

For personal use only



AVENIRA 
LIMITED

Wonarah – Tier 1 Phosphate Project

March 2022

CRU Phosphates Conference

ASX: AEV

Disclaimer

This presentation has been prepared by Avenira Limited (Avenira). This document does not constitute or contain an offer, invitation, solicitation or recommendation with respect to the purchase or sale of any security in Avenira. This document does not constitute an offer to sell, or a solicitation of an offer to buy, any securities in any jurisdiction (in particular, the United States of America), or a securities recommendation. This document is not a prospectus, product disclosure statement or other offering document under Australian law or any other law and will not be lodged with the Australian Securities and Investments Commission.

This document contains a summary of information about Avenira and its activities that is current as at the date of this document. The information in this document is general in nature and does not purport to be complete or to contain all the information which a prospective investor may require in evaluating a possible investment in Avenira or that would be required in a prospectus or a product disclosure statement prepared in accordance with the Corporations Act 2001 (Cth) (Corporations Act). Recipients should conduct their own analysis in order to satisfy themselves as to the accuracy and completeness of the information, statements and opinions contained in this presentation.

The information contained in this document has been prepared in good faith by Avenira, however no guarantee representation or warranty expressed or implied is or will be made by any person (including Avenira and its affiliates and their directors, officers, employees, associates, advisers and agents) as to the accuracy, reliability, correctness, completeness or adequacy of any statements, estimates, options, conclusions or other information contained in this document.

To the maximum extent permitted by law, Avenira and its affiliates and their directors, officers employees, associates, advisers and agents do not make any representation or warranty, express or implied, as to the currency accuracy, reliability or completeness of any information, statements, opinions, estimates, forecasts or other representations contained in this presentation. No responsibility for any errors or omissions from this presentation arising out of negligence or otherwise are accepted.

Certain information in this document refers to the intentions of Avenira, but these are not intended to be forecasts, forward looking statements or statements about the future matters for the purposes of the Corporations Act or any other applicable law. The occurrence of the events in the future are subject to risk, uncertainties and other actions that may cause Avenira's actual results, performance or achievements to differ from those referred to in this document. Accordingly Avenira and its affiliates and their directors, officers, employees and agents do not give any assurance or guarantee that the occurrence of these events referred to in the document will actually occur as contemplated.

Statements contained in this document, including but not limited to those regarding the possible or assumed future costs, the global economic climate, commodity prices, environmental risks, performance, dividends, returns, revenue, exchange rates, potential growth of Avenira, industry growth or other projections and any estimated company earnings are or may be forward looking statements. Forward-looking statements can generally be identified by the use of words such as 'project', 'foresee', 'plan', 'expect', 'aim', 'intend', 'anticipate', 'believe', 'estimate', 'may', 'should', 'will' or similar expressions. These statements relate to future events and expectations and as such involve known and unknown risks and significant uncertainties, many of which are outside the control of Avenira. Actual results, performance, actions and developments of Avenira may differ materially from those expressed or implied by the forward-looking statements in this document. Such forward-looking statements speak only as of the date of this document. There can be no assurance that actual outcomes will not differ materially from these statements.

Compliance Statement

Information in this document relating to Exploration Results or estimates of Mineral Resources or Ore Reserves has been extracted from the reports listed below. The reports are available to be viewed on the company website at: www.avenira.com

Wonarah Project

15 March 2013: Technical Report Mineral Resource Estimation for the Wonarah Phosphate Project, Northern Territory, Australia 30 April 2014: Quarterly activities report

Avenira confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. Avenira confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

Wonarah Project

- Tier 1 premium grade phosphate deposit in Australia
- 100%-owned by Avenira
- JORC 2012 resource of 550Mt, with 67Mt at 30% P₂O₅ (27% cutoff grade)
- Scoping study for Thermal Phosphoric Acid Plant and Ferric Phosphate Plant underway
- Strategic review continuing into supply/demand from:
 - Lithium ferro phosphate (LiFePO₄) cathode market (growing strongly)
 - Fertilizer market (typically seasonal)
- Excellent infrastructure including nearby road, rail, gas, and water
- Abundant sun, almost 365 days per year blue sky, no clouds, highest photovoltaic power potential
- Proposed renewable power including solar and thermal regeneration of power complimenting baseload gas power
- Ongoing discussions with downstream industry participants

Wonarah positioned to leverage strong phosphate demand growth in Cathode and Fertilizer markets



Phosphate Market - Batteries

Lithium Ferro Phosphate (LFP) batteries are growing in popularity for electric vehicles and static storage due to:

- Low cost, effective vs surging nickel and cobalt prices
- Safe, low toxicity
- Reliable, well-defined performance, longer life cycle
- Long-term performance stability and thermal stability, no fires
- Nickel and cobalt-free – recycling friendly
- Good potential replacement for lead-acid batteries
- Leading vehicle manufacturers switching to LFP
- China is largest manufacturer of LFP batteries for global EV manufacturers
- Korean battery producers accelerating towards LFP

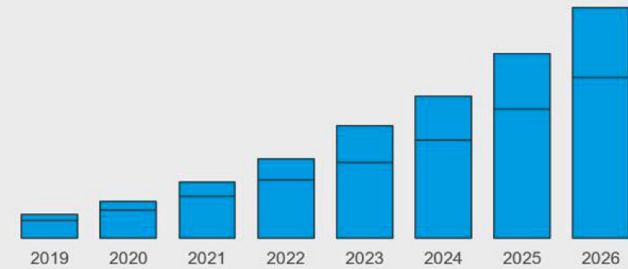
Lithium Ferro Phosphate batteries are the fastest growing segment of the battery industry



LFP production to boost tMAP and PWA/TPA demand

Global phosphate demand from LFP production, kt P₂O₅

tMAP PWA/TPA



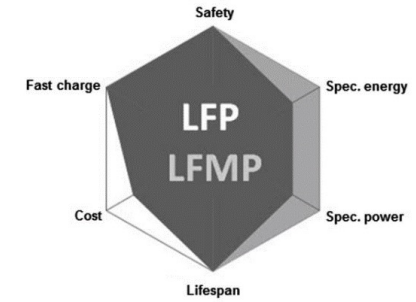
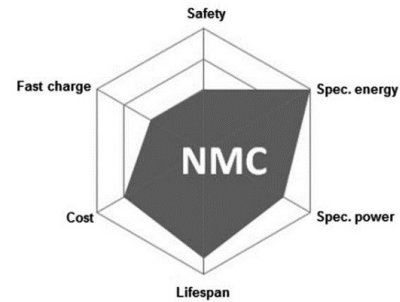
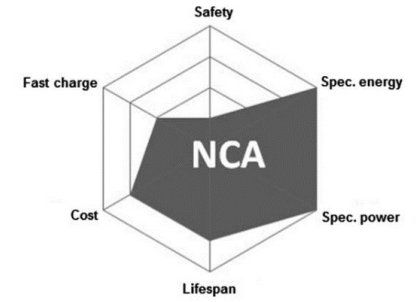
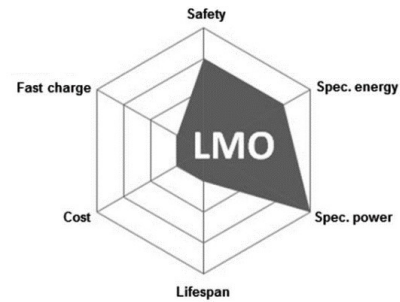
Source CRU: No Y Axis scale supplied, but demand is predicted to be three fold by 2026. tMAP is technical mono ammonium phosphate or purified phosphoric acid about 61% P₂O₅ and PWA/TPA is purified wet acid approximately 60% P₂O₅



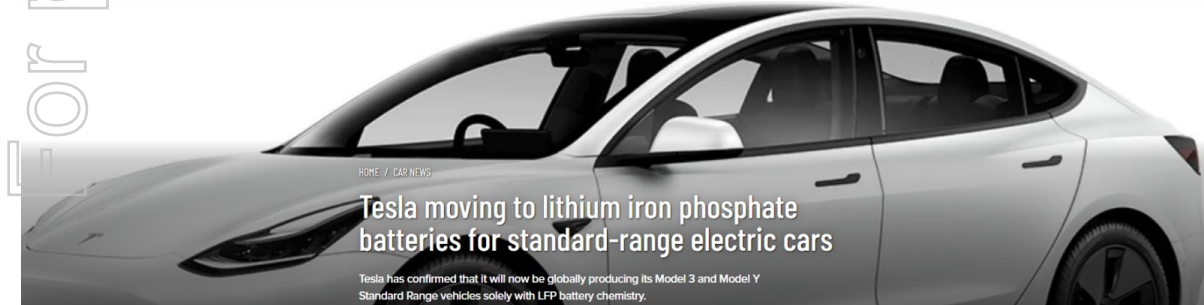
Rise of LiFePO₄ Batteries

Significant change in sentiment towards safer, longer life, recycle friendly Lithium Ferro Phosphate (LFP) batteries batteries in last 6 months

- Tesla recently announced in its 2021 Q3 investor deck that it would be changing the battery in its standard range vehicles to LFP
- A number of other significant announcements also occurred in late 2021:
 - LG Chem increasing LFP production,
 - Samsung SDI expanding into LFP batteries,
 - Mercedes Benz to launch LFP vehicles in 2024,
 - BMW investment in ONE (US Company) re LFP battery development and
 - Volkswagen plans for a LFP “Unified Battery Cell” by 2023
- With electric cars growing in popularity worldwide, switching to LFP batteries can potentially reduce the cost of an electric car by 20-25%
- Electric vehicles will become cheaper than internal combustion vehicles within 3 -4 years according to Tritium, a global vehicle charging designer, developer, and operator



Source: BCG, Spider diagram showing advantages of LFP batteries, e.g. larger grey area = better all-round performance in Safety, Energy, Power, Lifespan and fast charging compared to other batteries. LMO = Lithium Manganese Oxide, NCA = Lithium Nickel Cobalt Aluminum, NMC = Lithium Nickel Manganese Cobalt, LFMP = Lithium Iron Manganese Phosphate



NEWS BULLETIN – 8 March 2022

V1 - AUSE03201MA

THE AUSTRALIAN



WEDNESDAY
March 9, 2022
\$3.50
PRICE INCLUDES GST
FREIGHT EXTRA

WWW.THEAUSTRALIAN.COM.AU | FOR THE INFORMED AUSTRALIAN

THE MARKETS

THE AUSTRALIAN,
WEDNESDAY, MARCH 9, 2022
theaustralian.com.au/businessreview 19

LME steps in as nickel hits \$US100,000 a tonne

NICK EVANS

The nickel price crossed above \$US100,000 a tonne in early trading on the London Metal Exchange on Tuesday night, sparking emergency measures to protect the market from the wild spike.

The LME introduced emergency measures to allow traders to defer delivery on contracts for nickel futures after a 90 per cent price rise in Monday trading triggered margin calls at traders, and a Chinese bank was given extra time to pay up on a substantial short position rumoured to have been taken by Chinese nickel major Tsingshan Group.

Nickel prices fell back after breaching \$US100,000 a tonne and were trading closer to \$US80,000 at 1900 AEDT.

Nickel hit a peak of \$US54,975 a tonne on Monday, pipping the previous high mark of around \$US54,000 a tonne struck in 2007.

That year BHP's stainless steel division, which at the time included its Nickel West operations in Western Australia, out-earned its iron ore operations by \$US1bn, delivering stunning earnings of \$US3.7bn (\$5.1bn) for the full year.

That same year Russia's Norilsk Nickel stumbled up \$US6.4bn for LionOre's Australian nickel assets after a heated bidding war with Xstrata.

That takeover turned into arguably one of the greatest disasters in Australian corporate history, however, as the global financial crisis crunched commodity prices.

Within two years nickel prices were trading at less than a fifth of their March 2007 peak and Norilsk had been forced progressively to close all LionOre's Australian mines to stem its losses.

While nickel industry sources say they do not expect this week's extraordinary prices to persist, the sharp crash of 15 years ago is also unlikely to be replicated, given nickel's role in underpinning the global battery industry – where previously it was primarily used in stainless steel.

BHP was trying to sell Nickel West only five years ago, but returned the division to the fold in recognition of its importance as one of the company's "future facing commodities".

BHP boss Mike Henry told a Sydney business conference the company forecast a robust long-term outlook for the commodity.

"The world is going to need probably about two times as much copper over the next 30 years as the past 30, four times as much nickel – even two times as much steel – all to support the energy transition," he said.

"We've recently developed a nickel sulfate plant in our Nickel West operation in WA, and this is to extract more rent from every unit of nickel."

"We've gone from supplying none of our nickel into the electric vehicle battery market to more than 90 per cent into the EV battery market."

The early steps of a consolidation of the WA nickel industry are underway, courtesy of IGO's recent \$3.36 a share offer for fellow miner Western Areas.

But the Australian market clearly does not expect Monday's wild rise in the nickel price to translate into anything close to 2007's bidding war for Australian nickel assets.

Western Areas shares closed up only 3c to \$3.46, only 10c above the IGO offer price. IGO shares were down 2c to \$12.79, with Panoramic Resources up 0.5c to 31c. BHP shares closed down \$1.85 at \$48.53.

NMC Batteries, clouds forming

- The current inflated (and unsustainable) metals prices on the London Metals Exchange and its effect on NMC batteries have created a mathematical scenario that almost doubles the cost of raw materials in NMC batteries so that they are approaching ~3x that of an LFP battery on a \$/kWh basis.

Phosphate Market - Fertilizers

Fertilizer demand is continuing to improve:

- Phosphate rock price 32% grade P_2O_5 has risen 240% from its 10 Year low price in April 2020
- Food demand predicted to grow 50% by 2050
- Phosphate is a vital ingredient for NPK fertilisers
- Depleted soil nutrients require replenishment
- Majority of Phosphate market is vertically integrated from phosphate rock producer to DAP/ MAP end product production
- Structural market changes recently have included Russia and China phosphate import/ export restrictions, the US increasing tariffs on phosphate imports and impending EU phosphate impurity regulations

Phosphate demand is continuing with Rock and DAP/MAP with corresponding phosphate price increases.



Morocco Phosphate Rock Price

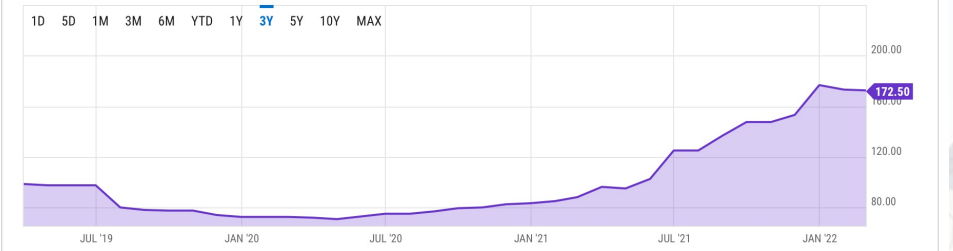
172.50 USD/mt for Feb 2022

Overview

Interactive Chart

Level Chart

VIEW FULL CHART



Source: Y Charts, 3 Year chart Morocco Phosphate Price



For personal use only

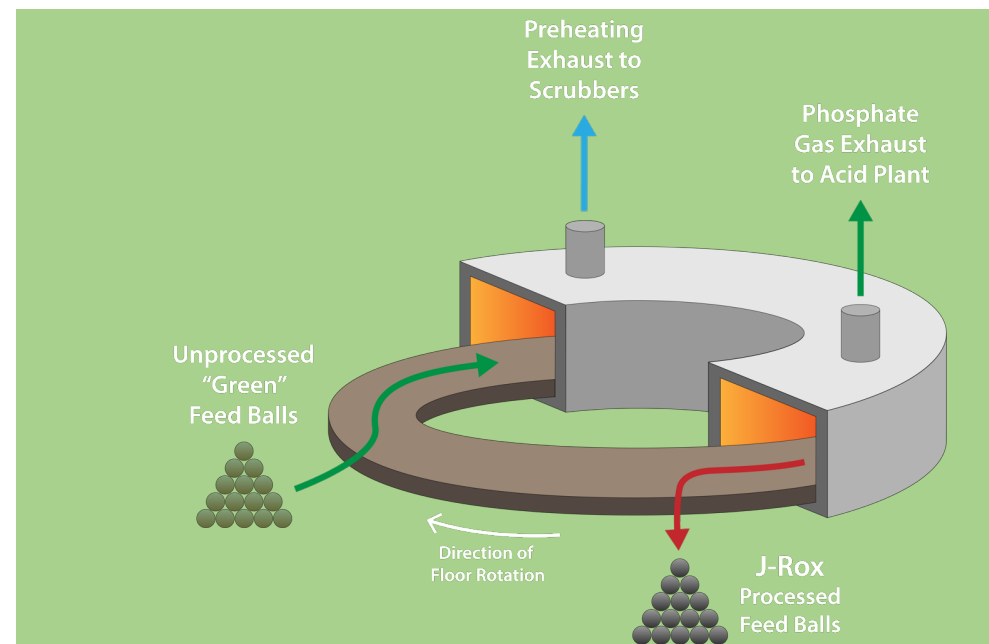
Novaphos – IHP Process

Avenira has been a partner with Novaphos from initial foundation equity partner through to exclusive licensee in Australia

- The Novaphos process produces high quality super phosphoric acid
- Low environmental impact without the traditional wet acid process that produces waste gypsum and tailings
- Alternative benefits with co-products J- Rox that can be utilised in concrete, cement and construction industries



Novaphos is continuing to challenge the conventional wisdom of the phosphate industry through an exemplary ESG focus



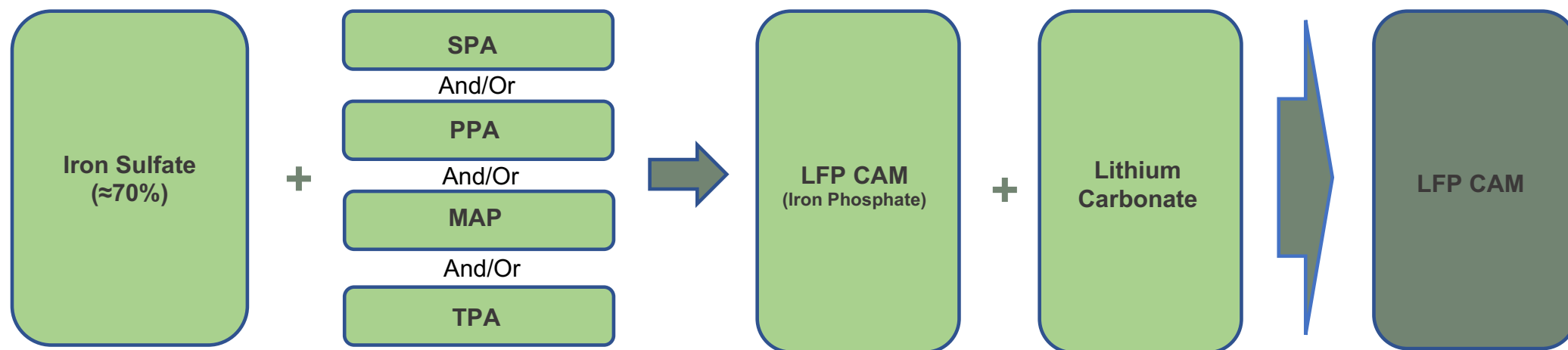
For personal use only

Scoping Study - Concepts

The Avenira study team have over the past four months consulted scientific organisations, universities, industry technical and economic analysts and manufacturers to develop a level understanding of the full supply chain of the active cathode market and LFP batteries. Australia also produces lithium hydroxide and lithium carbonate and Avenira has started the process re engagement with potential partners. And by the way....Australia produced more than half of the worlds lithium in 2021*.

In summary:

70% of Lithium Ferro Phosphate Cathode Active Materials (LFP CAM) are produced by the “Iron Phosphate Solid Phase Method”, on account of the relative ease of access to Iron Sulfate and mature processing technology. The study will continue to also consider process circuits suited to discrete high value fertiliser products in parallel.



NOTES: SPA = Super Phosphoric Acid (Novaphos), PPA = Purified Phosphoric Acid, MPA = Mono Ammonium Phosphate, TPA = Thermal Phosphoric Acid, scoping study options or combination thereof
* Statista.com 2022 Lithium report

Wonarah Project: specifics

Tier 1 world class phosphate asset:

- Largest premium grade phosphate resource (15% P₂O₅ cutoff) in Australia:
 - Measured Resource of 64.9 Mt @ 22.4% P₂O₅
 - Indicated Resource of 133 Mt @ 21.1% P₂O₅
 - Inferred Resource of 352 Mt @ 21% P₂O₅
- 67 Mt at 30% P₂O₅ Measured and Indicated Resource (27% P₂O₅ cutoff)
- Definitive feasibility study completed for a DSO operation by AMC Mining Consultants and Lycopodium in 2011
- Australian Licensee for alternative Phosphoric Acid technology company Novaphos Inc
- Key Infrastructure in place
 - Sealed road, rail to Darwin Port nearby
 - Northern gas pipeline runs through the project area
 - Near potable quality water close to leases
- Re-engagement with Northern Territory government departments and appointment of Northern Territory advisors
- Scoping study for Thermal Phosphoric Acid Plant and Ferric Phosphate Plant underway
- Renewable power support to base load gas



For personal use only

Wonarah Project: Next Steps

Near term activities



Scoping study update to focus on a Thermal Phosphoric Acid Plant for LFP battery metals and fertilizers

Implement strategic review options re phosphate markets (batteries and fertilizer)

Discussions with potential strategic partners

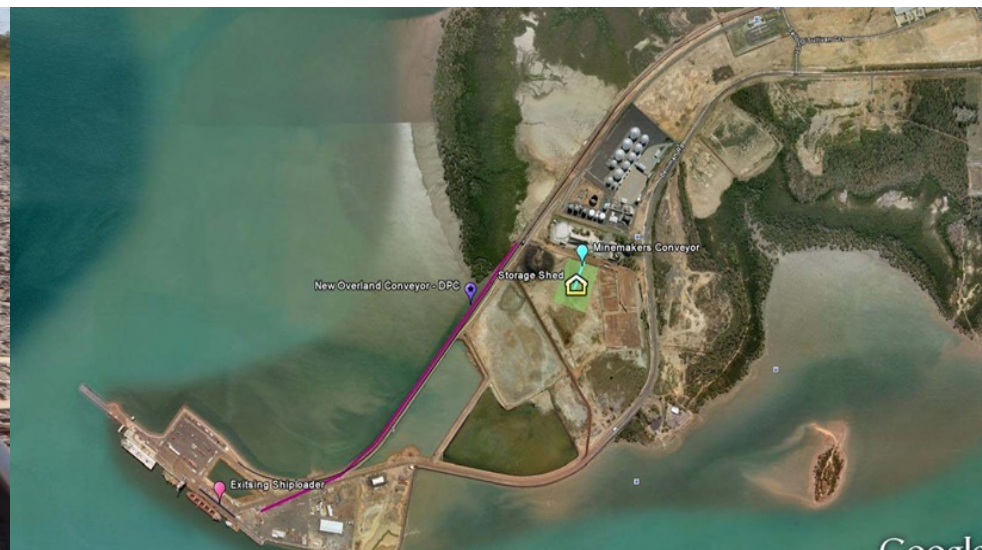
Commence feasibility studies (H2, 2022) to develop a pathway to production



Barkly Highway



Adelaide – Darwin Rail



East Arm Bulk Facility - Port of Darwin

For personal use only

Corporate Overview



Board of Directors



Brett Clark
Executive Chairman
 Engineer and Investment Banker with +30 years of Board and Senior Management/ Executive experience. Extensive exposure to financial/capital markets, project development and operations having previously worked in senior management and/or board roles with Rio Tinto, WMC Resources, Barrick Gold/ Antofagasta and Mitsubishi Development/ Murchison Metals JV in a variety of commodities including Iron Ore, Gold, Copper, Coal, Graphite, Nickel, Cobalt, Potash and oil and gas.



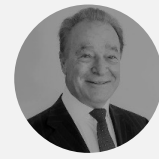
Kevin Dundo
Non-Executive Director
 Experienced corporate lawyer with +20 years gold sector experience. Chairman of Red 5 Limited (ASX:RED) and NED of Imdex Ltd.



Dr Geoffrey Xue
Non-Executive Director
 PhD & Masters in Economic Geology. Experienced mining and investment banker in Australia. Significant experience in gold project development. Currently the Project Manager at Anova Metals Ltd.



Winnie Lai Hadad
Non-Executive Director
 Australian qualified lawyer and a CPA. Established history of engagement between China based entities and Australian mining projects. Currently NED of Vonex Limited.



Roger Harris
Non-Executive Director
 B App Science. Founding director / owner of a large service-based company with branches in Western Australia and SE Asia . Operates a family office for 30 years investing in the natural resources sector.

Technical Team



Stephen Harrison
Chief Geologist
 A senior geologist previously responsible for exploration programs in the Yandal Greenstone Belt, including at the Jundee Gold Mine.

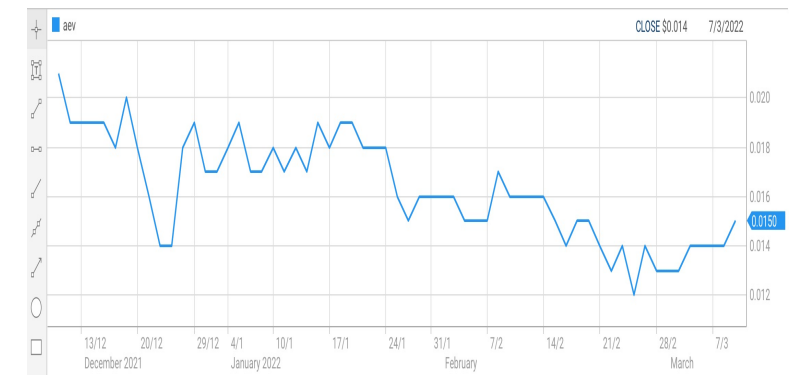


Marcus Fliis
Consulting Geologist and Geophysicist
 A senior geologist and geophysicist with many years' experience in Archean Eastern Goldfields settings.



Brian Campbell
Project Manager – Wonarah Phosphate
 Mr Campbell has deep experience leading engineering teams specialising in phosphate projects for global engineering organisations. This included roles with Worley as Director Mined Fertilizers, Advisian as a Strategic Consultant and Thyssenkrupp.

Shareprice



Capital Structure

Shares on issue (ASX:AEV)	862.9M
Unlisted Options	60.0M
Top 20 Shareholders February 2022	~40%
Market Capitalisation 8 March 2022	A\$12.1M
Cash + Liquid Investments (@ December 31, 2021)	A\$2.88M
Debt	\$3m

Wonarah Project: Conclusion

- Worldwide demand for phosphate is growing
 - Lithium Iron Phosphate Batteries
 - Rock phosphate, DAP/MAP
- Australia's Tier 1 premium grade phosphate project
- World class infrastructure adjacent to project
- 100% owned by Avenira
- Scoping study for a Thermal Phosphoric Acid plant and Ferric Phosphate Plant commenced with LFP battery and Fertilizer optionality with renewable power
- Strategic partnerships discussions in both battery and fertilizer investor markets



For personal use only



Avenir Limited
ABN 48 116 296 541
www.avenira.com

U6, 100 Mill Point Rd
South Perth, Western Australia 6151 AUSTRALIA

PO Box 1704
West Perth WA 6872 AUSTRALIA

+61 8 9264 7000 | frontdesk@avenira.com