

# Plenty of sizzle left in Siviour

Upstream production might be within touching distance for leading Australian graphite hopeful Renascor Resources Ltd, but managing director David Christensen is not tempting fate.

Renascor stands alone as the country's best chance for local graphite production via its Siviour project, about 15km west of the quiet coastal town of Arno Bay on South Australia's Eyre Peninsula. That frontrunner position was reaffirmed in early August when the company published robust economics for its proposed vertically integrated graphite mine and downstream facility.

Christensen has been at the helm of the company since long before its acquisition of Siviour in late 2015. Over the past eight years, the US-raised lawyer has not only overseen the significant growth of the project's resource – now the world's second largest proven graphite reserve – he has also spearheaded efforts to put Renascor at the forefront of global graphite demand.

Renascor holds the primary approvals necessary to build an upstream mining operation at Siviour, with negotiations for offtake and project finance gathering pace following completion of a DFS-level study on the company what the refers to as its battery anode material (BAM) project.

It is an enviable position that few other graphite players have advanced to, but Christensen has no intention of reflecting on his company's achievements until the task at hand is officially completed.

"I'll be happy once we're through the construction phase and we're producing product," Christensen told **Paydirt**.

"Up until then, you're just trading one challenge for another, that's kind of where we are right now. There's certainly a long road ahead, but we're in a much-needed commodity that studies have shown we can produce for a very good price. Hopefully we can be a bit of a roadmap for how you can really extract a lot of value out of critical minerals here in Australia."

Renascor is progressing value engineering in preparation for construction of the upstream graphite concentrate operation at Siviour. Current workstreams include flotation locked-cycle tests to validate the optimisation of the process flowsheet, geotechnical assessments for the desalination facility and detailed design on non-process infrastructure.

The BAM study forecasts Renascor will be both a low-cost downstream and upstream producer. Operating costs for the purified spherical graphite product are estimated at \$US1,782/t over the first 10 years and \$US1,846/t over the 40-year mine life, while graphite concentrate can be delivered for \$US405/t over the first 10 years and \$US472/t over the life-of-mine.

Other key estimates for the vertically integrated operation include post-tax NPV of \$1.5 billion, IRR of 26% and average annual EBITDA of \$363 million. A phased



David Christensen

development strategy is proposed to offset some of the execution risk associated with the full \$395 million downstream capital requirement.

Renascor intends to fund the upstream capex of \$214.5 million via its existing cash balance (\$129 million at June 30) and debt facilities. The Adelaide-based company already has a conditionally approved loan facility of \$185 million from the Australian Government's Critical Minerals Facility. Discussions are reportedly progressing with Export Finance Australia (EFA), the Clean Energy Finance Corporation (CEFC) and potential commercial lenders.

POSCO and Mitsubishi Chemical headline the company's potential offtake customer base.

From Christensen's perspective, the appetite for funding an advanced graphite project such as Siviour has never been stronger. According to Benchmark Mineral Intelligence, battery-related graphite demand is tipped to increase 300% by 2028 with further accelerated demand from 2032.

"We're entering an era where we need more graphite projects – and not some, but a lot," Christensen said.

"If you look even at the medium term, we're going to need 30, 40, 50 more projects. So, we're going to need new projects to feed the new demand. That's why, from an offtake perspective, we need to guarantee that offtake stream to give us the confidence to make a final investment decision.

"The offtake discussions are more about ensuring that we're moving the right amount of volume over a long enough period of time to backstop the financing. The market waxes and wanes, most battery minerals – including graphite – are probably a bit off right now from where we were nine months ago.

"When you look at our targeted customer base, it is for service into the ex-China market. Factors impacting the graphite price right now tend to be exclusively related to what's happening in China. In terms of our potential customer base, if you look at some of our non-binding offtake agreements, they are with customers who are looking to move into the North American, but also the European, markets.

"If you're trying to find ex-China sources of graphite, we look like one of the more developed projects in terms of permitting and approvals and feasibility work. And we're obviously in a good jurisdiction, being here in Australia."

Shortly after releasing the BAM study, Renascor confirmed it had entered into a licensing agreement with leading German independent battery mineral consultants Dorfner ANZAPLAN GmbH to use a hydrofluoric acid-free purification process at its planned downstream facility.

Renascor and Dorfner have been collaborating for several years over this eco-friendly purification process.

"It was more about ensuring we could meet the requisite ownership requirements to go through financing more than



Renascor is set to become one of the world's lowest-cost producers of both upstream and downstream graphite products via its Siviour project in South Australia

anything else," Christensen said. "In terms of the uniqueness of the processing, I think what this demonstrates is there's a process that works with our graphite, we've gone through an engineering phase and we have a high degree of confidence that this particular flowsheet works well for us. It's probably more about de-risking it from a financing point of view to ensure we can move forward into the larger costs associated with the construction capex when we get to that stage."

Renascor has flagged a 13-month construction period for the initial upstream operation at Siviour. Christensen would ideally like to see the company enter the commissioning phase and producing first graphite concentrate during 2025 to take advantage of those forecast supply deficits.

Graphite is yet to ascend to the same lofty heights as other battery minerals such as lithium, but Christensen believes it's time is coming – and coming fast.

"It's been a lot slower for a number of reasons, probably the most significant one

being that China dominates the market across all parts of the supply chain – from production of graphite, to the midstream and the downstream – so you just don't see the same transparency as you do with other minerals," he said.

"China's likely to continue to dominate a lot of the battery minerals and production of lithium-ion batteries and everything in between, but it's expanding and it's expanding considerably. We've seen a major uptick in the gigafactory pipeline in North America, in particular after the IRA announcement, and Europe is following fast.

"The entire market is moving from what's been historically a Chinese market to ex-China and, as that happens in graphite, you'll see much more transparency in terms of pricing, you'll see non-Chinese projects being valued more and I think we'll see a new degree of interest in the commodity.

"We want to be in a position when that flex point does come. We'll have an early mover advantage because we'll have moved forward and we'll actually be producing product. We'll be able to benefit not just on paper, but in practice."

– Michael Washbourne



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