St George Mining (ASX: SGQ)

St George upbeat about Mt Alexander Dragon

There are three items that exploration companies like to tick off when they announce a new resource-grade discovery, infrastructure and sound economics. *By Ron Berryman*

THESE THREE FACTORS HAVE PROVIDED the impetus for St George Mining (ASX: SGQ) following the acquisition of two key tenements from BHP Nickel West in 2016.

The Mt Alexander project stands out as it is showing all the signs of being a major nickel–copper discovery with the three prospects—Cathedrals, Strickland and Investigators -within the landholding showing exciting potential.

Early drilling suggests they could be looking at an excellent investment—a project with plenty of upside that could develop into a low-cost operation able to deliver separate high quality nickel and copper concentrates.

Mt Alexander is located 120 kilometres south southwest of the Agnew-Wiluna greenstone belt in the Yilgarn Craton of Western Australia, which hosts two of the world's largest komatiite-hosted nickel sulphide deposits, the Mt Keith and Perseverance deposits.

Strategically placed 120km south of Leinster and 100km west of Leonora it is in close proximity to existing infrastructure.

St George executive chairman John Prineas told *The Resources Roadhouse* that initial exploration had confirmed recurrent nickel-copper sulphides in the Cathedrals Belt over a strike of 3.5 kilometres.

Historic drilling at the Cathedrals prospect intercepted 4 metres at 4.9 percent nickel, 1.7 percent copper and 3.9g/t Platinum Group Elements (PGE's) from 91.4m and 3m at 3.8 percent nickel, 1.6 percent copper and 2.7 percent PGE's from 56.3m.

"In our current drill program, there was 19 planned drill holes but we have expanded it to 25 and further extended the zones of mineralisation," Prineas said.

"Preliminary metallurgical testwork of the massive sulphides at Mt Alexander produced concentrate with 18 per cent nickel and 32 per cent copper as well as high values for cobalt and PGE's, cobalt is very popular at the moment."

Downhole Electromagnetic (DHEM) surveys are being carried out in all completed drill holes to detect conductors associated with massive sulphide mineralisation and to assist in planning follow-up drilling. A major Moving Loop Electromagnetic (MLEM) survey is also in progress over the structural corridor one kilometre south of the Cathedrals prospect, which was revealed by a high resolution airborne magnetic survey completed in late 2016.

"It's a very exciting project and we have been looking forward to the results of our current drill and DHEM program and once we've analysed the information we'll plan the next round of drilling, which will be the drill-out phase," Prineas said.

As the diamond drilling has progressed the company has been able to announce significant intersections from the Investigators prospect including a 20.6 metre thick mineralised ultramafic which included 4.88m of massive and matrix sulphides from 157.8m downhole.

Two intervals of massive sulphides were intersected, which were 3m and 0.3m thick, with average values of 6.3 percent nickel and 4.3 percent copper.

At the Cathedrals prospect a 3.25m thick intersection of nickel sulphide mineralisation returned average values for the 1.35m thick massive sulphide of 9 percent nickel and 2 percent copper.

Commenting on the Investigators intersection Prineas said it was the thickest mineralisation encountered at the prospect to that point and represented an important milestone in the ongoing drilling campaign.

"The drill results at Cathedrals continue to extend the shallow high-grade mineralisation with further massive sulphides intersected only 60m below the surface," he continued.

"These results are amongst our best ever intersections at Mt Alexander and illustrate the potential at this under-explored project.

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"The nickel and copper values we are seeing continue to be impressive and give confidence that the high-grade mineralisation will support robust economics for a potential mining operation.

"The beauty of this project is that it is not just high-grade nickel, we've also got high-grade copper, cobalt and PGE's and a choice of processing at nearby plants, which will save something like $100 million if we don't build our own concentrator."

The economics of the Mt Alexander project is an important factor in its future as an operating mine and John Prineas has the background to provide a clinical evaluation of the venture and its potential to deliver a successful mine in the most efficient and cost-effective manner.

He has more than 25 years' experience in the banking and legal sectors, including responsibility for project and acquisition finance for resources and infrastructure projects with a major international bank.

"The shallow mineralisation is a major economic benefit," Prineas added.

"These kinds of grades are usually obtained by drilling down to 500 or 800 metres, we've only been down to about 160 metres and we haven't really tested it beyond that.

"We have high-grades of nickel and copper with strong credits for cobalt and PGE's; excellent metallurgy; high quality smelter-friendly concentrate; proximity to existing processing plants; and we're located near existing infrastructure with access to roads and power.

"We're very lucky."

The number of established nickel concentrators in the region is a valuable bonus for the project.

The Sinclair project is 75km northeast, the Cosmos concentrator 135km north and BHP's nickel headquarters at Leinster 110km northeast.

Prineas said the company would be looking at a pre-feasibility study within 6 to 12 months.

"Because of the shallow mineralisation at this stage we're considering an open cut or box cut, but whatever we do it'll be a low cost operation which will be a big advantage," he explained.

St George also acquired another project from BHP Nickel West which is 60 kilometres north of Mt Alexander along the Ida Fault, a significant craton-scale structure.

Reconnaissance aircore drilling conducted by BHP at the Hawaii project revealed more than five kilometres of moderate to high magnesium oxide (MgO) ultramafics.

The drill holes confirmed the discovery of a new greenstone sequence in an area previously considered to be barren granitoids.

These greenstone sequences have never been explored for nickel sulphide or gold mineralisation, and indicate that the Hawaii project provides an attractive exploration opportunity for St George.

A first pass RC drilling program has been initiated at the company's third project at East Laverton over several new gold targets.

In addition, diamond drilling is underway to test a powerful electromagnetic conductor (EM) at the Windsor prospect at East Laverton.

With conductivity of 210,000 Seimens, this is the most powerful conductor identified by St George to date and is highly prospective for massive sulphide mineralisation.

As *The Resources Roadhouse* was going to the printers, St George Mining received assay results from drilling at the Cathedrals prospect, which include the best intersections of nickel-copper-cobalt-PGE mineralisation to date at the Mt Alexander project.

Seven diamond drill holes were completed and all intersected mineralised ultramafic with laboratory assays confirming multiple, good-sized intersections of high-grade nickel-copper-cobalt-PGE mineralisation, including results from one hole of:

- 11.36m of mineralised ultramafic, including 4.2m at 0.39 percent nickel, 0.18 percent copper, 0.02 percent cobalt and 0.52g/t total PGEs from 53.6m; and
- 7.5m at 3.9 percent nickel, 1.74 percent copper, 0.12 percent cobalt and 3.32g/t.

The Short Story

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