

Green graphite for Metals of Africa

Metals of Africa Ltd boasts high quality graphite from its project in Mozambique, but its plans for environmentally favourable spherical graphite are expected to have end-users sitting up in their seats.

Currently spherical graphite – a key ingredient in lithium-ion batteries used in electric cars – is produced mainly in China using harmful chemicals such as hydrochloric acid.

Metals of Africa managing director Cherie Leeden said her company was investing in a collaborative pilot mill in the US, which is based on a chemical free process of spherical graphite production, which will make the company's graphite stand out from the crowd.

"The clean energy revolution is really what is driving the demand for the graphite. We are most focused on the electrical vehicle and home storage batteries, because that is where the demand is really growing," Leeden said at Africa Down Under 2016.

"Traceability is going to be key. There are several legislations that are enforced in the US right now which dictate that if a battery company is going to receive green energy grants, they must be accountable for their battery components.

"Currently, most of that involves the Chinese hydrochloric link. I think once we have a source that bypasses that environmentally negative process, this graphite should be in high demand."

Metals of Africa will boast a 100% traceable product, and it expects to attract more end-users once the pilot mill is operational next month.

"We are working on securing binding off-take agreements. We have been in detailed due diligence phase with a number of end-users across the Americas and Asia for several months," Leeden said.

"There is a lot of interest coming out of Japan, Korea, China and the US in respect to securing natural graphite and also spherical graphite."

Metals of Africa has conducted extensive lithium-ion battery tests, and has been "pleasantly surprised by results", according to Leeden.

"The results to date indicate that our natural graphite is performing better



Cherie Leeden

than synthetic graphite. Why that is quite relevant is that synthetic graphite costs about twice as much as natural graphite," Leeden said.

"There is a huge push from the battery end-users, the electric vehicle manufacturers, to switch from synthetic graphite to natural graphite because it is cheaper and it is producing even better results."

In an increasingly crowded market cost is vital, and the fact that its Mozambique projects have an opex among the lowest in the world, gives Metals of Africa a distinct advantage.

Aside from its participation in the production of spherical graphite, Metals of Africa will yield high quality graphite from its Montepuez and Balama projects in Cabo Delgado Province, Mozambique.

Balama's total resource is 16.3mt and Montepuez's 61.6mt. Both boast large and jumbo flake size distribution of 50%, making them some of the richest graphite deposits in Mozambique.

– **Jonathon Daly**



New perspectives: Cameroon Minister of Mines, Industry and Technological Development, Ernest Gbwaboubou, told Africa Down Under his Government was conscious it needed to do more to attract new investors at a time of low commodity prices. Gbwaboubou said legal and regulatory frameworks were under revision to ensure better management and more transparency in exploration and mining activities. There is also a push to increase the depth and access to pre-competitive data in the country. Some 57% of Cameroon is now covered by hi-res geophysical surveys and the total area of the country will be covered by geological and geochemical mapping by the end of 2016 with the release of 14 new maps to follow.