Cassini Resources (ASX: CZI)

West Musgrave Joint Venture Promises Rich Rewards

The west Musgrave project of Cassini Resources (ASX: CZI) located in Western Australia near the South Australian border, has moved into an important developmental stage. *By Ron Berryman*

CASSINI RESOURCES IS CURRENTLY UNDERTAKING a scoping study, the first of three important stages towards a definitive feasibility study, which is expected to be completed by October this year.

One of Australia's largest undeveloped nickel/copper deposits, West Musgrave was discovered by Western Mining Corporation in 2000 and was subsequently divested by BHP in 2014 following its takeover of WMC.

Cassini acquired the project for $250,000, plus a two per cent net smelter royalty interest, and should Cassini become a producer from the project, an inflation-adjusted $10 million payment after 12 months of production.

The project area contains the Nebo and Babel sister deposits and the 156 million tonnes at 0.6 per cent copper Succoth deposit as well as other highly-prospective exploration targets.

In August 2016, Cassini entered into a three-stage $36 million earn-in joint venture agreement with Australian copper mining company OZ Minerals (ASX: OZL) providing Cassini with a clear pathway to a decision to mine and potential cash flow for the company.

The arrangement with OZ Minerals has the potential to provide the company with a free-carried 30 percent of a producing company.

"OZ Minerals is a great partner, they're aligned, they're a producer at Prominent Hill and with them involved it means we're not as capital constrained as we were when we did our original scoping study," Cassini Resources managing director Richard Bevan told *The Resources Roadhouse.*

"The West Musgrave project is a world class asset, which currently has a resource of more than 850,000 tonnes of contained nickel and 1.8 million tonnes of contained copper.

"One of the strengths of the project is that while it's primarily a nickel/copper deposit there are a number of other minerals to make up that resource.

"It's fairly shallow so it's open pit, it's a very flat tabular resource so it has a low strip ratio and there are a number of other key metals in the deposit that there means there will be significant by-product credits.

"The operation we're contemplating is relatively large scale, it's got a long mine life of 15 years with lots of potential for upside and I think when you're looking at the strategic value of projects, if you can maximise your opportunities by operating over the complete commodity price cycle you can be guaranteed of experiencing times when the price is high.

"The counter balance to that is the work we've done to date shows that the operating costs would position it in the lower third of the C1 cash costs curve.

"That's the other thing you look for, that you're still making money when lots of other people aren't."

The $36 million earn-in joint venture with OZ Minerals covers three stages.

The first stage involves an expenditure of $3 million for a further scoping study and the provision of two technical staff;

The second stage of $15 million covers the pre-feasibility and definitive feasibility studies plus $4 million for regional exploration; and

The third and final stage covers another $10 million towards the definitive feasibility study and a further $4 million for regional expenditure.

Bevan said a recent 11-hole infill and extension drill program had demonstrated the continuity

of massive sulphide and additional discovery potential at Nebo.

A single hole was drilled to test the continuity of high-grade mineralisation between 100 metres spaced sections in the main Nebo orebody and returned 7m at 1.29 per cent nickel, 0.4 per cent copper and 0.30 per cent platinum group elements allowing more accurate modelling of the high-grade core of the deposit.

The Sugar Lode, which was discovered by Cassini in the northern 'roll-over zone' of the Nebo Lode in 2014, returned a best result of:

7m at 1 per cent nickel, 1.45 per cent copper, 0.02 per cent cobalt and 0.93 per cent PGE, including 3m at 1.87 per cent nickel, 1.87 per cent copper, 0.03 per cent cobalt and 1.76 per cent PGE from three holes.

Bevan said the PGE grades in this intersection were particularly promising and some of the highest recorded in the deposit, which remains open to the west and east and considered a priority exploration target due to the high-grade nature of the mineralisation.

"The drilling program successfully highlighted the potential for additional resources growth at Nebo warranting a more thorough resource definition and drilling program during later study phases," Bevan continued.

"We've now initiated a further scoping study as the first of three stages as manager of the project and taken a little bit of a step back just to contemplate some different scenarios just finding out the optimal size of the plant and the mining operation and we expect the new model to be an improvement on our 2015 study.

"Our focus at this stage is about increasing our level of confidence around the metallurgy especially the transition and weathering domains and updating our studies and the throughput rate.

"That'll come to a culmination over the next few months with an end date scheduled for October, which should allow OZ Minerals to be in a position where they can make a decision to continue later this year."

Bevan said that presuming OZ Minerals made a positive decision to proceed Cassini, the managers of the operation, would move onto the Pre-Feasibility Study stage which was expected to take about 18 months.

"In the second stage OZ are scheduled to spend $19 million on development and exploration and in the final stage there's an additional spend of $14 million over 12 months," he explained.

"If they complete that phase they end up with 70 per cent of the project and Cassini will be free-carried to 30 per cent."

Bevan added that the project had received strong support from the local community and the project exploration camp was located only 30 kilometres from the Jameson community, which has an airstrip.

Cassini Resources' focus at the moment is firmly fixed on progressing the West Musgrave project but it is also upbeat about the company's other two prospects in the region—the Mt Squires gold project and the West Arunta zinc target near Lake Mackay.

Both projects are owned 100 per cent by Cassini.

The Mt Squires gold project has historical drilling results including 15m at 2.3 grams per tonne gold from 31m, and 5m at 4.7g/t gold from 34m, while a maiden drill program at West Arunta intersected broad zinc enriched zones.

Mt Squires comprises four adjoining exploration licences and historical data collected by the Geographical Survey of Western Australia indicated the existence of a large geochemical anomaly with elements that are commonly associated with hydrothermal gold and base metal mineralisation.

"Once we've moved onto the Pre-Feasibility Study stage with West Musgrave we'll have the ability to gear up and do some exploration at Mt Squires and West Arunta," Bevan said.

"I think West Musgrave has medium to long term benefits for our shareholders but we need to balance that with some exploration that will drive shareholder value through the drill bit."

The Short Story

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