

# TMT has eyes on the prize

lan Prentice's vision for vanadium hopeful Technology Metals Australia Ltd (TMT) is as straightforward as they come.

"Given there's not many other primary producers in the vanadium space, we need to be the next primary producer that gets financed and builds a project," he said.

"We don't necessarily see ourselves as competing with the incumbent producers, but we do see ourselves as capable of being the next producer, that's how we're looking at it.

"From our perspective, a peer analysis is more about looking at other companies that also have projects prospective for development. No one else is as far advanced from a study point of view and so that's why we're saying we need to be the next producer on that list."

Prentice – TMT's managing director – spoke to *Paydirt* in light of the company unveiling a robust DFS which forecast lowest quartile cash costs for production of vanadium pentoxide (V<sub>2</sub>O<sub>5</sub>) from its Gabanintha project in Western Australia's Murchison region.

Life-of-mine cash costs of \$US4.04/lb headlined a strong set of project economics which also included EBITDA of \$4.1 billion over the initial 16 years of operations, pre-tax NPV of \$US924 million and IRR of 34%, assuming an average life-of-mine V<sub>2</sub>O<sub>5</sub> pricing of \$US10.88/lb.

Pre-production capital of \$US318 mil-

lion (\$454 million) is estimated to be paid back within 3.2 years of first production at Gabanintha, which will suddenly become the world's largest primary vanadium producer if the forecast annual output 27.9 mlb is achieved.

Gabanintha is also expected to be one of the world's highest grade vanadium producers with an average feed grade of plus-1% V<sub>2</sub>O<sub>5</sub> anticipated over the first 12 years of operations.

"It's really important as a new entrant into the market to make sure you're competitive on that operating cost parameter and that really comes back to the quality of our resource," Prentice said.

"Grade obviously is really important, but so is your metallurgy. The magnetic concentrate we produce is very clean; it doesn't have a lot of deleterious elements which are reagent-robbing in the roasting section of your plant.

"Efficiency through the roasting section of the plant is really, really key to delivering a really high purity final product, and again that goes all the way back to having a really clean ore to start with."

Extensive test work has indicated Gabanintha will produce a high purity V<sub>2</sub>O<sub>5</sub> product grading at least 99% – industry benchmark pricing is for 98% – which is set to attract a handy sales premium.

TMT signed a non-binding MoU with CNMC Ningxia Orient Group Company Ltd, a subsidiary of China Nonferrous Metal Mining (Group) Co Ltd, earlier this year with a view towards establishing a more formal V<sub>2</sub>O<sub>5</sub> offtake agreement. Prentice said he expected interest in his company's product would start to accelerate now the DFS findings were public.

"For a lot of the parties we've engaged with, the last piece for them was getting hold of the DFS and making sure it confirms all the detail that we've been working on and delivering," Prentice said.

"I think from a project point of view, and also from an equity market point of view, it's really about understanding that we do have the support of the customers and of the offtakers, both on product consumption but also on supporting the financing. Now, whether or not those groups assist with the financing or are just key in having them on board, it means that the financiers are a lot more comfortable.



Gabanintha is set to produce a high purity V<sub>2</sub>O<sub>5</sub> product grading at least 99%

"In a gold project you can hedge your forward production and everyone knows you're guaranteed whatever price, we don't have that. So, offtakes are our mechanism to enable the financiers to have comfort around both the volume of product we can sell, but also the pricing structures around that."

TMT will look to progress offtake and finance discussions for the rest of the year and into 2020 with a final investment decision targeted for April. In the meantime, the company will look to finalise its environmental approvals and mining lease grant, as well as kick off detailed engineering studies.

Prentice is confident his company's cost estimates will closely mirror actual numbers because of its collaboration with FLSmidth Inc, which built and now maintains many of the kilns used in some of the world's most notable vanadium operations, including TSX-listed Largo Resources Inc in Brazil.

"If your kiln doesn't work then your whole project economics go out the window," he said.

"We knew we had to deal with a group that has got current hands-on experience in running this part of the circuit, but what that's meant is we have had a little bit more capital. But, from our point of view, we were very comfortable spending a bit more on that because that's where the real key risk is."

While the Gabanintha orebody hosts some potential base metal credits, TMT has not yet determined if their extraction will prove economic. Prentice said it was something the company may look to build into the circuit once the vanadium operation was up and running.

– Michael Washbourne



TMT's Gabanintha project hosts a proven and probable reserve of 29.6mt @ 0.88% V<sub>2</sub>O<sub>5</sub>