

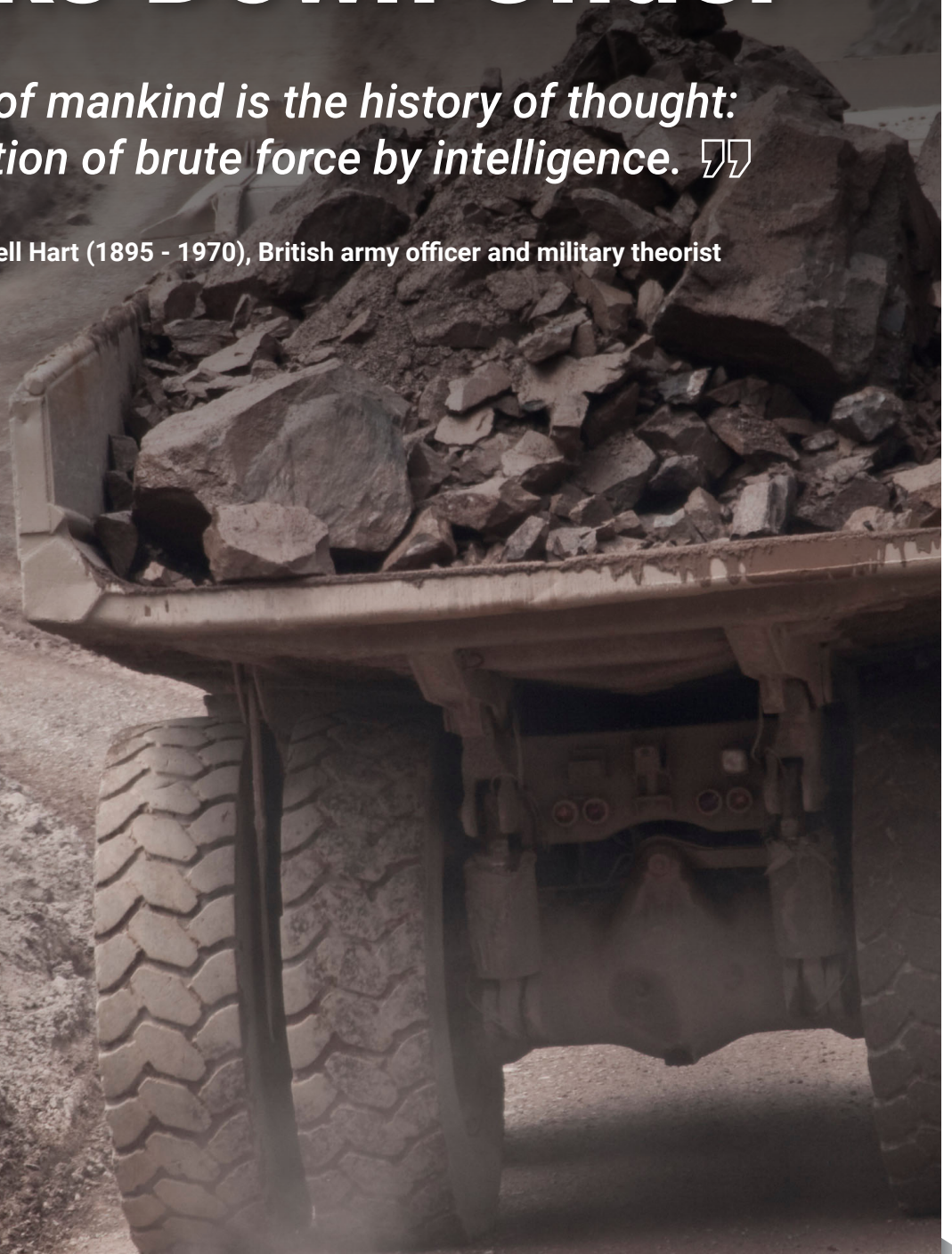


Resources

Stocks Down Under

📖 *The history of mankind is the history of thought: the subjugation of brute force by intelligence.* 📖

- Sir Basil Henry Liddell Hart (1895 - 1970), British army officer and military theorist



— QUEENSLAND PACIFIC METALS

Re-energising nickel production

— FENIX RESOURCES

Dark red destiny

— PROVINCE RESOURCES

The guinea pig of green hydrogen production

QUEENSLAND PACIFIC METALS

Re-energising nickel production

Stocks Down Under rating: ★★☆☆

ASX: QPM
Market cap: A\$172M

52-week range: A\$0.013 / A\$0.19
Share price: A\$0.14

Queensland Pacific Metals is the owner of the Townsville Energy Chemicals Hub, better known as the 'TECH Project'. TECH is a new production base in our Far North for critical minerals in the lithium battery and Electric Vehicle industries. As the availability of high-grade nickel starts to worry both investors and the industry at large, Queensland Pacific Metals believes this is the right time to try a more cost effective and sustainable way of producing battery minerals at a time when other processing options are seen as high risk and low reward.

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FENIX RESOURCES

Dark red destiny

Stocks Down Under rating: ★★

ASX: FEX
Market cap: A\$160M

52-week range: A\$0.061 / A\$0.395
Share price: A\$0.35

In the theme of new and upcoming iron ore production from juniors, WA-based Fenix Resources – Fenix meaning 'dark red' – is on a roll at its Iron Ridge Project with a production start in late 2020 and with first shipments in February. And that's after a quick two-year construction period. While it's still a small project, the strength of iron ore prices in recent days has prompted the company to think big in terms of expansion while it searches for other prospects. The only downside here is that we think the iron ore price may have peaked.

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PROVINCE RESOURCES

The guinea pig of green hydrogen production

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Share price chart



Source: Tradingview

The big brother to the nickel industry

The TECH Project is located in the 'Lansdown Eco-Industrial Precinct', an industrial park about 35 km south of Townsville, which, as the name suggests, is designed to be Australia's first environmentally friendly manufacturing and processing hub. The aim is to sustainably produce high-grade battery products, including nickel sulphate and cobalt sulphate, key ingredients in nickel-cobalt-manganese and nickel-cobalt-aluminium precursor materials used in lithium-ion batteries. The project will also produce high purity alumina and other by-products with little waste. QPM has already secured its ore supply from private New Caledonian miners, meaning there is no operational costs from on-site mining or tailings.

TECH's initial Pre-feasibility Study outlines a plant life of 30 years with a ramp-up of 12 months, processing up to 600,000 wet tonnes of ore per annum. The PFS also highlights an EBITDA of A\$261m and a post-tax Net Present Value of A\$1.47bn (at a 10% discount rate) and an Internal Rate of Return of 30.7%.

Following a well-supported \$15m share placement at 8 cents per share, QPM is now fully funded to complete its Definitive Feasibility Study (DFS). A Share Purchase Plan is also being planned to raise a further \$3m as investors continue to show interest. Favourable assay results from its pilot scheme has triggered QPM to consider doubling its production capacity as the nickel shortage looms.

Quality over quantity

While QOM is clearly concerned about the adoption of an alternative battery chain in Australia, the company's biggest concern is the availability of nickel and the most sustainable ways to produce it. As the demand for high-grade nickel rises, producers face the issue of depleting nickel sulphite reserves and a lack of new discoveries. There's also the issue of nickel extraction, which can be costly, environmentally unfriendly and, in some cases, unsatisfactory in producing high-grade nickel products from low-grade ore. Unlike mainstream processes, like HPAL (high pressure acid leaching), which use high temperatures and sulphuric acid to separate nickel and cobalt from laterite (aluminium) ore, QPM wants to use the Direct Nickel Process (DNP), which uses nitric acid to extract metal. DNP arguably has many advantages over HPAL, including lower emissions, less waste and a 95% extraction rate. By recycling 98% of nitric acid, QPM estimates it will have lower capital costs as well as a quicker road to production.

Given the positive assay results, QPM has the option to produce an intermediate Mixed Hydroxide Product (MHP) before further refining work to make premium nickel and cobalt sulphate. According to QPM, MHP previously sold at 70% of the LME nickel price, but rising demand could easily push this further. And as a premium product, nickel sulphate could net QPM around US\$2,000-3,000 per tonne over MHP, adding another incentive to go at full speed when the capacity is there.

Given the company already has two major offtake partners in Samsung and LG Chem, the recent assay results have prompted QPM to increase the project's scale to 1.2-1.5 million tonnes per annum. While that will take some extra money and power, Lansdown's industrial hub is enough to power ten TECH projects.

The need for green

Construction on the TECH Project is due to begin shortly, with an estimated completion in May 2023. What's interesting about this project is that Townsville's Queensland Nickel refinery, closed since 2016, used the same New Caledonian ore. Given the challenges presented by HPAL and other nickel processes, the success or failure of QPM's direct nickel strategy could have a direct impact on Queensland's nascent nickel industry as well as production elsewhere, particularly given the abundance of nickel laterite reserves in Australia. The harder operational work required for HPAL combined with the poor availability of high-grade nickel means that companies like QPM are taking notice of DNP in line with a greener EV/battery industry.

The task for QPM now will be to produce samples of MHP for other off-takers before the upgrade to nickel-cobalt sulphates and other by-products, including converting aluminium hydroxide to high-purity alumina – another battery component – and iron to high-grade haematite. This will also provide data for the DFS. The other task is to find the ore supply to meet the expansion plan. Funding is necessarily the most important consideration given the capital cost of US\$297m, but TECH does meet the criteria for NAIF funding and the existing offtake negotiations will likely attract other partners. The fact that in early June 2021 POSCO and LG recently agreed to invest US\$15m at A\$0.136 per share bodes well here. QPM's share price has risen markedly in 2021, but ahead of this DFS and in a buoyant environment for nickel, we think there's more where that came from. Four stars.

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Share price chart



Source: Tradingview

Red hot demand

The Iron Ridge project is in the Murchison district of Western Australia, 600 km north-northeast of Perth, 350 km south-west of the Port of Geraldton and 67 km north-east of that bustling Murchison metropolis, the town of Cue (population 328). A single open-pit operation, Iron Ridge has a mineral resource estimate of 10.5 million tonnes containing 64.2% Fe. The project is estimated to produce 1.25 million tonnes over 6.5 years. Fenix made four shipments in the March quarter for a total of 220,000 tonnes for an average price of US\$156 per tonne. And now that the ramp-up is complete, the company is progressively looking toward lower shipping costs.

In the midst of iron ore’s recent run, Fenix took the opportunity to expand its resource base with a farm-in and joint venture agreement with Scorpion Metals (ASX: SCN). The agreement will see Fenix earn a majority stake in Scorpion’s tenements, which lie directly adjacent to Iron Ridge, with the right to earn a 70% interest during a farm-in period of four years. Given the project’s small size but high-grade product, the company believes now is the perfect time to expand outward while demand remains high.

This is peak price territory (for now)

The current trend of record iron ore prices has really filled aspiring producers with hope. When Fenix completed the project's Feasibility Study in late 2019, it outlined a tidy annual EBITDA of \$16.4m at a cash cost of \$111.43 a tonne, a modest Net Present Value of \$54.3m (at a 10% discount) and a high Internal Rate of Return of 59%. Two years later and the demand from Chinese steel-makers has substantially improved that EBITDA, 'but the project's capital expenditure is still a mere \$11.9m.

Diesel prices have also moved downward in the company's favour. Logistically, transporting to Geraldton accounts for over 50% of the company's operating costs – a major factor in Fenix's trucking joint venture with transport company Newhaul Ltd to optimise costs.

Although still a small project, Iron Ridge's high-grade ore has netted offtake agreements with Chinese state-owned Sinosteel and Hancock Prospecting's Atlas Iron at 50/50. Atlas Iron was once the owner of Iron Ridge, so Hancock knows its value. Sinosteel is now a major player in WA, having acquired port and rail interests in and around Geraldton, which could mean further infrastructure options down the track for Fenix. With offtake agreements for 100% of the product already complete, the obvious next step for Fenix is Iron Ridge's expansion. As the company currently has a smaller production target of 1.25 million tonnes per annum, the next hurdle will be to ascertain the best parts of Scorpion's 33,950-hectare tenement area and scope out other stranded iron ore assets in the region.

May the odds be ever in your favour

Even if Chinese demand drops off faster than anticipated, Fenix is confident in the long-term outlook for high-grade ore as the market eventually balances itself out and oversupply looms again. Now that a steady-state production has started, the company expects a reduction in C1 costs from \$93.2 to \$82-88 per wet metric tonne. In the meantime, operating cash flow from the March quarter came in at \$21.8m, leaving a cash balance of \$26.7m and no debt. With its cash position improved, Fenix has now tasked itself with drilling for a resource up to 10 million tonnes and complete another Feasibility Study for a 1 million tonne deposit under the terms of the farm-in agreement with Scorpion.

No matter how fortunate the timing, the swift role into production at Iron Ridge (which was only acquired back in 2018) bodes well for Fenix, GWR Group and other juniors as well as WA's vibrant iron ore industry. Even with such a strong start, the company has made a logical and strategic move with Scorpion as other established and aspiring iron ore producers jostle for the best resources. The question, obviously, is what iron ore is going to do after its stellar performance in 2020 and into 2021.

Iron ore is not expected to stay at the current levels for long. Consider an Australian Financial Review article from 13 May by Timothy Moore headlined 'Iron ore extends rally to US\$237, Bank of America lifts forecasts'. Iron ore will average \$US172 a tonne in 2021, according to BoA. In 2022 that drops to US\$144 a tonne. Which means a bear market is coming. We think it started to kick in about the time of BoA upgraded its forecasts. Fenix is set up to make money at iron ore prices much lower than the current. However, that doesn't mean the market will allow the stock price to stay steady, so Fenix is two stars for now.

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Share price chart



Source: Tradingview

The theme is green

Province Resources is not afraid to think big: the company has scooped up a range of projects in Western Australia, including its mineral sands and sulphate of potash (SOP) projects in the Gascoyne region, the Pascalle Gold Project in Paterson province and the Guama Nickel project in the Frasers Range. It also has the Skane Vanadium Project in Sweden. Both the Gascoyne potash and mineral sands projects are supported by strong demand as well as WA's emerging potash and mineral sands industries. And although neither project has been given the green light, the company is buoyed by the support shown for the nearby Mardie Salt and Potash and Coburn Mineral sands projects.

All these projects are likely to take a back seat now that Province has acquired the HyEnergy Renewable Green Hydrogen Project at Carnarvon, on the coast of WA's Gascoyne region, about 900 kilometres north of Perth. As a new entrant to the renewable energy game, this company is proposing a hybrid solar and wind project to produce 60,000 tonnes of green hydrogen per annum for use domestically and overseas in line with the state's decarbonisation strategy. Province's share price markedly re-rated in February based on general hydrogen excitement. It's cooled a little since April, but we see another re-rating coming as HyEnergy progresses.

Green hydrogen is the new lithium

What exactly makes hydrogen 'green', we hear you ask? Well, unlike 'blue' or 'grey' hydrogen, which is made cheaply from gas or coal, green hydrogen is made from water and renewable energy via electrolysis. Currently, that makes it more expensive, but not for long - Wood Mackenzie and Goldman Sachs estimate that green hydrogen production costs will equal fossil fuel-based hydrogen by 2040. Province won't have to wait that long because Carnarvon, with its arid and windy environment, has the sun and wind resources to provide zero-carbon power virtually straight away. Add to that the sudden Federal and WA government support for the burgeoning industry, including the state's \$10m Hydrogen Fund, and HyEnergy could be a first-mover example for other GH projects.

The big hurdle now is finding both the funding and adequate power to support an 8GW renewable power facility and downstream hydro plant. The company has sagely signed an MoU with French power producer Total Eren, a leader in renewable power, to perform a feasibility study to develop the project in two stages. The partnership with Total Eren is a massive vote of confidence and presents an opportunity to scale up HyEnergy from a 1GW to an 8GW project. As the company aims to supply both the domestic and export markets, Province has also signed an MoU with the Shire of Carnarvon for access to the Dampier to Banbury Natural Gas Pipeline (DBNGP). The MoU supports the region as much as it does Province: the WA government wants to see 10% green hydrogen replace LNG in the pipeline by 2030. Although the project's scoping study has only just begun, both parties' confidence (and possible financial support) has given the company greater certainty of a viable project with greater market access.

Shipping sunshine

The swing to green hydrogen from Province and a swathe of other companies – including iron ore producer Iron Road – doesn't just reflect the developing economic benefit of green hydro, but also the changing demands from investors. Province is one of several companies we've written about to date which has adopted standardised Environmental, Social and Governmental (ESG) reporting to measure its own sustainability. While governments slowly show support for the industry through funding measures, the company acknowledges that investment moves toward green hydro stocks is a catalyst to influence legislative change – much in the same way lithium and other Electric Vehicle/battery minerals have changed an entire industry.

With the HyEnergy scoping study underway, Province will spend the next six to twelve months in funding discussions with public stakeholders. If the outcome of the scoping study is positive, that will allow the company to commence a full feasibility study and gain potential offtakes with the Australian Gas and Infrastructure Group (owners of the DBNGP). With HyEnergy's scalability increasing faster than originally planned for, the company was able to make a share placement of \$18m at 15 cents in May to boost its cash balance to \$23m.

While the interest in HyEnergy makes us wonder what the company plans to do with its other projects in the long term, we can't deny that we're eager to see a positive outcome in the next few months. We think Province stock, if it finds support around the placement price, has more upside given the support HyEnergy has received to date and the reasonable expectation of more to come. Four stars from us.



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