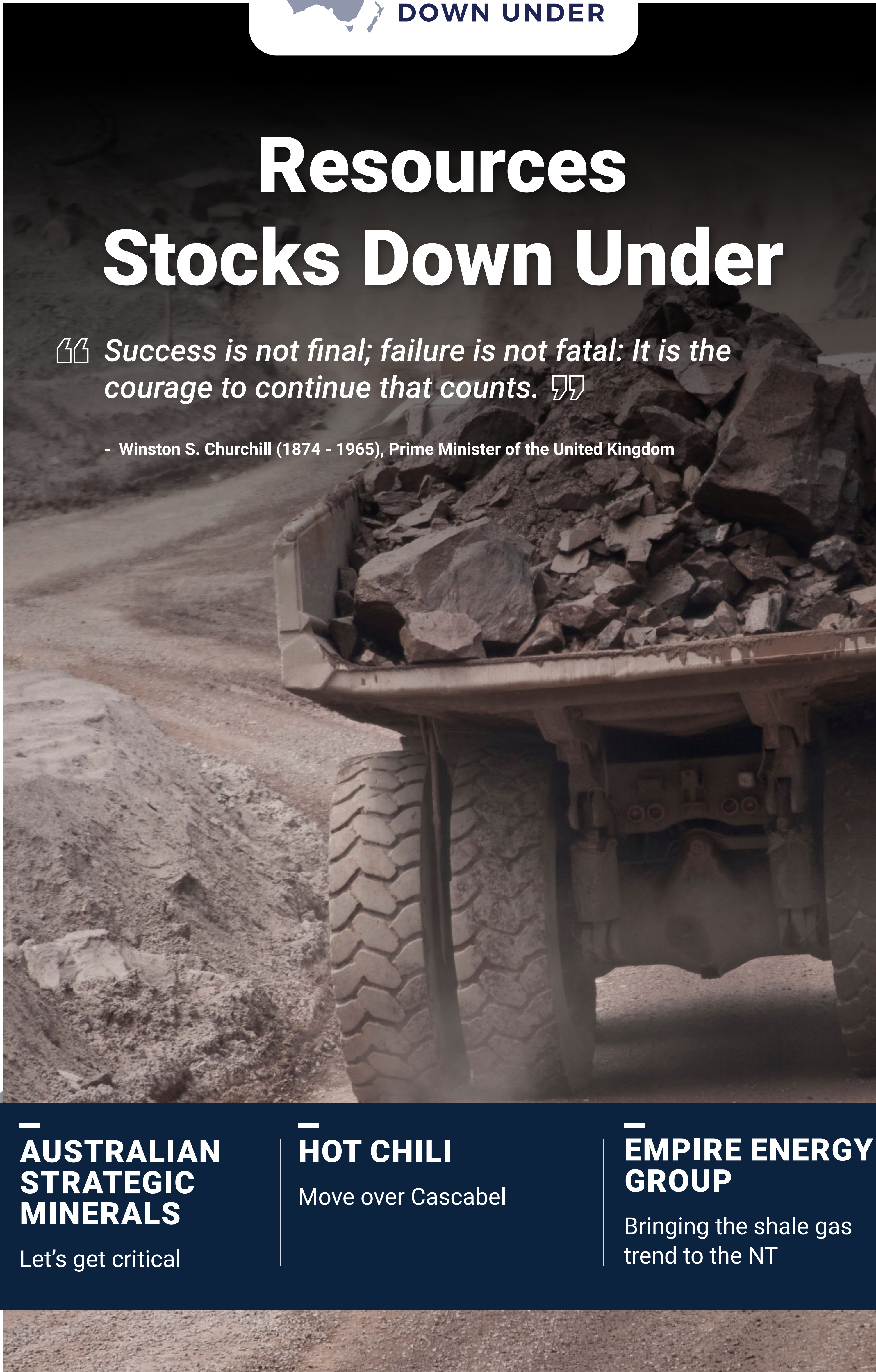
STOCKS DOWN UNDER

28 JANUARY 2021

Resources Stocks Down Under

"Success is not final; failure is not fatal: It is the courage to continue that counts."

- Winston S. Churchill (1874 - 1965), Prime Minister of the United Kingdom



AUSTRALIAN STRATEGIC MINERALS

Let's get critical

HOT CHILI

Move over Cascabel

EMPIRE ENERGY GROUP

Bringing the shale gas trend to the NT

AUSTRALIAN STRATEGIC MINERALS

Let's get critical

Stocks Down Under rating: ★★★★

ASX: ASM
Market cap: A$ 702M

52-week range: A$0.84 / A$6.84
Share price: A$ 5.21

Contrary to the gold fervour in some quarters, some feel that we should be directing our attention to more critical Rare Earths. Having recently demerged from gold producer Alkane Resources (ASX: ALK), WA-based Australian Strategic Minerals is now independently focused on becoming a key critical metal producer. The company has two major initiatives: its cornerstone Dubbo Project in central-western NSW, which will supply a range of high-purity metals and oxides necessary for tomorrow's technologies, and an independent metals technology facility to provide these materials on a commercial scale.

READ MORE

HOT CHILI

Move over Cascabel

Stocks Down Under rating: ★★★★

ASX: HCH
Market cap: A$125M

52-week range: A$0.009 / A$0.058
Share price: A$ 0.04

Named after its original intentions to mine for uranium in Chile, Hot Chili's board might feel more inclined to change its name now that it has a potentially ground-breaking project in the red metal. Or maybe not: any company would be chill if they had a significant copper resource and the money to extend it further. Hot Chili's share price made it above 5 cents in October on the news that its flagship project, Cortadera, continues to return high-grade copper discoveries.

READ MORE

EMPIRE ENERGY GROUP

Bringing the shale gas trend to the NT

Stocks Down Under rating: ★★★★

ASX: EEG
Market cap: A$ 117M

52-week range: A$0.13 / A$0.47
Share price: A$ 0.345

Empire Energy Group is an experienced oil and gas producer hoping to become one of the first shale gas producers in the NT. Having seen the uplift in shale gas production in the US, the company has quickly grown into an Empire of its own with almost 14 million acres and an estimated 13 trillion cubic feet of gas in the McArthur Basin and Beetaloo Sub-Basins. Buoyed by the support of the NT government and a return to fracking, Empire sees its shale gas play as an answer to Australia's volatile energy sector.

READ MORE

AUSTRALIAN STRATEGIC MINERALS

Let's get critical

Stocks Down Under rating: ★★★★

ASX: ASM
Market cap: A$ 702M

52-week range: A$0.84 / A$6.84
Share price: A$ 5.21

Contrary to the gold fervour in some quarters, some feel that we should be directing our attention to more critical Rare Earths. Having recently demerged from gold producer Alkane Resources (ASX: ALK), WA-based Australian Strategic Minerals is now independently focused on becoming a key critical metal producer. The company has two major initiatives: its cornerstone Dubbo Project in central-western NSW, which will supply a range of high-purity metals and oxides necessary for tomorrow's technologies, and an independent metals technology facility to provide these materials on a commercial scale.

Share price chart

Source: Tradingview

Let's split

ASM has met several milestones since going public in July, starting with its optimisation strategy at Dubbo before construction designed to reduce operating and mining costs, including flotation and solvent extraction tests. The Dubbo Project draws on a large polymetallic resource, including zirconium, tantalum and other Rare Earth Elements, which were once largely supplied by China. Located 25 km south of Dubbo – the town famous for its open-range zoo – ASM's project is construction-ready with a projected mine life of 15-20 years. ASM describes the Dubbo Project as an alternative solution to sourcing critical materials needed for high-growth sectors including renewables, healthcare and robotics. The project has a current resource of 75 million tonnes grading of 1.89% zircon, 0.44% niobium and 0.74% total Rare Earth Oxide.

ASM's very recent success with metal-refining technology has helped investors sit up and take notice. In late November ASM stock hit $3.88 on the news confirming the metallisation process' scalability after ASM's Korean partner Ziron Tech produced 120kg of titanium-copper alloy at 99.5% purity. In order to bring its mine-to-metal strategy to fruition, the company has completed its agreement with Korean manufacturer Dongkuk Refractories and Steel to construct a South Korean commercial pilot plant for its patented metal-refining technology, supplying in-demand oxides and metals to meet the expected deficits.

On 1 December 2020, the company announced it had produced 6 kilograms of NdFeB (neodymium-iron-boron) permanent magnet alloys, providing ASM with an avenue into the permanent magnet market and integrating the process into its business strategy.

'Tomorrow's technologies' today

Australia is already a key producer of critical rare earths minerals – critical in the sense that they're required in nearly every emerging technology industry. But China's continual trade petulance and increased demand from European and Asian markets means there is significant room to grow the local supply chain. Even after Dubbo hits the big time the world's supply of critical minerals will still be reliant on a select number of countries, with 75% of zirconium and 85% of Rare Earth Elements produced by China and 85% of niobium produced in Brazil. ASM's strategy is to reduce this over-reliance at a time when global economic prosperity depends more than ever on emerging technologies and applications.

With Ziron Tech, ASM has already conducted testing for a high-purity praseodymium metal. Now it's in the testing stage for dysprosium and neodymium/praseodymium (NdPr) component. We've spoken about the uses for NdPr here at Stocks Down Under with Talga Resources (ASX: TLG) on 8 October, but what's most interesting is the emphasis on zirconium, niobium and hafnium. While zirconium is essential to clean energy, niobium and hafnium are mainly used as alloying elements for industrial purposes. ASM is set to become the only producer of ferro-niobium for use in high-strength low-alloy (HSLA) steel, while niobium-hafnium oxide is emerging as the material of choice for semiconductors and data-storage devices.

The future is not just electric vehicles and batteries

ASM is another junior striving to be net-zero carbon as it integrates further into the critical metals chain, which is just about what we'd expect for a critical rare earths minerals explorer concerned about future sustainability. But it's also a low-cost solution for its growth strategy with Ziron Tech, in which ASM has 95% interest and ownership of all patented metal-refining technology. With a cash position of $20m, the company is now focussed on optimising capital and operating costs at the project with a final feasibility report due in first quarter of 2021.

While the company is engaged in potential offtake agreements, ASM is attracting attention from Australian authorities, like the Critical Minerals Facilitation Office, which is endeavouring to help finance prospective projects like Dubbo. However, with the commitment to critical mineral projects still developing, we're excited to see ASM's straight-forward approach to a future which looks beyond Electric Vehicle and battery production. We believe ASM is a four star project, which demonstrates the scalability of critical mineral projects back home – with a little outside help.

HOT CHILI

Move over Cascabel

Stocks Down Under rating: ★★★★

ASX: HCH
Market cap: A$125M

52-week range: A$0.009 / A$0.058
Share price: A$ 0.04

Named after its original intentions to mine for uranium in Chile, Hot Chili's board might feel more inclined to change its name now that it has a potentially ground-breaking project in the red metal. Or maybe not: any company would be chill if they had a significant copper resource and the money to extend it further. Hot Chili's share price made it above 5 cents in October on the news that its flagship project, Cortadera, continues to return high-grade copper discoveries.

Share price chart

Source: Tradingview

Explorer, producer, developer

Since establishing in March 2016 via, a Preliminary Feasibility Study, that its Productora Copper Project in Chile was 'global' in scale, Hot Chili has added two other important projects to it, one called El Fuego and the other called Cortadera. All lie within a 10 km radius of each other in the Atacama Region of northern Chile (the old Region III), about 600 km north of Santiago's Chilean capital.

As we all know, Chile is the home of 'Big Copper', with monsters, such as the legendary Chuquicamata mine way up in Antofagasta Region. Hot Chili believes that its collection of Atacama Region projects, which it now calls Costa Fuego, is giving it the ticket to join the Big Copper club.

The key breakthrough that allowed the creation of Costa Fuego was Cortadera. This project, optioned in February 2019 from a small family company, turned out to have a large high-grade zone at depth, as partly revealed by diamond drilling in June 2019. How high grade? How does 188 metres at 0.9% copper and 0.4 g/t gold strike you? No wonder, then, that Cortadera came in with an initial Mineral Resource Estimate in October 2020 of 451 million tonnes at 0.46% copper equivalent. Nothing like that had been discovered anywhere in the world since the Marimaca discovery up in the Antofagasta Region four years previously. It puts Hot Chili in the same league as SolGold with its Cascabel discovery in Ecuador from 2013 – a mine named after a real hot chili.

The company maker is here

When Hot Chili added Cortadera to Productora and a couple of high-grade satellites from El Fuego, it had 724 million tonnes at 0.48% copper equivalent. That's a resource of 2.9 million tonnes of copper, 2.7 million ounces of gold and 9.9 million ounces of silver. That in itself was impressive. Throw in the fact that its in an infrastructure-rich region where the altitudes are only 800-1,000 metres and the metallurgy suggested could get you a good, clean concentrate with no arsenic, and it looked like Hot Chili had its company maker. And there's more where that 724 million tonne resource came from because the drill rigs aren't finished building out this big porphyry system by a long shot.

Hot Chili will soon enjoy its first small piece of revenue from Costa Fuego – a March 2020 deal with ENAMI, Chile's state-owned copper smelting company, was struck to allow 120,000 tonnes of Productora ore to be processed annually through the ENAMI smelter at Vallenar on a lease mining basis. The deal was expanded to 180,000 tonnes per annum in December. The numbers aren't huge – ENAMI will pay US$2 a tonne and a 10% royalty on the sale value of the extracted minerals, but it establishes good relations with the locals while Hot Chili goes after big money from a genuine Tier 1 mining operation at Costa Fuego.

Cutting through Chile's tightly held copper hub

Given just how tightly controlled the copper space is in Chile, Hot Chili has played its hand extremely well to get to this point. Despite the country having some of the best copper opportunities, there is a distinct lack of investment opportunities for juniors combined with a slowdown in exploration activity from majors – another reason the company was clever to avoid greenfield prospects, opting instead for proven projects. Because of the proximity of Productora and El Fuego and the company's intention to create a hub along the Vallenar coast (which taps into existing infrastructure), Cortadera's arrival has brought Hot Chili the investor attention it needs to bring the development to fruition.

Hot Chili is currently focussed on providing a second resource estimate at Cortadera and a maiden estimate at San Antonio (one of the El Fuego satellites) to make Costa Fuego a true tier 1 asset, although the fact that Hot Chili has completed much of the groundwork is sure to give it more credibility. It's also working on a Scoping Study for Costa Fuego. As the copper supply looks to be tested in the coming years, finds like Cortadera are enough to excite a hungry market, meaning further hikes in the copper price could push the company's share price and market cap higher.

With greater output, better finances and a valuable copper market, it really looks like everything is, to borrow a phrase from that famous Simpsons episode, 'coming up Millhouse' for Hot Chili. Four stars from us.

EMPIRE ENERGY GROUP

Bringing the shale gas trend to the NT

Stocks Down Under rating: ★★★★

ASX: EEG
Market cap: A$ 117M

52-week range: A$0.13 / A$0.47
Share price: A$ 0.345

Empire Energy Group is an experienced oil and gas producer hoping to become one of the first shale gas producers in the NT. Having seen the uplift in shale gas production in the US, the company has quickly grown into an Empire of its own with almost 14 million acres and an estimated 13 trillion cubic feet of gas in the McArthur Basin and Beetaloo Sub-Basins. Buoyed by the support of the NT government and a return to fracking, Empire sees its shale gas play as an answer to Australia's volatile energy sector.

Share price chart

Source: Tradingview

NT: Australia's new frontier in shale gas

Empire seems to have come out of 2020 more or less unscathed, starting with the first drilling for the company's Carpentaria-1 well in EP187 and continuing with good gas production in the US.

Carpentaria-1 was drilled 85 km east of Borroloola on the eastern side of the Beetaloo Sub-basin. Up in the northeastern part of the Northern Territory, the major sedimentary basin is the McArthur Basin of which the Betaloo is an important component part. Around 70% of the Territory's prospective shale gas resources are estimated to occur in the Beetaloo Sub-basin and a few of the majors, such as Santos and Origin, have started to kick around within it. Empire is the biggest junior in the neighbourhood. Carpentaria-1, so-called because the Carpentaria Highway runs through EP187, was the payday Empire had been looking for in the Betaloo. The well went through a big slab of the Velkerri Shale believed to be good for gas and, as it turned out, there was plenty of liquid-rich gas there.

The next well in the Betaloo is coming soon

The market liked what it saw in Carpentaria-1, pushing the share price to around 40 cents late in 2020, as against the March low of just 15 cents. The presence of liquid-rich gas indicates heavier-end hydrocarbons (or condensate), which has the potential to attract higher prices. The results also put to rest the idea that the rocks within the Basins were too old to support new targets. The next steps for Carpentaria in the 2021 dry season will be a vertical fracture stimulation of the well followed by horizontal flow testing.

The reason Empire is so bullish on the prospect comes from its experience in the US, notably its work in Pennsylvania where shale gas has transformed the US energy market with 70% of energy production coming from shale. The company has been producing conventional oil and gas in the Appalachia region across Pennsylvania and New York State since 2006, covering about 2,400 conventional wells and is now the second-largest natural gas producer in New York State at 18% of total production.

Perhaps because of recent bans on fracking at home, shale gas has been largely unviable due to the necessity of extracting gas trapped at great depths. But the Australian Federal government is now eyeing Beetaloo's potential resources as important targets in the COVID-19 recovery, with Empire signalling that the Velkerri shale could easily rival the Marcellus shale, which runs from New York State to Ohio.

Profit abroad could be balanced with gas recovery at home

The prevalence of shale gas is important to Empire as it provides a window to solving eastern Australia's potential energy problems (with an expected lack of future supply) by using shale gas to complement LNG production as part of the gas-led recovery. Even without this concern, the company is pushing for further sources of both dry and liquid gas to break away from the reliance of imports.

Added to this, Empire's work in the US, which has seen a transition from imported energy to gas-led self-sufficiency, is one of the primary drivers in the company's vision to replicate that success through shale gas production. Fortunately for Empire, the NT's removal of the moratorium on fracking means that the company's ambitious plan for wiser energy consumption at home is a step closer, although whether it could lower energy prices in the eastern states remains to be seen.

Away from home, Empire is also pointing to a more global swing towards LNG in the transition away from coal, with Asian LNG demand likely to rise from 275 Mtpa (million tonnes per annum) to 659 Mtpa by 2035. Darwin is already a major LNG export centre serving China, Japan and South Korea, so it isn't beyond the realm of possibilities to see the NT gas sector as becoming a major hub in its own right. While it's not a proven reserve yet, Empire's prospective resource of 13.5 trillion cubic feet could serve home and abroad through government support and even joint ventures.

Is a gas-led recovery too late for Empire?

The COVID-19 outbreak and oil price war between Russia and Saudi Arabia hasn't had the same impact on Empire, given the company hedged 80% of its 2020 production at a price of US$2.50/Mcf. Hedging will remain in place until 2023, leaving Empire with limited exposure to direct oil prices. In terms of cost, the company was able to keep its drilling costs lower ($8 million) for its one well program, but now that the company has found success at Carpentaria-1 and raised A$18m over the course of the year, the plan is to trigger fast commercial testing success before the gas-recovery window shuts and other energy forms take over.

Empire's MD, Alex Underwood, points out that the lack of commitment toward gas recovery in eastern Australia has contributed to higher prices, meaning that cheaper gas through recovery could lead to a sustained demand domestically, at least in the short term. Given that the company has 14 million acres of land to access and with EP187 only a subset of the resource, Empire may have much more in terms of options (gas vs liquids) to meet its dream of sustaining demand at home while reaping the benefits abroad – or at least filling the gaps before the next solution. Four stars.

Pitt Street Research Pty Ltd

95 Pitt Street, Sydney, NSW 2000, Australia

Pitt Street Research Pty Ltd is founded on more than 40 years of combined experience researching companies in a range of different sectors.

Stocks Down Under (Pitt Street Research AFSL 1265112) provides actionable investment ideas on ASX-listed stocks. The Content has been prepared for general information purposes only and is not (and cannot be construed or relied upon as) personal advice nor as an offer to buy/sell/subscribe to any of the financial products mentioned herein. No investment objectives, financial circumstances or needs of any individual have been taken into consideration in the preparation of the Content. Financial products are complex, entail risk of loss, may rise and fall, and are impacted by a range of market and economic factors, and you should always obtain professional advice to ensure trading or investing in such products is suitable for your circumstances, and ensure you obtain, read and understand any applicable offer document