

PREMIER AMBITIONS IN QUEENSLAND

Stock research is a tough game, which is why Gavin Wendt does the hard work for readers every edition in *Market Watch*.

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CONSOLIDATED TIN Mines (ASX:CSD) is an emerging Australian Securities Exchange-listed tin explorer and developer whose major project is the Mt Garnet project near Cairns, Queensland. Its vision is to become the premier hard-rock tin producer in Queensland.

Its Mt Garnet tin project is located in an established mining area close to all essential infrastructure within the historic Herberton tinfield.

The Mt Garnet project is made up of three key deposits: the Gillian, Pinnacles and Windermere.

The company's development strategy is to confirm an initial JORC resource base of between 8-10 million tonnes of tin from the three deposits, which will in turn be used to feed a proposed centralised milling operation that will process about 1 million tonnes per annum and produce about 5000t of tin concentrate annually.

The Herberton tinfield has been mined since 1880, with literally thousands of mines established. Many were small-scale, while others were operated at company scale and worked for many years. Almost all of these operations began mining outcropping, high-grade ore. In many instances this ore extended to considerable depths.

With the hive of historic mining activity on the historic Herberton tinfield, it was obvious that exploration focused on easily accessible, high-grade ore would be futile. The real question was how much easily accessible, lower grade ore was available.

This is where the company's exploration programs have been focused. Consolidated Tin has conducted extensive exploration programs within the Mt Garnet project, identifying a total current JORC-compliant resource base

comprising 9.6Mt at 0.6% tin. This includes a JORC-compliant measured resource comprising 1.2Mt at 0.82% tin within the Gillian deposit.

In addition, the project also hosts an iron resource comprising 5.2Mt at 26.39% iron, which is upgradeable to a high-grade iron product.

Targeted drilling designed to update the project's resource base is ongoing and drilling is also under way at a new area within the project, known as the Coolgarra Group.

CSD is also progressing pre-feasibility study (PFS) work at Mt Garnet, which will play a key role in future mine development planning.

The company identified the potential for a large-scale, low-grade mining operation from the greisen-type deposits and/or the skarn-type deposits.

Both of these deposit types had been identified and explored by previous companies and had been either abandoned or mothballed due to the tin price collapse of the late 1980s.

No single deposit was known that would provide sufficient ore to allow the necessary economy of scale that would be needed to mine and treat low-grade ore. The only real possibility was by putting together a number of these known deposits to make up sufficient ore to supply to a centrally located treatment plant.

The company began investigating the skarn deposits and identified three of these as having the potential to produce 8-10Mt, which would be necessary to provide an initial mine life of 8-10 years for a mill with 1Mtpa throughput.

The minimum cut-off grade would be dependent on processing costs and the tin price.

The company decided that tin production should be on a scale that would allow the company to be considered a significant producer

that would attract tin buyer/smelter interest and competition, and bring better tin price returns.

To achieve this, the company decided the scale of production aim should be in the vicinity of 5000t of tin metal (in concentrate) per annum. This would require treatment of 1Mtpa with a recovered grade of .5% tin.

An in-house scoping study (based on a tin price of \$US18,000/t, 0.7Mtpa of tin ore grading 0.6%, recoveries of 68%, capital costs of \$124 million and tin production costs of \$11,250/t) suggests that about 3050t could be produced annually over a 7.5-year project life, generating net cash flow of about \$245 million.

This represents enormous upside for a company with an extremely modest market value of just \$10 million.

The company has continued to progress its PFS at the Mt Garnet project, with various components of the study currently under way.

Metallurgy and mineral recovery test work is ongoing, including programs to refine and develop the final process flow sheet.

The results of this test work will form the basis of the Mt Garnet project PFS.

A heads of agreement was signed with Snow Peak Group (SPG), a major CSD shareholder, in May 2012. SPG agreed to provide a \$3 million funding package for completion of the PFS for the Mt Garnet project. CSD agreed to provide 27,300,000 unlisted options, exercisable at 7c on or before December 31, 2013, as consideration for the payment.

Upon completion of the PFS, SPG may elect to acquire a 50% interest in a proposed joint venture by contributing up to 100% of the project's nwt present value towards project development capital cost. **RS**