Mike Rosenstreich

Managing Director **Hexagon Resources**

Graphite is an often overlooked ingredient in battery manufacture, and juniors like Hexagon Resources are readying to take advantage of future demand. Cameron Drummond spoke with Hexagon managing director Mike Rosenstreich about his experiences in the mining industry and graphite as an emerging product.

Q. What is your educational and professional history?

I consider myself to be a specialist generalist; starting from a strong technical background I then gained credit skills as resources banker and then merged that experience to building mining businesses.

In the early 1980s I fell into geology almost by accident, pushed by a love of the New Zealand wilderness and an introduction to the head of Otago University's Geology Department.

In NZ it wasn't seen as much of a career path unless you liked coal or were prepared to travel. I travelled – about 100km north of Dunedin, when US major Homestake Gold offered me my first job at the Macraes gold project, I think DDH 3.

Homestake shaped my early career with terrific opportunities in WA and Queensland in exploration, advanced projects and production over eight years.

I completed a Masters of Mineral and Energy Economics and joined Rothschild, a boutique lender and investor in the Australian resources sector.

I covered technical and credit issues, working on projects all over the world, across a wide range of commodities. That was a pretty pivotal point in my career.

In 2004, I joined Bass Metals as CEO. We acquired projects in Tasmania and defined high-grade polymetallic resources, made exciting new discoveries and had five years of Cu-Pb-Zn-Au-Ag production.

After leaving Bass in late 2013, I set up a boutique consultancy, linking technical and financial aspects of resources projects.

Q. Tell us about your current role.

In early 2017, I was asked to join Hexagon as managing director to bring a more commercial, development-focused skill set to commercialise the McIntosh flake graphite project located in the Kimberley region of WA.

Graphite isn't so much a commodity as a product, and our challenge is to ensure that we understand what customers want and then determine through our test work and process designs how we can meet those specifications.

My role includes developing a definitive feasibility study and secure offtake and project financing so that we can get into production as soon as practical. We are focussed on being part of this current energy and technical materials revolution, and graphite is a core component of that.

Q. How is development work at Hexagon tracking?

It's important to emphasise that our success largely depends on meeting key technical milestones on the commercialisation path. This year we have completed the first PFS level study for a start-up phase of the project; with NPV of $260m and IRR of 46 per cent from an annualised production rate of 100,000tpa of high-grade flake concentrate; and preliminary battery related test work on secondary processed battery anode feedstock – all of which came up positive.

We're also developing our marketing strategy.

Our advantages are a clean ore-type and a natural coarse flake endowment which should enable us to diversify our product mix from the PFS defined "one product for battery anodes" to potentially two products with the second, large flake product aimed at the expandable graphite market.

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Q. Where would you like to see Hexagon in five years?

Established as a vertically integrated supplier of high-purity, premium battery related minerals, obviously graphite, maybe extending to cobalt and other metals.

McIntosh gives us leverage to get into production, then develop down-stream value-add opportunities.

Q. How important is graphite to the new strategic metals boom?

Vital. "Lithium ion batteries" is a misnomer! They are "graphite-nickel-lithium ion cobalt" batteries. While the technology is changing fast, graphite is the dominant anode material and there is 5 to 10 times more graphite than Li and Co in a lithium ion battery.

The demand in this sector is huge and, in my view, underestimated.

There is a strong price imperative for manufacturers to increase the proportion of the cheaper natural flake graphite to synthetic graphite in anodes from the current level of 30 per cent, and our belief is that this will increase demand significantly as natural flake has enhanced electro-chemical attributes.

As upstream producers, our challenge is to demonstrate reliable production, at scale, of consistent high-quality natural graphite and from stable jurisdictions such as Australia to create a low-risk procurement chain for end users.

Q. What is the best piece of advice you have been given over your career?

I like to think that my "ears are not ornamental" so I have heeded numerous snippets of advice over my 34 year career.

In banking I learnt the concept of risk and reward, which is fine in exploration. But in developments and acquisitions I focus on risk and regret; seeking to minimise the potential for regret as much as possible.