



ASSOCIATION OF MINING
AND EXPLORATION COMPANIES



Australian Battery Minerals

Investment Opportunities



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Foreword

The genesis of the surge in battery demand can be traced back to 1991 when Sony commercialised the lithium-ion rechargeable battery. As lithium battery production costs fell, and mobile phone and electric car uptake has boomed, the global demand for lithium and other battery minerals has grown exponentially.

Australia has a long and successful history of mining. Australia has the world's largest iron ore province in its north west, one of the richest square miles of gold beneath Kalgoorlie, and one of the largest uranium deposits at Olympic Dam. Australia has been a substantial producer of most minerals for most of its history.

Currently, Australia produces over 60% of the world's lithium by value, dominating one end of the value chain; and all the other the minerals that are needed to manufacture batteries can be found in Australia in a varying level of development. The opportunity to invest in the Australian battery minerals sector is tremendous. Australia has a number of projects exploring, developing and producing battery minerals.

Underpinning these projects is the predicted growth and demand for batteries in the coming decade. An independent report prepared for AMEC identified that the currently \$165 Billion global lithium value chain will grow to a conservatively estimated \$2 Trillion by 2025. To fuel this growing demand more battery minerals projects will need to be developed. Australia has many opportunities in battery minerals.

We have compiled sufficient publicly available information to pique investors and companies' interest; the purpose of this document is to draw together a selection of those opportunities into one cohesive portfolio. What follows is a selection of companies at various stages of development. All are open for investment and for investors to reach out and contact them.

We hope to spur greater consideration of the opportunities for investment in Australia – one of the world's leading mining jurisdictions. Australia has also consistently ranked in the top five jurisdictions considered in the international Fraser Institute Survey. This high ranking reflects the low sovereign risk, unparalleled geology and the opportunity available.

The investment opportunities enclosed vary from exploration tenements, with companies looking to quantify mineralisation, to operating mining companies that may step further down the value chain.

On behalf of the Association of Mining and Exploration Companies, I hope that this document provides the first step to a positive investment in the Australian battery minerals mining and exploration industry.

Warren Pearce
Chief Executive Officer
Association of Mining and Exploration Companies



Message from the Commonwealth Government of Australia

Australia's lithium industry is an emerging, and exciting, player in Australia's resources sector and I am very proud of the work the Government is doing to support and promote the sector.

My vision for the resources sector is to have the world's most advanced, innovative and successful resources sector which delivers sustained prosperity and social development for all Australians. Lithium has a huge role to play in that vision.

I firmly believe we need to grasp the opportunities that lie before us in terms of developing our lithium industry. Australia leads the world in lithium production.



Our mineral reserves cover 90 per cent of the elements required in lithium-ion battery production – but we are yet to enjoy the benefits of downstream development of the industry which would reap even richer rewards. Right now, the ability to process lithium ore into lithium hydroxide takes a product worth under \$1000 per tonne to one worth close to \$20,000 per tonne – a scenario the Government is keen to see come to fruition. In the same vein, lithium prices have tripled since 2010 and global battery consumption is predicted to increase five-fold in the next 10 years. On every measure, the resources sector has increased in importance to the Australian economy over the past 15 years. This has come about because investments were secured over this period and we are now benefiting from the legacy of these investments. There remains plenty of investment opportunities, and our ambition is to drive enhanced investment across the value chain of commodities like lithium. A new strategy recently launched by the Government will help us do that by outlining a plan to maximise our potential as a world powerhouse in lithium-ion battery manufacturing.

Austrade's new Lithium-Ion Battery Value Chain: New Economy Opportunities for Australia strategy recognises our unique position to become a world-leader in this developing market. With growing global demand for lithium-ion batteries, the report flags our once-in-a-generation opportunity to transform into a major processing, manufacturing and trading hub for lithium-ion batteries. These products are powering the mobile device revolution, driving innovation and directing a global shift in energy storage solutions - and we know global demand for this technology is only going to grow over the next decade. We have significant comparative advantages in the lithium sector - our strong economic conditions, skilled workforce and well-established resources infrastructure network to name a few. Leveraging these benefits and attracting fresh investment is the key to accelerating the development of a high-tech lithium manufacturing sector in our own backyard.

The Government's Resources 2030 Taskforce report released earlier this year also acts as a roadmap for how we can put Australia in the best position to make the most of investments in the lithium supply chain. In response to that report, we are now in the process of developing Australia's first National Statement on Resources for 20 years. Our strategy will involve a coordinated plan for the lithium and related critical minerals sector, covering support for infrastructure development, research and development and investment promotion. Our plans will also build on the existing and continuing Government efforts and those of individual companies to develop the lithium industry. Our \$100 million Exploring for the Future program is taking the lead in delivering high resolution geoscience data and models to better understand the mineral, energy and groundwater resource potential of northern Australia. It is producing exciting scientific results, driven by new ideas and advanced analytical techniques that will significantly increase the potential search space for exploration. Likewise, the Junior Mineral Exploration Incentive scheme is helping our smaller exploration companies raise additional capital for greenfield exploration, leading to more investment-ready opportunities and underpinning the future strength of the sector.

Separately, several lithium mining operations in Western Australia expanding their production capacity and moving into downstream processing – two of them having already committed to develop lithium hydroxide plants in Western Australia. The Northern Australia Infrastructure Facility has also provided more than \$115 million to support new infrastructure to help unlock lithium opportunities. This activity is just a taste of things to come. With the right policies I am confident we can advance the lithium industry further up the value chain to see Australia become the world's leading supplier of high grade lithium components including ion-batteries – creating new jobs and opportunities for Australians.

I see a very bright future for our lithium industry, one where it provides a world-class product for export, secure, sustainable jobs for Australians and helps build our nation as well.

Senator Hon. Matthew Canavan
Minister for Resources and Northern Australia

Letter of support

Global battery commodity markets have experienced rapid growth in recent years, and the implications for Australia, and the world, are highly significant.

One component is the potential of battery technologies, and their capacity to revolutionise clean energy, vehicles and consumer products. The second component is that Australia, and Western Australia in particular can supply many of the commodities required by the battery manufacturing industry.

Western Australia has the resources, technical skills and research expertise necessary for the development of this rapidly emerging industry. Western Australia is one of the only jurisdictions in the world that has commercially viable reserves of all of the minerals required for the manufacture of these new technologies.

Western Australia's natural mineral resources combined with its technical skills, industry capabilities and close proximity to the manufacturing centres in Asia, make the state ideally placed to provide for the growing needs of the global battery market.

Western Australia has a strong history of welcoming international investment in the development and extraction of the state's natural resources.

To grasp the opportunities that the growth of battery and renewable technologies presents a new generation of international partnerships is needed.

The forecast demand for the commodities that will drive these technologies is overlaid by concerns regarding security of supply, the quality and consistency of production, and the ethical standards in place by the companies and jurisdictions involved.

Greater focus is now being placed on the ethical supply chain by the end users of technology products.

Western Australia, and the mining companies operating here, benefit from world class regulatory systems regulating environmental, occupational health & safety, indigenous engagement, and mining. These regulatory systems provide strong reasons that Western Australian companies can provide the commodities required for the battery technology supply chain and the reputational certainty demanded in this century.

I commend the Association of Mining and Exploration Companies (AMEC) for their efforts to increase international partnerships and investment in the Australian mining sector, and I hope this publication can help foster the new generation of international partnerships.

Hon. Bill Johnston MLA
Minister for Mines and Petroleum
Western Australia



Letter of support

As a global leader in renewable energy and battery technologies, South Australia is committed to being part of the international solution to fulfil rising demand for battery minerals.

The new South Australian Government has possibly the most ambitious rollout globally of home batteries, to complement our broad uptake of roof-top solar. That's why we have committed \$100 million to support 40,000 home batteries, and are working with Tesla to deliver battery their Virtual Power Plant which could contain 50,000 home batteries.

This builds on our reputation as home to the world's largest grid-connected battery, with other large batteries in the pipeline.

South Australia already has an abundance of and/or is highly prospective for copper, graphite, cobalt, nickel and manganese, all of which are used in various formulations for specific applications. The State Government is looking across the battery mineral value chain from raw materials to final products to identify how South Australia can best leverage its mineral wealth.

South Australia is an internationally-recognised investment destination offering multiple opportunities across the battery minerals value chain from exploration to downstream processing, production and transformational research and development.

Battery manufacturers and consumers are both seeking ethically sourced minerals, creating an additional advantage for explorers and miners operating in South Australia.

South Australia hosts 66% of Australia's known graphite resources including several advanced projects such as Archer Exploration's Campoona Shaft project, Lincoln Mineral's Kookaburra Gully and Renascor Resources' Siviour project targeting Australia's largest graphite deposit.

Graphite production and research into graphene development undertaken by our universities in collaboration with the State's explorers are enjoying success that will lead to commercial opportunities in this rapidly evolving sector.

Local explorers have also become increasingly active in developing cobalt prospects led by Havilah Resources with its Kalkaroo copper-gold-cobalt project and Mutooroo copper-cobalt project in the State's Mid North region. Additionally Gindalbie Metals is progressing its Mount Gunson copper-cobalt project with the MG14 and Windabout deposits both reporting significant cobalt mineralisation. A number of additional discoveries including Archer Exploration's Ketchowla and Polinga and Ausmex Mining's Willalo prospect are all very promising.

With a long history of advanced manufacturing, including multi-metallic smelting capabilities across regional South Australia, an established professional workforce and strong linkages to defence industries South Australia is positioned to take a leading role across the battery value chain.

Being a smaller jurisdiction, South Australia takes pride in its access to decision makers, its close engagement with local communities and case management of strategic investments.

Our excellent endowment in battery minerals provides an opportunity for South Australia to use its international reputation for stable government, experienced and transparent regulation and our enviable lifestyle to attract new investment to this fast expanding renewable resource sector.

Hon. Dan van Holst Pellekaan MLA
Minister for Energy and Mines
South Australia



Why Invest in Australia?

Why Australia

Investing in Australia's mining industry provides companies with access to a growing and resilient economy, close trade and cultural links to the Asia-Pacific region, and a transparent regulatory environment.

Growing and resilient economy

Australia is in its 28th year of consecutive annual economic growth – a track record unequalled by any other nation. This growth is expected to continue according to International Monetary Fund forecasts released in April 2018, which state that Australia is expected to realise average annual real GDP growth of 2.8 per cent between 2019 and 2023 – the highest forecast among major advanced economies.¹

World's largest reserves

Australia has the world's largest resources of gold, iron ore, lead, nickel, rutile, tantalum, uranium, zinc and zircon, while antimony, bauxite, black coal, brown coal, cobalt, copper, diamond, ilmenite, lithium, magnesite, manganese ore, niobium, silver, thorium tin, tungsten and vanadium all rank in the top five globally.² These commodities are essential for powering our economic growth and are critical to building the nation's future. The mining sector is strongly export oriented, accounting for 69 per cent of all export merchandise, which represents six per cent of Australia's GDP.

Open for exploration

Australia remains one of the biggest untapped minerals exploration markets, ranking second in the world for mining investment potential. Despite high levels of exploration and production by Australian and international companies, the continent is relatively underexplored, particularly at depths greater than 100 metres.

Discoveries in both brownfield and greenfield continue to be made. In 2017–18, Australian mining exploration in brownfield projects attracted A\$1.307 billion in expenditure, while A\$666 million was spent on undiscovered mineralisation in greenfield locations.³

Government commitment

High-quality geoscience is fundamental to exploration. The Australian Government has allocated A\$100.5 million over four years to *Exploring for the Future*, a government initiative to boost investment in resource exploration.

The four-year program, led by Geoscience Australia, is gathering new data and information about potential underground resources in northern and South Australia. The outcomes of this program aim to de-risk decision-making processes around investment.

The development of high quality digital infrastructure, including positioning data and satellite data, is on track with the government's *Positioning for the Future* and the *Digital Earth Program*. As well, all state and territory governments have dedicated policies, incentives and strategies in place to support the sector.

Sustainable mining experience

Sustainability is firmly on the Australian mining industry's agenda. Strengths such as environmental management, community engagement and development, water management, innovation and education, combined with strong environmental and safety regulations, have made Australia a world leader in sustainable mining. As a result, international investors can benefit from accessing local personnel and firms with world-leading capability in environmental accountability and corporate social responsibility.

Research and development

Innovation is vital to mining productivity and practices. Australia's world-class research and development (R&D) and Mining, Equipment, Technology and Services (METS) sector have reinforced Australia's position as a global hub for mining innovation. The METS sector is a key driver, leading the way in solutions that automate and optimise mine operations, maximise equipment use, improve extraction, and reduce risks and operating costs.

Seventeen R&D facilities in Australia are currently focusing on exploration, innovation, technologies and training in the resources sector. For investors, this means opportunities to access industry experts and partner with local firms and R&D initiatives across the mining supply chain.

More information

Diverse mineral resources – combined with an advanced equipment, technology and services industry – deliver a competitive edge to mining companies looking to establish a local base in Australia. Visit www.austrade.gov.au to find out more.

¹ International Monetary Fund, World Economic Outlook (WEO) Database, update April 2018.

² Australia's Identified Mineral Resources 2017, Geoscience Australia.

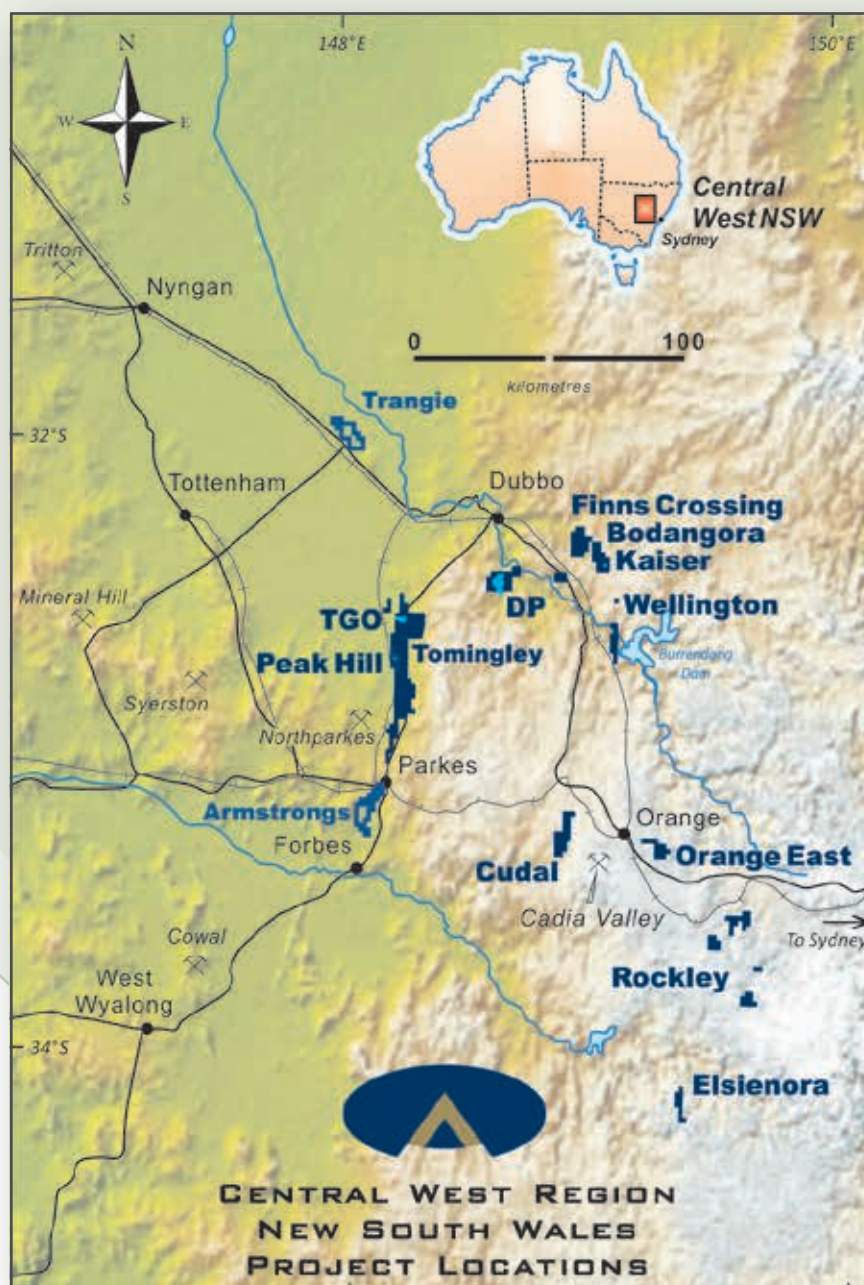
³ Australian Bureau of Statistics, Mineral Exploration Statistics 2017–18, 8415

Opportunities for investment

- Interested in financial investment by a third party, such as a joint venture? – Yes
- Opportunity for further offtake? – Yes
- Opportunities for further processing? – Yes



For further information about these opportunities, please visit our website: www.alkane.com.au



Alkane Resources

About Alkane Resources

Alkane Resources is a public company listed on ASX and OTCQX.

6,000 shareholders.

Dubbo Project

- **Project status** – Located at Toongi, 20km South of Dubbo is construction ready, pending financing.
- **Location** – 300km NW of Sydney (405km from Port Botany by road via Lithgow), NSW (Newcastle most accessible port for bulk imports, 400km Toongi to Newcastle Port via Golden Highway).
- **Government approval status** – Fully permitted with all State and Federal approvals in place.
- **Schedule start of operation of mine / anticipated year of start of mining** – Mine is expected to commence operations 2 years after construction commenced. Construction is dependent on financing. Anticipated that construction will begin in 2018-19.
- **Current expected mine life** – 70+years.
- **Mineral resource or reserve** – (4.4% economic metal oxides) zirconium, Rare Earth Oxides, niobium, hafnium (in order of decreasing share of revenue).
- **Current or planned level of processing (and location)** – Value adding processing will be located at Toongi (20km south of Dubbo), is expected to commence at 0.5mtpa and scale to 1mtpa.
- **Offtake agreements in place (%)** – There are a number of MoU and distribution agreements with partners but no offtake agreements are in place at this time.

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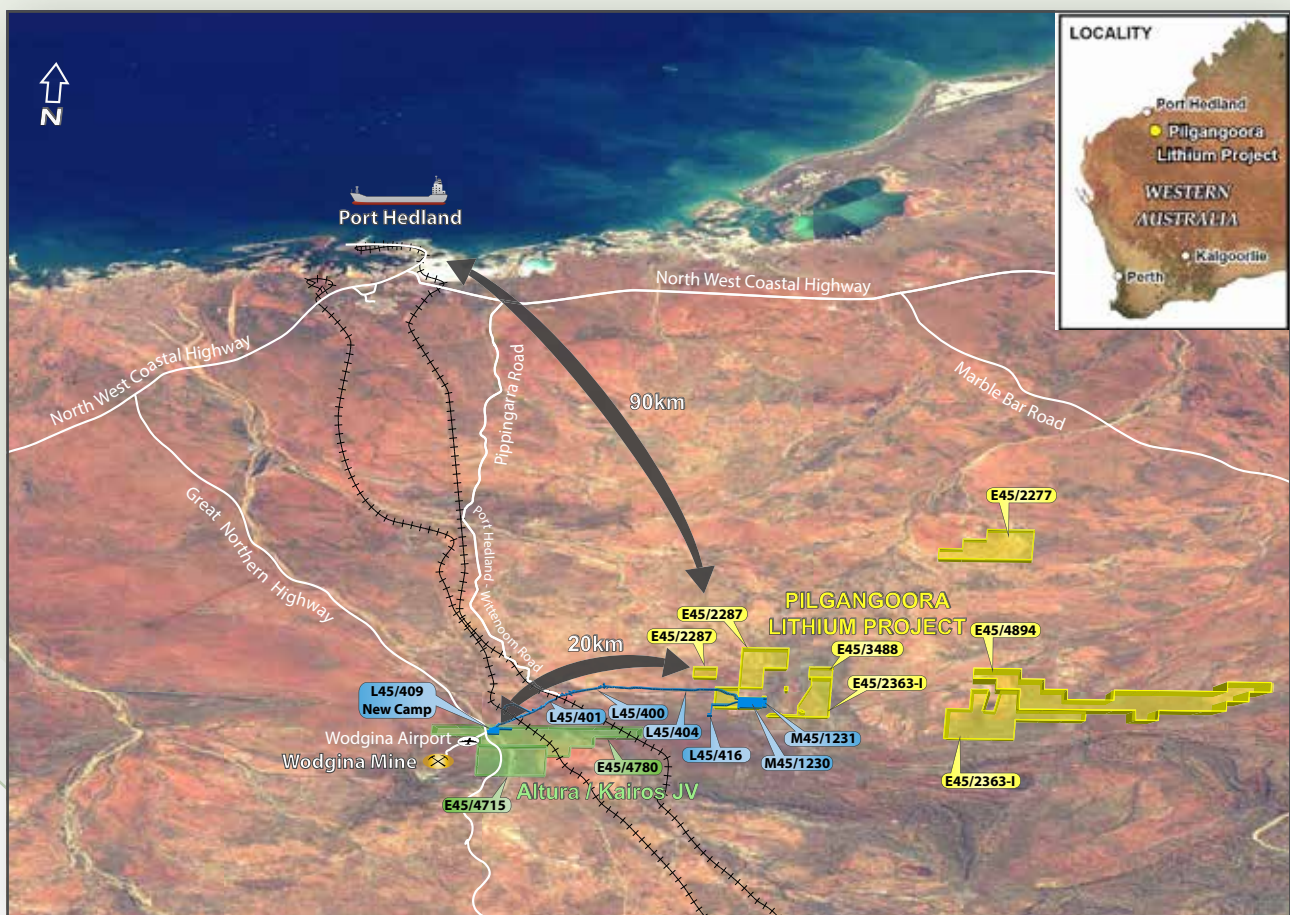
www.alkane.com.au

Opportunities for investment

To discuss this project or other possible opportunities, please contact the company directly.



For further information about these opportunities, please visit our website: www.alturamining.com



Altura Mining

About Altura Mining

Altura is a key player in the global lithium market and is leveraging increasing demand for raw materials for manufacturing lithium ion batteries for electric vehicles and static storage uses. Altura owns and operates the world-class Altura Lithium Project at Pilgangoora in WA's Pilbara, which has a production capacity of 220,000tpa of quality spodumene concentrate. The Company has completed a Definitive Feasibility Study on a potential Stage 2 expansion to 440,000tpa, with a Final Investment Decision due in 2018.

Pilgangoora Lithium Project

Production from the Altura Lithium Mine commenced on 25 July 2018 with the first haulage of spodumene product to the Qube storage facility in Port Hedland following on 7 August 2018.

Current mining operations are proceeding as planned with good overall recoveries from the mine, with run-of-mine (ROM) stocks at an average grade of 1.20% Li₂O. The Altura mining team continues to focus on ramping up production levels to nameplate capacity. The daily monitoring of production tonnages and grade versus the commissioning forecasts indicate the mining and processing are performing at a high level.

Product feed into the process plant has been successfully increased during the commissioning phase with spodumene concentrate grade and recoveries exceeding expectations. The first 4,000 tonnes of product, with the quality specifications as outlined in the table below, has been hauled to the Qube storage facility in Port Hedland. It should be noted these results are a combination of production testing on site and verification sampling from the storage facility itself.

Parameter	Content (%)
Lithium Oxide Grade (Li ₂ O%)	6.1
Iron Oxide (Fe ₂ O ₃)	1.07
Manganese (Mn)	0.12
Mica (mass %)	1.5

The ramp up to nameplate production of 220,000 tonnes of 6% Li₂O spodumene concentrate is targeted for the end of calendar year 2018. Shipments of concentrate are planned at regular intervals in order to suit the offtake partners' consumption requirements.

The verification process required in order to establish the Altura Lithium product will require varied size cargoes to lithium carbonate and lithium hydroxide converters based in China.

Altura Pilgangoora Mineral Resource Estimate (0.40% Li₂O Cut-off Grade) - May 2018

JORC Category	Cut-off Li ₂ O%	Tonnes (Mt)	Li ₂ O	Fe ₂ O%	Li ₂ O Tonnes
Measured	0.40%	8.7	1.12	2.14	97,000
Indicated	0.40%	38.0	1.00	1.93	380,000
Measured & Indicated	0.40%	46.7	1.02	1.97	477,000
Inferred	0.40%	3.8	0.92	1.80	35,000
Total	0.40%	50.5	1.01	1.96	512,000

Altura Pilgangoora Ore Reserve Estimate (0.43% Li₂O Cut-off Grade) - May 2018

JORC Category	Cut-off Li ₂ O%	Tonnes (Mt)	Li ₂ O	Fe ₂ O%	Li ₂ O Tonnes
Proved	0.43%	8.3	1.14	2.13	94,000
Probable	0.43%	32.8	1.03	1.90	338,000
Total	0.43%	41.1	1.05	1.95	432,000

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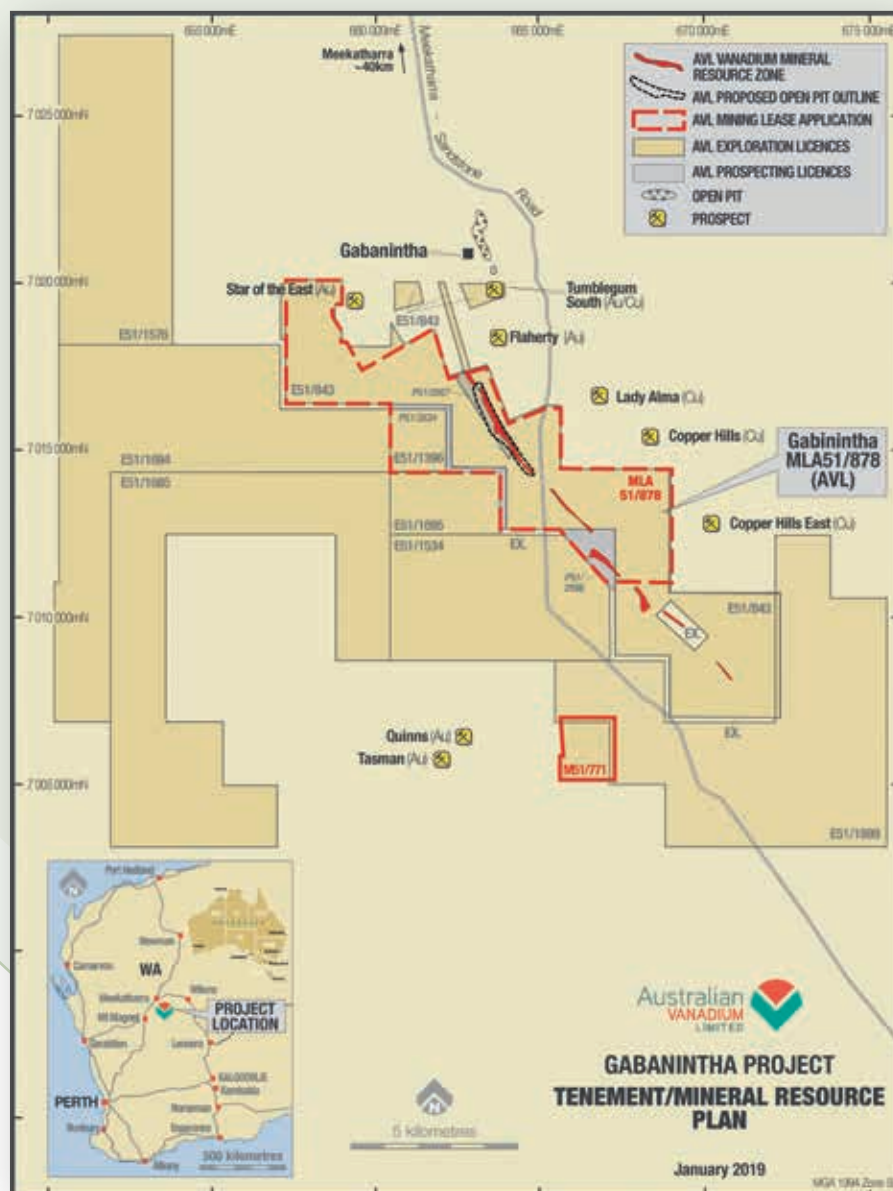
Opportunities for investment

To discuss this project or other possible opportunities, please contact the company directly.

- AVL is looking for project partners to help progress the deposit to production. Equity, offtake, funding, joint venture all considered.



For further information about these opportunities, please visit our website:
www.australianvanadium.com.au



Australian Vanadium Ltd

About Australian Vanadium

Australian Vanadium Limited (ASX: AVL) is an emerging vanadium producer developing a full integrated mining, milling and refining plant at its high-grade Gabanintha deposit in Western Australia. AVL has a strong technical team covering expertise in vanadium exploration through to production. The Company released its Pre-feasibility Study in late 2018. Vanadium is traditionally used to strengthen steel, but growth is occurring in its use in the energy storage market in vanadium redox flow batteries (VRFB). In 2016 AVL launched its 100% owned subsidiary VSUN Energy, with a remit to advance the knowledge and uptake of VRFB in Australia and overseas.

Project 1

- **Project status** – Development.
- **Location (including details and distance to the nearest port)** – Meekatharra, Western Australia, 580km from the port of Geraldton.
- **Government approval status**
– Mining Licence application awaiting approval, discussions are progressing well with the Native Title claimants
- **Schedule start of operation of mine / anticipated year of start of mining** – 2021.
- **Current expected mine life** – +17 years.
- **Mineral resource or reserve (ie. grade)** – Maiden Ore Reserve of 18.24Mt at 1.04% V_2O_5 comprised of a Proved Reserve of 9.82Mt at 1.07% V_2O_5 and a Probable Reserve of 8.42Mt at 1.01% V_2O_5 . The total Mineral Resource is 183.6Mt at 0.76% vanadium pentoxide (V_2O_5) with a high-grade zone of distinct massive magnetite high-grade zone of 96.7 Mt at 1.00% V_2O_5 .
- **Current or planned level of processing (and location)** – Open pit mining and beneficiation operation producing approximately 900,000 tonnes per annum of 1.40% V_2O_5 magnetite concentrate at an average yield of 60%. Planned vanadium pentoxide (V_2O_5) refinery at Gabanintha site with a production rate of approximately 22.5Mlb V_2O_5 per annum over an initial mine life of 17 years. The Gabanintha mineral process facility is designed to treat 1.45 Mt/a of 1.03% V_2O_5 grade ore to generate 10,115 dry metric tonnes of V_2O_5 fused flake (>98.5% w/w) per annum with further processing to provide products for steel, energy storage or other customer requirements.
- **Offtake agreements in place (%)**
– MOU in place with Win-Win Development Group (Win-Win), a private steel and alloy producer based in Chengdu, China. Win-Win is building a 5,000t/a vanadium carbon nitride (VCN) production line which requires approximately 7,000-8,000t/a of 98% V_2O_5 . AVL has also signed a Letter of Intent with German VRFB manufacturer SCHMID to explore potential supply of vanadium pentoxide and/or electrolyte.

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AVL

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Opportunities for investment

- **Interested in financial investment by a third party, such as a joint venture** – The best method for financial investment is via share purchases on the ASX.
- **Opportunity for further offtake?** – All offtake for the project remains available.
- **Opportunities for further processing?** – The project base case is to produce a Mixed Sulphide Product (MSP) that will ultimately require further processing to battery grade cobalt and nickel.



For further information about these opportunities, please visit our website: www.barraresources.com.au



Barra Resources

About Barra Resources

A Western Australian focused explorer and development company focused on shareholder growth through targeting dual high-demand commodities; cobalt-nickel and gold.

Mt Thirsty Cobalt Project is a 50/50 Joint Venture between Barra Resources Limited and Conico Limited.

Project information:

- **Project status** – Pre Feasibility Study.
- **Location** – 20km north-northwest of Norseman, Western Australia; 200km north of Esperance, Western Australia.
- **Government approval status** – Likely simple approval path via the Mining Act 1978, rather than the Environmental Protection Act 1986.
- **Schedule start of operation of mine / anticipated year of start of mining** – 2020.
- **Current expected mine life** – 21 Years.
- **Mineral resource or reserve** – Indicated and Inferred JORC 2004 Mineral Resource of 32Mt @ 0.13% Co 0.55% Ni.
- **Current or planned level of processing (and location)** – Planned processing onsite.
- **Offtake agreements in place (%)** – 0%.

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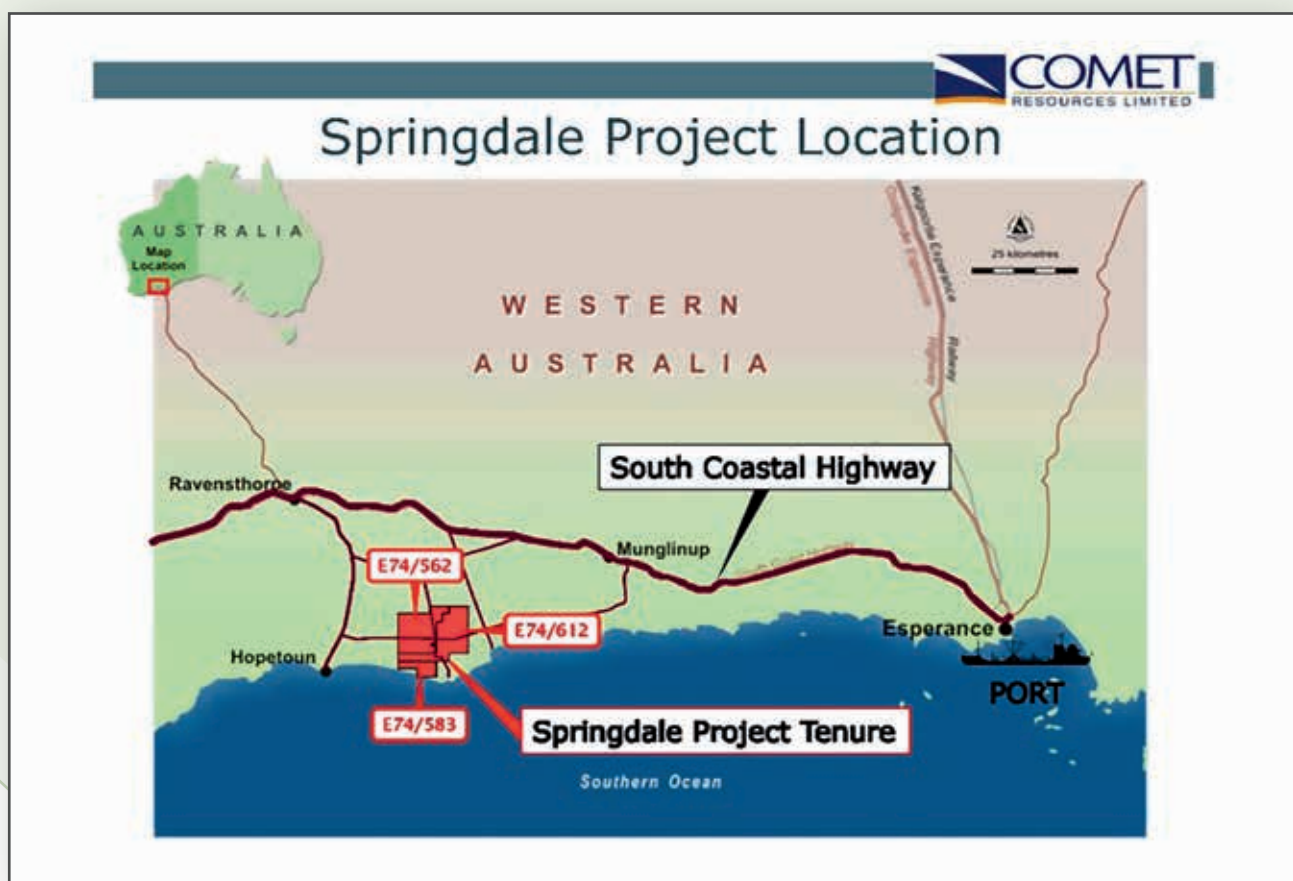
www.barraresources.com.au

Opportunities for investment

- **Interested in financial investment by a third party, such as a joint venture** – Comet is interested in financial investment by a third party, such as a joint venture and/or share placement with or without an offtake agreement.
- **Opportunity for further offtake?** – Opportunity for offtake agreements for graphene products.
- **Opportunities for further processing?** – Opportunity for further processing agreements and offtake for Graphite flake products.



For further information about these opportunities, please visit our website: www.cometres.com.au



Comet Resources Ltd

About Comet Resources Ltd

Comet listed on the Australian Stock Exchange in 1994. The Company discovered and studied the Ravensthorpe Nickel Project. In 2001 Comet successfully sold its final equity to BHP Billiton and returned to Comet shareholders \$32 million. Comet has approximately 203 million shares on issue.

Comet owns 100% of the three tenement's (E74/562, E74/583 and E74/612) that make up the Springdale project. The total land holding at Springdale is approximately 220 square kilometres.

Springdale Project

- **Project status** – Exploration.
- **Location** – The Springdale project is located approximately 30 km east of Hopetoun, Western Australia. The tenements lie within the deformed southern margin of the Yilgarn Craton and constitute part of the Albany-Fraser Orogen.
- **Government approval status** – Granted exploration licences on Farm land.
- **Mineral resource** – Comet has drilled 140 RC holes for a total of 7,857m, 113 aircore holes for 2,901 metres and 20 diamond holes for 1,193 metres. A maiden resource is expected late 2018.
- **Offtake agreements in place** – No.
- **Extra information** – Comet discovered in April 2017 that graphene can be produced from Springdale Graphite raw rocks by electrochemical exfoliation. It is very rare for an unprocessed graphite rock to produce graphene. Seems to be the next thing in battery advancement.

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Opportunities for investment

Element 25 presents a number of opportunities for interested investors:

- On market purchase of shares, via the Company's listing on the Australian Securities Exchange (ASX:E25).
- For companies and offtake partners seeking long term high-purity manganese supply, either as high purity manganese sulphate for Li-Ion cathode manufacture or as Electrolytic Manganese Metal for specialty steels and alloys.
- Direct project investment either at the project level, or as a part of the equity portion of the project finance.
- Lenders who wish to be involved in the debt portion of the project finance.



For further information about these opportunities, please visit our website: www.element25.com.au



Element 25 Limited

About Element 25

Element 25 is an ASX listed company (ASX: E25) focused on the development of the world class 100% owned Butcherbird High Purity Manganese Project located in Western Australia. Butcherbird is a long life Project which will provide secure, scalable supply of high purity manganese for Li-Ion batteries and specialty steel and alloy makers.

Butcherbird Project High Purity Manganese Project

- **Project status** – Scoping Study with robust economics completed in 2018. Pre-Feasibility at advanced stage.
- **Location** – The Butcherbird Project is located approximately 130km south of Newman in Western Australia, with two port solutions, 550km north to Port Hedland or south to Fremantle. The Great Northern Highway and Goldfields Gas Pipelines pass through the Project area providing turn-key logistics and power solutions. High penetration renewables including wind and solar will further reduce costs and carbon intensity.
- **Government approval status**
 - Granted Exploration Licence, Mining Lease under application. Native Title agreements are completed.
- **Scheduled start of operation of mine** – First production scheduled for 2021 subject to funding and approvals.
- **Current expected mine life** – > 25 years, potentially much longer.
- **Mineral resource or reserve**
 - The Butcherbird High Purity Manganese Deposit is a world class manganese resource with current JORC resources in excess of 263 MT of manganese ore.*

- **Current or planned level of processing (and location)**
 - Processing using proprietary low cost processing flowsheet comprising hydrometallurgical extraction of Mn, purification and either crystallisation of battery grade manganese sulphate or electrolytic manganese metal (EMM). The prefeasibility is looking at a number of size options, with a base case of 100Kt of Electrolytic Manganese Metal (EMM) per annum. Processing facility to be constructed at site.
- **Offtake agreements in place (%)** – none finalised, discussions well advanced.

Simple Geology

The mineralisation occurs as supergene enrichment of a regional scale basal manganese shale which underlies much of the Project area. The shale beds are gently folded and where the folds approach the surface topography, supergene processes have significantly upgraded the manganese content to form a potential feedstock for further upstream processing.

The geology and hence mining at Butcherbird are exceedingly simple. The ore zone at Yanneri Ridge is at surface, dips shallowly to the north resulting in a very low strip ratio estimated at 0.2:1. The uniform grade distribution means that the entire ore zone is mined for processing, with no need for grade control or selectivity.

Processing Breakthrough

A new process flowsheet developed in collaboration with CSIRO for the unique Butcherbird ores means that they can be leached into solution at ambient temperature and atmospheric pressure with high level of selectivity and very rapid leach kinetics with approximately 95% of the manganese extracted in around 30 minutes to produce a 90% pure manganese solution.

This liquor is then further purified and then either put through a crystalliser to produce high purity manganese sulphate for use in lithium ion battery cathodes or put through an electrolysis plant to produce electrolytic manganese metal both of which represent high purity high value manganese products.

*Reference: Company ASX release dated 17 April 2019

ASX

Perth

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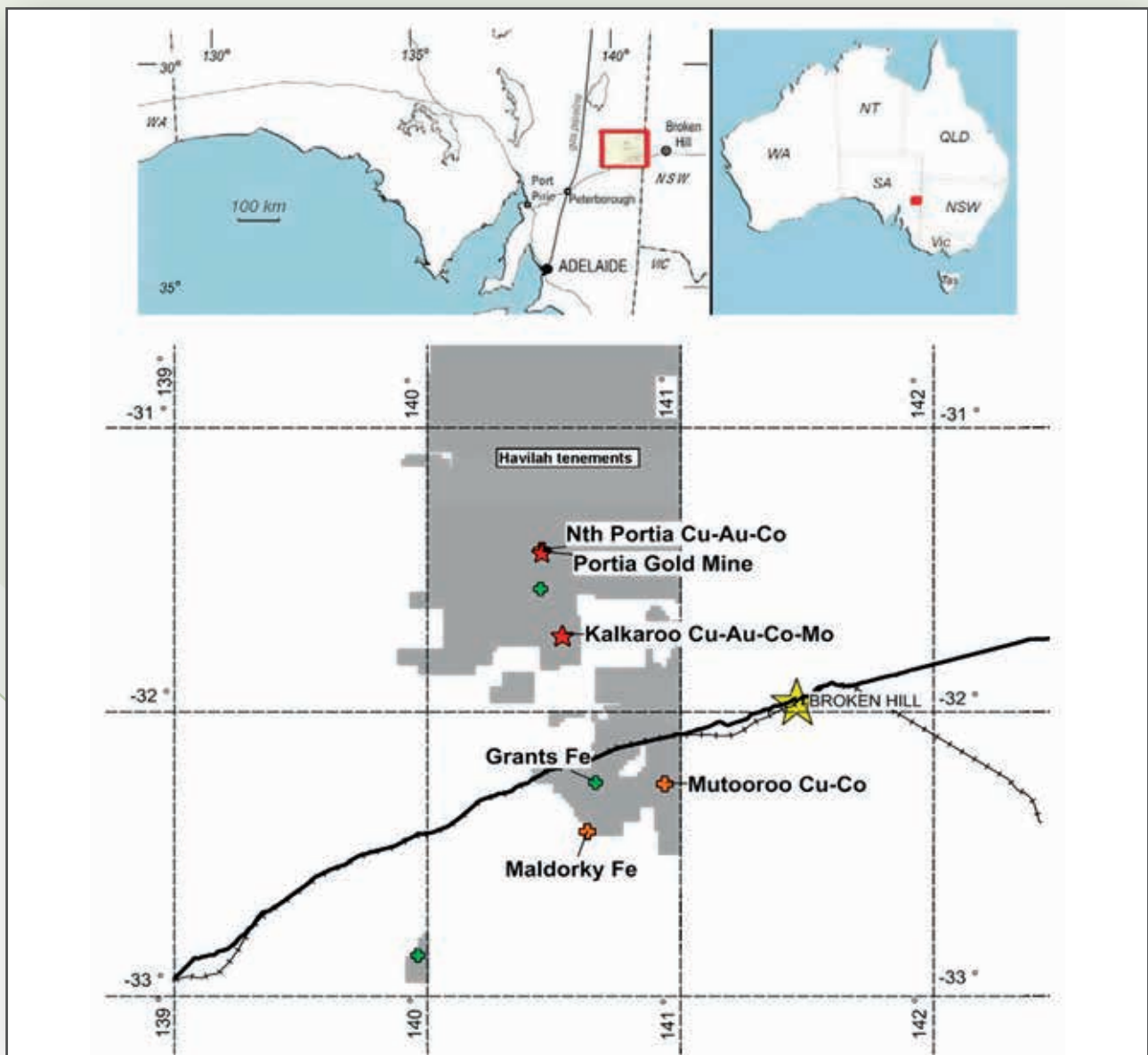
www.element25.com.au

Opportunities for investment

- Havilah is open to financial investment participation by a third party. Arrangements are flexible with respect to sale, direct investment and/or JV participation in the projects and regional exploration.
- Offtake agreements for the copper concentrates, and cobalt (in pyrite concentrate) are potentially available to a project investor.
- Investment is also welcomed in the processing, particularly for roasting of pyrite concentrates to recover cobalt, copper and gold (plus sulphuric acid, iron ore residues and cogenerated electricity), plus copper smelting.



For further information about these opportunities, please visit our website: www.havilah-resources.com.au



Havilah Resources Limited

About Havilah Resources Limited

Controls one of the largest undeveloped total CuEq sulphide resources in Australia.

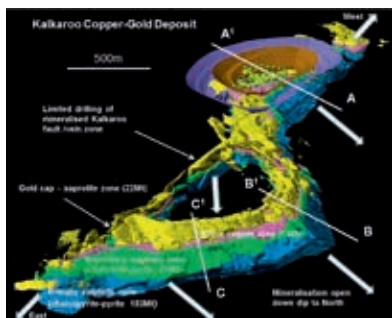
Comprising* 1.3 million tonnes of copper, 3.2 million ounces of gold and 31,600 tonnes of cobalt in two 100% owned advanced projects, namely Kalkaroo and Mutooroo located in northeastern South Australia.

There is a high potential for resource expansion and new discoveries in the surrounding 16,000 km² contiguous tenement holding in the poorly explored Curnamona Craton.

Favourable logistics with proximity of a main highway and transcontinental railway connecting to ports. Located near the regional mining centre of Broken Hill.

Kalkaroo Project (copper-gold-cobalt)

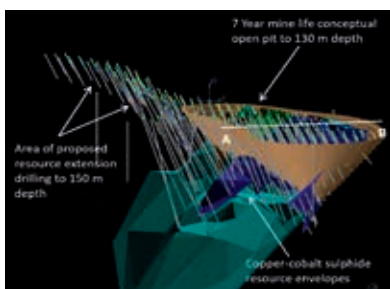
- **Ore Reserve (90% in Proven category)*:** 100 million tonnes @ 0.47% copper and 0.44 g/t gold for 474,000 tonnes of copper and 1.4 million ounces of gold.
- The largest undeveloped open pit copper deposit in Australia on a CuEq ore reserve basis. Largest undeveloped copper sulphide deposit with associated cobalt.
- **JORC Mineral Resources*:** Total of 1.1 million tonnes of copper, 3.1 million ounces of gold and 23,200 tonnes of cobalt.
- PFS at advanced stage, expected to be completed 1H 2019.
- Mining Lease application approved subject to pending finalisation of a Native Title Mining Agreement.
- Ore processing to start early-2022 (subject to funding and approvals).



- Planned 14 year mine life based on current Ore Reserve and optimised open pit design to 200 metres depth.
- Huge resource upside potential, with orebody open in all directions and three nearby prospects with ore grade intercepts.

Mutooroo Project (copper-cobalt-gold)

- **JORC Mineral Resources*:** 12.5 million tonnes @1.53% copper for 192,000 tonnes of copper, within which there is 8,200 tonnes of cobalt and 43,100 ounces of gold (for the upper sulphide ore only).



- Presently progressing mining lease approval documentation and PFS studies.
- Mid-2020 first production (subject to funding and approvals).
- Planned 7 year mine life, based on shallow open pit to 130 metres depth.
- Resource only partially drilled along strike and at depth.

Processing and Offtake (both projects)

- In both cases standard grinding and flotation processing on site will produce high quality copper concentrates for direct shipping to a smelter and refinery.
- All cobalt in the Kalkaroo deposit and up to 40% in the Mutooroo deposit is contained within cobaltian pyrite. This cobaltian pyrite can be concentrated from the copper concentrate tail during the flotation process, and contains indicative grades of 0.2-0.3% cobalt, 1.5-1.7% copper and 2.7-3.5 g/t gold.
- The pyrite concentrate requires further processing, possibly including roasting or leaching to recover the cobalt, copper and gold.

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**Supported by JORC resource and ore reserve statements released to the ASX on various dates.*

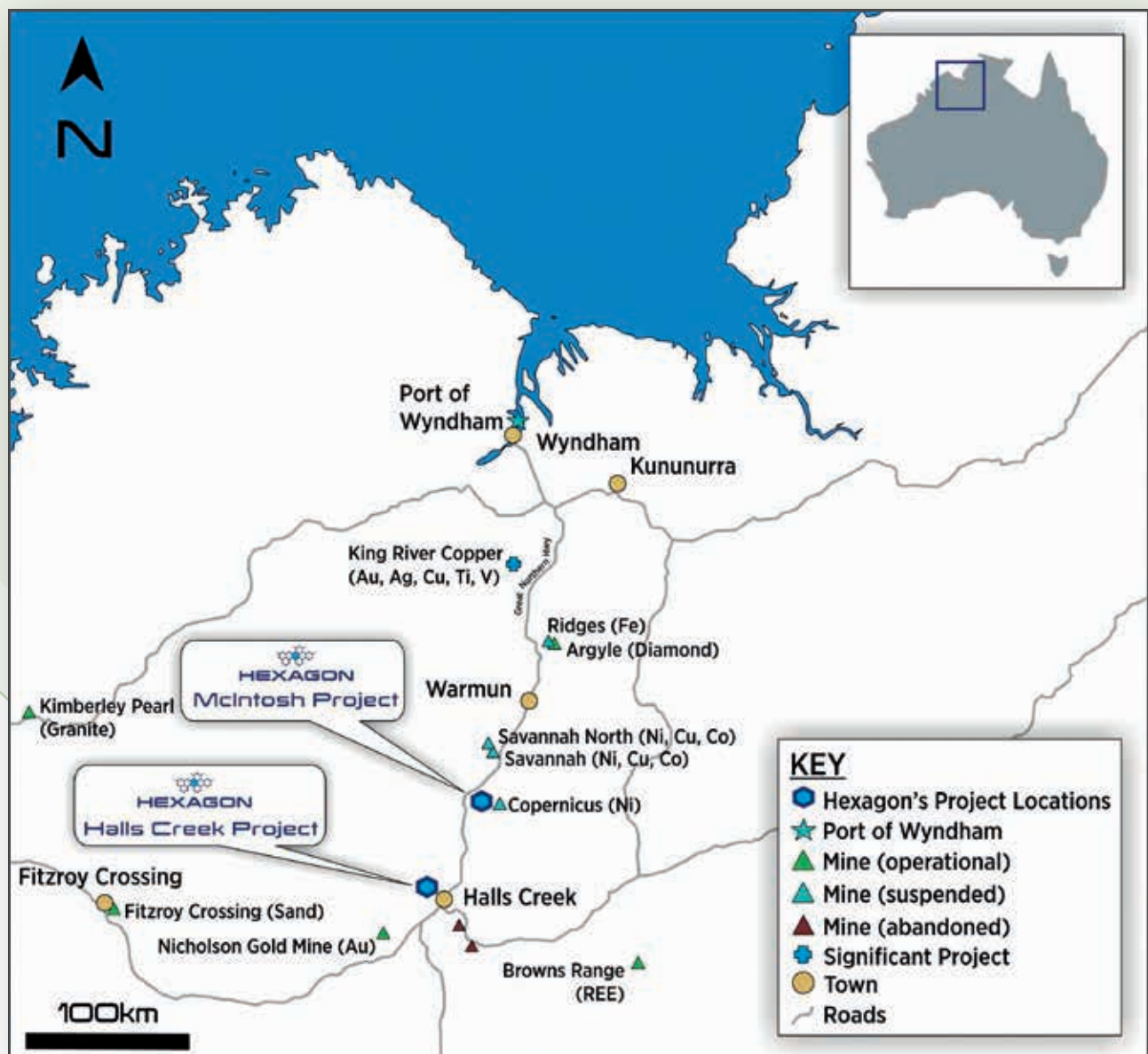
Opportunities for investment

Hexagon Resources offers opportunities:

- For investors to consider taking a stake in the business, via its listing on the Australian Securities Exchange (ASX – refer stock code HXG)
- For companies and partners seeking high-purity flake graphite concentrates from the Joint Venture's McIntosh Project; or
- Investment and offtake from Hexagon's planned downstream graphite refining operations based on its equity allocation of McIntosh graphite concentrates feedstock.



For further information about these opportunities, please visit our website: www.hexagonresources.com



Hexagon Resources Limited

About Hexagon Resources Limited

Hexagon Resources Limited is an Australian based advanced materials development company, focusing on the delivery of exceptional high purity and highly crystalline flake graphite for use in both new technologies and to displace synthetic graphite from traditional, larger scale markets. The primary focus for Hexagon is the development of the McIntosh Flake Graphite Project, in joint Venture with Mineral Resources Limited, and the downstream value-add processing of its graphite concentrate product.

McIntosh Project

Hexagon's flake graphite project, McIntosh, is a tenement package covering an area of 330km², located approximately 190km north of Halls Creek in the East Kimberley region of Western Australia.

The project has excellent roads linking it to the port of Wyndham, some 300km to the north.

McIntosh is a unique, high purity graphite deposit. Stage 1 of the project will produce approximately 100,000 tonnes per annum of graphite concentrates for a diverse range of premium priced end uses.

Testing to date has shown that the McIntosh output will be highly sought after by intermediate processors due to a number of factors:

- It can be easily purified to ultra-high purity; 99.999% ("5N's")
- It is easily expandable (suitable for the electronics market)
- It is easily spheroidised (essential for batteries)
- It has excellent crystallinity.

Purification test results are important as high purity graphite attracts a price premium; McIntosh graphite can be purified at lower cost and is delivered with reduced environmental and safety risks.

A significant proportion of the McIntosh mineral resource comprises of large flake with the +60 mesh size fraction showing excellent expansion attributes.

The mine is anticipated to be in production by 2021, with an expected mine life in excess of 20 years.

Joint venture established to develop McIntosh

In March 2018, Hexagon Resources announced that it has signed a binding Heads of Agreement with Mineral Resources Limited covering the development of Stage 1 of the McIntosh graphite project.

Under the agreement, the two companies will establish a joint venture, with Hexagon and Mineral Resources respectively holding a 49% and 51% participating interest.

From the date that Hexagon shareholders approve the transaction, MinRes will be solely responsible to:

- undertake all feasibility study work within 18 months;
- make a decision to mine within 24 months; and
- target completion of project development activities and Commercial Production of graphite within 36 months, which is defined as 2 months of production at the name plate capacity of 100,000tpa.

Mineral Resources will build, own and operate the Stage 1 project through a life of mine Mining Services Agreement – effectively a "pit to wharf" solution for the McIntosh Project. Hexagon regards the joint venture as a major de-risking event which ensures the McIntosh project is fully funded to commercial production.

In-house Technical Expertise to drive development plans

The Company has appointed Mr Michal Chan as Chief Development Office commencing 21 May, 2018. Most recently Mr Chan was for six years General Manager – Project Development for Syrah Resources Ltd, with prime responsibility for bringing the Balama Graphite Project from an exploration target to an emerging, significant graphite concentrate producer. Michael will be responsible for driving the Company's strategy to diversify into downstream graphite processing.

As well, Hexagon is working closely with its US based technical partner, referred to as NAM Labs (for commercial confidentiality reasons). NAM Lab's principals have over 30 years advanced materials and graphite experience including downstream processing expertise and market development.

ASX
HXG

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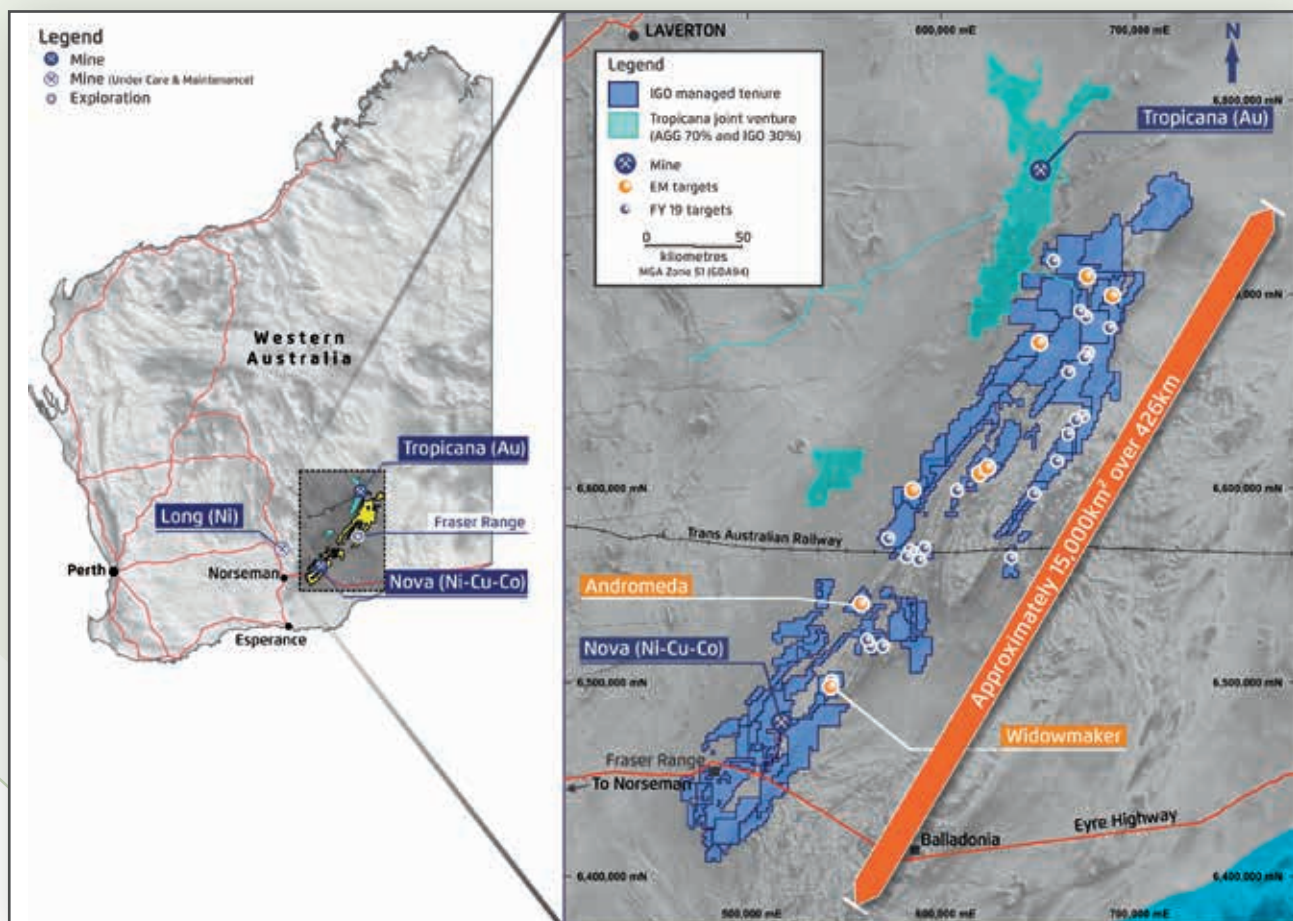
Website
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Opportunities for investment

- Joint Ventures and Strategic Partnerships.
- Ni-Cu-Co sulphide and Ni-Co sulphate.
- Metals for batteries in electric vehicles and clean energy storage.
- Exploration in the Fraser Range, Western Australia.



For further information about these opportunities, please visit our website: www.igo.com.au



Independence Group

About Independence Group

Independence Group NL (IGO) is a leading ASX-listed diversified mining and exploration company with a strategic focus on high quality assets of scale and longevity and an evolving strategy to align the business to the structural shift to energy storage. The Company's focus is on its 100% owned, world class Nova nickel-copper-cobalt operation, its 30% interest in the Tropicana Gold Operation, a Joint Venture with AngloGold Ashanti, and portfolio of belt scale exploration projects in Western Australia and the Northern Territory.

IGO is focused on exploration and discovery, committing A\$51 Million in FY19 with a significant portion to be invested in exploration at Nova and in the Fraser Range where IGO has consolidated ~15,000km² of tenure. The opportunity now is to leverage our knowledge of the area and our internal expertise to find nickel, copper, cobalt, lithium or other energy storage minerals projects of scale to drive our future growth strategy.

IGO has a strategy to develop a portfolio of belt scale greenfields exploration projects and "best in class" exploration capability that drives our future organic growth.

Nova Nickel-Copper-Cobalt Operation (IGO 100%)

Location – 360km southeast of Kalgoorlie and 380km northeast of the Esperance port, Western Australia.

Product – Nickel (Ni), Copper (Cu), Cobalt (Co).

Status – Nova has been in commercial production since July 2017. Nova-Bollinger mineralisation sits underground within a 47km² mining lease.

Mining – All ore is mined from underground using contract mining and processed through an owner-operated process plant.

Capacity – Nameplate 1.5Mtpa with demonstrated ability to sprint at 20% above nameplate.

Processing Method – Conventional crushing, grinding, flotation and filtration process with 89% nickel recovery and 85% copper recovery.

Downstream Processing – In FY18 IGO completed a scoping study and pre-feasibility metallurgical test work for the proposed hydrometallurgical processing to produce nickel sulphates directly from Nova nickel concentrate. A pre-feasibility study is expected to be complete in 2019.

Results to-date have validated and improved upon previous metallurgical assumptions of the initial scoping study reflecting an

opportunity to maximise recoveries and leveraging a premium price for nickel sulphates, which would directly feed into the energy storage value chain.

Offtake / Sales – 100% of nickel sulphide concentrate is sold to BHP Nickel West Pty Ltd and Glencore International AG. Current offtake agreements expire in 2020.

100% of the copper sulphide concentrate is sold to Trafigura Pte Ltd. Contract expires in 2020.

FY18 Production

22,258t Ni
9,545t Cu
731t Co

FY18 Payable Cash Costs

A\$2.78/lb Ni

FY19 Production Guidance

27,000t – 30,000t Ni
11,000t – 12,500t Cu
850 – 950t Co

FY19 Cash Costs Guidance

A\$1.65 – A\$2.00/lb Ni

- **Mineral Resources**¹ As at 30 June 2018 300,000t Ni
109,000t Cu
9,000t Co
- **Reserves**¹ As at 30 June 2018 216,000t Ni
89,000t Cu
7,000t Co

Nova Mine Life 8+ years

Growth Potential Discovery of new magmatic nickel deposits within IGO's extensive tenements position in the Fraser Range. Processing of Nova's nickel concentrate into a nickel sulphate product for the energy storage market.

ASX
IGO

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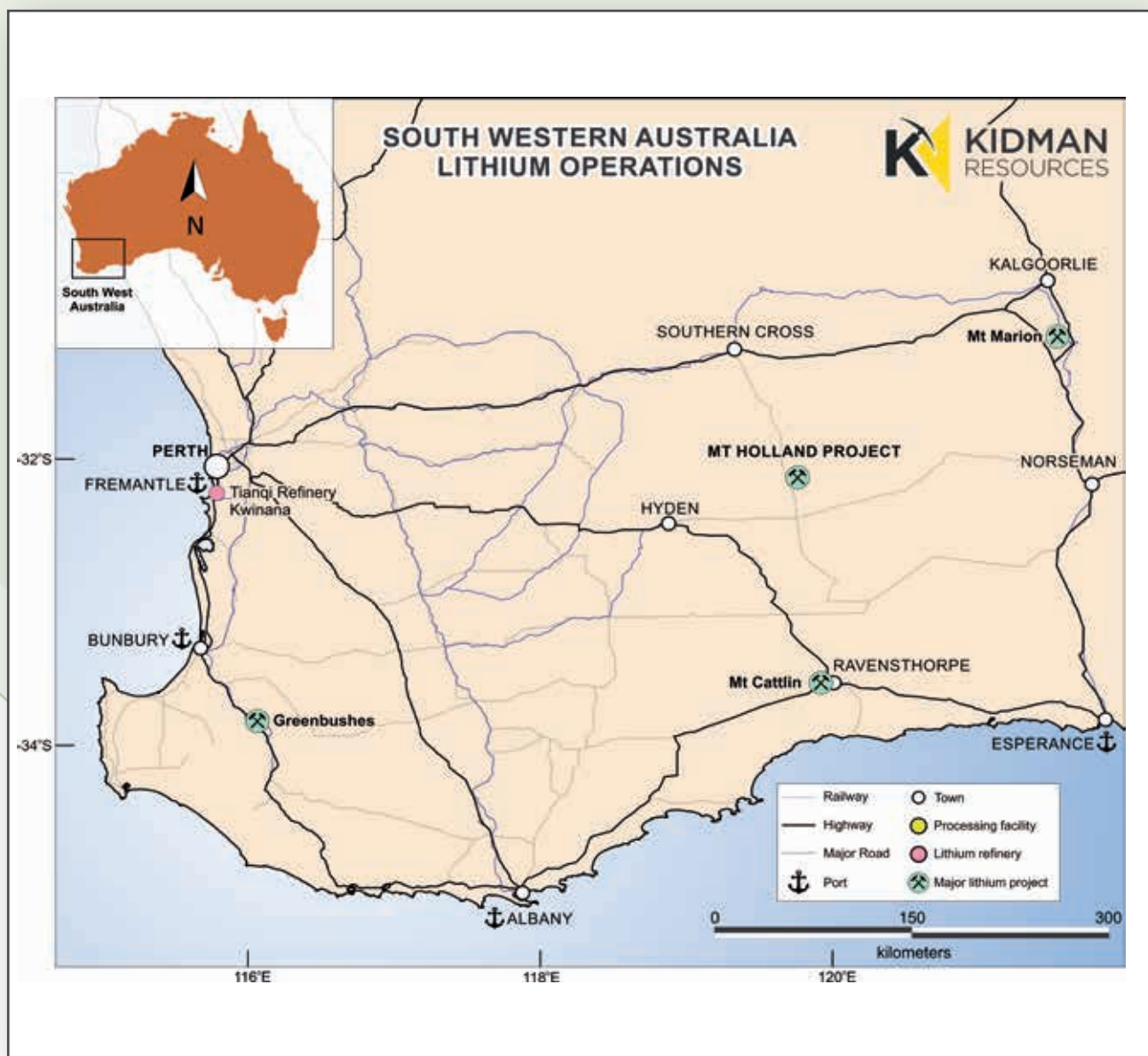
www.igo.com.au

Opportunities for investment

To discuss this project or other possible opportunities, please contact the company directly.



For further information about these opportunities, please visit our website: www.kidmanresources.com.au



Kidman Resources Limited

About Kidman Resources

Kidman Resources is an Australian-listed lithium explorer and developer

- Direct exposure to the burgeoning electric vehicle (EV) thematic
- Lithium demand forecast by BMO to grow at a 14% CAGR through 2025

Developing the Earl Grey lithium deposit in Australia via 50/50JV with SQM

- Tier-1 globally significant hard rock deposit

JV actively progressing refinery feasibility study for the proposed site in Kwinana, Western Australia

- The Mt Holland Project has been granted Level 2 Lead Agency Service by the State Government of Western Australia
- Places Kidman as an alternative source to the Chinese lithium conversion market
- Refinery financing options being assessed

Earl Grey Project

- Earl Grey is a Tier-1 globally significant hard rock deposit in Australia
- Mineral Resource of 189mt at 1.50% Li₂O yielding 7.03mt of LCE
- Life of Mine of 45+ years
- 91% of Mineral Resource is classified as Measured or Indicated
- Low strip ratio for life of project due to flat lying geometry

Refinery

- Refinery design to focus on lithium hydroxide production with potential to increase capacity
- Lithium hydroxide historically trades at a premium as it is the preferred EV battery power source
- Stage 1 nameplate of 45,400tpa lithium hydroxide
- Refinery feasibility study in progress
- Market update expected in Q4 2018

ASX
KDR

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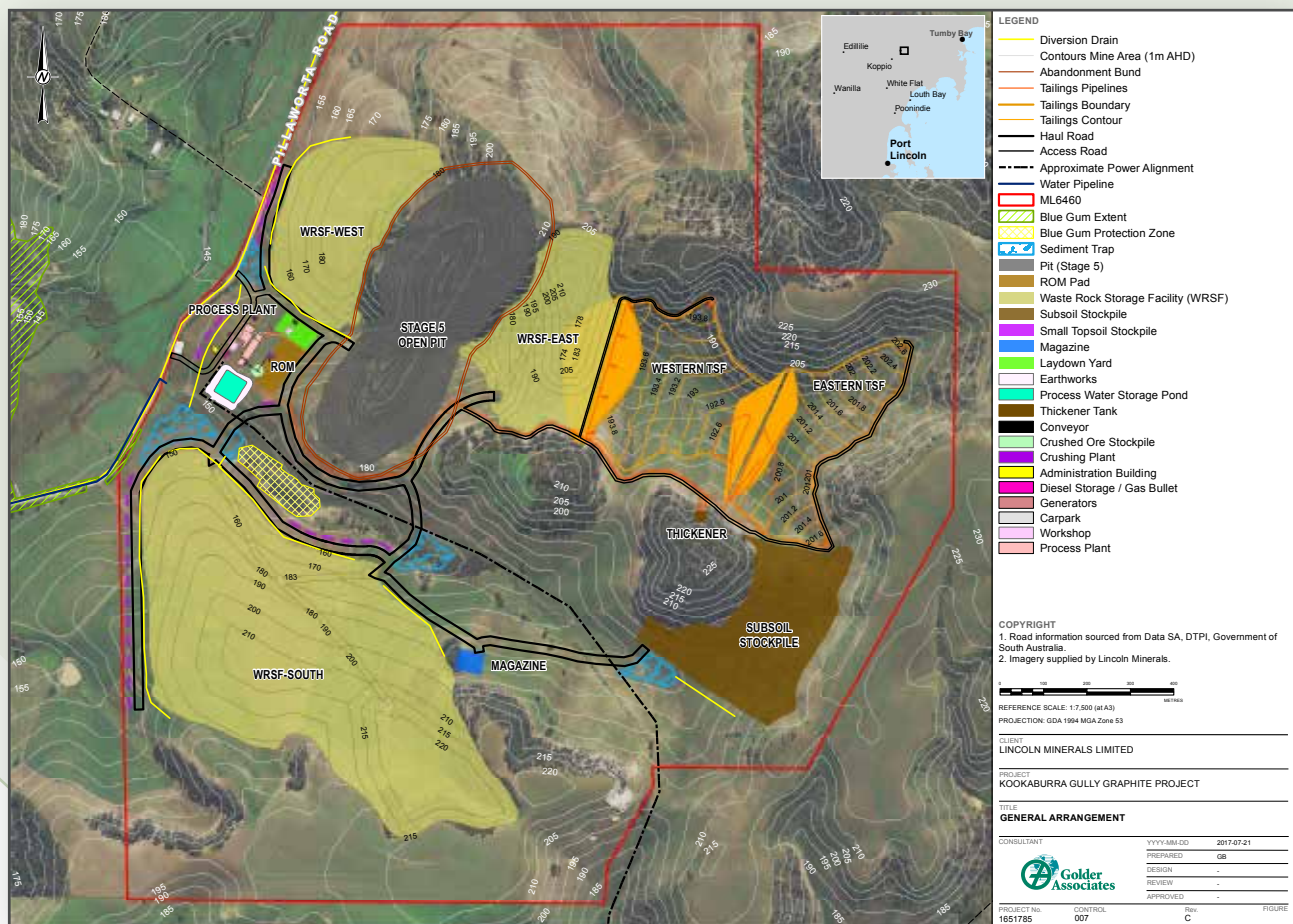
www.kidmanresources.com.au

Opportunities for investment

To discuss this project or other possible opportunities, please contact the company directly.



For further information about these opportunities, please visit our website: www.lincolnminerals.com.au



Lincoln Minerals Limited

About Lincoln Minerals Limited

Australian ASX listed company – Chairman James Zhang, and Eddie Pang, Johnson Zhang, Haifeng Zhu and Kee Saw (also the Company's CFO).

Pending final government approval (PEPR) before final sanctioning of Kookaburra Gully Graphite Project by LML Board.

No offtake contracts have been signed .

Further downstream processing and development are being explored for value adding concentrate development.

Kookaburra Gully Graphite Project

- The Kookaburra Gully Graphite Project has been granted a Mineral Lease and is currently working towards final government approval for its Program of Environment Protection and Rehabilitation. A Feasibility Study was released to market with a maiden Ore Reserve statement.
- The project is located on Eyre Peninsula in South Australia, some 35km north of Port Lincoln, one of SA's major export port facilities.
- Scheduled commissioning and mine construction is currently planned for 2019.
- The Probable Ore Reserve for Kookaburra Gully of 1.34 Mt @ 14.6% Total Graphitic Carbon (TGC) at a cut-off grade of 8.5% TGC inclusive within a total Measured, Indicated and Inferred Mineral Resource of 2.03 Mt at 15.2% TGC (cut-off grade 5% TGC).
- Onsite concentrate production of flake graphite products is envisaged with further downstream and offsite value adding production.
- No offtake agreements are in place, however value adding analysis is currently underway.

ASX
LML

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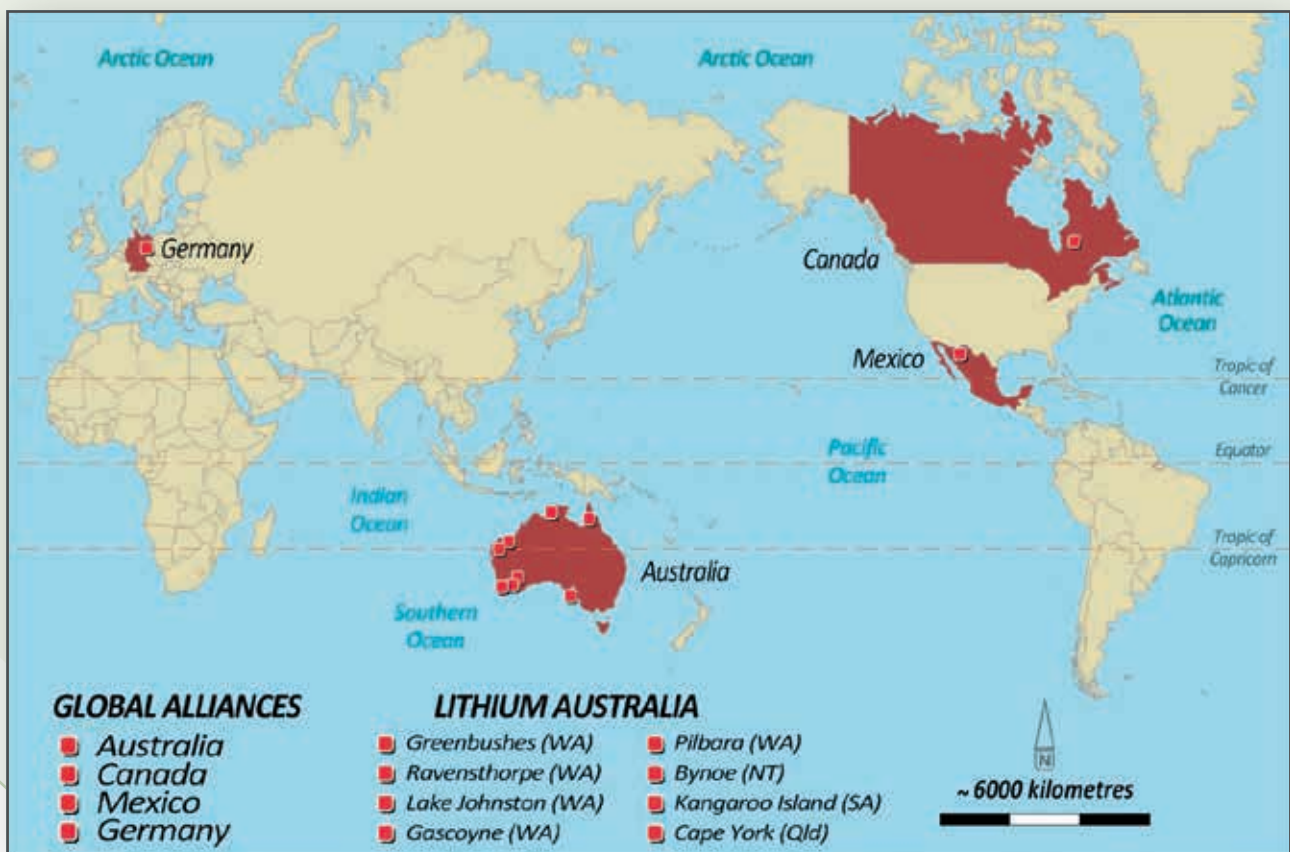
Website
www.lincolnminerals.com.au

Opportunities for investment

To discuss this project or other possible opportunities, please contact the company directly.

Lithium⁺ Australia^{NL}

For further information about these opportunities, please visit our website: www.lithium-au.com



Lithium Australia

About Lithium Australia

Lithium Australia (ASX listed, ticker LIT & LITCE) has a suite of technologies that provide for the sustainable production of lithium chemicals and lithium ion batteries. Investment opportunities are available at a corporate level, project partnership level or product off-take level.

Large-scale SiLeach® pilot plant offtake (battery-grade lithium chemicals)

- Plant production of about 2,500tpa lithium carbonate equivalent available from 2020
- LIT seeks forward sale of two years' production tied to:
 - 2018 pricing, and
 - product specifications
- Partnership for commercial lithium chemical production
- LIT has advanced, best-in-field technology in lithium minerals processing –the SiLeach® process
- Participation in 25,000 TPA lithium carbonate equivalent commercial plant
- Proposed plant location – Australia, Europe, North America
- Partnership for advanced lithium-ion battery cathode powders (VSPC)
- VSPC has world leading technology in Li-ion battery cathode materials
- VSPC technology controls chemical composition of the cathode powder
- VSPC technology controls particle size of the cathode powder
- VSPC technology produces cathode powder which is much finer than competitors
- Strong focus on LFP chemistry
- NCA, NCM and other compositions possible
- Superior quality control

Technology and Assets

Lithium Australia aspires to 'close the loop' on the energy-metal cycle. Its disruptive extraction processes are designed to convert all lithium silicates to lithium chemicals, from which advanced components for the battery industry can be created. By uniting resources and the best available technology, Lithium Australia seeks to establish a vertically integrated lithium processing business.

The principal business units are:

- Exploration and resource development covering prospective ground in major lithium provinces of Australia, Germany and Mexico.
- SiLeach® lithium extraction technology (committed to construction of a lithium chemical pilot plant with a design output of 2,500 tpa of lithium carbonate equivalent [LCE]). VSPC compatible.
- VSPC (the Very Small Particle Company Ltd) technology and pilot plant facilities to produce the most advanced cathode powders. Compatible with feed from SiLeach® and RCARC.
- CARC(Resource Conservation and Recycling Corporation) developing processing systems for the recycling of lithium-ion and alkali batteries. Target output compatible with VSPC inputs.

LIT's future potential will be strengthened by strategic alliances with key participants in the energy metal supply chain. It is in this context that LIT seeks partners with similar aspirations.

Partnership Opportunities

Lithium Australia seeks:

- Exploration partners
- Cathode powder manufacturing partners
- Offtake counterparts for lithium chemicals from 2020, and
- Partners for commercial scale SiLeach® lithium chemical production

Lithium Australia's SiLeach® and VSPC are both leaders in the fields of extractive metallurgy and LIB cathode technology. The application of these technologies will place the user at the forefront of the battery metal industry while creating greater sustainability and resource utilisation. The advanced development of both processes has reduced technical risk substantially. Commercialisation of these processes retains the risk of up-scaling the processes however the reward associated with successful implementation, developing disruptive processes in a growth industry, will generate great rewards.

Lithium Australia welcomes the opportunity to work with commercial partners in the battery metal industry.

ASX
LIT

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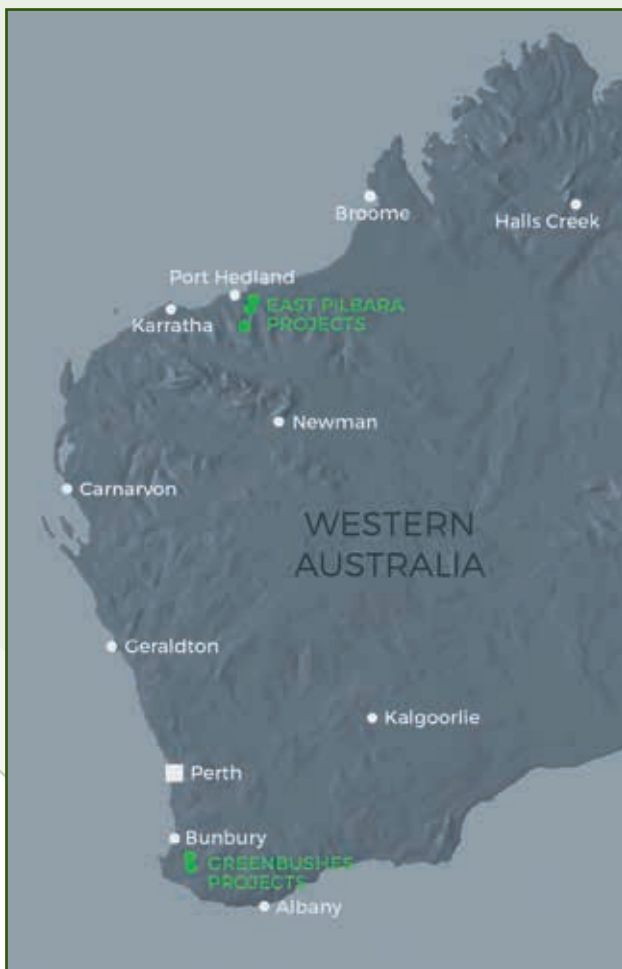
Opportunities for investment

Interested in potentially bolstering our Western Australia project areas.

Potentially looking for operating partners for Argentine assets.



For further information about these opportunities, please visit our website: www.lithiumpowerinternational.com



Lithium Power International Limited

Lithium Power International Limited (LPI) is a pure-play lithium company, with assets diversified across both brine in South America and hard rock in Western Australia. LPI's main focus is the development of its flagship Maricunga project in Chile in which LPI owns 51%. The Maricunga project is at an advanced stage having completed its Definitive Feasibility Study and Environmental Impact Assessment which is currently in the approval process. LPI is also completing extensive exploration in two of its five Western Australia assets and owns 70% of the Centenario project in Argentina which is currently commencing its exploration program.

Project 1 Lithium

- Exploration
- Pilbara (Tabba Tabba, Strelley and Pilgangoora), Western Australia
- Port: Port Hedland
- Government approval status: Approval to mine
- Schedule start of operation of mine / anticipated year of start of mining: N/A
- Current expected mine life: N/A
- Mineral resource or reserve (i.e. grade): N/A
- Current or planned level of processing (and location): N/A
- Offtake agreements in place: N/A

Project 2 Lithium

- Exploration
- Greenbushes, Western Australia,
- Port: Bunbury
- Government approval status: Approval to mine with the Conservation Management Plan for Exploration and Prospecting submitted and approval expected in 3Q19
- Schedule start of operation of mine / anticipated year of start of mining: N/A
- Current expected mine life: N/A
- Mineral resource or reserve (i.e. grade): N/A
- Current or planned level of processing (and location): N/A
- Offtake agreements in place: N/A

Project 3 Lithium

- Definitive Feasibility Study complete with EIA submitted and approval forecast for 4Q19
- Salar de Maricunga, Chile
- Port: Antofagasta
- The Chilean Nuclear Energy Commission (CCHEN) awarded
- Schedule start of operation of mine / anticipated year of start of mining: Construction January 2020, Operation January 2021 (with lithium production scheduled for 8-9 months after the start of operation)
- Current expected mine life: +20 years
- Mineral resource or reserve (i.e. grade): Measured Lithium 1,175 mg/L, Indicated Lithium: 1,153 mg/L, Measured + Indicated Lithium: 1,167 mg/L
- On site on the Maricunga Salar
- Offtake agreements in place (%): In negotiations

Project 4 Lithium

- Early stages of exploration
- Argentina
- Port: TBC
- Approval to explore
- Schedule start of operation of mine / anticipated year of start of mining: N/A
- Current expected mine life: N/A
- Mineral resource or reserve (i.e. grade): N/A
- Current or planned level of processing (and location): N/A
- Offtake agreements in place: N/A

Processing and Offtake (both projects)

We have not finalised any offtake relationships, however, we are in discussions with various parties for the offtake of the Maricunga.

ASX

LPI

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Opportunities for investment

To discuss this project or other possible opportunities, please contact the company directly.



For further information about these opportunities, please visit our website: www.metalsx.com.au



Metals X

About Metals X

Metals X Limited is an ASX 300 Australian diversified miner with a significant inventory of battery metals resources:

- Australia's largest tin producer
- Significant copper producer
- Australia's largest undeveloped nickel-cobalt resource

Metals X owns the Central Musgrave Project which hosts the Wingellina Nickel-Cobalt Project, one of the largest undeveloped nickel limonite accumulations in the world.

Wingellina Nickel-Cobalt Project

- **Project status** – Phase 1 Feasibility Study completed, Mineral Resource and Ore Reserve defined, EPA approval. Next stage is detailed design ahead of a development decision.
- **Location** – Western Australia, near the triple point of the borders of Western Australia, South Australia and the Northern Territory.
- **Government approval status** – Environmental approval received. Appropriate project tenure held. Mining Agreement executed with local council.
- **Schedule start of operation of mine / anticipated year of start of mining** – Depends upon timing of detailed design and funding. From commencement of detailed design, approximately 18 months to final investment decision, with 2.5 year construction period.
- **Current expected mine life** – Phase 1 Feasibility Study indicated a 40 year mine life based on production rate of 40,000 tonnes of nickel and 3,000 tonnes of cobalt per annum.
- **Mineral resource or reserve (ie. grade)** –
 - **Mineral Resource:** 216 million tonnes at 0.91% Ni and 0.07% Co for 2.0 million tonnes of contained nickel and 154,000 tonnes of contained cobalt.
 - **Ore Reserve:** 168 million tonnes of ore at 0.93% Ni and 0.07% Co for 1.6 million tonnes of contained nickel and 118,000 tonnes of contained cobalt.
- **Current or planned level of processing (and location)** – Processing on site through a high pressure acid leach (HPAL) plant to produce an intermediate product.
- **Offtake agreements in place (%)** – None. Will be integrated with financing.

ASX
MLX

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Opportunities for investment

- **Opportunity for further offtake?**– Opportunity exists for offtake
- **Opportunities for further processing?** – Assessment currently being undertaken for:
 - Coated and uncoated spherical graphite production
 - Thermal purification
 - Expandable graphite
 - Graphene



For further information about these opportunities, please visit our website: www.mncom.com.au



Mineral Commodities

About Mineral Commodities

Current JV between MRC wholly owned subsidiary MRC Graphite Pty Ltd (51%) and Gold Terrace (49%). Working towards 90% ownership.

Munglinup Project

- **Project status** – Currently undertaking a pre-feasibility study to be closed out and released May 2018.
- **Location** – The Munglinup Project is located around 640km southeast of Perth and 4km north of the town of Munglinup on the Albany-Esperance/South Coast highway and 105km west by sealed road from the port of Esperance.
- **Government approval status** – Level 2 Lead Agency Status granted by DMIRS due to strategic significance of the project.
- **Schedule start of operation of mine / anticipated year of start of mining** – Anticipated commissioning in late 2019.
- **Current expected mine life** – 9 years (Mining Lease granted to 2031).
- **Mineral resource or reserve (ie. grade)** – Mineral Resource of 3.7Mt at 15.3% TGC (10% cut-off) with mineralisation open in all directions.
- **Current or planned level of processing** – The project involves the development of several small open pits with a flotation plant to concentrate graphite ores. Majority of the ore will come from the Halberts Main Pit with supplemental feed from the 4 satellite pits. The graphite is hosted in gneiss metasediments, within the saprolitic zone, and as such no drill and blast is required.

Processing is via a multi-cleaner stage flotation plant with attritioning between each cleaner stage. As the ore is weathered, no primary crushing will be required. Tails will be thickened and report to a conventional, on site tailings storage facility.

Graphite concentrate will be bagged and shipped out to various markets. Some of the concentrate will be retained for further value add, downstream processing.
- **Offtake agreements in place (%)** – No offtake agreements currently in place.

ASX
MRC

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Opportunities for investment

- **Opportunities for further processing?** – Neometals is currently evaluating the development of a lithium processing facility in the vicinity of Kalgoorlie close to its Mt Marion Lithium Operation.
- **Opportunities for further processing?** – For its “downstream” business, technical collaboration, co-investment and partnerships with specialist industry groups or Investment Funds. Industry participants such as end users looking to benefit from a new supply of enhanced quality graphite (high purity & crystallinity) materials into energy storage or to substitute for synthetic graphite in industrial applications such as UHP electrodes. Alternatively, Funds wanting to co-invest in a high-margin, premium-end, advanced graphite materials business in a high-growth sector.

Nm

Neometals

For further information about these opportunities, please visit our website: www.neometals.com.au



Neometals

About Neometals

Neometals Ltd ("Neometals" - ASX:NMT) is a developer of industrial mineral and advanced materials projects. Neometals has two key divisions – a fully integrated Lithium business and a Titanium-Vanadium development business. Both are supported by proprietary technologies that assist downstream integration through revenue enhancement and cost efficiencies. Neometals owns a 13.8% stake in the Mt Marion lithium mine near Kalgoorlie, which operates one of the world's biggest lithium concentrators. Neometals holds an offtake option, which forms the backbone to its fully-integrated lithium business aspirations which include a Lithium Hydroxide Refinery and Lithium-ion Battery Recycling process. The 100%-owned Barrambie Titanium-Vanadium Project in WA's Mid-West is one of the world's highest-grade hard-rock titanium-vanadium deposits. Neometals' strategy focuses on de-risking and developing long life projects with strong partners and integrating down the value chain to increase margins. The company aims to leverage its cashflows to grow opportunities that provide sustainable mineral and material solutions to customers and to return value to shareholders.

Mt Marion Project

- **Ownership details/interest details** – Neometals Ltd 13.8%, Mineral Resources Limited 43.1%, Ganfeng Lithium Co., Ltd 43.1% through Reed Industrial Minerals Pty Ltd.
- **Location** – 40km southwest of Kalgoorlie, approx. 335km from Esperance Port (*please note: we are currently using Kwinana*).
- **Status** – In production.
- **Start of operation of mine / anticipated year of start of mining** – Commissioning of the plant was late 2016 and production early 2017.
- **Government approval status** – All approvals granted, mine is in production.
- **Mineral resource or reserve (ie. grade)** – Commenced with a JORC-compliant resource of 77.8Mt @ 1.37% Li₂O.
- **Current expected mine life** – 20+ years.
- **Offtake agreements in place (%)** – Life of mine offtake with JV partner Ganfeng Lithium Co., Ltd.
- **Current or planned level of processing (and location)** – Production ramping up to all in 6% concentrate later in 2018 – 400,000 tonnes per annum.

Barrambie Titanium / Vanadium Project

- **Ownership details/ interest details** – Neometals Ltd 100%, via Australian Titanium Pty Ltd.
- **Location (including details and distance to nearest port)** – 80km north-west of Sandstone in Western Australia, 574km from the port of Geraldton.
- **Status** – Vanadium project DFS completed in 2009, being updated now.
- **Start of operation of mine / anticipated year of start of mining** – Potential Phase 1 direct shipping production from late 2019.
- **Government approval status** – Native Title in place, extension being sought for existing environmental approval and approval for 3.2Mtpa operation expected June quarter 2019.
- **Strip ratio** – 2009 DFS showed ~3.8:1.
- **Mineral resource/reserve** – Global JORC resource of 280.1Mt at 9.18% TiO₂ and 0.44% V₂O₅ (high grade vanadium sub-set of 64.9Mt at 0.82% V₂O₅ and 16.9% TiO₂ (both based on indicated and inferred numbers).
- **Current expected mine life** – 2009 DFS contemplated a minimum mine life of 12 years at throughput of 3.2Mtpa.
- **Offtake agreements in place (%)** – Advanced discussion underway for sale of concentrate and ferro vanadium products.
- **Current or planned level of processing** – 2009 DFS contemplated 6,160t of vanadium contained in 7,700t of FeV₈O (V₂O₅ is an intermediate precursor material which can be extracted for vanadium redox battery market).

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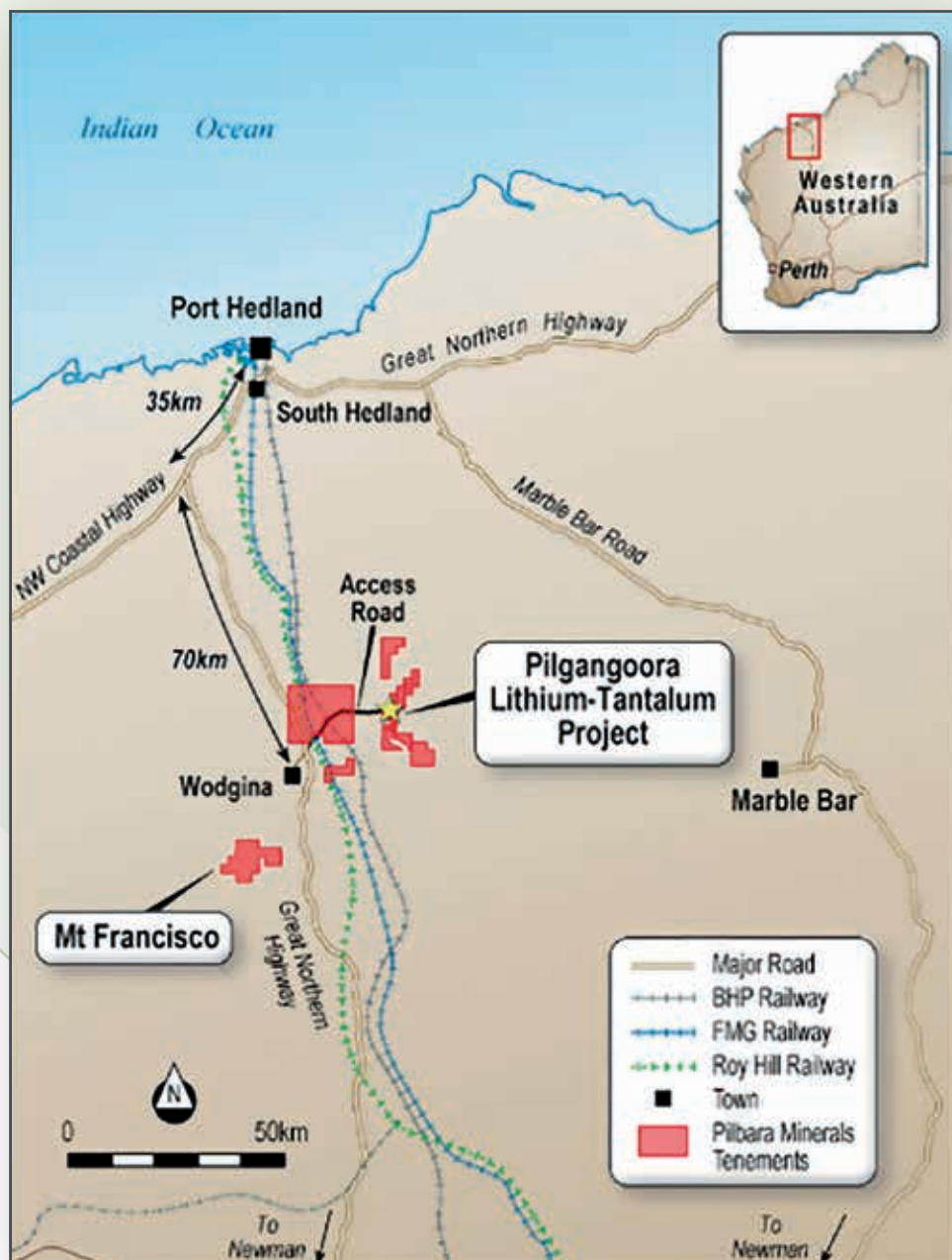
Website
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Opportunities for investment

- Pilbara Minerals are open to discussions



For further information about these opportunities, please visit our website: www.pilbaraminerals.com.au



Pilbara Minerals

About Pilbara Minerals

Pilbara Minerals is an Australian lithium-tantalum producer listed on the Australian Securities Exchange (ASX: PLS). Through the development of its 100%-owned Pilgangoora Lithium-Tantalum project in WA's Pilbara region, Pilbara Minerals is set to become one of the biggest lithium raw materials producers in the world by 2020. The significant scale and outstanding quality of the Pilgangoora Lithium-Tantalum project has seen Pilbara Minerals progress it from first drill hole to production in under four years.

In August 2018, Pilbara Minerals released a Definitive Feasibility Study to increase the processing capacity of the Pilgangoora project from 2Mtpa to 5Mtpa, allowing it to produce up to 850,000tpa of 6% spodumene concentrate. Following the exceptional results from this study and strong support from offtake partners, Pilbara Minerals plans to commence construction of the Stage 2, 5Mtpa expansion following a final investment in late 2018.

Pilgangoora Lithium-Tantalum Project

- **Project status** – Mining and production.
- **Location** – Pilbara region, 120km south of Port Hedland port.
- **Government approval status** – All major approvals in place.
- **Schedule start of operation of mine / anticipated year of start of mining** – 2018.
- **Current expected mine life** – 23 years with potential for significant further growth.
- **Mineral resource or reserve (ie. grade)** –
 - **Mineral Resource:** total of 213 million tonnes, grading 1.32% Li₂O (spodumene) and 116 ppm Ta₂O₅ and 0.69% Fe₂O₃, containing 2.82 million tonnes of lithium oxide and 54.6 million pounds of Ta₂O₅.
 - **Ore Reserve:** 226.0 million tonnes grading 1.27% Li₂O (spodumene) and 116ppm Ta₂O₅ and 0.60% Fe₂O₃.
- **Current or planned level of processing** – Dense media and flotation recovery through the processing plant to produce a 6% spodumene concentrate. Tantalite recovery to concentrate via gravity separation.
- **Offtake agreements in place (%)** –
 - 100% of Stage 1 offtake
 - 100% of Stage 2 offtake
 - Open to further discussion regarding the potential for further mine expansion and offtake capacity

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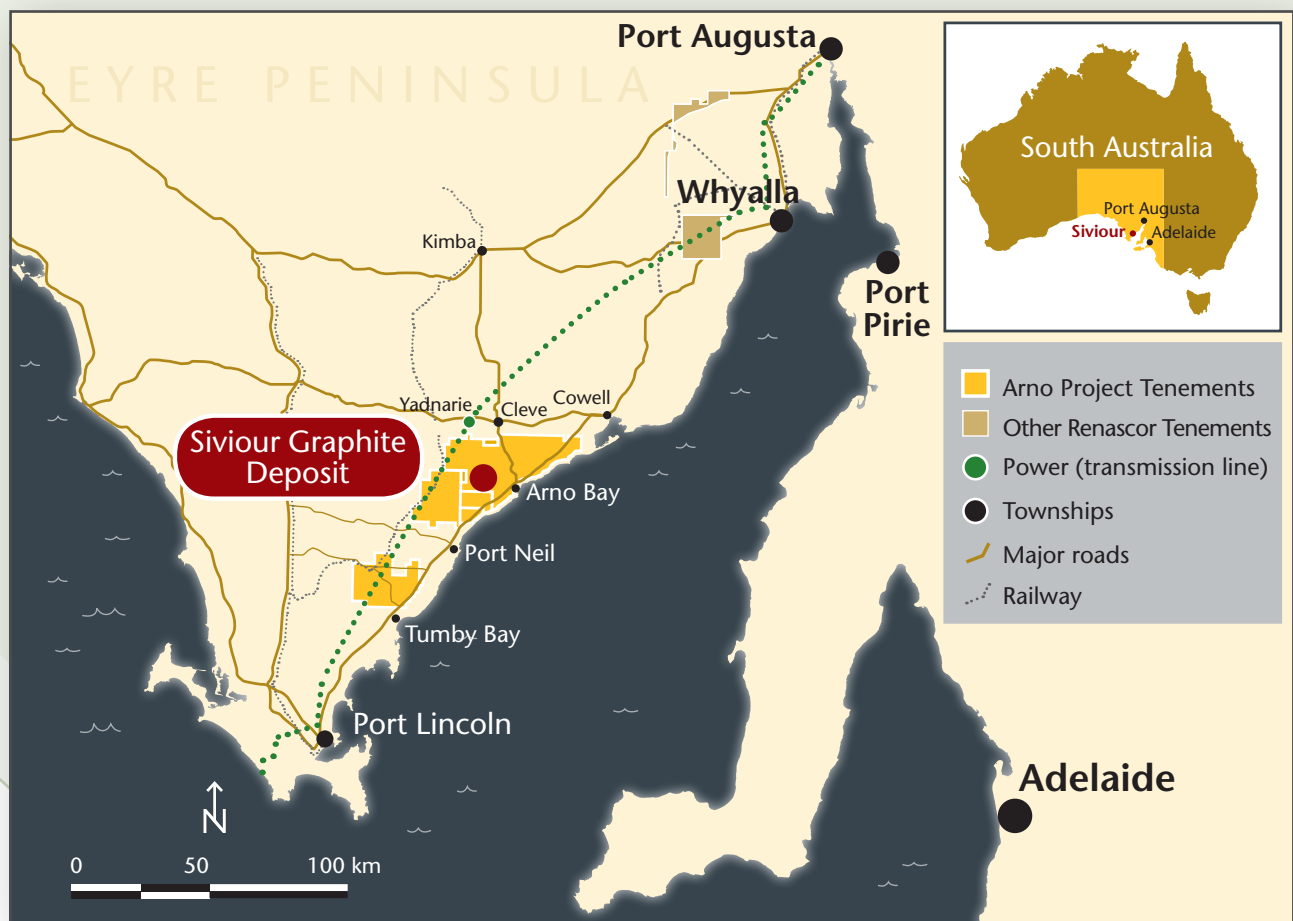
Website
www.pilbaraminerals.com.au

Opportunities for investment

- Interested in financial investment by a third party, such as a joint venture? – Potentially
- Opportunity for further offtake? – Yes
- Opportunities for further processing? – Potentially



For further information about these opportunities, please visit our website: www.renascor.com.au



Renascor

About Renascor

Renascor Resources is an Australian-based company focused on the development of economically viable deposits containing graphite and other minerals.

Project information

- **Project status** – PFS complete, undertaking DFS.
- **Location** – located within 10km of Port Lincoln Highway.
- **Government approval status** – Mine lease application expected August 2018.
- **Schedule start of operation of mine / anticipated year of start of mining** – Decision to Mine expected 2019, with possible production as early as 2020.
- **Current expected mine life** – 27 years.
- **Mineral resource or reserve (ie. grade)** – average head grade during first 10 years of production +12% TGC.
- **Current or planned level of processing** – Stage 1: 22,800tpa, Stage 2: 150,000tpa
- **Offtake agreements in place (%)** – Up to ~50% of Stage 1

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Opportunities for investment

Tawana Resources Limited offers opportunities:

- **Interested in financial investment by a third party, such as a joint venture?** – Open to opportunities
- **Opportunity for further offtake?** – Potentially - if production capacity is expanded (currently undertaking expansion studies)
- **Opportunities for further processing?** – Not presently under consideration



TAWANA
RESOURCES NL

For further information about these opportunities, please visit our website: www.tawana.com.au



Tawana Resources Limited

About Tawana Resources Limited

ASX listed company

Bald Hill Project

- **Project status** – Production.
- **Location** – The Bald Hill Project area is located 50 kilometres south east of Kambalda in the Eastern Goldfields in Western Australia. The principal road access to the Mine is via the (sealed) Coolgardie-Esperance Highway (National Highway 94), and then the Binneringie Road from Widgiemooltha, a distance of 65km of unsealed shire road. The Mine is approximately 350km by road from the Port of Esperance.
- **Government approval status** – Tawana and JV partner Alliance Mineral Assets Limited obtained various approvals required to operate the Bald Hill Project. Key approvals include an approved mining proposal, an operating facilities licence, clearing permits and a licence to take water.
- **Schedule start of operation of mine/anticipated year of start of mining** – Lithium (spodumene) concentrate production commenced March 2018.
- **Current expected mine life** – 9 years.
- **Mineral resource or reserve (ie. grade)** –
 - Total lithium Resources of 26.5Mt at 1.0% Li₂O (using 0.3% Li₂O cut off).
 - Project lithium Indicated Resources of 14.4Mt at 1.02% Li₂O an increase of 55% in contained lithium from October 2017.
 - Lithium Ore Reserve of 11.3Mt at 1.0% Li₂O and 160 ppm Ta₂O₅ – representing an increase of 105% in contained lithium from the July 2017 reserve estimate.
 - Tantalum Ore Reserve of 2.0Mt at 313ppm Ta₂O₅ – an increase of 43% from the July 2017 reserve estimate.
- **Current or planned level of processing** – Primero Group Pty Ltd designed and constructed a new 1.2 million tonnes per annum stage 1 dense media separation (DMS) processing plant, refurbished the existing tantalum plant (which included a spiral plant for recovering tantalum from -1 mm fines), and refurbished the existing supporting infrastructure at Bald Hill. Plant performance has achieved higher than the 161 tonnes per hour (tph) nameplate, with rates having reached up to 230tph. Further modifications are being planned with the view to achieve average throughput rates of up to 240tph.
- **Offtake agreements in place (%)** – Tawana has a long-term lithium concentrate offtake agreement with a wholly-owned subsidiary of Burwill Holdings Ltd, a company listed on the Stock Exchange of Hong Kong Limited (stock code 0024). The agreement is for the supply of Lithco's share of lithium concentrate from the Bald Hill Project over an approximate initial five year term at a fixed price in the first two years of US\$880 per tonne (6% Li₂O). Tawana's JV partner Alliance Mineral Assets Limited also has a long term lithium concentrate offtake agreement with the same counter-party on similar terms. The first shipment was made to Burwill in May 2018.

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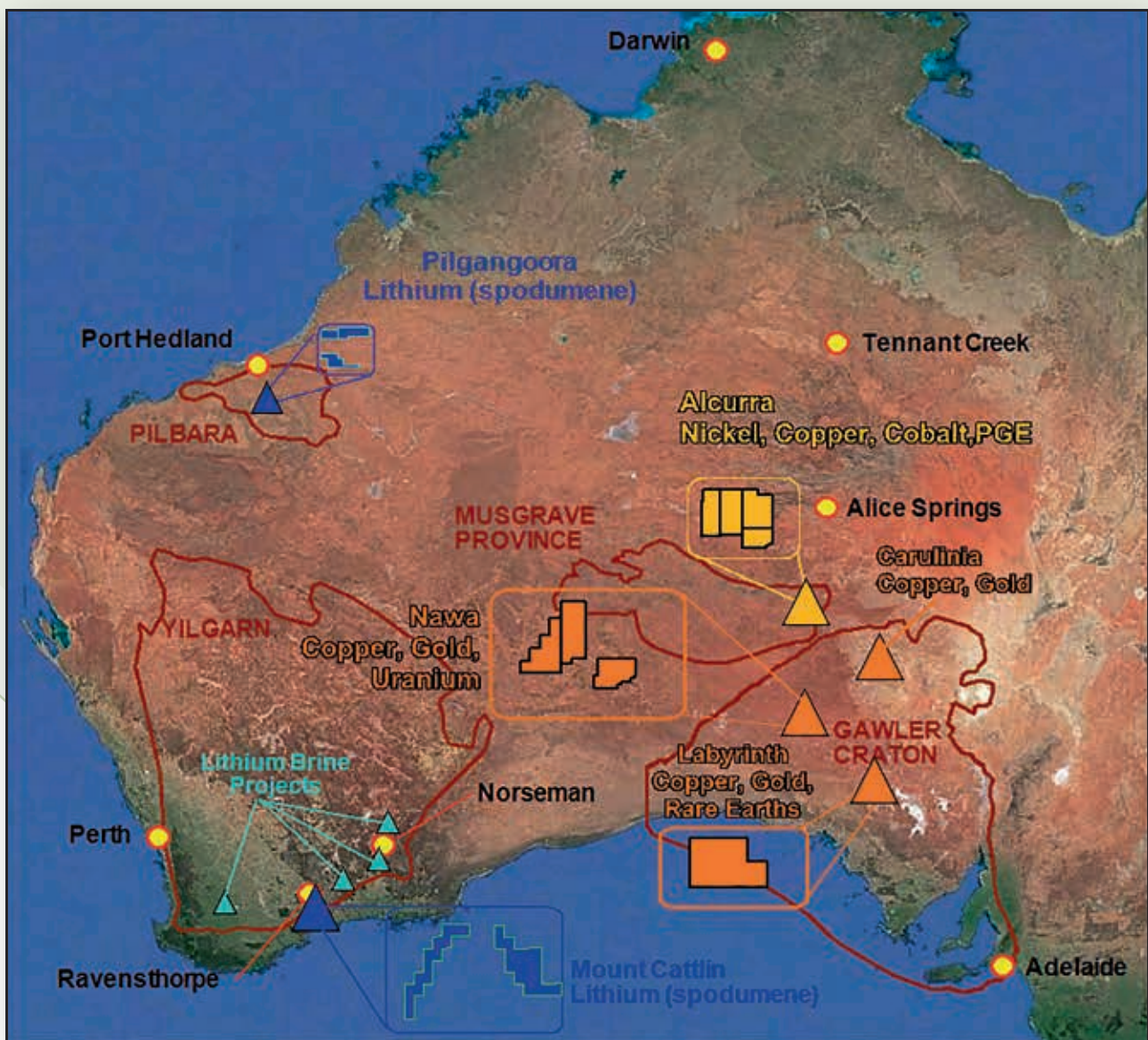
Opportunities for investment

To discuss this project or other possible opportunities, please contact the company directly.



Woomera Mining Ltd

For further information about these opportunities, please visit our website: www.woomex.com.au



Woomera Exploration

About Woomera Mining

All lithium tenements are 100% owned.

We are interested in financial investment as Farm-in/Joint Venture. Note that we have a JV with OZ Minerals over our Musgrave project in SA.

Pilgangoora Project

The Company's three Pilgangoora Project tenements lie within the Pilbara Craton, between 60km and 110km south east from Port Headland, within close proximity to the following world-class pegmatite hosted projects including:

- Pilbara Minerals Ltd: Mineral Resource of 156.3Mt @ 1.25% Li₂O and 128ppm Ta₂O₅ – ASX: PLS
- Altura Mining Ltd: Resource 40.3Mt @ 1.0% Li₂O – ASX: AJM
- Mineral Resource Ltd: The Wodgina Lithium Mine Resource of 120Mt @ 1.28% Li₂O – ASX: MIN

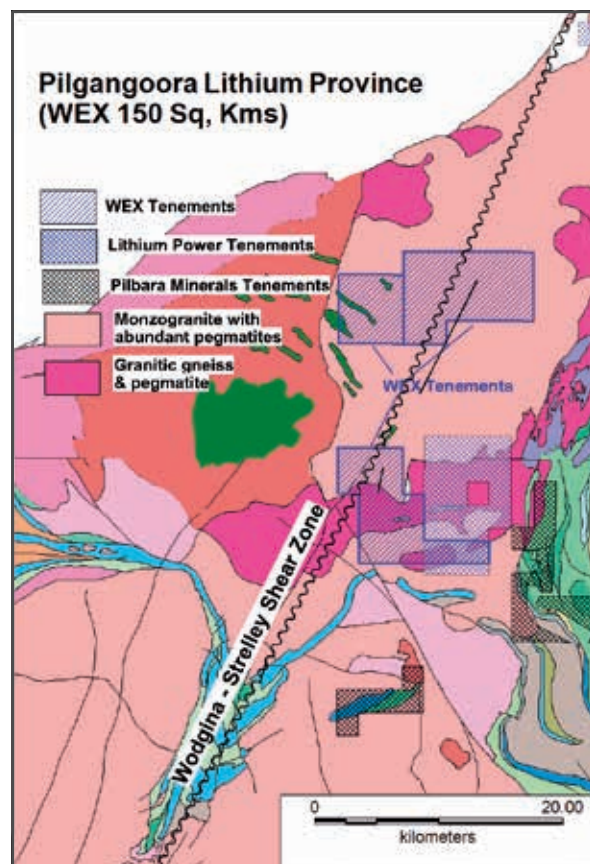
WML plans to conduct initial field reconnaissance at Pilgangoora in Q4 2018.

Mount Cattlin Project

The Mt Cattlin Project is located along the boundary of the Ravensthorpe Terrane, which forms part of the Archaean Ravensthorpe greenstone belt, which lies along the boundary between the Youanmi and Southwest regional terranes of the Yilgarn Craton.

The Mt Cattlin Project is considered prospective for hard rock lepidolite and spodumene mineralisation based primarily on geological and structural analogues drawn from Galaxy's Mt Cattlin Lithium deposit located approximately 10km to the south.

The 37 km² project area is under explored, and there is no record of previous lithium focused exploration in the project area. The application area lies on the boundary of the favourable Ravensthorpe greenstone belt and GSWA mapping indicates that structurally controlled lithium hosted pegmatites are widespread throughout the area.



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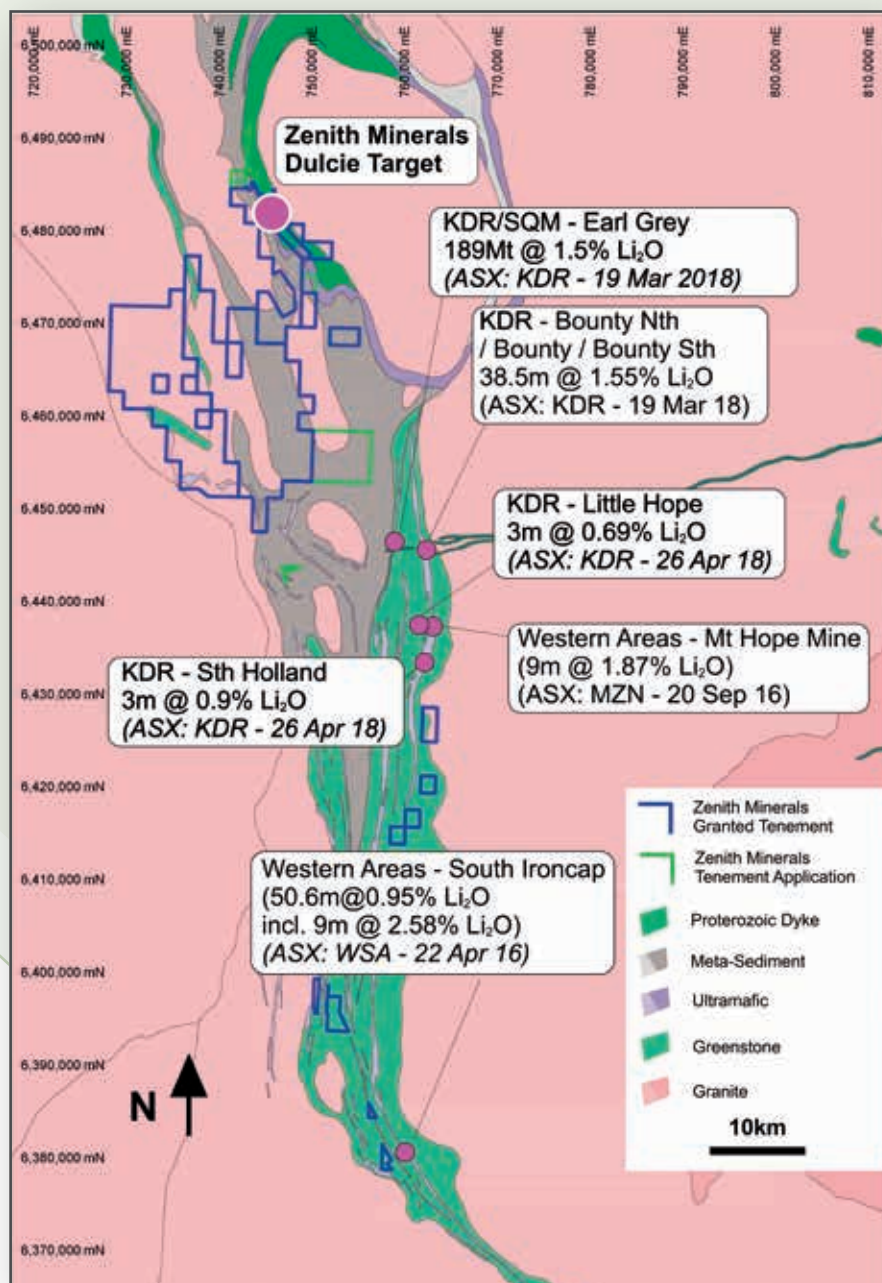
www.woomex.com.au

Opportunities for investment

- **Interested in financial investment by a third party, such as a joint venture?** – The Company is open to third party investment that is in the best interest of its shareholders. Participation could be at the project level, or via financial investment in the parent company or its wholly owned subsidiary company.
- **Opportunity for further offtake?** – The Company's ordinary shares trade on the Australian Securities Exchange (ASX) under the ticker code ZNC.
- To discuss this project or other possible opportunities please contact the company directly.



For further information about these opportunities, please visit our website: www.zenithminerals.com.au



Zenith Minerals

About Zenith Minerals

Zenith Minerals Limited is a Western Australian based company focused on increasing shareholder value by the identification, exploration and development of high-quality lithium, gold and base metals deposits.

The management and board of Zenith Minerals Limited have extensive experience in exploration and project development. The company has continued to implement its strategy of being an exploration project generator. Projects are advanced by the Company's experienced team applying innovative exploration techniques.

Projects may be developed or monetized depending how shareholders' best interests are served.

Split Rocks Project

- **Project status** – exploration stage.

The 100% owned Split Rocks Project covers a large portion (total area >500sqkm) of the Forrestania Greenstone Belt of Western Australia. This emerging lithium district is host to the Mt Holland Lithium Project owned by Sociedad Quimica y Minera de Chile S.A. (SQM) and Kidman Resources Limited that contains a resource of 189million tonnes @ 1.5% Li₂O.

Initial drill testing of Zenith's Dulcie lithium pegmatite target was completed in mid-2018, confirming the presence of thick pegmatite bodies (up to 79m downhole widths) over 950m of strike length – results confirm that these pegmatites contain broad anomalous levels of lithium throughout. The Dulcie pegmatite body remains open to the north and west and requires further follow-up drill testing.

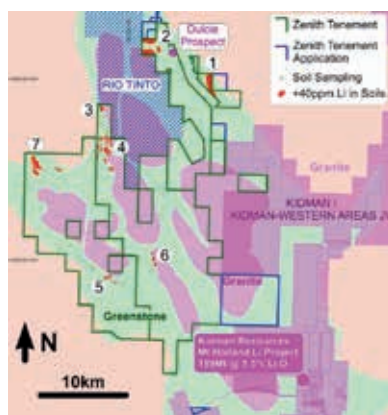
In addition, first pass geochemical programs at Zenith's Split Rocks Project, to date covering approximately 20% of the Company's tenements, have defined seven large coherent lithium anomalies with variable levels of associated caesium, tantalum and rubidium surrounding granite bodies that

may be potential source rocks for lithium bearing pegmatites.

The tenor of these large-scale lithium anomalies is comparable with competitor surface results that upon drilling have returned significant bedrock lithium mineralisation in several instances. Field follow-up indicated very little to no outcrop in the areas of the lithium soil anomalies and that drill testing was required.

Initial drill testing of the lithium soil anomalies has been completed and results are awaited.

- **Location** – Western Australia. 350km east of Perth, approximately 440km to Port of Kwinana and 400km to Port of Esperance.



- **Government approval status** – exploration licences have been granted by the Western Australian Department of Mines, Industry Regulation and Safety. Permits of Work have been approved for drilling activities to proceed.



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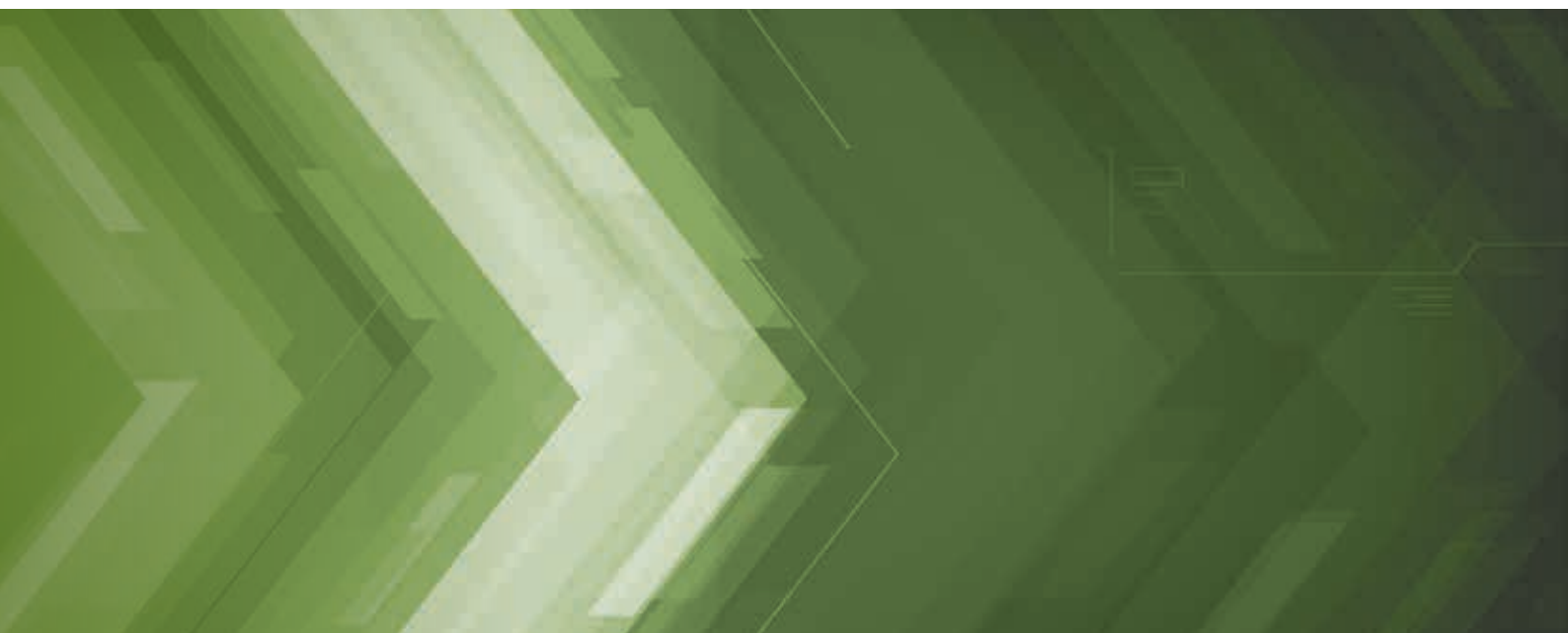
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