

# ASX Release

# **Scoping Study Green Light for Heemskirk Tin Project**

Stellar has completed a scoping study on Heemskirk Tin. The study demonstrates a high return on investment is achievable and justifies rapidly moving the project into pre-feasibility. Independent mining consultancy Mining One conducted the study and identified the following highlights:

- 21% internal rate of return and 3.5 year payback at a long-term tin price of US\$25,000/t (US\$22,500/t net of treatment charges) and 1.0A\$/US\$.
- US\$12,780/t cash cost of tin in concentrate production positions the project competitively on industry cost curve.
- Cash operating margin of US\$9,720/t or 43% on revenue net of smelting and refining charges.
- Life of mine revenue of \$673 million (100% basis) net of smelting and refining charges.
- 600,000 tpa throughput for 7.6 years provides economies of scale.
- 3,900 tonnes of annual tin production would rank the project second to Renison Bell in Australia.

6 July 2011

Scoping of project environmental parameters is now underway and should benefit from the fact that all planned operations are within a zone of historical mining.

The Heemskirk Tin Project remains on track for production in 2014 subject to the timing of government approvals and financing.

Stellar CEO Peter Blight said, "The scoping study highlights the importance of Heemskirk's high grade in providing a competitive cost structure for an underground tin mine. This also underpins a positive economic outcome on a standalone operation. Mr Blight also commented that Stellar's aim is to bullet-proof the project by adding significantly to the resource estimate and fully investigating the potential for by-product lead and silver production."

About Stellar:

Stellar Resources (SRZ) is focusing on the development of its tin and base metal projects in Tasmania. The company holds a portfolio of tenements located in Tasmania, South Australia and New South Wales that have excellent development potential. Key projects include: Heemskirk Tin located near Zeehan in Tasmania and the Tarcoola Iron Ore Project in central South Australia. The company aims to create shareholder value by identifying and developing mature exploration properties.

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Independent mining consultancy, Mining One, completed a detailed study of mine development, ore scheduling and processing at Heemskirk. The scoping study concluded that a 600,000 tpa operation producing 3,900 tpa of tin in concentrate provides an attractive return on investment of 21% at a long-term tin price and exchange rate of US\$25,000/t and A\$/US\$1.00 respectively. The project is also well positioned on the industry cost curve with cash costs of US\$12,780/t. This result underpins Stellar's confidence in the project and takes Heemskirk Tin forward into the pre-feasibility stage which is expected to take 9 months.

Over the next six months, the pre-feasibility study will focus on:

- continued drilling to upgrade and expand the resource estimate,
- exploration for a fourth deposit on the retention licence,
- assessment of the lead/silver potential,
- preliminary environmental assessment,
- continued metallurgical assessment of all three deposits.

### **Development Concept**

The development concept envisages a small open cut to recover near surface mineralisation from the Queen Hill deposit with contemporaneous underground development of Queen Hill, Montana and Severn. A single portal to the north of the Queen Hill pit would serve all three declines (see Figure 1). The open cut would also provide access to potential remnant and new positions of high grade silver and lead mineralisation from historical mining and stope fill material. (In the 1890s, Zeehan was a major silver and lead mining district ranking second in production to Broken Hill).

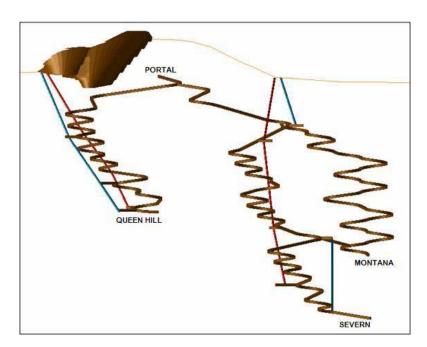


Figure 1: Queen Hill open cut and proposed decline development for underground mining

Geotechnical studies support cut and fill underground mining (see Appendix 1). Mine planning assumes that mine design and dilution will reduce the available tin by about 15%. Development of all three deposits simultaneously allows an average annual mining rate of 600,000 tonnes, providing economies of scale for the project. The 7.6 year mine life is based on the 4.4 million tonne at 1.1% tin JORC inferred



resource previously reported and detailed in the Background section of this announcement. Stellar believes that there is considerable potential to increase the mine life through ongoing drilling.

The scoping study includes a processing plant designed to produce 3,900 tonnes of tin in concentrate annually. The first stage of the plant includes crushing, pre-concentration using heavy media and grinding. This circuit should reject up to 20% of the feed with minimal tin losses and should significantly reduce costs in the concentrator.

Subsequent processing stages include sulphide flotation, gravity separation of coarse tin, desliming, tin flotation and acid treatment of concentrate to produce a saleable 50% tin concentrate at target recovery of 70%.

### **Assumptions**

The scoping study assumes pre-production capital expenditure of US\$108m. It includes underground mine development, a processing plant, tailings dam and ancillary infrastructure.

The project benefits in terms of reduced capital costs from excellent infrastructure with close access to a power transmission line (1km), water (5km) and a sealed road from site to the port of Burnie (130km).

Operating costs of US\$12,780/t of tin in concentrate, or US\$83/t ore, include contract mining (open pit and underground), technical services, maintenance, processing and administration.

The project internal rate of return of 21% is generated on a 100% equity basis under the assumptions shown in Table 1.

**Table 1: Scoping Study Assumptions** 

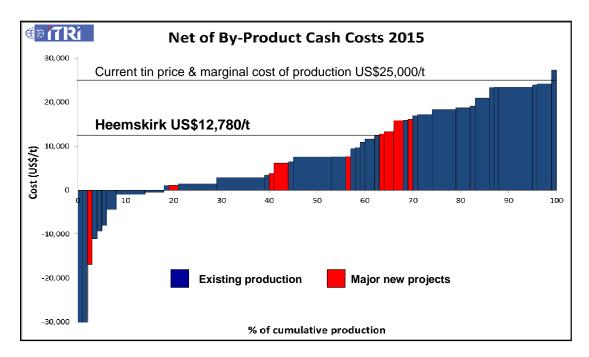
Parameter	Units	Assumption	Comment			
Mine life	years	7.6	minimum life			
Mining dilution	% 15 typ		typical for underground mines			
ROM grade	%	0.93	average resource grade is 1.1%			
Treatment rate	tpa	600,000	drawing from all three deposits			
Recovery	%	70	target rate			
Tin in concentrate	tpa	3,900	average annual production rate			
Concentrate grade	%	50	typical grade			
Tin price (net)	US\$/t	22,500	net of 10% smelting charge			
Exchange rate	US\$	1.00				
Operating cash cost*	US\$/t tin	12,780	43% operating margin			
Operating cash cost	US\$/t ore	83	ore milled			
Capital cost*	US\$m	108	pre-production capital			

<sup>\*</sup>Accuracy of cost estimates is +/- 30%



## **Competitive Cash Cost Position**

- The project is competitively positioned on the International Tin Research Institute's (ITRI) industry cash cost curve shown in Figure 2.
- The US\$12,780/t estimated cash cost places the project at the low end of the range for hard-rock underground operations and lower than many competing projects.
- Heemskirk's cash cost of production is 49% below the current spot price of tin which is US\$25,000/t.
- The ITRI cash cost curve estimate for 2015 establishes US\$25,000/t as the marginal cost of production. Stellar believes that marginal cost is also an appropriate measure of the long-term tin price, underpinning the use of this assumption in the scoping study.



Cost estimates are provisional and used with permission from a forthcoming ITRI report.

Figure 2: International Tin Research Institute Industry Cash Cost Curve

# **Background**

The Heemskirk Tin Project is located near Zeehan on Tasmania's West Coast in an area well serviced by power, water, transport, mining and other infrastructure. Stellar holds a 60% interest in the project with joint venture partner Gippsland Limited and can increase its holding to 70% by completing a feasibility study.

Drilling by Gippsland Limited in the 1970s and subsequently Aberfoyle Limited during the 1980s identified three tin deposits; Queen Hill, Montana and Severn. In 2010, Stellar added to the substantial drilling database with 6 holes into the near surface Queen Hill deposit. The Stellar results confirmed the high grade nature of the mineralisation and provided fresh samples for metallurgical testing. As previously reported, these tests indicated that tin is recoverable using a process similar to that employed at the nearby Renison Bell tin mine.

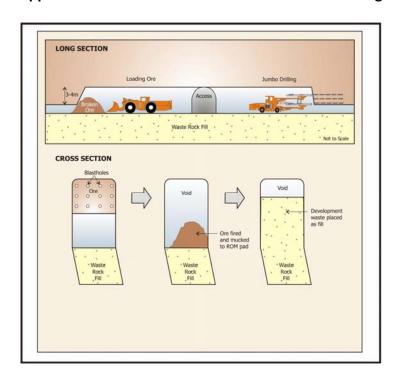


**Heemskirk Mineral Resource** 

Deposit	Ind icated			Inferred			Total		
	kt	% Sn	kt Sn	kt	% Sn	kt Sn	kt	% Sn	kt Sn
Queen Hill	1,600	1.2	19				1,600	1.2	19
Montana				360	1.6	6	360	1.6	6
Severn				2,400	0.9	23	2,400	0.9	23
Total	1,600		19	2,760		29	4,360	1.1	48

cut-off grade 0.6% tin

estimated on 3 March 2011 by Mining One Pty Ltd



**Appendix 1: Schematic Mechanised Cut and Fill Mining** 

The drill and exploration results reported herein, insofar as they relate to mineralisation, are based on information compiled by Mr R K Hazeldene (Member of the Australasian Institute of Mining and Metallurgy and Member of the Australian Institute of Geoscientists) who is a Consultant of the Company. Mr Hazeldene has sufficient experience relevant to the style of mineralisation and type of deposits being considered to qualify as a Competent Person as defined by the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2004 Edition). Mr Hazeldene consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. It should be noted that the abovementioned exploration results are preliminary.

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