

Cradle Resources

Metals & mining

20 April 2016

Lucrative Panda found in Tanzania

Cradle has today announced the results of the DFS on the Panda Hill Niobium Project. Cradle's 50% share of NPV₁₀ equates to US\$1.50/share, ie Cradle's shares are currently trading at just 13.5% of the value of its share in the project. Assuming that its share of initial capex (US\$102.2m including working capital) is 50:50 debt:equity funded, it will therefore need to raise just US\$51.1m (A\$65.7m) in equity finance to advance it. As such, Panda Hill is poised to become the world's first new niobium mine in 40 years, accounting for c 6% of global production.

Results of definitive feasibility study (DFS)

Compiled by MDM in collaboration with Coffey, SRK, SGS, SLR and Roskill (inter alia), the DFS envisages a 1.3Mtpa open pit operation, expanding by 100% from year four, mining an average 0.68% Nb₂O₅ grade in years 1-10 (and 0.54% over the 30-year life of mine) to produce an average 8,200t of ferro-niobium pa at an average stripping ratio of 1.5:1 and metallurgical recovery of 61%. Initial capex is estimated to be US\$196m, with a further US\$93m (to be funded from project cash flows) in year four. Average life-of-mine EBITDA is estimated to be US\$112m pa (US\$0.83/share undiluted) and the payback period 4.75 years. Ultimately, the DFS calculates a pre-tax project IRR of 32% and a post-tax NPV₁₀ of US\$404m at an initial product price of US\$37.65/kg Nb and average unit operating costs of US\$48.04/t ore processed or US\$21.34/kg Nb produced.

Metallurgy similar to existing operations

The Panda Hill carbonatite is a near-circular, volcanic intrusion into the surrounding rock with a diameter of c 1.5km. It is steeply dipping, which renders it amenable to a conventional open pit mine incorporating six push-backs. To date, only 40% of the carbonatite area has been drill tested. Significantly, the ore's metallurgical characteristics result in a process flowsheet in which 1) the flotation function is similar to Magris Resources' Niobec project (which has a similar geology and mineralogy to Panda Hill); 2) the leaching function is similar to Anglo American's Catalao; and 3) the converter function is similar to CBMM's (the world's dominant producer) final conversion stage, such that the ultimate product is high-quality Fe-Nb buttons.

Milestones

Cradle is actively involved in funding discussions, while its partner (Tremont) is engaged in well-advanced offtake and debt financing negotiations. A final development decision is expected in H216, leading to construction and commissioning in mid-2018.

Historical financials

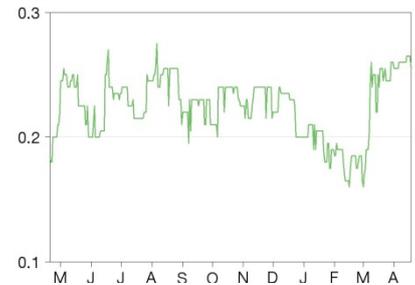
Year end	Revenue (A\$m)	PBT (A\$m)	EPS (c)	DPS (c)	P/E (x)	Yield (%)
12/14	0.0	(1.3)	(0.98)	0.0	N/A	N/A
12/15	0.0	(1.9)	(5.61)	0.0	N/A	N/A

Source: Company sources

Price **A\$0.26**
Market cap **A\$35m**

A\$1.2849/US\$

Share price graph



Share details

Code	CXX
Listing	ASX
Shares in issue	134.9m

Business description

Cradle Resources has a 50% interest in the Panda Hill Niobium Project in Tanzania. This interest makes it one of the few niobium explorers/developers in a world in which 90% of the world's metal supply originates from just one country (Brazil) and just three companies.

Bull

- Unremarkable metallurgy.
- Specialty and concentrated nature of niobium market.
- Access to water, power and transport infrastructure.

Bear

- Tanzania ranked 69 out of 109 by Fraser Institute.
- 30-year life of mine plan includes inferred resources.
- Need for HFO power before connecting to the grid.

Analyst

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