

Commodities, Features

Sizzling silica



CONTRIBUTOR

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Potential is emerging in Australia's silica industry. Anthony Fensom highlights the companies planning to strengthen the commodity's place in the country.

The race to become Australia's next silica sand producer is heating up, as demand intensifies and supply of the key mineral dwindles. Who will be the next miner to benefit?

"Dwindling output and environmental concerns are putting pressure on global supply, just as demand increases from Asia's fast-growing solar power industry and other glassmakers," says Neil McIntyre, chief executive officer of emerging silica sand miner Diatreme Resources.

"It's a perfect storm and for emerging producers such as Diatreme, we are extremely well placed to benefit."

Production race

Diatreme plans to produce premium-quality silica for the solar PV industry from its Galalar project, which is located near the world's biggest operating silica sand mine at Cape Flattery in Far North Queensland.

Having recently secured \$10 million from investors for its key project, McIntyre is confident of advancing the project into production within two years.

"We have been well supported by our key shareholders and that's given us the confidence to progress our development schedule," he says.

The company is currently advancing a definitive feasibility study and an environmental impact study, together with conducting further exploration at the project.

An economic study released in April 2020 showed the project could create more than 100 jobs for the local community of Hope Vale and Cooktown, injecting up to \$42 million during its operation.

A drive-in, drive-out operation is planned, with Galalar set to become Hope Vale's biggest private employer.

Many of the economic benefits will flow to the native title holders, who have a direct 12.5 per cent stake in the project.

“Galalar will be transformational for the region and we’ve received strong backing from local stakeholders, including the First Nations community,” McIntyre says.

“Subject to the necessary financing and approvals, we aim to be in production as early as late 2022, helping support Far North Queensland’s post-COVID recovery.”

Highlighting the strong demand from Asia, Diatreme signed its third memorandum of understanding over potential offtake supply to the Chinese market in May.

The company has flagged its continued engagement with “a range of potential offtakers and other partners.”

However, Diatreme is not the only company seeking to capitalise on the silica sand boom.

Nearby, Metallica Minerals is advancing its plans for a new silica sand mine, also located near the Cape Flattery mine.

In August, the company released a scoping study for its Cape Flattery silica sand project, which followed the completion of a 98-hole drilling program.

Further metallurgical studies on its silica sand samples are expected in the fourth quarter of 2021, with the company aiming to complete a pre-feasibility study and progress the environmental approval process.

WA projects

Meanwhile on the west coast, Perth-based miners are also moving to develop new projects.

In its latest quarterly report, VRX Silica announced it had moved to the next stage of the environmental approval process for its Arrowsmith North silica sand project, located 270 kilometres north of Perth.

With three silica sand projects in Western Australia, the company expects to commence first production at Arrowsmith North in late 2021, followed by its Muchea and Arrowsmith Central projects.

“Interest in the company’s products from Arrowsmith North remains incredibly strong and continues to grow,” the company states, flagging potential offtake partners in South Korea, Japan and Taiwan.

Another emerging Western Australian producer, Perpetual Resources announced on September 14 a scoping study on the economics of a direct-shipping-ore (DSO) operation at its Beharra project, located 300 kilometres north of Perth.

In June, the company was awarded a mining lease for the project, which Perpetual sees as becoming “the leading Mid West export silica sand project, with the lowest known impurity profile.”

Also in Western Australia, Australian Silica Quartz Group is progressing a scoping study for its Albany White Hill silica sand project, examining the potential for exports of 0.5 to one million tonnes per annum.

Elsewhere, Suvo Strategic Minerals is working towards a maiden JORC resource for its Nova silica project, while Cauldron Energy is progressing its acquisition of river-mouth sand licences located at the mouth of the Gascoyne River at Carnarvon.

Regardless of which company wins the race for production, the experts agree on one thing: more supply is essential.

“Silica sand is a finite resource, and it is running out,” Diatreme’s McIntyre says.

“Importantly, with an increasing focus on ESG issues, the need for sustainably produced supply has become critical.”

Supply shortage

The Asia-Pacific region is already suffering a supply shortfall, driving prices higher. Forecaster IMARC Group reports significant supply deficits in China, Taiwan, Japan and elsewhere, with supply constraints due to depletion and environmental restrictions on dredging.

For example, Chinese imports have grown from 270,000 tonnes a year in 2014 to more than two million tonnes in 2019, with the current solar energy boom only further increasing

demand.

IMARC estimates the Asia-Pacific silica sand market could reach nearly \$US8 billion (\$10.9 billion) by 2026, requiring an additional 40 million tonnes per annum of high-quality silica. The global market could expand to reach \$US20 billion over the same period.

Increased demand could also arise from the world's decarbonisation efforts. Researchers at the National Renewable Energy Laboratory in the United States are testing new thermal energy storage technology that uses silica sand as a medium.

The research suggests using silica sand for thermal energy storage could help replace traditional heating fuels, such as coal and natural gas, potentially replacing less sustainable energy sources.

"Traditional four-hour storage technologies don't scale well to the grid or city scale. Now that we are in need of large-scale energy storage, this technology makes a lot of sense," researcher Patrick Davenport said in a statement.

Silica has been listed among other "new economy minerals" by the Queensland Government for its use in emerging technologies powering the global drive towards electrification.

For miners such as Diatreme, the opportunity is enormous.

"Australia has the necessary silica sand and importantly the regulatory framework to deliver sustainably produced supply. The future is extremely exciting for the entire industry, as we work to deliver the next wave of projects to meet the increasing demand," McIntyre says.

**#Australian Silica Quartz Group #Diatreme #Galalar #Metallica Minerals #mining
#silica sand #Suvo Strategic Minerals #VRX Silica**

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