

## **2024 ANNUAL GENERAL MEETING**

#### Dear Shareholder

Notice is hereby given that the 2024 Annual General Meeting (**Meeting**) of Avenira Limited (ASX:AEV) (Avenira) will be held as a physical meeting at:

# Unit 12 / 217 Hay St, Subiaco, WA 6008 on Friday 29 November 2024 at 1:00pm (AWST)

In accordance with section 253RA(2) of the Corporations Act 2001 (Cth), the Company will not be sending hard copies of the Notice to shareholders unless a shareholder has requested a hard copy. A copy of the Notice of Meeting (NOM) is available on the Company's website at

#### www.avenira.com

As you have not elected to receive notices by email, a copy of your personalised proxy form is enclosed for your convenience. Please complete and return the attached proxy form to the Company's share registry, Automic Pty Limited, using any of the following methods:

#### **Easiest method**

**By mobile** Scan the QR code on your proxy form with the camera on your mobile device

and follow the prompts.

#### **Other methods**

Online <a href="https://investor.automic.com.au/#/loginsah">https://investor.automic.com.au/#/loginsah</a>

By mail Share Registry – Automic Pty Limited, GPO Box 5193, Sydney NSW 2001,

Australia

Your proxy voting instruction must be received by 1:00 pm (AWST) on 27 November 2024, being not less than 48 hours before the commencement of the Meeting. Any proxy voting instructions received after that time will not be valid for the Meeting.

The NOM is important and should be read in its entirety. If you are in doubt as to the course of action you should follow, you should consult your financial adviser, lawyer, accountant or other professional adviser. If you have any difficulties obtaining a copy of the NOM please contact the Company Secretary on +61 8 9264 7000.

#### Yours sincerely

Ms Yuan Yuan

**Executive Chairman** 



ACN 116 296 541

# NOTICE OF ANNUAL GENERAL MEETING AND EXPLANATORY MEMORANDUM AND PROXY FORM

The 2024 Annual General Meeting of the Company will be held at Unit 12 / 217 Hay St, Subiaco, WA 6008 on Friday 29 November 2024 at 1:00pm (AWST)

The **2024 Annual Report** may be viewed on the Company's website at www.avenira.com

#### IMPORTANT INFORMATION

Shareholders are urged to vote by lodging the proxy form that has been separately sent to you.

This is an important document that should be read in its entirety. If you do not understand it you should consult your professional advisers without delay.

#### **AVENIRA LIMITED**

#### ACN 116 296 541

#### NOTICE OF ANNUAL GENERAL MEETING

Notice is hereby given that a general meeting of the Shareholders of Avenira Limited ACN 116 296 541 (Company) will be held at Unit 12 / 217 Hay St, Subiaco, WA 6008 on Friday 29 November 2024 at 1:00pm (AWST).

The Explanatory Memorandum provides additional information on matters to be considered at the Annual General Meeting. The Explanatory Memorandum and the Proxy Form part of this Notice.

The Directors have determined pursuant to regulation 7.11.37 of the *Corporations Regulations 2001* (Cth) that the persons eligible to vote at the Annual general Meeting are those who are registered as Shareholders on Wednesday 27 November 2024 at 1:30pm (AWST).

Terms and abbreviations used in this Notice and the Explanatory Memorandum are defined in Section 13.

A Proxy Form is located at the end of the Explanatory Memorandum.

#### **AGENDA**

#### 1. Annual Report

To receive and consider the Annual Report of the Company for the year ended 30 June 2024, which includes the Financial Report, the Directors' Report (including the Remuneration Report) and the Auditor's Report.

#### 2. Resolution 1 – Adoption of Remuneration Report

To consider and, if thought fit, to pass, with or without amendment, the following resolution as a **Non-Binding Resolution**:

"That, for the purposes of section 250R(2) of the Corporations Act, approval is given for the adoption of the Remuneration Report as contained in the Company's Annual Report for the financial year ended 30 June 2024."

Note: The vote on this Resolution is advisory only and does not bind the Directors or the Company.

#### **Voting Prohibition Statement:**

A vote on this Resolution must not be cast (in any capacity) by or on behalf of either of the following persons:

- (a) a member of the Key Management Personnel, details of whose remuneration are included in the Remuneration Report, or a Closely Related Party of such member; or
- (b) by a person appointed as a proxy, where that person is either a member of the Key Management Personnel or a Closely Related Party of such member.
  - However, a person (the **voter**) described above may cast a vote on this Resolution as a proxy if the vote is not cast on behalf of a person described above and either:
- (c) the voter is appointed as a proxy by writing that specifies the way the proxy is to vote on this Resolution; or
- (d) the voter is the Chair and the appointment of the Chair as proxy:
  - (i) does not specify the way the proxy is to vote on this Resolution; and
  - (ii) expressly authorises the Chair to exercise the proxy even though this Resolution is connected directly or indirectly with the remuneration of a member of the Key Management Personnel.

#### 3. Resolution 2 – Re-election of Ms Yuan Yuan as a Director

To consider and, if thought fit, to pass, with or without amendment, the following resolution as an **Ordinary Resolution:** 

"That, pursuant to and in accordance with ASX Listing Rule 14.4 and clause 7.3(c) of the Constitution, Ms Yuan Yuan retires and being eligible is re-elected as a Director on the terms and conditions in the Explanatory Memorandum."

#### 4. Resolution 3 – Re-election of Ms Ran Mo as a Director

To consider and, if thought fit, to pass, with or without amendment, the following resolution as an **Ordinary Resolution:** 

"That, pursuant to and in accordance with ASX Listing Rule 14.4 and clause 7.3(c) of the Constitution, Ms Ran Mo retires and being eligible is re-elected as a Director on the terms and conditions in the Explanatory Memorandum"

#### 5. Resolution 4 – Re-election of Mr Shixing Zhang as a Director

To consider and, if thought fit, to pass, with or without amendment, the following resolution as an **Ordinary Resolution:** 

"That, pursuant to and in accordance with ASX Listing Rule 14.4 and clause 7.3(c) of the Constitution, Mr Shixing Zhang retires and being eligible is re-elected as a Director on the terms and conditions in the Explanatory Memorandum"

#### 6. Resolution 5 – Ratification of Issue of Placement Shares

To consider and, if thought fit, to pass with or without amendment, the following resolution as an **Ordinary Resolution:** 

"That, pursuant to and in accordance with ASX Listing Rule 7.4, Shareholders ratify the prior issue of 156,462,500 Shares at an issue price of \$0.008 each to subscribers pursuant to a placement on the terms and conditions in the Explanatory Memorandum".

#### **Voting Exclusion Statement:**

The Company will disregard any votes cast in favour of this resolution by or on behalf of a person who participated in the issue or an associate of that person/persons.

However, this does not apply to a vote cast in favour of a resolution by:

- (a) a person as proxy or attorney for a person who is entitled to vote on the resolution, in accordance with directions given to the proxy or attorney to vote on the resolution in that way; or
- (b) the chair of the meeting as proxy or attorney for a person who is entitled to vote on the resolution, in accordance with a direction given to the chair to vote on the resolution as the chair decides; or
- (c) a holder acting solely in a nominee, trustee, custodial or other fiduciary capacity on behalf of a beneficiary provided the following conditions are met:
  - (i) the beneficiary provides written confirmation to the holder that the beneficiary is not excluded from voting, and is not an associate of a person excluded from voting, on the resolution; and
  - (ii) the holder votes on the resolution in accordance with directions given by the beneficiary to the holder to vote in that way.

#### 7. Resolution 6 – Ratification of Issue of Arruwurra Shares

To consider and, if thought fit, to pass with or without amendment, the following resolution as an **Ordinary Resolution:** 

"That, pursuant to and in accordance with ASX Listing Rule 7.4, Shareholders ratify the prior issue of 70,000,000 Shares to Arruwurra Pty Ltd (**Arruwurra**) at an issue price of \$0.004 each on the terms and conditions in the Explanatory Memorandum".

#### **Voting Exclusion Statement:**

The entity will disregard any votes cast in favour of Resolution 6 by or on behalf of Arruwurra or an associate of that person/persons.

However, this does not apply to a vote cast in favour of a resolution by:

- (a) a person as proxy or attorney for a person who is entitled to vote on the resolution, in accordance with directions given to the proxy or attorney to vote on the resolution in that way; or
- (b) the chair of the meeting as proxy or attorney for a person who is entitled to vote on the resolution, in accordance with a direction given to the chair to vote on the resolution as the chair decides; or
- (c) a holder acting solely in a nominee, trustee, custodial or other fiduciary capacity on behalf of a beneficiary provided the following conditions are met:
  - (i) the beneficiary provides written confirmation to the holder that the beneficiary is not excluded from voting, and is not an associate of a person excluded from voting, on the resolution; and
  - (ii) the holder votes on the resolution in accordance with directions given by the beneficiary to the holder to vote in that way.

## 8. Resolution 7 – Ratification of Issue of Tranche 1 Placement Shares to Hebang

To consider and, if thought fit, to pass with or without amendment, as an **Ordinary Resolution** the following:

"That, pursuant to and in accordance with ASX Listing Rule 7.4, Shareholders ratify the prior issue of 285,000,000 Shares to Hebang Biotechnology (Hong Kong) Investment Limited (**Hebang**) at an issue price of \$0.006 per Share on the terms and conditions set out in the Explanatory Memorandum".

#### **Voting Exclusion Statement:**

The entity will disregard any votes cast in favour of Resolution 7 by or on behalf of Hebang or an associate of that person/persons.

However, this does not apply to a vote cast in favour of a resolution by:

- (a) a person as proxy or attorney for a person who is entitled to vote on the resolution, in accordance with directions given to the proxy or attorney to vote on the resolution in that way; or
- (b) the chair of the meeting as proxy or attorney for a person who is entitled to vote on the resolution, in accordance with a direction given to the chair to vote on the resolution as the chair decides; or
- (c) a holder acting solely in a nominee, trustee, custodial or other fiduciary capacity on behalf of a beneficiary provided the following conditions are met:
  - (i) the beneficiary provides written confirmation to the holder that the beneficiary is not excluded from voting, and is not an associate of a person excluded from voting, on the resolution; and
  - (ii) the holder votes on the resolution in accordance with directions given by the beneficiary to the holder to vote in that way.

#### 9. Resolution 8 – Approval of Issue of Options to Ms Yuan Yuan

To consider and, if thought fit, to pass with or without amendment, the following resolution as an **Ordinary Resolution**:

"That, pursuant to and in accordance with ASX Listing Rule 10.11, Shareholders approve the issue of 24,000,000 Options to Ms Yuan Yuan (or her nominee) on the terms and conditions set out in the Explanatory Memorandum".

#### **Voting Exclusion:**

The entity will disregard any votes cast in favour of this resolution by or on behalf of Ms Yuan Yuan and any other person who will obtain a material benefit as a result of the issue, or any of their respective associates. However, this does not apply to a vote cast in favour of this resolution by:

- (a) a person as proxy or attorney for a person who is entitled to vote on the resolution, in accordance with directions given to the proxy or attorney to vote on the resolution in that way; or
- (b) the chair of the meeting as proxy or attorney for a person who is entitled to vote on the resolution, in accordance with a direction given to the chair to vote on the resolution as the chair decides; or
- (c) a holder acting solely in a nominee, trustee, custodial or other fiduciary capacity on behalf of a beneficiary provided the following conditions are met:
  - (i) the beneficiary provides written confirmation to the holder that the beneficiary is not excluded from voting, and is not an associate of a person excluded from voting, on the resolution; and
  - (ii) the holder votes on the resolution in accordance with directions given by the beneficiary to the holder to vote in that way

#### 10. Resolution 9 – Approval of Issue of Options to Ms Ran Mo

To consider and, if thought fit, to pass with or without amendment, the following resolution as an **Ordinary Resolution**:

"That, pursuant to and in accordance with ASX Listing Rule 10.11, Shareholders approve the issue of 12,000,000 Options to Ms Ran Mo (or her nominee) on the terms and conditions set out in the Explanatory Memorandum".

#### **Voting Exclusion:**

The entity will disregard any votes cast in favour of this resolution by or on behalf of Ms Ran Mo and any other person who will obtain a material benefit as a result of the issue, or any of their respective associates. However, this does not apply to a vote cast in favour of this resolution by:

- (a) a person as proxy or attorney for a person who is entitled to vote on the resolution, in accordance with directions given to the proxy or attorney to vote on the resolution in that way; or
- (b) the chair of the meeting as proxy or attorney for a person who is entitled to vote on the resolution, in accordance with a direction given to the chair to vote on the resolution as the chair decides; or
- (c) a holder acting solely in a nominee, trustee, custodial or other fiduciary capacity on behalf of a beneficiary provided the following conditions are met:
  - (i) the beneficiary provides written confirmation to the holder that the beneficiary is not excluded from voting, and is not an associate of a person excluded from voting, on the resolution; and
  - (ii) the holder votes on the resolution in accordance with directions given by the beneficiary to the holder to vote in that way

#### 11. Resolution 10 – Approval of Issue of Options to Mr Shixing Zhang

To consider and, if thought fit, to pass with or without amendment, the following resolution as an **Ordinary Resolution**:

"That, pursuant to and in accordance with ASX Listing Rule 10.11, Shareholders approve the issue of 12,000,000 Options to Mr Shixing Zhang (or his nominee) on the terms and conditions set out in the Explanatory Memorandum".

#### **Voting Exclusion:**

The entity will disregard any votes cast in favour of this resolution by or on behalf of Mr Shixing Zhang and any other person who will obtain a material benefit as a result of the issue, or any of their respective associates. However, this does not apply to a vote cast in favour of this resolution by:

- (a) a person as proxy or attorney for a person who is entitled to vote on the resolution, in accordance with directions given to the proxy or attorney to vote on the resolution in that way; or
- (b) the chair of the meeting as proxy or attorney for a person who is entitled to vote on the resolution, in accordance with a direction given to the chair to vote on the resolution as the chair decides; or
- (c) a holder acting solely in a nominee, trustee, custodial or other fiduciary capacity on behalf of a beneficiary provided the following conditions are met:
  - (i) the beneficiary provides written confirmation to the holder that the beneficiary is not excluded from voting, and is not an associate of a person excluded from voting, on the resolution; and
  - (ii) the holder votes on the resolution in accordance with directions given by the beneficiary to the holder to vote in that way

#### 12. Resolution 11 – Approval of Issue of Options to Mr Nam (Eddy) Cheng

To consider and, if thought fit, to pass with or without amendment, the following resolution as an **Ordinary Resolution**:

"That, pursuant to and in accordance with ASX Listing Rule 10.11, Shareholders approve the issue of 12,000,000 Options to Mr Nam (Eddy) Cheng (or his nominee) on the terms and conditions set out in the Explanatory Memorandum".

#### **Voting Exclusion:**

The entity will disregard any votes cast in favour of this resolution by or on behalf of Mr Nam (Eddy) Cheng and any other person who will obtain a material benefit as a result of the issue, or any of their respective associates. However, this does not apply to a vote cast in favour of this resolution by:

- (a) a person as proxy or attorney for a person who is entitled to vote on the resolution, in accordance with directions given to the proxy or attorney to vote on the resolution in that way; or
- (b) the chair of the meeting as proxy or attorney for a person who is entitled to vote on the resolution, in accordance with a direction given to the chair to vote on the resolution as the chair decides; or
- (c) a holder acting solely in a nominee, trustee, custodial or other fiduciary capacity on behalf of a beneficiary provided the following conditions are met:
  - (i) the beneficiary provides written confirmation to the holder that the beneficiary is not excluded from voting, and is not an associate of a person excluded from voting, on the resolution; and
  - (ii) the holder votes on the resolution in accordance with directions given by the beneficiary to the holder to vote in that way

#### 13. Resolution 12 – Approval of Issue of Tranche 2 Placement Shares to Hebang

To consider, and if thought fit, to pass with or without amendment the following as an **Ordinary Resolution:** 

"That, for the purposes of section 611 (item 7) of the Corporations Act, approval is given for the acquisition of a relevant interest in an additional 465,000,000 voting shares of the Company by Hebang pursuant to the proposed issue of 465,000,000 Shares to Hebang at an issue price of \$0.006 per Share on the terms and conditions set out in the Explanatory Memorandum."

#### **Voting Exclusion:**

No votes may be cast in favour of this Resolution by:

- (a) Hebang, being the person proposing to make the acquisition, and its associates; or
- (b) the person (if any) from whom the acquisition is to be made and their associates.

**Expert's Report:** Shareholders should carefully consider the report prepared by the Independent Expert that accompanies this Notice for the purposes of the Shareholder approval required for Resolution 12 under section 611 (item 7) of the Corporations Act. The Independent Expert Report concludes that the transaction contemplated by Resolution 12 is not fair but reasonable to the non-associated Shareholders of the Company.

#### 14. Resolution 13 – Approval of Additional 10% Share Issue Capacity

To consider, and if thought fit, to pass with or without amendment the following as a Special Resolution:

"That, for the purposes of ASX Listing Rule 7.1A, Shareholders approve the Company having the additional capacity to issue up to a further 10% of the issued capital of the Company (at the time of the issue), calculated in accordance with the formula set out in ASX Listing Rule 7.1A.2 on the terms and conditions set out in the Explanatory Memorandum."

By order of the Board

Jaene Suth.

**Graeme Smith** 

**Company Secretary** 

Dated: 29 October 2024

#### **AVENIRA LIMITED**

ACN 116 296 541

#### **EXPLANATORY MEMORANDUM**

#### 1. Introduction

Notice is hereby given that an Annual General Meeting of the Shareholders of Avenira Limited ACN 116 296 541 (**Company**) will be held at Unit 12 / 217 Hay St, Subiaco, WA 6008 on Friday 29 November 2024 at 1:00pm (AWST).

The Explanatory Memorandum provides additional information on matters to be considered at the Annual General Meeting. The Explanatory Memorandum and the Proxy Form is part of this Notice.

Terms and abbreviations used in this Notice and the Explanatory Memorandum are defined the Glossary.

A Proxy Form is located at the end of the Explanatory Memorandum.

You may vote by attending the Annual General Meeting in person, by proxy or attorney, or by an authorised representative (if you are a body corporate).

To vote in person, attend the Annual General Meeting on the date and at the place set out above.

#### **PROXIES**

Members are encouraged to attend the meeting, but if you are unable to attend the meeting, we encourage you to vote by proxy.

In accordance with section 249L of the Corporations Act, Shareholders are advised that:

- each Shareholder has the right to appoint a proxy;
- the proxy need not be a Shareholder of the Company; and
- a Shareholder who is entitled to cast two or more votes may appoint two proxies and may specify the proportion or number of votes each proxy is appointed to exercise.

To vote by proxy, please follow the instructions in the attached Proxy Form.

#### **CORPORATE REPRESENTATIVES**

A body corporate that is a Shareholder, or which has been appointed as proxy, may appoint an individual to act as its representative at the Annual General Meeting. The appointment must comply with the requirements of section 250D of the Corporations Act. The representative should bring to the meeting evidence of his or her appointment, including any authority under which it is signed, unless it has previously been given to the Company.

#### DATE FOR DETERMINING HOLDERS OF SHARES

In accordance with Regulation 7.11.37 of the *Corporations Regulations 2001* (Cth), the Directors have set a date to determine the identity of those entitled to attend and vote at the Annual General Meeting. For the purposes of determining voting entitlements at the Annual General Meeting, Shares will be taken to be held by the persons who are registered as holding at 5:00pm (AWST) on Wednesday 27 November 2024. Accordingly, transactions registered after that time will be disregarded in determining entitlements to attend and vote at the Annual General Meeting.

#### 2. Annual Report

The Corporations Act requires that the Annual Report be laid before the Annual General Meeting. Neither the Corporations Act nor the Constitution requires a vote of Shareholders at the Annual General Meeting on these reports.

As a Shareholder, you are entitled to submit written questions to the auditor prior to the Annual General Meeting provided that the questions relate to:

- (a) the preparation and content of the Auditor's Report;
- (b) the conduct of the audit in relation to the Financial Report;
- (c) accounting policies of the Company in relation to the preparation of the financial Memorandums; and
- (d) the independence of the auditor in relation to the conduct of the audit.

All written questions must be received by the Company no later than 5 business days before the Annual General Meeting.

All questions must be sent to the Company and may not be sent direct to the auditor. The Company will then forward all questions to the auditor.

The Company's auditor will be present at the Annual General Meeting and Shareholders will have the opportunity to ask the auditor questions in relation to the conduct of the audit, the Auditor's Report, the Company's accounting policies, and the independence of the auditor.

#### 3. Resolution 1 – Adoption of Remuneration Report

#### **Background**

Section 250R(2) of the Corporations Act requires that at a listed company's annual general meeting, a resolution that the Remuneration Report be adopted must be put to the Shareholders. As prescribed by the Corporations Act, the vote on the adoption of the Remuneration Report is advisory only and does not bind the Company or the directors of the company. However, the Board does take the outcome of the vote and discussion at the meeting into account when considering future remuneration arrangements.

The Remuneration Report sets out the company's remuneration arrangements for the directors and senior management of the company. The Remuneration Report is part of the directors' report contained in the annual financial report of the company for a financial year.

In accordance with the requirements of the Corporations Act, if 25% or more of the votes cast are against the adoption of the Remuneration Report at two consecutive annual general meetings, Shareholders will, broadly, be invited to vote at the second of those meetings on a resolution (**Spill Resolution**) that another meeting be held within 90 days (**Spill Meeting**), at which all directors (other than the CEO) at the time of the last annual general meeting must cease to hold office unless re-elected at the Spill Meeting.

Resolution 1 is an Ordinary Resolution.

If the Chair is appointed as your proxy and you have not specified the way the Chair is to vote on Resolution 1, by signing and returning the Proxy Form, you are considered to have provided the Chair with an express authorisation for the Chair to vote the proxy in accordance with the Chair's intention, even though Resolution 1 is connected directly or indirectly with the remuneration of a member of the Key Management Personnel.

#### **Directors' Recommendation**

Acknowledging that each Director has a personal interest in his or her own remuneration as described in the Remuneration Report, the Board unanimously recommends that Shareholders vote in favour of Resolution 1.

The Chair intends to exercise all available proxies in favour of Resolution 1.

#### 4. Resolution 2 – Re-election of Ms Yuan Yuan as a Director

#### **Background**

In accordance with ASX Listing Rule 14.4 and article 7.3(c) of the Constitution, a director appointed as an addition to the Board must not hold office (without re-election) past the next annual general meeting of the entity. Article 7.2(b) of the Constitution allows the Directors to appoint a person as an addition to the Board at any time, provided that the total number of Directors does not at any time exceed the maximum number specified in the Constitution. Any Director so appointed holds office until the next general meeting of the Shareholders and is eligible for re-election at that meeting.

As announced on 30 July 2024, the Company secured a strategic investment from its largest shareholder, Hebang. As part of the strategic investment and following the completion of Tranche 1, Hebang had the right to appoint the Executive Chairman and a further two directors to the Board, as well as a Chief Executive Officer and Chief Financial Officer to the management team.

On 7 September 2024 Ms Yuan Yuan was appointed as Chairman and Chief Executive Officer of the Company.

Resolution 2 provides that, pursuant to ASX Listing Rule 14.4 and article 7.3(c) of the Constitution, Ms Yuan retires from office and seeks re-election as a Director.

If Resolution 2 is passed, Ms Yuan will be re-elected to the Board as a Director.

If Resolution 2 is not passed, Ms Yuan will not be re-elected to the Board as a Director and will leave the Board at the conclusion of the meeting.

#### **Directors Biography**

Ms Yuan has been a Board secretary and Board member of various Hebang companies over the past 10 years. Ms Yuan has a Masters of Management Accounting and a Masters of Philosophy from Melbourne University and a Bachelor of Medicine from Tongji University in China.

#### **Directors' Recommendation**

The Board (excluding Ms Yuan) supports the re-election of Ms Yuan as a Director and recommends that Shareholders vote in favour of Resolution 2.

The Chair intends to exercise all available proxies in favour of Resolution 2.

#### 5. Resolution 3 – Re-election of Ms Ran Mo as a Director

#### **Background**

In accordance with ASX Listing Rule 14.4 and article 7.3(c) of the Constitution, a director appointed as an addition to the Board must not hold office (without re-election) past the next annual general meeting of the entity. Article 7.2(b) of the Constitution allows the Directors to appoint a person as an addition to the Board at any time, provided that the total number of Directors does not at any time exceed the maximum number specified in the Constitution. Any Director so appointed holds office until the next general meeting of the Shareholders and is eligible for re-election at that meeting.

In accordance with Hebang's rights described in Section 4 above, Hebang nominated Ms Mo as an Executive Director and the Company appointed Ms Ran Mo as Executive Director on 6 August 2024.

Resolution 3 provides that, pursuant to ASX Listing Rule 14.4 and article 7.3(c) of the Constitution, Ms Mo retires from office and seeks re-election as a Director.

If Resolution 3 is passed, Ms Mo will be re-elected to the Board as a Director.

If Resolution 3 is not passed, Ms Mo will not be re-elected to the Board as a Director and will leave the Board at the conclusion of the meeting.

#### **Directors Biography**

Ms Mo is the finance manager of a subsidiary of Hebang and is responsible for overseeing the company's financial operations, ensuring compliance with financial regulations and providing strategic financial guidance to support the organisation's growth objectives. Ms Mo has a Masters Degree in Professional Accounting and Business Law.

#### **Directors' Recommendation**

The Board (excluding Ms Mo) supports the re-election of Ms Mo as a Director and recommends that Shareholders vote in favour of Resolution 3.

The Chair intends to exercise all available proxies in favour of Resolution 3.

#### 6. Resolution 4 – Re-election of Mr Shixing Zhang as a Director

#### **Background**

In accordance with ASX Listing Rule 14.4 and article 7.3(c) of the Constitution, a director appointed as an addition to the Board must not hold office (without re-election) past the next annual general meeting of the entity. Article 7.2(b) of the Constitution allows the Directors to appoint a person as an addition to the Board at any time, provided that the total number of Directors does not at any time exceed the maximum number specified in the Constitution. Any Director so appointed holds office until the next general meeting of the Shareholders and is eligible for re-election at that meeting.

In accordance with Hebang's rights described in Section 4 above, Hebang nominated Mr Shixing Zhang as Non-Executive Director and the Company appointed Mr Zhang as a Non-Executive Director on 6 August 2024.

Resolution 4 provides that, pursuant to ASX Listing Rule 14.4 and article 7.3(c) of the Constitution, Mr Zhang retires from office and seeks re-election as a Director.

If Resolution 4 is passed, Mr Zhang will be re-elected to the Board as a Non-Executive Director.

If Resolution 4 is not passed, Mr Zhang will not be re-elected to the Board as a Non-Executive Director and will leave the Board at the conclusion of the meeting.

#### **Directors Biography**

Mr Zhang is the assistant to the Chairman of the Board of Directors of Hebang. He has an Associate Degree of Chemical Engineering and provides strategic support and advice to the Chairman of Hebang.

#### **Directors' Recommendation**

The Board (excluding Mr Zhang) supports the re-election of Mr Zhang as a Director and recommends that Shareholders vote in favour of Resolution 4.

The Chair intends to exercise all available proxies in favour of Resolution 4.

#### 7. Resolution 5 – Ratification of Issue of Placement Shares

#### **Background**

On 5 April 2024 the Company issued 156,462,500 Shares to subscribers to a placement pursuant to ASX Listing Rule 7.1A (**Placement Shares**).

Resolution 5 seeks Shareholder approval pursuant to ASX Listing Rule 7.4 for the ratification of the issue of the placement Shares.

#### **ASX Listing Rules 7.1A and 7.4**

ASX Listing Rule 7.1A enables eligible entities to issue equity securities up to 10% of its issued share capital through placements over a 12 month period after the annual general meeting at which shareholders approve the 10% placement facility. The 10% placement facility is in addition to the Company's 15% placement capacity under ASX Listing Rule 7.1.

ASX Listing Rule 7.4 provides that where a company in general meeting ratifies the previous issue of securities made pursuant to ASX Listing Rule 7.1A (and provided that the previous issue did not breach ASX Listing Rule 7.1) those securities will be deemed to have been made with Shareholder approval for the purpose of the ASX Listing Rules. The Company confirms that the issue and allotment of the Shares, the subject of Resolution 5 did not breach ASX Listing Rule 7.1A.

By ratifying the issue of the Placement Shares, the Company will retain the flexibility, to issue equity securities in the future up to the 15% annual placement capacity set out in ASX Listing Rule 7.1 and also the 10% placement capacity set out in ASX Listing Rule 7.1A, assuming Resolution 13 is also passed.

If Resolution 5 is not passed, the issue of the Placement Shares is still valid however it will reduce, to that extent, the Company's capacity to issue equity securities under both ASX Listing Rule 7.1 and ASX Listing Rule 7.1A for 12 months following the issue.

#### **ASX Listing Rule 7.5**

The following information is provided to Shareholders for the purposes of obtaining Shareholder approval of the Placement Share issue the subject of Resolution 5 in accordance with ASX Listing Rule 7.5:

(a) the Shares the subject of Resolution 5 were issued to various professional and sophisticated investors who are clients of Petra Capital. None of the placement participants are a related party or substantial holder of the Company, a member of the Company's Key Management Personnel, an adviser to the Company, or any associates of those persons who received more than 1% of the Company's issued capital under the Placement. Accordingly, none of the placement participants are material investors there for the purposes of ASX guidance note 21 paragraph 7.2;

- (b) a total of 156,462,500 fully paid ordinary Shares were issued, ranking equally in all respects with the Company's existing Shares on issue;
- (c) the Shares were issued on 5 April 2024;
- (d) the Shares were issued at an issue price of \$0.008 each;
- (e) the purpose of the issue was to raise funds to replace working capital that was utilised to repay debt; and
- (f) a voting exclusion statement is included in the Notice.

#### **Directors' Recommendation**

The Directors of the Company believe that Resolution 5 are in the best interests of the Company and unanimously recommend that Shareholders vote in favour of Resolution 5.

The Chair intends to exercise all available proxies in favour of Resolution 5.

#### 8. Resolution 6 – Ratification of Issue of Arruwurra Shares

#### **Background**

On 3 July 2023, the Company announced that it (through its subsidiary Minemakers Australia Pty Ltd) had entered into a Mining Agreement with Arruwurra Aboriginal Corporation and Arruwurra Pty Ltd (**Arruwurra**) (**Mining Agreement**). The Mining Agreement was entered into to govern the parties' relationship with respect to the development of the tenements the subject of the Wonarah Phosphate Project.

On 29 July 2024 the Company issued 70,000,000 Shares to Arruwurra (**Arruwurra Shares**) in part satisfaction of the Company's obligations to make annual payments to Arruwurra pursuant to the Mining Agreement.

The Company issued the Shares the subject of Resolution 6 without prior Shareholder approval under ASX Listing Rule 7.1.

Resolution 6 seeks Shareholder approval pursuant to ASX Listing Rule 7.4 for the ratification of the issue of the Shares under the Mining Agreement.

#### ASX Listing Rules 7.1 and 7.4

ASX Listing Rule 7.1 provides that a company must not, subject to specified exceptions, issue or agree to issue more equity securities during any 12 month period than that amount which represents 15% of the number of fully paid ordinary securities on issue at the commencement of that 12 month period.

ASX Listing Rule 7.4 sets out an exception to ASX Listing Rule 7.1. It provides that where a company in general meeting ratifies the previous issue of securities made pursuant to ASX Listing Rule 7.1 (and provided that the previous issue did not breach ASX Listing Rule 7.1) those securities will be deemed to have been made with Shareholder approval for the purpose of ASX Listing Rule 7.1. The Company confirms that the issue and allotment of the Shares, the subject of Resolution 6 did not breach ASX Listing Rule 7.1.

By ratifying the issue of the Arruwurra Shares, the Company will retain the flexibility to issue equity securities in the future up to the 15% annual placement capacity set out in ASX Listing Rule 7.1 without the requirement to obtain prior Shareholder approval.

If Resolution 6 is not passed, the issue of the Arruwurra Shares is still valid however it will reduce, to that extent, the Company's capacity to issue equity securities without Shareholder approval under ASX Listing Rule 7.1 for 12 months following the issue.

#### **ASX Listing Rule 7.5**

The following information is provided to Shareholders for the purposes of obtaining Shareholder approval of the Share issue the subject of Resolution 6 in accordance with ASX Listing Rule 7.5:

- (a) the Shares the subject of Resolutions 5 were issued to Arruwurra Pty Ltd;
- (b) a total of 70,000,000 fully paid ordinary Shares were issued, ranking equally in all respects with the Company's existing Shares on issue;
- (c) the Shares were issued on 29 July 2024;
- (d) the Shares were issued at a deemed issue price of \$0.004 each in part consideration of the Company's obligation to pay an annual fee pursuant to the Mining Agreement;
- (e) the purpose of the issue was to comply with the Company's obligations under the Mining Agreement;
- (f) the material terms of the Mining Agreement are as follows:
  - (i) the Company is required to make the following payments to Arruwurra:
    - (A) the issue of 10,000,000 Shares and the payment of \$200,000 at the commencement of production from the Wonarah Phosphate Project;
    - (B) a payment every 5 years being the greater of the sum of \$300,000 or the equivalent of 2% of any increased capital expenditure made by the Company after commencement or production, with that payment in any event capped at \$5,000,000;
    - (C) an annual payment of \$435,750 (subject to indexation), in relation to which the Company may elect to pay 50% of the annual payment by way of the issue of Shares at a 15% discount to the VWAP calculated over the 10 business days prior to election; and
    - (D) a community payment of 2.5% for production sold and exported to offtakers (or delivered within Australia to offtakers) less logistics costs between mine gate and product loaded on ship; and
- (g) a voting exclusion statement is included in the Notice.

#### **Directors' Recommendation**

The Directors of the Company believe that Resolution 6 are in the best interests of the Company and unanimously recommend that Shareholders vote in favour of Resolution 6.

The Chair intends to exercise all available proxies in favour of Resolution 6.

#### 9. Resolution 7 - Ratification of Issue of Tranche 1 Placement Shares to Hebang

#### **Background**

On 30 July 2024, the Company announced it had successfully secured a strategic investment from Hebang to raise approximately \$4.5 million (before costs) (**Placement**).

The strategic investment is structured as follows:

- (a) Tranche 1 Placement: to raise \$1.71 million through the issue of 285,000,000 Shares, at an issue price of \$0.006 per new Share (**Tranche 1**); and
- (b) Tranche 2 Placement: to raise \$2.79 million through the issue of 465,000,000 Shares at the same issue price per new Share as under Tranche 1 (**Tranche 2**).

On 2 August 2024, a total of 285,000,000 Shares were issued at an issue price per new Share of \$0.006 per share (**Tranche 1 Placement Shares**) as follows:

- (a) 223,000,000 Tranche 1 Placement Shares were issued at \$0.006 per Share within the placement capacity provided for under ASX Listing Rule 7.1; and
- (b) 62,000,000 Tranche 1 Placement Shares were issued at \$0.006 per Share under ASX Listing Rule 7.1A.

Resolution 7 seeks Shareholder ratification pursuant to ASX Listing Rule 7.4 for the issue of the Tranche 1 Placement Shares.

#### ASX Listing Rules 7.1, 7.1A and 7.4

ASX Listing Rule 7.1 provides that a company must not, subject to specified exceptions, issue or agree to issue more equity securities during any 12 month period than that amount which represents 15% of the number of fully paid ordinary securities on issue at the commencement of that 12 month period.

ASX Listing Rule 7.1A enables eligible entities to issue equity securities up to a further 10% of its issued share capital through placements over a 12 month period after the annual general meeting at which Shareholders approve the further 10% placement facility. The 10% placement facility is in addition to the Company's 15% placement capacity under ASX Listing Rule 7.1.

ASX Listing Rule 7.4 sets out an exception to ASX Listing Rule 7.1. It provides that where a company in general meeting ratifies the previous issue of securities made pursuant to ASX Listing Rule 7.1 (and provided that the previous issue did not breach ASX Listing Rule 7.1) those securities will be deemed to have been made with Shareholder approval for the purpose of ASX Listing Rule 7.1. The Company confirms that the issue and allotment of the Shares, the subject of Resolution 7 did not breach ASX Listing Rule 7.1 or ASX Listing Rule 7.1A.

By ratifying the issue of the Tranche 1 Placement Shares, the Company will retain the flexibility to issue equity securities in the future up to the 15% annual placement capacity set out in ASX Listing Rule 7.1 and also the 10% placement capacity set out in ASX Listing Rule 7.1A, assuming Resolution 13 is also passed.

If Resolution 7 is not passed the issue of the Tranche 1 Placement Shares is still valid however it will reduce, to that extent, the Company's capacity to issue equity securities under both ASX Listing Rule 7.1 and ASX Listing Rule 7.1A for 12 months following the issue.

#### **ASX Listing Rule 7.5**

The following information is provided to Shareholders for the purposes of obtaining Shareholder approval of the Share issue the subject of Resolution 7 in accordance with ASX Listing Rule 7.5:

- (a) the Tranche 1 Placement Shares were issued to Hebang;
- (b) a total of 285,000,000 Tranche 1 Placement Shares (being fully paid ordinary shares in the capital of the Company) were issued:
  - 223,000,000 Tranche 1 Placement Shares were issued at \$0.006 per Share within the placement capacity provided for under ASX Listing Rule 7.1; and
  - 62,000,000 Tranche 1 Placement Shares were issued at \$0.006 per Share under ASX Listing Rule 7.1A;
- (c) the Tranche 1 Placement Shares were issued on 2 August 2024;
- (d) the issue price was \$0.006 per Tranche 1 Placement Share;
- (e) the purpose of the issue was to raise funds to progress study work for the Company's Yellow Phosphate and Lithium Ferro Phosphate Projects and for general working capital;
- (f) there are no additional material terms of the agreement pursuant to which the Tranche 1 Placement Shares were issued; and
- (g) a voting exclusion statement is included in the Notice.

#### **Directors' Recommendation**

The Directors of the Company believe that Resolution 7 is in the best interests of the Company and unanimously recommend that Shareholders vote in favour of Resolution 7.

The Chair intends to exercise all available proxies in favour of Resolution 7.

#### 10. Resolution 8 to 11 – Approval of Issue of Options to Related Parties

#### **Background**

The Company proposes to issue Options to Directors Mr Nam (Eddy) Cheng, Ms Yuan Yuan, Ms Ran Mo and Mr Shixing Zhang (or their nominee(s)), subject to the passing of Resolutions 8 to 11.

All Directors are related parties of the Company and their nominees would be classified as associates.

#### **Corporations Act requirements**

Chapter 2E of the Corporations Act prohibits an Australian public company from providing a financial benefit to a related party unless a specific statutory exception applies or prior shareholder approval is obtained to the giving of the financial benefit. A related party under the Corporations Act includes all directors of a public company. "financial benefit" has a wide meaning and includes the issue of securities by a public company to a director. The issue of Options to Messrs Yuan, Zhang, Cheng and Mo (the Directors) amounts to the provision of a "financial benefit" to a related party.

One of the exceptions to the requirement to obtain Shareholder approval in accordance with Chapter 2E of the Corporations Act applies where the financial benefit constitutes part of the related party's "reasonable remuneration".

Mr Brett Clark and Mr Roger Harris (being the directors who will not be participating in the proposed issue of Options) consider that the proposed issue of the Options constitutes part of each Directors' reasonable remuneration.

In determining the number, exercise price and term of the Options to be granted, the Board considered:

- (a) the responsibilities involved in Ms Yuan Yuan's positions as Chairman and Chief Executive Officer of the Company and her experience and knowledge;
- (b) the responsibilities involved in Ms Mo's position as an Executive Director, and her experience and knowledge;
- (c) the responsibilities involved in Mr Zhang's position as a Non-Executive Director, and his experience and knowledge;
- (d) the responsibilities involved in Mr Cheng's position as a Non-Executive Director, and his experience and knowledge;
- (e) that it aligns remuneration with the future growth and prospects of the Company and the interests of Shareholders by encouraging Director share ownership;
- (f) what it considered to be an appropriate assessment of the overall reasonable remuneration for Directors for an organisation of the Company's size and location;
- (g) the issue of Options in lieu of cash payments preserves the Company's cash resources and reduces ongoing costs; and
- (h) the significant contribution that the Directors are likely to have to the Company's success.

#### **ASX Listing Rule 10.11**

ASX Listing Rule 10.11.1 provides that unless one of the exceptions in ASX Listing Rule 10.12 applies, a listed company must not issue or agree to issue equity securities to a related party unless it obtains Shareholder approval.

The issue of Options to the Directors (or their nominees) falls within ASX Listing Rule 10.11.1, as they are all related parties to the Company. The Company therefore requires Shareholder approval under ASX Listing Rule 10.11.

If Resolution 8 is passed, the Company will be able to proceed with the issue of Options to Ms Yuan Yuan.

If Resolution 8 is not passed, the Company will not be able to proceed with the issue of Options to Ms Yuan Yuan and may need to seek to remunerate her by another means.

If Resolution 9 is passed, the Company will be able to proceed with the issue of Options to Ms Ran Mo.

If Resolution 9 is not passed, the Company will not be able to proceed with the issue of Options to Ms Ran Mo may need to seek to remunerate her by another means.

If Resolution 10 is passed, the Company will be able to proceed with the issue of Options to Mr Shixing Zhang.

If Resolution 10 is not passed, the Company will not be able to proceed with the issue of Options to Mr Shixing Zhang and may need to seek to remunerate him by another means.

If Resolution 11 is passed, the Company will be able to proceed with the issue of Options to Mr Nam Cheng.

If Resolution 11 is not passed, the Company will not be able to proceed with the issue of Options to Mr Nam Cheng and may need to seek to remunerate him by another means.

#### **ASX Listing Rule 10.13**

ASX Listing Rule 10.13 contains certain requirements as to the contents of a Notice sent to Shareholders for the purposes of ASX Listing Rule 10.11 and the following information is included in this Explanatory Memorandum for that purpose:

- (a) the Options will be issued to Mr Nam (Eddy) Cheng, Ms Yuan Yuan, Ms Ran Mo and Mr Shixing Zhang (or their nominees);
- (b) the Directors falls within the category set out in ASX Listing Rule 10.11.1, by virtue of being a Director;
- (c) the maximum number of Options to be granted pursuant to Resolution 8 to 11 is 60,000,000 as per the following table:

Resolution	Holder	Quantity	Exercise Price	Term
Resolution 8	Yuan Yuan	12,000,000	\$0.02	3 years
		12,000,000	\$0.03	3 years
	Sub Total	24,000,000		
Resolution 9	Ran Mo	6,000,000	\$0.02	3 years
		6,000,000	\$0.03	3 years
	Sub Total	12,000,000		
Resolution 10	Shixing Zhang	6,000,000	\$0.02	3 years
		6,000,000	\$0.03	3 years
	Sub Total	12,000,000		
Decelution 44	Nam Cheng	6,000,000	\$0.02	3 years
Resolution 11		6,000,000	\$0.03	3 years
	Sub Total	12,000,000		
	Grand Total	60,000,000		

- (d) the Options will be issued on a date which will be no later than 1 month after the date of the Meeting;
- (e) the terms and conditions of the Options are set out in Appendix A to this Explanatory Memorandum;
- (f) the Options will be granted for no monetary consideration as part of the remuneration of the Directors;
- (g) the purpose of the issue of the Options to the Directors is to motivate and reward their performance as Directors of the Company. Having considered the alternatives to an issue of Options (such as a higher cash-based component of remuneration), the Board considers that the grant of the Options is an effective way to remunerate the Directors for their services as the Options issued to each director preserves the Company's cash resources;

(h) details of each Director's current total remuneration package (not including the Options) is set out in the following table:

Director Name	Current Remuneration		
Yuan Yuan	\$250,000		
Ran Mo	\$72,000		
Shixing Zhang	\$72,000		
Nam Cheng	\$72,000		

- (i) there are no other material terms of any agreement pursuant to which the Options are to be issued; and
- (j) a voting exclusion statement is included in this Notice.

#### **Directors' Recommendation**

The Directors do not make any recommendation with respect to the issue of the Options as such recommendation regarding the remuneration of the Directors of the Company may be a conflict of interest.

#### 11. Resolution 12 - Approval of Issue of Tranche 2 Placement Shares to Hebang

#### **Background**

On 30 July 2024, the Company announced it had successfully secured a strategic investment from Hebang to raise approximately \$4.5 million (before costs) (**Placement**).

The strategic investment is structured as follows:

- (a) Tranche 1 Placement: to raise \$1.71 million through the issue of 285,000,000 Shares, at an issue price of \$0.006 per Share; and
- (b) Tranche 2 Placement: to raise \$2.79 million through the issue of 465,000,000 Shares at an issue price of \$0.006 per share, subject to Shareholder approval.

On 19 September 2024 the Company and Hebang entered into a Tranche 2 Subscription and Loan Agreement (**Tranche 2 Subscription Agreement**) in relation to Tranche 2 of the Placement.

#### **Corporations Act Requirements**

#### <u>Section 606 of the Corporations Act – Statutory Prohibition</u>

Pursuant to Section 606(1) of the Corporations Act, a person must not acquire a relevant interest in the issued voting shares in a listed company if the person acquiring the interest does so through a transaction in relation to securities entered into by or on behalf of the person and because of the transaction, that person's or someone else's voting power in the company increases:

- (a) from 20% or below to more than 20%; or
- (b) from a starting point that is above 20% and below 90%,

(**Prohibition**), unless one of the exceptions in Section 611 of the Corporations Act applies.

#### **Voting Power**

The voting power of a person in a body corporate is determined in accordance with Section 610 of the Corporations Act. The calculation of a person's voting power in a company involves determining the voting shares in the company in which the person and the person's associates have a relevant interest.

#### Associates

For the purposes of determining voting power under the Corporations Act, a person (**second person**) is an "associate" of the other person (**first person**) if:

- (a) (pursuant to section 12(2) of the Corporations Act) the first person is a body corporate and the second person is:
  - (i) a body corporate the first person controls;
  - (ii) a body corporate that controls the first person; or
  - (iii) a body corporate that is controlled by an entity that controls the first person;
- (b) the second person has entered or proposes to enter into a relevant agreement with the first person for the purpose of controlling or influencing the composition of the company's board or the conduct of the company's affairs; or
- (c) the second person is a person with whom the first person is acting or proposes to act, in concert in relation to the company's affairs.

#### **Relevant Interests**

Section 608(1) of the Corporation Act provides that a person has a relevant interest in securities if they:

- (a) are the holder of the securities;
- (b) have the power to exercise, or control the exercise of, a right to vote attached to the securities; or
- (c) have power to dispose of, or control the exercise of a power to dispose of, the securities.

It does not matter how remote the relevant interest is or how it arises. If two or more people can jointly exercise one of these powers, each of them is taken to have that power.

In addition, Section 608(3) of the Corporations Act provides that a person has a relevant interest in securities that any of the following has:

- (a) a body corporate in which the person's voting power is above 20%; and
- (b) a body corporate that the person controls.

#### **Reason Section 611 Approval is Required**

Item 7 of Section 611 of the Corporations Act provides an exception to the Prohibition, whereby a person may acquire a relevant interest in a company's voting Shares that would otherwise breach section 606 with Shareholder approval.

Hebang currently has a relevant interest in 538,608,182 Shares in the Company, representing a voting power in the Company of 19.92%.

In the event that Hebang is issued the Tranche 2 Placement Shares, Hebang will have a relevant interest in 1,003,608,182 Shares in the Company, and the voting power of Hebang will increase to up to 31.67% as a result.

Shareholder approval under Item 7 of Section 611 of the Corporations Act is therefore required to enable Hebang to be issued the Tranche 2 Placement Shares.

#### Specific Information required by Section 611 Item 7 of the Corporations Act and ASIC Regulatory Guide 74

The following information is required to be provided to Shareholders under the Corporations Act and ASIC Regulatory Guide 74 in respect of obtaining approval for Item 7 of Section 611 of the Corporations Act.

#### <u>Identity of the Acquirer</u>

Sichuan Hebang Biotechnology Co., LTD. (hereinafter referred to as: Hebang Biological, stock code: 603077) was established in 2002, located in Wutongqiao District, Leshan City, Sichuan Province, China and listed on the Shanghai Stock Exchange in 2012.

Since its listing in 2012, Hebang Biological has developed rapidly. It has grown from a domestic company into a global multinational company with business expanded into Australia, Israel, Indonesia, North America, South America and other countries and regions. The business activities have also developed from only salt mining, and soda ash/ammonium chloride manufacturing at the time of listing to its current three major business sectors: mining, chemicals and photovoltaic materials.

In the mining sector, Hebang Biological owns: two salt and one phosphate mining rights in Leshan City, China; one phosphate mining right in Ya 'an City, China; and one lead and zinc deposit and one copper deposit exploration rights in Kezhou City, China.

In the chemical sector, Hebang Biological manufactures soda ash, ammonium chloride, PMIDA, glyphosate, methionine and biopesticide, and also continuously invests in R&D to ensure sustainable business growth and success.

In the photovoltaic glass and other sectors, Hebang Biological specializes in manufacturing photovoltaic glass, special smart glass, LOW-E glass, photovoltaic modules and photovoltaic silicon wafer, and also operates a photovoltaic EPC, oil and gas services businesses.

In the future, Hebang Biological will continue to strengthen its investment in the mining sector, and generate benefits and value to stakeholders.

Hebang is a wholly owned subsidiary of Hebang Biological and is registered in Hong Kong.

Hebang is presently the largest Shareholder of the Company, with a relevant interest in 538,608,182 Shares representing a voting power of 19.92%.

As set out above, the three nominees of Hebang who have been appointed to the Board of the Company are Ms Yuan, Ms Mo and Mr Zhang (together, the **Hebang Directors**).

#### **Relevant Interest and Voting Power**

Hebang presently has a relevant interest in 538,608,182 Shares representing a voting power of 19.92%. The Shares are directly held by Hebang.

In the event that Hebang is issued the Tranche 2 Placement Shares, Hebang will have a relevant interest in 1,003,608,182 Shares in the Company, and the voting power of Hebang will increase to up to 31.67%.

#### Reason for proposed issue of securities

The Company is seeking Shareholder approval to permit Hebang to increase its voting power above 20% as a result of the issue of the Tranche 2 Placement Shares. The reason for the proposed issue of securities is to raise funds to progress study work for the Company's Yellow Phosphate and Lithium Ferro Phosphate Projects and for general working capital as part of Hebang's strategic investment in the Company.

#### Date of proposed issue of securities

The Tranche 2 Placement Shares will be issued within 2 Business Days after the Company's Shareholders approve the issue of the Tranche 2 Placement Shares to Hebang pursuant to Item 7 of Section 611 of the Corporations Act at the Annual General Meeting.

#### Material terms of proposed issue of securities

The Company and Hebang have agreed to the issue of 465,000,000 Shares at an issue price of \$0.006 per Share to Hebang, subject to Shareholder approval.

#### Details of any other relevant agreement

Pursuant to the Tranche 2 Subscription Agreement, Hebang has provided an unsecured loan of \$2,790,000 to the Company with an interest rate of 12% per annum. In the event that Shareholders approve the proposed acquisition of the Tranche 2 Placement Shares by Hebang the Company will repay the loan principal to Hebang through the issue of the Tranche 2 Placement Shares and will pay to Hebang the interest owing on the loan principal in cash at the same time.

In the event that Shareholders do not approve the issue of the Shares the loan principal and interest will be repayable on or before 20 September 2025 and the Company will need to raise alternative funding either from Hebang or other sources to repay the loan.

#### **Hebang's intentions**

Hebang has informed the Company that as at the date of this Notice and on the basis of the facts and information available to it, that it:

- (a) has no intention of making any significant changes to the business of the Company;
- (b) has no intention to inject further capital into the Company than that already announced;
- (c) has no intention to redeploy any fixed assets of the Company;
- (d) has no intention to transfer any property between the Company and Hebang;
- (e) has no intention to change the Company's existing policies in relation to financial matters or dividends; and
- (f) has no intention of changing the future employment of present employees of the entity.

These present intentions may change as new information becomes available, as circumstances or in light of all material information, facts and circumstances necessary to assess the operational, commercial, taxation and financial implications of those decisions at the relevant time.

#### Interest and recommendations of Directors

None of the current Board members have a material personal interest in the outcome of Resolution 12.

Based on the information available, including that contained in this Explanatory Memorandum and the Independent Expert's Report, all of the Directors consider that the issue of the Tranche 2 Placement Shares is in the best interests of the Company.

The Directors are not aware of any other information other than as set out in this Explanatory Memorandum or the Independent Expert Report that would be reasonably required by the Shareholders to allow them to make a decision whether it is in the best interests of the Company to pass Resolution 12.

Each of Mr Brett Clark, Mr Nam (Eddy) Cheng and Mr Roger Harris are independent of any relationship with Hebang and therefore for the purpose of Resolution 12 are independent directors (Independent Directors).

The Independent Directors note the conclusion set out in the Independent Expert's Report that the proposed transaction is not fair but reasonable to non-associated Shareholders of the Company. The Independent Directors also note the following statements contained in the Independent Expert's Report:

- (a) "In our opinion, the position of the Non-Associated Shareholders if the Proposed Transaction is approved is more advantageous than their position if it is not approved."
- (b) "We have been advised that the Company engaged corporate advisors to explore funding options over the last 12 months, with no other appropriate proposals pursued."
- (c) "the ability of the Company to successfully complete a raise with superior terms to the Proposed Transaction is uncertain."
- (d) "Should the Proposed Transaction not be successful and no alternative funding solution emerges, it is possible that the Avenira share price will fall below the current traded levels and revert back to the pricing levels seen prior to the announcement of the Proposed Transaction."

Accordingly, the Independent Directors recommend that Shareholders vote in favour of Resolution 12.

The Hebang Directors do not consider themselves to be independent directors for the purpose of Resolution 12 because they have been appointed by Hebang and they are or have been employees of either Hebang or a related company of Hebang.

The Hebang Directors therefore do not make any recommendation with respect to Resolution 12.

#### Advantages of the Issue

The Directors are of the view that the following non-exhaustive list of advantages may be relevant to the Shareholder's decision on how to vote on Resolution 12:

- (a) the issue of the Tranche 2 Placement Shares to Hebang represents the second part of a strategic investment by the Company's largest shareholder to enable the Company to accelerate the downstream development of its Yellow Phosphorous Project, adding substantial value to the Wonarah Phosphorous Project; and
- (b) the issue of the Tranche 2 Placement Shares to Hebang will enable the repayment of the loan provided by Hebang and will thereby ensure that the Company is debt free.

#### Disadvantages of the Issue

The Directors are of the view that the following non-exhaustive list of disadvantages may be relevant to the Shareholder's decision on how to vote on Resolution 12:

- (a) the issue of the Tranche 2 Placement Shares to Hebang will increase the voting power of Hebang from 19.92% up to approximately 31.67% reducing the voting power of non-associated Shareholders in aggregate from 80.08% to approximately 68.33%; and
- (b) the issue of the Tranche 2 Placement Shares to Hebang is proposed to be made at an issue price which is below the market price of the Company's Shares as at the date of this Notice and accordingly the issue may lead to a greater dilution of the voting power of non-associated Shareholders than may occur if an alternative equity capital raising was undertaken by the Company.

#### **Independent Expert's Report**

The Independent Expert's Report prepared by RSM Corporate Australia Pty Ltd (a copy of which is attached as Appendix B to this Explanatory Memorandum) assesses whether the transaction contemplated by Resolution 12 is fair and reasonable to the non-associated Shareholders of the Company.

The Independent Expert's Report concludes that the transaction contemplated by Resolution 12 is not fair but reasonable to the non-associated Shareholders of the Company.

Shareholders are urged to carefully read the Independent Expert's Report to understand the scope of the report, the methodology of the valuation and the sources of information and assumptions made.

#### 12. Resolution 13 – Approval of Additional 10% Share Issue Capacity

#### **Background**

ASX Listing Rule 7.1 requires Shareholder approval for an issue of securities in the Company if that issue will, when aggregated with all other issues during the previous 12 months, exceed 15% of the number of securities on issue at the commencement of that 12 month period.

In accordance with ASX Listing Rule 7.1A, eligible entities may seek Shareholder approval at their annual general meeting to issue a further 10% of their issued Share capital in addition to the 15% placement capacity set out in ASX Listing Rule 7.1 (10% Share Issue Capacity).

An eligible entity for the purposes of ASX Listing Rule 7.1A is an entity that is not included in the S&P/ASX 300 Index and has a market capitalisation of \$300 million or less. The Company is an eligible entity as at the date of this Notice. If the Company's market capitalization exceeds \$300 million on the date of the Meeting, the Company will withdraw this Resolution 13.

Any issue of securities under ASX Listing Rule 7.1A must be in an existing quoted class of equity securities and be issued at a cash consideration per security which is not less than 75% of the volume weighted average price of securities in that class, calculated over the 15 trading days on which trades in that class were recorded immediately before:

- (a) the date on which the price at which the equity securities are to be issued is agreed by the entity and the recipient of the equity securities; or
- (b) if the equity securities are not issued within 10 trading days of the date in Section (a) above, the date on which the equity securities are issued,

and must be calculated in accordance with the formula prescribed by ASX Listing Rule 7.1A.2.

The Company is now seeking Shareholder approval by way of a Special Resolution to have the ability to issue equity securities under the 10% Share Issue Capacity. The approval of Resolution 13 will provide the Company with even greater flexibility to issue securities under the 10% Share Issue Capacity in addition to the 15% placement capacity set out in ASX Listing Rule 7.1 without a further requirement to obtain prior Shareholder approval.

Resolution 13 is a Special Resolution and therefore requires the approval of 75% of the votes cast by Shareholders present and eligible to vote (in person, by Proxy, by attorney or, in the case of a corporate Shareholder, by a corporate representative).

The Chair intends to exercise all available proxies in favour of Resolution 13.

If Resolution 13 is approved as a Special Resolution, the Company will be able to issue 'equity securities' under ASX Listing Rule 7.1 and 7.1A without further Shareholder approval such that the Company's total annual placement capacity will be 25% of its issued capital.

If Resolution 13 is not passed, the Company will not be able to access the additional 10% capacity to issue equity securities without Shareholder approval provided for in ASX Listing Rule 7.1 and will remain subject to the 15% limit on issuing equity securities without Shareholder approval set out in ASX Listing Rule 7.1.

#### Information required by ASX Listing Rule 7.1A

Pursuant to and in accordance with ASX Listing Rule 7.3A, the information below is provided in relation to this Resolution.

#### Period for which approval is valid

Approval under 7.1A will commence on the date of the Meeting and expire on the first to occur of the following:

- (a) the date that is 12 months after the date of this Meeting;
- (b) the time and date of the Company's next annual general meeting; and
- (c) the time and date of approval by Shareholders of any transaction under ASX Listing Rule 11.1.2 (a significant change in the nature or scale of activities) or ASX Listing Rule 11.2 (disposal of the main undertaking).

#### **Minimum Price**

Any equity securities issued under ASX Listing Rule 7.1A must be in an existing quoted class of equity securities and be issued at a cash consideration per security which is not less than 75% of the volume weighted average price of equity securities in that class, calculated over the 15 trading days on which trades in that class were recorded immediately before:

- (a) the date on which the price at which the equity securities are to be issued is agreed by the entity and the recipient of the equity securities; or
- (b) if the equity securities are not issued within 10 trading days of the date in Section (a) above, the date on which the equity securities are issued.

#### Use of funds raised

The Company will only issue Shares under the 10% Share Issue Capacity for cash consideration.

The Company intends to use the funds raised towards further development of the Company's projects and/or for general working capital purposes.

The reasons for undertaking any particular issue under the 10% Share Issue Capacity would be announced at the time the Company sought to issue Shares under that 10% Share Issue Capacity.

#### **Risk of Economic and Voting Dilution**

Any issue of equity securities under ASX Listing Rule 7.1A will dilute the interests of Shareholders who do not receive any Shares under the issue.

If Resolution 13 is approved by Shareholders and the Company issues the maximum number of equity securities available under ASX Listing Rule 7.1A, the economic and voting dilution of existing Shares would be as shown in Table 1 below.

Table 1 shows the dilution of existing Shareholders calculated in accordance with the formula outlined in ASX Listing Rule 7.1A.2, on the basis of the closing market price of Shares and the number of equity securities on issue as at 23 October 2024.

Table 1 also shows the voting dilution impact where the number of Shares on issue (Variable A in the formula) changes and the economic dilution where there are changes in the issue price of Shares issued under ASX Listing Rule 7.1A.

As required by the ASX Listing Rules, the table below shows a hypothetical example of the potential dilution of Shareholders of the Company where the full 10% Share Issue Capacity is utilised, on the basis of three different assumed issue prices and numbers of equity securities on issue.

		Dilution			
Variable "A" in ASX Listing		\$0.005	\$0.010	\$0.020	
Rule 7.1A.2		50% decrease in Issue Price	Issue Price	100% increase in Issue Price	
Current Variable A 2,704,034,060	10% voting dilution	270,403,406	270,403,406	270,403,406	
	Funds raised	\$1,352,017	\$2,704,034	\$5,408,068	
50% increase in current Variable A 4,056,051,090	10% voting dilution	405,605,109	405,605,109	405,605,109	
	Funds raised	\$2,028,025	\$4,056,051	\$8,112,102	
100% increase in current Variable A 5,408,068,120	10% voting dilution	540,806,812	540,806,812	540,806,812	
	Funds raised	\$2,704,034	\$5,408,068	\$10,816,136	

The table has been prepared on the following assumptions:

- (a) The Company issues the maximum number of equity securities available under the 10% Share Issue Capacity.
- (b) The Issue Price is \$0.010 based on the closing price of Shares on 23 October 2024.
- (c) The current issued Share capital has been calculated in accordance with the formula in ASX Listing Rule 7.1A(2) and assumes the Company issues the maximum number of securities available under the 10% Share Issue Capacity.
- (d) No Shares are issued prior to the date of issue of any Shares under the 10% Share Issue Capacity.
- (e) The table shows the effect of issues of the Company's equity securities under the 10% Share Issue Capacity, not under the Company's 15% placement capacity under ASX Listing Rule 7.1.
- (f) The table does not show an example of dilution that may be caused to any particular Shareholder due to any placements under the 10% Share Issue Capacity.

Shareholders should note that there is a risk that:

- (a) the market price for the Company's Shares may be significantly lower on the issue date than on the date of the Meeting; and
- (b) the Shares may be issued at a price that is at a discount to the market price for those Shares on the date of issue.

#### Allocation policy under 10% Share Issue Capacity

As at the date of this Notice, the Company has not formed any specific intentions regarding who may be offered securities under a placement pursuant to ASX Listing Rule 7.1A. However, the recipients of equity securities could consist of current Shareholders or new investors (or both), none of whom will be related parties of the Company.

The Company will determine the recipients at the time of the issue under the 10% Share Issue Capacity, having regard to the following factors:

- (a) the purpose of the issue;
- (b) alternative methods for raising funds available to the Company at that time, including, but not limited to, an entitlement issue, Share purchase plan, placement or other offer where existing Shareholders may participate;
- (c) the effect of the issue of the equity securities on the control of the Company;
- (d) the circumstances of the Company, including, but not limited to, the financial position and solvency of the Company;
- (e) prevailing market conditions; and
- (f) advice from corporate, financial and broking advisers (if applicable).

#### Previous approval under ASX Listing Rule 7.1A

The Company previously obtained Shareholder approval under ASX Listing Rule 7.1A at the 2023 annual general meeting on 29 November 2023.

In accordance with ASX Listing Rule 7.3A.6, the following information is provided:

- (a) 199,125,000 Shares, (representing 9.04% of the total equity securities on issue at the commencement of the 12 months period following Shareholder approval in 2023) were issued in the 12 months preceding the date of this notice of meeting under ASX Listing Rule 7.1A.2 as follows:
  - (i) 156,462,500 Shares on 18 March 2024 at an issue price of \$0.008 each (representing a discount of 20% to the closing market price on the date of the issue); and
  - (ii) 62,000,000 Shares on 2 August 2024 at an issue price of \$0.007 each (representing a discount of 30% to the closing market price on the date of the issue).
- (b) (i) the Shares issued on 18 March 2024 were issued to various professional and sophisticated investors who are clients of Petra Capital; and
  - (ii) the Shares issued on 2 August 2024 were issued to Hebang;
- (c) (i) the total cash consideration received on 18 March 2024 was \$1,251,700 which has been spent (net of capital raising costs) to replace working capital that was utilised to repay debt;
  - (ii) the total cash consideration received 2 August 2024 was \$434,000 which has been used to progress study work for the Company's Yellow Phosphate and Lithium Ferro Phosphate Projects and for general working capital.

#### **Voting Exclusion**

A voting exclusion statement is not included in the Notice. At the date of the Notice, the Company has not approached any particular existing Shareholder or security holder or an identifiable class of existing security holder to participate in the issue of the Equity Securities. No existing Shareholder's votes will therefore be excluded under the voting exclusion in the Notice.

#### **Directors' Recommendation**

The Directors of the Company believe that Resolution 13 is in the best interests of the Company and unanimously recommend that Shareholders vote in favour of Resolution 13.

The Chair intends to exercise all available proxies in favour of Resolution 13.

#### 13. Glossary

Capitalised terms in this Notice of Annual General Meeting and in the Explanatory Memorandum have the following meanings:

Annual General Meeting or Meeting The annual general meeting of Shareholders convened by this

Notice of Annual General Meeting.

**Annual Report** The Directors' Report, the Financial Report and the Auditor's

Report in respect of the financial year ended 30 June 2024.

ASX ASX Limited and, where applicable, the Australian Securities

Exchange operated by ASX Limited.

**ASX Listing Rules** The listing rules of the ASX.

Avenira or Company Avenira Limited ACN 116 296 541.

AWST Australian Western Standard Time.

**Board** The board of Directors of the Company.

**Chair** The person appointed to chair the Meeting, or any part of the

Meeting, convened by the Notice.

**Closely Related Party** (a) A spouse or child of the member; or

(b) Has the meaning given in section 9 of the Corporations Act.

**Constitution** The Company's constitution.

**Corporations Act** *Corporations Act 2001* (Cth).

**Director** A director of the Company.

**Directors' Report**The annual directors' report prepared under chapter 2M of the

Corporations Act for the Company and its controlled entities.

**Explanatory Memorandum** The Explanatory Memorandum and management information

circular accompanying this Notice of Meeting.

Financial Report The annual financial report prepared under chapter 2M of the

corporations Act of the Company and its controlled entities.

**Key Management Personnel** Persons having authority and responsibility for planning, directing

and controlling the activities of the Company, directly or indirectly, including any Director (whether executive or otherwise) of the

Company.

**Notice** or **Notice** of **Meeting**The notice of meeting relating to the Annual General Meeting of

Shareholders to be held at ## (AWST) on ##.

**Option** Means an option to subscribe for a Share.

**Ordinary Resolution** A resolution passed by a simple majority of Shareholders on a

show of hands or by a simple majority of votes given on a poll.

**Proxy Form** The proxy form accompanying this Notice of Meeting.

**Remuneration Report** The remuneration report of the Company contained in the

Directors' Report.

**Resolutions** The resolutions set out in this Notice of Meeting, or any of them as

the context requires.

**Special Resolution** A resolution passed by at least 75% of Shareholders on a show of

hands or by 75% of votes given on a poll.

**Share** A fully paid ordinary share in the capital of the Company.

**Shareholder** The holder of a Share.

#### Appendix A – Terms and Conditions of Director Options

The Options were issued on the following terms:

- 1. The exercise price of 50% of the Options will be \$0.02 and 50% of the Options will be \$0.03 ("Exercise Price").
- 2. Each Option entitles the holder to subscribe for one Share in the Company upon the payment of the Exercise Price per Share subscribed for.
- 3. The Options will vest on the date of issue.
- 4. All Options will lapse at 5:00 pm, Western Standard Time on the date that is 3 years after the date of issue ("Expiry Date").
- 5. If there is takeover of the Company, or following a change of control of the Company (being a change in the composition of the shareholders of the Company whereby a person who does not presently control the Company within the meaning of Section 50AA of the Corporations Act 2001 (Cth) gains such control over the Company), any Options which are not eligible to be exercised will immediately be eligible to be exercised.
- 6. If an Option Holder is no longer an Employee, Director or Consultant to the Company before an Option vested, any Options not vested, will lapse immediately.
- 7. There are no participating rights or entitlements inherent in these Options and holders of the Options will not be entitled to participate in new issues of capital that may be offered to shareholders during the currency of the Option.
- 8. Option holders have the right to exercise their vested Options prior to the date of determining entitlements to any capital issues to the then existing shareholders of the Company made during the currency of the Options, and will be granted a period of at least 10 business days before books closing date to exercise the Options.
- 9. In the event the Company proceeds with a pro rata issue (except a bonus issue) of securities to the holders of Shares after the date of issue of the Options, the exercise price of the Options will be adjusted in accordance with the formula set out in the ASX Listing Rules.
- 10. In the event of any re-organisation (including reconstruction, consolidation, subdivision, reduction or return of capital) of the issued capital of the Company, the Options will be re-organised as required by the ASX Listing Rules, but in all other respects the terms of exercise will remain unchanged.
- 11. Once vested, the Options shall be exercisable at any time until the Expiry Date ("Exercise Period") by the delivery to the registered office of the Company of a notice in writing ("Notice") stating the intention of the Option holder to exercise all or a specified number of Options held by them accompanied by payment for the subscription monies for the Shares. The Notice and payment must be received by the Company during the Exercise Period. An exercise of only some Options shall not affect the rights of the Option holder to the balance of the Options held by it.
- 12. The Company shall allot the resultant Shares and deliver a statement of shareholdings with a holders' identification number within 5 business days of exercise of the Options.
- 13. The Shares allotted shall rank, from the date of allotment, equally with the existing ordinary shares of the Company in all respects.
- 14. The Options are not transferrable except with the consent of the Company.

#### Appendix B – Independent Expert's Report

Independent Expert's Report prepared by RSM Corporate Australia Pty Ltd.



# **Avenira Limited**

# Financial Services Guide and Independent Expert's Report

25 October 2024

For the purposes of ASX Listing Rule 10.1, we have concluded that the Proposed Transaction is not fair but reasonable to the Non-Associated Shareholders of the Company

# Contents

Fina	ncial Services Guide	3
Inde	pendent Expert's Report	5
1.	Summary of Proposed Transaction	11
2.	Scope of the Report	13
3.	Profile of Avenira Limited	15
4.	Profile of Hebang	26
5.	Valuation Approach	28
6.	Valuation of Avenira prior to the Proposed Transaction	30
7.	Valuation of Avenira post the Proposed Transaction	36
8.	Is the Proposed Transaction Fair to Non-Associated Shareholders?	38
9.	Is the Proposed Transaction Reasonable to Non-Associated Shareholders?	39
App	endices	
A.	Declarations and Disclaimers	44
B.	Sources of Information	45
C.	Glossary of Terms and Abbreviations	46
D.	History of the Wonarah Phosphate Project	49
E.	Industry Overview	53
F.	ERM Independent Technical Specialist Report	57
G.	RSM Control Premium Study 2021	58



#### Financial Services Guide

RSM Corporate Australia Pty Ltd ABN 82 050 508 024 ("**RSM**" or "we" or "us" or "ours" as appropriate) has been engaged to issue general financial product advice in the form of a report to be provided to you.

In the above circumstances we are required to issue to you, as a retail client, a Financial Services Guide ("FSG"). This FSG is designed to help retail clients make a decision as to their use of the general financial product advice and to ensure that we comply with our obligations as financial services licensees.

This FSG includes information about:

- who we are and how we can be contacted;
- the financial services that we will be providing you under our Australian Financial Services Licence ("AFSL"), Licence No 255847;
- remuneration that we and/or our staff and any associates receive in connection with the financial services that we will be providing
  to you;
- any relevant associations or relationships we have; and
- · our complaints handling procedures and how you may access them.

#### Financial services we will provide

For the purposes of our report and this FSG, the financial service we will be providing to you is the provision of general financial product advice in relation to securities.

We provide financial product advice by virtue of an engagement to issue a report in connection with a financial product of another person. Our report will include a description of the circumstances of our engagement and identify the person who has engaged us. You will not have engaged us directly but will be provided with a copy of the report as a retail client because of your connection to the matters in respect of which we have been engaged to report.

Any report we produce is provided on our own behalf as a financial services licensee authorised to provide the financial product advice contained in the report.

#### General financial product advice

In our report we provide general financial product advice, not personal financial product advice, because it has been prepared without taking into account your personal objectives, financial situation or needs.

You should consider the appropriateness of this general advice having regard to your own objectives, financial situation and needs before you act on the advice. Where the advice relates to the acquisition or possible acquisition of a financial product, you should also obtain a product disclosure statement relating to the product and consider that statement before making any decision about whether to acquire the product.

#### Benefits that we may receive

We charge various fees for providing different financial services. However, in respect of the financial service being provided to you by us, fees will be agreed, and paid by, the person who engages us to provide the report and such fees will be agreed on either a fixed fee or time cost basis. You will not pay to us any fees for our services; Avenira Limited ("Avenira" or "the Company") will pay our fees. These fees are disclosed in the Report.

Except for the fees referred to above, neither RSM Corporate Australia Pty Ltd, nor any of its directors, employees, or related entities, receive any pecuniary benefit or other benefit, directly or indirectly, for or in connection with the provision of the report.



#### Remuneration or other benefits received by our employees

All our employees receive a salary.

#### Referrals

We do not pay commissions or provide any other benefits to any person for referring customers to us in connection with the reports that we are licensed to provide.

#### **Associations and relationships**

RSM Corporate Australia Pty Ltd is beneficially owned by the partners of RSM Australia, a large national firm of chartered accountants and business advisors. Our directors are partners of RSM Australia Partners.

From time to time, RSM Corporate Australia Pty Ltd, RSM Australia Partners, RSM Australia and/or RSM Australia related entities may provide professional services, including audit, tax and financial advisory services, to financial product issuers in the ordinary course of its business.

#### **Complaints resolution**

#### Internal complaints resolution process

As the holder of an Australian Financial Services Licence, we are required to have a system for handling complaints from persons to whom we provide financial product advice. All complaints should be directed to The Complaints Officer, RSM Corporate Australia Pty Ltd. PO Box R1253, Perth, WA. 6844.

If we receive a written complaint, we will record the complaint, acknowledge receipt of the complaint within 15 days and investigate the issues raised. As soon as practical, and not more than 45 days after receiving the written complaint, we will advise the complainant in writing of our determination. If a complaint is received in advance of a shareholder meeting or other key date where shareholders or investors may be making decisions which are influenced by our report, we will make all reasonable efforts to respond to complaints prior to that date.

#### Referral to external dispute resolution scheme

A complainant not satisfied with the outcome of the above process, or our determination, has the right to refer the matter to the Australian Financial Complaints Authority ("AFCA"). AFCA is an independent dispute resolution scheme that has been established to provide free advice and assistance to consumers to help in resolving complaints relating to the financial services industry.

Further details about AFCA are available at the AFCA website www.afca.org.au. You may contact AFCA directly by email, telephone or in writing at the address set out below.

Australian Financial Complaints Authority GPO Box 3 Melbourne VIC 3001 Toll Free: 1800 931 678 Email: info@afca.org.au

Time limits may apply to make a complaint to AFCA, so you should act promptly or consult the AFCA website to determine if or when the time limit relevant to your circumstances expires.

#### **Contact details**

You may contact us using the details set out at the top of our letterhead on page 5 of this report.



#### **RSM Corporate Australia Pty Ltd**

Level 32, Exchange Tower 2 The Esplanade Perth WA 6000

> T +61 (08) 9261 9100 F +61 (08) 9261 9111

> > www.rsm.com.au

25 October 2024

The Directors Avenira Limited Unit 13, 6-10 Duoro Place West Perth WA 6005

Dear Directors,

# **Independent Expert's Report**

### Introduction

This Independent Expert Report (the "Report" or "IER") has been prepared to accompany the Notice of General Meeting and Explanatory Statement ("Notice") to be provided to the shareholders for a General Meeting of Avenira Limited ("Avenira", "AEV", or "the Company"), at which shareholder approval will be sought for (among other things) the issue of placement shares to Avenira's largest shareholder, Hebang Biotechnology (Hong Kong) Investment Limited ("Hebang"), being a wholly-owned subsidiary of Sichuan Hebang Biotechnology Investment Limited ("Sichuan Hebang").

On 30 July 2024, Avenira announced that it had secured a \$4.5 million strategic investment from Hebang comprising:

- A placement of 285,000,000 AEV shares to Hebang at an issue price of \$0.006 per share to raise \$1.71 million ("Tranche 1 Placement"); and
- A placement of 465,000,000 AEV shares to Hebang at an issue price of \$0.006 per share to raise \$2.79 million ("Tranche 2 Placement" or the "Proposed Transaction").

On 2 August 2024, Avenira completed the Tranche 1 Placement through the issue of 285,000,000 AEV shares ("Tranche 1 Placement Shares") to Hebang within the placement capacity provided for under ASX Listing Rules 7.1 and 7.1A. The Tranche 1 Placement resulted in Hebang obtaining a 19.92% interest in Avenira.

Avenira is seeking shareholder approval for the Tranche 2 Placement for the purposes of Item 7 of Section 611 of the *Corporations Act 2011* (Cth) (the "Act") on the basis that following the Tranche 2 Placement, Hebang will have an interest in the Company of greater than 20%.

The Directors of the Company have requested that RSM Corporate Australia Pty Ltd ("RSM"), being independent and qualified for the purpose, express an opinion as to whether the Proposed Transaction is fair and reasonable to shareholders not associated with the Proposed Transaction ("Non-Associated Shareholders").

The request for approval of the Proposed Transaction is included as Resolution 12 in the Notice. Resolution 12 as extracted from the Notice is included below for reference.

### Resolution 12 - Approval of issue of Tranche 2 Placement Shares to Hebang

"That, for the purposes of section 611 (item 7) of the Corporations Act, approval is given for the acquisition of a relevant interest in an additional 465,000,000 voting shares of the Company by Hebang pursuant to the proposed issue of 465,000,000 Shares to Hebang at an issue price of \$0.006 per Share on the terms and conditions set out in the Explanatory Memorandum."

THE POWER OF BEING UNDERSTOOD AUDIT | TAX | CONSULTING

RSM Corporate Australia Pty Ltd is beneficially owned by the Directors of RSM Australia Pty Ltd. RSM Australia Pty Ltd is a member of the RSM network and trades as RSM. RSM is the trading name used by the members of the RSM network. Each member of the RSM network is an independent accounting and consulting firm which practices in its own right. The RSM network is not itself a separate legal entity in any jurisdiction.



The Company is separately seeking shareholder approval for the following resolution:

#### Resolution 7 - Ratification of Issue of Tranche 1 Placement Shares to Hebang

"That, pursuant to and in accordance with ASX Listing Rule 7.4, Shareholders ratify the prior issue of 285,000,000 Shares to Hebang Biotechnology (Hong Kong) Investment Limited (**Hebang**) at an issue price of \$0.006 per Share on the terms and conditions set out in the Explanatory Memorandum".

When considering the Proposed Transaction, we have only included the impact that Resolution 12 will have on fairness and reasonableness, noting it is not subject to the approval of any other resolution.

The ultimate decision whether to approve the Proposed Transaction should be based on each Shareholder's assessment of their circumstances, including their risk profile, liquidity preference, tax position and expectations as to value and future market conditions. If in doubt as to the action they should take with regard to the Proposed Transaction, or the matters dealt with in this Report, Shareholders should seek independent professional advice.

## **Summary and conclusion**

In our opinion, and for the reasons set out in Sections 8 and 9 of this Report, the Proposed Transaction is **not fair but reasonable** to the Non-Associated Shareholders of Avenira.

## **Approach**

In assessing whether the Proposed Transaction is fair and reasonable to the Non-Associated Shareholders, we have considered Australian Securities and Investment Commission ("ASIC") Regulatory Guide 111 – Content of Expert Reports ("RG 111"), which provides specific guidance as to how an expert is to appraise transactions.

Where an issue of shares by a company otherwise prohibited under Section 606 of the Act is approved under Item 7 of Section 611, and the effect on the company shareholding is comparable to a takeover bid, such as the Proposed Transaction, RG 111 states that the transaction should be analysed as if it was a takeover bid.

Therefore, we have considered whether or not the Proposed Transaction is "fair" to the Non-Associated Shareholders by assessing and comparing:

- The Fair Value of a Share in Avenira on a control basis prior to the Proposed Transaction; with
- The Fair Value of a Share in Avenira on a non-controlling basis immediately post completion of the Proposed Transaction.

We have considered whether the Proposed Transaction is "reasonable" to the Non-Associated Shareholders by undertaking an analysis of the other factors relating to the Proposed Transaction which are likely to be relevant to the Non-Associated Shareholders in their decision of whether or not to approve the Proposed Transaction.

Further information of the approach we have employed in assessing whether the Proposed Transaction is "fair" and "reasonable" is set out at Section 2 of this Report.

# Fairness opinion

Our assessed values of an Avenira Share prior to and immediately post the Proposed Transaction are summarised in the table and figure below.

Table 1 Assessed values of an AEV Share prior to and post the Proposed Transaction

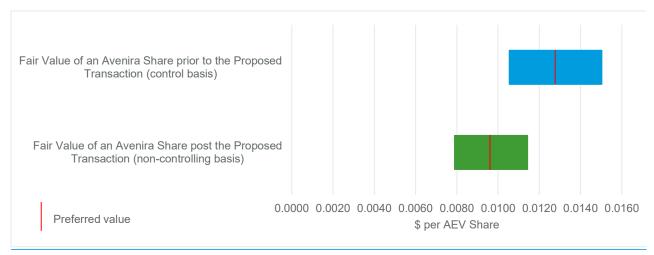
Fairness assessment	Low	High	Preferred
\$ per AEV share			
Fair Value of an Avenira Share <b>prior</b> to the Proposed Transaction (control basis)	0.0105	0.0150	0.0128
Fair Value of an Avenira Share <b>post</b> the Proposed Transaction (non-controlling basis)	0.0079	0.0114	0.0096

Source: RSM Analysis



We have summarised the Fair Market Values included in the table above in the chart below.

Figure 1 Assessment of Fairness of the Proposed Transaction



Source: RSM Analysis

The assessed range of values of an Avenira Share post the Proposed Transaction lies below the range of values assessed for an Avenira Share prior to the Proposed Transaction.

In accordance with the guidance set out in ASIC RG 111, and in the absence of any other relevant information, for the purposes of Section 611, Item 7 of the Act, we consider the Proposed Transaction to be **not fair** to the Non-Associated Shareholders of Avenira.

# Reasonableness opinion

RG 111 establishes that an offer is reasonable if it is fair. It might also be reasonable if, despite not being fair, there are sufficient reasons for security holders to accept the offer in the absence of any higher bid before the offer closes. As such, we have also considered the following factors in relation to the reasonableness aspects of the Proposed Transaction:

- The future prospects of Avenira if the Proposed Transaction does not proceed;
- The likelihood of an alternative proposal / offer emerging; and
- Other commercial advantages and disadvantages to the Non-Associated Shareholders as a consequence of the Proposed Transaction proceeding.

### Future prospects of Avenira if the Proposed Transaction does not proceed

Since acquiring the Wonarah Phosphate Project in June 2008, the Company has been impacted by the general downward trend in the phosphate market, with the Project's operational strategy adapting multiple times during its development pathway (as illustrated in Figure 9 in Appendix D).

On 20 September 2024, Hebang provided Avenira with an unsecured loan of \$2.79 million ("Hebang Loan") equal to the Tranche 2 Placement proceeds, pending shareholder approval and any other required regulatory approvals for the Tranche 2 Placement. The purpose of the loan is to ensure the Company has sufficient funds to progress the development of the Wonarah Phosphate Project while awaiting these approvals.

The unsecured loan will be repaid from funds received from the Tranche 2 Placement however, should the Proposed Transaction not eventuate, the Company will rely on the loan facility whilst looking for alternative finance prior to the repayment date in September 2025.

The Company has stated that, should the Proposed Transaction not proceed, the Directors will look to raise additional funds through a placement, rights issue, share purchase plan, convertible note or other capital raising method previously utilised by the Company. However, there is no guarantee that the fund raising would be successful or with more favourable terms.



As stated in Section 3.4 below, Hall Chadwick had noted a material uncertainty related to Avenira's ability to continue as a going concern in the FY24 financial statements due to the reporting of ongoing net losses, net operating and investment cash outflows, and working capital deficiencies. As such, Non-Associated Shareholders should be made aware that if no alternative source of funding is made available, it is unlikely that Avenira would have sufficient funds to repay the loan when it becomes due and payable in or around September 2025. Avenira's FY25 cash flow budget shows the Company operating with a monthly cash burn of approximately \$0.45 million excluding capital raising activities.

As an exploration company, Avenira's ability to raise funds has been heavily dependent on the performance and outlook of the phosphate market, noting that capital raises have typically been undertaken when rock phosphate prices were at a high, therefore providing investors with better sentiment around Avenira's outlook. With the phosphate market experiencing a volatile and generally downwards trend since Avenira's acquisition of the Wonarah Phosphate Project, the ability of the Company to successfully complete a raise with superior terms to the Proposed Transaction is uncertain.

If the Proposed Transaction does not proceed, the Company will need to take immediate action to source funds to repay the \$2.79 million loan before September 2025.

### Alternative proposals to the Proposed Transaction

We have been advised that the Company engaged corporate advisors to explore funding options over the last 12 months, with no other appropriate proposals pursued.

### Advantages and disadvantages

The key advantages of the Proposed Transaction are:

**Table 2 Advantages of approving the Proposed Transaction** 

Advantage	Details
Repayment of Hebang Loan	On 20 September 2024, Hebang provided a \$2.79 million unsecured loan to Avenira to enable the Company to progress the development of the Wonarah Phosphate Project. The loan will become due and payable on or around September 2025.
	Approval of the Proposed Transaction will enable Avenira to repay the Hebang Loan from the proceeds of the Tranche 2 Placement and become debt free.
	In the absence of shareholder approval, the Company would need to secure alternative funding to repay the loan or renegotiate a new loan with Hebang. There is no guarantee that funding will be available, or if it is, that it will be on favourable terms to Avenira.
Provides financial capacity and value accretion potential	In March 2024 the ASX formally queried Avenira's financial viability. At the end of the quarter, the Company had \$184,000 in available funding which, based on its level of spending in that quarter, was expected to last approximately two weeks. We have been advised by the Directors that formal advice was obtained in relation to solvency of the Company at that time, and efforts to raise capital intensified.  The Hebang strategic investment provided Avenira with immediate funding to
	progress the Yellow Phosphorous ("YP") study work and lithium ferro phosphate cathode active material ("LFP CAM") study work and for general working capital.
	Approval of the Proposed Transaction provides Avenira with a potential pathway towards YP and LFP product development; Non-Associated Shareholders would benefit from any value accretion associated with the Project as the study work completes.
Strengthen existing strategic relationship	Approval of the Proposed Transaction would provide Hebang and its associates with an interest in excess of 20% on a fully diluted basis. Hebang's interests would be aligned with the Company in increasing overall shareholder value of Avenira.
	Further, the Wonarah Phosphate Project could potentially benefit from access to Hebang's extensive phosphate experience and capabilities in building, commissioning, and operating plants around the world.



	Avenira and Hebang have also entered into a non-binding offtake MoU for the construction and operation of an initial 50,000 tonnes per annum YP plant, a commitment by Hebang to purchase part of the YP produced, and Hebang to provide the necessary technology, processes, experience and any other support for the construction and operation of the YP plant.
Impact on Avenira's share price	Avenira Shares had not traded above \$0.007 since early April 2024, until the last trading day prior to the announcement of the Proposed Transaction where the share price was \$0.009. It is possible that the share price may fall towards previously traded levels if the Proposed Transaction is not successful and no alternative funding solutions are received by the Company.  Included in Section 9.4 is a summary of Avenira's share price performance prior to and directly after the announcement of the Proposed Transaction.

Source: RSM Analysis

The key disadvantages of the Proposed Transaction are:

Table 3 Disadvantages of approving the Proposed Transaction

Disadvantages	Details
The Proposed Transaction is not fair	The assessed value of an Avenira Share post the Proposed Transaction lies below the range of values assessed for the value of an Avenira Share prior to the Proposed Transaction.
	This is primarily driven by the assessment approach which considers the value of an Avenira Share prior to the Proposed Transaction on a controlling basis, but the value of an Avenira Share after the Proposed Transcation on a minority basis, i.e. the impact of additional control obtained by Hebang is factored into the assessed fair values.
Dilutionary impact on Non-Associated Shareholders	Should the Proposed Transaction be approved, Non-Associated Shareholders' collective interest and voting power in Avenira will drop from 80.1% to 68.3%.  As the deemed issue price of shares under the Proposed Transaction is below the market price of Avenira's Shares as at the date of this Report (\$0.010 as at 21 October 2024), the placement will lead to a greater dilution of the voting power of Non-Associated Shareholders than may occur if an alternative equity capital raising was undertaken by Avenira on more favourable terms.
Significant influence of Hebang	Should the Proposed Transaction be approved, Hebang's interest in Avenira would increase to 31.7%, allowing Hebang to block Special Resolutions of the Company.  Together with Hebang's recent nomination of three people, on the Avenira Board
Source: PSM Analysis	and management team, Hebang would significantly increase its operational and governance control of Avenira, in addition to voting power.

Source: RSM Analysis

#### **Conclusion on Reasonableness**

In our opinion, the position of the Non-Associated Shareholders if the Proposed Transaction is approved is more advantageous than their position if it is not approved. Therefore, in the absence of any other relevant information and/or a superior alternative, we consider that the Proposed Transaction is **reasonable** for the Non-Associated Shareholders of Avenira.

Non-Associated Shareholders should have particular regard to the potential advantages and disadvantages set out above in the context of their own risk profile and investment strategy. If in doubt, Shareholders should consult an independent advisor.



### General

This Report represents general financial product advice only and has been prepared without taking into consideration the individual circumstances of the Non-Associated Shareholders.

The ultimate decision whether to accept the Proposed Transaction should be based on the Non-Associated Shareholders' assessment of their circumstances, including their risk profile, liquidity preference, tax position and expectations as to value and future market conditions.

Shareholders should read and have regard to the contents of the Notice which has been prepared by the Directors and Management of Avenira. Non-Associated Shareholders who are in doubt as to the action they should take with regard to the Proposed Transaction and/or the matters dealt with in this Report, should seek independent professional advice.

This summary should be considered in conjunction with the detail contained in the following sections of this Report.

Yours faithfully

**RSM CORPORATE AUSTRALIA PTY LTD** 

Nadine Marke **Director** 

NadiMu

Justin Audcent **Director** 



# 1. Summary of Proposed Transaction

### 1.1 Overview

On 30 July 2024, Avenira announced it had secured a strategic investment from its largest shareholder, Hebang Biotechnology (Hong Kong) Investment Limited ("Hebang"), being a wholly-owned subsidiary of Sichuan Hebang Biotechnology Corporation Limited, a Chinese domiciled and Shanghai Stock Exchange ("SHSE") listed company with core businesses in mining, chemicals manufacturing, photovoltaic products, and other industries ("Strategic Investment").

The Strategic Investment will result in Hebang increasing its shareholdings in Avenira to up to 31.67%. Avenira intends to use the investment to progress the development of its Yellow Phosphorous ("YP") and Lithium Ferro Phosphate ("LFP") study work at its Wonarah Phosphate Project, and for general working capital for the Company.

The Strategic Investment comprises A \$4.5 million two-tranche Placement to Hebang at an issue price of \$0.006 per AEV share, with the Tranche 2 Placement being subject to shareholder approval and any other required regulatory approvals;

Pending shareholder approval for the Tranche 2 Placement, Hebang has provided an unsecured loan of the Tranche 2 subscription amount (\$2.79 million) to Avenira. The terms of the loan are as follows:

- Principal payment: \$2.79 million;
- Repayment: Repayment of principal and interest upon the earlier of either the completion of the Tranche 2 Placement or 12 months after the date on which the loan is made by Hebang to the Company; and
- Interest: 12% per annum capitalised and payable on repayment of Principal.

As part of the Strategic Investment, Hebang had the right to appoint the Executive Chairman and a further two directors to the Board of Avenira, as well as the CEO and CFO to the Company's management team. Following completion of the Tranche 1 Placement and subject to all required regulatory approvals, Avenira duly appointed the following personnel on 7 August 2024:

- Mr Mo Yang, managing director ("MD") of a Sichuan Hebang group company, as a director, Avenira Executive Chairman and CEO (who was subsequently replaced in those roles by Ms Yuan (Stephanie) Yuan on 9 September 2024);
- Ms Ran Mo, finance manager of a Sichuan Hebang group company, as Avenira Executive Director; and
- Mr Shixing Zhang, assistant to the Sichuan Hebang Chairman of the Board of Directors, as Avenira Non-Executive Director ("NED").

The Tranche 1 Placement was issued under the Company's ASX Listing Rule 7.1 (223 million shares) and 7.1A (62 million shares) placement capacity on 2 August 2024, with Hebang holding a 19.92% shareholding interest in Avenira as a result.

The issuance of the 465,000,000 AEV shares to Hebang under the Tranche 2 Placement will result in Hebang having an interest in the Company greater than 20%. As such, Avenira is seeking shareholder approval for the Proposed Transaction for the purposes of Item 7 of Section 611 of the Act.

# 1.2 Key conditions of Proposed Transaction

Completion of the Proposed Transaction is subject to Avenira shareholders approving the Tranche 2 Placement pursuant to Item 7 of Section 611 of the Act ("Condition Precedent").

If the Condition Precedent is not satisfied by 30 November 2024, the parties shall negotiate in good faith either an extension of time or an alternative transaction in relation to Tranche 2.

### 1.3 Rationale for the Proposed Transaction

The funds received from the Strategic Investment will be used to progress the development of the YP and LFP study work at the Wonarah Phosphate Project. The Tranche 2 Placement funds will be used to repay the loan provided by Hebang upon signing of the Tranche 2 Placement documents.



# 1.4 Impact of Proposed Transaction on Avenira's Capital Structure

The table below sets out a summary of the capital structure of Avenira prior to and immediately after the Proposed Transaction.

Following the issue of Tranche 1 Placement shares, Hebang holds a 19.92% interest in Avenira. A further 465,000,000 AEV Shares will be issued to Hebang if the Tranche 2 Placement is approved, increasing Hebang's interest to 31.67% in Avenira as illustrated below.

The Non-Associated Shareholders' interests in Avenira will therefore decline from 80.08% currently to 68.33% post the Proposed Transaction.

Table 4 Proposed Transaction's impact on Avenira's capital structure

Share structure of Avenira pre and post the Proposed Transaction	Shares held in Avenira	% of ownership in Avenira
Shares on issue prior to the Proposed Transaction		
Non-Associated Shareholders of Avenira	2,165,425,878	80.08%
Hebang	538,608,182	19.92%
Total shares on issue prior to the Proposed Transaction	2,704,034,060	100.00%
Shares on issue post the Proposed Transaction		
Non-Associated Shareholders of Avenira	2,165,425,878	68.33%
Hebang	1,003,608,182	31.67%
Total shares on issue post the Proposed Transaction	3,169,034,060	100.00%

Source: RSM Analysis



# 2. Scope of the Report

## 2.1 Purpose of this Report

The Directors of Avenira have requested RSM, being independent and qualified for the purpose, to express an opinion as to whether the Proposed Transaction is fair and reasonable to Non-Associated Shareholders.

## 2.2 Corporations Act

Section 606 of the Act prohibits a person from acquiring a relevant interest in the issued voting shares of a public company if the acquisition results in that person's voting interest in the company increasing from a starting point that is below 20% to an interest that is above 20%. Following the completion of the Proposed Transaction, Hebang will increase its interest in Avenira from 19.92% to up to 31.67%.

Under Item 7 of Section 611 of the Act, the prohibition contained in Section 606 does not apply if the acquisition has been approved by the Non-Associated Shareholders of the Company.

Accordingly, the Company is seeking approval from the Non-Associated Shareholders for the Proposed Transaction under Item 7 of Section 611 of the Act.

Section 611(7) of the Act states that shareholders must be given all information that is material to the decision on how to vote at the meeting. ASIC Regulatory Guide 111 ("RG 111") advises the requirement to commission an Independent Expert's Report in such circumstances and provides guidance on the content.

# 2.3 Adopted basis of evaluation

In determining whether the Proposed Transaction is "fair" and "reasonable" to the Non-Associated Shareholders we have given regard to the views expressed by ASIC in RG 111.

RG 111 provides ASIC's views on how an expert can help security holders make informed decisions about transactions. Specifically, it gives guidance to experts on how to evaluate whether or not a proposed transaction is fair and reasonable.

RG 111 states that the expert's report should focus on:

- The issues facing the security holders for whom the report is being prepared: and
- The substance of the transaction rather than the legal mechanism used to achieve it.

Where an issue of shares by a company otherwise prohibited under section 606 is approved under Item 7 of Section 611 and the effect on the company's shareholding is comparable to a takeover bid, RG 111 states that the transaction should be analysed as if it was a takeover bid.

RG 111 applies the fair and reasonable test as two distinct criteria in the circumstance of a takeover offer, stating:

- A takeover offer is considered "fair" if the value of the offer price or consideration is equal to or greater than the value of the securities that are the subject of the offer; and
- A takeover is considered "reasonable" if it is fair, or where the offer is "not fair" it may still be reasonable if the expert believes that there are sufficient reasons for security holders to accept the offer.

Consistent with the guidelines in RG 111, in determining whether the Proposed Transaction is fair and reasonable to the Non-Associated Shareholders, the analysis we have undertaken is as follows:

- A comparison of the fair value of an ordinary Share in Avenira prior to (on a control basis) and immediately following (on a non-control basis) the Proposed Transaction fairness; and
- A review of other significant factors which Non-Associated Shareholders might consider prior to approving the Proposed Transaction – reasonableness.



The other significant factors to be considered include:

- Prospects of the Company if the Proposed Transaction does not proceed; and
- Any other commercial advantages and disadvantages to the Non-Associated Shareholders as a consequence of the Proposed Transaction proceeding.

Our assessment of the Proposed Transaction is based on economic, market and other conditions prevailing at the date of this Report.



# 3. Profile of Avenira Limited

# 3.1 Background

Avenira Limited (ASX:AEV), formerly Minemakers Limited, is an ASX-listed company focused on the development of its flagship Wonarah Phosphate Project and Jundee South Gold Project.

### **Key Projects**

Wonarah Phosphate Project

The Wonarah Phosphate Project is located in the Barkly Tableland region of the Northern Territory, approximately 240 km east of Tennant Creek and 1,035 km southeast of Darwin.

As illustrated in Figure 2 below, Wonarah is supported by its proximity to the Barkly Highway, as well as the Amadeus-Darwin gas pipeline, Darwin-Adelaide rail line and high quality water sources.

TOTAL LIMITED

TOTAL SPENDS

TOTAL SPENDS

TOTAL SPENDS

TOTAL SPENDS

TENNANT CREEK

TENNANT CR

Figure 2 Location map of Wonarah Phosphate Project

Source: Avenira 2023 Annual Report

The project comprises six exploration licences, two Mineral Leases, and an Access Authority covering 1,501 km<sup>2</sup>.

The Company intends to develop Wonarah to supply premium quality products into the electric vehicle ("EV"), agricultural, and industrial chemical markets.



Feedstock from the Wonarah Phosphate Project is intended to enable the production and sale of the following product streams:

- Direct Shipping Ore ("DSO") phosphate to supply the fertiliser markets and allowing for the production of Yellow Phosphorous ("YP") and Thermal (Super) Phosphoric Acid ("T(S)PA");
- T(S)PA used in the production of battery-grade specialty chemicals;
- Lithium Ferro Phosphate Cathode Active Material ("LFP CAM") to sell to domestic and international lithium-ion battery cell
  manufacturers; and
- YP to utilise in the T(S)PA and LFP CAM production chains.

As summarised in Appendix D, the Company has explored various options for development of the Wonarah Project over nearly 20 years of ownership, based on prevailing market prices and demand for the above product streams. The ability to source development and funding partners, together with logistical challenges from proximity to export routes and delays in advancing technology options, has led to a sustained decline in the AEV share price and reduced investment interest over recent years.

However, the LFP Scoping Study performed in March 2023 indicated positive results, with strong economics and technical viability for undertaking the development of a LFP cathode manufacturing project at Wonarah. In September 2023 the Company entered into formal agreements with Advanced Lithium Electrochemistry Limited ("Aleees"), an LFP battery manufacturer, granting Avenira the right to use Aleees' intellectual property for the manufacture and global distribution of LFP CAM.

In October 2023, Avenira announced positive results from the Wonarah DSO Project Feasibility Study and received approval of its Mine Management Plan ("MMP") authorising 40,000 tonnes of ore extraction.

Avenira's current JORC 2012 compliant mineral resource estimate for the Wonarah Phosphate Project is summarised below.

Table 5 Wonarah Mineral Resource Estimate (September 2023)

Resource category	Tonnes	P <sub>2</sub> O <sub>5</sub>	Al <sub>2</sub> O <sub>3</sub>	CaO	Fe <sub>2</sub> O <sub>3</sub>	K₂O	MgO	MnO	Na₂O	SiO <sub>2</sub>	TiO <sub>2</sub>
at 10% P <sub>2</sub> O <sub>5</sub> COG	Mt	%	%	%	%	%	%	%	%	%	%
Measured	78.3	20.8	4.85	28.0	1.11	0.43	0.25	0.04	0.10	39.7	0.21
Indicated	222.0	17.5	4.75	23.2	1.49	0.47	0.20	0.04	0.09	48.3	0.22
Measured + Indicated	300.3	18.4	4.78	24.5	1.40	0.46	0.21	0.04	0.09	46.1	0.22
Inferred	512.0	18.0	4.80	24.0	2.10	0.50	0.20	0.08	0.05	46.0	0.20
Total	812.3	18.1	4.79	24.2	1.84	0.49	0.20	0.07	0.07	46.0	0.21
Resource category	Tonnes	P <sub>2</sub> O <sub>5</sub>	Al <sub>2</sub> O <sub>3</sub>	CaO	Fe <sub>2</sub> O <sub>3</sub>	K₂O	MgO	MnO	Na₂O	SiO <sub>2</sub>	TiO <sub>2</sub>
at 15% P <sub>2</sub> O <sub>5</sub> COG	Mt	%	%	%	%	%	%	%	%	%	%
Measured	64.9	22.4	4.47	30.0	1.10	0.37	0.19	0.04	0.09	37.0	0.19
Indicated	133.0	21.1	4.77	28.0	1.53	0.47	0.21	0.04	0.09	39.7	0.22
Measured + Indicated	197.9	21.5	4.67	28.7	1.39	0.44	0.20	0.04	0.09	38.8	0.21
Inferred	352.0	21.0	4.50	28.0	2.00	0.50	0.20	0.10	0.08	39.0	0.20
Total	549.9	21.2	4.56	28.2	1.78	0.48	0.20	0.08	0.08	38.9	0.20
Resource category	Tonnes	P <sub>2</sub> O <sub>5</sub>	Al <sub>2</sub> O <sub>3</sub>	CaO	Fe <sub>2</sub> O <sub>3</sub>	K₂O	MgO	MnO	Na₂O	SiO <sub>2</sub>	TiO <sub>2</sub>
at 27% P <sub>2</sub> O <sub>5</sub> COG	Mt	%	%	%	%	%	%	%	%	%	%
Measured	3.4	30.9	3.14	42.1	0.85	0.18	0.19	0.05	0.08	18.0	0.14
Indicated	9.6	30.0	3.43	38.8	1.14	0.28	0.11	0.03	0.08	24.7	0.15
Measured + Indicated	13.4	30.2	3.35	39.7	1.07	0.26	0.13	0.04	0.08	22.9	0.15
Inferred	53.0	30.0	3.10	40.0	1.30	0.30	0.10	0.10	0.06	22.0	0.10
Total	66.0	30.0	3.10	40.0	1.30	0.30	0.10	0.10	0.06	22.0	0.10

Source: 'Mineral Resource Estimate to support DSO Feasibility Study' AEV ASX Announcement on 27 September 2023 & Independent Technical Specialist Report

Further details on the Project are contained in the Independent Technical Specialist's Report at Appendix F.



Jundee South Gold Project

In April 2020, Avenira entered into an agreement with Faurex Pty Ltd to purchase the Jundee South Gold Project ("Jundee South Gold Project") which, at the time of acquisition, comprised four exploration licences covering 720 km².

The Jundee South Gold Project's tenement portfolio has since increased to 47 core exploration and prospecting licences covering 1,373 km<sup>2</sup> across the Yandal Greenstone Belt which hosts several significant gold deposits, including the Jundee Mine, Bronzewing, and Darlot deposits.

To date, works on the Jundee South Gold Project have been relatively limited due to Avenira's focus on the Wonarah Phosphate Project. As at April 2024, related activities have been limited to data compilation, drilling programs, and planning for surface sampling, with no assessment of resources conducted.

# 3.2 Legal structure

The corporate structure of Avenira is outlined in the diagram below.

Figure 3 Avenira corporate structure



Source: Avenira 2024 Annual Report

# 3.3 Directors and management

The directors and key management of Avenira are summarised in the table below.

Table 6 Avenira directors and management

Name	Title	Experience
Ms Yuan (Stephanie) Yuan	Executive Chair & CEO	Ms Yuan has been a Board Secretary and Board member of various Hebang companies over the past 10 years. Ms Yuan has a Master of Management Accounting and a Master of Philosophy from Melbourne University as well as a Bachelor of Medicine from Tongji University in China.
Mr Brett Clark	Deputy Executive Chairman	Mr Clark has over 30 years' experience in the mining & energy sectors in funding, operations and advisory with companies such as Hamersley Iron Pty Ltd, CRA Limited, Rio Tinto Limited, and Oakajee Port and Rail. Mr Clark has extensive leadership experience in board positions held at both listed and unlisted companies. Mr Clark holds a Bachelor of Engineering from Curtin University and a Graduate Diploma of Business Management and Finance from Deakin University.



Ms Ran Mo	Executive Director	Ms Mo is the Finance Manager of a Hebang subsidiary and is responsible for overseeing the company's financial operations, ensuring compliance with financial regulations and providing strategic financial guidance to support the organisation's growth objectives. Ms Mo has a Masters Degree in Professional Accounting and Business Law.
Mr Shixing Zhang	Non-Executive Director	Mr Zhang is the assistant to the Chairman of the Board of Directors at Hebang. He has an Associate Degree in Chemical Engineering and provides strategic support and advice to the Chairman of Hebang.
Mr Nam (Eddy) Cheng	Non-Executive Director	Mr Cheng is an experienced senior management professional with established leadership credentials in the development of strategic outcomes. Mr Cheng has a background in business development, strategic analysis, and negotiation.
Mr Roger Harris	Non-Executive Director	Mr Harris has a Bachelor of Applied Science and was the founding director / owner of a large service-based company with branches in Western Australia and South-East Asia. Mr Harris continued to operate a family office for 30 years, investing in the natural resources sector and other asset classes. Mr Harris continues the development and growth of businesses through mergers and acquisitions. Mr Harris is also a member of Avenira's Audit Committee.
Mr Graeme Smith	Company Secretary	Mr Smith is the principal of Wembley Corporate Services which provides corporate secretarial, chief financial officer, and corporate governance services. Mr Smith has over 30 years' experience in company secretarial work in both listed and unlisted companies. Mr Smith holds a Bachelor of Economics from Macquarie University, a Master of Business Administration, and a Master of Commercial Law from Deakin University. He is a Fellow of the Australian Society of CPAs (FCPA), a Fellow of The Chartered Governance Institute FCG (CS, CGP) and a Fellow of the Governance Institute of Australia (FGIA).

Source: Avenira 2024 Annual Report, S&P Capital IQ, and 'Board Changes', 'Key Leadership Appointments', and 'Strategic Investment from Sichuan Hebang Biotechnology' AEV ASX Announcements on 9 September 2024, 7 August 2024, and 30 July 2024, respectively



### 3.4 Financial information

The Company's auditor, Hall Chadwick WA Audit Pty Ltd ("Hall Chadwick"), issued an unmodified audit opinion on the financial statements for the year ended 30 June 2024. However, a material uncertainty related to the Company's ability to continue as a going concern was noted in the auditor report due to the Company's ongoing net losses, net operating and investment cash outflows and working capital deficiency. Hall Chadwick note that the ability of the Group to continue as a going concern is principally dependent upon the Company raising funds from debt or equity sources.

### Financial performance

The following table sets out a summary of Avenira's historical consolidated financial performance for the years ended 30 June 2022 ("FY22"), 30 June 2023 ("FY23") and 30 June 2024 ("FY24").

Table 7 Avenira historical financial performance

\$'000	FY22	FY23	FY24
	Audited	Audited	Audited
Income			
Interest income	7	53	90
Other income	3	6	-
	10	58	90
Expenditure			
Depreciation & amortisation expense	(34)	(18)	(15)
Salaries & employee benefits expense	(1,139)	(1,242)	(1,756)
Net foreign currency gain / (loss)	(2)	-	2
Impairment of exploration & evaluation expenditure	(676)	-	(48)
Interest expense - leases	(2)	-	-
Share based payment (expense) / reversal	(7)	(972)	(569)
Administrative & other expenses	(879)	(1,024)	(828)
Extinguishment of financial liabilities	(146)	-	-
Loss before income tax	(2,875)	(3,198)	(3,123)
Income tax (expense) / benefit	-	-	-
Loss after income tax	(2,875)	(3,198)	(3,123)
Other comprehensive income			
Items that may be reclassified subsequently to profit or loss, net of tax			
Financial assets measured at fair value through profit & loss			
Net fair value gain / (loss) on financial assets measured at fair value through OCI	(1,845)	(429)	160
Other comprehensive income / (loss) for the period	(1,845)	(429)	160
Total comprehensive income / (loss) for the period	(4,720)	(3,627)	(2,963)

Source: Avenira 2023 Annual Report & Avenira 2024 Annual Report

We note the following in relation to Avenira's consolidated financial performance:

- The statement of financial performance reflects the Company's main activities as a mineral exploration company with no operating revenue, only costs primarily comprising salaries and other employee-related expenses and administration and corporate expenses. Exploration and evaluation expenses are capitalised on Avenira's balance sheet;
- Salaries and employee benefits expenses have consistently been the largest component of the Company's expenses across the review period, comprising around 40% over the two years ended 30 June 2023 before increasing to 55% of total expenses in FY24. These expenses largely relate to employee salaries and director fees;



- Share based payments predominantly relate to options granted to directors, employees, and consultants, and also include service rights granted to employees pursuant to the Company's employee share investment plan;
- Administrative and other expenses accounted for around 30% of total expenses over the two years ended 30 June 2023 before
  declining to approximately 25% in FY24. Administrative & other expenses largely relate to accounting, legal and consultants
  expenses, regulatory costs, travel expenses and interest paid on the Company's borrowings; and
- The Company recognises the change in the fair value of investments in other comprehensive income with the amounts being reclassified to profit or loss when the assets are sold or impaired.

#### **Financial position**

The following table sets out a summary of Avenira's historical consolidated financial position as at 30 June 2023 and 30 June 2024.

Table 8 Avenira historical financial position

\$'000	30-Jun-23	30-Jun-24
Financial Position	Audited	Audited
Current Assets		
Cash & cash equivalents	3,268	426
Trade & other receivables	208	136
Total Current Assets	3,476	562
Non-Current Assets		
Other assets	1,482	1,482
Financial assets	402	85
Plant & equipment	62	48
Capitalised exploration & evaluation expenditure	11,939	15,316
Intangibles	-	4,401
Total Non-Current Assets	13,885	21,331
Total Assets	17,361	21,894
Current Liabilities		
Trade & other payables	745	3,877
Provisions (current)	109	154
Loans & borrowings	3,464	-
Total Current Liabilities	4,318	4,032
Non-Current Liabilities		
Provisions (non-current)	2,184	2,051
Total Non-Current Liabilities	2,184	2,051
Total Liabilities	6,502	6,083
Net Assets	10,859	15,811
	V	· · ·
Equity		
Issued capital	149,210	154,849
Reserves	17,422	19,857
Accumulated losses	(155,772)	(158,895)
Total Equity	10,859	15,811

Source: Avenira 2023 Annual Report & Avenira 2024 Annual Report



We note the following in relation to Avenira's consolidated financial position as at 30 June 2024:

- As at 30 June 2024, Avenira reported net assets of \$15.81 million and a net current liabilities of \$3.47 million, with current liabilities exceeding current assets;
- Trade and other receivables largely comprise GST receivables and prepaid insurance;
- Capitalised exploration and evaluation expenditure relates to costs associated with the Wonarah Phosphate Project and the Jundee South Gold Project. These costs are accumulated and expected to be recouped either through sale or successful development and exploitation of the area of interest;
- Of the \$15.32 million capitalised exploration & evaluation expenditure balance as at 30 June 2024, \$11.25 million related to the Wonarah Phosphate Project with the remainder related to the Jundee South Gold Project;
- Other assets relate to security deposits held over the Wonarah tenements whilst intangibles relate to an agreement executed between Avenira and Aleees allowing the Company to extend the exclusive Australian licence to construct a commercial scale LFP plant for the Wonarah Phosphate Project;
- Financial assets relate to the fair value of unlisted holdings of Avenira which comprise a \$10,000 investment in Bullseye Mining and a \$75,000 investment in Mining & Resources Litigation Fund;
- Trade & other payables largely relate to the accrual of US\$1.50 million (A\$2.25m) pursuant to the License and Technology
   Transfer Agreement with Aleees. This is payable in equal instalments of US\$0.75 million on 1 January 2025 and 1 April 2025;
- Loans and borrowings at 30 June 2023 were wholly comprised of a \$3 million secured loan facility with Au Xingao Investment Pty Ltd, inclusive of capitalised interest amounts. The facility expired on 8 March 2024 with the Company repaying the loan (with interest) in instalments on 12 and 14 March 2024. As at 30 June 2024, the facility has been discharged; and
- Provisions are separated into current and non-current, with the former relating to employee benefits (i.e. wages, salaries, annual leave, and long service leave) and the latter relating to provisions for mine rehabilitation & restoration (i.e. costs of removing the plant, abandoning the mine site, and restoring the affected areas).

#### Cash flow statement

The following table sets out a summary of Avenira's historical consolidated cash flow statement for the years ended 30 June 2022, 30 June 2023 and 30 June 2024.



Table 9 Avenira historical cash flows

\$'000	FY22 Audited	FY23 Audited	FY24 Audited
Cash flows from operating activities			
Payments to suppliers & employees	(1,607)	(1,832)	(1,295)
Interest received	7	50	90
Receipt of other income	3	6	-
Payment of lease interest	(2)	-	-
Net cash outflow from operating activities	(1,599)	(1,776)	(1,205)
Cash flows from investing activities			
Payments for exploration expenditure	(1,705)	(2,883)	(3,557)
Payments for plant & equipment	(2)	(65)	-
Payments for intangibles	(2,322)	-	(739)
Proceeds from sale of investments	1,333	-	477
Net cash outflow from investing activities	(2,697)	(2,948)	(3,819)
Cash flows from financing activities			
Proceeds from issue of shares	1,446	7,491	6,260
Transaction costs on issue of shares	(74)	(495)	(377)
Amounts received in advance for issue of shares	-	-	5
Payment of principal portion of lease liabilities	(34)	(14)	-
Repayment of loans	-	-	(3,707)
Proceeds from loans & borrowings	846	-	-
Net cash inflow from financing activities	2,184	6,982	2,181
Net increase / (decrease) in cash & cash equivalents	(2,112)	2,257	(2,844)
Cash & cash equivalents at the beginning of the financial year	3,123	1,010	3,268
Effects of exchange rate changes on cash & cash equivalents	(2)	-	2
Cash & cash equivalents at the end of the financial year	1,010	3,268	426

Source: Avenira 2023 Annual Report & Avenira 2024 Annual Report

We note the following in relation to Avenira's cash flow statement:

- For the year ended 30 June 2024, Avenira had operating cash outflows of \$1.21 million, relating to payments to suppliers and employees, net of interest income received. We note that the Company has consistently reported operating cash outflows across the review period, typical of a company in the exploration and development phase;
- For the year ended 30 June 2024, Avenira's investing cash outflows primarily comprised payments for exploration expenditure;
- For the year ended 30 June 2024, Avenira had net financing cash inflows of \$2.18 million, relating to share placements net of the repayment of the Au Xingao loan; and
- We have been provided with the Company's cash flow budget for the year ending 30 June 2025, which forecasts Avenira
  operating with a monthly cash burn of approximately \$0.45 million excluding capital raising activities.



#### Events subsequent to 30 June 2024

As we have had regard to Avenira's 2024 Annual Report in the assessment of the Company's financial position as set out in Table 9 above, we note the following significant events that have occurred since 30 June 2024:

- In July 2024, Avenira announced that pursuant to the Mining Agreement executed with Arruwurra Aboriginal Corporation and Arruwurra Pty Ltd ("Arruwurra"), an agreement had been reached regarding the composition of the annual payment for the first anniversary of the agreement. The payment comprises 70 million ordinary shares in Avenira which were issued on 29 July 2024 and the balance of the annual payment, being \$153,770, will be paid in cash in October 2024;
- In July 2024, Avenira announced that it had secured a Strategic Investment from Hebang. On 2 August 2024, Avenira announced that, as part of the Strategic Investment, the Company issued a placement of 285 million shares to Hebang to raise \$1.71 million, and on 20 September 2024, it was announced that Hebang had provided an unsecured loan of \$2.79 million, to be repaid on completion of the proposed Tranche 2 Placement; and
- In August / September 2024, as part of the Strategic Placement, Avenira announced the appointment of Ms Yuan, Ms Mo and Mr Zhang to the Board of Avenira.

#### **Capital structure**

Avenira has 2,704,034,060 ordinary shares on issue as at the date of this Report. The top 20 shareholders of Avenira as at 30 September 2024 are set out below.

Table 10 Avenira top 20 shareholders

Rank	Name	Number of shares	% of issued shares
1	Hebang Biotechnology (Hong Kong) Investment Ltd*	285,000,000	10.54%
2	BNP Paribas Nominees Pty Ltd	270,419,613	10.00%
3	Citicorp Nominees Pty Ltd	207,748,516	7.68%
4	Mr Li Guaoli	100,890,000	3.73%
5	Arruwurra Pty Ltd	100,000,000	3.70%
6	Mr Craig Graeme Chapman	50,000,000	1.85%
7	Holy Investments Pty Ltd	36,418,759	1.35%
8	Mr Fanchao Lin	23,777,981	0.88%
9	Holy Investments Pty Ltd	22,949,533	0.85%
10	Old Forrester Pty Ltd	22,727,273	0.84%
11	Chaleyer Holdings Pty Ltd	21,500,000	0.80%
12	Ms Shu-Fen Liao	21,000,000	0.78%
13	Mrs Vineeta Gupta	20,733,821	0.77%
14	Awakening Investment Pty Ltd	19,877,100	0.74%
15	Mr Rowan Timothy Danischewski & Mrs Natasha Jane Danischewski	18,150,000	0.67%
16	Miss Yaqian Shan	16,191,283	0.60%
17	Mr Craig Graeme Chapman & Mrs Joanne Chapman	15,045,455	0.56%
18	Mr Giovanni Del Conte	14,849,612	0.55%
19	Societe De Polyserve Pour Les Engrais Et Produits Chimiques SA\C	14,703,962	0.54%
20	Mrs Jinfang Yu	13,355,761	0.49%
	Total	1,295,338,669	47.90%
	Other holders	1,408,695,391	52.10%
	Total issued capital	2,704,034,060	

Source: Avenira 2024 Annual Report

\*As advised by the Directors of Avenira, 10.5% of Hebang's shareholdings are directly held under Hebang Biotechnology (Hong Kong) Investment Ltd, with the remaining 253,608,182 shares (9.38%) held under BNP Paribas Nominees Pty Ltd.



In addition, as at the date of the Report, Avenira had:

- 145,000,000 listed Options with an exercise price of \$0.025 and expiry of 31 October 2025. Mr John Pezzaniti was the largest holder of these options with 22%;
- Multiple classes comprising 215,636,364 unlisted Options with various exercise prices and expiry dates.
  - Security holders holding 20% or more of the unlisted Options, other than those securities issued or acquired under an employee incentive scheme, included BLC National Pty Ltd, Mr Graeme Smith, and Burnvoir Corporate Finance.
- Two classes comprising 158,610,000 Performance Rights with expiry dates of 31 October 2025 and 31 October 2026.
  - o BLC National Pty was the largest holder of the class expiring on 31 October 2025, with 43%; and
  - o Aleees was the sole holder of the class expiring on 31 October 2026.

#### **Share Price Performance**

The figure below sets out a summary of Avenira's closing share price and trading volumes over the 12-month period to 24 July 2024, being the last trading day prior to the announcement of the Strategic Investment.



Figure 4 Avenira recent share price performance

Source: S&P Capital IQ

Over the 12 months leading to 24 July 2024, the AEV traded share price fell from a high of \$0.016 in July 2023 to a low of \$0.004 in June 2024.

Key announcements made by the Company over the 12-month period to 24 July 2024 are summarised in the table below.

**Table 11 Avenira key announcements** 

Ref	Date	Commentary
1	26-Jul-23	Quarterly activities - Mineral Leases granted for Wonarah, successfully raised \$5 million for Wonarah
2	26-Sep-23	Avenira executes agreement with technology partner Aleees
3	27-Sep-23	Mineral resource estimate to support DSO Feasibility Study
4	19-Oct-23	DSO Feasibility Study delivers strong financial results
5	24-Oct-23	Avenira receives Mining Authorisation for DSO operations, allowing for commencement of mining activities for an initial 40,000 tonnes of ore
6	31-Oct-23	Quarterly activities - re-evaluation of mineral resource estimate, Aleees agreement executed, mining agreement with Arruwurra Aboriginal Corporation to facilitate Wonarah Project development



7	10-Nov-23	Trading halt
8	17-Nov-23	Reinstatement to quotation & court orders granted relating Avenira's inadvertent administrative error in not lodging cleansing notices in the required timeframe
9	23-Nov-23	Update on Aleees arrangements and work on LFP Project, noting that a number of workstreams have commenced, Aleees has completed the basic process design work, discussions have commenced with a number of global car manufacturers seeking LFP CAM, and the agreed extension for the time for payment of the first US\$2 million licence fee
10	04-Dec-23	Trading halt - equity investment and strategic cooperation and offtake MoU
11	06-Dec-23	Avenira successfully completes \$5 million placement
12	31-Jan-24	Quarterly activities
13	08-Mar-24	Trading halt
14	18-Mar-24	Avenira completes placement of approximately 137 million new fully paid ordinary shares at \$0.008 per share to raise approximately \$1 million to fund working capital requirements
15	05-Apr-24	Reinstatement to quotation, operational and financial update, cleansing prospectus for an offer of up to 100,000 new shares at \$0.008 per new share
16	29-Apr-24	Quarterly activities - Hebang progressing with Scoping Study for the YP Plant, successful capital raising, and repayment of the secured convertible loan with Au Xingao Investment Pty Ltd
17	25-Jun-24	Further MoU extension with Aleees and NT Government until 30 June 2025

Source: ASX



# 4. Profile of Hebang

## 4.1 Background

Hebang is a Chinese domiciled company that was established in 2002 and officially listed on Shanghai Stock Exchange in February 2012 (Company Abbreviation: Hebang Biotechnology, Stock Code: 603077).

Since its listing, Hebang has leveraged its salt mine reserves, phosphate mines, and the natural gas supply advantages in the China southwestern region to achieve high-growth development. It operates through the following three key sectors:

- Mining Industry, including salt mines development, phosphate mines development, lead-zinc mine, copper mine and oil/gas energy supplies;
- Chemicals, sodium carbonate, ammonium chloride, PMIDA, glyphosate, methionine, and biological pesticide;
- Photovoltaics, smart & specialty glass, photovoltaic glass, photovoltaic modules and silicon wafer.

Since its listing, Hebang has significantly developed its natural resource portfolio, with its salt mine and phosphate mine reserves amassing to 98 million tonnes and 630 million tonnes, respectively. Further, Hebang has grown into the world's largest PMIDA (N-phosphonomethyl iminodiacetic acid) supplier, accounting for 70% of the global PMIDA market share. PMIDA is a key intermediate ingredient in the manufacturing of glyphosate, which is world's largest pesticide variety and is widely used to kill weeds in various situations including agriculture, industrial areas, and home garden.

More recently, Hebang has ventured into the photovoltaic industry, becoming a major manufacturer of solar panels, thereby possessing the necessary technology and processes required for photovoltaic power stations and yellow phosphorous factory construction.

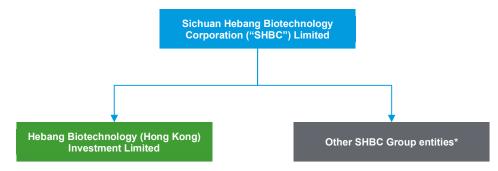
Hebang's new annual 500,000-tonne PMIDA project is under construction at Guang'an chemical industry park, and will become the world's largest PMIDA production base once put into production.

As well as the placement into Avenira, Hebang has furthered its international presence with a US\$800 million investment into the Indonesian Java Integrated Industrial and Port Estate ("JIIPE"), which is set to produce 600,000 tonnes of sodium carbonate, 600,000 tonnes of ammonium chloride and 200,000 tonnes of glyphosate annually.

# 4.2 Legal structure

The corporate structure of Hebang is outlined in the diagram below.

Figure 5 Hebang corporate structure



Source: 'Change in substantial holding' AEV ASX Announcement on 15 December 2023

<sup>\*</sup> Sichuan Hebang Salt Mine Co. Ltd, Sichuan Hebang Phosphate Mine Co. Ltd, Leshan Hebang Agricultural Technology Co. Ltd, Leshan Hebang New Materials Technology Co Ltd, S.T.K Stockton Group Ltd, Sichuan WuJun Solar Energy Co. Ltd, Leshan Yongjiang Industrial Co Ltd, Sichuan Hebang Liujiashan Phosphate Mine Co Ltd, Sichuan Qiaolian Trading Co Ltd, Pan Pacific Industries Pty Ltd and Qianwei Hebang Shuncheng Salt Industry Co Ltd.



## 4.3 Directors and management

Details of the directors and management of Hebang as at the date of this Report are summarised in the table below

**Table 12 Hebang Directors & Management** 

Name	Title	Experience
Xiaoping Zeng	Chairman & General Manager	Mr Zeng has been Chairman of Hebang since 2017, before being appointed to the dual role of Chairman and GM in 2023.
Jun Wang	CFO & Director	Mr Wang has been CFO and Director of Hebang since 2008 and was additionally Deputy GM between 2008 and 2023.
Jing Chen	Chairman of the Supervisory Board	Ms Chen currently serves as the Chairman of the Supervisory Board of Hebang.
Siying Jiang	Secretary to the Board	Ms Jiang currently serves as the Secretary to the Hebang Board.

Source: S&P Capital IQ

### 4.4 Financial information

### Financial performance

Hebang has demonstrated significant growth over recent years, with a compound annual growth rate ("CAGR") in revenue of 30% over the three years ended 31 December 2022, with EBITDA margins increasing from 20% to 40% across the same period.

The 2023 financial year reflected a period of decline for Hebang, with revenue declining 32% and EBITDA margins also falling.

### Financial position

As at 30 June 2024, Hebang was in a net debt position of \$123.8 million (being debt and debt-like items less cash & cash equivalents), with short term and long-term borrowings comprising the majority of the debt-like items. However, Hebang has a strong net asset position of \$4,046 million due to a large asset base of property, plant and equipment compared to long term debt of \$141 million.

Hebang's current and quick ratios (measures of a company's liquidity) as at 30 June 2024 were 2.0 and 1.1, respectively, reflecting an ability to meet short term obligations (current liabilities) from current assets on hand.



# 5. Valuation Approach

### 5.1 Basis of evaluation

The valuation of Avenira prior to and after the Proposed Transaction has been prepared on the basis of Fair Value, being the value that should be agreed in a hypothetical transaction between a knowledgeable, willing but not anxious buyer and a knowledgeable, willing but not anxious seller, acting at arm's length.

### 5.2 Valuation methodologies

RG 111 proposes that it is generally appropriate for an expert to consider using the following methodologies:

- The discounted cash flow ("DCF") method and the estimated realisable value of any surplus assets;
- The application of earnings multiples to the estimated future maintainable earnings or cash flows added to the estimated realisable value of any surplus assets;
- The amount which would be available for distribution on an orderly realisation of assets;
- The quoted market price for listed securities ("QMP"); and
- Any recent genuine offers received.

We consider that the valuation methodologies proposed by RG 111 can be split into three valuation methodology categories, as follows.

#### Market based methods

Market based methods estimate the fair market value by considering the market value of a company's securities or the market value of companies. Market based methods include:

- The quoted price for listed securities; and
- Industry specific methods.

The recent quoted price for listed securities method provides evidence of the fair market value of a company's securities where they are publicly traded in an informed and liquid market.

Industry specific methods usually involve the use of industry rules of thumb to estimate the fair market value of a company and its securities. Generally, rules of thumb provide less persuasive evidence of the fair market value of a company than other market-based valuation methods because they may not account for company specific risks and factors.

### Income based methods

Income based methods estimate value by calculating the present value of a company's estimated future stream of earnings or cash flows. Income based methods include:

- Discounted cash flow; and
- · Capitalisation of future maintainable earnings.

The DCF technique has a strong theoretical basis, valuing a business on the net present value of its future cash flows. It requires an analysis of future cash flows, the capital structure and costs of capital and an assessment of the residual value or the terminal value of the company's cash flows at the end of the forecast period. This method of valuation is appropriate when valuing companies where future cash flow projections can be made with a reasonable degree of confidence.

The capitalisation of future maintainable earnings is generally considered a short form DCF, where an estimation of the Future Maintainable Earnings ("FME") of the business, rather than a stream of cash flows is capitalised based on an appropriate capitalisation multiple. Multiples are derived from the analysis of transactions involving comparable companies and the trading multiples of comparable companies.



#### Asset based methods

Asset based methodologies estimate the fair market value of a company's securities based on the realisable value of its identifiable net assets. Asset based methods include:

- Orderly realisation of assets method;
- · Liquidation of assets method; and
- Net assets on a going concern basis.

The value achievable in an orderly realisation of assets is estimated by determining the net realisable value of the assets of a company which would be distributed to security holders after payment of all liabilities, including realisation costs and taxation charges that arise, assuming the company is wound up in an orderly manner. This technique is particularly appropriate for businesses with relatively high asset values compared to earnings and cash flows.

The liquidation of assets method is similar to the orderly realisation of assets method except the liquidation method assumes that the assets are sold in a shorter time frame. The liquidation of assets method will result in a value that is lower than the orderly realisation of assets method and is appropriate for companies in financial distress or where it is not appropriate to value the on a going concern basis.

The net assets on a going concern method estimates the market values of the net assets of a company but, unlike the orderly realisation of assets method, it does not take into account realisation costs. Asset based methods are appropriate when companies are not profitable, a significant proportion of the company's assets are liquid, or for asset holding companies.

# 5.3 Selection of valuation methodologies

### Valuation of an Avenira Share prior to the Proposed Transaction (control basis)

Primary methodology – Sum of the Parts methodology

In assessing the value of an Avenira Share prior to the Proposed Transaction, we have utilised the 'Sum of the Parts' methodology by aggregating the Fair Value of the following:

- The Wonarah Phosphate Project, as assessed by ERM International Group Limited ("ERM") in their Independent Technical Specialist Report ("ITSR", refer to Appendix F);
- The Jundee South Gold Project as assessed by ERM in their ITSR; and
- Net assets not otherwise included above.

Given the key assets of Avenira as at the Valuation Date are interests in mineral assets, we have instructed ERM to act as an independent technical specialist to provide a technical review and valuation of the Mineral Resources at the Wonarah Phosphate Project and Jundee South Gold Project.

Secondary methodology - Quoted Market Price methodology

Avenira's securities are listed on the ASX. We have therefore also utilised the quoted market price of the Company on the ASX as a secondary valuation methodology and to assess the market value as a cross check to our valuation of Avenira derived under the Sum of the Parts methodology.

#### Valuation of an Avenira Share post the Proposed Transaction (non-control basis)

In assessing the value of an Avenira Share post the Proposed Transaction, we have adjusted the pre-Proposed Transaction value for the immediate impact of the Proposed Transaction, assuming it proceeds. In particular, we have made the following adjustments:

- Included the cash raised, the dilutionary effect, and the associated transaction costs of the issue of Tranche 2 Placement; and
- Included the assessment of a minority discount to the value of an Avenira Share, given Hebang's assumed operational control should the Proposed Transaction proceed.



# 6. Valuation of Avenira prior to the Proposed Transaction

As stated at Section 5.3 we have assessed the value of an Avenira Share prior to the Proposed Transaction using the sum of the parts methodology as our primary methodology.

# 6.1 Sum of the parts valuation

In adopting the sum of the parts methodology, we have aggregated the values of the following:

- The Fair Value of the Wonarah Phosphate Project as assessed by ERM in their ITSR using the Comparable Transactions' methodology;
- The Fair Value of the Jundee South Gold Project as assessed by ERM in their ITSR using the Geoscience Factor Method methodology;
- Avenira's other net assets, based on their carrying values as set out in the audited financial statements of Avenira as at 30 June 2024.

We have determined the Fair Value of an Avenira Share on a controlling basis prior to the announcement of the Proposed Transaction, based on the sum of the parts methodology, to be as outlined below.

Table 13 Fair Value of an Avenira Share using the sum of parts methodology

Valuation assessment \$'000	Low	High	Preferred
Mineral assets			
Wonarah Phosphate Project	15,500	23,300	19,400
Jundee South Gold Project	10,800	15,000	12,900
Total mineral assets	26,300	38,300	32,300
Other assets and liabilities	69	69	69
Net cash	2,136	2,136	2,136
Equity value (control basis)	28,505	40,505	34,505
Number of shares on issue ('000s)	2,704,034	2,704,034	2,704,034
Value per AEV share (control basis, \$ per share)	0.0105	0.0150	0.0128

Source: ITSR & RSM Analysis

The methodology applied represents the value of a controlling shareholding. Accordingly, we consider the value generated under the sum of the parts methodology to already incorporate a premium for control and no further adjustment is considered necessary to assess the value of an Avenira Share on a controlling basis.

Value of Mineral assets

We have instructed ERM to act as an independent technical specialist to provide a technical review and valuation of the Mineral Resources at the Wonarah Phosphate Project and Jundee South Gold Project.

We set out in the table below a summary of ERM's valuations as extracted from the ITSR.



Table 14 ERM Valuation opinion summary - Wonarah Phosphate Project and Jundee South Gold Project

	Fair Value	Fair Value	Fair Value
	Low \$m	High \$m	Preferred \$m
Wonarah Phosphate Project			
Comparable Transactions – DSO (Arruwurra deposit + Main Zone)	15.5	23.3	19.4
Rule of Thumb (Yardstick) - DSO (Arruwurra deposit + Main Zone)	46.7	70.0	58.3
Rule of Thumb (Yardstick) – DSO (Arruwurra deposit only)	11.1	17.4	13.9
DCF Valuation – DSO (Arruwurra deposit only) @ US\$152.50 phosphate rock price			(6.1)
DCF Valuation – DSO (Arruwurra deposit only) @ US\$200.00 phosphate rock price			11.7
Jundee South Gold Project			
Comparable Transactions	4.9	8.2	6.6
Multiple of Exploration Expenditure	9.2	12.2	10.7
Geoscience Factor Method	10.8	15.0	12.9

Source: ITSR

In assessing the Fair Value of the Wonarah Phosphate Project and Jundee South Gold Project, ERM has utilised the following methodologies:

- Wonarah Phosphate Project Comparable Transactions, Rule of Thumb (Yardstick) Approach and Discounted Cash Flow Method: and
- Jundee South Gold Project Comparable Transactions, Multiple of Exploration Expenditure Approach and Geoscience Factor Method.

ERM favours the Comparable Transactions Approach to value the Wonarah Phosphate Project, as they consider it reflects the value which would likely be achieved were the project to be offered for sale, having regard to the fact that the range of development scenarios are either at an early stage or not feasible at current phosphate rock prices.

ERM's preferred approach to valuing the Jundee South Gold Project is the Geoscience Factor Method ("GFM") since the more granular process undertaken in the GFM method allows for a better reflection of the range of valuations applicable to the project.

We have adopted ERM's preferred valuations in our assessment of the Fair Value of Avenira's mineral assets. Accordingly, we consider the Fair Value of Avenira's mineral assets to be in the range of \$26.3 million to \$38.3 million, with a preferred valuation of \$32.3m, as set out below.

Table 15 Fair Value of Avenira's mineral assets

	Fair Value Low \$m	Fair Value High \$m	Fair Value Preferred \$m
Wonarah Phosphate Project	15.5	23.3	19.4
Jundee South Gold Project	10.8	15.0	12.9
Fair Value of Avenira's mineral assets	26.3	38.3	32.3

Source: ITSR

### Other assets and liabilities

The following table sets out our assessment of Avenira's other assets and liabilities as per the audited position presented as at 30 June 2024 and our assessed fair value adjustments where applicable.



Table 16 Avenira other assets and liabilities as at 30 June 2024

Net working capital	30-Jun-24	Assessed
\$'000	Audited	Fair Value
Trade & Other Receivables	136	136
Financial Assets – unlisted investments	85	85
Other Assets – security deposits	1,482	1,482
Plant & Equipment	48	48
Intangibles – Licence rights	4,401	4,401
Trade & Other Payables	(3,877)	(3,877)
Provisions (Current) – employee entitlements	(154)	(154)
Provisions (Non-current) – rehab provision	(2,051)	(2,051)
Other Assets and Liabilities	69	69

Source: Avenira 2024 Annual Report & RSM Analysis

Based on our understanding of the nature of the balances, we have not made any adjustments to the carrying values of the other assets and liabilities and have assumed that their Fair Values are equal to their audited balances as at 30 June 2024.

We note that the Licence rights relate to the potential development of an LFP Plant which has not been considered in the ERM assessed fair value of the Wonarah Phosphate Project, which focuses on the potential value derived from phosphate rock production. We have therefore included the value of the licence rights and the associated amounts payable in our assessment of the fair value of other assets and liabilities.

#### Net cash

The following table sets out our assessment of Avenira's net cash position as per the audited position presented as at 30 June 2024 and our assessed fair value adjustments.

Table 17 Avenira net cash as at 30 June 2024

Net cash	30-Jun-24	Assessed
\$'000	Audited	Fair Value
Cash & cash equivalents	426	4,926
Loans & borrowings	-	(2,790)
Net cash	426	2,136

Source: Avenira 2024 Annual Report & RSM Analysis

In assessing the fair value of Avenira's net cash position, we have had regard to the events subsequent to 30 June 2024 identified in Section 3.4, specifically:

- The cash received as part of the Tranche 1 Placement, being \$1.71 million; and
- The unsecured loan provided by Hebang with a value of \$2.79 million, and the corresponding cash received.



## 6.2 Quoted Price of Listed Securities Methodology

Prices at which a company's shares have been traded on the ASX can, in the absence of low liquidity or unusual circumstances, provide an objective measure of the value of the company, excluding a premium for control.

As such, to provide a comparison and cross check to our primary valuation methodology for Avenira, we have also considered the Fair Value of the Company through assessing the recent quoted price for AEV Shares on the ASX prior to the announcement of the Proposed Transaction.

The figure below sets out a summary of Avenira's closing share prices and traded volumes in the 12-month period to 24 July 2024, being the last trading day prior to the announcement of the Proposed Transaction. The assessment only reflects the trading prior to the announcement of the Proposed Transaction in order to avoid the influence of any movement in price that occurred as a result of the announcement.



Figure 6 Closing share price and recent trading of Avenira Shares

Source: CapIQ

RG 111.62 indicates that in order for the quoted market share price methodology to represent a reliable indicator of Fair Market Value, there needs to be an active and liquid market for the securities. The following characteristics may be considered to be representative of a liquid and active market:

- Regular trading in the company's securities;
- Approximately 1% of a company's securities traded on a weekly basis;
- The bid/ask spread of a company's shares must not be so great that a single majority trade can significantly affect the market capitalisation of the company; and
- There are no significant but unexplained movements in share price.

To provide further analysis of the quoted market prices for Avenira shares, we have considered the Volume Weighted Average Price ("VWAP") for the 1, 5, 10, 30, 60, 90, 120, and 180 calendar up to and including 24 July 2024, as summarised in the table below.



Table 18 VWAP of Avenira Shares to 24 July 2024

# of Days	1 Day	5 Day	10 Day	30 Day	60 Day	90 Day	120 Day	180 Day
VWAP	0.0086	0.0070	0.0066	0.0055	0.0056	0.0058	0.0065	0.0087
Total Volume (000's)	12,677	37,487	45,517	96,203	179,424	350,434	412,396	632,335
Total Volume as a % of Total Shares (free float)	0.89%	2.62%	3.18%	6.72%	12.54%	24.50%	28.83%	44.20%
Low Price	0.0070	0.0040	0.0040	0.0040	0.0040	0.0030	0.0030	0.0030
High Price	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0120	0.0160

Source: CapIQ

The table above shows that in the 180 trading days to 24 July 2024, 44.2% of Avenira Shares were traded, demonstrating a reasonably high level of liquidity during this period. In the 5 trading days to 24 July 2024, 2.6% of Avenira Shares were traded, which is above the 1% weekly threshold.

As set out in the table above, Avenira's traded share price fluctuated between \$0.003 and \$0.016 over the 180 trading days to 24 July 2024, with a VWAP of \$0.0087 over the same period.

Avenira's closing share price on 24 July 2024, the last day of trade before announcement of the Proposed Transaction, was \$0.009 with a VWAP of \$0.0086. The daily trade price had a low of \$0.007 and a high of \$0.010 with 0.89% of the issued capital traded.

Avenira is obligated to comply with the full disclosure regime required by the ASX. As a result we have assumed that the market is fully informed about the performance and prospects of Avenira.

In our assessment of the quoted market prices for Avenira Shares, we have had particular regard to the 10 to 30 day VWAP up to and including 24 July 2024, as we believe these periods are typically most reflective of the underlying value of a share, excluding the disruptive influence of the announcement.

Based on the above, we have assessed the value of a Avenira Share prior to the announcement of the Proposed Transaction, on a minority basis, to be in the range of \$0.0055 and \$0.0066.

#### **Control Premium**

In the absence of a takeover premium, multiples of listed companies generally reflect the buying and selling of small parcels of shares, which, therefore, do not attract a control premium. In order to assess the value of 100% of the equity interest in Avenira, we are required to adjust the multiple to reflect a premium for control. In doing so, we have had regard to the 2021 RSM Control Premium Study ("Control Premium Study", refer to Appendix G).

RSM conducted a study of 605 takeovers and schemes of arrangement involving companies listed on the ASX over the 15.5 years ended 31 December 2020. In determining the control premium, we compared the offer price to the closing trading price of the target company 20, 5 and 2 trading days pre the date of the announcement of the offer. Where the consideration included shares in the acquiring company, we used the closing share price of the acquiring company on the date prior to the date of the offer.

In assessing an appropriate control premium to apply, we have had regard to those seen in 161 transactions in the 'Mining & Metals' industry. In doing so, we have assessed an appropriate control premium to be in the range of 27.3% and 32.4% (being the median premia for the 2 and 20 trading days prior to the announcement, respectively).

Based on the above, we have determined the Fair Value of an Avenira Share on a controlling basis prior to the announcement of the Proposed Transaction to be in the range of \$0.0070 and \$0.0087, with a preferred value of \$0.0078, using the quoted price of listed securities methodology as outlined below.



Table 19 Fair Value of an Avenira Share using the quoted price of listed securities methodology

Valuation assessment	Low	High	Preferred
Quoted market price (non-controlling basis, \$ per share)	0.0055	0.0066	0.0061
Control premium	27%	32%	30%
Assessed value per share (controlling basis, \$ per share)	0.0070	0.0087	0.0078

Source: CapIQ, Control Premium Study & RSM Analysis

# 6.3 Valuation Summary of an Avenira Share prior to the Proposed Transaction

A summary of our assessed values of an Avenira Share on a controlling basis prior to the announcement of the Proposed Transaction derived under our two adopted methodologies is set out in the table below.

Table 20 Avenira Share valuation summary

Fair value per AEV Share pre-Proposed Transaction	Low	High	Preferred
\$ per share			
Method 1: Sum of the parts	0.0105	0.0150	0.0128
Method 2: Quoted price of listed securities	0.0070	0.0087	0.0078
Adopted value	0.0105	0.0150	0.0128

Source: RSM Analysis

In our opinion, we consider the sum of the parts methodology provides a more appropriate indicator of the Fair Value of an Avenira Share given it reflects the current financial position of the Company and an independently assessed value of the key asset of Avenira, being the Wonarah Phosphate Project, based on current operations and outlook.

We note that the value derived from the quoted price of listed securities methodology sits below our assessed value range using the sum of the parts methodology. Based on our analysis of the recent traded volumes of Avenira Shares, we consider their market to be relatively liquid such that the quoted price of listed securities methodology provides a useful cross check to our primary methodology. However, we consider that the quoted listed price does not accurately reflect the intrinsic value of Avenira, as it is influenced by market sentiment towards the mining sector, particularly the phosphate sector's performance and price volatility, as well as towards Avenira as a loss-making company exploring various development options for the Wonarah Phosphate Project.

Accordingly, we have assessed the Fair Value of an Avenira Share, on a controlling basis, prior to the Proposed Transaction to be in the range of \$0.0105 to \$0.0150, with a preferred value of \$0.0128.



# 7. Valuation of Avenira post the Proposed Transaction

As stated at Section 5.3, we have assessed the value of an Avenira Share post the Proposed Transaction by adjusting the pre-Proposed Transaction value for the immediate impact of the Proposed Transaction, assuming it proceeds.

In doing so, we have adjusted for:

- The proceeds from the issue of Tranche 2 Placement Shares which will be utilised to repay the Hebang Loan;
- The dilutionary impact from the issue of Tranche 2 Placement Shares;
- The associated transaction costs from the issue of Tranche 2 Placement Shares: and
- A minority discount, given Hebang's assumed operational control should the Proposed Transaction proceed.

Based on the above, we have determined the Fair Value of an Avenira Share on a non-controlling basis post the Proposed Transaction to be in the range of \$0.0079 and \$0.0114, with a preferred value of \$0.0096, as outlined below

Table 21 Fair Value of an Avenira Share post the Proposed Transaction

Fair value per AEV Share post Proposed Transaction \$'000	Low	High	Preferred
Assessed value of Avenira pre-Proposed Transaction	28,505	40,505	34,505
Proposed Transaction adjustments:			
Repayment of Hebang Loan	2,790	2,790	2,790
Transaction costs	(28)	(28)	(28)
Assessed equity value of Avenira post Proposed Transaction	31,267	43,267	37,267
Number of shares on issue post Proposed Transaction ('000s)	3,169,034	3,169,034	3,169,034
Value per AEV share (control basis, \$ per share)	0.0099	0.0137	0.0118
Minority discount	-20%	-17%	-18%
Value per AEV share (non-controlling basis, \$ per share)	0.0079	0.0114	0.0096

Source: Management, RSM Control Premium Study & RSM Analysis

As mentioned in Section 3.4 and 6.1 above, Hebang provided Avenira with an unsecured loan of \$2.79 million on 20 September 2024. The Proposed Transaction has the purpose of raising funds through the issue of 465,000,000 shares at an issue price of \$0.006 in order to repay the loan from Hebang.

We understand that the estimated costs of the Tranche 2 Placement are \$28,000. As such, we have deducted these in the assessment of Avenira's equity value

### Minority interest discount

In assessing an appropriate minority discount to apply, we have had regard to the Control Premium Study and the control premium range of 27.3% to 32.4% applied in the previous section, since a minority interest discount is the inverse of a control premium. However, we have also had regard to the assumed operational and governance control held by Hebang prior to the Proposed Transaction.

Following the Tranche 1 Placement (as noted in Section 1.1), Hebang appointed an Executive Chairman, an Executive Director, and a Non-Executive Director to the Board of Avenira. Accordingly, we consider Hebang to have already increased its level of control and Non-Associated Shareholders to have relinquished some control prior to Tranche 2 (the Proposed Transcation) being approved.



We therefore consider it reasonable to apply a lower minority discount than would be applicable based on the control premium range of 27.3% to 32.4% adopted in our quoted market price valuation of Avenira, in order to assess the fair value of an Avenira Share on a non-controlling basis post the announcement of the Proposed Transaction. We note that although Hebang has an increased operational and governance control, their shareholding is not at the level to unilaterally pass an ordinary (>50%) or special (>75%) resolution, which would reflect significant control over Avenira.

As such we have adopted a control premium range of 20% to 25% which we have converted into a minority discount range of 17% to 20%.



# 8. Is the Proposed Transaction Fair to Non-Associated Shareholders?

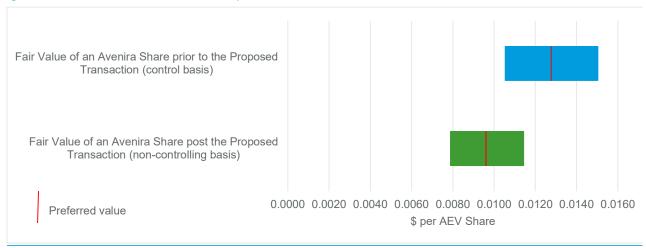
Our assessed values of an Avenira Share prior to and immediately after the Proposed Transaction are summarised in the table and figure below.

Table 22 Assessment of Fairness of the Proposed Transaction

Fairness assessment	Low	High	Preferred
\$ per AEV share			
Fair Value of an Avenira Share <b>prior</b> to the Proposed Transaction (control basis)	0.0105	0.0150	0.0128
Fair Value of an Avenira Share <b>post</b> the Proposed Transaction (non-controlling basis)	0.0079	0.0114	0.0096

Source: RSM Analysis

Figure 7 Assessment of Fairness of the Proposed Transaction



Source: RSM Analysis

The assessed range of values of an Avenira Share post the Proposed Transaction lies below the range of values assessed for an Avenira Share prior to the Proposed Transaction.

In accordance with the guidance set out in ASIC RG 111, and in the absence of any other relevant information, for the purposes of complying with Section 611 of the Act, we consider the Proposed Transaction to be **not fair** to the Non-Associated Shareholders of Avenira as the Fair Market Value of an Avenira Share post the Proposed Transaction is less than the Fair Market Value of an Avenira Share prior to the Proposed Transaction.



# 9. Is the Proposed Transaction Reasonable to Non-Associated Shareholders?

RG 111 establishes that an offer is reasonable if it is fair. It might also be reasonable if, despite not being fair, there are sufficient reasons for security holders to accept the offer in the absence of any higher bid before the offer closes. As such, we have also considered the following factors in relation to the reasonableness aspects of the Proposed Transaction:

- The future prospects of Avenira if the Proposed Transaction does not proceed;
- The likelihood of an alternative proposal / offer emerging; and
- Other commercial advantages and disadvantages to the Non-Associated Shareholders as a consequence of the Proposed Transaction proceeding.

# 9.1 Future prospects of Avenira if the Proposed Transaction does not proceed

Since acquiring the Wonarah Phosphate Project in June 2008, the Company has been impacted by the general downward trend in the phosphate market, with the Project's operational strategy adapting multiple times during its development pathway (as illustrated in Figure 9 in Appendix D).

On 20 September 2024, Hebang provided Avenira with an unsecured loan of \$2.79 million ("Hebang Loan") equal to the Tranche 2 Placement proceeds, pending shareholder approval and any other required regulatory approvals for the Tranche 2 Placement. The purpose of the loan is to ensure the Company has sufficient funds to progress the development of the Wonarah Phosphate Project while awaiting these approvals.

The unsecured loan will be repaid from funds received from the Tranche 2 Placement however, should the Proposed Transaction not eventuate, the Company will rely on the loan facility whilst looking for alternative finance prior to the repayment date in September 2025.

The Company has stated that, should the Proposed Transaction not proceed, the Directors will look to raise additional funds through a placement, rights issue, share purchase plan, convertible note or other capital raising method previously utilised by the Company. However, there is no guarantee that the fund raising would be successful or with more favourable terms.

As stated in Section 3.4 below, Hall Chadwick had noted a material uncertainty related to Avenira's ability to continue as a going concern in the FY24 financial statements due to the reporting of ongoing net losses, net operating and investment cash outflows, and working capital deficiencies. As such, Non-Associated Shareholders should be made aware that if no alternative source of funding is made available, it is unlikely that Avenira would have sufficient funds to repay the loan when it becomes due and payable in or around September 2025. Avenira's FY25 cash flow budget shows the Company operating with a monthly cash burn of approximately \$0.45 million excluding capital raising activities.

As an exploration company, Avenira's ability to raise funds has been heavily dependent on the performance and outlook of the phosphate market, noting that capital raises have typically been undertaken when rock phosphate prices were at a high, therefore providing investors with better sentiment around Avenira's outlook. With the phosphate market experiencing a volatile and generally downwards trend since Avenira's acquisition of the Wonarah Phosphate Project, the ability of the Company to successfully complete a raise with superior terms to the Proposed Transaction is uncertain.

If the Proposed Transaction does not proceed, the Company will need to take immediate action to source funds to repay the \$2.79 million loan before September 2025.

# 9.2 Alternative proposals

We have been advised that the Company engaged corporate advisors to explore funding options over the last 12 months, with no other appropriate proposals pursued.

Specifically, we have been made aware that Avenira engaged Burnvoir Corporate Finance in March 2024 seeking assistance in raising funds following a query from the ASX as to the financial viability of the Company. Furthermore, in June/July 2024, the Directors sought advice on Safe Harbour provisions.



# 9.3 Advantages and disadvantages

In assessing whether the Non-Associated Shareholders are likely to be better off if the Proposed Transaction proceeds, than if it does not, we have also considered various advantages and disadvantages that are likely to accrue to the Non-Associated Shareholders.

Advantages of approving the Proposed Transaction

**Table 23 Advantages of approving the Proposed Transaction** 

Advantage	Details
Repayment of Hebang Loan	On 20 September 2024, Hebang provided a \$2.79 million unsecured loan to Avenira to enable the Company to progress the development of the Wonarah Phosphate Project. The loan will become due and payable on or around September 2025.
	Approval of the Proposed Transaction will enable Avenira to repay the Hebang Loan from the proceeds of the Tranche 2 Placement and become debt free.
	In the absence of shareholder approval, the Company would need to secure alternative funding to repay the loan or renegotiate a new loan with Hebang. There is no guarantee that funding will be available, or if it is, that it will be on favourable terms to Avenira.
Provides financial capacity and value accretion potential	In March 2024 the ASX formally queried Avenira's financial viability. At the end of the quarter, the Company had \$184,000 in available funding which, based on its level of spending in that quarter, was expected to last approximately two weeks. We have been advised by the Directors that formal advice was obtained in relation to solvency of the Company at that time, and efforts to raise capital intensified.
	The Hebang strategic investment provided Avenira with immediate funding to progress the Yellow Phosphorous ("YP") study work and lithium ferro phosphate cathode active material ("LFP CAM") study work and for general working capital.
	Approval of the Proposed Transaction provides Avenira with a potential pathway towards YP and LFP product development; Non-Associated Shareholders would benefit from any value accretion associated with the Project as the study work completes.
Strengthen existing strategic relationship	Approval of the Proposed Transaction would provide Hebang and its associates with an interest in excess of 20% on a fully diluted basis. Hebang's interests would be aligned with the Company in increasing overall shareholder value of Avenira.
	Further, the Wonarah Phosphate Project could potentially benefit from access to Hebang's extensive phosphate experience and capabilities in building, commissioning, and operating plants around the world.
	Avenira and Hebang have also entered into a non-binding offtake MoU for the construction and operation of an initial 50,000 tonnes per annum YP plant, a commitment by Hebang to purchase part of the YP produced, and Hebang to provide the necessary technology, processes, experience and any other support for the construction and operation of the YP plant.
Impact on Avenira's share price	Avenira Shares had not traded above \$0.007 since early April 2024, until the last trading day prior to the announcement of the Proposed Transaction where the share price was \$0.009. It is possible that the share price may fall towards previously traded levels if the Proposed Transaction is not successful and no alternative funding solutions are received by the Company.
	Included in Section 9.4 is a summary of Avenira's share price performance prior to and directly after the announcement of the Proposed Transaction.

Source: RSM Analysis



Disadvantages of approving the Proposed Transaction

Table 24 Disadvantages of approving the Proposed Transaction

Disadvantages	<b>Details</b>
The Proposed Transaction is not fair	The assessed value of an Avenira Share post the Proposed Transaction lies below the range of values assessed for the value of an Avenira Share prior to the Proposed Transaction.
	This is primarily driven by the assessment approach which considers the value of an Avenira Share prior to the Proposed Transaction on a controlling basis, but the value of an Avenira Share after the Proposed Transcation on a minority basis, i.e. the impact of additional control obtained by Hebang is factored into the assessed fair values.
Dilutionary impact on Non-Associated Shareholders	Should the Proposed Transaction be approved, Non-Associated Shareholders' collective interest and voting power in Avenira will drop from 80.1% to 68.3%.  As the deemed issue price of shares under the Proposed Transaction is below the market price of Avenira's Shares as at the date of this Report (\$0.010 as at 21 October 2024), the placement will lead to a greater dilution of the voting power of Non-Associated Shareholders than may occur if an alternative equity capital raising was undertaken by Avenira on more favourable terms.
Significant influence of Hebang	Should the Proposed Transaction be approved, Hebang's interest in Avenira would increase to 31.7%, allowing Hebang to block Special Resolutions of the Company.
	Together with Hebang's recent nomination of three people, on the Avenira Board and management team, Hebang would significantly increase its operational and governance control of Avenira, in addition to voting power.

Source: RSM Analysis

# 9.4 Trading in Avenira Shares after announcement of the Proposed Transaction

The offer was announced to the ASX on 30 July 2024, with the closing share price remaining at \$0.009 from the last trading day prior to the announcement (i.e. 24 July 2024). Shown below is a summary of the trading activity of Avenira Shares from 2 July 2024 to 11 October 2024.

Figure 8 Performance of an Avenira Share pre and post the Proposed Transaction



Source: S&P Capital IQ & RSM Analysis



Since the announcement of the Proposed Transaction on the ASX on 30 July 2024, Avenira's closing share price has traded at a high of \$0.014 and a low of \$0.009, being a premium of 133% and 50% respectively over the deemed issue price of the Strategic Investment at \$0.006. However, as illustrated in the figure above, Avenira's share price had been trading below the deemed issue price of \$0.06 up until 24 July 2024.

Avenira's share price has increased since the announcement, including over the preceding days, indicating a potentially positive market reaction to the Proposed Transaction.

Should the Proposed Transaction not be successful and no alternative funding solution emerges, it is possible that the Avenira share price will fall below the current traded levels and revert back to the pricing levels seen prior to the announcement of the Proposed Transaction.

### 9.5 Conclusion on Reasonableness

In our opinion, the position of the Non-Associated Shareholders if the Proposed Transaction is approved is more advantageous than their position if it is not approved. Therefore, in the absence of any other relevant information and/or a superior alternative, we consider that the Proposed Transaction is **reasonable** for the Non-Associated Shareholders of Avenira.

An individual Shareholder's decision in relation to the Proposed Transaction may be influenced by their individual circumstances. If in doubt, Shareholders should consult an independent advisor.



# **APPENDICES**



# A. Declarations and Disclaimers

### **Declarations and Disclosures**

RSM Corporate Australia Pty Ltd holds Australian Financial Services Licence 255847 issued by ASIC pursuant to which they are licensed to prepare reports for the purpose of advising clients in relation to proposed or actual mergers, acquisitions, takeovers, corporate reconstructions or share issues.

### Qualifications

Our report has been prepared in accordance with professional standard APES 225 "Valuation Services" issued by the Accounting Professional & Ethical Standards Board.

RSM Corporate Australia Pty Ltd is beneficially owned by the partners of RSM Australia Pty Ltd (RSM) a large national firm of chartered accountants and business advisors.

Nadine Marke and Justin Audcent are directors of RSM Corporate Australia Pty Ltd. Both Nadine Marke and Justin Audcent are Chartered Accountants with extensive experience in the field of corporate valuations and the provision of independent expert's reports for transactions involving publicly listed and unlisted companies in Australia.

### Reliance on this Report

This report has been prepared solely for the purpose of assisting Shareholders of the Company in considering the Proposed Transaction. We do not assume any responsibility or liability to any party as a result of reliance on this report for any other purpose.

### Reliance on Information

Statements and opinions contained in this report are given in good faith. In the preparation of this report, we have relied upon information provided by the Directors and management of Avenira and we have no reason to believe that this information was inaccurate, misleading or incomplete. RSM Corporate Australia Pty Ltd does not imply, nor should it be construed that it has carried out any form of audit or verification on the information and records supplied to us.

The opinion of RSM Corporate Australia Pty Ltd is based on economic, market and other conditions prevailing at the date of this report. Such conditions can change significantly over relatively short periods of time.

In addition, we have considered publicly available information which we believe to be reliable. We have not, however, sought to independently verify any of the publicly available information which we have utilised for the purposes of this report.

We assume no responsibility or liability for any loss suffered by any party as a result of our reliance on information supplied to us.

### **Disclosure of Interest**

At the date of this report, none of RSM Corporate Australia Pty Ltd, RSM, Andrew Clifford, Nadine Marke, nor any other member, director, partner or employee of RSM Corporate Australia Pty Ltd and RSM has any interest in the outcome of the Proposed Transaction, except that RSM Corporate Australia Pty Ltd are expected to receive a fee of approximately \$35,000 (excluding goods and services tax ("GST") based on time occupied at normal professional rates for the preparation of this report. The fees are payable regardless of Avenira receiving Shareholder approval for the Proposed Transaction, or otherwise.

### Consents

RSM Corporate Australia Pty Ltd consents to the inclusion of this report in the form and context in which it is included with the Notice of Extraordinary General Meeting and Explanatory Memorandum to be issued to Shareholders. Other than this report, none of RSM Corporate Australia Pty Ltd or RSM Australia Pty Ltd or has been involved in the preparation of the Notice of General Meeting and Explanatory Memorandum. Accordingly, we take no responsibility for the content of the Notice of General Meeting and Explanatory Statement.



# B. Sources of Information

In preparing this Report we have relied upon the following principal sources of information:

- · Drafts and final copies of the Notice of Meeting;
- Tranche 2 Placement Subscription Agreement;
- Audited financial statements for Avenira for the years ended 30 June 2022, 30 June 2023, and 30 June 2024;
- Avenira ASX Announcements;
- Avenira Annual Reports;
- Wonarah Phosphate Feasibility Study 2010;
- Independent Technical Specialist Report dated October 2024;
- S&P Capital IQ database;
- World Bank Group;
- JORC Code: 2012 Edition;
- RSM Control Premium Study 2021;
- IBIS World Report Mineral & Phosphate Mining Industry in the US;
- IBIS World Report Fertiliser Manufacturing in Australia;
- US Geological Survey;
- Government of South Australia Energy & Mining: Phosphate;
- S&P Capital IQ database; and
- Discussions with Directors and Management of Avenira.



# C. Glossary of Terms and Abbreviations

Term	Definition
\$	Australian dollar
Act	Corporations Act 2001 (Cth)
AFCA	Australian Financial Complaints Authority
Aleees	Advanced Lithium Electrochemistry Limited
APES	Accounting Professional & Ethical Standards Board
ASIC	Australian Securities & Investments Commission
ASX	Australian Securities Exchange
ASX Listing Rules	The listing rules of ASX as amended from time to time
Bechtel	Bechtel Australia Pty Ltd
CAGR	Compound annual growth rate
CAPEX	Capital expenditure
COG	Cut-off Grade
Company / Avenira / AEV	Avenira Limited
Control basis	As assessment of the Fair Value on an equity interest, which assumes the holder or holders have control of the entity in which the equity is held
Control Premium Study	RSM Control Premium Study 2021
DAP	Diammonium Phosphate
DCF	Discounted cash flows
DFS	Definitive Feasibility Study
Directors	Directors of the Company
DSO	Direct Shipping Ore
DSO FS	Wonarah DSO Project Feasibility Study 2023
Enabling Study	Independent Enabling Study conducted by KEMWorks to confirm the economic potential for a fertiliser production facility at Wonarah
ERM	The ERM International Group Limited; the Independent technical specialist
ESIP	Employee savings investment plan
EV	Electric vehicle
<b>Explanatory Statement</b>	The explanatory statement accompanying the Notice
Fair Value	The amount at which an asset could be exchanged between a knowledgeable and willing but not anxious seller and a knowledgeable and willing but not anxious buyer, both acting at arm's length
FME	Future Maintainable Earnings
FSG	Financial Services Guide
FYxx	Financial year ending 30 June 20xx



GEAR	Golden Energy and Resources
GFC	Global Financial Crisis
Hall Chadwick	Hall Chadwick WA Audit Pty Ltd; Avenira's auditors
Hebang / SHBC	Sichuan Hebang Biotechnology Corporation Limited
HY24	Half-year ended 31 December 2023
IER	This Independent Expert Report
IHP	Improved Hard Process
Issue Price / Strategic Investment price / Proposed Transaction Price	\$0.006 per Avenira Share
ITSR	Independent Technical Specialist Report dated October 2024
Indo Mines	Indo Mines Limited
JDC	JDCPhosphate Inc
JIIPE	Java Integrated Industrial and Port Estate
LFP (CAM)	Lithium ferro phosphate (cathode active material)
LFP Scoping Study	Scoping study for the LFP cathode manufacturing project
MAP	Monoammonium Phosphate
Matrix	Matrix Resource Consultants
MD	Managing Director
MoU	Memorandum of Understanding
NMDC	NMDC Limited
Non-Associated Shareholders	Shareholders who are not a party, or associated to a party, to the Proposed Transaction
NED	Non-executive Director
Notice	The notice of meeting to vote on, inter alia, the Proposed Transaction
NT	Northern Territory
NWC	Net working capital
OCI	Other comprehensive income
Option or Options	Unlisted options to acquire Shares with varying vesting conditions
P&E	Plant and equipment
Proposed Transaction / Tranche 2 Placement	Placement of 465 million AEV shares to Hebang at an issue price of \$0.006 to raise \$2.79 million
Report	This Independent Expert's Report prepared by RSM dated October 2024
Resolution	The resolutions set out in the Notice
RG 111	ASIC Regulatory Guide 111 Content of Expert Reports
RSM	RSM Corporate Australia Pty Ltd
S&P Capital IQ	An entity of Standard and Poors which is a third-party provider of company and other financial information



Share or Avenira Share	Ordinary fully paid share in the capital of the Company
Shareholder	A holder of Share
SHSE	Shanghai Stock Exchange
SPA / TPA	70% / super / thermal phosphoric acid
Tranche 1 Placement	A Placement of 285 million AEV shares to Hebang at an issue price of \$0.006 to raise \$1.7 million
USGS	US Geological Survey
Verte	Verte Group Pty Ltd
Vulcan	Vulcan Phosphates LLC
VWAP	Volume weighted average price
Wonarah Phosphate Project / Project	Wonarah Phosphate deposit together with the facilities for the transport to and shipping of rock phosphate from the Port of Darwin; Avenira's flagship phosphate project
YP	Yellow Phosphorous



# D. History of the Wonarah Phosphate Project

### 'Rock phosphate' project

The Wonarah Phosphate deposit was discovered by Australian government geologists in the 1960s. Shortly after listing on the ASX in October 2006, Avenira (then Minemakers Australia Pty Ltd) obtained full ownership of the Wonarah Phosphate deposit at the same time as a dramatic increase in the world rock phosphate price was experienced, noting that an ASX Announcement by Avenira in March 2008 made mention of "the rock phosphate benchmark Moroccan export price has reportedly increased to US\$350-400 per tonne FOB. This is a leap from the US\$200 per tonne December 2007 price and is a multiple of the US\$50 per tonne of earlier in 2007."

The onset of the Global Financial Crisis ("GFC") towards the end of 2008 and the impact it had on rock phosphate prices (reducing to US\$110 per tonne as per the Company's 2009 Annual Report) resulted in the depletion of available capital and the Company's focus on reducing the capital requirement for development. As such, Avenira shifted strategy to developing a high-grade mine and producing direct shipping ore ("DSO") material.

In March 2009, Avenira appointed AMC Consultants Pty Ltd ("AMC") as the lead consultant for the Definitive Feasibility Study ("DFS") for the development of a rock phosphate mine at the Wonarah Phosphate deposit, together with the facilities for the transport to and shipping of rock phosphate from the Port of Darwin (together, the "Wonarah Phosphate Project").

The DFS' phosphate price assumption of US\$150 per tonne, was based on how the "global fertiliser markets are currently improving and average diammonium phosphate prices continue firm just over US\$500" [DFS, para 1.3.3]. Additionally, AMC made note of British Sulphur Consultants' forecast on rock phosphate prices increasing to a range of US\$155 to US\$170 CFR ('cost & freight'), from the trough experienced as a result of the GFC. The DFS concluded that the DSO operation was positive, with the base case for the Study anticipating the 9.4 Mt of DSO-suitable Ore Reserve to be mined in an initial five year operation.

### 'Super phosphoric acid' & finished fertiliser product project

In September 2010, the Company announced that a License Agreement and a Subscription Agreement had been signed with JDCPhosphate, Inc ("JDC"), whereby:

- Avenira invested US\$1 million (in an equal mix of cash and Company shares) to buy a cornerstone 6.67% equity interest in JDC;
   and
- Subject to further test work and successful trialling of Wonarah phosphate, Avenira was granted exclusive rights in Australia for seven years to construct a plant, and associated infrastructure, which used JDC's patented dry kiln process in order to make 70% phosphoric acid ("super-phosphoric acid" or "SPA") at Wonarah.

The Agreements with JDC were driven by Avenira's desire to use Wonarah rock phosphate to produce phosphate fertilisers, with the first step in that objective being the production of phosphoric acid. Typically, sulphuric acid is used in this process. However, in Wonarah's case, it was assessed that this would involve either the cost of importing and transporting the acid to site, or by producing it on site from imported sulphur with associated capital expenditure. Through the Agreements with JDC, Avenira sought to utilise the dry kiln process which does not use sulphuric acid, thereby allowing capital and operating cost savings for Wonarah.

The SPA produced from the dry kiln process was anticipated to sell at a premium price as it could be used for both normal fertiliser production as well as for higher grade applications in the food and chemical feed industries. Additionally, freight was assessed to be more economic on a unit of SPA basis, compared to standard grade phosphoric acid.

During 2011, evaluation and planned development at Wonarah moved away from the rock phosphate / DSO production and export model to one that incorporated downstream processing to produce phosphate and compound fertilisers. The move away from rock phosphate / DSO was largely due to Avenira not assessing ready acceptance in the spot or short-term contract markets and the uncertainty and lack of control over future prices and the rapidly rising AUD.

In June 2011 Avenira entered into an MoU with Bombay Stock Exchange listed NMDC Limited ("NMDC") to establish a pathway for the development of the Wonarah Phosphate Project. Under the MoU, relevant NMDC staff would assist in undertaking a joint Feasibility Study for the proposed development of a mine and downstream processing facilities to produce:

- · Beneficiated rock phosphate for export;
- · Phosphoric acid; and



Finished fertiliser products such as Diammonium Phosphate ("DAP") and Monoammonium Phosphate ("MAP").

In November 2011, Avenira announced that the independent enabling study (the "Enabling Study") conducted by KEMWorks (a Florida-based fertiliser industry consultancy firm) confirmed the economic potential for a major fertiliser production facility out of Wonarah. The Enabling Study was conducted for modelling of the economics of the development of the Wonarah Phosphate Project and the proposed downstream processing facilities to produce SPA, DAP and MAP, with the results justifying the commitment to a bankable feasibility study.

Having completed the divestment of a direct interest in Namibian assets for \$25 million in December 2012, Avenira concentrated on the development of Wonarah, specifically its development of the dry kiln process to produce the high value SPA product (which was priced around US\$1,000 per tonne of  $P_2O_5$  at that time).

In June 2013, Avenira announced that the following matters had been recently completed or advanced:

- Execution of an improved License Agreement with JDC to use the Improved Hard Process ("IHP") technology, which improves the efficiency of the production of SPA from rock phosphate in the dry kiln process;
- A further equity investment in JDC of approximately US\$1 million thereby increasing Avenira's shareholding to 5.8%;
- Avenira had been engaged in a technical study with JDC whose aims were to define IHP as a preliminary feasibility study level (prior to IHP validation) and as a bankable feasibility study level (post IHP validation) thereby furthering the bankable feasibility study covering the upgrading of mined rock phosphate to SPA using the IHP technology; and
- Whilst significant progress had been made on a demonstration plant for the IHP technology, the validation process was delayed due to construction issues.

In August 2018, Avenira announced that JDC had successfully produced high-quality SPA using low-quality rock phosphate tailings without creating phosphogypsum waste in its IHP method. JDC was expected to further upgrade its commercial demonstration plant for on-demand and sustained operations, with the potential to be applied in the Wonarah Phosphate Project.

In April 2020, Avenira announced that it had commenced a review of the Wonarah Project and had initiated a scoping study to consider whether the Project was able to be developed economically, as significant time had passed since the last Enabling Study in 2011 and noting a continued deterioration in the rock phosphate price through 2020. Further to the potential for rock phosphate concentrate, Avenira examined, through a scoping study, the potential inclusion of further tertiary processing, including DAP / MAP technology as well as the IHP technology developed by JDC.

### 'Lithium ferro phosphate' and fertiliser project

In November 2021, Avenira announced that a strategic review into the supply and demand from the LiFePO4 (lithium ferro phosphate or "LFP") cathode market and fertiliser market was underway, largely driven by the surge in the performance of the battery industry and electric vehicle ("EV") industry.

In August 2022, Avenira announced the commencement of a DSO study to determine the feasibility of mining its Wonarah deposit and the direct shipping of phosphate ore. This return to the initial rock phosphate / DSO strategy of the Wonarah Phosphate Project was driven by the rock phosphate price for  $32\% P_2O_5$  COG increasing from a 10-year low of approximately US\$80 per tonne in April 2020 to US\$320 per tonne in July 2022. Avenira noted this upward trend was driven by:

- The Russian and Chinese ban on phosphate exports;
- European Union heavy metal limits for phosphate imports affecting supply from Morocco and the Middle East; and
- The Russia-Ukraine conflict constricting supply of ammonia supply for fertiliser manufacture.

As at August 2022, and alongside the increased focus on the DSO strategy, Avenira was continuing its scoping study to develop the Wonarah Phosphate Project to produce critical end products for LFP batteries and fertiliser industries. The Project continued to use the Wonarah Phosphate deposit to feed a high purity phosphoric acid plant and looked to combine with a downstream LFP manufacturing plant. Bechtel Australia Pty Ltd ("Bechtel") was appointed to complete an evaluation of the technology for a Battery Grade Lithium Iron Phosphate Powder Plant.

In September 2022, Avenira announced that it had signed an MoU with leading LFP battery manufacturer Advanced Lithium Electrochemistry Limited ("Aleees") and the NT Government to investigate and work towards the development of a LFP battery cathode manufacturing plant, leveraging the phosphoric acid feed from the Wonarah Phosphate Project. Avenira noted that Aleees is one of



the few companies outside China with complete LFP cathode material manufacturing capability and patents for EV and stationary storage batteries.

In November 2022, Avenira announced an update on the proposed DSO Phosphate Project to mine and sell high-grade phosphate ore from the Wonarah Phosphate Project to third-parties to produce high-purity phosphoric acid. The key results of this update were as follows:

- Testing confirmed Wonarah Ore to be well suited for the production of battery-grade phosphoric acid;
- Offtake discussions were well advanced with a binding offtake agreement expected to be executed for the sale of up to 600,000 tonnes per annum of high grade, high value Wonarah DSO phosphate ore; and
- Prices for high grade phosphate ore (being 32% P<sub>2</sub>O<sub>5</sub> COG) continued to trade at or near record highs (US\$317.5 per tonne in October 2022) and were expected to remain elevated throughout 2023 and 2024 (US\$200 per tonne) due to global fertiliser shortages and the accelerating adoption of LFP battery cells. Avenira believed that due to its abnormally high-grade, physical properties, and low impurities, Wonarah phosphate ore may command a premium to the benchmark price.

In March 2023, Avenira announced the results of the scoping study conducted for the LFP cathode manufacturing project (the "LFP Scoping Study"). The results of the LFP Scoping Study were positive, with strong economics and technical viability highlighting the potential for Avenira to become one of the leading LFP cathode active material ("CAM") producers globally and one of the only LFP producers in the world based outside of China, Taiwan, and Japan. The LFP Scoping Study concluded that additional funding of \$180 million and \$527 million for a 10,000 tonne per annum and 30,000 tonne per annum scale plant, respectively, would be required.

In September 2023, Avenira announced that it had entered into formal agreements with Aleees granting the Company the right to use Aleees' intellectual property for the manufacture and global distribution of LFP CAM.

In September 2023, Avenira announced that independent consultants Matrix Resource Consultants ("Matrix") issued a Mineral Resource estimate for the Wonarah deposit, based on a 27%  $P_2O_5$  COG. Based on this COG, Matrix assessed the Mineral Resource estimate for the Wonarah Project to be 66 Mt at 30%  $P_2O_5$  COG, thereby supporting the deposit's potential to support DSO operations and downstream opportunities, such as Yellow Phosphorous ("YP"), SPA (also referred to as Thermal Phosphoric Acid ("TPA")), and LFP.

In October 2023, Avenira announced the positive results from the Wonarah DSO Project Feasibility Study ("DSO FS") based on a  $27\% P_2 O_5 COG$ . The key results of the DSO FS were reported as follows:

- Substantial Mineral Resource with an estimate of 66 Mt at 30% P<sub>2</sub>O<sub>5</sub> being able to support the DSO Project;
- Opportunity for a mine plan extension and further upside to the DSO Project economics if the global phosphate price remains high;
- Total free cash flows of \$27.3 million generated over 23 months to support the funding and development requirements of Avenira's downstream ventures, noting that the DSO FS was based on a phosphate price assumption of US\$200 per tonne; and
- The low pre-production CAPEX of \$11.5 million allowed for a short 14-month payback period.

The DSO FS notes that additional funding of \$10 - \$15 million would be required to achieve the outcomes of the Study.

### 'Yellow phosphorous' project and strategic relationship with Hebang

In December 2023, Avenira announced a binding strategic equity investment of \$2 million from Sichuan Hebang Biotechnology Corporation Limited by way of a placement of Avenira shares at an issue price of \$0.011 per share.

Parallel to the placement, Avenira entered into a non-binding strategic cooperation offtake MoU with Hebang, allowing for close cooperation between Avenira and Hebang for phosphate mining, DSO, and YP production. The rationale behind the MoU was stated to be largely around Hebang's need for YP in its manufacturing processes for agricultural and photovoltaic products, and with YP being a vital intermediate product in the production of SPA/TPA and a core feedstock in the manufacture of LFP CAM.

The MoU was stated to provide for the following:

- The construction and operation of an initial 50,000 tonnes per annum YP plant;
- A commitment by Hebang to purchase part of the production of YP from the plant, noting that the purchase will not affect the supply
  of YP for the production of SPA/TPA needed in the LFP plant;



- Hebang to provide the necessary technology, processes, construction management, operational experience, personnel, and other support to assist Avenira in the construction and operation of the YP plant;
- · Hebang to contribute to the funding of the YP plant; and
- · Both Avenira and Hebang to jointly pursue renewable energy options for the YP plant, notably solar and wind power.

Further to the Hebang placement, Singapore-based resource investment firm Golden Energy and Resources ("GEAR") also participated in the placement at \$0.011, to bring the total capital raise to \$4.8 million.

In April 2024, Avenira announced its business objectives for the next 12 months, comprising:

- The primary objective of advancing the development of the YP plant with Hebang;
- Aleees, at its own cost, undertaking work to improve the strategic value of the LFP project; and
- Avenira continuing to monitor the DSO rock phosphate price and work with off-takers when the rock phosphate market recovers.

Figure 9 below illustrates Avenira's daily share price movements compared to the rock phosphate prices (reported on a monthly basis), making specific reference to the points at which Avenira shifted its focus for the Wonarah Phosphate Project (as outlined in the prior paragraphs).

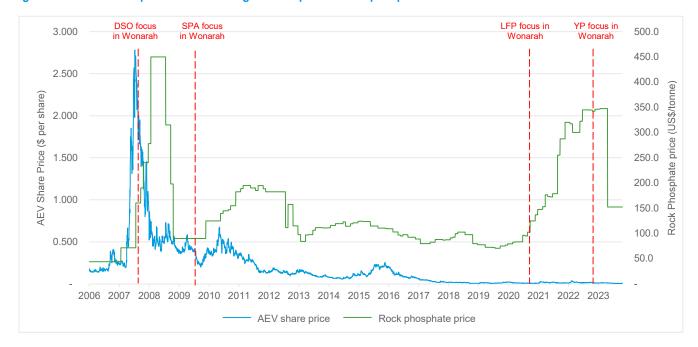


Figure 9 Avenira share price movements against the price of rock phosphate

Source: CapIQ, World Bank Group Commodity Price Data (Pink Sheet) accessed on 4 September 2024



# **E.** Industry Overview

# **Rock Phosphorous Industry**

### Overview

Phosphorous is one of the three essential nutrients required by plants, with the marketable product being beneficiated phosphate rock with phosphorous pentoxide ( $P_2O_5$ ) content suitable for phosphoric acid or elemental phosphorous production, most commonly used as a fertiliser and to produce a range of fertiliser products such as DAP, MAP (both of which are 'wet-process phosphoric acid' products), and super phosphoric acid ("SPA").

For general use in the fertiliser industry, phosphate rock, or its concentrates, preferably have levels of approximately  $30\% P_2O_5$ , reasonable amounts of calcium carbonate (5%), and less than 4% combined iron and aluminium oxides. Worldwide, resources of high-grade ore are declining, and the beneficiation of lower-grade ore by washing, flotation, and calcining is becoming more commonplace.

Phosphate rock resources occur as sedimentary marine phosphorites (the most economically significant and primary form), apatiterich igneous rock, and ancient & modern guano accumulations, with the largest sedimentary deposits located in northern Africa (Morocco and Senegal), the Middle East, China, and the United States (as seen in Figure 11 below).

As per the US Geological Survey Mineral Commodity Summaries 2024 Report (the "USGS Report"), global production of phosphate rock was estimated to be 4% lower in 2023 than in 2022 largely due to economic uncertainty and global events leading to reduced mineral production and reduced demand. However, global production capacity is projected to increase to 69.1 million tons by 2027 (compared to 63.6 million tons in 2023). Capacity expansions are expected to increase in areas such as Brazil, Kazakhstan, Mexico, Morocco, and Russia, whilst new mines in Australia and Canada are planned to be primarily used to supply the manufacturing of LFP CAM.

The figure below summarises the global phosphate rock production in 2023, by country, as per the USGS Report.

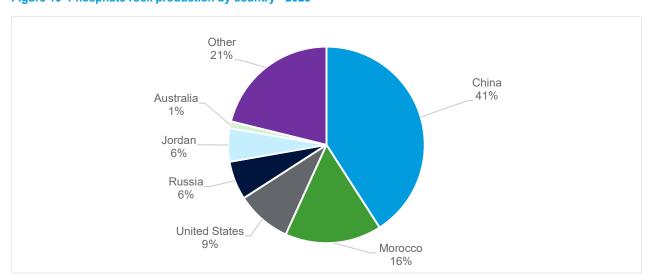


Figure 10 Phosphate rock production by country - 2023

Source: USGS Report

The figure below illustrates the global phosphate reserves by country in 2023, as per the USGS Report.



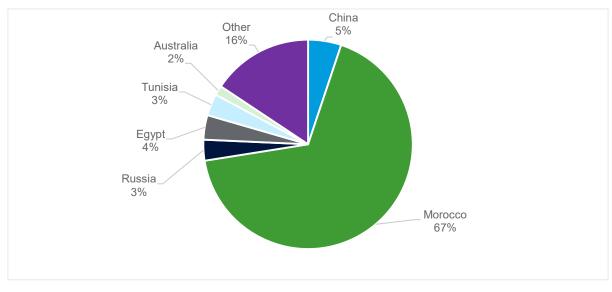


Figure 11 Phosphate reserves by country - 2023

Source: USGS Report

The USGS Report estimated Australia to have the 10th largest phosphate reserve globally in 2023.

World consumption of P<sub>2</sub>O<sub>5</sub> contained in fertilisers was estimated to have been 45.7 million tonnes in 2023 compared to 43.8 million tons in 2022 and is expected increase to 50 million tonnes by 2027, with Asia and South America expected to be the leading regions for growth. In 2023, more than 95% of the phosphate rock mined in the United States was used to manufacture wet-process phosphoric acid and SPA which were used as intermediate feedstocks in the manufacture of fertilisers and animal feed supplements. As per the USGS Report, there are no substitutes for phosphorous in agriculture.

## Phosphate pricing

Pricing of phosphate rock is largely determined by the Morocco phosphate rock price due to the country's dominant industry position (in terms of Mineral Resources, Ore Reserves, and annual production). As phosphate rock is a bulk commodity, local suppliers benefit from proximity to potential markets. Countries such as India, Australia, Indonesia, and New Zealand are currently reliant on imports from Morocco, Senegal, Peru, and Egypt. However, given Australia's proximity to these markets, there is a potential opportunity for local producers to establish themselves as the preferred suppliers, allowing for more control over phosphate pricing.

As illustrated in Figure 9 in Appendix D, phosphate rock prices have experienced notable fluctuations since 2006, driven by factors such as shifts in global agricultural demand, supply chain disruptions, and evolving trade policies. Looking forward, however, global demand for phosphate is expected to rise due to the need to increase agricultural output to feed a growing population, as illustrated in Figure 12 below. Emerging Australian producers are pursuing the development of mines for the production of raw materials for phosphate chemicals, thereby differentiating away from major international producers, allowing for higher prices for their products which are expected to have increased demand in coming years.

China, as a major phosphate producer, generally uses its production domestically, which gives rise to the perception that China is an unreliable supplier of phosphate products, thereby allowing other producers to fill the supply gap and have more price control.

The figure below illustrates historical phosphate rock price performance from January 2022 as well as the forecasted prices for the years 2024 and 2025 as per the World Bank Group's forecasts as at April 2024.

Prices had increased significantly in 2022 as a result of the Ukraine-Russia conflict and the introduction by China of a guota system restricting phosphate exports to 3 million metric tonnes per year, down from the 10 million metric tonnes it had previously been supplying. In 2024, prices have reverted to levels consistent with pre-2022 and are forecast to remain at the same level through to 2025.





Figure 12 Rock phosphate prices - historical & forecast

Source: World Bank Group Commodity Price Data (Pink Sheet) & World Bank Group Commodity Price Forecasts as at April 25 2024

#### **Performance**

The performance of the phosphate rock market, particularly the mining of the commodity, is largely driven by the following factors, as identified by IBISWorld:

### Consumer spending

The need for inorganic chemicals, fertilisers, and other non-metallic minerals depends on consumer spending on food and various other goods. As consumers spend more, manufacturing and farming activity increases, thereby raising the need for minerals and phosphate as inputs. During times of economic uncertainty, the opposite may occur, posing a potential threat to miners.

### Trade-weighted index ("TWI")

Mineral and phosphate miners have increasingly relied on exports for revenue, particularly as the global need for agricultural and industrial activities continues to grow. Any boost in strength of the US dollar negatively impacts US exports, which allows for foreign producers to potentially fill this supply gap.

### Industrial production index

The industrial production index measures the output from the mining, manufacturing, electric, and gas industries. Miners in this industry produce various minerals including phosphate to be used in various downstream markets such as the fertiliser market. When these markets thrive, so too does the industry miners' revenue.

### Demand from fertiliser manufacturing

Fertiliser manufacturers primarily produce products that contain a different mixture of the three vital nutrients essential for plant growth (namely, nitrogen, phosphorous, and potassium). Phosphate and potash are the primary ingredients to manufacture these fertilisers and nutrients, meaning there is a positive correlation between the performance and demand for fertilisers and the phosphate production industry.

With approximately 30% of the Australian fertiliser manufacturing industry being comprised of phosphate fertilisers, the performance of this industry is directly aligned with the performance of the phosphate rock mining industry. Record global fertiliser prices have



recently driven growth and pushed the Australian industry revenue to new highs. However, as global fertiliser prices begin to retract, so too will industry revenue, although remaining above historical averages. Following a series of global supply-side shocks, including the COVID-19 pandemic, the European natural gas crisis, the Russia-Ukraine conflict, and China's recent attempt to curb fertiliser exports, there is a greater focus on the domestic supply chain, which will reduce the reliance on imports into Australia, thereby creating an opportunity for Australian producers and suppliers of the fertiliser supply chain.

The performance of the Australian fertiliser manufacturing industry is largely driven by the following factors, as identified by IBISWorld:

- Demand from agriculture;
- · Domestic price of fertiliser;
- Level of annual rainfall; and
- TWI (with a weaker Australian dollar making Australian fertilisers more competitive overseas).

#### Outlook

The phosphate rock market, particularly the mining of the commodity, is anticipated to experience revenue growth with a CAGR of 1.2% in the five years to 2029, largely due to the following reasons:

- Lower prices being counteracted by production expansion largely due to expanding food production, elevated consumer spending, and increasingly competitive local (US) and global markets keeping the need for minerals and phosphate steady as economic conditions improve;
- · Trade remaining essential to the success of miners; and
- Technology advancements helping to improve mining operations.

The Australian fertiliser manufacturing industry is anticipated to experience a slight decline in performance, with a revenue CAGR of 0.4% in the five years to 2029, largely due to the following reasons:

- Global fertiliser price corrections, although revenue is expected to remain above historical averages;
- A greater focus on domestic supply chain security will reduce import reliance; and
- Environmental issues will drive change in the industry's product portfolio, with a focus on low-carbon fertilisers and biofertilisers.

.



# F. ERM Independent Technical Specialist Report



# Wonarah Phosphate Project, N.T. and Jundee South Gold Project WA.

Independent Technical Report and Valuation for Avenira Limited for Avenira Limited PREPARED FOR



Avenira Limited

DATE 21 October 2024

REFERENCE 0749204 AEVITV01

ERM REPORT R258.2024



# DOCUMENT DETAILS

DOCUMENT DETAILS	
DOCUMENT TITLE	Wonarah Phosphate Project, N.T. and Jundee South Gold Project WA.
DOCUMENT SUBTITLE	Independent Technical Report and Valuation for Avenira Limited
PROJECT NUMBER	0749204
REPORT NUMBER	R258.2024
DATE	21 October 2024
VERSION	3.2
AUTHOR(S)	Charlie Gianfriddo, Steve Hoban, Howard Simpson, Andrew Waltho
CLIENT NAME	Avenira Limited



CLIENT: Avenira Limited

PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024

REPORT: R258.2024 VERSION: 3.2

# **DOCUMENT HISTORY**

REVISION HI	STORY		ERM APPRO	OVAL TO ISSUE										
VERSION	REVISION	AUTHOR	REVIEWED BY	NAME	DATE	COMMENTS								
Version	0.1		Name			Initial Draft for client review								
	1.0					Draft for client review								
	2.0				8 Oct 2024	Report incorpor- ating client review feedback								
	2.1	Charlie Gianfriddo, Steve Hoban, Howard Simpson, Andrew Waltho	Gianfriddo, Steve Hoban, Howard Simpson, Andrew	Gianfriddo, Steve Hoban, Howard Simpson, Andrew Patrick Maher		8 Oct 2024	Revised report incorporat- ing additional client feedback							
	2.2				Gianfriddo, Steve Hoban, Howard Simpson, Andrew	Gianfriddo, Steve Hoban, Howard Simpson, Andrew	Gianfriddo, Steve Hoban, Howard Simpson, Andrew	Gianfriddo, Steve Hoban, Howard Simpson, Andrew	Gianfriddo, Steve Hoban, Howard Simpson, Andrew	Gianfriddo, Steve Hoban, Howard Simpson, Andrew		Patrick	15 Oct 2024	Revised report incorporat- ing additional client feedback
	3.0						Maher	16 Oct 2024	Revised to change the basis for valuing the Wonarah project					
	3.1													
	3.2				21 Oct 2024	Included additional discussion of preferred valuation approach for Wonarah project								



CLIENT: Avenira Limited
PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

# REPORT PREPARED FOR

COMMISSIONING ENTITY	Avenira Limited			
CLIENT CONTACT	Steve Harrison			
CONTACT TITLE	Chief Geologist			
ADDRESS	Level 25 108 St Georges Terrace Perth WA 6000 Australia Unit 13, 6-10 Douro Place West Perth WA 6872 Australia			
CONTACT EMAIL	sharrison@avenira.com			
CLIENT NAME	Avenira Limited			
CLIENT ACRONYM	AEV			

MANAGING ENTITY	RSM Australia				
CLIENT CONTACT	Nadine Marke				
CONTACT TITLE	Partner, National Head of Corporate Finance				
ADDRESS	Level 32, Exchange Tower 2 The Esplanade Perth WA 6000 Australia GPO Box R1253 Perth WA 6844 Australia				
CONTACT EMAIL	Nadine.Marke@rsm.com.au				



CLIENT: Avenira Limited
PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

### SIGNATURE PAGE

# Wonarah Phosphate Project, NT and Jundee South Gold Project WA.

Steve Harrison for Avenira Limited Chief Geologist Nadine Marke for RSM Australia Pty Ltd Partner, National Head of Corporate Finance



### **Charlie Gianfriddo**

Principal Technical Consultant, Geoscience, Sustainable Mining Services



### **Patrick Maher**

Partner, Sustainable Mining Services



### **Andrew Waltho**

Consulting Director, Mining Transaction and Corporate Advisory, Sustainable Mining Services

ERM Australia Consultants Pty Ltd Level 14 207 Kent Street Sydney, NSW 2000 Australia

T +61 (0) 2 8584 8888

### **Steve Hoban**

Principal Metallurgist

### **Howard Simpson**

Manager, Mining Engineering, Sustainable Mining Services

© Copyright 2024 by The ERM International Group Limited and/or its affiliates ('ERM'). All Rights Reserved. No part of this work may be reproduced or transmitted in any form or by any means, without prior written permission of ERM.



PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

# **EXECUTIVE SUMMARY**

### Overview

Avenira Limited (AEV) and RSM Australia Pty Ltd (RSM) requested that ERM prepare an Independent Technical Assessment and Valuation of the mineral assets of Avenira Limited (AEV) for inclusion in an information package to be provided to AVE's investors for use in assessment of a major transaction proposed by AEV. Avenira Limited is an ASX listed company (ASX:AEV) developing the Wonarah Phosphate Project, Northern Territory and the Jundee South gold project, Western Australia which comprise AEV's principal mineral assets.

This report has been prepared by ERM to meet Avenira's requirements for a report satisfying the requirements of the VALMIN Code (2015) and be suitable for public release by the Company.

This report was prepared by ERM during September 2024, using information available at 31st August 2024. 31 August 2024 is the effective date of this report. The report is the product of a comprehensive desktop study completed by ERM.

Site visits to the Wonarah and Jundee projects were not conducted. For Wonarah, there has been little substantive exploration completed at the site in recent years and previous drilling and bulk sampling sites have been rehabilitated. Exploration of the Jundee project is at an early-stage. These factors result in little information that could contribute materially to the report being acquired by visiting either site.

Information required to complete this work was sourced from reports and other information made available by RSM and AEV, and other publicly accessible sources identified by RSM, AEV and ERM.

This report's authors and reviewers have no previous association with AEV. Neither ERM nor the authors and reviewer of this report, have or have had previously, any material interest in AEV or both the Wonarah and Jundee projects. ERM's relationship with AEV is solely one of professional association between client and independent consultant.

Valuation of mineral assets is not an exact science, and several approaches are possible, each with varying strengths and shortcomings. While valuation is a subjective exercise, there are several generally accepted methods for ascertaining the value of mineral assets. ERM considers that, wherever possible, inputs from a range of methods should be assessed to inform conclusions about the Market Value of Mineral Assets. Valuers should strive to adequately reflect the carefully considered risks and potentials of the various projects in the valuation ranges and the preferred values, with the overriding objective of determining the "fair market value."

## Global Phosphorus Resources, Markets and Applications

Phosphorus is one of the three essential nutrients required by plants. Phosphate rock is used directly as a fertiliser and to produce a range of fertiliser products. Avenira has recognised the importance of producing high value products from phosphate rock mined at Wonarah and maximising resource utilisation. A scoping study has been previously completed by AEV that investigates the potential for the Wonarah project to supply inputs to downstream products required for Lithium Ferro (Iron) Phosphate (LFP) battery cathode manufacture and yellow phosphate, used widely in the production of phosphate chemicals.



CLIENT: Avenira Limited
PROJECT NO: 0749204 AEVITV01
REPORT: R258.2024

Phosphate rock resources occur principally as sedimentary marine phosphorites. The largest sedimentary deposits are found in northern Africa (Morocco and Senegal), the Middle East, China and the United States. World resources of phosphate rock are more than 300 billion tonnes, including 65 billion tonnes of reserves, concentrated in northwest Africa according to the United States Geological Survey (USGS). Global phosphate rock production, in contained P2O5 terms, is forecast to increase to 69.1 Mt by 2027 compared with 63.6 Mt in 2023, representing an increase of approximately 9% over this period. In Australia the Middle Cambrian phosphorite deposits of the Georgina Basin, Queensland and Northern Territory host 90% of Australia's phosphate rock resource. Incitec Pivot's Duchess mine in the Georgina Basin of northwest Queensland is currently mainland Australia's only phosphate rock mining operation.

The phosphate rock price is largely determined by the Morocco phosphate rock price due to Morocco's dominant industry position. India, Australia, Indonesia, New Zealand, Japan and South Korea are currently reliant on phosphate fertiliser imports from Morocco, Senegal, Peru and Egypt, creating a potential opportunity for Australian producers. Emerging Australian producers, including AEV, are pursuing the development of mines producing the raw materials for phosphate chemicals to differentiate them from major international producers and secure higher prices for products for which demand is forecast to increase in coming years. These include yellow phosphorus which is used in a broad range of industrial applications including the production of fertilisers, pesticides, flame retardants, certain types of plastics and synthetic resins, as well as in the production of semiconductors and other electronic components. The largest market for yellow phosphorus is the Asia-Pacific region. Phosphate rock has been included in the critical minerals lists of Australia, the European Union, USA, China and a number of other countries. The global yellow phosphorus market was estimated to be 2,100 kt in 2022, expected to grow at a CAGR of over 5.3% to exceed 3,000 kt annually by 2030.

### Wonarah Phosphate Project—Geology, Resources, Mining and Processing

The Wonarah Phosphate project is located around 960 km southeast of Darwin, 400 km west of Mount Isa, Queensland and 250 km east of Tennant Creek in the Barkly Tableland of the Northern Territory. Wonarah is accessed via the Barkly Highway, a sealed road between Tennant Creek to the west and Mt Isa to the east. The road surface meets national highway standard and provides a secure road access to the mine site, except in exceptional flooding conditions that may be experienced during the northern Australia Monsoon during summer months. The Wonarah site is close to the northern Australian gas pipeline (NGP) which could provide natural gas for the manufacture of phosphate products onsite in the future.

AEV's landholding at Wonarah consists of two granted mining leases and six granted exploration leases with a total area of 1,494.12 km². All leases are 100% held by Minemakers Australia Pty Ltd, a 100% owned subsidiary of AEV. The licences are located within the Georgina Basin which contains Early and Middle Palaeozoic sediments that occurs over a broad area of western Queensland and the eastern Northern Territory. The sequence includes a number of phosphate rock beds that are being mined or explored by several companies.

AEV's exploration activities have generally comprised initial broad spaced reverse circulation (RC) drilling to outline the extents of the main mineralised zones followed by successively tighter infill drilling designed to improve definition of the distribution of phosphate mineralisation. Two mineralised zones have been identified at Wonarah: the Main Zone and the



smaller, shallower and slightly higher-grade Arruwurra deposit. The geology of the two principal mineralised zones is broadly comparable, although some variation in host rock lithology, phosphate mineralisation and grade are evident. The Mineral Resource Estimate for the Wonarah deposit reported in June 2022 was 533 Mt at 21%  $P_2O_5$ , at a 15%  $P_2O_5$  cut-off grade; and 812 Mt at 17%  $P_2O_5$  based on a 10%  $P_2O_5$  cut-off grade. A resource estimate of 66 Mt at 30%  $P_2O_5$  was reported in September 2023 at a cut-off grade of 27%  $P_2O_5$ . Phosphate rock quality meets industry criteria established for fertiliser manufacture and yellow phosphate production. Only a small proportion of samples have been analysed for trace elements that may restrict phosphate rock transport and utilisation, but the concentrations of deleterious components are generally low.

As a relatively low value bulk commodity, phosphate rock is typically mined by open cut methods. AEV propose mining the Arruwurra deposit using conventional open pit truck and excavator mining. The mining process will primarily entail progressive stripping and selective ore mining, with drilling and blasting required to fragment the higher-grade phosphate rock bed.

ERM reviewed the recently completed direct shipping ore (DSO) feasibility study and concluded that most capital and operating cost estimates provided a generally suitable basis for mining studies. The study, however, did not include any mention of rehabilitation and closure costs, grade control practices and costs, and costs associated with water supply, fuel storage facilities, power infrastructure, information technology and communications infrastructure and other owner related costs that are expected to exceed the contingency included in the study. An environmental management plan was developed for the proposed DSO operation at Arruwurra, for handling of phosphate rock and products at the Wonarah project site. The Darwin Port Authority will require an environmental plan for product stockpiles covering particle management, water runoff and dust control. A plan will also be developed by Avenira to cover transport of beneficiated ore and phosphate products between the site and port. This proved to be a shortcoming in feasibility studies for recent mineral resource development projects using the ports of Esperance and Bunbury in Western Australia which delayed project development but is being managed proactively by Avenira. Estimates of mining and processing costs in the study are based on contractor estimates provided by a single contractor, which can contribute to inconsistencies in estimates used.

Coarse (<10mm) lump ore from the project is demonstrably suited to the manufacture of yellow phosphate and downstream phosphate chemicals. Fine ore is intended for export and use in the production of single superphosphate fertiliser or for agglomeration into briquettes for use in yellow phosphate production. Lower-grade phosphate rock would be crushed and sold in one tonne bags as a direct application fertiliser at the mine gate.

The Wonarah project may be valued using several approaches, in terms of an exploration opportunity, identified Mineral Resource and a resource development project that has been subject to feasibility studies. Several approaches have been followed by ERM to provide both technical and market value opinions. It is important to note that mineral asset valuations are opinions that involve a subject assessment of the project's value that are the opinion of the valuer and can only be tested by taking the project to market.

Valuation methods employed comprised:

analysis of comparable transactions



- development of a Discounted Cash Flow analysis based on mining of the Arruwurra zone of the deposit
- Rule of Thumb (Yardstick) valuation

Valuation opinions provided by each of these approaches are summarised in the following table.

Approach	Туре	Currency	Valuat	Valuation Opinion (A\$ M)		Notes
			Low	Preferred	High	
Comparable Transactions Wonarah DSO (Arruwurra + Main Zone)	Market	A\$ M	15.5	19.4	23.3	Based on analysis of comparable transactions presented in Table 4-11 with removal of four outlier values. The low and high case values represent the preferred value ± 20%. This limit was imposed due to the wide scatter in transaction values
Rule of Thumb (Yardstick) – Wonarah DSO (Arruwurra + Main Zone)	Market	A\$ M	46.7	58.3	70.0	Low and high case values represent the preferred value ± 20%. This limit was imposed due to the wide scatter in transaction values used to develop the Rule of Thumb multipliers evident in Figure 4-13.
Rule of Thumb (Yardstick) Arruwurra deposit DSO	Market	A\$M	11.1	13.9	17.4	Included in the Wonarah Deposit value opinion above.
DCF Valuation Arruwurra deposit DSO	Technical	A\$ M		(6.1)		NPV <sub>10</sub> estimated for the Arruwarra deposit only using a phosphate rock price of US#152.50 per tonne.
				11.7		NPV <sub>10</sub> sensitivity scenario for the Arruwurra deposit only using a phosphate rock price of US\$200.00 per tonne.

Analysis of comparable transactions provides a valuation opinion of between A\$15.5 million and A\$23.3 million, with a preferred, central value of A\$19.4 million. This opinion reflects the results of 15 transactions involving projects with publicly reported phosphate rock Mineral Resources and Ore Reserves, with additional context provided by analysis of 15 additional, primarily earlier stage projects where Mineral Resources were not reported.

The Rule of Thumb valuation represents an opinion of the market value of the undeveloped Wonarah phosphate resource between A\$46.7 million and A\$70.0 million, with a preferred



CLIENT: Avenira Limited PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

value of A\$58.3 million based on mineralisation reported to comprise the Arruwurra and Main zones respectively used in the DSO feasibility study.

Using a Rule of Thumb approach, the Arruwurra deposit is valued at a preferred value of A\$13.9 million. Again, the multiplier factors derived from an analysis of comparable transactions, discussed in section 4.10.1, provides a broad spread of values. Limiting the low and high valuation opinions to within  $\pm 20\%$  of the preferred valuation opinion provides a low and high opinion of A\$11.1 million and A\$17.4 million, respectively. The low and high value cases developed using the Rule of Thumb approach were considered to be too broad by ERM to be useful in further studies of the project. ERM's practice in instances of this, which are not uncommon in situations where the number of competent transactions is relatively small, spread over an extended period of time, and cover resources in multiple jurisdictions with varying sovereign risk profiles, is to set limits of  $\pm 20\%$  around the central, preferred case based on the multipliers developed for the project.

ERM validated the inputs required for development of a net present value (NPV) estimate for the project (Arruwurra + Main Zone deposits) and prepared high level estimates for a central case using a phosphate rock price of US\$152.50 per tonne and a sensitivity case of US\$200.00 per tonne. The NPV of the project was estimated to be negative for the US\$152.50 phosphate rock price, but positive for the US\$200.00 price, indicating that the project is relatively sensitive to product price. This is also viewed by ERM to support Avenira's strategy of seeking to use phosphate rock from Wonarah in the production of higher value products, notably yellow phosphorus (YP), to enhance project feasibility.

A discounted cash flow (DCF) valuation based on mining of the Arruwurra zone only was estimated to be a NPV $_{10}$  of (US\$6.06) million using the prevailing phosphate rock price. A sensitivity case using a phosphate rock price of US\$200.00 per tonne demonstrated the sensitivity of the Wonarah project to price.

The DSO feasibility study completed for Avenira in 2023 (Avenira Limited, 2023) demonstrated that production of DSO phosphate rock for export from Wonarah is not viable at current prices but may be viable at prices that have been experienced in the Australian market in recent years. The principal issues affecting project viability were interpreted by ERM to be phosphate rock road transport charges between the project site and Port of Darwin, and Darwin port charges. This could render production of DSO for domestic markets a viable option, although the proportion of the Wonarah phosphate rock resource meeting DSO specifications is relatively small (about 8% of the resource tonnage at a  $10\% P_2O_5$  cut-off). Although discussed in the DSO study as an option, the production of direct application phosphate rock (DAPR) for sale at a lower price for domestic use has not been studied adequately to attribute potential value to this resource.

AEV have elected to pursue the production of higher value phosphate products including YP which would significantly alter the value of the project and utilise a greater proportion of the resource, determined by the cut-off grade required and mining factors. These studies are yet to reach a point where analysis of capital and operating (mining, processing and transport) costs and product revenue could be used to determine the economic basis for valuing a phosphate chemicals operation and the recoverable portion of the mineral resource, that could be used in turn to develop an Ore Reserve estimate, open pit design and production schedule.



AEV's confidence that a viable phosphate chemicals project can be developed is supported by ERM on the basis of available data.

## Jundee South Gold Project (WA)

The Jundee South project is located between Wiluna, Leinster and Leonora in the Northeastern Goldfields region of Western Australia which is a well-established mining district. The project is easily accessed from Wiluna or Leinster at multiple points by well-maintained sealed roads. The towns of Wiluna and Leinster could sustain the workforce. Both have airports able to handle commute flights for FIFO workers.

The project includes 47 exploration and prospecting licences covering an area of 1,372.8 km<sup>2</sup> that has been extensively explored by multiple companies in an Archean granite-greenstone domain that contains several long-life gold mining and milling operations. AEV have established access to land for exploration with both Native Title claimant groups and pastoral leaseholders.

AEV's tenements straddle the Yandal Greenstone Belt which forms part of the Archean Yilgarn Craton.

Gold was first discovered in the Yandal belt in the late 1880s. Production was at a small scale initially, however, this changed following the discovery of the significant mineralisation at the Bronzewing, Jundee and Darlot deeps (Centenary) deposits in the 1990s. The gold mineralisation is of orogenic-type. It is typically shear related with later stage brittle crosscutting faults being critical in gold localisation. Iron rich mafic rocks or porphyry intrusive association, quartz vein development, and carbonate (± potassium mica and iron sulphide) alteration are common features.

Extensive reconnaissance drilling and geochemical sampling and geophysical surveys have identified a range of exploration targets for more detailed testing. No discoveries leading to the estimation of Mineral Resources have been established to date, with exploration by AEV still considered to be at an early-stage. In addition to gold, Avenira is actively generating targets for pegmatite-hosted lithium and potash.

The project has been valued by ERM using a series of methods applicable to projects without identified Mineral Resources including:

- comparable transactions
- the Appraised Value or Exploration Expenditure Approach (EEA)
- the Geoscience Factor Method (GFM) or Kilburn Geoscience Rating (KGR)

The valuation opinions for the Jundee South project are presented in the table below.

The EEA and GFM opinions are considered by ERM to be consistent with one another, and significantly higher than the Comparable Transactions valuation. Comparison with the EEA and GFM valuations suggest that tenements without Mineral Resources are being traded at a discount in Western Australia over the past two years.



CLIENT: Avenira Limited
PROJECT NO: 0749204 AEVITV01 DA
REPORT: R258.2024 VE

Approach	Туре	Currency	Valuatio	Valuation Opinion (\$ million)		Notes
			Low	Preferred	High	
Comparable Transactions	Market	A\$	4.9	6.6		Gold projects without Mineral Resources and Ore Reserves in WA completed in the two years prior to the effective date of this report.
EEA	Technical	A\$	9.2	10.7		PEM 1.5 to 2.0 used to determine the low and high bounds of the MEE estimate respectively. Exploration expenditure A\$6.1 million.
GFM	Technical	A\$	10.8	12.9		37 EL, 9 PL, 1,272km² tenement package. Separate BAC estimates prepared for PL and EL.

### Valuation Opinion Summary

ERM proposes that the Comparable Transactions valuation opinion for the Wonarah project of between A\$15.5 million and A\$23.3 million, with a preferred value of A\$19.4 million, would be more likely to be achieved were the project offered for sale and should be preferered to the Rule of Thumb valuation for the project.

There are a range of potential development scenarios for the project, ranging from production of DSO and an intermediate grade phosphate rock product (DAPR) to production of phosphate chemicals. The latter is at an early-stage of investigation by AEV. The potential of DSO production for export has been shown not to be viable at current phosphate rock prices, but the value of the project is price sensitive.

AEV's Jundee South gold project's value was determined using comparable transactions, Multiples of Exploration Expenditure (MEE) and Geoscience Factor Method (GFM) approaches. The MEE and GFM approaches produced very similar valuation opinions which are around 40% higher than that obtained by analysis of comparable transactions. ERM proposes that the comparable transactions available, while all-in recent years and in Western Australia, did not fully value the size of AEV's tenement package and its proximity to a number of significant deposits that have been in production for an extended period.

ERM favours the GFM valuation opinion of A\$10.8 million to A\$15.0 million, with a preferred value of A\$12.9 million. Both the MEE and GFM methods are subjective. MEE depends on the valuer's opinion of the enhancement of prospectivity achieved by exploration while GFM is based on the opinion of how the project should be described in the four categories used to assess projects. ERM's opinion is that the more granular process followed in the GFM method produces a more defensibe valuation, and that the method is better able to express the range of valuations applicable to the project. The MEE valuation is interpreted to support the preferred GFM valuation.



CLIENT: Avenira Limited
PROJECT NO: 0749204 AEVITV01
REPORT: R258.2024

# Summary

AEV has demonstrated acute awareness of issues affecting the viable development of the Wonarah project that has contributed to development of strategies to address weaknesses and threats to the project.

Jundee South is considered by ERM to represent an attractive opportunity for new resource discovery in a highly prospective region in a favourable jurisdiction.



CLIENT: Avenira Limited PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

# **CONTENTS**

EXEC	CUTIVE	SUMMARY	V				
1.	INTROI	DUCTION	1				
1.4 1.5 1.6 1.7 1.8 1.9	1 SCOPE OF WORK 2 EFFECTIVE DATE 3 APPROACH 4 COMPLIANCE WITH THE JORC AND VALMIN CODES 5 SITE VISITS 6 PRINCIPAL SOURCES OF INFORMATION 7 ROCK PHOSPHATE PRICE 8 EXCHANGE RATES						
2.	MINER	AL ASSET VALUATION PRINCIPLES	5				
2.1 2.2 2.3 2.4 2.5	VALUAT	Discounted Cash Flow/Net Present Value Method	5 6 7 7 8 8 9 9 9				
3.	PROJEC	CT BACKGROUND	15				
3.1 3.2 3.3 3.4	ROCK P 3.2.1 3.2.2 3.2.3 3.2.4 YELLOW	A LIMITED CORPORATE OVERVIEW HOSPHORUS INDUSTRY OVERVIEW Phosphate rock products and end-uses Phosphate rock occurrences, Resources and global production Phosphorus as a Critical Mineral Phosphate Rock economics and pricing PHOSPHORUS INDUSTRY ALIAN PHOSPHATE PRODUCTION AND CONSUMPTION	15 15 15 17 18 18 20 20				
4.	WONARAH PHOSPHATE PROJECT, NT.						
4.1 4.2 4.3 4.4 4.5	PROJECT LOCATION  CLIMATE AND TOPOGRAPHY  ACCESS AND INFRASTRUCTURE  EXISTING LANDUSE						



	4.5.3	Native Title	24
4.6	EXPLOR	ATION AND DEVELOPMENT HISTORY	24
4.7	GEOLO	GY AND RESOURCES	25
	4.7.1	Regional Geology	25
	4.7.2	Deposit Geology and Mineralisation	27
	4.7.3	Mineral Resource Estimation	28
	4.7.4	Mineral Resource Classification	34
	4.7.5	Wonarah Phosphate Rock Quality	36
4.8	PROPOS	SED MINING	37
	4.8.1	Mining Approach	37
	4.8.2	Feasibility Study review	38
4.9	ORE PR	OCESSING AND BENEFICIATION	40
4.10	PROJEC	T VALUATION OPINION	44
	4.10.1	Comparable Transactions	45
4.11	COMPA	RABLE TRANSACTIONS VALUATION	45
4.12	RULE O	F THUMB (YARDSTICK) VALUATION	48
	4.12.1	Rule of Thumb Valuation	49
	4.12.2	Financial Model Review and DCF Valuation	50
4.13	WONAR	AH PROJECT VALUATION SUMMARY	52
	4.13.1	Discussion	52
	4.13.2	Valuation Opinion	55
5.	JUNDE	E SOUTH PROJECT, WA.	56
5.1	PROJEC	T LOCATION	56
5.2	CLIMAT	E AND TOPOGRAPHY	57
5.3	ACCESS	AND INFRASTRUCTURE	57
5.4	EXISTIN	NG LANDUSE	57
5.5	EXPLOR	ATION AND MINING TENURE	57
	5.5.1	Mineral Exploration and Mining Tenements	57
	5.5.2	Restricted Land in the Project Area	61
	5.5.3	Native Title	61
5.6	EXPLOR	ATION AND DEVELOPMENT HISTORY	63
	5.6.1	Geophysics	73
5.7	GEOLO	GY AND RESOURCES	75
	5.7.1	Regional Geology	75
	5.7.2	Deposit Geology and Mineralisation	81
5.8	MINERA	L RESOURCES	86
5.9	PROPOS	SED MINING	86
5.10	ORE BE	NEFICIATION	86
5.11	TECHNI	CAL ASSESSMENT	86
5.12	PROJEC	T VALUATION OPINION	87
	5.12.1	Comparable Transactions	87
	5.12.2	Appraised value or eXPLORATION EXPENDITURE APPROACH	91
	5.12.3	Geoscience Factor Method	92
6.	CONCL	USIONS	94
6.1		T STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS	94
	6.1.1	Wonarah Phosphate Project	94
	6.1.2	Jundee South Gold Project	94
6.2	VALUAT	ION SUMMARY	94



	6.2.1	Wonarah Phosphate Project	94
	6.2.2	JunDee South Gold Project	94
	6.2.3	Valuation Opinion	100
7.	REFERENCES		101

# LIST OF TABLES

TABLE 2-1: VALUATION APPROACHES FOR DIFFERENT TYPES OF MINERAL PROPERTIES (VALMIN, 2015)	, 7
TABLE 2-2: PEM FACTORS	10
TABLE 2-3: GEOSCIENTIFIC FACTOR RANKING	11
TABLE 2-4: DEFINITION OF EXPLORATION STAGES	13
TABLE 2-5: PROBABILITY OF SUCCESSFULLY PROCEEDING FROM ONE EXPLORATION STAGE TO	
ANOTHER	14
TABLE 4-1: AVENIRA'S WONARAH TENEMENTS	23
TABLE 4-2: WONARAH MINERAL RESOURCE STATEMENT.	31
TABLE 4-3: WONARAH PROJECT MINERAL RESOURCE, BY PROSPECT AT 27% P <sub>2</sub> O <sub>5</sub> CUT-OFF	32
TABLE 4-4: DRILL HOLE SPACING CRITERIA USED IN MINERAL RESOURCE CLASSIFICATION	36
TABLE 4-5: WONARAH PHOSPHATE ROCK QUALITY CHARACTERISTICS	36
TABLE 4-6: MARKETABLE PRODUCT DETAILS	41
TABLE 4-7: 2022 LUMP PRODUCT CHARACTERISTICS	41
TABLE 4-8: LUMP BPH PRODUCT SIZE DISTRIBUTION	42
TABLE 4-9: ORE RESERVE MODIFYING FACTORS	43
TABLE 4-10: THEORETICAL LUMP UPGRADE PRODUCTION EQUATION	43
TABLE 4-11. COMPARABLE TRANSACTIONS - PHOSPHATE PROJECTS WITH ORE RESERVES AND MINERAL RESOURCES	46
TABLE 4-12: COMPARABLE TRANSACTIONS—EXPLORATION PROJECTS WITHOUT MINERAL RESOURCES AND ORE RESERVES	47
TABLE 4-13. RULE OF THUMB (YARDSTICK) MULTIPLIER FACTOR ESTIMATION	49
TABLE 4-14: RULE OF THUMB VALUATION, DSO PHOSPHATE RESOURCE (ARRUWARRA DEPOSIT - MAIN ZONE)	+ 49
TABLE 4-15: RULE OF THUMB VALUATION, ARRUWARRA DEPOSIT DSO PHOSPHATE RESOURCE	50
TABLE 4-16: WONARAH PROJECT DCF VALUATION, US\$152.50/TONNE (A\$224.07/TONNE) ROCK PHOSPHATE PRICE (AUSTRALIAN DOLLARS)	52
TABLE 4-17: VALUATION SUMMARY, WONARAH PHOSPHATE PROJECT (ARRUWURRA DEPOSIT + MAIN ZONE)	54
TABLE 5-1: JUNDEE SOUTH PROJECT TENEMENT INFORMATION.	58
TABLE 5-2: SUMMARY OF DRILLING IN AVENIRA'S DRILL DATABASE.	64
TABLE 5-3: MINERALISED AC INTERCEPTS FROM THE 2021 DRILLING.	71
TABLE 5-4: MINERALISED RC INTERCEPTS FROM THE 2022 DRILLING.	72
TABLE 5-5: COMPARABLE TRANSACTIONS - WA GOLD EXPLORATION PROJECTS 2022-2024	88
TABLE 5-6: JUNDEE SOUTH BAC - EXPLORATION LICENCES	92
TABLE 5-7: JUNDEE SOUTH BAC - PROSPECTING LICENCES	93
TABLE 5-8: GEOSCIENCE FACTOR METHOD ASSESSMENT - JUNDEE SOUTH	93
TABLE 6-1: WONARAH PHOSPHATE DEPOSIT - STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS	95
TABLE 6-2: JUNDEE SOUTH GOLD PROJECT - STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS	96
TABLE 6-3: VALUATION OPINION SUMMARY, WONARAH PROJECT (NT)	98
TABLE 6-4: VALUATION OPINION SUMMARY, JUNDEE SOUTH PROJECT (WA)	99



CLIENT: Avenira Limited PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024 VERSION: 3.2

#### LIST OF FIGURES FIGURE 3-1: PHOSPHATE ROCK FERTILISER PRODUCTS (VAN KAUWENBERGH, 2010) 16 FIGURE 3-2. GLOBAL PHOSPHATE ROCK END USE (2017) 16 FIGURE 3-3: GEOGRAPHIC DISTRIBUTION OF GLOBAL PHOSPHATE ROCK RESERVES 17 FIGURE 3-4: FUTURE GLOBAL PHOSPHATE ROCK PRODUCTION ALLOWING FOR DEPLETING RESERVES BASED ON CONSTANT INDIVIDUAL COUNTRY EXTRACTION RATES. 18 FIGURE 3-5: PHOSPHATE ROCK PRICES AUG 2019 - AUG 2024 19 FIGURE 3-6: CURRENT MAJOR ASIA-PACIFIC REGION PHOSPHATE ROCK IMPORTERS (GREEN) AND SUPPLIERS TO THE REGION (BROWN) 19 FIGURE 4-1: LOCATION OF THE WONARAH PROJECT. 21 FIGURE 4-2: AVENIRA'S WONARAH TENEMENTS AND RESOURCE AREAS. 23 FIGURE 4-3: HISTORICAL DRILLING RECORDED IN AVENIRA'S DRILLING DATABASE FOR THE WONARAH PROJECT, COLOURED BY COMPANY. 25 FIGURE 4-4: AVENIRA'S DRILLING AT THE WONARAH PROJECT. 25 FIGURE 4-5: DISTRIBUTION OF LATE PROTEROZOIC TO EARLY PALAEOZOIC ROCKS OF THE GEORGINA BASIN IN WESTERN QUEENSLAND AND EASTERN NT, AUSTRALIA. 26 FIGURE 4-6: STRATIGRAPHY IN THE WONARAH REGION. 27 FIGURE 4-7: ARRUWURRA CROSS-SECTION. 29 FIGURE 4-8: MAIN ZONE CROSS-SECTION. 30 FIGURE 4-9: WONARAH MAIN ZONE RESOURCE BLOCK MODEL >27% P2O5. 33 FIGURE 4-10: WONARAH ARRUWURRA RESOURCE BLOCK MODEL >27% P2O5. 34 FIGURE 4-11: DISTRIBUTION OF SAMPLES WITH ARSENIC, CADMIUM AND/OR LEAD ASSAYS 37 FIGURE 4-12: LUMP BPH SIZE DISTRIBUTION 42 FIGURE 4-13: COMPARABLE TRANSACTIONS - TRANSACTION VALUE VS. RESOURCE TONNAGE 48 FIGURE 5-1: JUNDEE SOUTH PROJECT LOCATION MAP SHOWING THE DIFFERENT PROJECT AREAS. 56 FIGURE 5-2: LEASE CHANGES AT JUNDEE SOUTH 1 62 FIGURE 5-3: HISTORICAL DRILLING IN AND AROUND THE JUNDEE SOUTH PROJECT RECORDED IN AVENIRA'S DRILLING DATABASE. 67 FIGURE 5-4: HISTORICAL DRILLING IN AND AROUND THE JUNDEE SOUTH 1 AND 2 PROJECT AREAS RECORDED IN AVENIRA'S DRILLING DATABASE. 68 FIGURE 5-5: ROUNTREE STRUCTURAL AND GEOLOGICAL INTERPRETATION MAP OF THE JUNDEE SOUTH 1 AREA. FIGURE 5-6: AVENIRA DRILLING INCLUDING PROSPECT NAMES. 70 FIGURE 5-7: GROUND MAGNETICS SURVEY AREAS ON THE JUNDEE SOUTH AREA. 74 FIGURE 5-8: GROUND MAGNETICS TOTAL MAGNETIC INTENSITY (TMI) REDUCED TO POLE (RTP) IMAGE OF THE YAN14 PROSPECT WITH INTERPRETED GEOLOGY. 75 FIGURE 5-9: JUNDEE SOUTH TENEMENTS ON GEOLOGY. 77 FIGURE 5-10: BRONZEWING TENEMENTS ON GEOLOGY. 78 FIGURE 5-11: DARLOT EAST TENEMENTS ON GEOLOGY. 79 FIGURE 5-12: OCKERBURRY (DARLOT WEST) TENEMENTS ON GEOLOGY. 80 FIGURE 5-13: MT STIRLING TENEMENTS ON GEOLOGY. 81 FIGURE 5-14: JUNDEE SOUTH PROJECT TENEMENTS ON GEOLOGY, INCLUDING NEARBY MINERALISATION. 82 FIGURE 5-15: SUMMARY OF HIGH AU IN HISTORICAL RAB DRILLING AND DEFINITION OF MAIN PROSPECTS IN THE JUNDEE SOUTH AREA. 84 FIGURE 5-16: TARGETS IN THE JUNDEE SOUTH 1 AREA. 85 FIGURE 5-17: ANNUAL JUNDEE SOUTH PROJECT EXPLORATION EXPENDITURE 2017-2024 91



# ACRONYMS AND ABBREVIATIONS

Acronym	Description	
AAC	Arruwurra Aboriginal Corporation	
AACE	Association for the Advancement of Cost Engineering	
AC	Air-Core drilling	
AEV	Avenira Limited (ASX code)	
AIG	Australian Institute of Geoscientists	
Al <sub>2</sub> O <sub>3</sub>	Aluminium oxide	
AusIMM	Australasian Institute of Mining and Metallurgy	
ASX	Australian Securities Exchange Ltd	
ATO	Australian Taxation Office	
BAC	Base Acquisition Cost—financial basis of the GFM valuation approach	
bcm	Bank cubic metres (material as it lies in its natural bank state)	
CAGR	Compound annual growth rate	
CaO	Calcium oxide	
DAP	Diammonium phosphate fertiliser	
DAPR	Direct Application Phosphate Rock	
DCF	Discounted Cash Flow	
DMIRS	Department of Mines, industry Regulation and Safety	
DSO	Direct Shipping Ore	
EEA	Exploration Expenditure Approach (appraised value mineral asset valuation method for projects without Mineral Resources and Ore Reserves)	
EL	Exploration Licence	
ERM	ERM Australia Consultants Pty Ltd	
EU	European Union	
Fe <sub>2</sub> O <sub>3</sub>	Iron (ferric) oxide	
FeO	Iron (ferrous) oxide	
FIFO	Fly In/Fly Out (long distance commute arrangement for mining industry workers at remote sites)	
GFM	Geoscience Factor Method (mineral asset valuation method for projects without Mineral Resources and Ore Reserves)	
IMVAL	International Mineral Valuation Committee	
IRR	Internal rate of return	
JORC	Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012 edition)	
K20	Potassium oxide	
KGR	Kilburn Geoscience Rating (synonymous with GFM)	



CLIENT: Avenira Limited PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024 VERSION: 3.2

Acronym	Description	
km²	square kilometre	
koz	Thousand (Troy) ounces	
LFP	Lithium Ferro (Iron) Phosphate (LFP) battery cathode	
MAP	Monoammonium phosphate fertiliser	
MEE	Multiple of Exploration Expenditure	
MER	Minor Element Ratio (phosphate rock quality index)	
MGA94	Map Grid of Australia 1994 (national coordinate system)	
MgO	Magnesium oxide	
ML	Mining Licence / Mining Lease	
MMP	Mine management plan	
MnO	Manganese oxide	
Moz	Million (Troy) ounces	
Mt	Million tonnes	
Na₂O	Sodium oxide	
NGP	Northern Australia gas pipeline	
NPV	Net Present Value	
NT	Northern Territory	
P <sub>2</sub> O <sub>5</sub>	Phosphorus oxide (stable oxide form of phosphorus)	
PL	Prospecting Licence	
PEM	Prospectivity Enhancement Multiplier, component of EEA valuations	
RAB	Rotary air blast drilling	
RBA	Reserve Bank of Australia	
RC	Reverse Circulation drilling	
ROM	Run of Mine	
RPGeo	Registered Professional Geoscientist	
RSM	RSM Australia Pty Ltd	
RTP	Reduced to pole (magnetic data modelling)	
saprock	Saprolite rock—product of deep weathering of rocks near surface in lateritic profiles	
SiO <sub>2</sub>	Silicon dioxide, silica	
SSP	Single superphosphate fertiliser	
TiO <sub>2</sub>	Titanium oxide	
TMI	Total magnetic intensity (geophysical survey)	
tpa	tonnes per annum (mining, production rate)	
USGS	United States Geological Survey	



CLIENT: Avenira Limited

PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

Acronym	Description
VALMIN	Australasian Code for Public Reporting of Technical Assessments and Valuations of Mineral Assets (The VALMIN Code 2015 edition)
VMS	Volcanogenic massive sulphide
WA	Western Australia
wt%	Weight per cent
YP	Yellow phosphorus

CLIENT: Avenira Limited

PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024

REPORT: R258.2024 VERSION: 3.2

## 1. INTRODUCTION

## 1.1 SCOPE OF WORK

Avenira Limited (AEV) and RSM Australia Pty Ltd (RSM) requested that ERM prepare an Independent Technical Assessment and Valuation of the mineral assets of Avenira Limited (AEV) for inclusion in an information package to be provided to AVE's investors for use in assessment of a major transaction proposed by AEV. AEV's principal mineral assets are the Wonarah Phosphate Project in Northern Territory and the Jundee Gold Project in Western Australia.

This report has been prepared by ERM to meet Avenira's requirements for a report satisfying the requirements of the VALMIN Code (2015) and be suitable for public release by the Company.

#### 1.2 EFFECTIVE DATE

This report was prepared by ERM during September 2024, using information available at 31<sup>st</sup> August 2024.

31 August 2024 represents the effective date of this report.

## 1.3 APPROACH

The Independent Technical Assessment and Valuation report is the product of a comprehensive desktop study.

The valuation of the projects was based on several methodologies including:

- recent comparable transactions
- multiples of previous exploration and resource evaluation expenditure
- Geoscience Factor Method (Kilburn Geoscience Rating) valuation
- Rule of Thumb (Yardstick) valuation and
- high level income based valuation

## 1.4 COMPLIANCE WITH THE JORC AND VALMIN CODES

This report has been prepared to meet all the requirements of the VALMIN and JORC Codes for mineral asset valuation (VALMIN, 2015) and public reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC, 2012) respectively.

## 1.5 SITE VISITS

Site visits to the Wonarah and Jundee projects were not conducted. For Wonarah, there has been little substantive exploration completed at the site in recent years and previous drilling and bulk sampling sites have been rehabilitated. Exploration of the Jundee project is at an early-stage. These factors result in little information that could contribute materially to the report being acquired by visiting either site.

ERM has followed an approach consistent with best practice in transparently describing the basis for opinions required by the project scope and taking account of their materiality to the project.



#### 1.6 PRINCIPAL SOURCES OF INFORMATION

Information required to complete this work was sourced from reports and other information made available by RSM and AEV, and other publicly accessible sources identified by RSM, AEV and ERM.

The Wonarah Phosphate Project's feasibility study completed by Mining Plus for AEV 4 December 2023 was the principal source of information for the Wonarah project. Information for the Jundee project was largely obtained from ASX announcements released by AVE and other documents provided by the Company.

#### 1.7 ROCK PHOSPHATE PRICE

The August 2024 phosphate rock price was US\$152.50 per tonne (A\$224.07). This price has been used throughout this report.

#### 1.8 EXCHANGE RATES

A US:Australian dollar exchange rate of 1.4693, the prevailing rate at 30 August 2024, is used throughout this report (RBA, 2024).

# 1.9 REPORT AUTHORS -QUALIFICATIONS, EXPERIENCE AND COMPETENCE

## **Andrew Waltho**

Consulting Director at ERM; BAppSc (Hons1st), FAIG RPGeo (MinExpl, Mining), FAusIMM, FGS, Prof Member SME, GAICD.

Andrew has more than 40 years as an exploration and mining geoscientist spanning multiple commodities, deposit styles and settings with major, mid-tier and junior companies and as a consultant. Andrew also has more than 23 years' experience as a director of resources sector companies and not for profit professional organisations. He is a past-President of the Australian Institute of Geoscientists and Chair of the Institute's Ethics and Standards Committee. Andrew was recently appointed to the VALMIN Committee which is responsible for the development of the Australasian Code for Public Reporting of Technical Assessments and Valuations of Mineral Assets. He is also an Australian representative on the International Mineral Valuation Committee (IMVAL) that promotes consistency of mineral asset valuation practices globally.

Andrew has more than 40 years of experience in exploration, resource evaluation and due diligence for a range of commodities including phosphates in Australia and overseas. Other career highlights have included deep involvement in the development of the Century zinc-lead-silver mine in northwest Queensland, extending from early exploration through all stages of feasibility to commissioning and the initial years of production. Other highlights have included participation in feasibility studies for the Dugald River zinc project in Queensland, the Jadar lithium-borate project in Serbia and due diligence reviews for multiple projects spanning a broad suite of commodities, including gold, base metals, uranium, potash, phosphates, industrial minerals and mineral sands, again both in Australia and overseas.

Andrew has direct experience in the exploration and resource evaluation of Georgina Basin phosphate deposits and Mississippi Valley style base metal exploration within the basin.



PROJECT NO: 0749204 AEVITV01
REPORT: R258.2024

#### **Charlie Gianfriddo**

Principal Technical Consultant at ERM; BSc (Hons. Geology), MAIG.

Charlie is an accomplished geoscientist with 15 years' technical and managerial experience in minerals exploration and corporate services focused mainly on base and precious metals. His experience ranges from grassroots project generation to near-mine resource development. Charlie has worked across Africa, Asia, Europe and Australia. He has previously held senior roles in the MMG Project Generation Team and was Chief Geologist at Castlemaine Goldfields in Victoria. Based out of Melbourne, Charlie is part of the ERM Sustainable Mining Services team primarily working on geological analysis, due diligence and independent technical reporting for mergers, acquisitions and company listings. His fields of interest include Minerals Systems, geochemistry and remote sensing.

#### **Steve Hoban**

Director, Principal Process Engineer at BHM Process Consultants.

Steve is a qualified metallurgist with 20 years' experience in the mining industry. His main areas of expertise are in commissioning, project design, circuit optimisation and training. Steve's experience covers crushing, grinding, beneficiation and beneficiation/mineral separation, flotation, thickening, solvent extraction/electrowinning, and smelting. He has worked all over Australia and overseas in a number of commodities including gold, nickel, mineral sands, tin/tungsten and uranium. Steve has held numerous roles during his time in the mineral processing industry such as Principal Metallurgist, Process Commissioning Manager and Corporate Liaison Officer.

#### **Howard Simpson**

Mining Manager, Consulting Director at ERM, BSc Eng (Mining) (Hons), BCom (Accounting and Quantitative Management), FAusIMM (CP Mining), RPEQ.

Howard is an experienced mining professional who has delivered mining engineering, mine planning and economic evaluation for projects, technical studies and operations. He has delivered projects and studies across multiple geographies and commodities, with responsibilities for design, planning, scheduling of mine operations and economic evaluation. Howard has focused on innovation throughout his career, focusing on technology solutions, integrated mining systems such as in-pit crushing and conveying, and new and alternative mining methodologies.

#### **Patrick Maher**

Partner (APAC) at ERM; BSc (Hons) Geology, MAusIMM, MAIG.

Patrick is a geologist and project manager with over 30 years' international experience in geological disciplines ranging across exploration, geometallurgy, feasibility studies and mining corporate services. He has also worked as a project leader for community development and sustainability groups in Europe and Australia. Patrick served as a Director of the Australian Institute of Geosciences from 2016 to 2020.



## 1.10 PRIOR ASSOCIATION AND INDEPENDENCE

This report's authors and reviewers have no previous association with AEV. Neither ERM nor the authors and reviewer of this report, have or have had previously, any material interest in AEV or both the Wonarah and Jundee projects.

ERM's relationship with AEV is solely one of professional association between client and independent consultant. This report is prepared in return for professional fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this report. ERM's fee for the preparation of this report is approximately A\$45,100 excluding GST, including contingency.

No employee of ERM is, or is intended to become, a director, officer or other direct employee of AEV. There is no formal agreement between ERM and AEV in relation to ERM conducting further work for the company.

## 1.11 DISCLAIMERS

The statements and opinions contained in this report are given in good faith and in the belief that they are not false nor misleading. The report is based on information available up to and including the date of this report.

The statements and opinions are based on a reference date of 31st August 2024 and could alter over time depending on exploration results, mineral resource knowledge, mineral prices and other relevant market factors.

The opinions expressed in the report have been based on information compiled by ERM. The opinions in the report are provided in response to a specific request from AEV to do so. ERM has exercised all due care in reviewing the supplied information. While ERM has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the data assembled by ERM for this report. ERM does not accept responsibility for any errors or omissions in the information and does not accept any consequential liability arising from commercial decisions or actions resulting from them.

ERM's valuation opinions are based on both public and non-public information. The information available is the product reasonable enquiries within the time available, to confirm the authenticity and completeness of the technical data and other relevant information used.

ERM considers that its opinion must be considered as a whole and that selecting portions of the analysis, or factors considered by it, without considering all factors and analyses together could create a misleading view of the process underlying the opinions presented in this report. The timing and context of an independent valuation report is complex and does not lend itself to partial analysis or selective interpretations without consideration of the entire report.

No audit of any financial data has been conducted.

The valuations discussed in the report are opinions as to likely values, not absolute values, which can only be tested by going to the market.



PROJECT NO: 0749204 AEVITV01 DAT
REPORT: R258.2024 VER

## MINERAL ASSET VALUATION PRINCIPLES

## 2.1 BASIC PRINCIPLES

Valuation of mineral assets is not an exact science, and several approaches are possible, each with varying strengths and shortcomings. While valuation is a subjective exercise, there are several generally accepted methods for ascertaining the value of mineral assets. ERM considers that, wherever possible, inputs from a range of methods should be assessed to inform conclusions about the Market Value of Mineral Assets.

A valuation opinion should always be presented as a range, with the preferred value identified. The preferred value need not be the median value and is determined by the Practitioner based on their experience and professional judgement.

Mineral Assets are defined in the VALMIN Code (VALMIN, 2015) as all property including (but not limited to) tangible property, intellectual property, mining and exploration tenure and other rights held or acquired in connection with the exploration, development of and production from those Tenures. This may include the plant, equipment and infrastructure owned or acquired for the development, extraction and processing of Minerals in connection with that tenure.

Business valuers typically define market value as "The price that would be negotiated in an open and unrestricted market between a knowledgeable, willing, but not anxious buyer and a knowledgeable, willing but not anxious seller acting at arms-length." The accounting criterion for a market valuation is that it is an assessment of "fair value," which is defined in the accounting standards as "the amount for which an asset could be exchanged between knowledgeable, willing parties in an arms-length transaction." The VALMIN Code defines the value of a mineral asset as its market value, which is "the estimated amount (or the cash equivalent of some other consideration) for which the mineral asset should exchange on the date of valuation between a willing buyer and a willing seller in an arms-length transaction after appropriate marketing where the parties had each acted knowledgeably, prudently and without compulsion."

Market Value usually consists of two components, the underlying or technical value, and a premium or discount relating to market, strategic or other considerations. The VALMIN Code recommends that a preferred or most likely value be selected as the most likely figure within a range after considering those factors which might impact on value.

The concept of market value hinges upon the notion of an asset changing hands in an armslength transaction. Market Value must therefore consider, inter alia, market considerations, which can only be determined by reference to "comparable transactions." Generally, truly comparable transactions for mineral assets are difficult to identify due to the infrequency of transactions involving producing assets and/or Mineral Resources, the great diversity of mineral exploration properties, the stage to which their evaluation has progressed, perceptions of prospectivity, tenement types, the commodity involved and so on.

For exploration tenements, the notion of value is very often based on considerations unrelated to the amount of cash which might change hands in the event of an outright sale, and in fact, for the majority of tenements being valued, there is unlikely to be any "cash equivalent of some other consideration." While acknowledging these limitations, ERM identifies what it considers to be "comparable transactions" (i.e. transactions that are useful to consider) to be used in assessing the values to be attributed to mineral assets.



#### 2.2 VALUATION METHODS FOR MINERAL ASSETS

The choice of valuation methodology applied to mineral assets, including exploration licences, depends on the amount of data available and the reliability of that data.

The VALMIN Code classifies mineral assets into categories that represent a spectrum from areas in which mineralisation may or may not have been found through to operating mines which have well-defined Ore Reserves, as listed below:

"**Early-stage Exploration Projects**" – tenure holdings where mineralisation may or may not have been identified, but where Mineral Resources have not been identified.

"Advanced Exploration Projects" – tenure holdings where considerable exploration has been undertaken and specific targets identified that warrant further detailed evaluation, usually by drill testing, trenching or some other form of detailed geological sampling. A Mineral Resource (as defined in the JORC2 Code) estimate may or may not have been made but sufficient work will have been undertaken on at least one prospect to provide both a good understanding of the type of mineralisation present and encouragement that further work will elevate one or more of the prospects to the Mineral Resources category.

"Pre-Development Projects" – tenure holdings where Mineral Resources have been identified and their extent estimated (possibly incompletely) but where a decision to proceed with development has not been made. Properties at the early assessment stage, properties for which a decision has been made not to proceed with development, properties on care and maintenance and properties held on retention titles are included in this category if Mineral Resources have been identified, even if no further work is being undertaken.

"**Development Projects**" – tenure holdings for which a decision has been made to proceed with construction or production or both, but which are not yet commissioned or operating at design levels. Economic viability of development projects will be proven by at least a Prefeasibility Study.

"**Production Projects**" – tenure holdings (particularly mines, wellfields and processing plants) that have been commissioned and are in production.

Each of these different categories will require different valuation methodologies, but regardless of the technique employed, consideration must be given to the perceived "market valuation."

The Market Value of Exploration Properties and Undeveloped Mineral Resources can be determined by the following general approaches: Income, Market and Cost (Table 2-1). The Market Value of Development and Production Projects are best assessed using the Market and Income approaches, whereas the Market Value of xploration projects are best assessed using the Market and Cost approaches.e

## 2.3 VALUATION APPROACHES BY ASSET STAGE

Regardless of the technical application of various valuation methods and guidelines, the valuer should strive to adequately reflect the carefully considered risks and potentials of the various projects in the valuation ranges and the preferred values, with the overriding objective of determining the "fair market value".

Table 2-1 shows the valuation approaches that are generally considered appropriate to apply to each type of mineral property.



Table 2-1: Valuation approaches for different types of mineral properties (VALMIN, 2015)

Valuation Approach	Exploration Properties	Mineral Resource Properties	Development Properties	Production Properties
Income	No	In some cases	Yes	Yes
Market	Yes	Yes	Yes	Yes
Cost	Yes	In some cases	No	No

#### 2.4 **INCOME**

## 2.4.1 DISCOUNTED CASH FLOW/NET PRESENT VALUE METHOD

The DCF valuation method recognises the time value of money, it is most suitable for development projects, where detailed studies have been completed to justify input assumptions and Production Projects, where there is actual historical data to justify input assumptions. Less commonly the DCF methodology is applied to pre-development projects.

The DCF valuation method provides a means of relating the magnitude of expected future cash profits to the magnitude of the initial cash investment required to purchase a mineral asset or to develop it for commercial production.

The DCF valuation method determines:

- The net present value (NPV) of a stream of expected future cash revenues and costs
- The internal rate of return (IRR) that the expected cash flows will yield on a given cash investment.

The DCF valuation method is a forward-looking methodology, requiring that forecasts be made of technical and economic conditions which will prevail in the future. All future predictions are inherently uncertain. The level of uncertainty reduces as the quality of the data available to project future rates of production and future costs, increases.

It is essential to understand specific fundamental attributes of the mining industry in undertaking a DCF, such as:

- An Ore Reserve and in some cases Mineral Resource is the basis of any mineral development.
- Costs are determined by the number of tonnes mined and processed, while revenues are determined by the number of tonnes, pounds or ounces of metal produced. The two are related by the recovered grade of the ore.
- Profit is typically more sensitive to changes in revenue that to changes in costs.
- The commodity price is a principal determinant of revenue but is also the factor with the greatest level of financial risk.

The most significant factors, which must be considered in a DCF valuation of a mineral asset is the reliability of the Mineral Resource and Ore Reserve, particularly with respect to recovered grade, the price at which the product is sold and the risk of not maintaining the projected level of commodity price.



CLIENT: Avenira Limited PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

Key inputs into the DCF valuation method for a mineral asset valuation are:

- life-of-mine planning assumptions
- capital cost estimates—can be the initial cost of constructing the project and/or the ongoing cost of sustaining the productive life of the operation
- operating cost estimates—costs incurred both onsite in producing the commodity which is shipped from the property, and off site, in the transportation and downstream processing of that commodity into saleable end products
- revenue estimates—revenue in the mining context is the product of the following factors:
- the tonnage of ore mined and processed
- the grade of the ore
- the metallurgical recovery
- the price of the saleable commodity
- taxation and royalty payments
- discount rate—represents the risk adjusted rate of interest expected to be yielded by an investment in the mineral asset

The Income Approach is not appropriate for properties without Mineral Resources. It should be employed only where enough reliable data are available to provide realistic inputs to a financial model, preferably based on studies at or exceeding a pre-feasibility level.

#### 2.5 MARKET

#### 2.5.1 COMPARABLE TRANSACTION METHOD

The Comparable Transactions method looks at prior transactions for the property and recent arms-length transactions for comparable properties.

The Comparable Transaction method provides a useful guide where a mineral asset that is generally comparable in location and commodity has in the recent past been the subject of an "arms-length" transaction, for either cash or shares.

For the market approach resources are not generally subdivided into their constituent JORC Code categories. The total endowment or consolidated *in situ* resources are what drives the derivation of value. Each transaction implicitly captures the specific permutation of resource categories in a project. There are too many project-specific factors at play to allow any more than a consideration of price paid vs total resource base. Therefore, considering individual project resource permutations is neither practicable nor useful for this valuation approach. To that end ERM's discussion of the market approach is predicated on the consolidated resource base, to allow application of the method.

Where a progressively increasing interest is to be earned in stages, it is likely that a commitment to the second or subsequent stages of expenditure will be so heavily contingent upon the results achieved during the earlier phases of exploration that assigning a probability to the subsequent stages proceeding will in most cases be meaningless. A commitment to a minimum level of expenditure before an incoming party can withdraw must reflect that party's



perception of minimum value and should not be discounted. Similarly, any up-front cash payments should not be discounted.

The terms of a sale or joint venture agreement should reflect the agreed value of the tenements at the time, irrespective of transactions or historical exploration expenditure prior to that date. Hence the current value of a tenement or tenements will be the value implied from the terms of the most recent transaction involving it/them, plus any change in value as a result of subsequent exploration.

High quality mineral assets are likely to trade at a premium over the general market. On the other hand, exploration tenements that have no defined attributes apart from interesting geology or a "good address" may well trade at a discount to the general market. Market Values for exploration tenements may also be impacted by the size of the land holding, with a large, consolidated holding in an area with good exploration potential attracting a premium due to its appeal to large companies.

## 2.5.2 RULE OF THUMB (YARDSTICK)

The Rule of Thumb (Yardstick) method is relevant to exploration properties where some data on tonnage and grade exist, and these properties may be valued by methods that employ the concept of an arbitrarily ascribed current in situ net value to any Ore Reserves (or Mineral Resources) outlined within the tenement (Lawrence, 2001), (Lawrence, 2011).

Rules-of-Thumb (Yardstick) methods are commonly used where a Mineral Resource remains in the Inferred category and available technical/economic information is limited. This approach ascribes a heavily discounted in situ value to the resources, based upon a subjective estimate of the future profit or net value (say per tonne of ore) to derive a rule of thumb.

This Yardstick multiplier factor applied to the resources delineated (depending upon category) varies depending on the commodity. Typically, a range from 0.4% to 3% of the current spot price is used for base metals and platinum group metals, whereas for gold and diamonds a range of 2% to 5% of the current spot price is used, and typically much lower factors are applied for bulk commodities. The method estimates the insitu gross metal content value of the mineralisation delineated (using the spot metal price and appropriate metal equivalents for polymetallic mineralisation as at the valuation date).

The chosen percentage is based upon the valuer's risk assessment of the assigned Mineral Resource category, the commodity's likely extraction and treatment costs, availability / proximity of transport and other infrastructure (particularly a suitable processing facility), physiography and maturity of the mineral field, as well as the depth and strip ratio of the potential mining operation.

This method is best used as a non-corroborative check on the order of magnitude of values derived using other valuation methods that are likely to better reflect project-specific criteria.

#### 2.6 COST

#### 2.6.1 APPRAISED VALUE OR EXPLORATION EXPENDITURE APPROACH

The Appraised Value or EEA considers the costs and results of historical exploration.

The Appraised Value method is based on the premise that the real value of an exploration property lies in its potential for the existence and discovery of an economic mineral deposit



(Roscoe, 2002). It utilises a Multiple of Exploration Expenditure (MEE), which involves the allocation of a premium or discount to past relevant and effective expenditure using the Prospectivity Enhancement Multiplier (PEM). This involves a factor which is directly related to the success (or failure) of the exploration completed to date, during the life of the current tenements.

Guidelines for the selection of a PEM factor have been proposed by several authors in the field of mineral asset valuation (Onley, 2004). Table 2-2 lists the PEM factors and criteria used in this Report.

Table 2-2: PEM Factors

PEM range	Criteria
0.2 to 0.5	Exploration (past and present) has downgraded the tenement prospectivity, no mineralisation identified
0.5 to 1.0	Exploration potential has been maintained (rather than enhanced) by past and present activity from regional mapping
1.0 to 1.3	Exploration has maintained, or slightly enhanced (but not downgraded) the prospectivity
1.3 to 1.5	Exploration has considerably increased the prospectivity (geological mapping, geochemical, or geophysical activities)
1.5 to 2.0	Scout drilling (rotary air blast, air-core, RC percussion) has identified interesting intersections of mineralisation
2.0 to 2.5	Detailed drilling has defined targets with potential economic interest
2.5 to 3.0	A Mineral Resource has been estimated at Inferred JORC category, no concept, or scoping study has been completed
3.0 to 4.0	Indicated Mineral Resources have been estimated that are likely to form the basis of a Prefeasibility Study
4.0 to 5.0	Indicated and Measured Resources have been estimated and economic parameters are available for assessment

#### 2.6.2 GEOSCIENCE FACTORS

The GFM or KGR, as described by Kilburn (1990), provides an approach for the technical valuation of the exploration potential of mineral properties, on which there are no defined resources. It seeks to rank and weight geological aspects, including proximity to mines, deposits and the significance of the camp and the commodity sought. The criteria originally proposed by Kilburn (Kilburn, 1990) have been modified by several authors since the approach was originally published. The version of the GFM criteria used by ERM incorporate changes advocated by SRK in a previous review of Avenira's mineral assets (McKibben, 2019).

Valuation is based upon a calculation in which the geological prospectivity, commodity markets and mineral property markets are assessed independently. The GFM is essentially a technique to define a value based upon geological prospectivity. The method appraises a variety of mineral property characteristics:

Location with respect to any off property mineral occurrence of value, or favourable geological, geochemical or geophysical anomalies



PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

Location and nature of any mineralisation, geochemical, geological or geophysical anomaly within the property and the tenor of any mineralisation known to exist on the property being valued

Number and relative position of anomalies on the property being valued

Geological models appropriate to the property being valued.

The GFM systematically assesses and grades these four key technical attributes of a tenement to arrive at a series of multiplier factors (Table 2-3).

Table 2-3: Geoscientific Factor Ranking

Rating	Address/Off property factors	On property factors	Anomaly factors	Geological factors
0.1			No mineralisation identified; area sterilised	Unfavourable geological setting, No alteration of interest
0.5		Very little chance of mineralisation; Concept unsuitable to the environment	Extensive previous exploration with poor results	Potentially favourable geological setting but poor results to date, complexly deformed and metamorphosed
1	No known mineralisation in district	Exploration model support; Indications of prospectivity; Concept validated	Extensive previous exploration with encouraging results; Regional targets	Deep cover; Generally favourable lithology/ alteration (70%)
1.5	Reconnaissance (rotary air blast/air-core) drilling with some scattered favourable results. Minor workings	Exploratory sampling with encouragement	Several early-stage targets outlined from geochemistry and geophysics	Shallow cover; Generally favourable lithology/alteration
2	Several old workings; Significant RC percussion drilling leading to advanced project	Several old workings; Reconnaissance drilling or RC percussion drilling with encouraging intersections	Several well-defined targets supported by reconnaissance drilling data. Multiple exploration models being applied simultaneously	Exposed favourable; Lithology/alteration
2.5	Abundant workings; Grid drilling with encouraging results on adjacent sections	Abundant workings; Core drilling after RC percussion with encouragement	Several well-defined targets with encouraging drilling results	Strongly favourable lithology, alteration
3	Mineral Resource areas defined	Advanced Resource definition drilling (early stages)	Several significant subeconomic targets; No indication of "size"	Generally favourable lithology with structures along strike of a major mine; Very prospective geology
3.5	Abundant workings/mines with significant historical production; Adjacent to known mineralisation at	Abundant workings/mines with significant historical production; Mineral	Several significant subeconomic targets; Potential for significant "size"; Early-stage drilling	



Rating	Address/Off property factors	On property factors	Anomaly factors	Geological factors
	Prefeasibility Study stage	Resource areas defined		
4	Along strike or adjacent to resources at Definitive Feasibility Study stage	Adjacent to known mineralisation at Prefeasibility Study stage	Marginally economic targets of significant "size" advanced drilling	
4.5	Adjacent to development stage project	Along strike or adjacent to resources at Definitive Feasibility Study stage	Marginal economic targets of significant "size" with well drilled Inferred Resources	
5	Along strike from operating major mine(s)	Adjacent to development stage project	Several significant ore grade co-relatable intersections	
6				Advanced exploration model constrained by known and well understood mineralisation
10		World class deposit / mine		

The Geoscience Rating Factor valuation method is a subjective valuation method, and different valuation practitioners are likely to derive different on-off property, anomaly and geological factors, based on their interpretation and understanding of the project. Different descriptions of the rating factors also exist. However, provided the same rating system of factors and descriptions of their values is used, the results from different practitioners should not be dramatically different.

The Base Acquisition Cost (BAC) is an important input to the GFM. In essence, it is the average cost to acquire and hold an average tenement in the jurisdiction and it is determined by summing the costs to identify an area of interest, application fees, annual rents and other government costs, work required to facilitate granting (e.g. Native Title, environmental etc.) and minimum annual statutory expenditures. In other words, the BAC is the total average expenditure per standard unit area (km², hectare, subblock, etc.) and captures the identification cost and then the application and retention costs. Each factor is then multiplied serially by the BAC to establish the overall technical value of each mineral property. A fifth factor, the market factor, is then multiplied by the technical value to arrive at the fair market value.

The standard references on the method (Kilburn, 1990) (Goulevitch & Eupene, 1994) do not provide much detail on how the market factor should be ascertained. ERM takes the approach of using the implied value range from our selected comparable transactions to inform the selection of a GFM market factor. Our presumption is that the selected comparable transactions are capturing the market sentiment, so any other valuation method should not be significantly different (order of magnitude).



CLIENT: Avenira Limited PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

This is achieved by finding the market factor that produces an average GFM preferred value per unit area for whole project (i.e. total preferred GFM value divided by the total area) that falls within the range of the comparables implied values per unit area. It is ERM's view that this adequately accounts for global market factors on an empirical basis. For example, if the implied value range is \$100/km² to \$2000/km², then the market factor should give an average GFM preferred value per unit area that falls within that range.

ERM generally would select a market factor (rounded to an appropriate number of significant digits) that gives a value closer to the upper end of the range (though this is the valuer's judgement call). This is because the GFM is a tool that addresses the exploration potential of a project and is best suited to informing the upper end of valuation ranges for a project.

#### 2.6.3 GEOLOGICAL RISK METHOD

In the Geological Risk valuation method, as described by Lord, Etheridge, Wilson, Hall, & Uttley (2001), the value of a project at a given stage of knowledge/development is estimated based on the potential value of the project at a later stage of development, discounted by the probability of the potential value of the later stage being achieved, and considering the estimated cost of progressing the project to the next stage. The relevant stages of exploration are defined in Table 2-4.

Table 2-4: Definition of exploration stages

Stage	Description
Stage A	Ground acquisition, project/target generation
Stage B	Prospect definition (mapping and geochemistry)
Stage C	Drill testing (systematic RC, diamond drilling)
Stage D	Resource delineation
Stage E	Feasibility

The expected value (E) of a project at a given stage is then dependent on the target value at the next stage (T), the probability of successfully advancing the project to the next stage (P), and the cost of advancing the project (C). This can be expressed as:

$$E=P*(T-C)E=P*(T-C)$$

This valuation method generates an expected value for each project (or prospect) at each of the main exploration stages or decision points, by working back from a project's target value. A project's target value can be based on an expected NPV from a reasonably constrained DCF model, or from a reasonable approximation of the value of a defined resource, in which case the initial target value will be the value at the end of Stage D, as opposed to the value at the end of Stage E.

Lord, Etheridge, Wilson, Hall, & Uttley (2001) concluded that the probability of successfully proceeding from one exploration phase to the following one was as depicted in Table 2-5, based on a detailed study of gold exploration programs in the Laverton area of Western Australia.



PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024
REPORT: R258.2024 VERSION: 3.2

The Geological Risk method has not been applied to this study but is described here for completeness.

Table 2-5: Probability of successfully proceeding from one exploration stage to another

Stages	Probability of advancing
Generative to reconnaissance	0.54
Reconnaissance to systematic drill testing	0.17
Systematic drill testing to Resource delineation	0.58
Resource delineation to Feasibility	0.87
Feasibility to Mine	0.90

Source: (Lord, Etheridge, Wilson, Hall, & Uttley, 2001)



PROJECT NO: 0749204 AEVITV01
REPORT: R258.2024

## PROJECT BACKGROUND

## 3.1 AVENIRA LIMITED CORPORATE OVERVIEW

Avenira Limited is an ASX listed company (ASX:AEV) developing the Wonarah Phosphate Project, Northern Territory and Jundee gold project, Western Australia.

ERM considers the Wonarah Phosphate Project to be Avenira's principal mineral asset.

Avenira has recognised the importance of producing high value products from phosphate rock mined at Wonarah and maximising resource utilisation.

A scoping study has been previously completed by AEV that investigates the potential for the Wonarah project to supply inputs to downstream products required for Lithium Ferro (Iron) Phosphate (LFP) battery cathode manufacture (Avenira Limited, 2023). Avenira have also advanced plans to build a YP plant that will provide battery grade YP to the LFP plant and food grade phosphoric acid to food and industrial chemical producers. YP is a precursor in the production of thermal phosphoric acid used in the production of LFP cathode material.

Avenira announced the results of a DSO project feasibility study to the ASX 19 October 2023 (Avenira Limited, 2023). The study examined an opportunity to crush and screen phosphate rock using an onsite crushing plant to produce three products:

- 1. **BPH lumps** (10-50 mm) comprising hard rock, suited to YP production intended to be transported to the Port of Darwin for export
- 2. **BPH Fines** (<10mm) that would also be exported for use in single superphosphate (SSP) production and for agglomeration into briquettes for use in the YP plant; and
- Direct Application Phosphate Rock (DAPR) Product produced from softer APH phosphate rock for sale into domestic agricultural markets as Direct Application Phosphate Rock

The phosphate rock price assumptions underpinning the feasibility study were a BPH product price of A\$308/tonne and APH product price of A\$100/tonne, providing an average product price of A\$238.6/tonne, and an all-in sustaining cost of A\$181.3/tonne. A fall in global phosphate rock prices to US\$152.50 per tonne soon after the release of the DSO feasibility study rendered the project uneconomic and required a shift in focus to YP production to deliver a viable project.

### 3.2 ROCK PHOSPHORUS INDUSTRY OVERVIEW

Some general observations regarding rock phosphorus resources, production and applications are useful, given the industry's nature and the significance of the Wonarah project to Avenira.

## 3.2.1 PHOSPHATE ROCK PRODUCTS AND END-USES

Phosphorus is one of the three essential nutrients required by plants. Phosphate rock is used directly as a fertiliser and to produce a range of fertiliser products (Figure 3-1). The end-uses of phosphate rock are outlined in Figure 2-2.



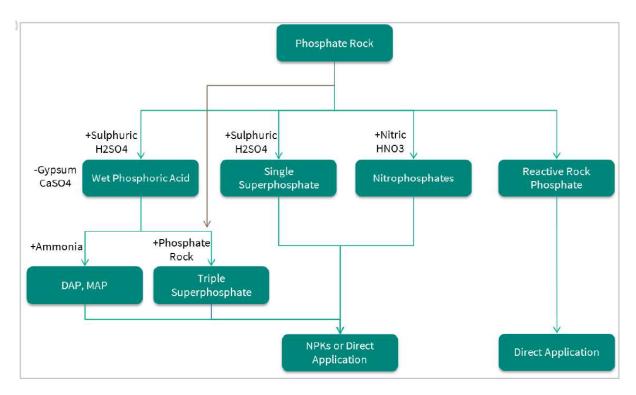


Figure 3-1: Phosphate rock fertiliser products (Van Kauwenbergh, 2010)

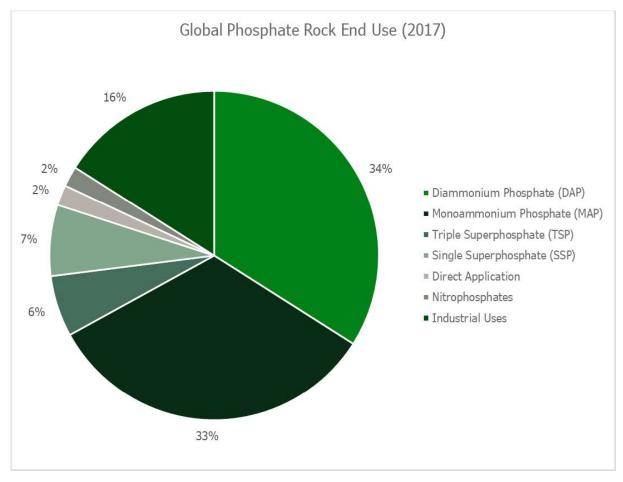


Figure 3-2. Global phosphate rock end use (2017)



CLIENT: Avenira Limited
PROJECT NO: 0749204 AEVITV01
REPORT: R258.2024

DATE:21 October 2024 VERSION: 3.2

## 3.2.2 PHOSPHATE ROCK OCCURRENCES, RESOURCES AND GLOBAL PRODUCTION

Phosphate rock resources occur principally as sedimentary marine phosphorites. The largest sedimentary deposits are found in northern Africa (Morocco and Senegal), the Middle East, China and the United States.

World resources of phosphate rock are more than 300 billion tonnes, including 65 billion tonnes of reserves, concentrated in northwest Africa (Figure 3-3). There are no imminent shortages of phosphate rock, according to the USGS, and there are no substitutes for phosphorus in agriculture (Jasinski, 2024). The global phosphate reserves to production ratio points to 370 years' of supply from currently identified reserves at constant extraction rates but a marked decrease in production between 2060 and 2070 due to depletion of reserves in the US and China (Figure 3-4) (Cooper, Lombardi, Boardman, & Carliell-Marquet, 2011).

Global phosphate rock production, in contained  $P_2O_5$  terms, is forecast to increase to 69.1 Mt by 2027 compared with 63.6 Mt in 2023, representing an increase of approximately 9% over this period (Jasinski, 2024). Significant new mining projects are planned to be completed after 2027 by the USGS in Congo, Guinea Bissau and Senegal.

For general use in the fertiliser industry, phosphate rock or its concentrates preferably have levels of approximately 30% phosphorus pentoxide ( $P_2O_5$ ), reasonable amounts of calcium carbonate (5%), and less than 4% combined iron and aluminium oxides. Worldwide, the resources of high-grade ore are declining, and the beneficiation of lower-grade ore by washing, flotation and calcining is becoming more widespread.

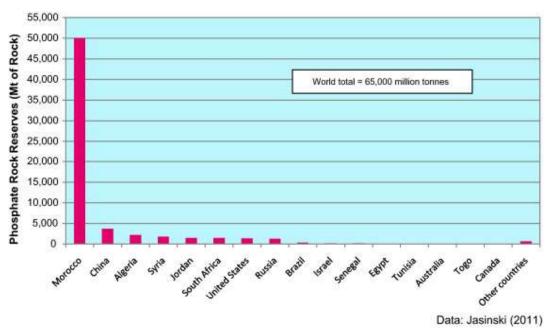


Figure 3-3: Geographic distribution of global phosphate rock reserves

Source: Jasinski (2011)



PROJECT NO: 0749204 AEVITV01
REPORT: R258.2024

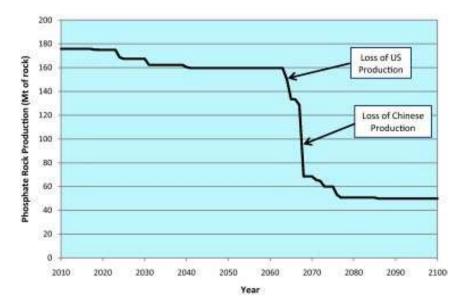


Figure 3-4: Future global phosphate rock production allowing for depleting reserves based on constant individual country extraction rates.

Source: (Cooper, Lombardi, Boardman, & Carliell-Marquet, 2011)

In Australia the Middle Cambrian phosphorite deposits of the Georgina Basin, Queensland and Northern Territory (NT) host 90% of Australia's phosphate rock resources. Wonarah in the NT is Australia's second largest known deposit behind the Ammaroo deposit being studied by Verdant Minerals Ltd (Verdant Minerals, 2024). Incitec Pivot's Duchess mine in the Georgina Basin of northwest Queensland is currently mainland Australia's only phosphate rock mining operation. Other significant resources include the Mount Weld deposit in Western Australian (carbonatite-hosted apatite) and Christmas Island (phosphatic laterite developed on volcanics) (Government of South Australia, 2024).

#### 3.2.3 PHOSPHORUS AS A CRITICAL MINERAL

Phosphorus is included in the critical minerals lists for Australia, China, the EU, USA and several other countries. Phosphates are on the first watchlist of the UK Critical Minerals Expert Committee.

#### 3.2.4 PHOSPHATE ROCK ECONOMICS AND PRICING

The phosphate rock price is largely determined by the Morocco phosphate rock price due to Morocco's dominant industry position, in terms of both Mineral Resources, Ore Reserves and annual production. The August 2024 phosphate rock price was US\$152.50 per tonne. This price has been used throughout this report. Prices for the past five years (August 2019—August 2024) are presented in Figure 3-5 for production meeting fertiliser industry product specifications.



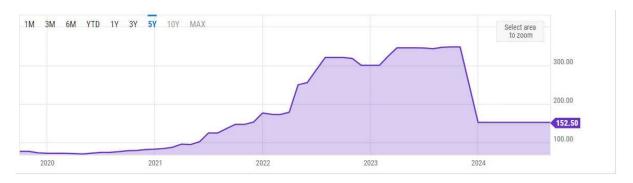


Figure 3-5: Phosphate Rock Prices Aug 2019 - Aug 2024

Phosphate rock is a bulk commodity, where local suppliers benefit from proximity to potential markets. India, Australia, Indonesia, New Zealand, Japan and South Korea are currently reliant on imports from Morocco, Senegal, Peru and Egypt, creating a potential opportunity for Australian producers (Figure 3-6). Emerging Australian producers, including AEV, are pursuing the development of mines producing the raw materials for phosphate chemicals to differentiate them from major international producers and secure higher prices for products for which demand is forecast to increase in coming years. China is a major phosphate producer but uses almost all of its production domestically. This is contributing to China being perceived as an unreliable supplier of phosphate products by overseas clients (Bechtel, 2022)-.



Figure 3-6: Current major Asia-Pacific region phosphate rock importers (green) and suppliers to the region (brown)

Source: (Centrex Metals, 2018)

Avenira is investigating several development options for the Wonarah project, including value adding through production of phosphorus products.



## 3.3 YELLOW PHOSPHORUS INDUSTRY

YP is a highly reactive, white or yellow-coloured, waxy substance that is produced through the heating of white phosphorus in an inert atmosphere to around 250-300°C, which causes it to melt and then vapourise. The vapour is then condensed into a liquid, which solidifies into a waxy substance upon cooling. YP is used in a broad range of industrial applications including the production of fertilisers, pesticides, flame retardants, certain types of plastics and synthetic resins, as well as in the production of semiconductors and other electronic components (Chexngxing, 2023). YP is recognised as a critical material in the LFP battery supply chain. Phosphate rock has been included in the European Union Critical and Raw Materials list.

Major players in the global YP industry include Kazphosphate LLC, Jiangyin Chengxing Industrial Group Ltd and Hubei Xingfa Chemicals Group Co. Ltd. The largest market for YP is the Asia-Pacific region. The global YP market was estimated to be 2,100 kt in 2022, expected to grow at a CAGR of over 5.3% to exceed 3,000 kt annually by 2030 (Chemanalyst, 2023).

Approximately 7.5 tonnes of phosphorus slag are generated during the production of one tonne of phosphorus, composed primarily of calcium oxide (CaO) and silicon dioxide (SiO<sub>2</sub>), with traces of minor components including 2.5—5 wt.%  $Al_2O_3$ , 0.2—2.5 wt.% Fe2O3, 0.5—3 wt.% MgO, 1—5 wt.%  $P_2O_5$ , and a range of trace elements, depending on the characteristics of the source materials used (Criado, Xinyuan, Provis, & Bernal, 2017).

#### 3.4 AUSTRALIAN PHOSPHATE PRODUCTION AND CONSUMPTION

Incitec Pivot's Duchess mine in the Georgina Basin of northwest Queensland, approximately 580 km southeast by road from Avenira's Wonarah project, is the only current phosphate rock producer in Australia. The Phosphate Hill mine is the only significant manufacturer of Monoammonium Phosphate (MAP) and Diammonium Phosphate (DAP) in Australia. The mine currently produces between 730-770 kt of phosphate fertiliser products annually (Incitec Pivot Ltd, 2024). Production utilises natural gas from a major pipeline passing through the site and sulphuric acid sourced from Glencore's copper and lead smelting operations in Mount Isa which will be curtailed with the proposed closure of the Mount Isa copper mine in 2015. The mine's production is shipped by rail to Townsville from where it is shipped to distribution centres throughout Australia for sale to agricultural end users in both bulk and packaged form.

Australia consumes about 400 kt of phosphorus annually, about half of which is produced in Australia (Fertilizer Australia, 2024). The domestic fertiliser market is highly competitive and barriers to entry are low. Major fertiliser products are traded in significant volume on the world market and the only requirement for entry into Australia are strict quarantine regulations.

Avenira, by focusing on phosphate chemicals, is targeting a market segment where there are no current domestic competitors.



## 4. Wonarah Phosphate Project, NT.

## 4.1 PROJECT LOCATION

The Wonarah project is located around 960 km southeast of Darwin, in the Barkly Tableland of the Northern Territory (Figure 4-1). The project is approximately 400 km west of Mount Isa, Queensland and 250 km east of Tennant Creek, NT, close to the Barkly Highway which joins the two towns. The project site the south of the Barkly Highway, approximately 75 km to the east of Barkly Roadhouse.

The coordinate system used in this section is Map Grid of Australia 1994 (MGA94) Zone 53.



Figure 4-1: Location of the Wonarah project.

Source: Avenira



#### 4.2 CLIMATE AND TOPOGRAPHY

Wonarah is in the south-central area of the Barkly region. The climate of much of the Barkly region is semiarid, merging into an arid zone at the southern limit and into a narrow subhumid northern strip adjoining the Gulf of Carpentaria. The climate is monsoonal with well-defined wet and dry seasons, with nearly all rain falling between October and March and the greatest incidence during December and January. Light rains are sometimes received during the dry season, but the period between April and September is frequently dry.

Bureau of Meteorology records show an expected annual rainfall of 602 mm, based on records from the Tennant Creek station.

Monthly temperatures are high throughout the year, particularly in October to March prior to the onset of the wet season. Relative humidity reaches its highest levels in January.

#### 4.3 ACCESS AND INFRASTRUCTURE

Wonarah is accessed via the Barkley Highway, a sealed road between Tennant Creek to the west and Mt Isa to the east (Figure 4-1). The road surface meets national highway standard and provides a secure road access to the mine site, except in exceptional flooding conditions.

The Wonarah site is close to the NGP which could provide natural gas for the manufacture of phosphate products onsite in the future.

#### 4.4 EXISTING LANDUSE

The region is predominantly used for pastoral activities, with large-scale cattle grazing constituting the primary land use. This area is part of the extensive Barkly Tableland, one of Australia's most important pastoral zones due to its vast tracts of semiarid grasslands that are highly suitable for extensive cattle operations. The landscape is dominated by large pastoral stations, including prominent properties such as Barkly Downs and Alexandria, which operate over thousands of square kilometres.

## 4.5 EXPLORATION AND MINING TENURE

## 4.5.1 MINERAL EXPLORATION AND MINING TENEMENTS

Avenira's landholding at Wonarah consists of two granted mining leases and six granted exploration leases with a total area of 1,494.12 km<sup>2</sup>. All leases are 100% held by Minemakers Australia Pty Ltd, a 100% owned subsidiary of AEV (Table 4-1).

The estimated Mineral Resources lie within Exploration Licence EL EL32359 and Mining Lease ML33343 (Main Zone); and EL29840 and ML33344 (Arruwarra), and EL33610, formed by the amalgamation of EL29849 and EL33063 (Figure 4-2).

A significant part of the mineral resources were previously contained within mining lease ML27244. This mining lease was conditionally surrendered in May 2017 to significantly reduce project holding costs. Tenure was maintained over the mineral resources through the granting of the three exploration licences (EL 33062, EL 33192, EL 33193).

Avenira's Wonarah project tenements are considered by ERM to be in good standing according to NT government tenure information accessed online, which ERM considers to be reliable. Independent legal confirmation of this, however, should be sought.



Table 4-1: Avenira's Wonarah tenements

Tenement	EL29840	EL32359	ML33343	ML33344	EL33062	EL33192	EL33193	EL33610
Area (km²)	41.79	98.50	16.86	29.95	371.72	460.99	460.42	13.89
Area (ha)	4,179.0	9,849.7	2,994.7	1,686.0	37,171.7	46,098.9	46,042.4	1,389.0
Granted	19/03/2013	26/05/2020	11/04/2023	11/04/2023	14/10/2022	15/11/2022	15/07/2022	19/10/2023
Exp Requirement: 22-23 (A\$)	-	-			40,600	31,500	31,600	
Exp Requirement: 23-24 (A\$)	10,500	147,200			41,000	45,750	46,000	20,000
Exp Requirement: 24-25 (A\$)								

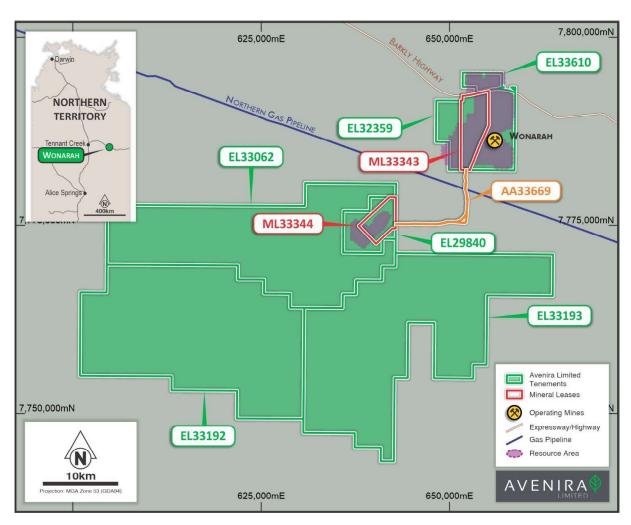


Figure 4-2: Avenira's Wonarah tenements and resource areas.

Source: Avenira



## 4.5.2 RESTRICTED LAND IN THE PROJECT AREA

No restricted land is known within the project tenements.

As per Native Title Agreement over the project, ground disturbing fieldwork is subject to heritage survey clearances which could result in restrictions on exploration activities in some areas.

### 4.5.3 NATIVE TITLE

Wonarah is situated on Arruwurra enhanced freehold land owned by the Arruwurra Aboriginal Corporation (AAC). This results in local Aboriginal Land Councils not being involved in determining access to land or being stakeholders in the project. A mining agreement was signed between Avenira and AAC in July 2023.

### 4.6 EXPLORATION AND DEVELOPMENT HISTORY

The Wonarah area was initially identified as having phosphate potential in 1967 by ICI Australia, however, it was not until the year 2000 that major discoveries were made. These were driven by exploration efforts conducted by Rio Tinto, which undertook more detailed drilling and exploration campaigns. Avenira's drilling database also records drilling completed by a number of other explorers (Figure 4-3).

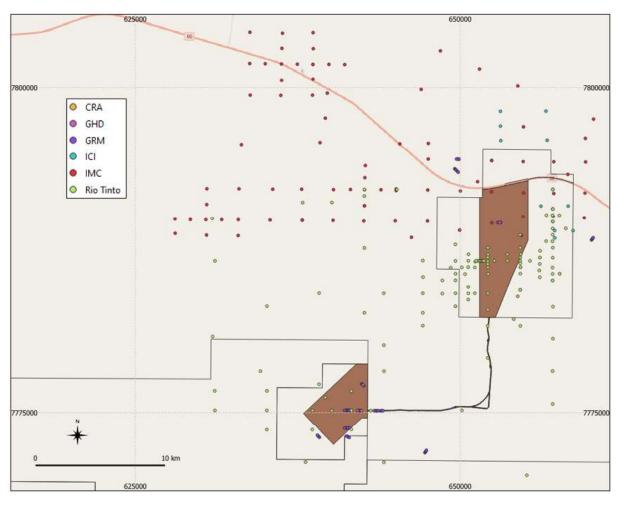




Figure 4-3: Historical Drilling recorded in Avenira's drilling database for the Wonarah project, coloured by company.

Avenira's exploration activities have generally comprised initial broad spaced RC drilling aimed at outlining the extents of the main mineralised zones followed by successively tighter infill drilling designed to improve definition of the distribution of phosphate mineralisation within the broader zones (Figure 4-4). The infill drilling has been focused on higher-grade portions of the mineralisation with drill hole spacings selected based on interpreted local mineralisation trends. Higher-grade portions of the mineralisation which have been the focus of Avenira's closer spaced infill drilling include the basal BPH zone at Arruwurra and higher-grade, generally northeast trending zones within the MPH at Main Zone.

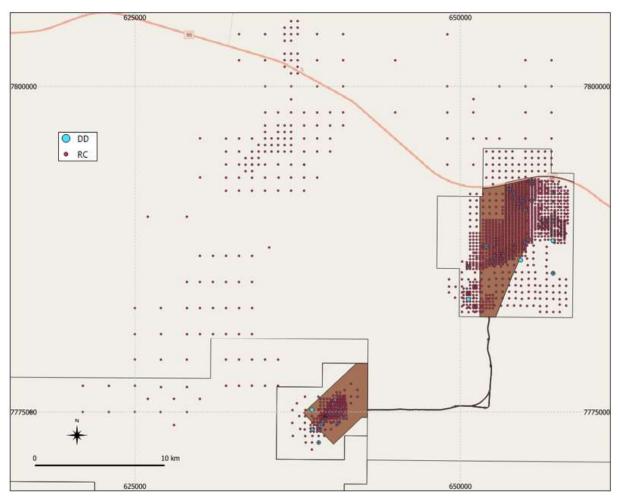


Figure 4-4: Avenira's drilling at the Wonarah project.

Mining to date is limited to a 2009 bulk sampling exercise.

#### 4.7 GEOLOGY AND RESOURCES

## 4.7.1 REGIONAL GEOLOGY

The Wonarah deposit is located within the Georgina Basin, a sedimentary basin containing Early and Middle Palaeozoic sediments which occurs over a broad area of western Queensland and the eastern NT (Figure 4-5). The Georgina Basin contains several significant phosphate



deposits, including the Phosphate Hill deposit which Incitec Pivot has developed to produce ammonia and phosphoric acid used in fertiliser production

The Georgina Basin is subdivided into several subbasins that primarily reflect the thickness of Cambrian deposition. Within the region of the deposit, two subbasins occur, the Brunette and the Undilla, which are made up of Middle Cambrian sediments and volcanics.

Within these subbasins, two geological sequences (the Ordian (510—520 Ma) and the Late Templetonian (510-508 Ma)) have been identified (Figure 4-6). The Ordian sequence consists of Thorntonia limestone (dolomitic siltstone) onlapping onto the Peaker Piker Volcanics which comprise weathered basalt and dolerite.

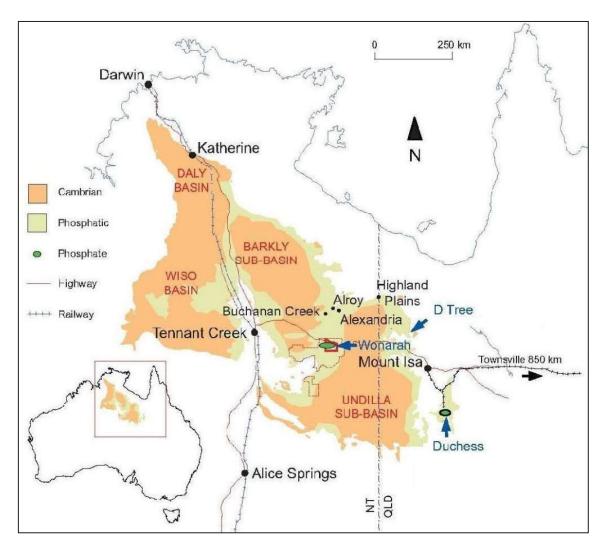


Figure 4-5: Distribution of Late Proterozoic to Early Palaeozoic rocks of the Georgina Basin in western Queensland and eastern NT, Australia.

Source: Avenira

The Late Templetonian unconformably overlies the Ordian. Its basal unit is represented by the Upper Gum Ridge Formation, which consists of mudstone and siltstones variably overlain by brecciated chert and mudstone phosphorite, which hosts the phosphorite mineralisation included in the current estimates.



The Upper Gum Ridge Formation is overlain by the Wonarah Beds which are devoid of significant phosphate mineralisation and comprise of mudstone, siltstone and dolostone with minor nodular chert.

Several metres of aeolian sands and variably developed, locally outcropping silcrete, ferricrete and calcrete overlays most of the Wonarah area.

#### 4.7.2 DEPOSIT GEOLOGY AND MINERALISATION

There are two mineral deposits at Wonarah: the Main Zone and the smaller, shallower and slightly higher-grade Arruwurra deposit. These are hosted by flat lying to gently undulating phosphorite bearing sedimentary rocks of the Upper Gum Ridge Formation.

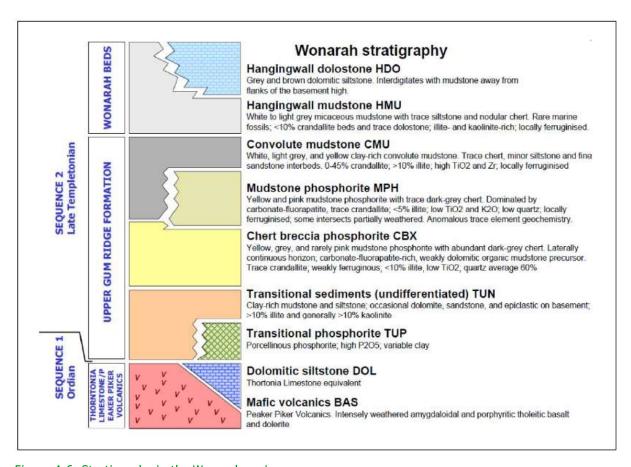


Figure 4-6: Stratigraphy in the Wonarah region.

Source: Avenira

Avenira subdivide the Upper Gum Ridge Formation into four units which are listed in stratigraphic (top down) order in Figure 4-6.

Four phosphate horizons are recognised, two in the Arruwarra deposit and two in the Main Zone. These units are interpreted to occupy similar stratigraphic positions but are distinguished due to lithological and mineralogical differences. In the Arruwarra deposit, mineralisation is present in a main mudstone phosphorite unit (APH) with an internal basal indurated high phosphate grade unit (BPH). Mineralised domains interpreted for Main Zone comprise a mudstone phosphorite (MPH) unit underlain by Chert Breccia Phosphorite (CBX) and



undifferentiated Transitional Sediments (TUN) which contain locally developed and generally discontinuous beds of high-grade porcelaneous mudstone phosphorite designated as transitional phosphorite (TUP). Thin discontinuous zones of elevated phosphate grades within mudstone above the main mineralised envelope are designated as CMU.

The Transitional Undifferentiated sediments (TUN) unit shows generally only low phosphate grades. Higher-grade portions include rare generally discontinuous beds of high-grade porcelaneous mudstone phosphorite designated as transitional phosphorite (TUP).

The chert (breccia) fragments within the CBX unit are interpreted to represent silicified phosphatic dolostone bands, replaced by silica during diagenesis, and brecciated through post-depositional collapse processes.

The mudstone phosphorite (MPH) unit is commonly friable with typically medium to high phosphate grades. At Arruwurra this unit is designated as APH and locally includes a visually distinct indurated, high-grade phosphorite basal unit designated as the Basal Phosphorite (BPH).

The Convolute Mudstone (CMU) overlies the main mineralised zones and generally contains only low-grade phosphorus values interpreted to be of supergene origin with rare, discontinuous high-grade mudstone phosphorite interbeds.

The mineralised domains used for resource estimation reflect the rock units described above and were interpreted based on Avenira's geological logging and one metre down-hole composited assay grades. These domains are gently undulating, with an overall gentle dip of less than one degree towards the south and west. The distribution of the mineralised domains interpreted for Arruwurra and Main Zone is summarised below.

At Arruwurra, the CBX unit is less well developed than at Main Zone. The majority of Arruwurra phosphate mineralisation is hosted by the APH unit which averages around 6 m thick. The Arruwurra domains cover an area around 6 x 2.5 km. The high-grade basal BPH zone is developed in central portions of the deposit with an average interpreted thickness of approximately 1.6 m over an area around  $0.9 \times 2.2$  km. The mineralisation trends northeast-southwest, outcropping in the northeast and sloping shallowly to the southwest. It reaches depths of about 55 m; however, a substantial proportion of the mineralisation is within 30 m of the surface. A cross-section of Arruwurra is shown in Figure 4-7.

Main Zone mineralised domains are interpreted to cover an area around 10 km east-west by 14 km north-south. The MPH and CBX domains dominate the Main Zone resources and contain around 96% of combined Measured and Indicated Mineral Resources estimated for this deposit at a cut-off grade of  $10\%\ P_2O_5$ . The MPH domain averages approximately 4 m thick. CBX mineralisation is significantly more continuous than the MPH zone. It is interpreted over most of the Main Zone area with an average thickness of around 4 m. The TUP and CMU mineralised domains represent comparatively small, discontinuous zones that are generally intersected by only a small number of drill holes. Overall, the combined thickness of the mineralised sequence is about 10 m. The mineralisation reaches depths of about 75 m, however, most of the mineralisation is within 50 m of the surface. A cross-section of Main Zone is shown in Figure 4-8.

#### 4.7.3 MINERAL RESOURCE ESTIMATION

The Mineral Resource Estimate for the Wonarah deposit reported in June 2022 is,



- 533 Mt at 21% P<sub>2</sub>O<sub>5</sub>, based on a 15% P<sub>2</sub>O<sub>5</sub> cut-off grade; and
- 812 Mt at 17% P<sub>2</sub>O<sub>5</sub> based on a 10% P<sub>2</sub>O<sub>5</sub> cut-off grade.

The Wonarah resource model was re-evaluated in September 2023 with a 27% P<sub>2</sub>O<sub>5</sub> cut-off grade. At this cut-off grade, the resultant Mineral Resources estimate is 66 Mt at 30% P<sub>2</sub>O<sub>5</sub>.

Table 4-2 summarises the combined Wonarah mineral resource estimates. The figures in this table are rounded to reflect the precision of the estimates and include rounding errors.

Table 4-3 provides a breakdown of the latest resource estimate for the project at a 27% P<sub>2</sub>O<sub>5</sub> cut-off grade broken down by deposit (Abbott, 2022). The Arruwurra zone Mineral Resource comprises only 6% of the total phosphate resource for the project above a 27% P₂O₅ cut-off and is slightly higher-grade than the remainder of the deposit.

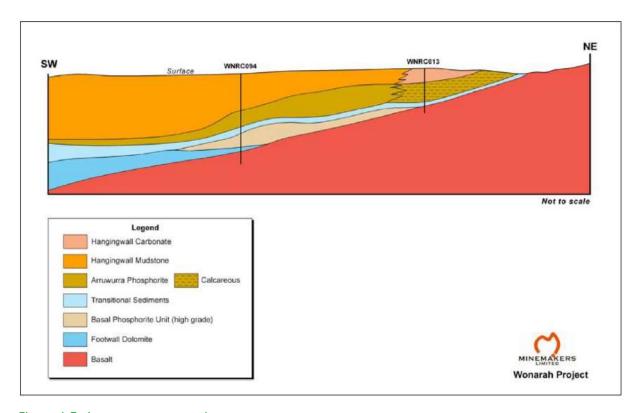


Figure 4-7: Arruwurra cross-section.

Source: Avenira



CLIENT: Avenira Limited PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024 VERSION: 3.2

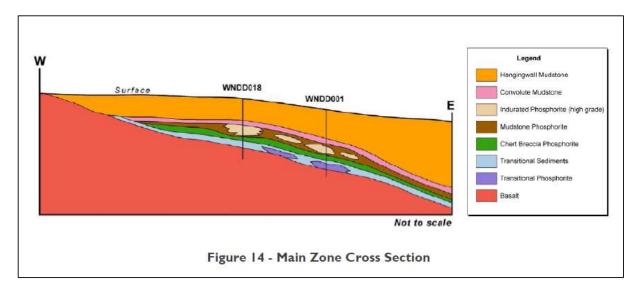


Figure 4-8: Main Zone cross-section.

Source: Avenira

Figure 4-9 and Figure 4-10 show the extents of mineralisation included in the current estimates relative to the tenement boundaries.



CLIENT: Avenira Limited PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

Table 4-2: Wonarah Mineral Resource Statement.

Cut-off	Resource	Tonnes	P <sub>2</sub> O <sub>5</sub>	Al <sub>2</sub> O <sub>3</sub>	Ca0	Fe <sub>2</sub> 0 <sub>3</sub>	K <sub>2</sub> 0	MgO	MnO	Na <sub>2</sub> 0	SiO <sub>2</sub>	Ti0 <sub>2</sub>
P <sub>2</sub> O <sub>5</sub>	Category	Mt	%	%	%	%	%	%	%	%	%	%
	Measured	28'3	20.8	4.85	28.0	1.11	0.43	0.25	0.04	0.10	39.7	0.21
	Indicated	222.0	17.5	4.75	23.2	1.49	0.47	0.20	0.04	60'0	48.3	0.22
10%	Meas+Ind	300.3	18.4	4.78	24.5	1.40	0.46	0.21	0.04	60.0	46.1	0.22
	Inferred	512.0	18.0	4.80	24.0	2.10	05.0	0.20	0.08	0.05	46.0	0.20
	Total	812.3	18.1	4.79	24.2	1.84	0.49	0.20	0.07	0.07	46.0	0.21
	Measured	6.49	22.4	4.47	30.0	1.10	0.37	0.19	0.04	60'0	37.0	0.19
	Indicated	133.0	21.1	4.77	28.0	1.53	0.47	0.21	0.04	60'0	39.7	0.22
15%	Meas+Ind	197.9	21.5	4.67	28.7	1.39	0.44	0.20	0.04	60.0	38.8	0.21
	Inferred	352.0	21.0	4.50	28.0	2.00	0.50	0.20	0.10	0.08	39.0	0.20
	Total	549.9	21.2	4.56	28.2	1.78	0.48	0.20	0.08	0.08	38.9	0.20
	Measured	3.4	30.9	3.14	42.1	0.85	0.18	0.19	0.05	0.08	18.0	0.14
	Indicated	9'6	30.0	3.43	38.8	1.14	0.28	0.11	0.03	0.08	24.7	0.15
27%	Meas+Ind	13.0	30.2	3.35	39.7	1.06	0.25	0.13	0.04	0.08	22.9	0.15
	Inferred	53.0	30.0	3.10	40.0	1.30	0.30	0.10	0.10	0.06	22.0	0.10
	Total	0'99	30.0	3.15	39.9	1.25	0.29	0.11	60.0	90.0	22.2	0.11

Source: Avenira.



DATE:21 October 2024 VERSION: 3.2

Table 4-3: Wonarah project Mineral Resource, by Prospect at 27% P<sub>2</sub>O<sub>5</sub> cut-off

	Ore Type Category	Measured	Arruwurra Indicated (BPH)	Total	Indicated	Main Zone Inferred	Total	Main Zone Inferred (TUP)	Combined Inferred Total		Total	
urce Tonnes	gory Mt	red 3.4	ted 0.6	4.0	ted 9.0	ad 37.0	46.0	ed 16	red 3.4	ted 9.6	ed 53.0	0.99
												-
P <sub>2</sub> O <sub>5</sub>	%	30.9	30.7	30.9	30.0	30.0	30.0	30	30.9	30.0	30.0	30.0
Al <sub>2</sub> O <sub>3</sub>	%	3.14	2.95	3.11	3.46	3.30	3.33	2.5	3.14	3.43	3.06	3.12
Ca0	%	42.1	41.8	42.1	38.6	40.0	39.8	40	42.1	38.8	40.0	39.9
Fe <sub>2</sub> 0 <sub>3</sub>	%	0.85	1.05	0.88	1.15	1.30	1.27	1.3	0.85	1.14	1.30	1.25
K <sub>2</sub> 0	%	0.18	0.20	0.18	0.29	0:30	0:30	0.2	0.18	0.28	0.27	0.27
MgO	%	0.19	0.22	0.19	0.10	0.10	0.10	0.1	0.19	0.11	0.10	0.11
Mn0	%	0.05	0.05	0.05	0.03	0.04	0.04	60'0	0.05	0.03	0.10	60.0
Na <sub>2</sub> 0	%	80'0	80'0	80.0	0.08	0.07	0.07	0.04	80'0	80'0	90'0	90.0
Si0 <sub>2</sub>	%	18.0	18.6	18.1	25.1	21.0	21.8	23	18.0	24.7	21.6	21.9
Ti0 <sub>2</sub>	%	0.14	0.13	0.14	0.15	0.10	0.11	0.2	0.14	0.15	0.13	0.13

Source: Abbott (2022)



DATE:21 October 2024 VERSION: 3.2

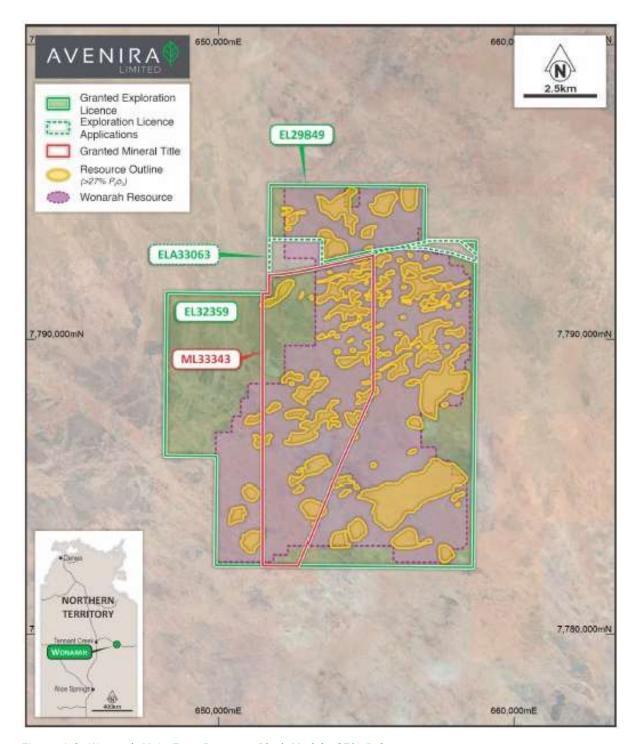


Figure 4-9: Wonarah Main Zone Resource Block Model >27% P<sub>2</sub>O<sub>5</sub>.

Source: Avenira.



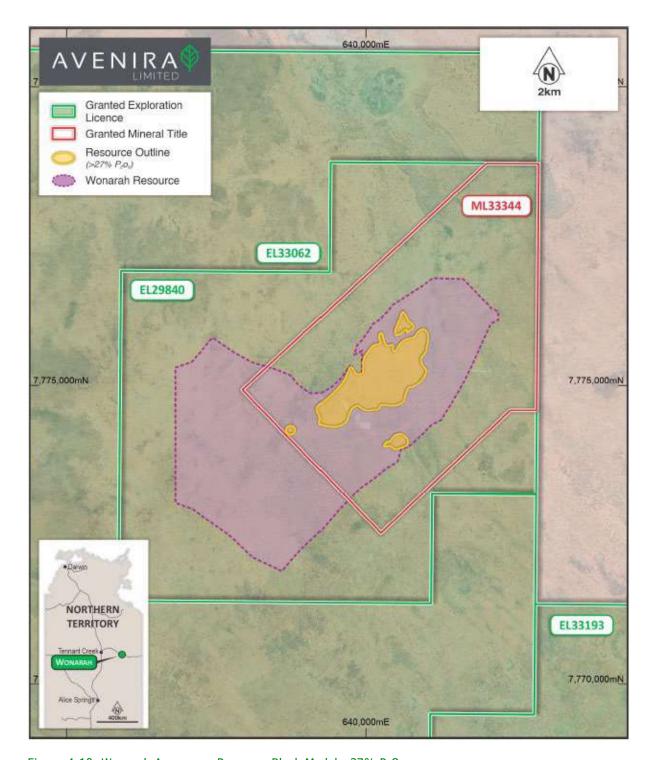


Figure 4-10: Wonarah Arruwurra Resource Block Model >27% P<sub>2</sub>O<sub>5</sub>.

Source: Avenira.

## 4.7.4 MINERAL RESOURCE CLASSIFICATION

The Mineral Resources are classified as Measured, Indicated, and Inferred on the basis of estimation search passes and plan view polygons defining areas of relatively consistent drill spacing. The classification scheme varies between mineralised domains and cut-off grades



CLIENT: Avenira Limited PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

reflecting the differences in grade continuity between different zones, and the decreasing continuity of the mineralisation with increasing  $P_2O_5$  cut-off grades.

For  $P_2O_5$  cut-off grades of 10% and 15% Measured resources include estimates for Arruwurra mineralisation tested by 125 x 125 m spaced drilling and Main Zone MPH mineralisation tested by 125 x 62.5 m drilling. Indicated resources include Arruwurra mineralisation and Main Zone MPH, CBX and TUN mineralisation tested by 250 x 250 m spaced drilling. Inferred Mineral Resources include all estimates for the Main Zone CMU and TUP domains and estimates for the other mineralised domains tested by drilling spaced at broader than 250 x 250 m generally to around 500 x 500 m.

Mineral Resources at 27%  $P_2O_5$  cut-off include mineralisation within the Arruwurra BPH domain, and the MPH and TUP domains at the Main Zone. At this cut-off grade estimates for BPH mineralisation tested by  $125 \times 125$  m and  $250 \times 250$  m spaced drilling are classified as Measured and Indicated respectively, with estimates for more broadly sampled mineralisation classified as Inferred. For Main Zone, MPH mineralisation tested by  $250 \times 250$  m spaced drilling is classified as Indicated, and all other estimates including more broadly sampled portions of the MPH domain and all estimates for the TUP domain classified as Inferred Resources.

The current estimates are primarily based on results from Avenira's RC and diamond sampling. Data from a small number of holes drilled by previous tenement holders were included to provide information in areas of limited Avenira's sampling. Information available to demonstrate the reliability of the sampling and assaying for Avenira's drilling includes recovered sample weights, field duplicates, reference standards and inter-laboratory repeats. Additional confirmation of the reliability of RC sampling is provided by comparison of results from nearby RC and diamond holes.

ERM considers that quality control measures undertaken by Avenira have established that the RC sampling is representative and free of any biases or other factors that may materially impact the reliability of the sampling, and analytical results. The sample preparation, security and analytical procedures adopted by Avenira provide an adequate basis for the current Mineral Resource estimates.

Resources were estimated by Ordinary Kriging of one metre down-hole composited assay grades within mineralised domains interpreted for Arruwurra and Main Zone. The estimates reflect Avenira's current conceptual development plans for the project which comprise a large-scale operation feeding a beneficiation plant with mineralisation defined at comparatively low  $P_2O_5$  cut-off grades. Zones of mineralisation were established predominantly at grades of 10%  $P_2O_5$  or higher. The estimates include  $P_2O_5$ ,  $Al_2O_3$ , CaO,  $Fe_2O_3$ ,  $K_2O$ , MgO, MnO,  $Na_2O$ ,  $SiO_2$  and  $TiO_2$  grades with variograms modelled for each attribute. The estimates include bulk densities of 1.7 to 2.0 t/bcm derived from 520 immersion density measurements performed on core samples from Avenira's diamond drilling.

ERM proposes that the project would benefit from further work to confirm the adequacy of 125 m x 125 m spaced drilling to classify Mineral Resources as Measured at high  $P_2O_5$  cut-off grades (Table 4-4). The current Mineral Resource Classification has, however, been systematically applied by AEV and is considered suitable for the purposes of this report by ERM.



Table 4-4: Drill hole spacing criteria used in Mineral Resource Classification

	Main Zone	Arruwurra
Measured	125 x 62.5	125 x 125
Indicated	250 x 250	250 x 250
Inferred	>250 x 250	>250 x 250

# 4.7.5 WONARAH PHOSPHATE ROCK QUALITY

Chemical grade phosphate rock used in fertiliser and YP manufacturing should contain at least 24%  $P_2O_5$  (between 28.7% and 31.2% is most desirable), less than 3.0%  $Fe_2O_3$ , and have a  $CaO:P_2O_5$  ratio between 3.3:1 and 3.6:1. The Minor Element Ratio (MER), a frequently used indicator of phosphate rock purity when used in fertiliser production is higher than for other major phosphate rock sources, but not excessive. Low MER material is preferred for fertiliser manufacture (Table 4-5).

Table 4-5: Wonarah phosphate rock quality characteristics

Quality Parameter	Specification	Value
Phosphorus (P <sub>2</sub> O <sub>5</sub> %)	>24%	30.1
Preferred (P <sub>2</sub> O <sub>5</sub> %)	28.7%—31.2%	30.1
Fe <sub>2</sub> O <sub>3</sub> %	<3.0%	1.25
CaO:P <sub>2</sub> O <sub>5</sub> ratio	3.3—3.6	1.33
MER		14.9

Only a small proportion of samples have been analysed for trace elements that may restrict phosphate rock transport and utilisation, including chlorine, fluorine and heavy metals (As, Cd, Cr, Cu, Hg, Mn, Ni, Pb, Ti, V, U, Zn). Copper and zinc may be permitted at higher concentrations in fertilisers for use in Europe where these metals are specifically required to correct natural deficiencies in soils (Ryszko, Rusek, & Kolodynska, 2023). Other Georgina Basin deposits have ubiquitously low trace element and heavy metal contents, but it may be beneficial to have a representative set of analyses for Wonarah phosphate rock.

Figure 4-11 (below) shows the distribution of the samples assayed for any of these elements. Further work is required to determine if these data are representative of the deposit overall.



PROJECT NO: 0749204 AEVITV01
REPORT: R258.2024

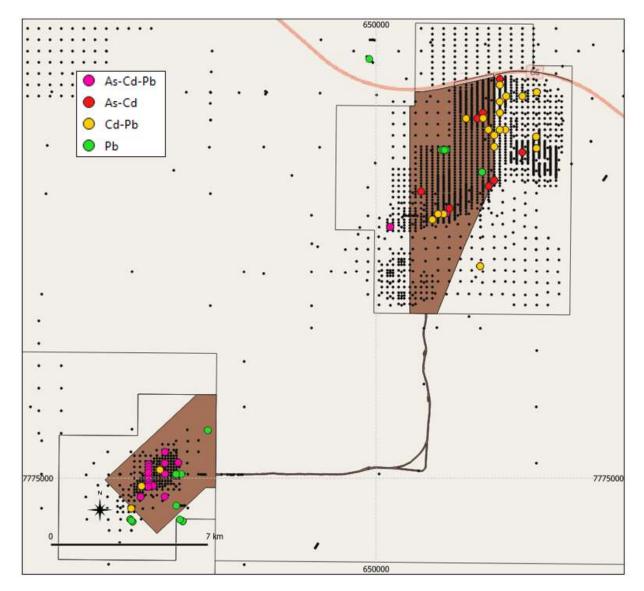


Figure 4-11: Distribution of samples with Arsenic, Cadmium and/or lead assays

# 4.8 PROPOSED MINING

# 4.8.1 MINING APPROACH

Phosphate Rock is a relatively low unit-value commodity. Consequently, most phosphate rock operations tend to be open cut mines with high production rates and, ideally, reasonably short transport distances to major markets, although, value added products are being traded globally.

The proposed mining approach is outlined in the project's feasibility studies, the most recent of which examining a DSO proposal was completed in 2023 (Mining Plus, 2023).

Avenira propose mining the Arruwurra deposit using conventional open pit truck and excavator mining. The mining process will primarily entail progressive stripping and selective ore mining, with limited drill and blasting operations.



An experienced mining contractor will undertake the mining operations. The contractor will establish essential mining facilities, including a mobile equipment workshop, tyre bay, warehouse, laydown yard and fuel and oil facilities.

Excavators will load BPH and APH material and waste on 2.5 m benches, BPH and APH material will be transported to the Run of Mine (ROM) pad, while waste material will be deposited in an ex-pit waste dump. Waste material from the pre-stripping operation will be used for the construction of ROM pads and haul roads. Ancillary equipment, such as tracked dozers, graders, water carts and lighting plants will be used to support the operation and assist with pit development.

Limited drill and blast on 5-10 m benches will be required, but operations will be mostly comprised of free digging activities. The mining contractor will handle the magazines and explosives.

ROM will then be blended, crushed and screened to meet DSO product specification. ROM will be hauled and stockpiled at a dedicated storage facility adjacent to the primary crusher from the multiple locations in the pit. BPH material will then be reclaimed from stockpiles and blended into the crusher to meet DSO grade and physical quality targets.

The mine plan focuses exclusively on the Arruwurra deposit and does not consider any mining of the orebody at Main Zone. Subject to a decision to extend the life of the DSO Project, Avenira may look to incorporate mining at Main Zone to increase production.

A mining model was created to estimate material loss using a 200 mm boundary on both upper and lower material bounds, resulting in a 14% material loss estimated for the selected mining method within the pit design.

#### 4.8.2 FEASIBILITY STUDY REVIEW

ERM reviewed the feasibility study (Mining Plus, 2023) and makes the following observations:

- 1. The mining contract rate of A\$6.35 per tonne is considered to align with industry norms, although it is not clear whether ancillary equipment detailed in the feasibility study are included.
- 2. Diesel used by ancillary operations is included in the study financial model.
- 3. Diesel consumption for proposed operations (A\$495,915) may not reflect variability in haul distances. The diesel cost allocation for the APH (800 m) and BPH (50 m) ROM material rehandle is a monthly estimate of A\$130,000. There is no account of the variable haul distances and tonnes across the financial model.
- 4. Contract mining estimates were obtained from several contractors, but only details of the preferred estimate were provided for review. ERM would prefer to review all submissions to confirm confidence in estimates and to ensure that significant items have not been overlooked.
- 5. The mining costings used in the feasibility study, in ERM's view, do not provide an appropriate level of detail for a feasibility study. The mining component of a feasibility study should typically be supported by sufficient process and life cycle detail to align with an Association for the Advancement of Cost Engineering (AACE) class 3 study. Contractor assessments need a similar level of detail and should be obtained from at



CLIENT: Avenira Limited PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

least three independent vendors or independent contracting shadow estimate specialists.

- 6. The mobile crushing and screening rate of A\$8.75 per tonne aligns with industry norms. The loading and hauling rates for the crushing process align with industry norms for this type of operation.
- 7. A closure management plan has been developed for the project which is discussed in the DSO project feasibility study (Mining Plus, 2023). The proposed dumps require reshaping and profiling to provide long term stability and drainage, and the open pits created by mining will be backfilled as much as possible.
- 8. There are no grade control costs included in the study. Some form of grade control will be required to ensure that DSO specifications are met.
- 9. Capital expenditure for:
  - water supply and storage facilities
  - fuel facilities
  - power infrastructure and supply
  - technical resources (hardware, software, communications infrastructure)
  - other owner related costs

are mentioned in the mining capital section of the feasibility study (Mining Plus, 2023) but are not addressed in the contractor estimate.

- 10. The crushing and screen process schedule defines a monthly process rate of 40,000 tonnes for 23 months. The feasibility study is silent on the planned operated hours, throughputs, mechanical availabilities and planned maintenance schedules.
- 11. The cost of infrastructure required to support a 24/7 paramedic at site do not appear to have been considered in the feasibility study.
- 12. Given the experience of Esperance and Bunbury ports in Western Australia with the shipment of bulk products, the feasibility study and cost estimate have not considered a sustainable environmental plan for transferring products from containers to cargo sizes ranging from 25,000 to 50,000 tonnes at the Port of Darwin.
- 13. Closure and rehabilitation costs have not been included in the feasibility study. The study does recognise the importance of this work and the need for the design of pits, waste dumps and infrastructure being undertaken with consideration to minimising post-mining works. Rehabilitation and closure activities need to be undertaken progressively as mining advances in areas where mining has been completed, and the need for closure landforms to be consistent with agreed post-mining land use and the surrounding landscape. The feasibility study states that a Mine Closure Plan to be developed by SLR Consulting Australia for the Wonarah site will comply with NT government regulations governing mine development and closure and is in preparation. Rehabilitation and closure costs are able to be reasonably estimated using the type and area of disturbance associated with mining operations and should be included in the feasibility study.



PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

The feasibility study includes a 10% contingency in the cost estimates which ERM proposes may not be adequate to cover closure of the site, and required environmental management that will be required at the Port of Darwin. There is also an environmental bond process in the Mine Management Plan (MMP) which includes an estimated rehabilitation cost-based on the nature and area of different types of land disturbance associated with the project. This will be addressed by ERM in the valuation opinion for the project.

These issues are not considered sufficiently material to affect conclusions regarding the valuation of the project for the purposes of this report.

# 4.9 ORE PROCESSING AND BENEFICIATION

Avenira completed a feasibility study in 2010 which was updated in 2023 on the principles of Direct Shipping Phosphate ore for sale from the Port of Darwin.

BPH lump ore (10-50 mm) is suited to the production of YP (and ultimately thermal phosphoric acid, a critical input into the manufacture of LFP cathodes). BPH lumps are intended to be transported to the Port of Darwin via a combination of road and rail, for export to international clients with off-take agreements and for use in the proposed YP plant.

BPH Fines (<10 mm) will also be exported overseas, targeting the single superphosphate (SSP) market, the downstream fertiliser industry or phosphate chemicals including YP and phosphoric acid production. SSP involves mixing phosphate rock with sulphuric acid to enhance phosphate solubility and form hard granules ranging from 2 mm to 5 mm in size. The rock is crushed and milled before mixing with sulphuric acid, allowing for the use of a wide range of sizes and rock types. Phosphate chemicals production would rely on a plant constructed in Darwin or elsewhere on the Adelaide to Darwin railway, or shipping ore from the Port of Darwin to an existing or newly constructed overseas site.

APH material will be targeted at the domestic agricultural market as a DAPR and will be sold as a bulk product or in 1 t bulk bags at the mine gate, targeting local farmers and fertiliser traders.

A subsequent update to the Direct Shipping model was released by Avenira incorporating a revised resource and mining method while entertaining a crushing and screening process in order to generate the below product streams displayed in Table 4-6.

The key processing principles of the proposed Avenira Wonarah Phosphate project hinge on the principles of Direct Shipping Operations in order to generate the premium product/s of single superphosphate (SSP) or Thermal Lump from the in situ resource. This is driven by the grade of the primary +10mm lump phosphate aimed at 32%  $P_2O_5$  product will still be entirely driven by the in situ grade of the material and how it is managed through the mining process.

Both BPH and APH DSO will be processed via an onsite mobile crushing and screening plant, producing the three distinct product specifications: BPH lumps (10-50 mm), BPH Fines (<10 mm), and Crushed APH Ore. BPH and APH ores will be campaigned separately through the plant.



Table 4-6: Marketable product details

Product	Full Product Name	Specif	ications	Ore Source
		Size (mm)	Grade (P <sub>2</sub> O <sub>5</sub> %)	
DAPR	Direct Application Phosphate Rock	0 to 2	20% average	APH or BPH
SSP	Single Super Phosphate	0 to 5	28% average	ВРН
Thermal Lump	Thermal Grade	10 to 50	28% minimum	ВРН

Source: Avenira.

Two key processing improvements have been adopted in the 2023 study (Mining Plus, 2023) over that which was considered in the 2010 DSO Study in order to facilitate a greater degree of operational and production flexibility aiming to address, or entertain, the key following project drivers.

- A campaign approach to processing by which lower-grade BPH (basal high-grade phosphate) material and APH (mudstone phosphorite) units are processed to produce a lower quality product as opposed to being considered waste. Or co-treated with the high-grade BPH entertaining serious variation and risk to the overall product quality and saleability of the primary product.
- 2. A Crushing and Screening Operation has been added in order to facilitate a size separation at 10mm by which the premium lump product can be isolated from the "fines" fraction to affect a grade separation of the BHP material into the two product fractions for BPH lump and fines.

The lump product chemical characteristics based on an ore sample treated and analysed by CMPI in 2022 are presented in Table 4-7.

Table 4-7: 2022 Lump Product Characteristics

Analyses / Tests	Unit	Results	Requirements
P as P <sub>2</sub> O <sub>5</sub>	%	33.66	> 28.0
Al as Al <sub>2</sub> O <sub>3</sub>	%	1.27	< 0.65
Mg as MgO	%	0.17	< 0.35
Ca as CaO	%	47.52	< 46.5
Fe as Fe <sub>2</sub> O <sub>3</sub>	%	0.65	< 1.9
Arsenic, As	ppm	3.00	< 20.0
Lead, Pb	ppm	222.48	-
Sulphur, S	%	0.35	-
SiO <sub>2</sub>	%	9.89	> 10.0
CO <sub>2</sub>	%	5.98	< 6.25
Tumbler Index (TI)	%	86.57	> 97.0
Abrasion Index (AI)	%	8.41	< 0.2

Source: Avenira.

It is unclear how much mass was processed in order to generate this sample. Avenira project staff believe that the test work described in Table 4-7 comprised approximately 20 litres of



CLIENT: Avenira Limited
PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024
REPORT: R258.2024 VERSION: 3.2

material. However, it does reflect the fact that the Wonarah phosphate product envisaged for sale is a relatively clean product in relation to deleterious elements by which the combined As, Mg and Fe is well below 5 % and the arsenic and sulphur grades are well within acceptable limits. Only lead appears to be slightly elevated but should not have a bearing on the inherent value of the product.

In relation to the resource average material, this sample appears to be comparatively lower in silica (SiO2) which is detailed at 14-20 % as opposed to the 9.9 % reported here, it can thus be assumed that the calcite content is elevated when compared to that of the resource average (47.5 % CaO) indicating it has had some degree of mudstone incorporated in the composite as opposed to pure BPH.

Looking at the product size distribution generated from what appears to be a P100 25mm crush two key conclusions can be made (Table 4-8, Figure 4-12).

Table 4-8: Lump BPH product size distribution

Sieve Size	Mass Retained (%)
> 25 mm	0.00
20 -25 mm	1.48
16 - 20 mm	6.20
12.5 - 16 mm	29.71
10 - 12.5 mm	54.95
5 - 10 mm	6.98
2 - 5 mm	0.15
< 2 mm	0.53



Figure 4-12: Lump BPH size distribution



CLIENT: Avenira Limited
PROJECT NO: 0749204 AEVITV01
REPORT: R258.2024

DATE:21 October 2024 VERSION: 3.2 Samples were splits from a 12.7 mm crush of drill core, resulting in no mass greater than 20mm being available for testing. There is a considerable amount of mass (55 %) sitting right on the product separation line between 10 and 12.5 mm. This introduces some degree of risk as to the assumed 60 /40 % mass distribution between SSP and thermal lump product ratios generated from the crushing and screening unit operation as well as bulk material handling from mine to product. Control of the top size of the crush in order to affect the desired product mass split will take some trial and error in the early phase of operation. ERM proposes that this does not constitute a material economic risk.

The criteria outlined in Table 4-9 are used as modifying factors in the project's Ore Reserve model. The mineral resource at a 27%  $P_2O_5$  cut-off grade is presented in Table 4-3.

Table 4-9: Ore Reserve Modifying Factors

Model Parameter	Unit	Metric		
Mining Dilution	%	0		
Mining Recovery	%	87.3		
Product Price 10-50 mm	USD/t 260			
Product Price <10 mm	USD/t	260		
Payability	%	100		
Processing Rate	tpa shipped	300,000		
Product Yield (10-50mm)	%	40		
Product Yield (<10mm)	%	60		

Source: Avenira.

The complete revenue factor (RF) 0.64 open pit shell described in the project's feasibility study produces 675 kt of BPH at a 27 %  $P_2O_5$  cut-off grade. The Mineral Resource Estimate (Table 4-3) confirms that the bulk of the tonnes processed from Main Zone will present with an average head grade of 30.0 %  $P_2O_5$ .

The introduction of the crushing and screening operation and generation of two products introduces a beneficiation component that will likely present on an ore component hardness basis by which the harder ore component of phosphorite (4.9-5.5 hardness) will upgrade in the coarser fraction and softer shattering mineral species will concentrate in the finer (<10mm) fraction creating a grade bias.

Creating a simple mass balance and assuming that the coarse lump product does indeed upgrade to a grade of 33 %  $P_2O_5$ , then the SSP or -10mm product will satisfy the specification grade of 28 %  $P_2O_5$  (Table 4-10).

Table 4-10: Theoretical Lump Upgrade Production Equation

	Pit Shell RF 0.64	Lump Product (10-50mm)	SSP Product (<10mm)
P <sub>2</sub> O <sub>5</sub> Grade %	30.0	33.0	28.0
% by Mass	100	40	60
Contained Tonnes	675000	270000	405000



PROJECT NO: 0749204 AEVITV01
REPORT: R258.2024

In the absence of specific size by assay data on a bulk representative sample, the expected product distribution from both a mass and grade perspective may witness significant variation in operation from that modelled.

From an economic perspective, ERM conclude that there is more than likely a premium that should be applied to the thermal lump product value which is likely to present with an upgraded  $P_2O_5$  content of certainly > 30 %, potentially 32-33 %, and the SSP product will by default be on, or very close to the specification point of 28 %  $P_2O_5$ .

The feasibility study alludes to the fact that ROM stocks and feed blending of the BPH mined will be scarce and the mining, processing and logistics is very streamlined. This leaves little opportunity to address any imbalance observed in product mass distribution or quality. Thus, there will be a heavy onus on grade control sampling prior to crushing in order to understand what the production profile will look like and ensure that the SSP product does not continually fall out of specification by which the grade is lower than 28 %  $P_2O_5$ .

As mentioned in the opening of this section, the process and production will still be predominantly driven by the principles of DSO production by which all the economic outcomes will be entirely driven by that which is presented to the plant. A fair degree of homogeneity is required for smooth operation and ensuring each bulk parcel will meet the specified product and sales specification.

ERM conclude the three-phase product approach is a much more targeted, and operationally flexible approach to achieving the economic outcome than that of Direct Shipping originally entertained however, poor mining practices, discontinuity and internal dilution of the resource remain the key risks to the economic outcome.

BPH lump ore (10-50 mm) is suited to the production of YP (and ultimately thermal phosphoric acid, a critical input into the manufacture of LFP cathodes). BPH lumps are intended to be transported to the Port of Darwin via a combination of road and rail, for export to international clients with off-take agreements until the YP plant is commissioned.

BPH Fines (<10 mm) will also be exported overseas targeting the SSP market and the downstream fertiliser industry. SSP involves mixing phosphate rock with sulphuric acid to enhance phosphate solubility and form hard granules ranging from 2 mm to 5 mm in size. The rock is crushed and milled before mixing with sulphuric acid, allowing for the use of a wide range of sizes and rock types.

APH material will be targeted into the domestic agricultural market as a DAPR and will be sold as bulk ore or in 1 t bulk bags at mine gate, targeting local farmers and fertiliser traders.

# 4.10 PROJECT VALUATION OPINION

The Wonarah project may be valued using several approaches, in terms of an exploration opportunity, identified Mineral Resource and a resource development project that has been subject to feasibility studies. Several approaches have been followed by ERM to provide both technical and market value opinions.

It is important to note that market valuations are opinions that involve a subject assessment of the project's value that are the opinion of the valuer and can only be tested by taking the project to market.



# 4.10.1 COMPARABLE TRANSACTIONS

Analysis of comparable transactions forms the basis of an opinion of the market value of the project. ERM completed a global review of comparable transactions in a period of 10 years prior to the effective date of this report (2014-2024) using the S&P Capital IQ commercial transactions database which covers global mining and mineral resources M&A activity (S&P, 2024). In all, 15 transactions involving the sale of projects with reported Ore Reserves and Mineral Resources were identified (Table 4-11). These transactions provided values of between US\$0.58 and US\$8.32 per tonne for Ore Reserves, and US\$0.01 and US\$3.80 per tonne for Mineral Resources. Only four projects identified had reported Ore Reserves. These were not considered in valuing Wonarah mineralisation. An Ore Reserve for the project was included in a 2010 feasibility study. This study, however, used different product specifications than the current study resulting in this estimate not being applicable in the context of the current project.

Mineral Resources were reported for all 15 transactions examined by ERM. Values per tonne range from less than US\$0.01 per tonne and US\$3.80 per tonne in the complete dataset. The five lowest values, all less than US\$0.10 per tonne, were discarded for being anomalously low in ERM's view. The remaining 10 transactions had effective values of US\$0.18/tonne to US\$3.80/tonne, with a geometric mean of US\$0.82/tonne. These represent between 0.12% and 2.50% of the US\$152.50/tonne phosphate rock price used in this report.

ERM also identified a further 17 transactions where phosphate projects without Mineral Resources were sold in their entirety, or equity in projects was acquired by third parties (Table 4-12). These results are not immediately applicable to developing a valuation opinion for the Wonarah project, other than demonstrating demand for early-stage phosphate projects available for acquisition.

#### 4.11 COMPARABLE TRANSACTIONS VALUATION

An analysis of Comparable Transactions summarised in Table 4-11, after the removal of several outliers, indicates that considerable scatter exists in the relationship between resource size and market value (Figure 4-13). The relationship in Figure 4-13 indicates that a 66 Mt phosphate rock resource would have a market value of A\$19.4 million or A\$0.29/tonne of mineralisation, within a margin of error that could be as high as  $\pm$  35% (A\$12.6 million to A\$26.2 million). Low and high case values represent the preferred value  $\pm$  20%. This limit was imposed due to the wide scatter in transaction values and results in a low and high valuation of A\$15.5 million and A\$23.3 million respectively.

The lack of correlation evident between resource tonnes and predicted value is influenced by the lack of Mineral Resource Classification information in the Comparable Transactions data. Approximately 80% of the Wonarah mineral resource (at a 27%  $P_2O_5$  cut-off) is classified as Inferred Resource, and 95% classified as Indicated + Inferred. Only the Arruwurra deposit has been drilled in sufficient detail to report a Measured + Indicated Mineral Resource. The resulting low level of resource confidence for the Wonarah deposit as a whole would contribute to a relatively low valuation for the deposit. The market value of the project could also be improved by more detailed studies of the YP production option being examined for development of the project, which requires further work in terms of improved Mineral Resource definition and YP project studies, which is Avenira's declared development option for the project.



Table 4-11. Comparable Transactions - Phosphate projects with Ore Reserves and Mineral Resources

Droiort	Country	Owner	Acquirer	Date	Trans Valu	/alin Family		Trans Ro	Rocorvoc E	Rocorvos	Rocoryoe	Bosonirges	Recource	Recource
3356 · ·		į	,	Announced Completed			•	₩.		\$/t			\$/t	\$/t 2024
Ardmore	Australia (Qld)	Icitec Pivot Ltd	Centrex Metals Ltd	2/02/2017 27/06/2017	06/2017	3.79	100.0	3.79	10.10			16.20	0.23	0.44
Baobab	Senegal	Avenira Limited	Mimran Natural Resources	4/11/2015 2/	2/03/2016 1	11.25	20.0	56.25				19.90	0.57	0.80
Bayovar	Peru	Peruvian Group	Americas Potash Peru S.A.	25/01/2016 25/01/2016		9.51	30.0	31.70				166.40	0.19	0.29
Berlin	Peru	Green Shift Commodities Ltd	Ltam Battery Metals Inc.	11/12/2023 9/	9/04/2024	8.85	100.0	8.85				8.70	1.02	0.53
	British Virgin Islands	Cominco Resources	Kropz Plc	29/11/2018 19/02/2019		26.90	100.0	26.90				675.80	90.0	0.12
Dissimieux Lake	QC, Canada	Jourdan Resources Inc.	Genius Properties Ltd	23/03/2016 20/06/2016		0.26	100.0	0.26				235.00	00.0	0.00
Elandsfontein	South Africa	African Rainbox Capital Pty Ld	Kropz Plc	29/11/2018 27/11/2018		2.81	4.0	70.25				4.04	69"0	1.34
	BC, Canada	GB Minerals Ltd	Itafos	28/12/2017 27/02/2018		54.93	68.7	96.67	30.23	1.75	3.32	98.38	0.54	1.02
	BC, Canada	GB Minerals Ltd	De Jong Capital LLC, Alpha Infrastructure	22/02/2016	29/02/2016	3.48	20.5	16.98	9.02	0.38	0.58	29.35	0.12	0.18
	Australia (NSW)	Golden Cross Resources Ltd	HQ Mining Resources Holding Pty Ltd	23/10/2015 29/01/2016		96.9	76.6	60.6				147.02	0.03	0.05
	ON, Canada	Jourdan Resources Inc.	Investor Group	27/02/2017 28/04/2017		322.00	19.7	1632.03				46.37	0.01	0.01
	Peru	Juan Paulo Quay SAC Agrifos Peru	Agrifos Peru SAC	10/03/2015 26/03/2015		3.96	70.0	2.66				131.85	0.03	0.04
Idaho Mineral Rights	USA	Nutrien Ltd	Itafos	7/11/2017 12/01/2018			100.0	99.50	15.13	4.39	8.32	33.13	2.01	3.80
	Uganda	Namakera Mining Company Ltd	Black Montain Resources Ltd	11/04/2016 1/11/2016		2.36	100.0	2.36				54.90	0.04	0.07
Niobium and Phosphate Business	Brazil	Anglo American Plc	CMOC Mining Pty Ltd	28/04/2016 30/09/2016		1500.00	100.0	1500.00	34.98	4.79	9.25	741.68	2.02	3.11



Table 4-12: Comparable Transactions—Exploration projects without Mineral Resources and Ore Reserves

Notes								0.81 Acquired 33.071 tonnes of phosphate (US\$17.84 per tonne - US\$24.47 per tonne in 2024 dollars)								
n Va <b>l</b> ue	US\$ (M) 8/2024	0.88	6.97	2,13	9.11	0.86	5,43	0.81 Ac	107,74	2.03	2.27	2.27	0.48	0.61	1.08	46.97
Transaction Value	100% US\$ (M)	99.0	3.79	1,59	14.69	0.63	3,62	0.59	78.57	1.08	1.21	1.21	0.25	0,45	1.75	25.04
Equity	%	20.0	100.0	100.0	100.0	100.0	100.0	100.0	37.0	18.4	16.5	16.5	40.0	100.0	100.0	9'99
Trans,Value	\$US (M)	0.33	3.79	1,59	14.69	0.63	3,62	0.59	29,03	0.20	0.20	0.20	0.10	0.45	1.75	16,67
te	Completed	28/02/2021	27/06/2017	29/06/2021	22/08/2022	5/02/2015	23/10/2018	17/02/2015	12/01/2015	12/10/2018	12/10/2018	12/10/2018	10/07/2019	22/02/2022	30/06/2022	18/06/2019
Date	Announced	16/02/2021	2/02/2017	21/12/2020	9/12/2021	2/10/2014	31/01/2018	17/02/2015	9/10/2014	17/08/2018	17/08/2018	17/08/2018	5/10/2018	1/08/2021	9/03/2022	11/03/2019
Acquirer		Russell Brooks Limited	Centrex Metals Limited	Chatham Rock Phosphate Limited	Afrimat Limited	Mining Global Inc	Handa Mining Corporation	DuSolo Fertilizers Inc.	CI Resources Kimited	Private Investor	Private Investor Group	Private Investor	Yara Internationa <b>l</b> ; ASA	Eurochem Group AG	First Uranium Resources Ltd	CD Capital Asset Management Limited
Owner		Kropz Plc	Incitec Pivot Limited	Avenir Makatea Pty Ltd	Glenover Phosphate Pty Ltd	Xstract Resources Plc	Buccaneer Holdings Ltd	Undisclosed Seller	Phosphate Resources Ltd	Randsburg International Gold	Randsburg Private International Gold Group	Randsburg International Gold	Private Investor	Tara International ASA	Southwind Corporation	Verdant Minerals Ltd
Country		Ghana	Australia (Qld)	Australia	South Africa	Chile	Chile	Brazil	Australia (WA)	Canada	Canada	Canada	Brazil	Brazil	USA	Australia (NT)
Project		Aflao	Ardmore			Mejillones	Mejillones						Serra do Salitre	Serra do Salitre		



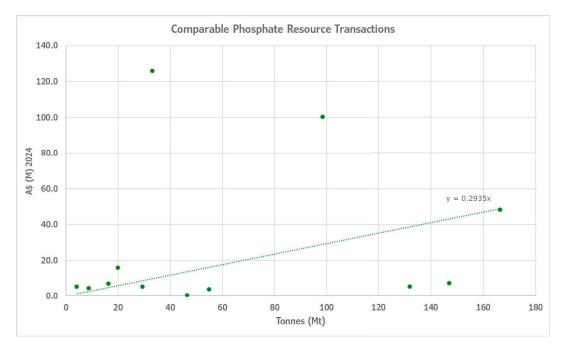


Figure 4-13: Comparable Transactions - Transaction Value vs Resource Tonnage

# 4.12 RULE OF THUMB (YARDSTICK) VALUATION

Rule of Thumb (Yardstick) valuations typically use multipliers of between 0.5% and 5.0% of the commodity price to estimate the value of Mineral Resources. These criteria are based on the valuation approach being applied to gold deposits. This results in multipliers used for other commodities, particularly industrial minerals and other bulk commodities, to be derived from information for recent comparable transactions. This approach has been adopted by ERM for this project. The comparable transactions information available for phosphate rock deposits with Mineral Resources suggests that this range should be modified to be 0.12% to 2.5%. This is interpreted to reflect lower interest in acquiring phosphate rock assets that other, higher value mineral commodities, especially gold, reducing the influence of competition on pricing of acquisitions. ERM believes that this, in part, reflects the dominant influence that major phosphate rock producers, notably Morocco, are able to exert on product pricing. Bulk commodities are also widely perceived to be "easy" mining and development prospects, which ERM considers a misconception that overlooks the need to produce products meeting often stringent product specifications.

A shortcoming of the S&P Global transactions data used by ERM is that, while it distinguishes between Ore Reserves and Mineral Resources involved in mining industry transactions, it does not distinguish between Ore Reserve and Mineral Resource Classification categories. For Ore Reserves, this shortcoming is not considered significant. A project with Ore Reserves is, in most instances, better valued using other approaches, notably income methods, where the information required is usually produced by the conversion of Mineral Resources to Ore Reserves by applying modifying factors. Open pit optimisations and detailed designs may be used to derive meaningful production schedules for valuation purposes which account for waste stripping costs and revenue resulting from ore production. For Mineral Resources, however, the shortcoming is more significant. ERM addresses this by applying the proportion of the Mineral Resource value range to the minimum and maximum multipliers derived for analysis of comparable transactions presented in Table 4-13.



Table 4-13. Rule of Thumb (Yardstick) Multiplier Factor Estimation

	Conve	ention		'	Nonarah project	
Resource Class	Low (%)	High (%)	Range (%)	Low (%)	Preferred (%)	High (%)
Measured	2.0	5.0	66%	0.93	1.71	2.50
Indicated	1.0	2.0	22%	0.41	0.93	0.93
Inferred	0.5	1.0	12%	0.12	0.67	0.41

#### 4.12.1 RULE OF THUMB VALUATION

#### 4.12.1.1 DSO PHOSPHATE ROCK

The DSO phosphate rock resource at Wonarah, which is distributed across both the Arruwurra deposit and Main Zone, is the most thoroughly studied and understood portion of the deposit from both a geological and marketing viewpoint. ERM proposes that this portion of the resource at Wonarah is the basis of a meaningful and robust valuation of the project. There is scope to improve this valuation with further studies that:

- 1. Demonstrate that a market exists for DAPR mine gate sales
- 2. Progress studies on the production of higher value phosphate chemicals

The latter, significantly, could deliver a completely changed set of value assumptions that would have a major impact on the size of the Mineral Resource that could contribute to Ore Reserves and for the basis of an income based valuation for the project.

A Rule of Thumb (yardstick) valuation for the Wonarah project is presented in Table 4-14. The valuation considers both the Arruwarra and Main Zone resources.

Table 4-14: Rule of Thumb valuation, DSO Phosphate Resource (Arruwarra Deposit + Main Zone)

Resource	Tonnes	P <sub>2</sub> O <sub>5</sub>		Multiplier		Va	luation (A\$I	M)
Category	Mt	%	Low	Pref	High	Low	Pref	High
Measured	3.4	30.9	0.93	1.71	2.50	7.1	13.0	19.0
Indicated	9.6	30.0	0.41	0.67	0.93	8.8	14.4	20.0
Inferred	53.0	30.0	0.12	0.26	0.41	14.3	30.9	48.7
Total	66.0	30.1				30.2	58.3	87.7

The Rule of Thumb analysis uses resource multipliers derived from the analysis of comparable transactions discussed in Section 4.10.1 above.

The Rule of Thumb valuation represents an opinion of the market value of the undeveloped Wonarah phosphate resource identified by exploration completed by Avenira to date of between A\$30.2 million and A\$87.7 million, with a preferred value of A\$58.3 million.

The broad range of values reflects the variability in the values of comparable transactions in which the multipliers used in the valuation opinion are based. In instances of this, ERM frequently uses an approach of setting the lower and upper boundaries at  $\pm 20\%$  of the preferred transaction value, which would be A\$46.6 million and A\$70.0 million.



PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024
REPORT: R258.2024 VERSION: 3.2

A Rule of Thumb valuation using the same parameters was completed for the Arruwurra deposit only (Table 4-15). This valuation was included to be more closely comparable with the DCF valuation prepared for the project.

Table 4-15: Rule of Thumb valuation, Arruwarra Deposit DSO Phosphate Resource

Resource	Tonnes	P <sub>2</sub> O <sub>5</sub>		Multiplier		Va	luation (A\$I	<b>4</b> )
Category	Mt	%	Low	Pref	High	Low	Pref	High
Measured	3.4	30.9	0.93	1.71	2.50	7.1	13.0	19.0
Indicated	0.6	30.7	0.41	0.67	0.93	0.6	0.9	1.3
Inferred			0.12	0.26	0.41			
Total	4.0	30.9				11.1	13.9	16.7

Using a Rule of Thumb approach, the Arruwurra deposit alone is valued at between A\$7.6 million and A\$20.3 million, with a preferred value of 13.9 million. Again, the multiplier factors derived from an analysis of comparable transactions, discussed in section 4.10.1 above, provides a broad spread of values. Limiting the low and high valuation opinions to within  $\pm 20\%$  of the preferred valuation opinion provides a low and high opinion of A\$11.1 million and A\$16.7 million respectively.

#### 4.12.1.2 DAPR PHOSPHATE ROCK

The Arruwarra deposit and Main Zone are estimated to contain a large DAPR resource of 546 Mt @ 21.1% P2O5 at a cut-off grade of 15%, excluding phosphate rock meeting the specifications for DSO phosphate rock. ERM has reviewed AEV's logic for producing an intermediate grade phosphate rock product for mine gate sales and believes it could find a market within Australia. The product could be viably mined, processed and packaged for sale on site on a cash-cost basis, without allowance for capital) for sale at the mine gate from where purchasers would transport the product to potential domestic markets for sale at a required margin. The economics of this activity, in ERM's view, rely on the cost of transporting imported phosphate rock from overseas producers which has been between US\$600/tonne and more than US\$1,000 per tonne in recent years, depending on the availability of vessels required to transport product. ERM's opinion is that insufficient work has been completed to adequately demonstrate the viability of this option at this stage. Potential exists for the value of this resource to significantly exceed the value of DSO production, and also helps to support AEV's case for studying the production of phosphate chemicals. Mine gate phosphate rock sales and phosphate chemicals should be compared on both a relative value and resource utilisation basis to help ensure appropriate stewardship of the Wonarah phosphate resource by AEV. ERM does not believe that stating the value of potential domestic market DAPR production is appropriate at this time and prefers to remain with DSO phosphate value as the basis for valuing the Wonarah resource.

# 4.12.2 FINANCIAL MODEL REVIEW AND DCF VALUATION

ERM reviewed a financial model provided in the Avenira data room managed by RSM (AEV Scoping Study Financial Model 15 Feb 2023.xlsm). The inputs used in the model were dated 1 Jan 2023.



PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024
REPORT: R258.2024 VERSION: 3.2

The financial model examines mining of the Arruwurra deposit only (4.0 Mt@30.9% P₂O₅). AEV has yet to complete the studies required to support a DCF valuation of the Main Zone resource.

ERM made a series of changes to the model:

- 1. operating cost allocations were increased by 12.5%, to align with an assumed date of January 1, 2025. The increase reflects inflation, industry cost escalation that ERM has observed in Australia during 2023-24, and affords a level of contingency, given that mining and crushing costs were based on a single contract cost estimate, discussed in Section 4.8.2 of this report.
- 2. The financial model has an opening 2022 financial year tax loss balance of A\$110.2 million. For the purpose of preparing a revised valuation, this opening tax loss balance was removed from the model.
- 3. The capital allocation and detail included in the model are based on the preferred case from three mining contractor estimates. The reliability of the information presented would have benefited from all estimates being available for review, especially of the contractors have limited infrastructure engineering experience. The capital allocation has an 11% contingency, which has been increased by 10% to align it with an assumed date of January 1, 2025. The net capital allocation adjustment is 21 %.
- 4. ERM proposes that the inventory balance allocations in the financial model are somewhat complex and include duplicate cost allocations by including net movement balances for the APH and BPH products when all products may be assumed to be sold. ERM simplified the model by assuming that APH and BPH products are sold in the same production period, eliminating the inventory balance allocations.
- 5. The net material movements and products detailed in the mine plan remain unchanged as follows.
  - a. BPH mined a total of 450,938 tonnes.
  - b. APH mined and sold 391,576 tonnes.
  - c. Waste tonnes mined: 3,403,338.
  - d. Total tonnes mined: 4,244,853.
  - e. +10mm BPH tonnes produced and sold 180,375.
  - f. -10mm BPH tonnes produced and sold 208,992.
- 6. The financial model has been adjusted to the assumed date of January 1, 2025, as follows:
  - a. BPH product pricing adjustment from US\$200.0 to US\$152.5 per tonne.
  - b. APH product pricing adjustment from US\$100 to US\$96 per tonne.
  - c. The AUD/USD exchange rate was adjusted from 0.65 to 0.68 (PoundSterlingLive, 2024).
- 7. All control switches and flags in the worksheet header remain unchanged in the revised valuation model prepared by ERM.
- 8. The financial model has no provisions for the following:



CLIENT: Avenira Limited PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

- a. Closure costs or accumulation of a sinking fund for closure, although the MMP includes payment of a rehabilitation surety to the NT government.
- b. Ongoing rehabilitation maintenance costs post-closure.
- c. No owner working capital replacement provisions.
- d. There are no details in the contractor statements regarding how working capital replacement has been evaluated in the proposed operational costs and capital pricing schedules.

This may, in part, reflect the model examining mining of the Arruwurra portion of the resource only, which is a relatively small portion of a larger resource, but do represent parameters that will need to be considered in future studies of the broader resource.

The revised financial model predicts the valuation presented in Table 4-16. Two models were prepared using BPH prices of US\$152.5/tonne and US\$200.0/tonne to provide an indication of model sensitivity and consistency with the 2023 DSO feasibility study (Mining Plus, 2023).

Table 4-16: Wonarah project DCF Valuation, US\$152.50/tonne (A\$224.07/tonne) rock phosphate price (Australian Dollars)

Parameter	BPH US\$152.5/tonne	BPH US\$200.0/tonne
EBITDA	\$749,000	\$27,311,000
EBIT	\$(441,000)	\$26,121,000
NPBT	\$(441,000)	\$26,121,000
NPAT	\$(217,000)	\$17,935,000
Cashflow from Operations	\$1,325,000	\$19,918,000
Cashflow from Investing	\$(5,508,000)	\$(5,508,000)
Cashflow from Financing	\$0.00	\$0.00
Total Valuation Cashflows / Net Movement in Cash	\$(4,183,000)	\$14,410,000
NPV at a Discount of 10% on 30 June 2025	\$(6,055,000)	\$11,165,000

At current prices (US\$152.50 per tonne), development of the Wonarah project to produce phosphate rock for use in downstream fertiliser manufacture is estimated to have a NPV $_{10}$  of A\$(6.06 million). The 10% discount rate used reflects ERM's view of the return that would be required to justify investment in the project under prevailing finance market conditions where companies are experiencing difficulties attracting investment for mineral resource development projects. The phosphate price sensitivity case indicates that project economics are sensitive to price.

# 4.13 WONARAH PROJECT VALUATION SUMMARY

#### 4.13.1 DISCUSSION

Development of valuation opinions for the Wonarah project as a pre-development asset was completed by ERM using a combination of comparable transactions data obtained using S&P's



Capital IQ database (S&P, 2024) and further research of transactions revealed by the database. The comparable transactions data was used to directly estimate the potential project value and was used to derive resource multipliers for use in development of a Rule of Thumb (Yardstick) valuation opinion for the project. A phosphate rock price of US\$152.5 per tonne and US:Australian dollar exchange rate of 1.4693 at the effective date of this report were used in this process. All transaction values were recast in real (2024) Australian dollar terms.

The Wonarah project is difficult to arrive at a preferred valuation for. AEV have demonstrated that a large resource of moderate to high-grade phosphate rock which appears to have low deleterious trace metal contents exists in the project tenements. Several, relatively small portions of the phosphate rock resource have been drilled to Measured and Indicated Mineral Resource status, but most of the identified Mineral Resources remain classified as an Inferred Mineral Resource. Further drilling has potential to upgrade confidence in this resource or demonstrate that the resource is less continuous than interpreted using available drilling. Additional drilling may also contribute to recognition of additional phosphate rock meeting DSO specifications.

Studies by AEV have demonstrated that several potential development options exist, which include the sale of phosphate rock into Australian fertiliser markets. These are in areas of Australia that are a considerable distance from the project site, requiring products to be transported long distances by road. The cost of this, however, is considered likely by ERM to be lower than transport costs associated with phosphate rock imports to Australia. Production of phosphate rock for export has been shown by studies not to be viable, mainly due to road transport and port changes. The Australian phosphate fertiliser product market is, however, heavily reliant on imports which local phosphate production could displace. Analysis of available data demonstrates the in situ of the identified and studied DSO resource. This analysis also suggests that there is value in the production of an intermediate grade DAPR product that would use a considerable proportion of the identified Mineral Resource, but potential markets have not been adequately examined by AEV for this option to contribute to the project's valuation at this stage.

ERM is convinced that AEV's strategic decision to focus on the production of higher value phosphate products (YP and phosphoric acid) has clear potential to enhance the value of the project. Studies have not, however, proceeded to a point where these options can be meaningfully valued, requiring valuation opinions to remain focused on phosphate rock production.

The valuation opinions obtained by the work are summarised in Table 4-17.

Analysis of Comparable Transactions and the Rule of Thumb (Yardstick) valuation are both potentially useful sources of valuation opinions. The latter is particularly subject to phosphate prices which appear to be strongly influenced by the behaviours of major producers. The market for phosphate fertilisers is strong and growing. Recent events, notably China's reservation of domestic phosphate production for domestic use, appears to have had little impact on global prices. The potential for supply disruption of Moroccan production by border tensions with Western Sahara and Algeria has potential to disrupt phosphate supply should current tensions escalate.



Table 4-17: Valuation Summary, Wonarah Phosphate Project (Arruwurra deposit + Main Zone)

Approach	Туре	Currency	Valuat	tion Opinion (	A\$ M)	Notes
			Low	Preferred	High	
Comparable Transactions Wonarah DSO (Arruwurra + Main Zone)	Market	A\$ M	15.5	19.4	23.3	Based on analysis of comparable transactions presented in Table 4-11 with removal of four outlier values. The low and high case values represent the preferred value ± 20%. This limit was imposed due to the wide scatter in transaction values
Rule of Thumb (Yardstick) – Wonarah DSO (Arruwurra + Main Zone)	Market	A\$ M	46.7	58.3	70.0	Low and high case values represent the preferred value ± 20%. This limit was imposed due to the wide scatter in transaction values used to develop the Rule of Thumb multipliers evident in Figure 4-13.
Rule of Thumb (Yardstick) Arruwurra Deposit DSO	Market	A\$M	11.1	13.9	17.4	Included in the Wonarah Deposit value opinion above.
DCF Valuation Arruwurra Deposit DSO	Technical	A\$ M		(6.1)		NPV <sub>10</sub> estimated for the Arruwarra deposit only using a phosphate rock price of US#152.50 per tonne.
				11.7		NPV <sub>10</sub> sensitivity scenario for the Arruwurra deposit only using a phosphate rock price of US\$200.00 per tonne.

The low and high value cases developed using the Rule of Thumb approach were considered to be too broad by ERM to be useful in further studies of the project. ERM's practice in instances of this, which are not uncommon in situations where the number of competent transactions is relatively small, spread over an extended period of time, and cover resources in multiple jurisdictions with varying sovereign risk profiles, is to set limits of ±20% around the central, preferred case based on the multipliers developed for the project.

ERM validated the inputs required for development of a NPV estimate for the project and prepared high level estimates for a central case using a phosphate rock price of US\$152.50 per tonne and a sensitivity case of US\$200.00 per tonne. The NPV of the project was estimated to be negative for the US\$152.50 phosphate rock price, but positive for the US\$200.00 price, indicating that the project is relatively sensitive to product price. This is also viewed by ERM to support Avenira's strategy of seeking to use phosphate rock from Wonarah in the production of higher value products, notably YP, to enhance project feasibility.



CLIENT: Avenira Limited PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

The range of values based on comparable transactions is one-third that proposed by a rule of thumb valuation approach (Table 4-17).

ERM believes that the Rule of Thumb (Yardstick) valuation opinion for the Wonarah deposit of between A\$46.7 million and A\$70.0 million, with a preferred value of A\$58.3 million is a valid assessment of expected market value, but is based on a development option for the project for which AEV is actively pursuing alternatives. The Rule of Thumb opinion is influenced heavily by the value of identified phosphate rock resources meeting DSO specifications.

#### 4.13.2 VALUATION OPINION

ERM proposes that the Comparable Transactions valuation opinion for the project of between A\$15.5 million and A\$23.3 million, with a preferred value of A\$19.4 million, would be more likely to be achieved were the project offered for sale. This opinion is better aligned with AEV's current ASX market capitalisation of A\$29.74 million (ASX, 2024).

Additional, unrealised, value may exist in the deposit due to the low level of confidence in the project's Mineral Resource based on current drilling.

AEV have elected to pursue the production of higher value phosphate products including YP which would significantly alter the value of the project and utilise a greater proportion of the resource, determined by the cut-off grade required and mining factors. These studies are yet to reach a point where analysis of capital and operating (mining, processing and transport) costs and product revenue could be used to determine the economic basis for valuing a phosphate chemicals operation and the recoverable portion of the mineral resource, that could be used in turn to develop an Ore Reserve estimate, open pit design and production schedule. AEV's confidence that a viable phosphate chemicals project can be developed is supported by ERM on the basis of available, early-stage data.



# 5. JUNDEE SOUTH PROJECT, WA.

# 5.1 PROJECT LOCATION

Avenira's Jundee South project is located in the Northeastern Goldfields region of Western Australia (Figure 5-1). The tenements discontinuously extend around 300 km northwest-southeast. Most of the tenements run about 35 km from, and east parallel to, the stretch of the Goldfields Highway between Wiluna to the north and Leinster. The Flinders Park project area tenements are about 65 km further south, located to west of the stretch of the Goldfields Highway between Leinster and Leonora to the south.

The coordinate system used throughout this section is Map Grid of Australia 1994 (MGA94) Zone 51.

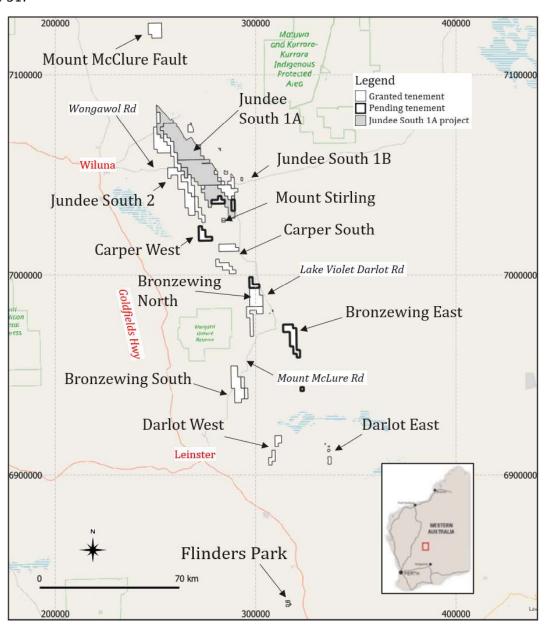


Figure 5-1: Jundee South project location map showing the different project areas.



# 5.2 CLIMATE AND TOPOGRAPHY

The Jundee South project in Western Australia has a semiarid to arid climate, with hot summers where temperatures often exceed 35°C and cooler winters averaging 15°C to 25°C during the day. Rainfall is sparse, averaging 200 to 300 mm annually, with most precipitation occurring during summer thunderstorms or from the remnants of tropical cyclones.

The landscape is characterised by flat to gently undulating terrain with elevations ranging from 400 to 500 metres above sea level. The topography includes rocky outcrops, broad valleys and occasional salt lakes. Vegetation is sparse, mainly consisting of shrublands and mulga woodlands, reflecting the region's dry conditions.

#### 5.3 ACCESS AND INFRASTRUCTURE

The Jundee South project is easily accessed from Wiluna or Leinster at multiple points by well-maintained sealed roads (Figure 5-1). From Wiluna, the Wongawol Road runs east directly entering the Jundee South project after around 35 km. Within the Jundee South project area there is a turn off south onto the Lake Violet Road, and then a turn off southwest onto Mount Mclure Road leading to Leinster. This route comes within 5 km of the Mount Stirling, Carper and Bronzewing project areas. The Darlot project areas are within 6.5 km of the Darlot-Weebo Road accessed from Leinster and the Flinders Park project area is within 6 km of the Goldfields Highway. An extensive network of variably maintained station tracks is used to travel from the main roads into, and within, the project areas.

There are several active mines along the main roads and the infrastructure to sustain a new mining operation, including haul roads and processing facilities, is already well-established.

The towns of Wiluna and Leinster could sustain the workforce. Both have airports able to handle commute flights for FIFO workers.

# 5.4 EXISTING LANDUSE

The Jundee South project is situated in a well-established mining district.

Existing land use in the project area is largely dedicated to pastoral activities, with large cattle grazing properties occupying much of the area. Due to the semiarid climate and low rainfall, grazing is extensive but low-density, relying on native grasses and shrubs for feed. Water for livestock is sourced primarily from bores and a few seasonal watercourses, as natural surface water availability is limited.

# 5.5 EXPLORATION AND MINING TENURE

#### 5.5.1 MINERAL EXPLORATION AND MINING TENEMENTS

The Jundee South project includes 47 leases, with five of these leases not yet granted. These are 100% owned by Avenira. The package covers 1,372.8 km² including pending leases and 1,272.2 km² not including pending leases (Figure 5-1; Table 5-1). Exploration licences (live and pending) cover 1,363.5 km². Prospecting licences (live) cover the remaining 9.4 km².



PROJECT NO: 0749204 AEVITV01 DATE:21
REPORT: R258.2024 VERSIOI

Table 5-1: Jundee South project tenement information.

Tenement ID	Project Area	Status		Key Dates		Area	Combined	Required
			Applied	Granted	Expiry		Reporting	Expenditure
E 37/1546	Bronzewing East	PENDING	18/10/2023			57.84		\$30,000
E 37/1547	Bronzewing East	PENDING	18/10/2023			3.04		\$10,000
E 53/2272	Bronzewing North	LIVE	19/10/2022	26/08/2024	25/08/2029	54.89		\$20,000
E 53/2280	Bronzewing North	PENDING	9/12/2022			15.25		\$15,000
E 36/1021	Bronzewing North	LIVE	22/09/2021	7/02/2023	6/02/2028	45.71	148/2024	\$20,000
E 53/2211	Bronzewing North	LIVE	18/01/2022	27/02/2024	26/02/2029	0.24	148/2024	\$10,000
E 36/1029	Bronzewing South	LIVE	27/01/2022	3/07/2023	2/07/2028	79.01		\$26,000
E 36/1074	Bronzewing South	LIVE	4/04/2023	1/07/2024	30/06/2029	18.23		\$20,000
E 53/2205	Carper South	LIVE	13/12/2021	22/08/2023	21/08/2028	33.61	106/2024	\$20,000
E 53/2210	Carper South	LIVE	18/01/2022	18/03/2024	17/03/2029	30.53	148/2024	\$20,000
E 53/2291	Carper West	LIVE	24/02/2023	26/08/2024	25/08/2029	27.51	106/2024	\$20,000
P 37/9539	Darlot East	LIVE	22/07/2021	18/03/2022	17/03/2026	0.18	278/2022	\$2,000
E 37/1474	Darlot East	LIVE	27/01/2022	5/09/2022	4/09/2027	5.83	278/2022	\$15,000
P 37/9630	Darlot East	LIVE	8/02/2022	6/09/2022	5/09/2026	0.57	278/2022	\$2,320
P 37/9631	Darlot East	LIVE	8/02/2022	6/09/2022	5/09/2026	1.24	278/2022	\$4,960
E 36/1049	Darlot West	LIVE	14/11/2022	10/07/2023	9/07/2028	15.16	158/2023	\$15,000
E 36/1050	Darlot West	LIVE	14/11/2022	10/07/2023	9/07/2028	15.15	158/2023	\$15,000
P 53/1712	Flinders Park	LIVE	23/01/2021	1/07/2022	30/06/2026	1.37	123/2021	\$5,480
P 53/1713	Flinders Park	LIVE	23/01/2021	1/07/2022	30/06/2026	1.95	123/2021	\$7,840
E 53/2317	Jundee South 2	PENDING	18/10/2023			9.18		\$15,000
E 53/2318	Jundee South 2	PENDING	18/10/2023			15.30		\$15,000



Page 58

Tenement ID	Project Area	Status		Key Dates		Area	Combined	Required
			Applied	Granted	Expiry		Reporting	Expenditure
E 53/2204	Jundee South 1A	LIVE	8/12/2021	30/01/2023	29/01/2028	61.36	106/2024	\$20,000
E 53/2289	Jundee South 1A	LIVE	24/02/2023	22/01/2024	21/01/2029	33.69	106/2024	\$20,000
E 53/2209	Jundee South 1A	LIVE	18/01/2022	27/02/2024	26/02/2029	101.06	106/2024	\$33,000
E 53/2308	Jundee South 1A	LIVE	11/09/2023	10/04/2024	9/04/2029	42.94	106/2024	\$20,000
E 53/2290	Jundee South 1A	LIVE	24/02/2023	26/08/2024	25/08/2029	27.54	106/2024	\$20,000
E 53/1859	Jundee South 2	LIVE	11/08/2015	23/03/2016	22/03/2026	104.09	123/2021	\$102,000
E 53/1856	Jundee South 2	LIVE	21/07/2015	30/11/2016	29/11/2026	65.09	123/2021	\$70,000
E 53/2078	Jundee South 2	LIVE	22/05/2019	5/02/2020	4/02/2025	175.58	123/2021	\$88,500
E 53/2079	Jundee South 2	LIVE	22/05/2019	5/02/2020	4/02/2025	193.67	123/2021	\$99,000
E 53/2208	Jundee South 2	LIVE	18/01/2022	2/09/2022	1/09/2027	9.21	123/2021	\$15,000
E 53/2216	Jundee South 1B	LIVE	18/01/2022	2/09/2022	1/09/2027	0.71	280/2022	\$10,000
E 53/2218	Jundee South 1B	LIVE	18/01/2022	2/09/2022	1/09/2027	2.37	280/2022	\$10,000
E 53/2219	Jundee South 1B	LIVE	18/01/2022	2/09/2022	1/09/2027	1.72	280/2022	\$10,000
E 53/2220	Jundee South 1B	LIVE	18/01/2022	2/09/2022	1/09/2027	1.45	280/2022	\$10,000
E 53/2250	Jundee South 1B	LIVE	28/07/2022	8/05/2023	7/05/2028	39.81	280/2022	\$20,000
E 53/2253	Jundee South 1B	LIVE	28/07/2022	8/05/2023	7/05/2028	3.06	280/2022	\$10,000
E 53/2288	Jundee South 1B	LIVE	8/02/2023	12/10/2023	11/10/2028	9.16	280/2022	\$20,000
E 53/2296	Jundee South 1B	LIVE	28/03/2023	22/01/2024	21/01/2029	2.87	280/2022	\$10,000
E 53/2297	Jundee South 1B	LIVE	28/03/2023	22/01/2024	21/01/2029	3.06	280/2022	\$10,000
E 53/2299	Jundee South 1B	LIVE	28/03/2023	10/04/2024	9/04/2029	12.25	280/2022	\$15,000
E 53/2298	Jundee South 1B	LIVE	28/03/2023	20/05/2024	19/05/2029	3.06	280/2022	\$10,000
Р 37/9593	Mount Stirling	LIVE	26/11/2021	5/09/2022	4/09/2026	1.03	279/2022	\$4,160
P 37/9594	Mount Stirling	LIVE	26/11/2021	5/09/2022	4/09/2026	1.02	279/2022	\$4,080



Tenement ID	Project Area	Status		Key Dates		Area	Combined	Required
			Applied	Granted	Expiry		Reporting	Expenditure
P 37/9595	Mount Stirling	LIVE	26/11/2021	5/09/2022	4/09/2026	1.60	279/2022	\$6,440
P 37/9596	Mount Stirling	LIVE	26/11/2021	5/09/2022	4/09/2026	0.42	279/2022	\$2,000
E 69/4020	Mt MClure Fault	LIVE	27/01/2022	14/09/2022	13/09/2027	46.22		\$20,000
TOTAL (incl. Pending Leases)						1,373		\$967,780
TOTAL (Live Leases Only)						1,272		\$882,780



Page 60

The Jundee South project refers to all tenements. Jundee South 1 is used here to refer to the original and marquee gold project area. Jundee South 1 is the largest of the project areas, is located mainly on gold prospective greenstone belt rocks, and has been explored most extensively historically and by Avenira. Jundee South 2 is used here to refer to the later acquired tenements west-adjoined to Jundee South 1 on less prospective granitoid rocks. Jundee South 1A indicates the original main tenements and Jundee South 1B indicates the relinquished/re-acquired tenements (Figure 5-1).

# 5.5.2 RESTRICTED LAND IN THE PROJECT AREA

No restricted land is known within the project tenements.

E36/1049 partly overlaps the Weebo Aboriginal Reserve, however, Avenira does not anticipate this having any major effect on exploration activities.

As per Native Title Agreement over the project, ground disturbing fieldwork is subject to heritage survey clearances which could result in restrictions on exploration activities in some areas.

# 5.5.3 NATIVE TITLE

Parts of the Jundee South project are subject to Native Title determination WAD108/2016 and WAD241/2004 (Tarlka Matuwa Piarku Aboriginal Corporation RNTBC). A *Native Title Land Access and Mineral Exploration Agreement* pertaining to the Jundee South 1 project area (including exploration licences E53/1856, E53/1859. E53/2078, and E53/2079) was signed between Tarlka Matuwa Piarku and Avenira on September 16, 2021. These licence IDs are now superseded as per Figure 5-2, however, Avenira confirm that the agreement remains in good standing.

On August 8, 2022, the above agreement was updated by a *Deed of Variation* to also include exploration licences E53/2204, E53/2207, E53/2208, E53/2209, E53/2212, E53/2213, E53/2214, E53/2215, E53/2216, E53/2217, E53/2218, E53/2219, E53/2220, E53/2237, E53/2238, and E69/4020.

Parts of the Jundee South project are subject to Native Title determination WAD228/2011 and WAD302/2015 (Tjiwarl Aboriginal Corporation RNTBC). An *Exploration and Prospecting Deed of Agreement* was signed between Tjiwarl and Avenira pertaining to E36/1029 and E53/2210 on June 21, 2023.

Parts of the Jundee South project are subject to Native Title determination WAD225/2018 (Kultju Aboriginal Corporation RNTBC). An *Exploration and Prospecting Deed of Agreement* was signed between Kultju and Avenira pertaining to P53/1712, P53/1713, E53/1859, E36/1021, E53/2205, E53/2209, E53/2210, E53/2211, E53/2212, E53/2251, E53/2252, E53/2272, E53/2280, E53/2290 and E53/2291 on June 12, 2023.

The Darlot/Watarra Native Title Agreement was executed by AEV and countersigned by Watarra on 3 September 2024. This covers all licences in the southern part of AEV's tenement package.



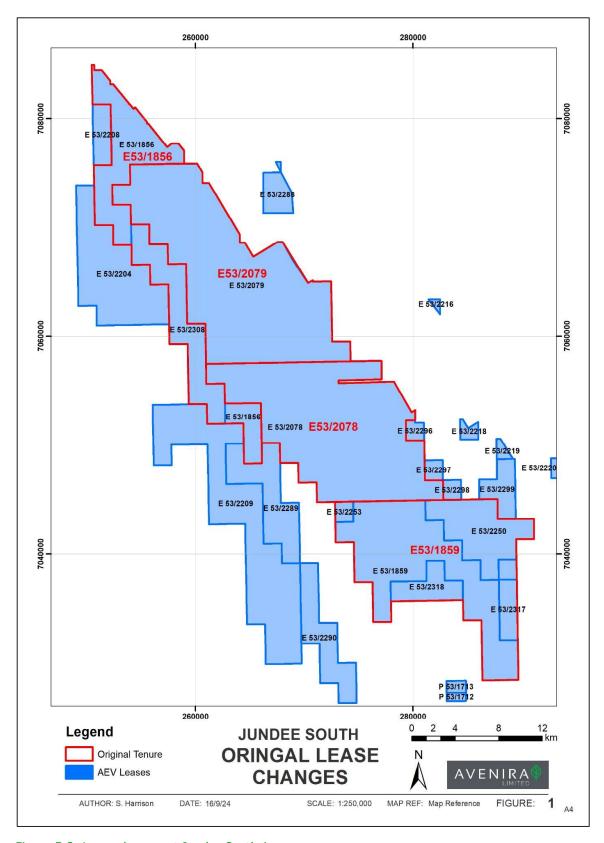


Figure 5-2: Lease changes at Jundee South 1



# 5.6 EXPLORATION AND DEVELOPMENT HISTORY

There has been no development of resources on the tenements. Exploration is at an early-stage.

Geological mapping has been undertaken by various previous explorers. These maps have not been digitised.

Various surface geochemical surveys have been undertaken. These have not been reviewed for this report.

6,638 historical rotary air blast (RAB), air-core (AC) and similar method drillholes (total 358,379 m) and 106 RC historical drillholes (total 13,847 m) have been completed on Avenira's tenements (Table 5-2; Figure 5-3).

The Jundee South 1 project area has been extensively RAB and AC drilled by a number of previous explorers, typically on a 160 x 640 m grid, but with drill hole spacings of up to 1280m x 160m. This was effectively untargeted first pass geochemical exploration. It was infilled to 40 x 80 m in areas of gold geochemical anomalism and there has been considerable follow-up by RC drilling (Figure 5-4).

The other project areas have not been systematically drilled and there is only sparse RAB and AC historical drilling recorded in Avenira's drill database.

No diamond (DD) drilling has been undertaken on any of Avenira's tenements.

Exploration by Avenira in recent years has focused on the Jundee South 1 project area. Avenira's exploration here is underpinned by a detailed structural and geological interpretation map completed by consultant Rountree in February 2021 (Figure 5-5). Further structural interpretation was completed by consultant Gold Vector in April 2021.

Between 2020-2022 Avenira drilled 295 AC drillholes (total 23,063 m) and 23 RC drillholes (total 13,847 m) across a number of prospects at the Jundee South project area (Table 5-2; Figure 5-6). The best intercepts from this drilling are included in Table 5-3 and Table 5-4.



PROJECT NO: 0749204 AEVITV01
REPORT: R258.2024

Table 5-2: Summary of drilling in Avenira's drill database.

Tenement			Historical Drilling	Drilling					Avenira Drilling	Drilling		
		AC, RAB etc.			<b>SC</b>			AC			RC	
	Holes	Avg m	Total m	Holes	Avg. m	Total m	Holes	Avg. m	Total m	Holes	Avg. m	Total m
E 37/1546												
E 37/1547												
E 53/2272												
E 53/2280												
E 36/1021	20	32	637									
E 53/2211	2	20	100									
E 36/1029	19	29	257									
E 36/1074	6	11	95									
E 53/2205	7	21	148									
E 53/2210												
E 53/2291												
P 37/9539	П	15	15									
E 37/1474												
P 37/9630												
P 37/9631												
E 36/1049	45	31	1417									
E 36/1050	10	70	704									
P 53/1712	37	29	1083									
P 53/1713	11	20	216									
E 53/2317	51	72	3697									
E 53/2318	155	44	0689				13	74	896			



Tenement			Historical Drilling	Drilling					Avenira Drilling	Drilling		
		AC, RAB etc.			RC			AC			RC	
	Holes	Avg m	Total m	Holes	Avg. m	Total m	Holes	Avg. m	Total m	Holes	Avg. m	Total m
E 53/2204												
E 53/2289	36	14	514									
E 53/2209												
E 53/2308	34	23	773									
E 53/2290												
E 53/1859	1021	45	46100	4	175	869	63	06	2666	2	210	420
E 53/1856	414	37	15277	14	126	1769	45	92	4132	2	231	462
E 53/2078	2086	57	119072	49	133	6541	73	77	5545	11	223	2452
E 53/2079	1968	65	127097	20	129	2581	101	29	6752	8	195	1560
E 53/2208	4	16	99									
E 53/2216												
E 53/2218	48	36	1728									
E 53/2219	21	25	524									
E 53/2220	49	51	2511									
E 53/2250	311	54	16674	19	119	2258						
E 53/2253	15	79	1187									
E 53/2288												
E 53/2296	22	88	1930									
E 53/2297	39	52	2014									
E 53/2299	107	45	4789									
E 53/2298	21	28	1224									
P 37/9593	15	28	413									



Tenement			Historical Drilling	Drilling					Avenira Drilling	Drilling		
	1	AC, RAB etc.			RC			AC			RC	
	Holes	Avg m	Total m	Holes	Avg. m	Avg. m Total m	Holes	Avg. m	Total m	Holes	Avg. m	Total m
P 37/9594	09	15	928									
P 37/9595												
P 37/9596												
E 69/4020												
TOTAL	6,638	40	358,379	106	136	13,847	295	80	23,063	23	215	4,894



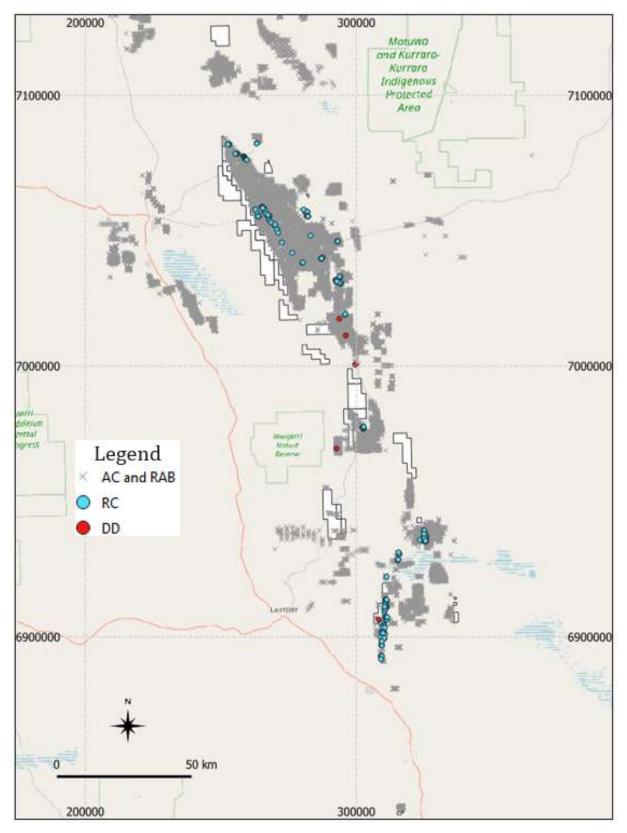


Figure 5-3: Historical drilling in and around the Jundee South project recorded in Avenira's drilling database.



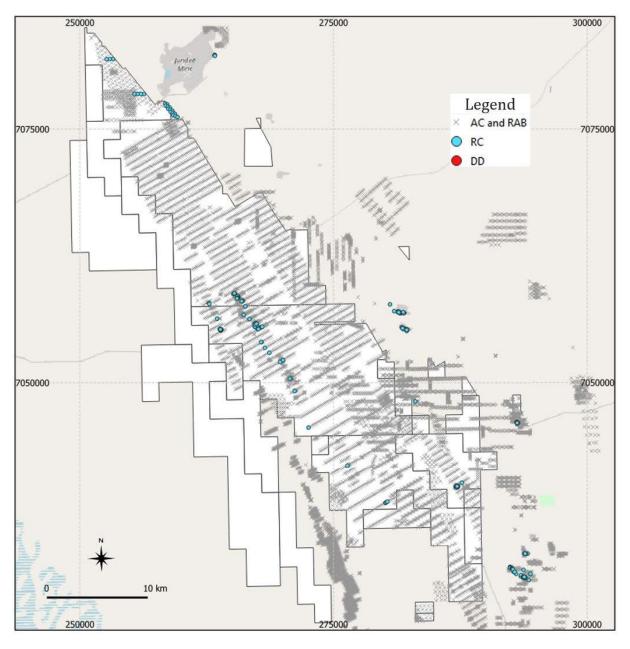


Figure 5-4: Historical drilling in and around the Jundee South 1 and 2 project areas recorded in Avenira's drilling database.

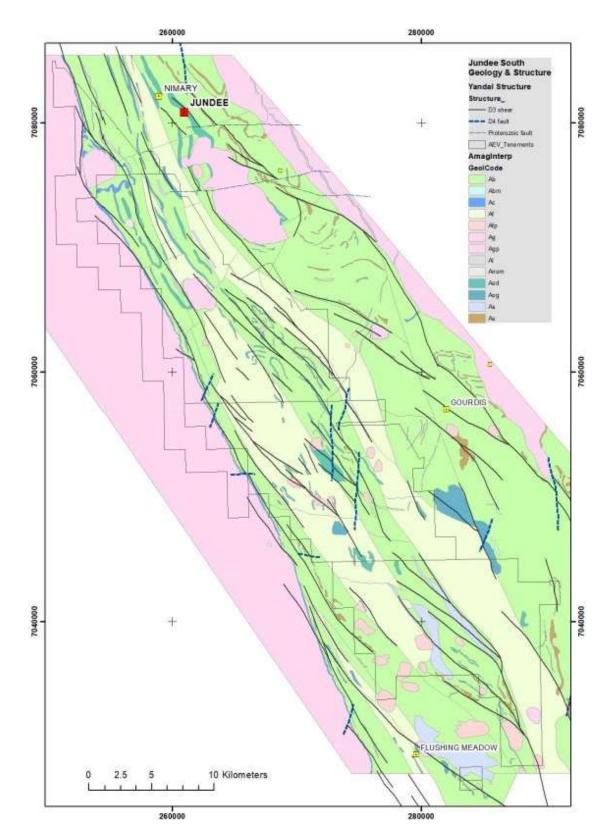


Figure 5-5: Rountree structural and geological interpretation map of the Jundee South 1 area.

Source: Avenira. Note that this figure shows outdated tenements.



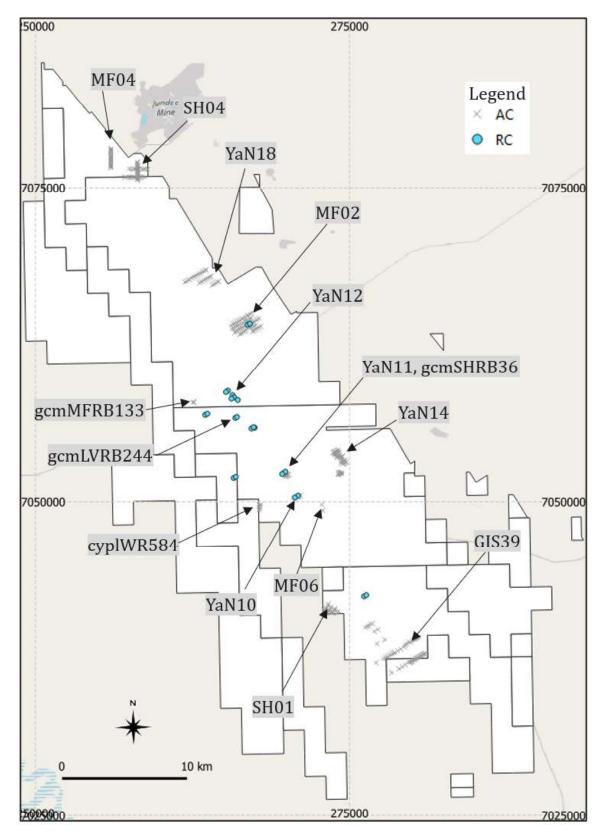


Figure 5-6: Avenira drilling including prospect names.



Table 5-3: Mineralised AC intercepts from the 2021 drilling.

Hole	Target	Depth From (m)	Depth To (m)	Width (m)	Grade (g/t Au)	Comment
1.	de la companya de la	Resan	pled Inter	rvals (>0.2	g/tAu)	**
JSA20_058	To versal	35	42	7	1.36	Quartz vein in felsic volcanic.
including	MF02	39	40	1	5.22	The hole finished in mineralisation
JSA20_125		81	84	3	0.45	Redox Front
JSA20_123	YaN11 (gcmSHRB36)	104	105	1	0.78	Quartz veining with relict sulphide
JSA20_129		89	90	1	0.57	Redpx front
<del>)</del>	,	Comp	osite Inter	vals (>0.1	g/t Au)	A MX
JSA20_333	YaN11 (gcmSHRB36)	68	76	8	0.25	Intermediate porphyry
JSA20_333		96	100	4	0.30	Weathered sulphide veining in intermediate volcanic
JSA20_334		72	76	4	0.18	Foliated mafic rock
JSA20_332		32	36	4	0.14	Quartz veined weathered felsic
JSA20_223	SH04	52	56	4	0.13	Weathered Dolerite
JSA20_304	cypIWR584	60	64	4	0.10	Weathered sulphide veining in Gabbro

Source: Avenira.



CLIENT: Avenira Limited PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

Table 5-4: Mineralised RC intercepts from the 2022 drilling.

Hole	From	To	Width	Grade	Comment
				(g/t Au)	
JSRC_0002	104	108	4	0.12	Felsic Porphyry, 12% Qtz veins
JSRC_0003	108	112	4	0.10	6% Qtz veins
JSRC_0003	180	184	4	0.11	Felsic Porphyry, 2% Qtz veins, minor py
JSRC_0003	200	204	4	0.10	Felsic Porphyry
JSRC_0004	24	28	4	0.33	Minor quartz vein
JSRC_0004	96	100	4	0.10	Saprock contact, Felsic Porphyry
JSRC_0004	149	188	39	0.12	NS 144-149, minor qtz vein + pyrite
Including	149	152	3	0.23	
JSRC_0005	48	52	4	0.12	Minor quartz veining
JSRC_0005	100	128	28	0.84	Minor quartz veining
Including	100	108	8	2.03	
JSRC_0005	180	196	16	0.18	Structure with high water flow, minor qtz
including	180	188	8	0.25	vein & pyrite
JSRC_0005	212	216	4	0.20	Minor quartz veining
JSRC_0006	136	140	4	0.66	10% quartz vein
JSRC_0014	176	180	4	0.12	Mafic schist, minor quartz vein and pyrite
JSRC_0016	16	20	4	0.10	Felsic saprolite, minor quartz veining
JSRC_0016	220	224	4	0.19	Intermediate Porphyry, 1% Qtz vein
JSRC_0017	36	40	4	0.41	Minor quartz vein
JSRC_0017	144	148	4	0.21	Minor quartz vein & pyrite
JSRC_0017	156	160	4	1.04	15% quartz vein
JSRC_0017	280	284	4	0.32	Felsic porphyry – no vein/pyrite
JSRC_0018	80	88	8	1.06	20% quartz vein
JSRC_0018	164	180	16	0.14	Felsic Porphyry, minor qtz vein & minor py
JSRC_0018	208	228	20	0.12	Felsic Porphyry, 6% qtz vein & minor py
JSRC_0018	236	240	4	0.11	Felsic Porphyry, 2% qtz vein & minor py
JSRC_0019	224	228	4	0.11	Felsic Porphyry (EOH)
JSRC_0020	72	84	12	0.13	Felsic Porphyry with up to 8% Quatz
JSRC_0021	68	72	4	0.13	Intermediate Porphyry
JSRC_0021	160	164	4	7.29	Intermediate Porphyry with 4% Quartz
JSRC_0021	164	168	4	0.15	Change in unit colour – intermediate
JSRC_0022	64	68	4	0.10	Dacite. Saprock transition



CLIENT: Avenira Limited PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

### 5.6.1 GEOPHYSICS

The project is covered by government magnetics-radiometrics data and gravity. Magnetics-radiometrics resolution in the Jundee South 1 project area is 100 m spaced lines. The gravity is of low resolution consisting of 2-4 km spaced readings. AEV have received a proposal to acquire 40m line spacing, 30m flight height aeromagnetics over the majority of the northern portion of the project area at a cost of A\$331,000. The AEV board have approved a prepayment required by the selected contractor to secure their services.

In May 2020 AEV used geophysical consultants Southern Geoscience to merge, process and image 8 open file magnetics-radiometrics surveys in the Jundee South 1 area. These were between 50 and 400 m spacing and completed between 1989 and 1996. In addition, the Jundee (50 m line spacing, 1994) and Lake Violet (100 m spacing, 1996) surveys were being processed as standalone datasets.

In July 2020 AEV used consultants DIRT Exploration to review the ASTER remote sensing signature of the Jundee South mine area and determine its applicability to gold exploration in the Jundee South project area.

In July-August 2020 AEV commissioned Modern Magnetics to complete high resolution round magnetics surveys at four prospects: YaN12, YaN14, MF01, and MF05 (Figure 5-7). This was completed at a 25 m line spacing. Modern Magnetics also provided geological interpretations of each prospect (e.g., Figure 5-8).

In October 2023 DIRT Exploration reviewed Sentinel-2 remote sensing data in the western Bronzewing and West Darlot areas in the context of lithium exploration.

In June 2024 Avenira used geophysical consultants Southern Geoscience to merge, process and image two open file airborne magnetics-radiometrics surveys in the Darlot East area. These were originally completed in 2000 and 2014 at a line spacing of 40 and 50 m respectively and with a terrain clearance of 35 m.

The recently approved airborne magnetics survey commissioned by AEV has potential to both generate new exploration targets and prioritise testing of existing targets, which ERM considers to be a positive initiative that will enhance AEV's exploration and potentially contribute to new resource discovery. The new survey could contribute to enhancement of the value of AEV's Jundee South tenement package.

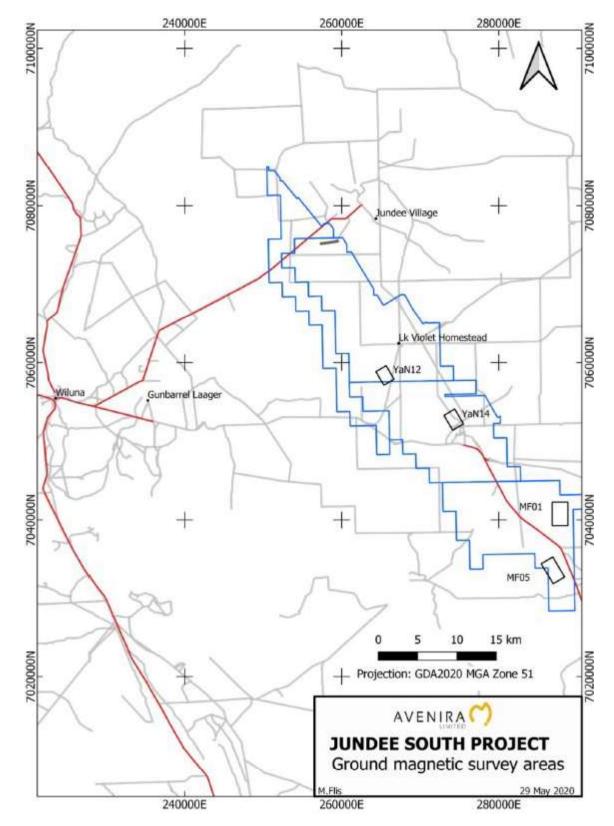


Figure 5-7: Ground magnetics survey areas on the Jundee South area.

Source: Avenira. Note that this figure shows outdated tenements.



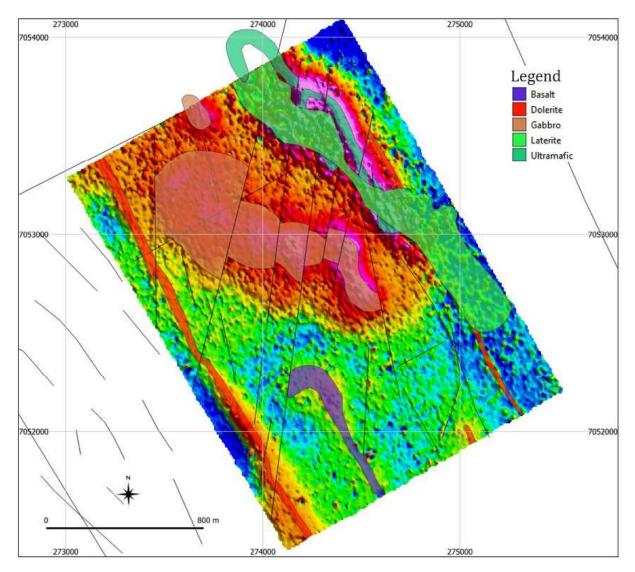


Figure 5-8: Ground magnetics total magnetic intensity (TMI) reduced to pole (RTP) image of the YaN14 Prospect with interpreted geology.

### 5.7 GEOLOGY AND RESOURCES

### 5.7.1 REGIONAL GEOLOGY

Avenira's Jundee South project straddles the western flank of the Yandal Greenstone Belt with the tenements concentrated towards the northern end of the belt (Figure 5-9). The Yandal Greenstone Belt forms part of the Kurnalpi Terrane of the Eastern Goldfields Province within the Archean Yilgarn Craton.

The Yandal belt is a linear belt approximately 130 km in strike and 30 km wide that strikes north-northwest and consists of a deformed and metamorphosed sequence of volcanic and sedimentary rocks bounded by granitoids. Metamorphism is generally low to middle-greenschist facies, grading to amphibolite facies close to granite margins.

The greenstone rocks are highly prospective for gold, whereas the prospectivity of the surrounding granitoid rocks is low.



The Jundee South 1 and Mount Stirling tenements in the north of the project dominantly overlie Yandal Greenstone Belt rocks, whereas the Jundee South 2 and Mount McClure Fault tenements dominantly overlie granitoid rocks (Figure 5-9). The geology in this part of the greenstone belt is relatively complex with slices of mafic stratigraphy intercalated with felsic volcanics and sedimentary rocks and intruded by multiple granitic stocks. It is likely that early structural imbrication and folding gave rise to the observed geological pattern (D1 and D2 events), and these early structures have been later reactivated as sinistral strike—slip faults (D3 event) (Baltis, 2021). There is extensive cover and deep weathering across the region. Drilling indicates cover and weathering is mostly >50 m.

The Carper, Bronzewing and Darlot East tenements to the south predominantly overlie granitoid rocks at the fringes of the greenstone belt, with small sections overlapping the greenstone belt itself (Figure 5-10, Figure 5-11). Greenstone belt rocks in the Darlot East project area are interpreted to consist of undifferentiated basalt.

Avenira interpret that there is potential for covered mafic stratigraphy (of the greenstone belt) beneath some parts of the tenements that are conventionally mapped to overlie granitoid rocks based on magnetic response (e.g., at the Mount McLure Fault project area), however, this interpretation is conceptual only.

Further south, the Ockerburry (Darlot West) tenements are located on the regional scale Ockerburry Fault within a mixed sequence of greenstone belt volcanics and volcaniclastics (Figure 5-12).

The Mount Stirling tenements to the far south are located on greenstone belt rocks comprising mafic lithologies identified in sporadic outcrop (Figure 5-13).



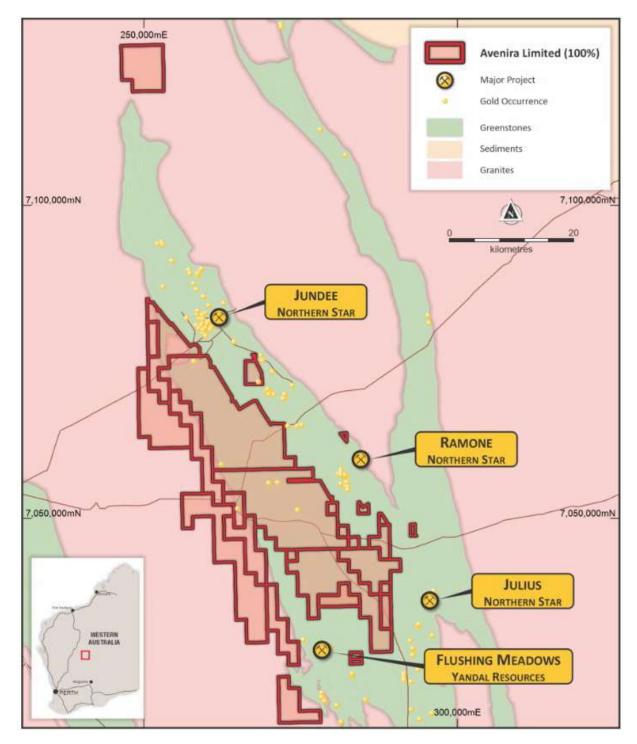


Figure 5-9: Jundee South tenements on Geology.



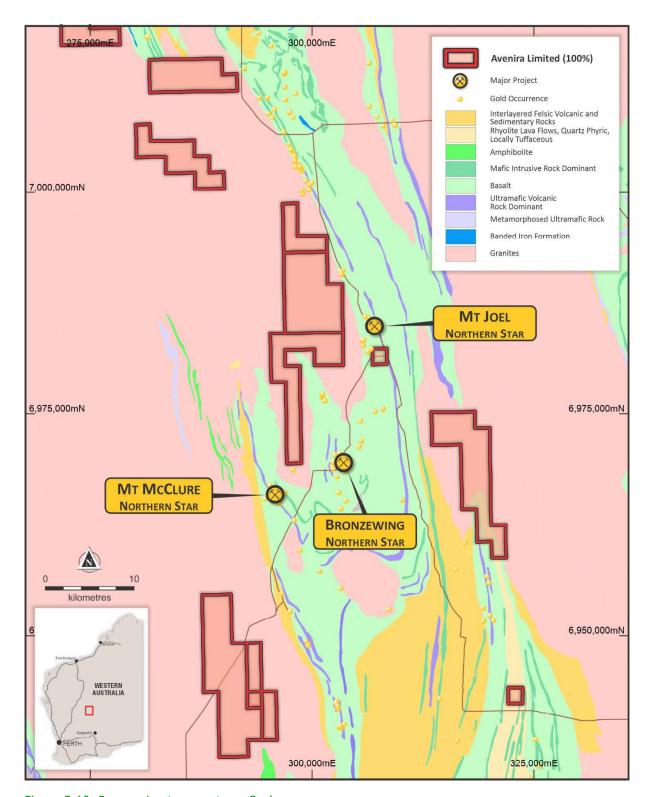


Figure 5-10: Bronzewing tenements on Geology.



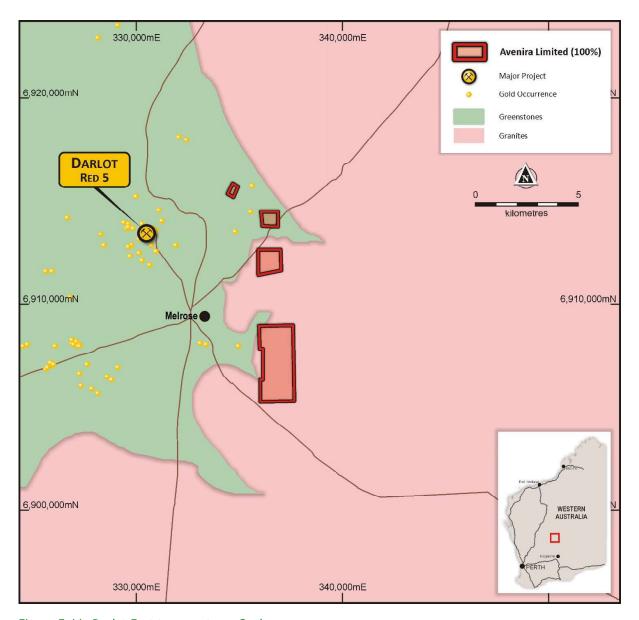


Figure 5-11: Darlot East tenements on Geology.



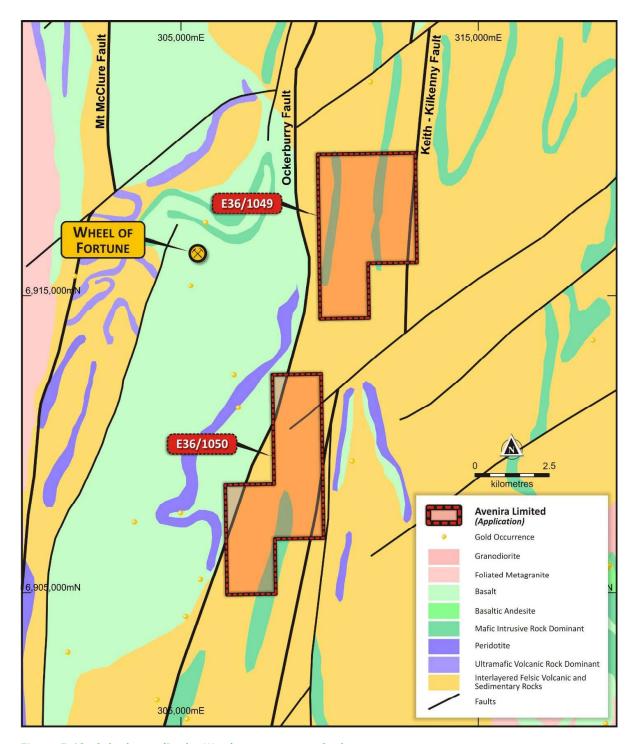


Figure 5-12: Ockerburry (Darlot West) tenements on Geology.



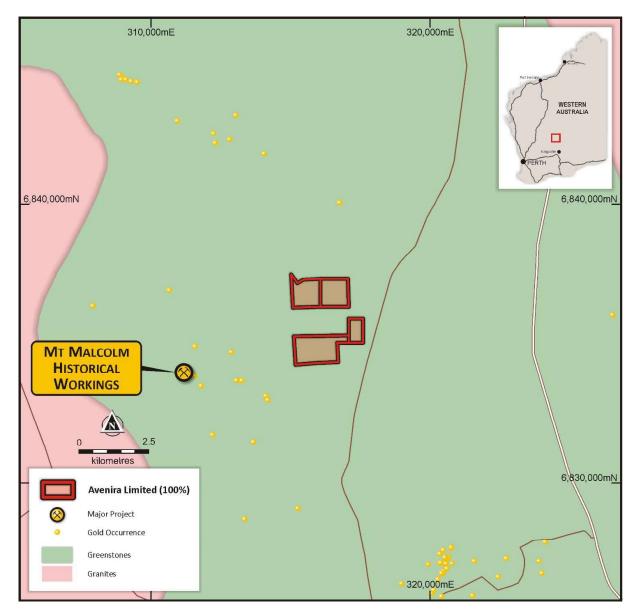


Figure 5-13: Mt Stirling tenements on Geology.

### 5.7.2 DEPOSIT GEOLOGY AND MINERALISATION

The main commodity being explored for at the Jundee South project is gold.

Avenira tenements are within 5 km of the Jundee mine (>10 Moz gold), the Julius deposit (400 koz), the Bronzewing mine (4 Moz), and the Darlot mine (3.5 Moz) (Figure 5-14).

**ERM** 

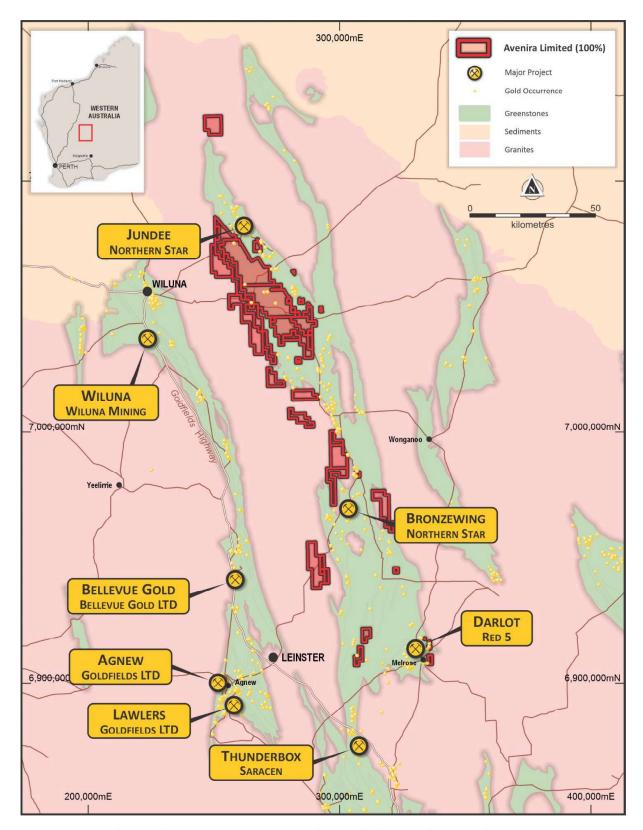


Figure 5-14: Jundee South project tenements on geology, including nearby mineralisation.



Gold was first discovered in the Yandal belt in the late 1880s. Production was at a small scale initially, however, this changed following the discovery of the significant mineralisation at the Bronzewing, Jundee and Darlot deeps (Centenary) deposits in the 1990s.

The gold mineralisation is of orogenic-type. It is typically shear related with later stage brittle cross-cutting faults being critical in gold localisation. Iron rich mafic rocks or porphyry intrusive association, quartz vein development, and carbonate (± potassium mica and iron sulphide) alteration are common features. Deposits in felsic volcanic rocks or sediment are rare in the belt and generally small in size. No significant gold mineralisation has been identified within the granitoids.

No economic gold mineralisation is known to occur on Avenira's Yandal tenements, only modest to low-grade gold drill intercepts.

Historical prospects in the Jundee South project area were defined by elevated gold in the first pass AC and RAB drilling (Figure 5-15),

The Lake Violet prospect was first defined by RAB gold anomalies that have a strike length of about 4.5 km. It was then tested by 39 RC holes. Relatively thin intercepts (1-4 m, true width unknown) of generally low-grade (0.8-2.0 g/t) gold were intercepted at a near constant depth (93-103 m). One interpretation is that gold has concentrated at an old water table level, and this is not necessarily reflective of gold in the underlying rocks (Filis, 2020).

The Moilers Find prospect is to the west and parallel to the Lake Violet prospect. This prospect was first defined on RAB gold anomalies that have a strike length of about 3.2 km. It was then tested by 18 RC holes with only low level gold intersected.

The SH prospect further to the south was tested by six RC holes with only low level gold intersected.

The WW prospect is based on a 1-5 g/t RAB gold anomaly. This prospect was tested by 19 RC holes and intersected wider (up to 14 m, true width unknown) but still low-grade mineralisation.

Avenira has also generated conceptual targets in-house and using external consultants.

In May 2020 Rountree generated 22 targets in the Jundee South 1 tenements based on favourable structural and lithological criteria using a Jundee deposit model (red in Figure 5-16).

In April 2021 Gold Vector generated 21 targets in the Jundee South 1 tenements (blue in Figure 5-16). The target generation involved identifying shear zones that may have been generated or reactivated during the D3 event, in particular left stepping jogs (i.e., from NNW to NW orientation) and splays with a northwest-orientation as favourable positions for gold mineralisation. Other factors considered favourably were gravity gradients reflecting large structures, intrusive centres and competency contrast between juxtaposed rock types.

All targets were reviewed and ranked by CSA Global in September 2021. CSA Global provided 72 planned drill holes to test 47 targets. This work has informed the strategic exploration of prospects in the early stages of the project's life (Figure 5-15, Figure 5-16)

Avenira is currently completing target generation and ranking in the other tenements that make up the project.



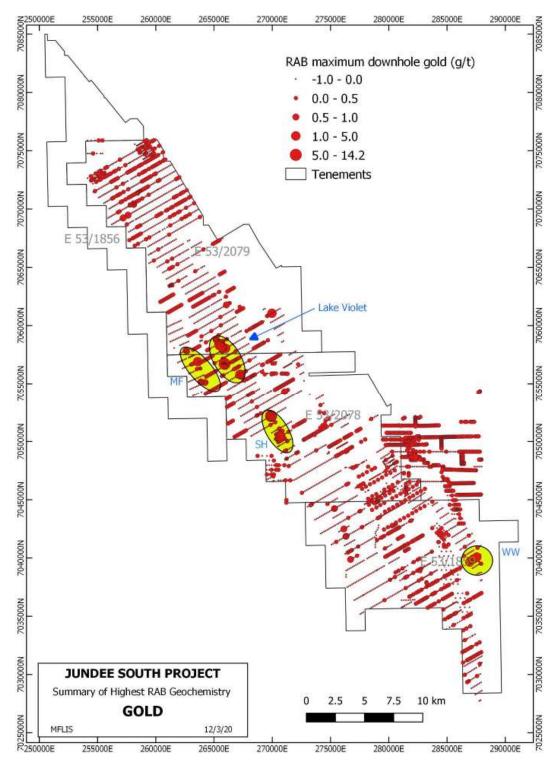


Figure 5-15: Summary of high Au in historical RAB drilling and definition of main prospects in the Jundee South area.

Source: Avenira. Note that this figure shows outdated tenements.



CLIENT: Avenira Limited
PROJECT NO: 0749204 AEVITV01 DATE:
REPORT: R258.2024 VERSI

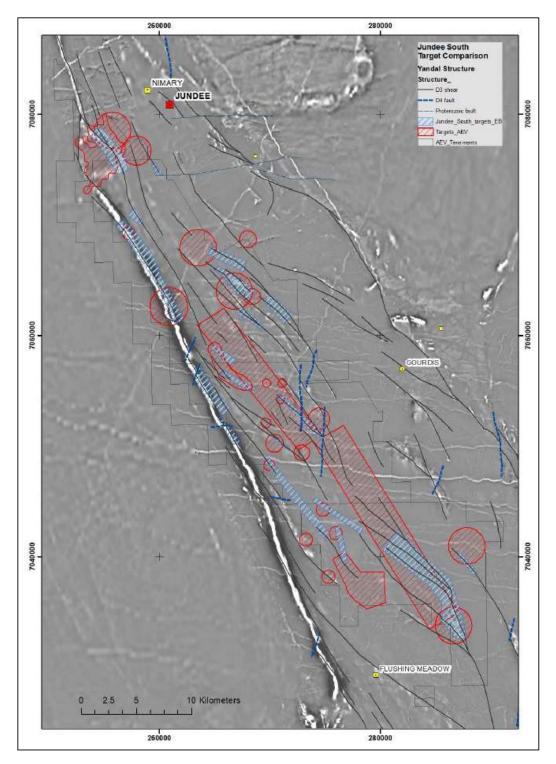


Figure 5-16: Targets in the Jundee South 1 area.

Source: Avenira. Note that this figure shows outdated tenements.

In addition to gold, Avenira is actively generating targets for pegmatite-hosted lithium and potash. The leases may also be prospective for volcanogenic massive sulphide (VMS) base and precious metals, and banded iron formation.



CLIENT: Avenira Limited PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

### 5.8 MINERAL RESOURCES

The Jundee South project is at a pre-resource stage of development.

#### 5.9 PROPOSED MINING

The project is at a very early phase of exploration. Mining studies have yet to advance beyond an initial, conceptual level.

### 5.10 ORE BENEFICIATION

The project is at a very early phase of exploration potential and geological definition. ERM cannot comment as to the metallurgical potential or viability of any of the project targets or domains at this time. This is consistent with the current level of project resource evaluation and development.

### 5.11 TECHNICAL ASSESSMENT

The Jundee South project is in a well-established mining district with several examples of economic gold mines hosted in greenstone belt rocks in close proximity.

The sections of the Jundee South project with analogous greenstone geology to that which hosts these mines, in particular the Jundee South 1 project area, are highly prospective for gold and Avenira's use of an orogenic-type gold model to inform exploration is of sound technical merit.

The Jundee South project is at an early-stage of exploration.

Historic RAB drilling encountered wet conditions which resulted in inconsistent sampling of the saprock section of the weathering profile. Subsequent drilling by AEV used AC techniques which enabled drilling to consistently sample the complete profile (to refusal). Drilling to date has only intercepted modest to low-grade mineralisation with generally poor geological continuity between intercepts. However, the RC drill density at these prospects is generally low and there remains potential for economic gold mineralisation. Avenira is currently compiling and modelling these data to identify potential positions of structural upgrade to the mineralisation and depth and strike extensions.

Exploration so far has focused on follow-up of elevated gold in first pass RAB and AC drilling. Baltis (2021) notes that much of the first pass drilling appears not to have penetrated through the weathering profile to the key saprock horizon, the lower of two main gold dispersion horizons within the Yilgarn regolith. This means that it may not have necessarily been effective in sterilising areas. In this context, Avenira's strategy of generating, ranking and systematically testing conceptual targets based on key geological criteria is of sound technical merit.

In addition, a number of second and third order RAB-defined gold anomalies remain to be drill tested. These are currently being reviewed.

Avenira's exploration to date has been appropriate for the target style. Given the sulphidic alteration noted at the Jundee mine, it would also be reasonable to assess electrical geophysical methods (especially induced polarisation) for prospect testing.

Exploration for other commodities is at this stage conceptual only. Further work is required to progress these concepts.



### 5.12 PROJECT VALUATION OPINION

Value associated with the Jundee South project is associated with the exploration tenements, interpreted prospectivity and exploration results to date. Early-stage exploration properties without identified Mineral Resources are usually valued using cost-based approaches including the KGR, recent comparable transactions, MEE and joint venture/earn-in terms.

Best practice requires the use of more than one approach for the assets to be valued. Differences in valuation opinions evident between approaches need to be compared and discussed and confidence in the results provided by each approach assessed.

### 5.12.1 COMPARABLE TRANSACTIONS

ERM identified 44 recent, comparable transactions in Western Australia involving pre-resource stage exploration projects completed in the two years prior to the effective date of this report (August 2022—August 2024) using the S&P Capital IQ transactions service (S&P, 2024). These transactions are summarised in Table 5-5.

Values in the complete set of identified transactions ranged from US\$2,000/km<sup>2</sup> to US\$1.581 million/km2. Four high value transactions were excluded from further analysis:

- 1. Pilbara Minerals Limited's acquisition of the Mount York project from Kairos Mining Limited for US\$13.45 million
- 2. Geoda Pty Ltd and Lamerton Pty Ltd's acquisition of the Lady Ida project from Ore Banda Mining Limited, reported as not involving Mineral Resources and Ore Reserves but on mining leases considered to be non-core assets by Ora Banda, but considered by ERM to have undisclosed Mineral Resources and Ore Reserves contributing to their agreed value
- 3. Northern Star (Carusoe Dam) Pty Ltd's acquisition of the Hobbes project from Solstice Minerals Limited, also considered likely to have unreported Mineral Resource potential and/or particular strategic value to Northern Star
- 4. Regener8 Resources NL's acquisition of the Niagra project GTI Resources Limited for US\$1.01 million, corresponding with an effective value of US\$101,500/km<sup>2</sup>, considered anomalous by being four times the closest transaction identified in the data examined

A further five transactions were identified with values in the range selected for use in preparing a comparable transactions valuation opinion but for which the areas of the tenements involved in the transaction could not be determined.

The remaining 35 transactions have values between US\$200/km<sup>2</sup> to US\$39,700/km<sup>2</sup>, with a geometric mean value of US\$4,800/km<sup>2</sup>. The range of values evident in these transactions (US\$39,500/km<sup>2</sup>) is considered by ERM too wide to be of meaningful use. This has been managed by setting lower and upper bounds at  $\pm 25\%$  of the preferred transaction value provided by the geometric mean value of US\$4,800/km2 (US\$3,600 and US\$6,000 respectively).

Avenira's Jundee South tenement holdings comprise a total of 1,372.8 km<sup>2</sup> of mostly live exploration tenements, where pending tenements (considered highly likely to be granted), held as both exploration licences and prospecting licences. Prospecting licences account for only 100.6 km<sup>2</sup> of the Avenira tenement package.



CLIENT: Avenira Limited PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

Table 5-5: Comparable Transactions - WA Gold Exploration Projects 2022-2024

							t 10km NNE							project							
Notes				7.2 Two EL, Laverton region			20.5 Early stage exploration project 10km NNE Paddington Mine.					0.9 Ennuin West gold project		1.1 Meekatharra area exploration project			20.6 Coolgardie region		4.7 Northwest of Kalgoorlie WA		
Trans	Value/Area US\$000/km²	3.1	25.6	7.2		32.7	20.5	8.4	4.0	101.5	1.0	6.0	35.5	1.1	1.9		20.6	33.8	4.7	34.4	12.5
Tenement	Area km²	38.5	1.0	107.3		1.9	23.1	11.0	57.8	12.9	63.2	96.3	7.2	55.0	257.7		19.3	13.8	156.8	4.0	112.8
Trans Value	100% US\$ ('000 8/2024)	120.6	26.3	772.3	1058.0	61.7	472.7	92.9	228.5	1304.2	63.3	83.4	254.1	58.5	488.7	4416.0	397.4	464.1	742.5	137.1	1405.0
Trans Value	100% US\$	87.0	19.0	557.0	750.0	43.8	341.0	0.79	169.0	1010.0	49.0	64.0	195.0	40.0	375.0	3210.0	274.0	320.0	520.0	0.96	930.0
Equity	%	100.0	100.0	100.0	100.0	80.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.08	100.0	100.0
Trans, Value	\$ns (,000)	87.000	19.000	557,000	750.000	35.000	341.000	67.000	169,000	1010.000	49.000	64.000	195.000	40.000	375.000	3210.000	274.000	320.000	416.000	000'96	930.000
e	Completed	11/11/2021	21/10/2021	1/12/2021	1/11/2021	25/11/2021	19/12/2022	31/03/2022	13/01/2022	23/06/2022	10/05/2022	25/07/2022	4/03/2022	7/12/2022	30/03/2022	30/06/2022	17/07/2023	30/09/2022	8/07/2022	26/09/2022	17/10/2022
Date	Announced	8/10/2021	21/10/2021	25/10/2021	1/11/2021	25/11/2021	16/12/2021	22/12/2021	11/01/2022	3/02/2022	21/02/2022	2/03/2022	4/03/2022	13/03/2022	30/03/2022	30/05/2022	20/06/2022	21/06/2022	1/07/2022	28/07/2022	28/09/2022
Acquirer		Western Mines Group Ltd	Yandal Resources Limited	Brightstar Resources Ltd	Aurum Resources Limited	Ozz Resources Ltd	Pursuit Minerals Ltd	Legacy Iron Ore Ltd	Ozz Resources Ltd	Regener8 Resources NL	Javelin Minerals Ltd	Everest Metals Corporation Ltd	Ozz Resources Ltd	Great Boulder Resources Ltd	Musgrave Exploration Pty Ltd	Capricorn Metals Ltd	FMR Investments Pty Ltd	Aurumin Limited	Midas Minerals Ltd	IRIS Metals Ltd	E79 Gold Mines Limited
Owner		Investors	Investors	Milford Resources Pty Ltd	Aldoro Resources Limited	Investor	Broad Arrow Holdings (WA) Pty	Investors	Anglo Australian Resources NL	GTI Resources Limited	Fleet St Holdings Pty Ltd	NXT1 Pty Ltd	United Mines Pty Ltd	Undisclosed	Eastern Goldfields Exploration Pty Ltd	Gascoyne Resources Limited	Horizon Minerals Limited	Mining Equities Pty Aurumin Limited Ltd	DiscovEx Resources Ltd	Investor	Gascoyne Resources Limited
Country		Australia (WA)	Australia (WA)	Australia (WA)	Australia (WA)			Australia (WA)	Australia (WA)	Australia (WA)	Australia (WA)	Australia (WA)	Australia (WA)	Australia (WA)		Australia (WA)	Australia (WA)	Australia (WA)	Australia (WA)		Australia (WA)
Project		E39/2073	P27/2234	Comet Well		P37/8633	Commando	E39/2040	E37/1287, E37/1355	Niagra	E 29/1095	E77/2652	P37/9139, P37/8573, E37/1234 & E37/1235	Side Well	Mount Magnet South Australia (WA)	Mumbakine Well	Gunga West	E57/1140	Newington	Kookynie	E51/1681



Notes		2.0 5 tenements proximal to tenements held by company, all share transaction 7		216.4 Non-core mining leases, resources and reserves unclear.	Large tenement holding, past mining on licences	39.7 6 prospecting licences	4.2 Tenements in the Southern Cross greenstone belt WA			2.2 Fraser Range Gold Project. 135 km² granted, 59 km² application		Northern Star purchased 62 exploration tenements surrounding Horizon's			9.0 Tenements adjacent to Peregrine's Newman project, positive exploration		
Trans	Value/Area US\$000/km²	2.0	1.8	216.4		39.7 (	4.2			2.2 F	4.4	4	5.8	0.2	0.6	1.7	12.2
Tenement	Area km²	19.3	22.0	37.4		8.4	96.4			194.0	1183.0		5.5	96.3	6'86	96.3	5.5
Trans Value	100% US\$ ('000 8/2024)	39.5	39.5	8096.5	168.4	334.0	400.9	427.2	1485.4	432.2	5214.3	2473.9	31.7	17.4	891.8	164.6	67.3
Trans Value	100% US\$ ('000)	30.0	30.0	6430.0	133.0	258.0	305.0	325.0	1130.0	328.8	4110.0	1950.0	25.0	14.0	720.0	132.0	54.0
Equity	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	80.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Trans.Value	\$ns (,000)	30.000	30.000	6430.000	133.000	258,000	305.000	325.000	1130,000	263,000	4110.000	1950,000	25.000	14.000	720.000	132.000	54.000
Date	Announced Completed	23/02/2023	31/05/2023	19/09/2023	26/04/2023	5/07/2023	6/05/2024	31/08/2023	21/09/2023	15/01/2024	1/12/2023	27/10/2023	12/07/2023	16/11/2023	12/12/2023	31/03/2024	9/01/2024
Da	Announced	15/02/2023	28/02/2023	16/03/2023	26/04/2023	19/05/2023	1/08/2023	3/08/2023	7/08/2023	15/08/2023	11/10/2023	23/10/2023	25/10/2023	16/11/2023	12/12/2023	8/01/2024	9/01/2024
Acquirer		Tempest Minerals Limited	Cooper Metals Ltd	Geoda Pty Ltd, Lamerton Pty Ltd	Rock Solid Mining Services Pty Ltd	Nelson Resources Ltd	Golden Horse Minerals Ltd	Lithium Resource Investments Pty Ltd	Ora Gold Ltd	Tempest Minerals Ltd	Trek Metals Limited	Northern Star Resources Ltd	Aurumin Limited	Infinity Mining Ltd	Peregrine Gold Ltd	Golden Horse Minerals Ltd	Everest Metals Corporation Ltd
Owner		Investor	DiscovEx Resources Ltd	Ora Banda Mining Limited	Golden State Mining Ltd	Rock Mining Australia Pty Ltd	Investor	Australia (WA) Aurumin Limited	Sipa Resources Ltd Ora Gold Ltd	Mac3 Pty Ltd	Undisclosed	Horizon Minerals	SLS Exploration Pty Ltd	TasEx Geological Services Pty Ltd	FMG Pilbara Pty Ltd	Enterprise Metals Ltd	Warringa Blue Ltd, Everest Metals Lil Boyteeth Pty Corporation Lt Ltd
Country		Australia (WA) Investor	Australia (WA)	Australia (WA)	Australia (WA)	Australia (WA)	Australia (WA)	Australia (WA)	Australia (WA)	Australia (WA)	Australia (WA)	Australia (WA)	Australia (WA)	Australia (WA)	Australia (WA)	Australia (WA)	Australia (WA)
Project			E59/2584	Lady Ida	Cue	Yarri	Birthday, Ennuin, Newfield East	Karramindie	Murchison	Elephant			E57/1028	E45/6281	Newman	E77/2652	E1/2135, E51/2136



Page 89

	Owner	Acquirer	Date	je je	Trans.Value	Equity		Trans Value	Tenement	Trans	Notes
			Announced Completed	Completed	\$00 (,000)	%	100% US\$ ('000)	100% US\$ ('000 8/2024)	Area km²	Value/Area US\$000/km²	
Australia (WA) Olympio Metals Investor Limited	Inve	stor	2/02/2024	2/02/2024	144.000	100.0	144.0	168.4	112.8	1.5	
Australia (WA) Solstice Minerals North Limited (Carc	North (Carc Pty L	Northern Star (Carosue Dam) Pty Ltd	9/04/2024	16/04/2024	6460.000	80.0	8075.0	8631.0	55.0	156.9	
Australia (WA) Undisclosed Aurun	Aurun	Aurumin Limited	22/04/2024	30/06/2024	190.00	100.0	190.0	203.1	0.09	3.4	3.4 5 Exploration tenements proximal to existing tenure, cash+shares transaction
E15/1801, E63/2199 Australia (WA) Investors Auric P	Auric I	Auric Mining Ltd	25/07/2024	20/06/2024	730.000	100.0	730.0	744.6	324.5	2.3	
Australia (WA) Kairos Minerals Pilbara N Limited Limited	Pilbara Limite	Pilbara Minerals Limited	1/08/2024	5/09/2024	13450,000	100.0	13450.0	13450.0	8.5	1580.5	
Australia (WA) Investor Global	Global Ltd	Global Petroleum Ltd	16/09/2024	16/09/2024	000'99	10.0	0.099	0.099	93.5	7.1	



ERM proposes that these results provide a comparable transactions value of between A\$4.94 million and A\$8.24 million, with a preferred value of A\$6.59 million.

### 5.12.2 APPRAISED VALUE OR EXPLORATION EXPENDITURE APPROACH

Exploration expenditure figures for the Jundee South project were compiled by Avenira using WA Department of Mines, industry Regulation and Safety (DMIRS) online tenement records. This database is publicly accessible and considered by ERM to be reliable and transparent. All companies holding exploration and mining tenements in Western Australia are required to lodge proforma expenditure reports annually by the anniversary date of each tenement. Failure to comply with reporting requirements results in cancellation of the affected tenements by DMIRS. The data compiled by Avenira has not been thoroughly audited, but spot checks by ERM indicate that the data is complete and accurate.

Avenira has recorded exploration expenditure on the Jundee South project of A\$6.12 million since 2017, distributed as presented in Figure 5-17.

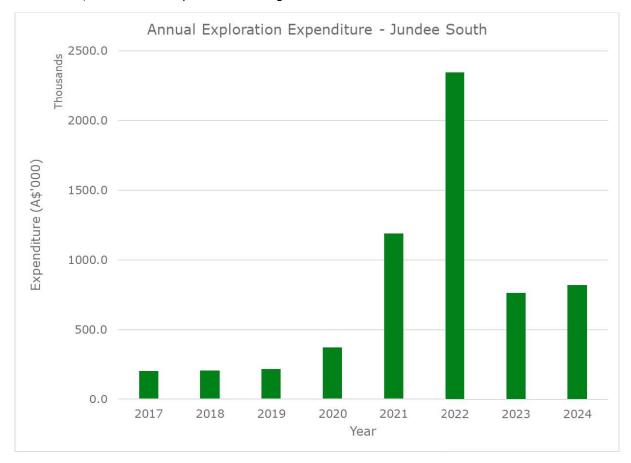


Figure 5-17: Annual Jundee South project Exploration Expenditure 2017-2024

ERM considers the Jundee South region to be highly prospective, with a number of significant gold deposits, including long-life producing mines in the district (Figure 5-14). Exploration by Avenira has focused on regional mapping, geophysical surveys and sampling beneath surficial cover using AC and RC drilling to facilitate bedrock geochemical analysis (Figure 5-15). This work has been effective in generating new targets for further testing (Figure 5-16) but has not led to the discovery of new gold resources as yet.



ERM proposes that a PEM of 1.5 to 2.0 is appropriate for all tenements within the Jundee South project, resulting in a value opinion of A\$9.2 million to A\$12.2 million with a preferred value of A\$10.7 million, the midpoint of this range, consistent with PEM criteria proposed by Onley, (2004).

ERM considers that reasonable prospects exist to increase the value of the project through discovery of economic mineralisation within the project area with continued exploration.

### 5.12.3 GEOSCIENCE FACTOR METHOD

The GFM or KGR seeks to rank and weight geological aspects, including proximity to mines, deposits and the significance of the project area and the commodity sought. The valuation is based on a calculation in which the geological prospectivity, commodity markets and mineral property markets are assessed independently along with the cost of acquiring exploration tenure and access to land for exploration, reflected in the BAC that forms the basis of the estimate.

The Jundee South project comprises:

- 47 exploration licences with an aggregate area of 1272.2 km<sup>2</sup> and
- nine prospecting licences with an aggregate area of 100.6 km<sup>2</sup>.

The GFM valuation approach hinges on rating expenditure incurred in securing access to land captured by the BAC (Table 5-6, Table 5-7). All exploration licences and prospecting licences have been treated as single entities for the purpose of this valuation estimate.

Table 5-6: Jundee South BAC - Exploration Licences

Activity	Rationale	Cost Estimate (A\$)
Project Generation	Estimated four weeks by exploration geologist, management review	A\$16,000
EL Applications	Application fee A\$1,743 for multiple blocks, spread over 37 titles	A\$64,490
First Year Tenement Rental	Initial Fee A\$\$469 per block	A\$78,250
Expenditure Commitment	As reported by WA DMIRS database	A\$928,500
Administration	Administration costs—two weeks by admin and land access team	A\$6,000
Statutory Reporting	One week per licence (\$4,000 for 37 licences)	A\$148,000
Estimated BAC	A\$1,093,240 estimated total cost, 463 blocks	A\$1,093,240

Multiples interpreted by ERM to reflect the prospectivity of prospecting and exploration licences included in the Jundee South project are examined in Table 5-8. The GFM method estimates a value of between A\$10.8 and A\$15.0 million for Avenira's Jundee South project. ERM proposes a preferred value of A\$12.9 million.



PROJECT NO: 0749204 AEVITV01
REPORT: R258.2024

Table 5-7: Jundee South BAC - Prospecting Licences

Activity	Rationale	Cost Estimate (A\$)
Project Generation	Estimated 2.5 days' work by exploration geologist and management review	A\$2,000
PL Applications	A\$455 per prospecting licence	A\$4,095
First Year Tenement Rental	100.61 km², 10,061 ha, A\$38 per 10 hectares	A\$38,230
Expenditure Commitment	Reported from DMIRS database	A\$39,280
Administration	3 days by admin and land access team	A\$1,800
Statutory Reporting	2 days per licence, 9 licences	A\$21,600
Estimated BAC	Estimated total A\$107,005 across 9 prospecting licences	A\$107,005

Table 5-8: Geoscience Factor Method Assessment - Jundee South

Factor	Rat	ing	Remarks
	Low	High	
Address/Off Property Factors	2.0	2.5	Operating mines with significant gold resources and historical production in the area, but not along strike of Avenira tenements.
On Property Factors	1.5	2.0	Reconnaissance air-core/RC percussion drilling with encouraging intersections
Anomaly Factors	2.0	2.5	Multiple, early-stage targets supported by reconnaissance drilling data
Geological Factors 1.5		1.5	Prospective geology
Market Factor	1.0		
Equity	100	0%	Tenements are 100% Avenira held
Valuation (A\$ M)	10.8	15.0	Exploration and Prospecting licences

PROJECT NO: 0749204 AEVITV01
REPORT: R258.2024

### CONCLUSIONS

## 6.1 PROJECT STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS

Avenira is pursuing two very different projects which have distinct qualities. These are able to be succinctly captured in terms of perceived strengths, weaknesses, opportunities and threats.

### 6.1.1 WONARAH PHOSPHATE PROJECT

The Wonarah project has a varied set of strengths, weaknesses, opportunities and threats, discussed in Table 6-1. Reports and other documents from the Avenira data room reviewed by ERM and discussions with Avenira management in completing this report demonstrate acute awareness of most issues listed that has contributed to development of strategies to address weaknesses and threats affecting the project.

### 6.1.2 JUNDEE SOUTH GOLD PROJECT

Jundee South is considered by ERM to represent an attractive opportunity for new resource discovery in a highly prospective region in a favourable jurisdiction, summarised in Table 6-2.

### 6.2 VALUATION SUMMARY

### 6.2.1 WONARAH PHOSPHATE PROJECT

Valuation opinions for the project have been developed by ERM using multiple approaches:

- analysis of comparable transactions
- · Rule of Thumb (Yardstick) Valuation
- review and revision of the Wonarah financial model, development of a DCF valuation.

The valuation opinions developed are summarised in Table 6-3. A DCF valuation was run using phosphate rock prices of US\$152.50/tonne (August 2024 price) and US\$200.00/tonne. This demonstrated the sensitivity of the DCF to price. The DCF valuation uses a discount rate of 10% to reflect the expected cost of capital for mining projects expected in Australia at the date of this report. Further mining studies are needed to extend the DCF valuation to the Main Zone.

The DCF demonstrated that the Wonarah project is not viable as a phosphate rock producer. This has driven Avenira to consider alternative product options provided by phosphate chemicals including YP and LFP battery cathode materials which are in growing demand and attracting prices expected to deliver an attractive investment prospect.

### 6.2.2 JUNDEE SOUTH GOLD PROJECT

Avenira holds an attractive tenement package in a highly prospective region of Western Australia with a long history of gold exploration and mining.

Valuations were developed by ERM using Comparable Transactions, MEE and the GFM which provide transparent valuation opinions for projects without Mineral Resources and Ore Reserves. Results are presented in Table 6-4.



Table 6-1: Wonarah Phosphate Deposit - Strengths, Weaknesses, Opportunities and Threats

Strengths	Weaknesses
High quality product meeting fertiliser industry quality specifications.  Well delineated mineral resource provides a sound technical basis for detailed mine design with progressive rehabilitation potential.  Suitable raw material for phosphate chemicals production (YP and LFP battery cathode materials).  Domestic phosphate market dependent on imports.	Phosphate rock is a relatively low value bulk commodity.  Major producers (Morocco) effectively set world prices.  Relatively remote location, distant from major agricultural industry centres in eastern, southern and southwestern Australia.  Lack of infrastructure apart from sealed major road access to the site, which links to Tennant Creek and Mt Isa.  Trace element concentrations appear to be low but only a small number of
turing. nocils, ner is	rrace element concentrations appear to be low but only a small number of samples, unevenly distributed across the deposit for a restricted suite of elements. The project is not considered to be a viable phosphate rock producer at current phosphate rock prices (but Avenira's development strategy has been designed to effectively counter this).
The proposed mine is in a sparsely populated region and will not adversely impact local communities.  The project will benefit the local community which is also the owner of the freehold title in the project area.  Secure, transparent exploration and mining tenement regime.  There is an existing EPA assessment and NOI for the previous 3Mtpa DSO feasibility study and the JDC radial arc furnace.	
Potential access to natural gas from a major pipeline passing through the project area. Investigations into the use of renewable energy to power the project have commenced.	
Opportunities	Threats
China has ceased exporting phosphate rock and directing domestic industry away from phosphate chemicals to fertilisers to help ensure domestic food security.	One existing and several emerging competitors also mining Georgina Basin phosphate resources with potential to increase local phosphate production.

expertise through commercial arrangements with industry leaders in these fields. Existing Australian phosphate producer, Incitec Pivot's Duchess Mine, is a mature Avenira are targeting production of phosphate chemicals (YP and high quality Avenira has established access to YP and LFP battery cathode technology and operation dependent on supplies of sulphuric acid to produce MAP and DAP Industry partnerships also have potential to assist with access to capital to operations in 2025 which could impact sulphuric acid cost and availability. products. Glencore have announced the closure of the Mount Isa copper phosphoric acid) which are priced differently to phosphate rock. develop the project and product sales.

Proposals for new mineral processing facilities are likely to attract the attention of environmental activists and face intense scrutiny by local communities which could adversely affect permitting timelines.

Recent Australian government decisions have contributed to uncertainty of environmental approvals for new mine development projects in Australia.

Table 6-2: Jundee South Gold Project - Strengths, Weaknesses, Opportunities and Threats

Strengths	Weaknesses
Large exploration tenure holding in a high prospective area that contains a number of operating mines and several as yet undeveloped gold discoveries. Well understood and documented geological setting.  Access to data from extensive previous exploration by companies and precompetitive exploration data compiled by government.  Secure, transparent exploration and mining tenement regime.  Established access to land for exploration. No restricted land in the project area. Access to skilled workforce and support for mining operations.  Extensive geophysics, and AC and RC drilling completed to facilitate exploration targeting.  Targets developed for more detailed and focused testing.  Considerable geometallurgical data available to support ore processing flow sheet. High gold prices, strong gold demand outlook.  Project is located in a region with a history of gold exploration and production with communities supportive of the industry.	Avenira tenements are across rather than along strike from major resources and discoveries, but where geology remains favourable
Opportunities	Threats



PROJECT NO: 0749204 AEVITV01 REPORT: R258,2024

CLIENT: Avenira Limited

Data available for valuation of projects without identified Mineral Resources.

Recent Australian government decisions have contributed to uncertainty of environmental approvals for new mine development projects in Australia



DATE:21 October 2024 VERSION: 3.2

Table 6-3: Valuation Opinion Summary, Wonarah Project (NT)

Approach	Туре	Currency	Valuat	tion Opinion (	(A\$ M)	Notes
			Low	Preferred	High	
Comparable Transactions Wonarah (Arruwurra deposit + Main Zone) DSO	Market	A\$ M	15.5	19.4	23.3	Based on analysis of comparable transactions presented in Table 4-11 with removal of four outlier values. The low and high case values represent the preferred value ± 20%. This limit was imposed due to the wide scatter in transaction values
Rule of Thumb (Yardstick) – Wonarah (Arruwurra deposit + Main Zone) DSO	Market	A\$ M	46.7	58.3	70.0	Low and high case values represent the preferred value ± 20%. This limit was imposed due to the wide scatter in transaction values used to develop the Rule of Thumb multipliers evident in Figure 4-13.
Rule of Thumb (Yardstick) Arruwurra deposit DSO	Market	A\$M	11.1	13.9	17.4	Included in the Wonarah Deposit value opinion above.
DCF Valuation Arruwurra deposit DSO	Technical	A\$ M		(6.1)		NPV <sub>10</sub> estimated for the Arruwarra deposit only using a phosphate rock price of US#152.50 per tonne.
				11.7		NPV <sub>10</sub> sensitivity scenario for the Arruwurra deposit only using a phosphate rock price of US\$200.00 per tonne.

The low and high value cases developed using the Rule of Thumb approach were considered to be too broad by ERM to be useful in further studies of the project. ERM's practice in instances of this, which are not uncommon in situations where the number of competent transactions is relatively small, spread over an extended period of time, and cover resources in multiple jurisdictions with varying sovereign risk profiles, is to set limits of ±20% around the central, preferred case based on the multipliers developed for the project.

ERM validated the inputs required for development of a NPV estimate for the project and prepared high level estimates for a central case using a phosphate rock price of US\$152.50 per tonne and a sensitivity case of US\$200.00 per tonne. The NPV of the project was estimated to be negative for the US\$152.50 phosphate rock price, but positive for the US\$200.00 price, indicating that the project is relatively sensitive to product price. This is also viewed by ERM to support Avenira's strategy of seeking to use phosphate rock from Wonarah in the production of higher value products, notably YP, to enhance project feasibility.



CLIENT: Avenira Limited PROJECT NO: 0749204 AEVITV01 DATE:21 October 2024 REPORT: R258.2024

Table 6-4: Valuation Opinion Summary, Jundee South project (WA)

Approach	Туре	Currency	Valuatio	n Opinion (\$	million)	Notes
			Low	Preferred	High	
Comparable Transactions	Market	A\$	4.9	6.6	8.2	Gold projects without Mineral Resources and Ore Reserves in WA completed in the two years prior to the effective date of this report
MEE	Technical	<b>A</b> \$	9.2	10.7	12.2	PEM 1.5 to 2.0 used to determine the low and high bounds of the MEE estimate respectively. Exploration expenditure A\$6.1 million
GFM	Technical	A\$	10.8	12.9	15.0	37 EL, 9 PL, 1,272km <sup>2</sup> tenement package. Separate BAC estimates prepared for PL and EL

The DSO feasibility study (Avenira Limited, 2023) demonstrated that production of DSO phosphate rock for export from Wonarah is not viable at current prices but may be viable at prices that have been experienced in the Australian market in recent years. This is confirmed by the DCF valuation prepared for this study. ERM interpreted the principal issues affecting project viability to be phosphate rock road transport charges between the project site and Port of Darwin, and Darwin port charges. This could render production of DSO for domestic markets a viable option, although the proportion of the Wonarah phosphate rock resource meeting DSO specifications is relatively small (about 8% of the resource tonnage at a  $10\% P_2O_5$  cut-off). Although discussed in the DSO study as an option, the production of DAPR for sale at a lower price for domestic use has not been studied adequately to attribute potential value to this resource.

AEV have elected to pursue the production of higher value phosphate products including YP which would significantly alter the value of the project and utilise a greater proportion of the resource, determined by the cut-off grade required and mining factors. These studies are yet to reach a point where analysis of capital and operating (mining, processing and transport) costs and product revenue could be used to determine the economic basis for valuing a phosphate chemicals operation and the recoverable portion of the mineral resource, that could be used in turn to develop an Ore Reserve estimate, open pit design and production schedule. AEV's confidence that a viable phosphate chemicals project can be developed is supported by ERM on the basis of available data.

The MEE and GFM opinions for Jundee South are considered by ERM to be consistent with one another, and significantly higher than the Comparable Transactions valuation. Comparison with the MEE and GFM valuations suggest that tenements without Mineral Resources are being traded at a discount in Western Australia over the past two years. AEV are also pursuing exploration approaches that could deliver new data that could enhance potential for new gold (and possibly other metals) within the Jundee South tenements. The geophysical survey



recently commissioned by AEV over the northern tenements is expected to play a role in the development of new, and prioritisation of existing targets for testing.

### 6.2.3 VALUATION OPINION

ERM proposes that the Comparable Transactions valuation opinion for the Wonarah project, between A\$15.5 million and A\$23.3 million, with a preferred value of A\$19.4 million, would be more likely to be achieved were the project offered for sale and should be preferred to the Rule of Thumb valuation for the project.

There are a range of potential development scenarios for the project, ranging from production of DSO and an intermediate grade phosphate rock product (DAPR) to production of phosphate chemicals. The latter is at an early-stage of investigation by AEV. The potential of DSO production for export has been shown not to be viable at current phosphate rock prices, but the value of the project is price sensitive and the DSO option could be NPV positive at recent phosphate rock prices. Phosphate rock prices are heavily influenced by major producers and may not respond to significant changes in supply, demonstrated by the withdrawl of China from export markets due to a decision to reserve all production for domestic use. This arguably reflects the ability of other large producers to make up any shortfall in supply arising from this decision. Long-running border tensions between Morocco, Western Sahara and Algeria also appear to be exerting little influence on prices currently despite their potential to disrupt phosphate rock supply.

AEV's Jundee South gold project's value was determined using comparable transactions, Multiples of Exploration Expenditure (MEE) and Geoscience Factor Method (GFM) approaches. The MEE and GFM approaches produced very similar valuation opinions which are around 40% higher than that obtained by analysis of comparable transactions. ERM proposes that the comparable transactions available, while all-in recent years and in Western Australia, did not fully value the size of AEV's tenement package and its proximity to a number of significant deposits that have been in production for an extended period.

ERM favours the GFM valuation opinion of A\$10.8 million to A\$15.0 million, with a preferred value of A\$12.9 million. Both the MEE and GFM methods are subjective. MEE depends on the valuer's opinion of the enhancement of prospectivity achieved by exploration while GFM is based on the opinion of how the project should be described in the four categories used to assess projects. ERM's opinion is that the more granular process followed in the GFM method produces a more defensible valuation and that the method is better able to express the range of valuations applicable to the project. The MEE valuation is interpreted to support the preferred GFM valuation.

ERM notes that the combined valuation opinions for Wonarah and Jundee South closely approximate the current ASX market capitalisation of AEV (A\$32.3 million versus A\$29.74 million respectively).

PROJECT NO: 0749204 AEVITV01
REPORT: R258.2024

### REFERENCES

- Abbott, J. (2022). Wonarah Mineral Resource estmates at 27% P2O5 cut off. South Perth WA: Matrix Resource Consultants Pty Ltd, unpublished letter to S. Harrison, 9 November 2022.
- Araujo, C. (2019, January 24). Valuation of Mineral and Coal Assets Challenges and Opportunities. Retrieved from Sydney Mineral Exploration Discussion Group: https://smedg.org.au/wp-content/uploads/2020/07/SRK\_Valuation%20of%20Mineral%20Assets.pdf
- ASX. (2024, October 21). *Avenira Limited AEV*. Retrieved from ASX: https://www.asx.com.au/markets/company/aev
- Avenira Limited. (2023). *Interim Financial Report for the Half-Year ended 31 December 2023.*Sydney: Australian Securities Exchange (ASX) Limited Announcement, 18 March 2024.
- Avenira Limited. (2023). Wonarah DSO Project Feasibility Study Delivers Strong Financial Results. Sydney: Australian Securities Exchange Announcement, 19 October 2023.
- Baltis, E. (2021). *Jundee South Project review*. Southport: Avenira Internal Memorandum (unpublished).
- Bechtel. (2022). Wonarah Phosphate Project Yellow Phosphorus and Thermal Phosphoric Acid Avenira Draft Scoping Study Report. Brisbane: Bechtel Australia Pty Ltd Report 26379-000-G65-GAM-00001 (Unpublished).
- Centrex Metals. (2018). Ardmore Phosphate Rock Project Definitive Feasibility Study Results and Maiden Ore Reserve. Adelaide: Centrex Metals Limited.
- Chemanalyst. (2023, August). *Discover Our Yellow Phosphorus Industry Tracking*. Retrieved from Chemanalyst: https://www.chemanalyst.com/industry-report/yellow-phosphorous-market-725
- Chexngxing. (2023, March 6). *The Many Uses and Benefits of Yellow Phosphorus*. Retrieved from Jiangsu Chexngxing Phosph Chemicals Co, Ltd.: https://en.cxpcchina.com/blogs/milestone/the-many-uses-and-benefits-of-yellow-phosphorus
- Cooper, J., Lombardi, R., Boardman, D., & Carliell-Marquet, C. (2011). The future distribution and production of global phosphate rock reserves. *Resources, Conservation and Recycling, Volume 57, December 2011*, 78-86.
- Criado, M., Xinyuan, K., Provis, J. L., & Bernal, S. A. (2017). Alternative inorganic binders based on alkali-activated metallurgical slags. In H. Savastano Jr., J. Fiorelli, & S. Francisco dos Santos, *Sustainable and Nonconventional Construction Materials using Inorganic Bonded Fiber Composites* (pp. 453-466). Woodhead Publishing. doi:https://doi.org/10.1016/B978-0-08-102001-2.00030-9
- Fertilizer Australia. (2024, September 19). *Australian Fertilizer Market*. Retrieved from Fertilizer Australia: https://fertilizer.org.au/about-fertiliser/the-fertiliser-industry/australian-fertilizer-market



- Flis, M. (2020). *Review of the Jundee South gold project for Avenira Limited.* Perth: Rountree Pty Ltd (unpublished).
- Goulevitch, J., & Eupene, G. (1994). Geoscience Rating for Valuation of Exploration Properties

   Applicability of the Kilburn Method in Australia and Examples of its Use in the NT.

  Mineral Valuation Methodologies Conference (VALMIN 94) (pp. 175-189). Sydney:

  Australasian Institute of Mining and Metallurgy (AusIMM).
- Government of South Australia. (2024, September 18). *Phosphate*. Retrieved from Energy and Mining: https://www.energymining.sa.gov.au/industry/minerals-and-mining/mineral-commodities/phosphate
- Incitec Pivot Ltd. (2024, 09 16). 2024 Half Year Financial Results Presentation. Retrieved from Incitec Pivot: https://investors.incitecpivot.com.au/static-files/d854942d-7bae-4f8c-9f34-fea83fd15309
- Jasinski, S. M. (2011). *Phosphate Rock, Mineral Commodity Sumaries.* Reston VA: U.S. Geological Survey.
- Jasinski, S. M. (2024). *Phosphate Rock, in, Mineral Commodity Summaries, January 2024*. Reston, VA USA: U.S. Geological Survey National Minerals Information Centre.
- JORC. (2012). Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012 edition). Melbourne: Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC).
- Kilburn, L. C. (1990, January 1). Valuation of Mineral Properties which do not contain Exploitable Reserves. *CIM Bulletin*, p. 4 pp.
- Lawrence, M. J. (2001). An Outline of Market-based Approaches for Mineral Asset Valuation Best Practice. *Mineral Asset Valuation Issues for the Next Millennium (VALMIN 2001)* (pp. 115-137). Perth: Australasian Institute of Mining and Metallurgy (AusIMM).
- Lawrence, M. J. (2011). Considerations in Valuing Inferred Resources. *VALMIN Seminar Series* 2011-12 (pp. 93-102). Perth: Australasian Institute of Mining and Metallurgy (AusIMM).
- Lord, D., Etheridge, M., Wilson, M., Hall, G., & Uttley, P. (2001, April). Measuring Exploration Success: An alternate to the discovery-cost-per-ounce method of quantifying exploration effectiveness. *Society of Economic Geologists Newsletter 45*, pp. 1-16.
- McKibben, J. (2019). Independent Specialist Report on the mineral assets held by Avenira Limited. Report for RSM Corporate Australia Pty Ltd, August 2019. Perth: SRK Consulting (Australasia) Pty Ltd.
- Mining Plus. (2023). Avenira DSO Wonarah Feasibility Study, Dec 2023. Brisbane: Mining Plus (unpublished report for Avenira Limited).
- Onley, P. G. (2004). Multiples of Exploration Expenditure as a Basis for Mineral Property Valuation. *Mineral Valuation Methodologies Conference (VALMIN 94)* (pp. 191-197). Sydney: Australasian Institute of Mining and Metallurgy (AusIMM).
- PoundSterlingLive. (2024, September 16). Exchange Rate Forecasts. Retrieved from PoundSterlingLive.com: https://www.poundsterlinglive.com/australian-dollar-to-u-s-dollar-forecast



- RBA. (2024, September 16). *Exchange Rates Daily 2023 to Current.* Retrieved from Reserve Bank of Australia:
  - https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjHwKnbodiIAxUxslYBHdSmPZwQFnoECC0QAQ&url=https%3A%2F%2Fwww.rba.gov.au%2Fstatistics%2Ftables%2Fxls-hist%2F2023-
  - current.xls&usg=AOvVaw24FjD0VxdC2FU9K03zHVii&opi=89978449
- Roscoe, W. E. (2002). Valuation of Mineral Exploration Properties Using the Cost Approach. *CIM Bulletin 95*, 105-109.
- Ryszko, U., Rusek, P., & Kolodynska, D. (2023). Quality of Phosphate Rocks from Various Deposits Used in Wet Phosphoric Acid and P-Fertilizer Production. *Materials* 16(2):793, 1-15.
- S&P. (2024, September 16). *Transactions*. Retrieved from S&P Capital IQ: https://www.capitaliq.spglobal.com/web/client?auth=inherit#office/screener?perspectiv e=275259
- VALMIN. (2015). Australasian Code for Public Reporting of Technical Assessments and Valuations of Mineral Assets. Melbourne: The VALMIN Committee is a joint committee of The Australasian Institute of Mining and Metallurgy (AusIMM) and the Australian Institute of Geoscientists.
- Van Kauwenbergh, S. J. (2010). *World Phosphate Rock Reserves and Resources.* Washington D.C.: International Fertilizer Development Center.
- Verdant Minerals. (2024, September 9). *Ammaroo Phosphate Project, NT*. Retrieved from Verdant Minerals: https://www.verdantminerals.com.au/ammaroo



PROJECT NO: 0749204 AEVITV01
REPORT: R258.2024



## ERM HAS OVER 160 OFFICES ACROSS THE FOLLOWING COUNTRIES AND TERRITORIES WORLDWIDE

Argentina The Netherlands **ERM's [Office name]** 

Australia New Zealand Level 9

Belgium Peru 260 Queen Street
Brisbane Qld 4506
Brazil Poland Australia

Canada Portugal T +61 (0) 7 3007 8414

China Romania

Colombia Senegal <u>www.erm.com</u>

France Singapore

South Africa

South Korea

Guyana Spain

Hong Kong Switzerland

India Taiwan
Indonesia Tanzania

Ireland Thailand

Italy UAE

Japan UK

Kazakhstan US

Kenya Vietnam

Malaysia

Germany

Ghana

Mexico

Mozambique

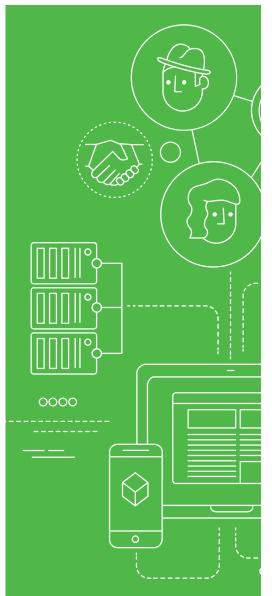




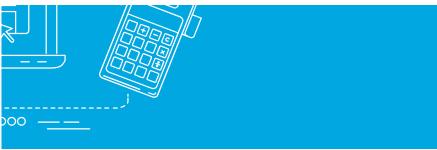
### G. RSM Control Premium Study 2021

# **Control Premium Study**

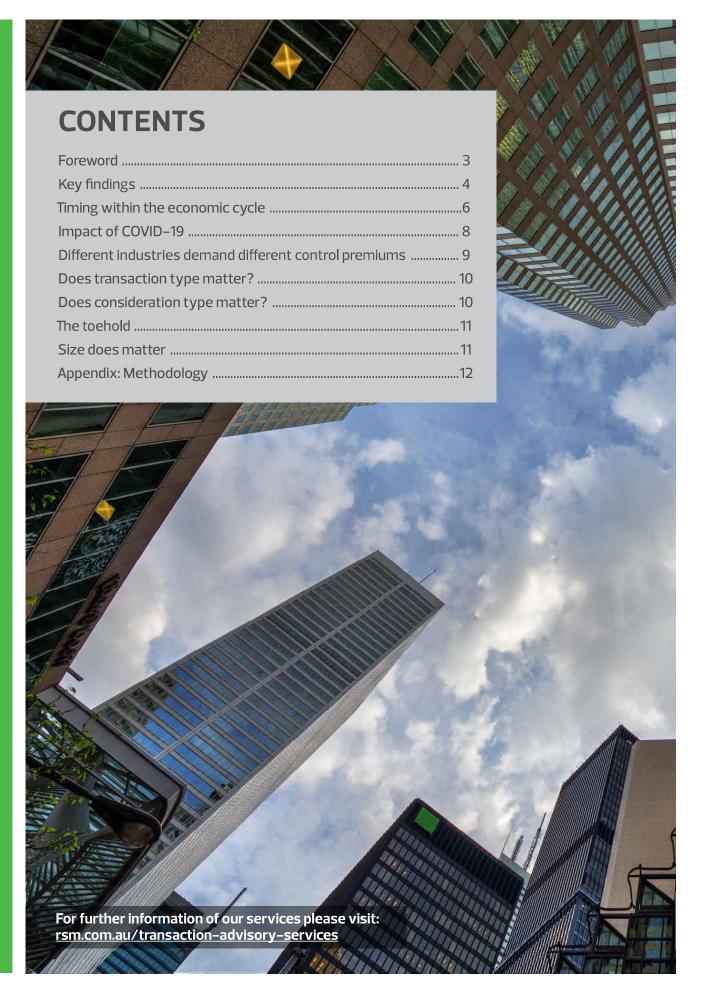
An analysis of the implied control premiums observed in successful takeovers and schemes of arrangement











# **FOREWORD**

In 2010 we released our inaugural study in which we analysed the implied control premiums observed in successful takeovers and schemes of arrangement completed in Australia between 1 July 2005 and 30 June 2010. Further updated studies with expanded data sets to the end of the most recent financial year (FY) were issued in 2013 and 2017.

In this study, we have updated our analysis again to include successful takeovers initiated from 1 July 2005 through to 31 December 2020 (to facilitate analysis on calendar years (CY) as well as by FY). This additional data has expanded our analysis to 605 successful control transactions in Australia covering the 15.5 year period ended 31 December 2020.

In addition the scope of the RSM 2021 Control Premium Study has been expanded to analyse the implied control premiums observed in 131 successful takeovers and schemes of arrangement completed between 1 July 2005 and 31 December 2020 in the New Zealand market.





We acknowledge the input and support we have received from Curtin University's Dr Lien Duong, Dr Baban Eulaiwi and Professor Grantley Taylor, and Victoria University of Wellington's Associate Professor Thu Phuong Truong in the completion of this study.

The results of our analysis indicate that control premiums were influenced by a number of factors including:

- Industry sector
- Consideration type
- Transaction type
- Timing within the economic cycle (including the impact of COVID 19)
- Toehold (extent of existing acquirer holding in the target)
- Size/market capitalisation

With interest rates remaining low and companies holding significant cash reserves following a capital raising spree during COVID-19, mergers and acquisitions (M&A) activity in the Australasia region is expected to be high through FY 2022 and beyond.

The control premium is a fundamental component of value and it is, therefore, critical that directors and investors consider the nature and extent of the premium when assessing equity values in the context of a potential transaction.

We hope you find the results of our study of interest and value. Should you require any further information or wish to discuss our findings in more detail, please contact the authors as follows:



Andrew Clifford
Director, Corporate Finance
Melbourne
andrew,clifford@rsm,com,au



Nadine Marke Director, Corporate Finance Perth nadine.marke@rsm.com.au



**Tim Goodman**Director, Corporate Finance
Sydney
tim.goodman@rsm.com.au

## **KEY FINDINGS**

The average and median control premiums observed in the Australian and New Zealand markets for companies listed on the Australian Securities Exchange (ASX) and the New Zealand Securities Exchange (NZSX) respectively on the basis of 20 days, 5 days and 2 days pre announcement for the 15.5 years from I July 2005 to 31 December 2020 are summarised in the table below.

CONTROL PREMIUMS	AUSTRALIA	NEW ZEALAND
Number of Transactions	605	131
Average Control Premium		
20 days pre announcement	34.7%	18.6%
5 days pre announcement	29.2%	15.7%
2 days pre announcement	27.1%	14.1%
Median Control Premium		
20 days pre announcement	27.5%	15.0%
5 days pre announcement	24.2%	9.4%
2 days pre announcement	22.2%	8.2%

Average and median control premiums Australia and New Zealand

#### **AUSTRALIA**

#### The table above shows:

- The average implied control premium at 20 days pre-bid for the Australian market lies at 34.7% (based on transactions completed in the period 1 July 2005 to 31December 2020).
- The median control premium offered at 20 days pre-bid in Australian transactions for the 15.5 year period was 27.5%.
- Observed premiums continue to fall in the days immediately pre-bid, which may indicate bid speculation and/or information leakage in the market.
- Median values lie consistently below the average (mean) due to the occurrence of several transactions with premiums in excess of 150% over the period.

In this study, we have explored factors relating to the target, or the transaction itself, which may exercise influence on the control premium required to be offered to shareholders of listed companies to facilitate change of control transactions. Our analysis indicates that the following factors can have an impact on the premium paid to acquire control:

- Industry sector significantly influences the control premium required to complete a successful transaction. Sectors that are traditionally priced and valued on upside potential revealed considerably higher premiums (e.g. health care and telecommunications, IT and software) than those where valuations are more typically limited to asset base (e.g. real estate and financial institutions).
- Scrip deals, which offer "relative" consideration, continue to attract lower premiums than cash only deals, where consideration is absolute.

- Schemes of Arrangement, which represent almost 50% of the transactions in our data set attract lower control premiums than off market transactions. This is likely due to the hostile nature of off market bids. In addition, Schemes only have to win over 75% of the target shareholders to effect a compulsory acquisition compared to 90% in a takeover, which may enable acquirers to limit their offer.
- Size matters there appears to be a strong negative correlation between market capitalisation and the level of control premium paid. Our analysis shows the control premium declines as target capitalisation increases and the control premium is appreciably higher in transactions involving targets with a market capitalisation of less than \$50 million.
- Our analysis shows that existing knowledge of a target (as a consequence of a toehold) can lead acquirers to pay significantly higher premiums than are otherwise observed — perhaps as a result of lower perceived business risk in the transaction.
- Underlying the specifics above is the external influence of the economic cycle, which creates the fear and optimism that fuels risk appetite, and helps drive share prices. In our opinion, the control premium is influenced by the above factors to varying degrees, at different times within the economic cycle. This can be evidenced in the period since COVID-19 was declared a global pandemic, which lead to significant drops in global equity markets and a rise in observed control premiums with the average implied control premium of the analysed transactions peaking at 50.7% in FY 2020.

#### **NEW ZEALAND**

#### The table above shows:

- The average implied control premium at 20 days prebid for the New Zealand market lies at 18.6% (based on transactions completed in the period 1 July 2005 to 31 December 2020).
- The median control premium offered at 20 days pre-bid in New Zealand transactions for the 15.5 year period was 15.0%.
- Observed premiums follow similar trends to those observed in the Australian market with premiums declining in the days immediately pre-bid and median values consistently measuring below the average.
- However, the overall control premiums observed in the New Zealand market are significantly lower than those in the Australian market.

Analysis of the New Zealand market shows that most takeovers are uncontested. Lock-up agreements are commonly used to secure binding commitments from target shareholders in New Zealand without the same restrictions on percentage of voting rights which exist in the Australian Corporations Act 2001. This may explain the lower control premiums offered in NZSX transactions compared to the ASX, where less certainty is achievable in advance and a greater risk of competing bids exists.

Overall, the number of transactions observed in the New Zealand market is relatively low, with 45% occurring immediately prior to the GFC between FY2006 and FY2008, and an average of six per year in the period since then. This has limited the statistical reliability as individual transactions have a significant impact on the overall dataset. The detailed analysis in this study therefore refers primarily to the Australian market.

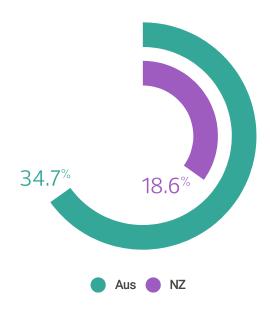
The number of successful control transactions covering the 15.5 year period ended 31 December 2020



The percentage of takeovers in which the *consideration type was cash* 



The *average 20-day pre-bid* implied control premium for the market



The level of *existing toehold* in a target in which acquirers are prepared to *pay the highest premiums* in Australia and New Zealand

10 < 20%

## TIMING WITHIN THE ECONOMIC CYCLE

#### **AUSTRALIA**

The expansion of the Australian data set to 31 December 2020 has enabled us to perform an analysis of the control premiums over 15.5 financial years from 1 July 2005 to 31 December 2020, during which time Australia experienced a mining boom (2005-2012), the global financial crisis (2007-2009), the post mining boom "hangover" (2013-2016) followed by a gradual expansion until the COVID-19 pandemic (2020-current).

Financial Year	Number of Transactions	Average Control Premium (20 days pre)	Median Control Premium (20 days pre)
2006	35	32.4%	22.0%
2007	68	27.9%	25.5%
2008	59	25.7%	18.7%
2009	25	42.1%	32.9%
2010	45	45.9%	42.9%
2011	61	40.1%	37.2%
2012	52	39.5%	28.8%
2013	26	31.4%	14.0%
2014	37	36.1%	22.2%
2015	26	31.4%	31.4%
2016	29	28.3%	21.2%
2017	27	25.5%	27.3%
2018	31	35.9%	27.1%
2019	43	27.6%	28.2%
2020	30	50.7%	36.9%
6 months to 31 Dec 2020	11	48.0%	27.5%

 $\label{lem:average} \textbf{Average} \ \textbf{and} \ \textbf{median} \ \textbf{control} \ \textbf{premiums} \ \textbf{Australia} \ \textbf{and} \ \textbf{New} \ \textbf{Zealand}$ 

#### An analysis of the data indicates:

- The number of completed transactions peaked at 68 during FY2007 and fell to a low of 25 in FY2009 as capital markets effectively froze during the GFC. Transaction levels then rose in parallel with the mining boom through FY2010 to FY2012 before falling back to levels seen during the GFC from FY2013 onwards.
- The lowest average control premium of 25.7% was in FY2008, whilst the lowest median control premium of 14.0% was in FY2013.
- Following a period of relatively high activity and lower premiums from FY2006 – FY2008, FY2009 saw average and median control premiums both rise considerably on low transaction volumes.
- Average and median control premiums continued to rise in FY2010 to 45.9% and 42.9% respectively before beginning to contract through FY2011 and FY2012.
- From FY2013 to FY2019 a period of generally reduced transaction activity occurred while average premiums have returned closer to the 15.5 year average of 34.7%.
- For FY2020 and the six months to 31 December 2020, average control premiums rose significantly to 50.7% and 48.0% respectively reflecting the impact of COVID-19 on capital markets and equity valuations.

#### Implied Control Premium: 20 Days Pre-Announcement (Financial Year)





## We consider that several factors explain the control premium volatility over the 15.5 year period analysed, namely:

- In FY2008, the lowest average control premiums recorded coincided with the ASX reaching record levels, as acquirers appeared to baulk at paying "normal" premiums over traded share price. This may have reflected a belief that a certain premium was already inherent in the share prices with the ASX at all-time highs during this time.
- Equally, while the ASX and other global markets continued to fall heavily during the GFC (circa 2009), average and median control premiums increased as buyers may have considered fair value in the context of lower traded market prices and were therefore willing to pay a higher premium.
- The ASX recovered strongly in FY2010 increasing from lows of circa 3,200 points to 5,000 points and with that came a sense of optimism that the GFC may be over. In that environment and with share prices yet to reach their FY2008 highs, buyers appeared to look beyond share prices to future cash flows and were willing to pay a higher premium in order to get deals done.
- The impact of an active metals & mining sector in FY2010, FY2011 and FY2012 (respectively 35.6%, 27.9% and 32.7% of all transactions) influenced the control premium during that period, with this sector particularly impacted by exchange rates. In essence, capital provision in mining is highly internationalised and the attractiveness of deals relates in part to the AUD/USD exchange rate. The rate rose from between \$0.77 to \$0.94 in FY2010 to between \$0.94 and \$1.10 in FY2012. In those 3 financial years the average control premium for metals & mining transactions

- at 20 days pre-bid fell from 48.5% to 22.4% and the median from 37.0% to 21.4%, illustrating how international competitiveness may also impact the level of premium available to acquiree shareholders. Conversely, in the period subsequent to FY2012 the AUD/USD exchange rate fell to the range of \$0.70 to \$0.77 in FY2016, which was met with a corresponding rise in control premiums in the mining sector, with both the average and median premiums at 36.8%. The movement in the premium in this sector, given the relatively high proportion of mining transactions, impacted the overall premium in the Australian market accordingly.
- In FY2013, a dramatic fall in commodity prices brought about an end to the mining boom and the lowest median control premium of 14.0% was recorded. This reflected a higher number of outliers in the sample as well as potentially, a sense of uncertainty among acquirers due to the volatility of commodity prices.
- In the period FY2013 to FY2019 median control premiums returned to normal levels while average control premiums have gravitated to around the 15.5 year average of 34.7% as Australia contemplated the post mining boom "hangover" and which industry sectors would fill the void left by resources.
- FY2020 and the six months to 31 December 2020 have been dominated by the impact of COVID-19 with control premiums rising to record levels of around 50%, significantly influenced by increased premiums in the health sector, metals & mining and diversified financials. Some acquisitions in these sectors attracted premiums of over 200% as companies sought to implement strategically beneficial Scheme of Arrangements.

## IMPACT OF COVID-19

The world started to become aware of COVID-19 in January 2020 and soon after it was recognised as a global pandemic. The impact on world trade and the world markets was dramatic.

In Australia, the All Ordinaries Index on the ASX went from a high of 7,255.17 on 14 February 2020 to a low of 4,564.13 on 23 March 2020 a fall of 2,691.04 (37%) in just 39 days. The impact on implied control premiums since the onset of COVID-19 is shown in the table below by both Calendar year and Financial Year.

	Number of Transactions	Average Control Premium (20 days pre)	Median Control Premium (20 days pre)
Financial Year			
2019	43	27.6%	28.2%
2020	30	50.7%	36.9%
6 months to 31 Dec 2020	11	48.0%	27.0%
Calendar Year			
2019	37	32.4%	34.4%
2020	23	61.1%	29.9%

Recent average and median control premiums by financial year and calendar year

Whilst on a financial year basis the impact of COVID-19 is spread across two financial years (FY2020 and FY2021 to date) on a calendar year basis it only impacts 2020 in our data set to 31 December 2020.

The data shows a significant increase in control premiums from an average of 27.6% in FY2019 to 50.7% in FY2020 and by calendar year from 32.4% in CY2019 to 61.1% in CY2020. Transactions with the highest observed control premiums were announced during April and May 2020, when economic uncertainty was at its peak and acquirers took advantage of the distressed capital markets.



# DIFFERENT INDUSTRIES DEMAND DIFFERENT CONTROL PREMIUMS

Our analysis confirms that different industry sectors command different control premiums. The table below highlights the considerable variability in average pre-bid control premiums across different industry sectors for the period of our study.

Industry	Number of Transactions	20 day pre-bid	5 day pre-bid	2 day pre-bid
Metals & Mining	161	36.6%	32.5%	29.8%
Energy	68	39.6%	32.5%	27.2%
Health Care	37	48.6%	49.9%	42.5%
Real Estate	39	14.4%	13.7%	12.6%
Banks and Diversified Financials	47	26.4%	24.8%	25.4%
Industrials	60	36.1%	27.3%	24.7%
Telecommunications, IT & Software	64	44.1%	31.8%	34.8%
Other	125	29.6%	23.4%	21.7%

Average control premium segmented by Industry

#### **Median Control Premium by Industry**



Sectors such as metals and mining, healthcare and telecommunications, IT and software exhibit above average control premiums (30% to 50%) whereas average control premiums in the real estate and banks and diversified financials sectors exhibit a tight range around 15% to 25%.

Healthcare in particular exhibits the highest average control premiums. Average control premiums in this sector have increased markedly in recent years as acquirers search for growth.

The higher premiums in the metals and mining, energy, health care and telecommunications, IT and software sectors may suggest that bidders in these sectors are focusing on the future cash flow potential of businesses. However, buyers of financial and property assets are generally paying only for the assets in place. These conclusions are broadly supported by the typical valuation methods used in

these sectors and a comparison of control premium to price-to-book ratios where assets tend to be "marked-to-market". In this study pre-bid real estate stocks were trading at a price-to-book ratio of 1.0x and attracting an average control premium of 14.4%, a reduction from the 2017 Study average control premium of 16.9%.

The variability in control premium between industry sectors means the relative proportion of transactions from different industries has a major bearing on the overall average control premium observed. Cyclical/volatile sectors such as metals and mining (26.6%), energy (11.2%) and technology (10.6%) combine to represent 48.4% of transactions. It could be argued that such a high proportion of transactions from these sectors may lead to control premiums in the Australian market having greater variability over time.

## DOES TRANSACTION TYPE MATTER?

We have considered whether the type of transaction has an impact on both the average control premium and the median control premium as shown in the table below.

Document Type	Number of Transactions	Average Control Premium (20 days pre)	Median Control Premium (20 days pre)
Scheme of Arrangement	300	32.1%	25.2%
Off-market bids	282	37.3%	30.1%
On-market bids	23	36.4%	22.0%

Average and median control premium by Transaction Type

Schemes of Arrangement (Schemes) account for almost half (49.6%) the transactions in the data set over the 15 year period from FY2006 to FY2020. There has been an increasing use of Schemes over the period with only 41.2% of transactions being Schemes over the 15.5 year period to 31 December 2020 and 62.3% of transactions being Schemes in the period FY2015 to FY2020.

As shown in the table above Schemes have both lower average control premiums (32.1%) and median control premiums (25.2%) compared to the other common takeover structure (an off-market bid) which shows average and median control premiums of 37.3% and 30.1%, respectively.

One of the key differences between Schemes and takeovers is that to achieve compulsory acquisition in a Scheme, acquirers have to win over a lower proportion (75%) of target shareholders than in a takeover (90%). In addition, unlike takeover transactions (off-market bids and on-market bids) which are covered by the provisions of Chapter 6 of the Corporations Act 2001, including safeguards for target shareholders which are known collectively as the Eggleston principles (Section 602), Schemes are subject to the provisions in Part 5.1 of the Corporations Act and therefore not subject to the Eggleston principles.

## DOES CONSIDERATION TYPE MATTER?

Cash is the most popular form of consideration accounting for 420 (69.4%) of the transactions in the data set. Scrip consideration accounts for 140 transactions (23.1%) and the remaining 45 transactions (7.5%) comprise both cash and scrip. The average and median control premiums for each of these consideration types for 20 day, 5 day and 2 day pre bid are shown in the table below.

	CASH	SCRIP	SCRIP/CASH
Average Control Premium			
20 days pre-announcement	36.2%	32.3%	28.1%
5 days pre-announcement	30.9%	26.5%	22.2%
2 days pre-announcement	28.1%	25.6%	22.8%
Median Control Premium			
20 days pre-announcement	28.6%	20.7%	27.4%
5 days pre-announcement	26.3%	20.1%	18.7%
2 days pre-announcement	22.6%	22.8%	18.4%

Average and median control premium by consideration type

Our current study reinforces the findings of our previous studies that control premiums in cash transactions are higher than scrip transactions. The average control premium at 20 days pre-bid in cash transactions was 36.2%, considerably higher than scrip and scrip/cash transactions, where the observed premiums were 32.3% and 28.1% respectively.

Cash is an absolute measure of consideration whereas scrip is relative. This may explain why control premiums in scrip transactions appear to be lower than cash transactions as:

- From a business specific perspective, target shareholders can expect to participate in synergistic benefits in the combined entity; and
- From a general market risk perspective, target shareholders effectively receive an option to benefit from market risk volatility

## THE TOEHOLD

Our most recent study confirms our findings in the previous studies that control premiums vary based on the level of existing shareholding in the target, with higher premiums generally being paid when acquirers have a material stake in the target as shown in the table below.

Toehold	Number of Transactions	Average Control Premium (20 days pre)	Median Control Premium (20 days pre)
0%	278	33.2%	25.0%
>0%<=10%	48	30.7%	30.5%
>10%<=20%	162	37.8%	31.4%
>20%<=50%	69	35.3%	30.0%
>50%	48	36.1%	28.2%

Average and Median control premium segmented by toehold

Our findings are consistent with the view that, when considering a change of control, an existing shareholder, who may well have board representation, is likely to be better informed and more committed to the target.

The knowledge of operational strengths and potential of the business, together with the associated ability to quantify the risks and rewards of ownership are likely to be amongst the factors which lead the informed buyer to pay more for perceived benefits of synergy. In addition, behavioural finance research has shown that greater commitment to a target does lead to a greater degree of "optimism bias" often leading managers to overestimate their capabilities and to overpay for acquisitions.

The table above indicates that the highest average and median premiums are paid when the existing shareholder's toehold is between 10% and 20%; being 37.8% and 31.4% respectively. This could indicate a strategy to buy the toehold (19.9%) on market with no premium attached, before aggressively acquiring.

## SIZE DOES MATTER

Size does matter when it comes to control premiums. In order to explore the relationship between control premium and the size of the target, we have classified targets based on their market capitalisation, and then analysed average and median control premiums for each band at 2, 5 and 20 days pre-bid. Market capitalisation was determined 20 days before bid announcement to mitigate any bid effects on value. Band sizes of less than \$25m, \$25m to \$50m, \$50m to \$100m, \$100m to \$500m and greater than \$500m were used to achieve statistically reasonable sample sizes. In addition, breakdowns of less than \$12.5m and greater than \$1b were analysed to explore the effects at the top and bottom of the spectrum.

A summary of the results of our analysis are set out in the table below.

Market capitalisation	No. of transactions	20 day pre-bid	5 day pre-bid	2 day pre-bid
\$0 to \$25M	119	50.8%	40.1%	40.6%
\$25 to \$50M	67	41.0%	37.1%	31.8%
\$50 to \$100M	102	36.7%	32.6%	28.6%
\$100 to \$500M	185	30.9%	26.1%	23.9%
\$500M+	132	20.8%	17.2%	16.0%

Average Control Premium by Market Capitalisation

Confirming our findings in previous studies, as the target's size increases, the size of the average control premium decreases across all bands at 20, 5 and 2 days pre-bid. Our analysis shows that the starting values and the degree of change for the bands is significant: for entities of less than \$25m market capitalisation the average control premium at 20 days pre-bid is above 50% whereas, for entities of greater than \$500m market capitalisation this value is just above 20%.

Factors that may explain the relationship between market capitalisation and control premium include:

- The industry and nature of companies within those size bands, with small Metals & Mining and Software deals influencing the lower bands
- Larger companies are likely to be more heavily traded and closely scrutinised by analysts and market participants, than their smaller counterparts, which could lead to share prices more accurately reflecting intrinsic value; and
- Smaller companies, by contrast, are less well followed by analysts and often less understood by market participants and may be subject to discounts relating to lower liquidity. Micro-cap entities may also be targeted for the value of their existing listing — effectively as "shell" companies.

## **APPENDIX**

## Methodology

RSM has analysed successful takeover offers and schemes of arrangement completed between 1 July 2005 and 31 December 2020 for companies listed on the Australian Securities Exchange (ASX) and on the New Zealand Securities Exchange (NZSX).

We have calculated the implied control premium as (offer price – share price) / share price, based on the closing share price of the target company at 20, 5 and 2 days pre and post the announcement of the offer. Our analysis and commentary is, however, primarily focused on 20 day pre-bid premiums, which, in our view, are less likely to be influenced by bid speculation. Accordingly, we consider the 20 day pre-bid data as providing the most reliable observation of any control premium implicit in the transaction.

In the period of our review, we observed a total of 784 transactions in Australia and 211 in New Zealand. Of these, 179 transactions in Australia and 80 transactions in New Zealand were excluded due to insufficient available data to calculate control premiums based on pre-bid share prices.

Where the offer included scrip of the acquiring entity, the closing share price of the acquirer on the day of the offer has been used to calculate the value of the offer.

### **Acknowledgements**





We acknowledge the input and support we have received from Curtin University's Dr Lien Duong, Dr Baban Eulaiwi and Professor Grantley Taylor, and Victoria University of Wellington's Associate Professor Thu Phuong Truong in the completion of this study.







#### **RSM Corporate Australia Pty Ltd**

Level 32, Exchange Tower 2 The Esplanade Perth, WA 6000

T +61 (08) 9261 9100 F +61 (08) 9261 9111

www.rsm.com.au

RSM Corporate Australia Pty Ltd is a member of the RSM network and trades as RSM. RSM is the trading name used by the members of the RSM network.

Each member of the RSM network is an independent accounting and Consulting firm each of which practices in its own right. The RSM network is not itself a separate legal entity of any description in any jurisdiction.

The RSM network is administered by RSM international Limited, a company registered in England and Wales (company number 4040598) whose registered office is at 11 Old Jewry, London EC2R 8DU.

The brand and trademark RSM and other intellectual property rights used by members of the network are owned by RSM International Association, an association governed by article 60 et seq of the Civil Code of Switzerland whose seat is in Zug.

© RSM International Association

rsm.com.au



## **Proxy Voting Form**

If you are attending the Meeting in person, please bring this with you for Securityholder registration.

Avenira Limited | ABN 48 116 296 541

Your proxy voting instruction must be received by **01.00pm (AWST) on Wednesday, 27 November 2024**, being **not later than 48 hours** before the commencement of the Meeting. Any Proxy Voting instructions received after that time will not be valid for the scheduled Meeting.

#### **SUBMIT YOUR PROXY**

#### Complete the form overleaf in accordance with the instructions set out below.

#### YOUR NAME AND ADDRESS

The name and address shown above is as it appears on the Company's share register. If this information is incorrect, and you have an Issuer Sponsored holding, you can update your address through the investor portal: https://investor.automic.com.au/#/home Shareholders sponsored by a broker should advise their broker of any changes.

#### STEP 1 - APPOINT A PROXY

If you wish to appoint someone other than the Chair of the Meeting as your proxy, please write the name of that Individual or body corporate. A proxy need not be a Shareholder of the Company. Otherwise if you leave this box blank, the Chair of the Meeting will be appointed as your proxy by default.

#### **DEFAULT TO THE CHAIR OF THE MEETING**

Any directed proxies that are not voted on a poll at the Meeting will default to the Chair of the Meeting, who is required to vote these proxies as directed. Any undirected proxies that default to the Chair of the Meeting will be voted according to the instructions set out in this Proxy Voting Form, including where the Resolutions are connected directly or indirectly with the remuneration of Key Management Personnel.

#### STEP 2 - VOTES ON ITEMS OF BUSINESS

You may direct your proxy how to vote by marking one of the boxes opposite each item of business. All your shares will be voted in accordance with such a direction unless you indicate only a portion of voting rights are to be voted on any item by inserting the percentage or number of shares you wish to vote in the appropriate box or boxes. If you do not mark any of the boxes on the items of business, your proxy may vote as he or she chooses. If you mark more than one box on an item your vote on that item will be invalid.

#### APPOINTMENT OF SECOND PROXY

You may appoint up to two proxies. If you appoint two proxies, you should complete two separate Proxy Voting Forms and specify the percentage or number each proxy may exercise. If you do not specify a percentage or number, each proxy may exercise half the votes. You must return both Proxy Voting Forms together. If you require an additional Proxy Voting Form, contact Automic Registry Services.

#### SIGNING INSTRUCTIONS

**Individual:** Where the holding is in one name, the Shareholder must sign.

**Joint holding:** Where the holding is in more than one name, all Shareholders should sign.

**Power of attorney:** If you have not already lodged the power of attorney with the registry, please attach a certified photocopy of the power of attorney to this Proxy Voting Form when you return it.

**Companies:** To be signed in accordance with your Constitution. Please sign in the appropriate box which indicates the office held by you.

**Email Address:** Please provide your email address in the space provided.

By providing your email address, you elect to receive all communications despatched by the Company electronically (where legally permissible) such as a Notice of Meeting, Proxy Voting Form and Annual Report via email.

#### **CORPORATE REPRESENTATIVES**

If a representative of the corporation is to attend the Meeting the appropriate 'Appointment of Corporate Representative' should be produced prior to admission. A form may be obtained from the Company's share registry online at https://automicgroup.com.au.

#### **Lodging your Proxy Voting Form:**

#### Online

Use your computer or smartphone to appoint a proxy at

https://investor.automic.com.au/#/loginsah or scan the QR code below using your smartphone

Login & Click on 'Meetings'. Use the Holder Number as shown at the top of this Proxy Voting Form.



#### BY MAIL:

Automic GPO Box 5193 Sydney NSW 2001

#### IN PERSON:

Automic

Level 5, 126 Phillip Street Sydney NSW 2000

#### BY EMAIL:

meetings@automicgroup.com.au

#### BY FACSIMILE:

+61 2 8583 3040

## All enquiries to Automic: WEBSITE:

https://automicgroup.com.au

#### PHONE:

1300 288 664 (Within Australia) +61 2 9698 5414 (Overseas)

C	
_	
Σ	
0	
$\vdash$	
4	
(F)	

<b>Appo</b> the n Chai	an	ne d	of t	he	per	so	n o	r b	od	ly c	100	rpo	rat	e į	Jou	ar	e a	рр	oint	inç	g as	y	our	pro	оху	or	fail	ing	the	реі	102	ารต	o no	ime	d c	r, if	no į	реі	son	is	nan	ned,	, th	e Ch	nair,	or	the
sees	fit	an	d a	t ar	ıy c	ıdj	our	nm	ner	nt tl	he	rec	of.																																		
											Π																									1											
he ( Inle	SS	ind	lico	tec									•																								vot	te i	n a	ссо	rda	nce	e wi	ith t	he (	Cha	ir's
/hei	e cis	l/we e m	e h	ave our	e ap	р ху	oint on	ed Re	l th	ne (	Ch tio	nair ons	as 1, 8	s m 3, 9	iy/c 9, 10	our O a	pro ind	оху 11 (	(or exc	w ep	here t wh	e t	he re l	Ch we	air e ha	bed ive	con ind	nes licat	ed c	oui di	r pr ffe	oxi en	y by t vo	y de ting	fat j int	tent	ion	be	low)	ev	en t	hοι	ıgh	e th Res	solu	tion	
S	ī	P	2	- `	Yo	u	r v	0	tii	ng	) (	diı	re	ct	io	n																															
Resc	_			on	of I	Rei	nur	nei	rat	ion	R	ерс	ort						For	]	Agai	ns	t At	stc		Res		App Yud	orov	al	of Is	ssu	e of	f Op	otio	ns t	o Ms	s Y	uan			Fo	<u>r</u>	Aga	inst	Abs	taiı
2		Re-	ele	ctic	n c	of N	/ls \	Υu	an	Yu	ıar	า ตร	s a	Di	rec	tor										9		App	orov	al (	of Is	ssu	e of	f Op	otio	ns t	o Ms	s R	an N	Мo							
}		Re-	ele	ctic	n c	of N	/Is F	Rai	n N	Ло	as	a l	Dir	ect	tor									Ī		10		Ap <sub>l</sub> Zho	orov	al (	of Is	ssu	e of	f Op	tio	ns t	тМ с	r SI	nixir	ng							
		Re-			n c	of N	⁄lr S	Shi	xin	g Z	Zh	ang	g a	s a	l			Ī	_							11			orov dy) (				e of	f Op	tio	ns t	іМ с	r N	am								
5		Rat	ific	atic	n c	of Is	SSU	e c	of F	Pla	ce	me	nt	Sh	are	S										12			orov					f Tro	anc	he 2	2 Plo	ace	eme	nt							
6		Rat	ific	atic	n c	f Is	SSU	e c	of A	Arru	JW	urr	a S	Sha	ires	5										13			orov		of A	Add	itio	nal	10%	6 Sh	are	lss	ue								
,					n c He			e c	of T	rai	nc	he	1 F	lac	cem	ner	nt																														
Plea: pol																													our p	oro.	ху і	not	to \	/ote	or	the	t Re	eso	lutic	on c	on a	sho	эw	of h	ana	's oi	or
S	T	P	3	-	Si	gı	na	tι	ır	es	6 (	an	d	C	on	to	ıct	t d	let	ai	ls																										
	Г			nd	vid	ua	l or	Se	ecı	urit	yh	olc	ler	1				Г					Sed	cur	ityh	old	ler	2				1	Г				S	ecı	ırity	hol	der	3				1	
C						an	d S	ole	e C	on	ıρ	anį	y S	ecı	reto	ary								D	ired	tor						,				Dire	ctor	/ C	om	pan	y S	ecre	eta	ry		_	
	)[][	act	. IV	ıme	9: 		Τ							T		Γ	Т					Τ			T			T										Т			Τ	T			T		
L Er	 1a	lΑ	ddi	ess	 ::	1																																									
		Ť					T										$\Box$					T						$\top$										T			Τ				Τ		
Co	n	act	: Do	ıyti	me	Te	lep	hc	one	- T				1		_								-							1	Da	te ([	DD/	MM	I/YY	)										
									_																										/				] /					per		••	

I/We being a Shareholder entitled to attend and vote at the Annual General Meeting of Avenira Limited, to be held at **01.00pm (AWST) on Friday, 29 November 2024 at Unit 12 / 217 Hay St, Subiaco, WA** hereby:

**STEP 1 - How to vote** 

APPOINT A PROXY:

AEV