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Public Companies

Southern Hemisphere charges at booming battery market

Steve Kales | SPONSORED
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Southern Hemisphere Mining's Los Pumas project is just a stone's throw from the rail line that runs to the port city of Arica only 175km away. Credit: File.

Southern Hemisphere Mining is eyeing entry into the booming electric vehicle market after initial leach amenability test-work declared ore from its Los Pumas manganese project in Chile suitable for battery metals.

The company is now optimistic that results from the first stage of its ore test-work could now lead it to the high-purity manganese sulphate monohydrate (HPMSM) used, together with other minerals such as lithium, nickel and cobalt, in the cathode structure of lithium-ion batteries.

Management says that prospect would provide a significant boost to the economics of its wholly-owned Los Pumas project given lower-grade ore is now potentially viable. The project also has a large, low-grade indicated and inferred resource of 264 million tonnes at 2.4 per cent manganese.

The tested ore achieved about 99 per cent extraction of manganese under "standard" leach conditions and produced a solution containing 80 grams per litre manganese.

Southern Hemisphere engaged Perth-based technical specialists Mn Energy to conduct the preliminary test-work. Mn Energy has already designed a patent-pending leach-purification method for manufacturing HPMSM from previously uneconomical low-grade manganese ore.

Los Pumas Manganese Project lead director **Natalie Dawson** said:

It is a great opportunity to combine Mn Energy's patented technology with the company's wholly owned Los Pumas Project to extract more manganese more efficiently. Given the project's location and surrounding infrastructure, the Los Pumas Manganese Project should start attracting interest from those within the electric vehicle industry.

Southern Hemisphere says end-product HPMSM can be more effectively transported, meaning the battery-metals explorer is now looking at a lower capital expenditure as the new process has six fewer steps to build into a future plant. Manganese has traditionally been used in the production of steel, specialty alloys and aluminium products. But interest in the metal now centres on its increasing use in the battery market sector, with Tesla and Volkswagen producing a new battery with a higher proportion of manganese and no cobalt.

However, the most vital piece of information for the long-term success of the project may well be the location of the dirt from where it came.

Los Pumas is just a stone's throw from the rail line that runs from La Paz in neighbouring Bolivia to the port city of Arica only 175km away, providing an easy export route to electric vehicle production facilities in the United States.

While that appears geographically-close, politically the binds are even closer, with the free-trade agreement between the US and Chile likely to prove a major factor in determining the final destination for the project's HPMSM.

The Biden administration's Inflation Reduction Act of 2022 mandates at least 40 per cent of US-made EV batteries must contain critical minerals from that nation's mines or from countries with which they share free-trade deals. That figure will rise to 80 per cent in 2027 and that is good news for those planning on pulling a battery metal out

of the ground in Chile, which signed a free-trade agreement with the US in 2004.

Last October, the US also revealed plans for its Department of Energy to expand domestic manufacturing of batteries for electric vehicles and the electrical grid, with US\$2.8 billion (AU\$4.2 billion) in funding for 20 manufacturing and processing sites across 12 States under its Bipartisan Infrastructure Law.

However, the US may not yet have everything its own way with the European Union (EU) last week passing its new Critical Raw Materials Act, which outlines how it now intends to ensure a secure and sustainable supply of critical raw materials essential in supporting the energy transition.

That is politico speak for how it can decrease its reliance on China for critical minerals, including manganese.

Battery-grade manganese was included in the Act's list of critical raw materials, which are those considered to be of high economic importance and of high supply risk to the EU. The mineral was also identified as a strategic raw material, which recognises its importance in meeting Europe's decarbonisation efforts and in defence and space applications.

Europe currently relies on importing high-purity manganese to meet 90 per cent of its demand, meaning opportunity may again be knocking for ASX-listed explorers.

And demand for manganese is unlikely to slow down any time soon with commodity researchers CPM Group forecasting it is set to grow tenfold by 2030 to 3.1 million tonnes per annum.

However, demand for the product from a non-Chinese source may turbocharge the atmosphere for anyone playing in that sandpit if a dent can be put into the Asian heavyweight's hold 95 per cent of manganese sulphate production capacity, as estimated by Bloomberg in 2021.

Southern Hemisphere has etched out nearly 24 million tonnes grading at 7.8 per cent manganese within the top 20 metres of its project. But the company also says it still has

plenty of scope to expand its shallow-dipping, flat-lying resource along strike with a swarm of vertical feeder structures yet to be tested at depth.

The next stage of work at Los Pumas is processing with an added focus on pushing its product to the many players in the battery metals industry. With no shortage of suitors likely, the next few months could be pivotal for the company as the planets appear to be aligning in the Chilean sky.

[Source: The West Australian 22/03/2023](#)