey has also commenced at the Fish Hook Prospect, which will cover the entire 8km east-west strike length of the Cathedrals Belt east of Bullets. Following completion of the soil survey and a review of survey results, a MLEM survey will be designed for Fish Hook with a particular focus on areas of nickel-copper soil anomalies.

The composition of the mineralisation at the Cathedrals Belt, with its elevated copper-nickel ratio, cobalt and PGE values and basalt host rocks, is more akin to an intrusive mineral system - rather than the typical Kambalda-style extrusive deposits in the Yilgarn.

Geological mapping carried out within the Cathedrals Belt during 2017 by Rodinia Geological Services Pty Ltd on behalf of SGQ identified a suite of 'young' intrusive rocks associated with nickel-copper mineralisation. The mapping report commented that: *"The suite of rocks identified, their unique characteristics and the style of mineralisation present suggest a picrite and/or tholeiitic basalt-related (or 'conduit-related') Ni-Cu+- PGE model, such as the Noril'sk-Talnakh, Voisey's Bay and Eagle Deposits."*

The Raglan deposits in Canada are also an example of an intrusive style nickel sulphide deposit. Intrusive deposits of this kind often contain multiple mineralised positions, which can be linked.

## Nickel Price Overview

LME nickel has risen by 53% over the past 60 days, from \$5.50/lb to \$8.40/lb currently, to be trading at its highest level since early 2015. The price has surged after Indonesia's mines minister said the country may expedite the reinstatement of a ban on unprocessed ore exports, first mooted for 2022. China's nickel pig

iron production fed from Indonesian and Philippine mines dominate the global industry, and despite the economic slowdown in China, which imports some 50% of the world's nickel, stainless steel production is growing rapidly.



Furthermore, the mines ministry of Papua New Guinea has said a nickel processing plant owned by Metallurgical Corp of China that spilled mine waste into Papua New Guinea's Basamuk Bay may face closure. The Ramu operation produces approximately 35,000 tonnes of nickel, equivalent to 23% of the metal held in LME inventories.

Bloomberg has also reported that US-based Carlyle Group has been caught up in a years-long attempt to untangle an elaborate nickel warehousing fraud in Hong Kong worth around US\$300 million that has ensnared major metals brokerages.

## Summary

***The discovery of high-grade nickel-copper sulphides, with the first-ever drill hole in an area with about 10m of transported overburden and more than 1km from the nearest known mineralisation on the Cathedrals Belt, is an encouraging exploration result. The occurrence of high-grade nickel and copper sulphide mineralisation at shallow depths is rare, with SGQ further extending the strike of this type of mineralisation along the Cathedrals Belt to an impressive 5.5km.***

***With multiple EM conductors still to be drilled, including targets at the unexplored West End and Fish Hook Prospects, there is potential for more high-grade nickel-copper sulphide discoveries. Existing exploration has been focused on a 4.5km strike of the Cathedrals Belt, where high-grade discoveries have been made at the Investigators, Stricklands and Cathedrals Prospects. But new prospects are now being targeted, including Fairbridge, West End and Fish Hook.***

***Hole MAD153 will also be keenly watched - a deep hole with a planned depth of 450m, targeting an area that has never been drilled before. It is designed to test the down-dip potential of the known shallow high-grade mineralisation at the Cathedrals Prospect and for potential repetitions of mineralisation at depth below the upper zone of mineralisation.***

***With multiple intersections of high-grade nickel-copper sulphides over a broad area and favourable project economics, Mt Alexander is emerging as a major new nickel sulphide camp in Western Australia. The location of the project near the world-class nickel sulphide mines in the Agnew-Wiluna belt provides SGQ with access to existing roads and infrastructure, as well as opportunities to utilise existing processing plants. SGQ will remain held within our coverage Portfolio.***

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