

Kalgoorlie base for Neometals lithium vertical integration

Neometals, the WA based technology minerals project developer, is using its 13.8% stake in the Mt Marion lithium mine near Kalgoorlie as the backbone to its downstream product and growth strategy. Neometals is also developing its Barrambie titanium project together with a range of mineral processing technologies, however, it is the pursuit of lithium value chain integration that promises the company global relevance in the battery supply chain.

Mt Marion is the world's third largest lithium operation after the Atacama Salar (SQM/Albemarle) and Greenbushes (Tianqi/Albemarle) and is run as a JV between Neometals, China's leading lithium producer Ganfeng Lithium and Mineral Resources Limited. Mt Marion has a current mine life of ~20 years and its JV partners supply more than 20% of the world's lithium units.

Neometals is advancing its lithium story on several fronts with planned downstream processing of lithium concentrates, lithium battery recycling and the investigation into potentially disruptive lithium processing technologies. The plan to continue driving down costs and participate across the value chain is spearheaded by a proposal to develop an expandable 10,000tpa 'Kalgoorlie Lithium Hydroxide Plant', which is earmarked for completion by 2021.

The proposed Kalgoorlie plant would initially use lithium concentrate from Mt Marion for processing into lithium hydroxide, a key ingredient for electric vehicle and stationary batteries.

The lithium source from Mt Marion has been third party validated by Ganfeng who are presently upgrading the spodumene concentrate to lithium hydroxide chemical for global battery market end-users. Like



Ganfeng, Neometals intend to use a modern, conventional direct-conversion sulphate process and aims to expand initial production using future supplies from its own WA lithium projects (Mt Edwards and Mt Holland).

Managing Director Chris Reed stated it was all about Neometals moving down the production cost curve, "Basically we want to parlay our offtake rights at Mt Marion (a minimum of 12.37% of annual spodumene production from 2020) into the production of lithium chemicals for the EV and stationary storage battery markets."

"Mt Marion is a great income stream but we need to move down the cost curve in the longer term. If we produce lithium hydroxide locally we will have a cost advantage owing to removal of transport, shipping and tax costs where every ~1 tonne of lithium hydroxide comes from ~7 tonne of spodumene feed", Reed said.

In addition to lithium hydroxide production



in Australia, Neometals is also conducting proof of scale test work of its battery recycling process and other potentially disruptive lithium processing technologies.

Battery recycling completes the Neometals lithium vertical integration and cost reduction story - with raw material supply, value adding for battery end-users and finally a recycling solution to recover battery minerals at end of life. Neometals estimates that for every tonne of lithium hydroxide recovered from EV batteries through recycling, it is possible to recover a tonne of nickel metal and one to two hundred kilograms of cobalt.

In relation to local opportunities coming from Neometals developments, Chris Reed commented,

"The Company has and will always look to support the Kalgoorlie community, as it shares a deep history with the mining town. The Kalgoorlie Lithium Hydroxide Plant will bring a number of advantages to both Neometals and Kalgoorlie including job creation, local economy stimulation and will also create a large focus on Kalgoorlie with such a big project in a rapidly growing commodity space being located and established in the region".