

# Australian tin's new number two

One of the common themes across the number of Australian specialty metals plays budding up in the market of late is a history of unrealised potential. High-grade and/or high tonnage projects, never harnessing prime position in the portfolio, are being revamped as key assets for a number of junior companies.

Stellar Resources Ltd is no exception to this phenomenon. Having remodeled itself from a multi-commodity explorer to tin-focused junior, decades of drawn-out tin exploration is swiftly being packaged into what could potentially be Australia's second biggest tin producer on Tasmania's west coast, an area with a proud 150-year base metal mining history.

Based out of Zeehan, Stellar is spearheading its charge into the tin market from its now 100%-owned Heemskirk project, with an indicated resource at the Queen Hill deposit of 1.6mt @ 1.2% tin for 19,000t of tin. To this add the Severn and Montana deposits and the



Managing director Peter Blight and project manager Ray Hazeldene discuss the 3,000m stage two drill programme at the Severn deposit

Heemskirk project boasts the title of being the highest grade undeveloped tin project in Australia. It will also become Australia's second largest tin producer – behind neighbouring Metals X Ltd's Renison Bell mine, only 18km away – when it comes into operation as early as 2015.

The question Stellar now wants to answer is: could Heemskirk be another Renison Bell?

"Renison Bell has mined over 200,000t of tin over its 100-odd year history," Stellar managing director Peter Blight said, "What we have located so far is that we have about 25% of what they ultimately found. If it is shown they are similar systems, then there is a lot more for us to find."

The transformation to a tin-focused junior from a multi-commodity explorer began in 2011 when a scoping study on the then 60%-owned tenure yielded positive results, opening the management team's eyes to the exploration upside for a project fortunate to be blessed with established infrastructure and a population who epitomise "pro-mining".

Gippsland Ltd (the 40% free-carried JV partner at Heemskirk) had held the ground since the 1960's until Aberfoyle picked up a 60% interest in the 1970s and worked on it



into the early 1980s.

Stellar acquired the Aberfoyle interest in 2008 from Western Metals Ltd, which had taken over Aberfoyle in 1998 and stashed the project in the bottom of a drawer. Stellar inherited a 92 drill hole database with the project and could see the potential to discover blind deposits in the area, and began to chip away while balancing other project commitments.

The partnership between Stellar and Gippsland was always amicable, but Stellar really wanted to sink its teeth into Heemskirk and found it couldn't get enough traction with Gippsland clinging to its share, well aware of the project's up-and-coming value.

"Having a silent partner was ok with Aberfoyle, because they had cash flow from other projects and could afford to carry a partner. But for us as a junior it was a pretty tough JV to live with," Blight said.

Fortunately, in November 2011 Stellar and Gippsland reached a deal both parties could live with; Gippsland relinquished its 40% stake for 43.5 million Stellar shares – resulting in a 19% holding in Stellar – and a royalty arrangement if the LME tin price was to go over \$US27,000/t once Stellar was in production.

Gaining full control over Heemskirk gave Stellar a renewed vigour and momentum for the metal and the project, heading into a year of exploration freed of the JV and with a serious focus on the goal of production in 2015.

Much of last year's exploration activities at Heemskirk centred on resource drilling at the three key deposits, establishing a collective mineral resource of 4.4mt @ 1.1% for 48,000t contained tin

across Queen Hill, Severn and Montana.

Expanded second stage drilling will be the plan of attack for 2012 following aeromagnetics flown in April. With an eye to double the size of the Severn resource, and move it from inferred to indicated category, 10,000m of drilling has been planned for the Heemskirk project and the nearby 100%-owned St Dizier tin project, a potential satellite operation in the making.

Breaking the lump 10,000m down, Stellar has allocated 3,000m over five diamond holes to test the depth of Severn to 650m from surface, plus a further 2,000m of diamond drilling to upgrade the resource to indicated. Queen Hill and Montana will benefit from 3,000m of infill and extension drilling, leaving 1,000m for testing geophysical targets identified from the aforementioned aeromag survey, and the final 1,000m will be undertaken at St Dizier to turn historical data to JORC resource.

When **Paydirt** was onsite, two diamond rigs were boring away; one testing Severn at depth and the other starting on the infill drilling inside the Severn resource.

"Provided they all come in, the five deep diamond holes we are drilling at Severn will make a significant difference to the size of the deposit."

The year-long drill programme has a \$6 million price tag, but project manager and geologist Ray Hazeldene said the company was about to test whether RC drilling could be used for infill drilling from surface to at least 100m – preferably 200m – be-

fore continuing with diamond tails, thus lowering the drilling cost.

Tin's positive market fundamentals play a vital role in the company's drive to production in 2015; with world demand of 360,000t outstripping world mine production of 290,000t, the supply gap is being met by secondary supply, which cannot suffice for long.

Blight's view, aligned with that of tin market specialist ITRI, is that this gap will continue to widen, especially if any existing producers experience any hiccups.

"The world needs about 80,000t of new annual tin production over the next five years. So far, the project list is well short of that and not all of the projects will come in at the same time. If anything, while there are more projects coming along, nobody is sure they are going to meet demand in the future."

An encouraging result from the July 2011 scoping study in hand, Stellar found it could contribute 3,900 tpa out of the 62,700 tpa of new production estimated to come on-stream worldwide in the next five years.

Crunching the numbers using current data, Stellar aims to have a mine life of 7.6 years at a capex of \$108 million, able to be paid back in 3.5 years.

At \$US12,780/t



## STELLAR SITE VISIT

cash costs, Stellar anticipates a life of mine revenue of \$673 million net of smelter charges. Due to greater depths and being a more mature mine, Renison Bell is currently operating at around a \$15-16,000/t cash cost.

"We are around a 50% cash cost of what we consider to be the long-term tin price of \$25,000/t, which I think is quite a good position."

"Given what we know to date, the highest throughput rate is around 600,000 tpa. Obviously if we can make Severn bigger then we can look at changing that too. At 600,000 tpa at 70% recovery, we would be producing around 3,900 tpa of tin in a 50% concentrate."

"One of the aims of this drill programme at the moment is to get that mine life up over 10 years, hopefully to 12 years."

Metallurgy is in its early stage and the company will revisit preliminary work this year with fresh core to increase its certainty, but so far so good, Blight said.

"We have only really tested the top part of Queen Hill, which we believe is probably going to be the one we are going to have to grapple with the most. Severn is looking like being an easier proposition."

"Effectively what we have concluded from the work we have done is that we will have to go through the full Renison process to produce a 50% tin concentrate at a 70% recovery. We haven't completed all the test work, but so far it has been going quite well and we are going through the last 20% of the test work on Queen Hill."

Blight said it was likely that 70% recovery

would be the upper end of what could be achieved from processing the ore, which he said was "pretty good" recovery for tin.

"We obviously have to sample Severn and Montana, put them through the process, and any significant changes in mineralisation also have to be tested. But so far it is confirming our original thoughts that the Renison Bell flow sheet is probably the one we are going to need for processing here."

Certain areas of Queen Hill and Montana have been historically mined for lead and silver, but the tin potential was basically left untouched in the ground, save for a few

**The rugged Queen Hill deposit on the outskirts of Zeehan hosts Stellar's most drilled deposit**



small-scale operations in earlier times of the Tasmanian colony.

"Nobody mined tin, but they certainly did a lot of mining for lead-silver on Queen Hill. They are separate lodes; they get quite close in places but it is a different generation of mineralisation," Blight said.

Ample water, available electricity, roads, rail and the port of Burnie all nearby, plus a readily accessible workforce means that while the team sees that fantastic regional potential exists, it won't be the driving the project, with a development focus taking off within a year from now.

"The focus this year really is drilling. While doing that we are continuing on with the metallurgy and the baseline environmental work, and by the middle of the year we will probably start engineering work with all of this taking us through to about May 2013 when we should have a PFS done. Then we would be looking at – hopefully – a fairly quick run through to a BFS, which would be released by November 2013.

"Then we would be in a position to look for finance in the project, so construction would be in 2014, and if all goes well, production in 2015."

Given nearby operations like the Avebury nickel mine have been put on care-and-maintenance, the town of Zeehan is eager to see Heemskirk get off the ground so it can rebuild its mining mettle over nearby mining community rival Queenstown.

"This is quite an advanced tin project; the scoping study really was a very good outcome for us. It provides us with momentum as does the ownership restructuring that we have done. The big positive is the grade and location; this is a fantastic place to be developing a mine given the infrastructure and history you see around us," Blight said.

– Luke Sizer



Outside of the Heemskirk project, Stellar has a multitude of projects and JV's in a well regarded mining postcode, south of the Tarkine in western Tasmania



Tasmania's west coast, home to the long-standing Renison Bell tin mine, could soon be Australia's tin hub, thanks to juniors capitalising on strong tin market fundamentals



Hazeldene inspects mineralisation at the Montana deposit



Several intercepts of up to 1.7% tin over 4m have been made at the Severn resource



A second diamond rig at Severn carries out infill drilling on the current resource on the outskirts of Zeehan