# **ASX MEDIA RELEASE**



Havilah Resources

A New Mining Force in South Australia

31 July 2019

# Notice of Meeting Finalised for GFG Funding of up to \$100M

Havilah Resources Limited (**Havilah**) is pleased to provide an update on the proposed investment in Havilah of up to \$100 million (**Proposed Transaction**) by the GFG Alliance. The Proposed Transaction will realise a strategic and mutually beneficial partnership between the two parties (<u>ASX announcement of 1 May 2019</u>).

Havilah advises that the independent expert's report (**IER**) and regulatory reviews of the notice of meeting (**NOM**) regarding the Proposed Transaction have now been completed. The NOM has therefore been finalised and sent for printing in preparation of its dispatch ahead of the extraordinary general meeting (**EGM**) relating to the Proposed Transaction.

The NOM will be dispatched to shareholders on 9 August 2019 and the EGM will be held on 12 September 2019. An electronic copy of the NOM is also annexed to this announcement.

Details with respect to the planned rights issue at a discount to \$0.154 (the subscription price for the initial placement by GFG if the Proposed Transaction is approved) will be provided closer to the EGM.

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> For further information visit <u>www.havilah-resources.com.au</u> **Contact:** Mr Walter Richards, CEO, on (08) 8155-4500 or email: <u>info@havilah-resources.com.au</u>



# **Havilah Resources Limited**

ACN 077 435 520

#### Notice of Extraordinary General Meeting

#### **Explanatory Notes**

#### Date of meeting

12 September 2019

### Time of meeting

11:00am (Adelaide time)

### Place of meeting

Adelaide Convention Centre North Terrace Adelaide SA 5000

# **VOTE IN FAVOUR**

The independent directors of Havilah Resources Limited recommend that shareholders **VOTE IN FAVOUR** of the resolution set out in this Notice of Extraordinary General Meeting.





This Notice of Extraordinary General Meeting should be read in its entirety. If shareholders are in doubt as to how they should vote, they should seek advice from their accountant, solicitor or other professional adviser prior to voting.

## Chairman's letter

Havilah Resources Limited

P: +61 8 8155 4500 info@havilah-resources.com.au

164 Fullarton Road Dulwich South Australia 5065

Dear Fellow Shareholder,

I would like to invite you to consider a transformational opportunity for Havilah Resources Limited (**Company**) which can potentially unlock the underlying value of the Company. The independent directors of the Company recommend that you vote in favour of the resolution in the attached Notice.

The opportunity can be realised by approval of the Company's transaction with OneSteel Manufacturing Pty Ltd (ACN 004 651 325) (**SIMEC**), a member of the GFG Alliance, that was announced on 1 May 2019 (**Transaction**).

The Transaction involves SIMEC providing an investment in the Company of up to \$100.0 million and consists of a committed staged equity investment in the Company of \$49.5 million, plus a further \$50.5 million in conditional funding. Funds will be applied via already agreed work programs (see Annexure C), designed to advance the Company's iron ore projects (collectively the "Iron Genesis Project") and the Mutooroo copper-cobalt project and prospects in the surrounding area (the "Copper Aura Project") to the completion of definitive feasibility studies over an anticipated three-year period, as well as providing funding for exploration, corporate and administration costs.

The staged equity investment in the Company of \$49.5 million will consist of an initial placement of \$6.0 million at a price of \$0.154 per share, which is the 45-day VWAP at 30 April 2019, followed by a series of subsequent subscriptions at a premium of between 22% (a price of \$0.188 per share) to 35% (a price of \$0.208 per share), with the upper end of the range applying when SIMEC has a shareholding in the Company of between 30% and 51% in the Company.

The Transaction will establish a strategic partnership with the GFG Alliance, which has a major investment in South Australia via operation of the revitalised Whyalla steelworks and Whyalla port and export facility and as such is natural potential purchaser of the Company's future iron ore production. The GFG Alliance has the capacity to support and facilitate the future growth of the Company through access to global capital markets, capital investment, technical assistance and commercial offtake agreements.

Under this Transaction the Company has an opportunity to rapidly advance two major projects, namely the "Iron Genesis Project" and the "Copper Aura Project", to investment decisions that could result in production at a scale and within a timeframe to meet the Company's ambition to grow and create long term shareholder value, as well as aligning with the GFG Alliance's ambitious growth plans in South Australia and worldwide.

The Transaction is a logical step in the Company's long term strategy to realise the value from its multicommodity portfolio by securing adequate funding, a strategy that was discussed with shareholders at the 2017 annual general meeting. At that meeting it was noted that without adequate funding the Company is constrained in delivering value to shareholders from its mineral assets.

The opportunity presented by the Transaction is the outcome of the Company's long term strategy in acquiring prospective tenements over the Grants Basin iron ore prospect and then seeking a partner with the required expertise and capital to assist in its exploration and development.

The Company identified the GFG Alliance (and more particularly SIMEC) as a suitable strategic partner with the strategic fit and financial capability to create substantial potential value from the Iron Genesis Project. With the right assets at the right time the Company was well placed to negotiate from a position of strength and in mid-2018 the Company commenced discussions with SIMEC regarding funding to advance the project. Those discussions tested and evaluated various alternatives against the Company's objective of securing a substantial funding package allowing meaningful work to be performed with potential uplift in the value of each of the projects and thereby an uplift in the value of the Company. Following extensive negotiations, the Company and SIMEC agreed to the Transaction in May 2019.

The independent directors recommend that you vote in favour of the resolution set out in the attached Notice to approve the Transaction for the following key reasons:

- it is potentially transformational for the Company in providing access to funding, including contingency funding, that will allow the Company confidently to advance two of its key projects to definitive feasibility study level within the next three years;
- it creates a strategic partnership with the GFG Alliance which has already made significant investment commitments in South Australia and is a natural end user of the iron ore at its Whyalla steelworks and export facility;
- staged equity investments are being contributed by SIMEC at a premium to the share price of the Company at the date of the announcement of the Transaction;
- dilution to shareholders is managed by structuring the funding so that it may be suspended if the project financial and technical objectives are not being met in accordance with the agreed work plan, milestones and project investment criteria;
- it provides funding and resources to accelerate exploration on the Company's substantial tenement package; and
- the Company maintains control of its destiny and its projects as an independently directed and managed ASX-listed entity.

The Company engaged BDO Corporate Finance (WA) Pty Ltd (**Independent Expert**) as the independent expert to prepare a report expressing its opinion as to whether or not the Transaction is fair and/or reasonable to the shareholders of the Company who are entitled to vote on the Resolution.

The Independent Expert has concluded in its report that "in the absence of a superior offer and any other relevant information, the Transaction is not fair but reasonable to the Shareholders of Havilah" (emphasis added).

In concluding that the Transaction is reasonable, the Independent Expert considered both:

- advantages and disadvantages of the Transaction; and
- other considerations, including the position of Shareholders if the Transaction does not proceed and the consequences of not approving the Transaction.

In the Independent Expert's opinion: "the position of Shareholders if the Transaction is approved is more advantageous than the position if the Transaction is not approved" (emphasis added).

This report is set out in Annexure D of the Notice and I encourage you to read it in full.

Set out below is an extract from the IER setting out the comprehensive advantages and disadvantages of the Transaction identified by the Independent Expert (refer section 2.5 of the IER).

ADVANTAGE	ADVANTAGES AND DISADVANTAGES							
Section	Advantages	Section	Disadvantages					
Funding Component								
13.4.1.	Opportunity to develop a strategic partnership with SIMEC and GFG	13.5.1.	The Funding Component is not fair					
13.4.2.	Structure of the Transaction funding package is value accretive to Shareholders	13.5.2.	Dilution to existing Shareholders' interest					
13.4.3.	Shareholders have the opportunity to participate in the Rights Issue at a discount to SIMEC's investment	13.5.3.	Presence of significant shareholder may reduce the attractiveness of Havilah's shares to potential investors					
13.4.4.	Provides necessary funding to explore value of the Projects							
13.4.5.	Provides potential access to future funding							
13.4.6.	Increased market capitalisation may increase the market presence of Havilah							
13.4.7.	Broader expertise and increased experience of the board of directors							
Security Component								
13.4.8.	The Security Component is fair	13.5.4.	Potentially restrictions placed on Havilah's ability to deal with the secured assets without SIMEC's consent					
13.4.9.	The Security Component allows the Transaction to proceed							

I am of the opinion that the many advantages outweigh the few disadvantages.

When reading the independent expert report (IER), shareholders should bear in mind the following:

- given that shareholder approval of the Transaction is being sought under item 7 of section 611 of the Corporations Act, the Transaction is required to be analysed as a "control transaction" as per ASIC guidance under RG 111 (refer to Section 3 of the IER for further details). However, the Company notes that control by SIMEC is not a guaranteed outcome of the Transaction and if it occurs, will occur over a period of time and subject to a number of protections;
- a premium for control is therefore only appropriate if and when that situation materialises. The Transaction does not result in 100% control with the expected SIMEC shareholding to be at 51%, subject to all conditions being fulfilled;
- section 10.2 of the IER sets out that a premium for control is justified where there is control over decision making and strategic direction, access to cash flows, control over dividend policies, and

access to tax losses. None of these benefits will be obtained by SIMEC or the GFG Alliance pursuant to this Transaction;

- the Independent Expert identified that the presence of a significant shareholder (SIMEC or the GFG Alliance) may reduce the attractiveness of the Company's shares to potential investors post the transaction. It could however be argued that the Company is already faced with the situation of a couple of existing significant shareholders reducing the attractiveness of the Company's shares;
- the Transaction is on the basis that the future board will always consist of a majority of independent directors including an independent chair;
- any potential future transactions with SIMEC and the GFG Alliance will only be permitted where the additional requirements of the Corporations Act and the ASX Listing Rules have been met (refer to the section titled "Additional shareholder protections in transactions with SIMEC and the GFG Alliance" of the Notice);
- milestone shares issued to SIMEC when SIMEC has a shareholding in the Company of between 30% and 51% will be priced at \$0.208 per share, a 35% premium to the 45-day VWAP at 30 April 2019, which is close to the independent expert's preferred price, inclusive of a control premium, of \$0.21 (refer to section 10.3 of the IER);
- all milestone subscriptions prior to SIMEC reaching a 30% shareholding in the Company are priced at a 22% premium to the 45-day VWAP at 30 April 2019; and
- the potential uplift in the value of the Company's projects resulting from expenditure of the funds provided by the Transaction (where funds are invested with the aim of generating substantial potential value from the Iron Genesis and the Copper Aura projects) has been capped in the post transaction valuation in section 11.1.2 of the IER to the amount of the funds invested. In other words, there is no recognition of the value multiplier for the work that is planned to be carried out. At the same time, the Transaction has been deliberately structured to allow for expenditure to stop at any time should it become clear that additional expenditure is unlikely to enhance the value in the projects any further.

The Company also notes that the Independent Expert states in the IER that "Given that a significant portion of the committed funding package is at specific Havilah share prices that are above current share price levels, we consider this to be an advantage and to be value accretive to current Shareholders" (refer page 66 of the IER).

The table below demonstrates that the milestone share subscription price range in this Transaction is within the range of reasonable outcomes set out by the Independent Expert.

15 16

17 18 19 20 21 22 23

Share Price Ranges - Cents per Share

24

25 26

### <u>Notes</u>

- Current Share Price Range and 45-day VWAP at 30 April 2019
   BDO Value Range Maximum Shares Control Basis: Pre-SIMEC
   BDO Value Range Maximum Shares Minority Basis: Post-SIMEC
   BDO Value Range Quoted Market Price with Premium for Control
- 4 BDO value Range Quoted Market Price with Premium for Continued Contract Price with Premium for Continued Contract Price Price
- 5 SIMEC Share Subscription Price Range

Notes:

- 1. Current share price range and 45-day VWAP at 30 April 2019.
- Independent Expert valuation of a Company share prior to the Transaction on a control basis (refer to section 2.4 of the IER).
   Independent Expert valuation of a Company share following the Transaction on a minority basis. (refer to section 2.4 of the IER).
- 4. Independent Expert valuation of a Company share based on a quoted market price including a control premium (refer to section 10.2 of the IER).
- 5. SIMEC milestone subscriptions price per share after initial placement.

On behalf of the directors and the Company's leadership team, I invite you to read the attached Notice and Explanatory Notes in full (including the IER) in deciding how to vote on the resolution outlined in the Notice.

The independent directors recommend that you vote in favour of the resolution, by voting in person or by proxy at the Meeting.

On behalf of the directors, I would like to take this opportunity to thank you for your continued support of the Company.

Yours sincerely

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Mark Stewart Independent Non-Executive Chairman Havilah Resources Limited

www.havilah-resources.com.au ABN: 39 077 435 520



# **Notice of Extraordinary General Meeting**

Havilah Resources Limited ACN 077 435 520 (**Company**) will hold an extraordinary general meeting at Adelaide Convention Centre, North Terrace, Adelaide SA 5000 on 12 September 2019 at 11:00am (Adelaide time) (**Meeting**).

The Explanatory Notes that accompany and form part of this notice of extraordinary general meeting (**Notice**) describe the matters to be considered at the meeting.

### AGENDA

#### SPECIAL BUSINESS

#### **Resolution – Approval of SIMEC Transaction**

auo consider and, if thought fit, to pass the following resolution as an ordinary resolution:

"That, for the purposes of section 611 (item 7) of the *Corporations Act 2001* (Cth), ASX Listing Rule 10.1 and all other purposes, approval is given for the Company to issue up to 447,733,124 fully paid ordinary shares in the capital of the Company to OneSteel Manufacturing Pty Ltd (ACN 004 651 325) (**SIMEC**) to raise up to approximately \$75 million, and grant to SIMEC security over the "Copper Aura Tenements", the "Iron Genesis Tenements" and the shares in the subsidiaries of the Company that hold those tenements, and in the event of the insolvency of the Company and subsequent enforcement of the security which results in one or more of those assets being sold to SIMEC, to transfer those assets to SIMEC, each as described in the Explanatory Notes."

#### Voting Restriction:

In accordance with the Corporations Act, a vote must not be cast in favour of the Resolution (and will be taken not to have been cast if cast contrary to this restriction) by SIMEC and its associates.

In accordance with the ASX Listing Rules, the Company will disregard any votes cast in favour of this resolution by or on behalf of SIMEC or any associate of SIMEC. However, the Company need not disregard a vote if:

it is cast by a person as proxy for a person who is entitled to vote, in accordance with the directions on the proxy form; or

it is cast by the person chairing the meeting as proxy for a person who is entitled to vote, in accordance with a direction on the proxy form to vote as the proxy decides.

#### Independent Expert:

BDO Corporate Finance (WA) Pty Ltd (ACN 124 031 045, AFSL 316 158) (**BDO**), the independent expert engaged by the Company to prepare an independent expert report for the purposes of ASIC Regulatory Guide 74: *Acquisitions approved by members* and ASX Listing Rule 10.10.2 (**IER**), has concluded in the IER that:

- *"in the absence of a superior offer and any other relevant information, the Transaction is not fair but reasonable to the Shareholders of Havilah"* (section 2.3 of the IER); and
- *"the position of Shareholders if the Transaction is approved is more advantageous than the position if the Transaction is not approved*" (section 2.5 of the IER).

For more information, please see to the section titled "Independent expert report" in the Explanatory Notes and the copy of the IER set out in Annexure D.



### **VOTING AND THE PROXY**

For the purpose of determining the voting entitlements at the Meeting, the board has determined that shares in the Company will be taken to be held by the registered holders of those shares at 6.30pm (Adelaide time) on 10 September 2019. Accordingly, transactions registered after that time will be disregarded in determining entitlements to attend and vote at the Meeting.

A shareholder who is entitled to attend and cast a vote at the Meeting and who wishes to vote on the resolution contained in this Notice should either attend in person, or appoint a proxy or proxies to attend or vote on the shareholder's behalf. A proxy form is enclosed with this Notice. The proxy or proxies do not need to be a shareholder of the Company. A shareholder that is a body corporate may appoint a representative to attend in accordance with the *Corporations Act* 2001 (Cth) (**Corporations Act**). If a representative of a shareholder that is a body corporate is to attend the Meeting, the appropriate "Certificate of Appointment of Corporate Representative" should be produced prior to admission to the Meeting. A form of that certificate may be obtained from the Company's share registry.

A shareholder entitled to attend and to cast two or more votes is entitled to appoint two proxies. Where two proxies are appointed, each appointment may specify the proportion of the shareholder's voting rights that the proxy may exercise. If the shareholder appoints two proxies and the appointment does not specify this proportion, each proxy may exercise half of the votes able to be cast by the appointing shareholder.

The proxy form (and any power of attorney under which it is signed) must be received at the address below not later than 11:00am (Adelaide time) on 10 September 2019 (being 48 hours before the commencement of the meeting). Any proxy forms received after that time will not be valid for the meeting.

Completed proxy forms should be sent to the Company's share registrar, Computershare Investor Services Pty Limited as follows:

By mail:	Havilah Resources Limited c/- Computershare Investor Services Pty Limited GPO Box 242 Melbourne VIC 3001 Australia
By fax:	Havilah Resources Limited c/- Computershare Investor Services Pty Limited (within Australia) 1800 783 447 (outside Australia) +61 3 9473 2555
Online:	www.investorvote.com.au To use this facility you will need your holder number (SRN or HIN), postcode and control number as shown on the proxy form. You will have been taken to have signed the proxy form if you lodge it in accordance with the instructions on the website or at the Company's registered office at 164 Fullarton Road, Dulwich SA 5065 not less than 48 hours before the time for holding the Meeting, or adjourned meeting as the case

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may be, at which the individual named in the Proxy Form proposes to vote.

#### DATED THIS 30<sup>TH</sup> DAY OF JULY 2019 BY ORDER OF THE BOARD

Claire Redman Company Secretary



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# **Explanatory Notes**

These Explanatory Notes have been prepared to provide shareholders with material information to enable them to make an informed decision on the business to be conducted at the extraordinary general meeting of the Company. The directors recommend shareholders read these Explanatory Notes in full before making any decision in relation to the resolution. The directors also recommend shareholders read the instructions on the proxy form in full if they intend to vote by proxy.

#### SPECIAL BUSINESS

#### Resolution – Approval of SIMEC Transaction

#### Background

The Company is a resources exploration and development company, which operates in South Australia. Its mission is to sequentially develop its portfolio of gold, copper, iron, cobalt, tin and other mineral resources in South Australia. It aims to build on its successful exploration track record by making new value-adding discoveries. However, as is the case with many exploration and development companies, the Company requires ongoing funding to enable it to continue to undertake its exploration and development activities.

The Transaction provides for funding for the "Iron Genesis Project" (previously the "Maldorky, Grants and Grants Basin Iron Ore Projects"), which pertains to iron ore deposits located approximately 8km south of the Barrier Highway and the Transcontinental Railway in South Australia, and the "Copper Aura Project" (previously the "Mutooroo Project", including various copper-cobalt prospects within the Mutooroo Copper-Cobalt District), which pertains to a lode-style massive sulphide copper-cobalt deposit located approximately 60km west of Broken Hill (together, **Projects**), each of which requires significant investment in order to reach any potential future commercialisation. The Transaction does not directly provide funding for any of the Company's other projects (e.g. the "Kalkaroo Project"), but does provide flexibility for the Company to pursue those projects independently.

The Transaction is a logical step in the Company's long term strategy to realise the value from its multi-commodity portfolio by securing adequate funding, a strategy that was discussed with shareholders at the 2017 annual general meeting. At that meeting, it was noted that without adequate funding the Company is constrained in delivering value to shareholders from its mineral assets.

The opportunity presented by the Transaction is the outcome of the Company's long term strategy in acquiring prospective tenements over the Grants Basin iron ore prospect and then seeking a partner with the required expertise and capital to assist in its exploration and development.

The Company identified the GFG Alliance (and more particularly SIMEC) with the strategic fit and financial capability to create substantial potential value from the Iron Genesis Project. With the right assets at the right time the Company was well placed to negotiate from a position of strength and in mid-2018 the Company commenced discussions with SIMEC regarding funding to advance the project. Those discussions tested and evaluated various alternatives against the Company's objective of securing a substantial funding package allowing meaningful work to be performed with the potential uplift in value of each of the projects and thereby an uplift in the value of the Company. Following extensive negotiations the Company and SIMEC agreed that SIMEC will provide staged funding to the Company on the terms of a share subscription agreement between the Company, SIMEC and Liberty Onesteel (MDR) UK Ltd (UK company number 10932936) dated 1 May 2019 (**Share Subscription Agreement**) (subject to a number of conditions, including that shareholder approval be obtained at the Meeting).

The Transaction establishes a strategic partnership with the GFG Alliance, which has a major investment in South Australia via operation of the revitalised Whyalla steelworks and Whyalla port and export facility. The GFG Alliance has the capacity to support and facilitate the future growth of the Company through access to global capital markets, capital



investment, technical assistance and commercial offtake agreements. If the Resolution is passed, the transaction that is the subject of the Resolution will provide the Company with an opportunity to rapidly advance two major projects to production at a scale and within a timeframe to meet the GFG Alliance's ambitious growth plans in South Australia and worldwide.

The Resolution seeks shareholder approval for the Company to:

issue up to 447,733,124 fully paid ordinary shares in the capital of the Company (**Subscription Shares**) to SIMEC in accordance with the Share Subscription Agreement, for the purposes of section 611 (item 7) of the Corporations Act and all other purposes; and

grant to SIMEC security over the Copper Aura Tenements (outlined in Annexure A), the Iron Genesis Tenements (outlined in Annexure A) and the shares in the subsidiaries of the Company that hold those tenements, comprising Copper Aura Pty Ltd (ACN 633 057 280) (**Copper Aura**), Iron Genesis Pty Ltd (ACN 633 057 379) (**Iron Genesis**) and Mutooroo Metals Pty Ltd (ACN 114 646 703) (**Mutooroo Metals**), and in the event of the insolvency of the Company and subsequent enforcement of the security which results in one or more of those assets being sold to SIMEC, to transfer those assets to SIMEC, for the purposes of ASX Listing Rule 10.1 and all other purposes,

each as described in these Explanatory Notes (Transaction).

#### Why shareholder approval is required for the purposes of section 611 (item 7) of the Corporations Act

The Corporations Act prohibits a person acquiring a relevant interest in voting shares in a listed company through a transaction in relation to securities entered into by or on behalf of the person where, because of the transaction, that person's or someone else's voting power in the company increases:

- from 20% or below to more than 20%; or
- from a starting point that is above 20% and below 90% (section 606(1)).

However, section 611 (item 7) of the Corporations Act allows the person to acquire the relevant interest if the acquisition was approved previously by a resolution passed at a general meeting of the company in which the acquisition is made, and:

- no votes are cast in favour of the resolution by:
  - o the person proposing to make the acquisition and their associates; or
  - the persons (if any) from whom the acquisition is to be made and their associates; and

the members of the company were given all information known to the person proposing to make the acquisition or their associates, or known to the company, that was material to the decision on how to vote on the resolution, including:

- the identity of the person proposing to make the acquisition and their associates;
- the maximum extent of the increase in that person's voting power in the company that would result from the acquisition;
- the voting power that person would have as a result of the acquisition;
- the maximum extent of the increase in the voting power of each of that person's associates that would result from the acquisition; and
- the voting power that each of that person's associates would have as a result of the acquisition.

As set out above, SIMEC may be issued up to 447,733,124 Subscription Shares in accordance with the Share Subscription Agreement, which could cause it to acquire voting power in the Company in excess of 20%. The Company is therefore seeking shareholder approval for the issue of the Subscription Shares in accordance with section 611



(item 7) of the Corporations Act. If approval is not obtained, then the Subscription Shares will not be issued and the Transaction will not proceed.

#### Why shareholder approval is required for the purposes of ASX Listing Rule 10.1

ASX Listing Rule 10.1 provides that a company must ensure that neither it, nor any of its child entities, disposes of a substantial asset to a related party without shareholder approval.

As part of the Transaction, SIMEC will provide "Milestone Funding" in several tranches. For each milestone tranche, SIMEC is required to provide funding for the work in that tranche by way of a pre-payment for the issue of Subscription Shares. The Company will then issue the relevant milestone Subscription Shares on the date that is 10 business days after the relevant milestone has been achieved or the funds for that milestone have been exhausted.

It was important to SIMEC that its interest in the Company and the Projects between each milestone pre-payment date and the date of issue of Subscription Shares by the Company be protected. To provide this protection, SIMEC required, and the Company agreed, that the Company would grant SIMEC security over the shares that the Company holds in each of Copper Aura, Iron Genesis and Mutooroo Metals, to cause each of Copper Aura and Mutooroo Metals to grant SIMEC security over the Copper Aura Tenements they hold and to cause Iron Genesis to grant SIMEC security over the Iron Genesis Tenements, subject to relevant regulatory consents being obtained (together, **Security**). The Company is not granting security to SIMEC over any other assets, including assets that form part of the "Kalkaroo Project".

The Security will be in the form of a specific security deed (which pertains only to the specific assets over which it is granted) granted by the Company over the shares in each of Copper Aura, Iron Genesis and Mutooroo Metals, and a general security deed (which pertains to all assets of a company) granted by each of Copper Aura, Iron Genesis and Mutooroo Metals. The grant of the Security may require approval of the Foreign Investment Review Board (**FIRB**) in accordance with the *Foreign Acquisitions and Takeovers Act 1975* (Cth), and will require approval of the Minister for Energy and Mining (**Minister**) in accordance with the *Mining Act 1971* (SA). As members of the GFG Alliance have previously obtained approvals of FIRB and the Minister for other transactions, the Company expects that both approvals would be given.

The Security will only be capable of being enforced if an insolvency event has occurred in respect of the Company between a milestone tranche payment date and the date that the Company would be required to issue Subscription Shares in respect of that payment. SIMEC does not have the right to demand repayment of a milestone pre-payment except on the occurrence of an insolvency event in respect of the Company. It follows that SIMEC does not have the right to demand repayment of a milestone pre-payment or enforce the Security in connection with the work program for the Projects, including any delay in the work program or any failure by the Company to achieve a milestone.

The Share Subscription Agreement defines an insolvency event of the Company to mean an administrator being appointed to the Company, a controller (as defined in the Corporations Act) or provisional liquidator being appointed to the Company, the Company being taken under section 459F(1) of the Corporations Act to have failed to comply with a statutory demand, the Company passing a resolution for its winding up, an order being made for the Company's winding up, the Company suspending payment of its debts, ceasing (or threatening to cease) to carry on all or a material part of its business, stating that it is unable to pay its debts or being or becoming otherwise insolvent or being unable to pay its debts or otherwise insolvent or a court or other authority enforcing any judgment or order against the Company for the payment of money or the recovery of any property.

If an insolvency event was to occur in respect of the Company and SIMEC was entitled to enforce the Security and chose to do so, then the assets that are subject to the Security would become controlled by a receiver. A receiver is an independent and suitably qualified person appointed by a secured creditor. The receiver's role is to collect and sell enough of the secured assets to repay the debt owed to the secured creditor, pay out the money collected in the order required by law and report to ASIC. The receiver's primary duty is to the secured creditor that appointed them and they are under an obligation to take reasonable care to sell collateral for not less than its market value or, if there is no market value, the best price reasonably obtainable. A receiver also has the same general duties as a company director. Through this receivership process, the Company could be required to transfer one or more of the shares in Copper



Aura, the shares in Iron Genesis, the shares in Mutooroo Metals, the Copper Aura Tenements and the Iron Genesis Tenements to a person, and that person could be SIMEC.

If a receiver was appointed to any or all of the assets the subject of the Security, SIMEC would likely be a related party of the Company for the purposes of ASX Listing Rule 10.1. As a related party, SIMEC would not bid for the secured assets because the ASX Listing Rules would prevent the Company from being able to transfer those assets to SIMEC without shareholder approval. The approval sought would remove this impediment so that SIMEC would be able to bid for the assets following an insolvency event in respect of the Company on the same basis as anyone else in the market. As the Share Subscription Agreement requires the Company to obtain all approvals necessary for the Transaction, the Company is seeking the approval of shareholders for the purposes of ASX Listing Rule 10.1 at the Meeting. If this approval is not obtained, then the Transaction will not proceed as the Security will not be granted.

For completeness, the Security will be released following the earlier of:

the Company issuing Shares in relation to the final tranche of the "Milestone Funding";

SIMEC not paying for a tranche of "Milestone Funding" on the basis that the milestone for the previous tranche was not achieved before the relevant funds were exhausted and confirming that it does not intend to provide any further "Milestone Funding"; and

SIMEC failing to pay for a tranche of "Milestone Funding" when required and following the Company providing a breach notice to SIMEC in respect of that failure,

provided that at that time the Company is not subject to an insolvency event.

Each of Copper Aura, Iron Genesis and Mutooroo Metals will also provide a guarantee and indemnity in favour of SIMEC and, for such time as the Security remains in place, Copper Aura will undertake to not dispose of the Copper Aura Tenements it holds, Iron Genesis will undertake to not dispose of the Iron Genesis Tenements it holds and Mutooroo Metals will undertake to not dispose of the Copper Aura Tenements it holds.

#### What the Company expects to occur if the Resolution is not passed

If the Resolution is not passed, then the Share Subscription Agreement will be terminated and the Transaction will not proceed. It follows that the funding set out in the Share Subscription Agreement would not be provided to the Company and the associated work program set out in Annexure C in respect of the Copper Aura Project and the Iron Gensis Project would not proceed. The Company would not pursue the "Iron Genesis Project" given that the Transaction is with SIMEC which is uniquely positioned as both a funder and a customer for the "Iron Genesis Project".

Without the Transaction, the Company would continue to pursue the "Copper Aura Project" (previously the "Mutooroo Project") and the "Kalkaroo Project", as it was doing prior to entering into the Share Subscription Agreement. However, the Company would not take steps to materially advance these projects towards investment decisions until it could secure significant funding for the projects. Unless the Company could find a strategic partner like the GFG Alliance willing to commit significant funds at a premium, the funds would likely be raised through placements and rights issues priced at a discount to the prevailing market price and which would be dilutive to current shareholders.

#### The person to whom Subscription Shares will be issued and the Security will be granted

Subscription Shares will be issued to OneSteel Manufacturing Pty Ltd (ACN 004 651 325) (trading as "SIMEC Mining").

The Security will be granted to, and in the event of the enforcement of the Security over one or more of the assets, those assets could be transferred to, OneSteel Manufacturing Pty Ltd (ACN 004 651 325) (trading as "SIMEC Mining")

SIMEC is part of the GFG Alliance, a London-headquartered international group of businesses, founded and owned by the British Gupta Family (principally Mr Sanjeev Gupta), with annual revenue of over US\$15 billion and around 15,000 staff. It combines energy generation, metal manufacturing, engineering, natural resources and financial services, working together to deliver a common business strategy. The GFG Alliance comprises Liberty, an integrated industrial and metals business, SIMEC, a resources and infrastructure group, Wyelands, a banking and financial services arm, JAHAMA, a division that manages and develops the Alliance's global property holdings, and the GFG Foundation, which



focuses on retention and creation of engineering and industrial skills. The acquisition of the ArcelorMittal European assets will increase the group's workforce to approximately 30,000 people and turnover to over US\$20 billion.

Set out in Annexure B is a list of entities in the GFG Alliance, including SIMEC (**GFG Alliance Entities**). Each of the GFG Alliance Entities is an associate of SIMEC, as is Mr Gupta.

#### The material terms of the Transaction

The material terms of the Share Subscription Agreement are as follows:

**Funding** – The funding to be provided by SIMEC is broadly divided into:

\$49.5 million of staged "committed funding", \$6.0 million of which SIMEC is required to provide as part of an initial placement and the balance of which SIMEC is required to provide subject to specific project milestones being met (which milestones are outlined in more detail in Annexure C); and

\$50.5 million of "conditional funding", which SIMEC is required to provide only if requested by the Company and if particular events or circumstances occur,

and is summarised as follows:

Funding Component	Amount	Method of funding (including price)	Use of Funds
Committed fu	nding		
Initial Placement	\$6.0 million	Funding to be provided by way of subscription by SIMEC for 38,961,039 Subscription Shares priced at \$0.154 per Share, being the 45 day volume weighted average price (VWAP) to 30 April 2019 ( <b>Reference Share Price</b> ).	To fund corporate, administrative costs and agreed work programs on the Projects.
Milestone Funding	\$43.5 million	<ul> <li>Funding to be provided in accordance with the table set out in Annexure C.</li> <li>Milestone subscriptions will be priced at: <ul> <li>\$0.188 per Share (being a 22% premium to the Reference Share Price) where SIMEC holds no more than 30% of all Shares at the relevant subscription date;</li> <li>\$0.208 per Share (being a 35% premium to the Reference Share Price) where SIMEC holds more than 30% but not more than 51% of all Shares at the relevant subscription date; and</li> <li>\$0.154 per Share (being the Reference Share Price) where SIMEC holds more than 30% but not more than 51% of all Shares at the relevant subscription date; and</li> <li>\$0.154 per Share (being the Reference Share Price) where SIMEC holds more than 51% of all Shares at the relevant subscription date,</li> </ul> </li> <li>but excluding any Shares obtained by SIMEC other than in accordance with the Share Subscription Agreement and any Shares subscribed for by SIMEC in accordance with the</li> </ul>	To fund agreed work programs on the Projects staged over a three-year period, as set out in Annexure C.



		"participation rights" outlined below (Milestone Subscription Price).	
Conditional f	unding (if reques	ted by the Company)	
Additional Project Funding	\$17.5 million	If the Company decides to request this additional project funding from SIMEC (noting that the Company is under no obligation to do so) and each relevant success criteria in the "Project Development Plan" has been satisfied or waived, SIMEC is required to provide the funding and can choose to do so in one or more of the following ways:	To fund completion of the agreed work programs on the Projects (if needed).
		by way of SIMEC purchasing direct equity interests in the Iron Genesis Project (priced at \$1,200,000 for each 1% interest, calculated on a pro rata basis); and/or	
		by way of subscription for additional Subscription Shares at the Milestone Subscription Price (between \$0.154 and \$0.208 per Share, see "Milestone Funding" above), subject to the paragraph below.	
		The Company expects that this funding, if requested, would be provided by way of SIMEC purchasing direct equity interests in the Iron Genesis Project, noting that SIMEC is only entitled to elect to subscribe for additional Subscription Shares as part of this funding component:	
		<ul> <li>if, and to the extent that, SIMEC's interest in the Company has been diluted by a capital raising or the issue of Shares on the exercise of options; or</li> </ul>	
		if SIMEC is unable to obtain the approvals required from FIRB and the Minister in order for it to purchase direct equity interests in the Iron Genesis Project.	
Corporate Funding	\$8.0 million	<ul> <li>If the Company decides to request this corporate funding from SIMEC (noting that the Company is under no obligation to do so) and SIMEC chooses to provide the funding, SIMEC can choose to provide the funding in one or more of the following ways:</li> <li>&gt; subscription for Subscription Shares at the lesser of the Milestone Subscription Price (between \$0.154 and \$0.208 per Share, see "Milestone Funding" above) and the fair market value of Shares for an arm's length institutional placement by the Company and</li> </ul>	To fund general corporate costs, tenement administration, Kalkaroo Station and discretionary exploration (if requested).



	Total	\$100.0 million		
	Development Funding for the Copper Aura Project	\$25.0 million	If requested by the Company (noting that the Company is under no obligation to do so), this funding will be negotiated in light of the economics of the project and availability and suitability of alternative financing. Note: this tranche of funding is not the subject of the Resolution. If the Company and SIMEC agree that this funding be provided in a manner that requires shareholder approval, such approval will be sought at that time.	To fund a portion of the development costs of the Copper Aura Project post- delivery of a positive definitive feasibility study (if requested).
			<ul> <li>if SIMEC is unable to obtain the approvals required from FIRB and the Minister in order for it to purchase direct equity interests in the Iron Genesis Project.</li> </ul>	
			<ul> <li>if, and to the extent that, SIMEC's interest in the Company has been diluted by a capital raising or the issue of Shares on the exercise of options;</li> <li>if SIMEC elects to underwrite a capital raising by the Company; or</li> </ul>	
			The Company expects that this funding, if requested, would be provided by way of SIMEC purchasing direct equity interests in the Iron Genesis Project, noting that the Share Subscription Agreement requires SIMEC to prioritise this method of funding (unless it has been diluted by a capital raising or the issue of Shares on the exercise of options). To this end, SIMEC will only be entitled to subscribe for additional Subscription Shares as part of this funding component:	
			by the Company undertaking a capital raising underwritten by SIMEC, subject to the paragraph below.	
)			<ul> <li>by SIMEC, subject to the paragraph below; and/or</li> <li>by SIMEC purchasing direct equity interests in the Iron Genesis Project subject to the satisfaction of certain conditions (priced at \$900,000 for each 1% interest, calculated on a pro rata basis); and/or</li> </ul>	

**Rights Issue** – The Company is required to undertake a pro-rata rights issue at a discount to the Reference Share Price to raise up to \$5 million, following approval by shareholders of the subscriptions under the Share Subscription



Agreement. The terms of the rights issue will be finalised by the Company following shareholder approval of the Transaction.

Director appointments – SIMEC has the right to nominate directors to the Company's board as follows:

upon completion of the initial placement, one director;

upon reaching a 30% interest in the Company, one additional director, who must be an independent director within the meaning of ASX Corporate Governance Council's Corporate Governance Principles and Recommendations (4th Edition, February 2019); and

upon reaching a 45% interest in the Company, two further directors, one of whom must be an independent director within the meaning of ASX Corporate Governance Council's Corporate Governance Principles and Recommendations (4th Edition, February 2019).

Where SIMEC ceases to hold at least 30% of issued shares in the Company, it must procure the resignation of one nominated director who is not an independent director. Where SIMEC ceases to hold at least 15% of issued shares in the Company, it must procure the resignation of the remaining nominated director who is not an independent director.

The Company's board must be comprised of a majority of independent directors at all times and have an independent chair.

**Security** – As described in more detail above under the heading "Why shareholder approval is required for the purposes of ASX Listing Rule 10.1", for such time as work is proceeding in accordance with the "Project Development Plan" and SIMEC is continuing to provide "Milestone Funding", SIMEC will have the Security. Granting of the Security is subject to relevant regulatory consents and will only be capable of being enforced if the Company becomes insolvent (in the circumstances described under the heading "Why shareholder approval is required for the purposes of ASX Listing Rule 10.1").

**Guarantee** – Liberty Onesteel (MDR) UK Ltd has guaranteed SIMEC's obligations under the Share Subscription Agreement. This means that if SIMEC fails to meet its obligations under the Share Subscription Agreement, both SIMEC and Liberty Onesteel (MDR) UK Ltd would be liable for any loss suffered by the Company as a result.

**Participation rights** – For such time as SIMEC holds Shares, work is continuing in accordance with the "Project Development Plan" and SIMEC has committed funding obligations, it will be provided with an opportunity to participate in all of the Company's proposed capital raisings. Where SIMEC elects not to participate in a capital raising, the Company may still undertake the capital raising provided that the capital raised would not exceed 10% of the Company's fully diluted capital per annum.

Additional option shares – Each time Company options (listed or unlisted) in existence at the date of the Share Subscription Agreement (and specific employee options granted on 11 July 2019) are converted into Shares and work is continuing in accordance with the "Project Development Plan", SIMEC will have the right to acquire the same number of Shares that were issued upon the relevant conversion. The price payable by SIMEC for these Shares will be the same as the relevant option exercise price, except in relation to options exercised by Company directors Christopher Giles or Mark Stewart, in which case the price payable by SIMEC will be determined in the same manner as the price for the "Milestone Funding" set out in the table above.

**Offtake rights** – SIMEC will have a first right of refusal in relation to any iron ore offtake from the Iron Genesis Project and any copper concentrate or any other mineral offtake from the Copper Aura Project.

**Exclusivity Extension Payment** – The payment of \$1.0 million made by SIMEC to the Company in February 2019 in order to extend SIMEC's exclusivity rights will be credited to SIMEC either by way of SIMEC acquiring a 0.833% direct equity interest in the Iron Genesis Project or by way of set-off against any "Additional Project Funding" provided by SIMEC (at SIMEC's election).

**Conditions Precedent** – The Share Subscription Agreement is conditional on the Company's shareholders approving the subscriptions in the agreement under section 611 (item 7) of the Corporations Act and the enforcement of the Security under ASX Listing Rule 10.1.



#### The reasons for the Transaction

The Company has decided to proceed with the Transaction because:

it is potentially transformational for the Company in that it provides committed funding and capability to take two significant projects through to investment decisions in a very short space of time;

it provides access to capital that will allow the Company confidently to advance two of its key projects to definitive feasibility study level within the next three years;

project value creation remains within the Company for the benefit of shareholders;

it creates a strategic partnership with the GFG Alliance, which has already made a significant investment commitment in South Australia;

the Company maintains control of its destiny and its projects as an independently directed and managed ASXlisted entity;

it opens the door to international capital markets and commercial support that might otherwise not be available;

it provides access to an end user steelworks and export facility at Whyalla, facilitating potential development of the Iron Genesis Project, among others;

it provides for methodical exploration of the highly prospective Mutooroo Copper-Cobalt District for the first time in the Company's history with excellent discovery prospects;

the Company will continue to seek the best investment options for Kalkaroo and will maintain an active regional exploration program on its high conviction targets;

flexible investment terms that are governed by the Company's achievement of a series of technical and financial milestones;

the funding is structured so as to provide the Company with access to funding for any cost overruns of the agreed work programs;

milestone subscription capital is contributed by SIMEC at a premium to the share price of the Company at the date of the announcement of the Transaction;

the funding is structured in a way that only results in dilution to existing shareholders if work is continuing in accordance with the agreed work plan and milestones; and

it enables the Company to put all of its assets to work and to have the opportunity to realise the full potential of those assets.

#### When the Transaction is to occur

The Company expects that Subscription Shares will be issued within a five year period after the passing of the Resolution as follows:

- Subscription Shares issued as part of the "Initial Placement" will be issued 10 business days after the passing of the Resolution;
- Subscription Shares issued as part of the "Milestone Funding" will, subject to the satisfaction of milestones, be issued over a period of approximately three years commencing in the month of the passing of the Resolution (please see the column titled "Expected share issue date" in the table in Annexure C), but noting that the relevant expected share issue dates in that table are based on the achievement of the relevant "Defined Success Criteria" and not fixed dates, such that the dates included are estimates only;
- Subscription Shares issued as part of the conditional "Additional Project Funding" will (if issued see the above table under the heading "The material terms of the Transaction") be issued after the Subscription Shares for the "Milestone Funding" have been issued, but within a five year period after the passing of the Resolution; and



Subscription Shares issued as part of the conditional "Corporate Funding" will (if issued – see the above table under the heading "The material terms of the Transaction") be issued from time to time during the five year period after the passing of the Resolution.

Any Shares issued as part of the conditional "Development Funding for the Copper Aura Project", do not form part of the Subscription Shares and the Company is not seeking approval at the Meeting for the issue of any such Shares. If the Company decides to issue Shares as part of the conditional "Development Funding for the Copper Aura Project" (a decision that would be made in due course taking into consideration the relevant facts and circumstances at that time), the Company would seek any approvals required in connection with the issue of any such Shares at the relevant time.

#### SIMEC's voting power in connection with the Transaction

#### The voting power of SIMEC and its associates at the date of this Notice

SIMEC and its associates currently have no voting power in the Company. The Company's capital structure as at the date of this Notice is set out in the table below.

Type of security	Held by SIMEC (and associates)	% of total	Held by shareholders not associated with SIMEC	% of total	Total
Ordinary shares	Nil	0%	218,249,052	100%	218,249,052
Listed options	Nil	0%	13,606,867	100%	13,606,867
Unlisted options	Nil	0%	18,501,072	100%	18,501,072

#### The voting power of SIMEC and its associates after the Transaction

The number of Subscription Shares issued to SIMEC largely depends on a number of factors, some of which are outside of the control of the Company, including:

- whether all of the "Milestone Funding" is provided, noting that each milestone tranche is subject to "Defined Success Criteria";
- the level of subscriptions received in respect of the rights issue;
- whether the "Additional Project Funding" is requested by the Company and if so, whether it is provided by way of SIMEC purchasing direct equity interests in the Iron Genesis Project, by SIMEC subscribing for Subscription Shares (where SIMEC has been diluted by a capital raising or the issue of Shares on the exercise of options or is unable to obtain the FIRB approval (if required) and Ministerial approval required for it to purchase direct equity interests in the Iron Genesis Project), or a combination of both;
- the number of options that are exercised and whether or not SIMEC decides to exercise its right to subscribe for shares on a reciprocal basis in each case where options are exercised;
- whether the "Corporate Funding" is requested by the Company and if so, whether it is provided by way
  of SIMEC purchasing direct equity interests in the Iron Genesis Project, SIMEC subscribing for
  Subscription Shares (where SIMEC has been diluted by a capital raising or the issue of Shares on the
  exercise of options or is unable to obtain the FIRB approval (if required) and Ministerial approval
  required for it to purchase direct equity interests in the Iron Genesis Project), SIMEC underwriting a
  capital raising, or a combination of one or more of those methods;
- the timing of any request by the Company for "Additional Project Funding" or "Corporate Funding"; and
- whether the Company undertakes any additional capital raisings or otherwise issues securities (including options).



As such, whilst the voting power of SIMEC and its associates as a result of the Transaction is not known, the Company is able to specify what it expects the voting power of SIMEC and its associates to be as a result of the Transaction, as well as the maximum voting power that SIMEC and its associates could obtain as a result of the Transaction.

#### The expected voting power of SIMEC and its associates

The Company expects that its capital structure as a result of the Transaction will be that set out in the following table:

Type of security	Held by SIMEC (and associates)	% of total	Held by shareholders not associated with SIMEC	% of total	Total
Ordinary shares	276,228,846	50.45%	271,321,347	49.55%	547,550,193

This table has been prepared based on the following assumptions:

- only those Subscription Shares that form part of the "committed funding" are issued;
- the Company does not undertake any additional capital raisings or issue any additional options;
- the rights issue is fully subscribed for and raises \$5 million;
- all options to acquire Shares that are on issue at the date of this Notice with an exercise price below \$0.40, excluding employee options issued on 11 July 2019, are exercised immediately prior to their expiry;
- the employee options issued on 11 July 2019 are exercised after the last milestone date;
- SIMEC subscribes for all Shares to which it is entitled in accordance with its right to subscribe for Shares on a reciprocal basis in each case where options are exercised;
- the "Additional Project Funding" is not requested by the Company or is requested, but provided by way of SIMEC purchasing direct equity interests in the Iron Genesis Project because the approvals of FIRB (if required) and the Minister are obtained; and
- the "Corporate Funding" is not requested by the Company or is requested, but provided by way of SIMEC purchasing direct equity interests in the Iron Genesis Project because the approvals of FIRB (if required) and the Minister are obtained.

It follows that the expected voting power that SIMEC would have as a result of the issue of the Subscription Shares would be 50.45% of the total votes of the Company. Given that SIMEC and its associates do not have any voting power, this is also the expected increase in the voting power of SIMEC and its associates as a result of the Transaction. The directors consider that the assumptions upon which the above table has been prepared are reasonable in all of the Company's circumstances based on information available at the time of this Notice. However, it is important to note that the voting power outlined in the table above is an estimate only and is subject to a number of factors, some of which are outside of the control of the Company. It follows that SIMEC's voting power in the Company after the Transaction may be more or less than what is indicated in the above table.

#### The maximum voting power of SIMEC and its associates after the Transaction

The maximum voting power that SIMEC and its associates would have as a result of the issue of the Subscription Shares would be 60.99% of the total votes of the Company. Given that SIMEC and its associates do not have any voting power, this is also the maximum increase in the voting power of SIMEC and its associates as a result of the Transaction.



This maximum voting power is calculated based on the following assumptions:

- all Subscription Shares are issued, including those Subscription Shares that form part of the conditional funding;
  - the rights issue is fully subscribed for and raises \$5 million;
- the "Additional Project Funding" is requested by the Company and provided by way of SIMEC subscribing for Subscription Shares rather than SIMEC purchasing direct equity interests in the Iron Genesis Project (because SIMEC is unable to obtain the FIRB approval (if required) and Ministerial approval required for it to purchase direct equity interests in the Iron Genesis Project);
- all options to acquire Shares that are on issue at the date of this letter, other than employee options issued on 11 July 2019, are exercised immediately prior to their expiry;
- the employee options issued on 11 July 2019 are exercised after the last milestone date;
- SIMEC subscribes for all Shares to which it is entitled in accordance with its right to subscribe for Shares on a reciprocal basis in each case where options are exercised;
- that the "Corporate Funding is requested by the Company and provided in January 2021 by way of SIMEC subscribing for Subscription Shares rather than SIMEC purchasing direct equity interests in the Iron Genesis Project or underwriting a capital raising (because SIMEC is unable to obtain the FIRB approval (if required) and the Ministerial approval required for it to purchase direct equity interests in the Iron Genesis Project);
- that the Company does not undertake any additional capital raisings; and
- that the Company does not issue any additional options.

However, the Company notes that this reflects the maximum position only based on each of the assumptions listed above. The Company does not expect all of those assumptions to eventuate. To this end:

- the Company is entitled under the Share Subscription Agreement to undertake capital raisings and would seek to do so rather than seeking "Additional Project Funding" or "Corporate Funding" if it resulted in a more favourable outcome for the Company and existing shareholders;
- the Company expects that if it requested any of the \$17.5 million "Additional Project Funding", this funding would be provided by way of SIMEC purchasing direct equity interests in the Company's Iron Genesis Project, noting that SIMEC would only be entitled to subscribe for additional Subscription Shares if and to the extent that SIMEC's interest in the Company had been diluted by a capital raising, or if SIMEC was unable to obtain the approvals of FIRB (if required) and the Minister required for it to purchase direct equity interests in the Iron Genesis Project; and
  - the Company expects that if it requested any of the \$8 million "Corporate Funding", this funding would be provided by way of SIMEC purchasing direct equity interests in the Company's Iron Genesis Project, noting that the Share Subscription Agreement requires SIMEC to prioritise this method of funding (unless it has been diluted by a capital raising or the issue of Shares on the exercise of options) and that SIMEC would only be entitled to subscribe for additional Subscription Shares if and to the extent that SIMEC's interest in the Company had been diluted by a capital raising or the issue of Shares on the exercise of options, if SIMEC elected to underwrite a capital raising by the Company, or if SIMEC was unable to obtain the approvals of FIRB (if required) and the Minister required for it to purchase direct equity interests in the Iron Genesis Project.

Given these expectations, the Company believes that the information set out above under the heading "The expected voting power of SIMEC and its associates" better reflects the expected shareholding of SIMEC and its associates as a result of the Transaction.



#### No other agreements between the Company and SIMEC or any of its associates

The Company is not a party to any agreement, other than the Share Subscription Agreement, with SIMEC or any of SIMEC's associates.

#### Intentions of SIMEC and the GFG Alliance regarding the future of the Company if the Resolution is passed

The information set out in this section has been prepared based on information provided to the Company by SIMEC and the GFG Alliance. SIMEC and the GFG Alliance have consented to the inclusion of this information in the form and context in which it appears. However, the Company notes that the statements in this section are statements of their current intentions only, as at the date of this Notice. Accordingly, those intentions may change. SIMEC and the GFG Alliance currently have:

no intention to change the business of the Company;

an intention for the Company to develop the Projects in accordance with the "Project Development Plan";

no intention to change the Company's strategy in relation to the "Kalkaroo Project" and the Company's other assets;

an intention to contribute capital to the Company in accordance with the Share Subscription Agreement, which provides for continued investment by SIMEC and the GFG Alliance in the Company over an extended period of three years or more;

no intention to change the future employment of the employees of the Company;

no intention to transfer the Company's assets at the current stage of their development, but may in future seek to acquire offtake in relation to iron ore extracted from the Iron Genesis Project and/or offtake in relation to copper concentrate or any other minerals extracted from the Copper Aura Project. The terms of any such acquisition would be negotiated between the Company, SIMEC and the GFG Alliance at the relevant time, would be on arm's length commercial terms and would require the approval of shareholders other than SIMEC and its associates (currently the other GFG Alliance Entities) if SIMEC was a substantial holder and/or related party of the Company at the time of the acquisition (see section below titled "Additional shareholder protections in transactions with SIMEC and the GFG Alliance"). It is also important to note that the Iron Genesis Project and the Copper Aura Project are currently in an early exploration phase only and that it is expected to be a period of years before any commercialisation could be achieved;

no intention to redeploy the fixed assets of the Company;

no intention to seek to acquire any interest in any of the assets of the Company other than in accordance with the Share Subscription Agreement;

no intention to change the financial or dividend distribution policy of the Company; and

an intention to nominate persons for appointment as directors of the Company in accordance with its rights to do so under the Share Subscription Agreement, but no intention to seek to appoint additional directors or remove existing directors.

#### Additional shareholder protections in transactions with SIMEC and the GFG Alliance

If the Transaction proceeds and SIMEC and/or the GFG Alliance was to put forward a further proposed transaction to the Company, whether or not as a result of a change in the intentions set out above or otherwise, such a transaction would need to be approved by the Company's board, which will comprise a majority of independent directors.

At the time of any proposed transaction, SIMEC and the GFG Alliance would also be a substantial holder and an associate of the Company for the purposes of the ASX Listing Rules, which means that if the proposed transaction provided for the acquisition of a substantial asset by SIMEC and the GFG Alliance, it also would require the approval of shareholders in addition to the approval of the majority independent board.

Further, depending on the voting power that SIMEC and the GFG Alliance and their associates acquire as a result of



the issue of Subscription Shares, as outlined above under the heading "SIMEC's voting power in connection with the Transaction", the Company expects SIMEC and the GFG Alliance to become related parties of the Company for the purposes of the Corporations Act and the ASX Listing Rules. If this was to occur, then:

transactions between the Company and SIMEC and the GFG Alliance which are not on arm's length terms would need to be approved by shareholders; and

any transaction that provides for the issue of further securities (that is, not including Subscription Shares) to SIMEC or the GFG Alliance would require the approval of shareholders.

In each case where shareholder approval was required for a transaction, SIMEC and the GFG Alliance (and their associates) would not be able to vote. It follows that those shareholders not associated with SIMEC and the GFG Alliance would need to approve the transaction before it could proceed.

In addition to the above, if SIMEC or the GFG Alliance wished to acquire shares other than Subscription Shares after its voting power reaches 20%, it would need to comply with the takeover provisions of the Corporations Act, which are summarised above in the section titled "Why shareholder approval is required for the purposes of section 611 (item 7) of the Corporations Act", meaning that it would need to make a takeover bid for the Company in accordance with Chapter 6 of the Corporations Act or rely on one of the limited exceptions outlined in Chapter 6 of the Corporations Act, such as acquiring no more than 3% of the voting shares every 6 months.

#### Directors

SIMEC has the right to nominate directors to the Company's board based on the progression of the Transaction and SIMEC's shareholding in the Company. SIMEC is entitled to nominate its first director following completion of the "Initial Placement", which will be completed by 10 business days after the passing of the Resolution.

To this end, SIMEC has nominated Mr Benjamin Bolot for appointment as a director of the Company upon the completion of the "Initial Placement".

Mr Bolot is employed by One Steel Trading Pty Ltd (a member of the GFG Alliance and a related body corporate of SIMEC) and is the Head of Mergers & Acquisitions for the GFG Alliance Australia. Mr Bolot does not hold any equity interests in SIMEC or any other entity in the GFG Alliance. Prior to joining the GFG Alliance Australia, Mr Bolot served as Chief Investment Officer at Spark Infrastructure Group from June 2017 until August 2018. Formerly, he held roles as General Manager of International Development, Strategy & Transactions, and Policy at Origin Energy Limited. Prior to this he was Chief Risk Officer at Origin Energy Limited. In his role as General Manager of International Development, Mr Bolot was a director of a number of offshore energy development joint ventures including Energia Austral (Chile), Energia Andina (Chile), OTP Geothermal Pte (Indonesia), Origin Energy Insurance (Singapore) and PNG Energy Developments (PNG). Ben was a Co-Founder of Minerva Strategic Advisory Pty Ltd and served as its Managing Director. Prior to joining Minerva, he was a Senior Executive at Babcock & Brown in the infrastructure division specialising in public market merger and acquisition transactions. He led a large number of transactions in Australia as well as working with Babcock & Brown transaction teams in Asia, the United States and Europe. Before joining Babcock & Brown, he was Corporate Development Manager at Origin Energy and a Senior Manager in the Corporate Finance group at Centrica plc, parent company of British Gas. Mr Bolot holds a Bachelor of Laws and Bachelor of Commerce from the University of Auckland, New Zealand.

SIMEC has not notified the Company of any other person who it proposes to nominate for appointment as a director in the event that it is entitled to do so in future.

#### Independent expert report

The Company engaged BDO Corporate Finance (WA) Pty Ltd (ACN 124 031 045, AFSL 316 158) (**BDO**) to prepare an independent expert report for the purposes of ASIC Regulatory Guide 74: *Acquisitions approved by members* and ASX Listing Rule 10.10.2, expressing BDO's opinion as to whether or not the Transaction (including the issue of the Subscription Shares and the grant and potential enforcement of the Security) is fair and/or reasonable to the shareholders of the Company who are entitled to vote on the Resolution.



BDO has made the following statements in its report:.

"We have considered the terms of the Transaction as outlined in the body of this Report and have concluded that, in the absence of a superior offer and any other relevant information, the Transaction is not fair but reasonable to the Shareholders of Havilah. This opinion is derived from the Transaction comprising the Funding Component and Security Component, with each component having the following opinions:

- We have considered the terms of the Funding Component as outlined in the body of this Report and have concluded that, in the absence of a superior offer and any other relevant information, the Funding Component is not fair but reasonable to the Shareholders of Havilah.
- We have considered the terms of the Security Component as outlined in the body of this Report and have concluded that, in the absence of a superior offer and any other relevant information, the Security Component is fair and reasonable to the Shareholders of Havilah."

#### and

"We have considered the [Transaction], in terms of both advantages and disadvantages of the Transaction and other considerations, including the position of Shareholders if the Transaction does not proceed and the consequences of not approving the Transaction. In our opinion, the position of Shareholders if the Transaction is approved is more advantageous than the position if the Transaction is not approved. Accordingly, in the absence of any other relevant information or a superior offer, we consider that the Transaction is reasonable for Shareholders."

A copy of the independent expert report is set out in Annexure D. A copy of the report is also available on the Company's website (<u>https://www.havilah-resources.com.au/media-center/</u>). Shareholders are encouraged to read the report in full.

BDO has given and has not, before the date of this Notice, withdrawn its written consent to being named in this Notice in the form and context in which it is named and to the inclusion of its independent expert as an annexure to this Notice.

#### **Directors' Recommendation**

Subject to the receipt of a superior proposal, each of the independent directors of the Company recommends that non-associated shareholders should vote in favour of the Resolution for the reasons set out above under the heading "The reasons for the Transaction". The non-independent director Dr Chris Giles makes no recommendation on the grounds that the Transaction is not fair.



### Annexure A – Copper Aura Tenements and Iron Genesis Tenements

#### **Copper Aura Tenements**

Each of Exploration Licence 5703, Exploration Licence 5753 (Mutooroo Mine), Exploration Licence 5755, Exploration Licence 5801, Exploration Licence 5831, Exploration Licence 5882, Exploration Licence 6163, Mineral Claim 3565 and Mineral Claim 3566.

Any other lease, licence, permit or other authority or tenement for the prospecting, exploration or mining of any mineral, a substantial part of which is in the area that is within a 25 km radius centred at 489100E 6430400N GDA94 Zone 54 or the external boundaries of the tenements listed in item 1 as at 1 May 2019 (except to the extent that that area extends to New South Wales), held by the Company or any related body corporate of the Company.

Any application for or interest in a lease, licence, permit or other authority or tenement that confers or will confer similar rights to those mentioned in item 2.

#### **Iron Genesis Tenements**

Each of Exploration Licence 6280 (Mingary), Exploration Licence 5848 (Mingary), Exploration Licence 6041 (Cutana) and Exploration Licence 6054 (Bindarrah).

Any other lease, licence, permit or other authority or tenement for the prospecting, exploration or mining of any mineral, a substantial part of which is in the area that is within a 25 km radius centred at 471000E 6422000N GDA94 Zone 54 or the external boundaries of the tenements listed in item 1 as at 1 May 2019, held by the Company or any related body corporate of the Company.

Any application for or interest in a lease, licence, permit or other authority or tenement that confers or will confer similar rights to those mentioned in item 2.



### Annexure B – GFG Alliance entities

	GFG	Alliance entities				
	No.	Name	Company Number	No.	Name	Company Number
$\bigcirc$	<u>)</u>	SIMEC Group Limited (HK)	CN 1651874	2.	Liberty MDR Treasury Company UK Ltd	CN 11179175
	3.	SIMEC (Australia) UK Ltd	CN 10933375	4.	Liberty GREENPOWER Pty Ltd	ACN 626 173 902
	5.	SIMEC Holdings (Mining) UK Ltd	CN 10934308	6.	Liberty Holdings Australia Pty Ltd	ACN 627 011 938
		SIMEC (Australia) Mining Pty Ltd	ACN 623 121 504	8.	Liberty Building Solutions Holdings Pty Ltd	ACN 631 112 108
	9.	Austral Coal Pty Limited	ACN 069 071 816	10.	Liberty Building Solutions Pty Ltd	ACN 631 112 457
	Di.	SIMEC Holdings (Ports) UK Ltd	CN 10934363	12.	OneSteel NZ Limited	CN 1047789
	13.	Liberty Global Holding Pte. Ltd	UEN 201705408R	14.	Liberty OneSteel (Manufacturing) Pty Ltd	ACN 623 194 070
D	15.	Liberty Onesteel Pte. Ltd.	UEN 201723336C	16.	Liberty ONESTEEL (Newcastle) Pty Ltd	ACN 623 285 718
$(\square$	17.	Liberty Onesteel (Primary) Pte. Ltd	UEN 201723465D	18.	SSX Services Pty Limited	ACN 083 090 831
	19.	Liberty Onesteel (Primary) UK Ltd	CN 10934445	20.	OneSteel NSW Pty Limited	ACN 003 312 892
	21.	Liberty Primary Metals Australia Pty Ltd	ACN 631 112 573	22.	OneSteel Wire Pty Limited	ACN 000 010 873
	23.	Arrium Mining Services Asia Limited	CN 1390655	24.	The Australian Steel Company (Operations) Pty Ltd	ACN 069 426 995
	25.	OneSteel Manufacturing Pty Limited	ACN 004 651 325	26.	One Steel Recycling Hong Kong Limited	CN 849675
	27.	Whyalla Ports Pty Ltd	ACN 153 225 364	28.	OneSteel Recycling Pty Limited	ACN 002 707 262
	29.	Tahmoor Coal Pty Ltd	ACN 076 663 968	30.	OneSteel Trading Pty Limited	ACN 007 519 646
	31.	Bargo Collieries Pty Ltd	ACN 000 970 276	32.	OneSteel Reinforcing Pty Limited	ACN 004 148 289
2	33.	Saanvi Holdings Ltd	CN 1931564	34.	XMS Holdings Pty Limited	ACN 008 742 014
C	35.	Liberty Onesteel Ltd	CN 1954529	36.	Austube Mills Pty Ltd	ACN 123 666 679
	37.	Liberty Onesteel (MDR) UK Ltd	CN 10932936	38.	P&T Tube Mills Pty Ltd	ACN 010 469 977
	39.	Liberty Onesteel (Manufacturing) UK Ltd	CN 10933885	40.	Liberty Onesteel Corporate Services Pte. Ltd.	UEN 201723467E
	41.	Liberty Onesteel (Recycling) UK Ltd	CN 10934300	42.	Liberty Onesteel Corporate Services UK Ltd	CN 10936534
	43.	Liberty Onesteel (Distribution) UK Ltd	CN 10934243	44.	Liberty Onesteel Corporate Services Pty Ltd	ACN 621 281 329
	45.	Liberty (Austube Mills) UK Ltd	CN 10934161			



Annexur Milestone fu	Annexure C – Milestone Funding Milestone funding tranches							
Milestone Number	Estimated Start Date	Funding Amount (\$m)	Scope of Work Funded	Defined Success Criteria				
	Aug-19	2.39	Iron Genesis Project Continuation of Grants Basin infill drilling, geotechnical and metallurgical drilling for Prefeasibility Study (PFS) and commencement of environmental baseline studies for the Iron Genesis Project. Copper Aura Project Commencement of Copper Aura Project exploration, resource development and initial metallurgical testing, and infrastructure studies for the Scoping Study (SS). Also includes the commencement of environmental studies.	<ul> <li>Iron Genesis Project         <ul> <li>18,000m reverse circulation (RC) and diamond completed (or less)</li> <li>Generate sufficient material for metallurgical pr 900m DD)</li> <li>Identify work programs to support regulatory and Environmental baseline studies complete</li> <li>Impact assessment studies commenced</li> <li>Stakeholder engagement plan in place and cor</li> </ul> </li> <li>Copper Aura Project         <ul> <li>List of exploration targets for drilling in the PFS</li> <li>DD metallurgical sample (300m drilling)</li> <li>Resource model at Exploration Target confider 2012</li> <li>Study to determine feasibility of Mutooroo under potential areas for underground resources)</li> <li>Product grade and recovery identified for copper Mutooroo Resource and exploration targets (la program identified)</li> <li>CAPEX/OPEX to American Association of Cos 5 (-50% +100%) estimate level</li> <li>Completed report indicating economic viability</li> <li>Identify work programs to support regulatory application y appl</li></ul></li></ul>				

0	Milestone Number	Estimated Start Date	Funding Amount (\$m)	Scope of Work Funded	Defined Success Criteria	Expected share issue date
		Aug-19	2.39	Iron Genesis Project Continuation of Grants Basin infill drilling, geotechnical and metallurgical drilling for Prefeasibility Study (PFS) and commencement of environmental baseline studies for the Iron Genesis Project. Copper Aura Project Commencement of Copper Aura Project exploration, resource development and initial metallurgical testing, and infrastructure studies for the Scoping Study (SS). Also includes the commencement of environmental studies.	<ul> <li>Iron Genesis Project <ul> <li>18,000m reverse circulation (RC) and diamond drilling (DD) program completed (or less)</li> <li>Generate sufficient material for metallurgical program (approximately 900m DD)</li> <li>Identify work programs to support regulatory applications</li> <li>Environmental baseline studies complete</li> <li>Impact assessment studies commenced</li> <li>Stakeholder engagement plan in place and consultation commenced</li> </ul> </li> <li>Copper Aura Project <ul> <li>List of exploration targets for drilling in the PFS phase</li> <li>DD metallurgical sample (300m drilling)</li> <li>Resource model at Exploration Target confidence according to JORC 2012</li> <li>Study to determine feasibility of Mutooroo underground mining (identify potential areas for underground resources)</li> <li>Product grade and recovery identified for copper mineralisation at Mutooroo Resource and exploration targets (laboratory scale testwork program identified)</li> <li>CAPEX/OPEX to American Association of Cost Engineers (AACE) Class 5 (-50% +100%) estimate level</li> <li>Completed report indicating economic viability of project</li> </ul> </li> </ul>	Jan 21
C L	2	Sep-19	2.86	<ul> <li>Iron Genesis Project</li> <li>Commencement of engineering studies for power, water, tailings, logistics and site infrastructure of the Iron Genesis project for the PFS.</li> <li>Commencement of engineering study to develop the process plant flowsheet including cost estimation for the Iron Genesis Project for the PFS.</li> </ul>	<ul> <li>Completed report indicating economic viability of project</li> <li>Identify work programs to support regulatory applications</li> <li>Iron Genesis Project</li> <li>Defined product grade, recovery and production rate</li> <li>Proven flowsheet at laboratory pilot scale that delivers:         <ul> <li>target grade greater than 65% iron (Fe)</li> <li>iron recovery that achieves the relevant project investment criteria</li> <li>understanding of the impact of titania and phosphorus</li> <li>assessment against Platts 65% Fe Iron Ore concentrate index</li> </ul> </li> <li>CAPEX/OPEX estimated to AACE Class 3 (-20% +30%)</li> <li>Risk assessment in place and action plan to address risks</li> </ul>	Aug 21



Milestone Number	Estimated Start Date	Funding Amount (\$m)	Scope of Work Funded	Defined Success Criteria	Expected share issue date
	Oct-19	0.67	Iron Genesis Project Commencement of metallurgical testwork (ore characterisation and flowsheet development) for the PFS for the Iron Genesis Project.	<ul> <li>Pellet and/or sinter properties established via testwork and assessed against the Platts criteria</li> <li>Perform economic evaluation and achieve an internal rate of return (IRR) of ≥10% and free on board (FOB) less than AU\$60/tonne</li> <li>Identify potential customers and their requirements</li> <li>Define and design supporting infrastructure requirements to an AACE Class 3 (-20% to +30%) level</li> <li>Preliminary tailings storage facility (TSF) design to AACE Class 3 (-20% +30%) estimate level</li> <li>Sustainable power supply identified including non-binding agreement which supports the commercial tollgate to progress to definitive feasibility study (DFS)</li> <li>Sustainable water supply identified including non-binding agreement which supports the commercial tollgate to progress to DFS</li> <li>Matrix of opportunities and action plan in place</li> <li>Iron Genesis Project</li> <li>Defined product grade, recovery, production rate</li> <li>Proven flowsheet at laboratory pilot scale that delivers:         <ul> <li>target grade greater than 65% Fe</li> <li>iron recovery that achieves the relevant project investment criteria</li> <li>understanding of the impact of titania and phosphorus</li> <li>assessed against Platts 65% Fe Iron Ore concentrate index</li> </ul> </li> <li>CAPEX/OPEX estimated to AACE Class 3 (-20% +30%).</li> <li>Risk assessment in place and action plan to address risks</li> <li>Pellet and/or sinter properties established via testwork and assessed against the Platts criteria</li> </ul>	Feb 20
4	Nov-19	0.35	Funding for the PMO of the Iron Genesis and Copper Aura Projects.	<ul> <li>Funding for the PMO of the Iron Genesis and Copper Aura Projects funded</li> </ul>	Feb 20
5	Dec-19	0.90	Iron Genesis Project Commencement of resource development and continuation of metallurgical testwork (flowsheet simulation testwork) for the Iron Genesis Project.	<ul> <li>Iron Genesis Project</li> <li>Resource model developed and validated by external audit to a JORC 2012 standard</li> <li>Resource greater than 1.25 billion tonnes (Bt)</li> <li>Probable reserve developed and validated by external audit to a JORC 2012 standard</li> <li>Reserve of at least 50% of final project resource size</li> <li>Preliminary pit design/optimisation, waste rock dump design, production sequence and cost estimates completed</li> </ul>	Aug 20



Milestone Number	Estimated Start Date	Funding Amount (\$m)	Scope of Work Funded	Defined Success Criteria	Expected share issue date
6	Feb-20	0.35	Funding for the PMO of the Iron Genesis and Copper Aura Projects.	Funding for the PMO of the Iron Genesis and Copper Aura Projects.	May 20
1) 7	May-20	0.35	Funding for the PMO of the Iron Genesis and Copper Aura Projects.	Funding for the PMO of the Iron Genesis and Copper Aura Projects.	Aug 20
0 0 0	Aug-20	4.47	Iron Genesis Project Completion of metallurgical and geotechnical drilling and additional infill drilling for the Grants Basin as part of the PFS for the Iron Genesis Project.	<ul> <li>Iron Genesis Project</li> <li>30,000m RC drilling and 3,000m geotechnical DD program completed (or less)</li> <li>Generate sufficient material for metallurgical program (1,800m drilling)</li> </ul>	Feb 21
9	Sep-20	9.23	Iron Genesis Project Completion of engineering studies for power, water and process plant for the Iron Genesis Project. Copper Aura Project Commencement of diamond drilling for metallurgical characterisation for the Copper Aura Project.	<ul> <li>Iron Genesis Project</li> <li>Proven flowsheet at integrated pilot plant scale that delivers: <ul> <li>target grade greater than 65% Fe</li> <li>iron recovery that achieves the project investment criteria</li> <li>minor elements assessed against Platts 65% Fe Iron Ore concentrate index</li> </ul> </li> <li>Drawings suitable for detailed design and AACE Class 2</li> <li>Equipment lists ready for detailed design and AACE Class 2</li> <li>Hazard and operability study (HAZOP) completed and plan in place to manage safety through construction, commissioning and operation</li> <li>Projects risks understood, quantified and mitigation plan in place</li> <li>CAPEX/OPEX estimated to AACE Class 2 (-15% +20%).</li> </ul>	Aug 21
	Oct-20	8.06	<ul> <li>Iron Genesis Project         Complete the engineering studies for logistics and site infrastructure for the Iron Genesis Project.     </li> <li>Copper Aura Project         <ul> <li>Complete the environmental studies for the PFS for the Copper Aura Project.</li> <li>Commence the infrastructure studies for power, water and logistics for the Copper Aura Project.</li> <li>Commence ore characterisation and processing route identification for the Copper Aura Project.</li> </ul> </li> </ul>	<ul> <li>Copper Aura Project         <ul> <li>Generate sufficient sample for PFS metallurgical testing program</li> </ul> </li> <li>Iron Genesis Project         <ul> <li>Perform economic evaluation and achieve an IRR ≥15% and FOB less than AU\$50/t</li> <li>Determine market demand and value of product</li> <li>Established funding model</li> <li>All necessary utilities and supporting infrastructure designed to an AACE Class 2 (-15% +20%) level and necessary agreements and information required for regulatory approval</li> </ul> </li> <li>Copper Aura Project         <ul> <li>Defined copper product(s) grade, recovery and production rate</li> <li>Proven flowsheet at laboratory pilot scale that delivers the target parameters</li> <li>Preliminary tailings storage facility (TSF) design to AACE Class 3 (-20%)</li> </ul> </li> </ul>	Dec 22



Milestone Number	Estimated Start Date	Funding Amount (\$m)	Scope of Work Funded	Defined Success Criteria	Expected share issue date			
		0.00		<ul> <li>Define and design supporting infrastructure requirements to an AACE Class 3 (-20% +30%) level</li> <li>Sustainable power supply identified including non-binding agreement which supports the commercial tollgate to progress to DFS</li> <li>Sustainable water supply identified including non-binding agreement which supports the commercial tollgate to progress to DFS</li> <li>Sustainable water supply identified including non-binding agreement which supports the commercial tollgate to progress to DFS</li> <li>Matrix of opportunities and action plan in place</li> <li>Environmental baseline studies complete</li> <li>Impact studies commenced</li> <li>Stakeholder engagement plan in place and consultation commenced</li> </ul>	L			
	Nov-20	0.66	Iron Genesis Project Commence DFS metallurgical testwork, including flowsheet simulation and pilot plant testwork for the Iron Genesis Project.	<ul> <li>Iron Genesis Project</li> <li>Proven flowsheet at integrated pilot plant scale that delivers:         <ul> <li>target grade greater than 65% Fe</li> <li>iron recovery that achieves the project investment criteria</li> <li>minor elements assessed against Platts 65% Fe Iron Ore concentrate index</li> </ul> </li> </ul>	Jan 21			
	Jan-21	1.34	Iron Genesis Project Complete the environmental impact assessment for the Iron Genesis Project.	<ul> <li>Iron Genesis Project</li> <li>Mining Lease Application (MLA) and all other relevant approvals documents completed and submitted</li> </ul>	Apr 21			
	Feb-21	2.50	Iron Genesis Project Complete the resource development for the DFS for the Iron Genesis Project. Complete the RC drilling program and resource development for the PFS for the Copper Aura Project.	<ul> <li>Iron Genesis Project</li> <li>Resource model developed and validated by external audit to a JORC 2012 standard</li> <li>Resource greater than 1.5 Bt</li> <li>Final pit design/optimisation, waste rock dump design, production sequence and cost estimates completed</li> <li>Proven/probable reserve developed and validated by external audit to JORC 2012 standard which supports the 25 year mine life at design production rate</li> <li>Copper Aura Project</li> <li>RC and DD of best three targets identified, totalling, 15,000m (or less)</li> <li>Deeper RC and DD on Mutooroo resource totalling 15,000m (or less)</li> <li>Sufficient material generated for metallurgical testing program (900m drilling)</li> <li>Resource model developed and validated by external audit to a JORC 2012 standard</li> <li>Resource greater than 5 years life of mine (LOM) feed</li> </ul>	Nov 21			



Milestone Number	Estimated Start Date	Funding Amount (\$m)	Scope of Work Funded	Defined Success Criteria	Expected share issue date		
				<ul> <li>Preliminary pit design/optimisation, waste rock dump design, production sequence and cost estimates completed</li> <li>Probable reserve developed and validated by external audit to a JORC 2012 standard</li> <li>Reserve of at least 50% of project Indicated resource size</li> </ul>			
	Apr-21	1.12	Iron Genesis Project Complete DFS metallurgical testwork for the Iron Genesis Project. Copper Aura Project Complete processing engineering studies and concentrate marketing for the Copper Aura Project.	<ul> <li>Iron Genesis Project</li> <li>Drawings suitable for detailed sign and AACE Class 2</li> <li>Equipment lists ready for detailed design and AACE Class 2</li> <li>HAZOP completed and plan in place to manage safety through construction, commissioning and operation</li> <li>Projects risks understood, quantified and mitigation plan in place</li> <li>CAPEX/OPEX estimated to AACE Class 2 (-15% +20%)</li> <li>Copper Aura Project</li> <li>Perform economic evaluation and achieve IRR of 10% and FOB less than USD180 cents/pound (c/lb) copper equivalent (Cu eq) total cost</li> <li>Defined direct ship product value with established smelter terms including credits and penalties</li> <li>Perform economic evaluation and achieve an IRR of ≥10% and total cost <ul> <li>USD150c/lb Cu eq</li> </ul> </li> </ul>	Sep 22		
15	May-21	0.35	Funding for the PMO of the Iron Genesis and Copper Aura Projects.	Funding for the PMO of the Iron Genesis and Copper Aura Projects	Aug 21		
16	Aug-21	2.14	Complete resource drilling to support resource for the DFS for the Copper Aura Project.	<ul> <li>Copper Aura Project</li> <li>RC and DD best three targets at a line spacing of 100 by 100m totalling 30,000m (or less)</li> <li>Generate sufficient material for metallurgical testing program (1,800m drilling)</li> </ul>	May 22		
17	Nov-21	0.35	Funding for the PMO of the Iron Genesis and Copper Aura Projects.	Funding for the PMO of the Iron Genesis and Copper Aura Projects	Feb 22		



$\sim$								
C	Milestone Number	Estimated Start Date	Funding Amount (\$m)	Scope of Work Funded	Defined Success Criteria	Expected share issue date		
ľ	18	Dec-21	1.52	<ul> <li>Copper Aura Project</li> <li>Complete DFS metallurgical drilling for the Copper Aura Project.</li> <li>Complete the environmental impact assessment for the Copper Aura Project.</li> </ul>	<ul> <li>Copper Aura Project</li> <li>Generate sufficient sample for DFS metallurgical program</li> <li>MLA and all other relevant approvals documents completed and submitted</li> </ul>	Apr 24		
	19	Feb-22	0.80	<b>Copper Aura Project</b> Complete resource development for the DFS for the Copper Aura Project.	<ul> <li>Copper Aura Project</li> <li>Resource model developed and validated by external audit to a JORC 2012 standard</li> <li>Resource minimum 15 years LOM feed</li> <li>Final pit design/optimisation, waste rock dump design, production sequence and cost estimates completed</li> <li>Proven/probable reserve developed and validated by external audit to JORC 2012 standard which supports the minimum 15 year mine life at design production rate</li> </ul>	Nov 23		
	20	May-22	0.35	Funding for the PMO of the Iron Genesis and Copper Aura Projects.	Funding for the PMO of the Iron Genesis and Copper Aura Projects	Aug 22		
Ţ	21	Aug-22	0.23	Funding for the PMO of the Iron Genesis and Copper Aura Projects.	Funding for the PMO of the Iron Genesis and Copper Aura Projects	Nov 22		
	) 22	Sep-22	2.51	<b>Copper Aura Project</b> Complete the DFS engineering studies for power, water, logistics, tailings, site support and plant design for the Copper Aura Project.	<ul> <li>Copper Aura Project</li> <li>Proven flowsheet at laboratory pilot scale that delivers the targeted parameters</li> <li>Drawings suitable for detailed design</li> <li>Equipment lists ready for detailed design</li> <li>CAPEX/OPEX estimated to AACE Class 2 (-15% +20%)</li> <li>HAZOP completed and plan in place to manage safety through construction and commissioning</li> <li>Project risks understood and quantified</li> <li>Perform economic evaluation and achieve an IRR of 15% and FOB less than USD150c/lb Cu eq total cost</li> <li>Established funding model</li> <li>All necessary utilities and supporting infrastructure designed to an AACE Class 2 (-15% +20%) level and necessary agreements and information required for regulatory approval</li> </ul>	Apr 24		
	Total		43.5					



The above table has been prepared on the basis that:

no options on issue at the date of this Notice, or which are granted after the date of this notice, are exercised before the end of August 2022; and

the Company does not raise additional capital before August 2022, including by obtaining any of the "conditional funding" outlined in the table above under the heading "Overview of funding".

If options were exercised before the end of August 2022, or if the Company was to engage in a capital raising (other than the milestone funding to which the table pertains) before the end of August 2022, then figures in the table below would need to be adjusted accordingly.



# Annexure D – Independent Expert Report

## HAVILAH RESOURCES LIMITED Independent Expert's Report

OPINION: Not fair but reasonable

30 July 2019







#### **Financial Services Guide**

#### 30 July 2019

**BDO Corporate Finance (WA) Pty Ltd** ABN 27 124 031 045 ('**we**' or '**us**' or '**ours**' as appropriate) has been engaged by Havilah Resources Limited ('Havilah') to provide an independent expert's report on the proposal to enter into a funding agreement with OneSteel Manufacturing Pty Ltd (trading as SIMEC), a member of the GFG Alliance. You are being provided with a copy of our report because you are a shareholder of Havilah and this Financial Services Guide ('FSG') is included in the event you are also classified under the Corporations Act 2001 ('the Act)' as a retail client.

Our report and this FSG accompanies the Explanatory Memorandum and Notice of Meeting required to be provided to you by Havilah to assist you in deciding on whether or not to approve the proposal.

#### Financial Services Guide

This FSG is designed to help retail clients make a decision as to their use of our general financial product advice and to ensure that we comply with our obligations as a financial services licensee.

This FSG includes information about:

- Who we are and how we can be contacted;
- The services we are authorised to provide under our Australian Financial Services Licence No. 316158;
- Remuneration that we and/or our staff and any associates receive in connection with the general financial product advice;
- Any relevant associations or relationships we have; and
- Our internal and external complaints handling procedures and how you may access them.

#### Information about us

We are a member firm of the BDO network in Australia, a national association of separate entities (each of which has appointed BDO (Australia) Limited ACN 050 110 275 to represent it in BDO International). The financial product advice in our report is provided by BDO Corporate Finance (WA) Pty Ltd and not by BDO or its related entities. BDO and its related entities provide professional services primarily in the areas of audit, tax, consulting, mergers and acquisition, and financial advisory services.

We and BDO (and its related entities) might from time to time provide professional services to financial product issuers in the ordinary course of business and the directors of BDO Corporate Finance (WA) Pty Ltd may receive a share in the profits of related entities that provide these services.

#### Financial services we are licensed to provide

We hold an Australian Financial Services Licence that authorises us to provide general financial product advice for securities to retail and wholesale clients, and deal in securities for wholesale clients. The authorisation relevant to this report is general financial product advice.

When we provide this financial service we are engaged to provide an expert report in connection with the financial product of another person. Our reports explain who has engaged us and the nature of the report we have been engaged to provide. When we provide the authorised services we are not acting for you.

#### **General Financial Product Advice**

We only provide general financial product advice, not personal financial product advice. Our report does not take 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. If you have any questions, or don't fully understand our report you should seek professional financial advice.


#### Fees, commissions and other benefits that we may receive

We charge fees for providing reports, including this report. These fees are negotiated and agreed with the person who engages us to provide the report. Fees are agreed on an hourly basis or as a fixed amount depending on the terms of the agreement. The fee payable to BDO Corporate Finance (WA) Pty Ltd for this engagement is approximately \$80,000.

Except for the fees referred to above, neither BDO, 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 and our directors do not hold any shares in Havilah.

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

All our employees receive a salary. Our employees are eligible for bonuses based on overall productivity but not directly in connection with any engagement for the provision of a report. We have received a fee from Havilah or our professional services in providing this report. That fee is not linked in any way with our opinion as expressed in this report.

#### 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.

#### **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 must be in writing addressed to The Complaints Officer, BDO Corporate Finance (WA) Pty Ltd, PO Box 700 West Perth WA 6872.

When 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.

#### **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 external dispute resolution scheme that deals with complaints from consumers in the financial system. It is a not-for-profit company limited by guarantee and authorised by the responsible federal minister. AFCA was established on 1 November 2018 to allow for the amalgamation of all Financial Ombudsman Service ('FOS') schemes into one. AFCA will deal with complaints from consumers in the financial system by providing free, fair and independent financial services complaint resolution. If an issue has not been resolved to your satisfaction you can lodge a complaint with AFCA at any time.

Our AFCA Membership Number is 12561. Further details about AFCA are available on its website <u>www.afca.org.au</u> or by contacting it directly via the details set out below.

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

You may contact us using the details set out on page 1 of the accompanying report.



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 $\ensuremath{\mathbb{C}}$  2019 BDO Corporate Finance (WA) Pty Ltd



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30 July 2019

The Directors Havilah Resources Limited 164 Fullarton Road DULWICH SA 5065

Dear Directors

# **INDEPENDENT EXPERT'S REPORT**

# 1. Introduction

On 1 May 2019, Havilah Resources Limited ('Havilah' or 'the Company') announced that it had entered into a Share Subscription Agreement ('SSA') with OneSteel Manufacturing Pty Ltd, trading as SIMEC Mining ('SIMEC'), for up to \$100 million in funding to advance Havilah's copper and iron ore work programs for Maldorky, Grants and Grants Basin iron ore assets (Notice of Meeting reference is "Iron Genesis") and the Mutooroo Copper-Cobalt District (Notice of Meeting reference is "Copper Aura").

Havilah is seeking approval for the issue of the maximum potential number of shares under the first \$75 million of the funding package and the provision of security to SIMEC over some of Havilah's assets to protect the funds advanced prior to the issue of shares in Havilah between each milestone prepayment date and the date of issue of subscription shares ('the Transaction').

The funding package will comprise a \$6 million initial placement and further \$43.5 million in placements over an expected three-year period committed by SIMEC, with the potential for SIMEC to also provide an additional \$17.5 million in conditional project funding and \$8 million in conditional discretionary funding for general corporate costs, tenement administration, Kalkaroo Station and discretionary exploration (collectively 'the Funding Component').

As part of the Transaction, SIMEC will provide milestone funding in several tranches. For each milestone tranche, SIMEC will be required to provide funding for the work in that tranche by way of a prepayment for the issue of subscription shares. Havilah will then issue the relevant milestone subscription shares on the date that is 10 business days after the relevant milestone has been achieved or the funds for that milestone have been exhausted.

SIMEC is seeking protection for the funds advanced prior to the issue of shares in Havilah between each milestone prepayment date and the date of issue of subscription shares by requiring Havilah to grant SIMEC security over the shares that the Company holds in each of the Company's 100% owned subsidiaries - Copper Aura Pty Ltd ('Copper Aura'), Mutooroo Metals Pty Ltd ('Mutooroo Metals') and Iron Genesis Pty Ltd ('Iron Genesis'), and over the tenements held by each of these subsidiaries pursuant to specific security deeds ('Security Component').

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SIMEC, a member of the GFG Alliance ('**GFG**'), is a South Australian mining company with iron ore operations in the Middleback Ranges of South Australia and recently acquired the Tahmoor Coal Mine in New South Wales. Further details on GFG can be found in section 6 of this Report. Following the Transaction, SIMEC could hold a maximum of up to 60.99% interest in the issued capital of Havilah.

The issue of shares under the Funding Component is subject to shareholder approval, which is sought under Item 7 of Section 611 of the Corporations Act 2001 ('**Corporations Act**' or '**the Act**') as the issue of shares under the SSA to SIMEC would result in it holding an interest of more than 20% in the issued capital of Havilah.

Under the SSA, there is also the potential for SIMEC to provide an additional \$25 million in conditional development funding for Havilah's Mutooroo copper project. As this conditional development funding is completely discretionary, Havilah will not seek approval for the issue of shares at this stage given the uncertainty. Therefore, we have not considered it as part of the Funding Component.

At the time of any such enforcement under the Security Component, which would only occur where Havilah was insolvent prior to the issue of shares to SIMEC for the funds advanced, SIMEC would likely be a substantial holder and/or related party of Havilah for the purposes of ASX Listing Rule 10.1 and if SIMEC exercises its rights under its security and appoints a receiver, and any such receivership process resulted in a transfer to SIMEC, that transfer would require shareholder approval under ASX Listing Rule 10.1.

The SSA requires Havilah to obtain all approvals necessary for the Funding Component and, as such, Havilah is seeking the approval of Havilah shareholders to any enforcement under the Security Component for the purposes of ASX Listing Rule 10.1. If this approval is not obtained, then the Funding Component will not proceed, as the security over the shares that Havilah holds in each of Copper Aura, Mutooroo Metals and Iron Genesis will not be granted.

The Funding Component and the Security Component are collectively referred to as the Transaction. We are required under Item 7 of Section 611 of the Act and ASX Listing Rule 10.1 to provide an opinion to Shareholders as to whether the Funding Component and Security Component are fair and reasonable to Shareholders, respectively. For this reason, we have outlined separate opinions for each of the Funding Component and the Security Component. However, Shareholders are required to vote on the Transaction as a whole, given that the Funding Component cannot go ahead without the Security Component. Therefore, we have provided an overall opinion on whether the Transaction is fair and reasonable to Shareholders.

# 2. Summary and Opinion

# 2.1 Requirement for the report

The directors of Havilah have requested that BDO Corporate Finance (WA) Pty Ltd ('**BDO**') prepare an independent expert's report ('**our Report**') to express an opinion as to whether or not the Transaction is fair and reasonable to the non-associated shareholders of Havilah ('**Shareholders**').

Our Report is prepared pursuant to section 611 of the Corporations Act and ASX Listing Rule 10.1 and is to be included in the Notice of Meeting ('NoM') for Havilah in order to assist the Shareholders in their decision whether to approve the Transaction.



# 2.2 Approach

Our Report has been prepared having regard to Australian Securities and Investments Commission ('ASIC') Regulatory Guide 111 'Content of Expert's Reports' ('RG 111') and Regulatory Guide 112 'Independence of Experts' ('RG 112').

In arriving at our opinion, we have assessed the terms of the Transaction as outlined in the body of this report. We have considered:

- How the value of a Havilah share prior to the Funding Component on a control basis, compares to the value of a Havilah share following the Funding Component on a minority basis. Further details on regulatory requirements of our valuation approach can be found in Section 3 of this Report;
- The Funding Component assuming the maximum number of shares are to be issued to SIMEC at the time of approving the Transaction, for the purposes of our valuation. However, practically, the issue of shares to SIMEC will take place over a period longer than the proposed work schedule of three years;
- A comparison between the value of the proceeds from the sale of the security that would be provided to SIMEC under the Security Component in the event of the insolvency with the value of the liabilities that would be settled;
- The likelihood of an alternative offer being made to Havilah;
- Other factors which we consider to be relevant to the Shareholders in their assessment of the Transaction; and
- The position of Shareholders should the Transaction not be approved.

# 2.3 Opinion

Given that Shareholders are required to vote on one resolution regarding approval of the Transaction, we outline a single opinion for the Transaction, which is comprised of the Funding Component and Security Component.

We have considered the terms of the Transaction as outlined in the body of this Report and have concluded that, in the absence of a superior offer and any other relevant information, the Transaction is not fair but reasonable to the Shareholders of Havilah. This opinion is derived from the Transaction comprising the Funding Component and Security Component, with each component having the following opinions:

- We have considered the terms of the Funding Component as outlined in the body of this Report and have concluded that, in the absence of a superior offer and any other relevant information, the Funding Component is not fair but reasonable to the Shareholders of Havilah.
- We have considered the terms of the Security Component as outlined in the body of this Report and have concluded that, in the absence of a superior offer and any other relevant information, the Security Component is fair and reasonable to the Shareholders of Havilah.



# 2.4 Fairness

In section 12 we determined that the value of a Havilah share prior to the Funding Component, on a control basis, compares to the value of a Havilah share following the Funding Component, on a minority basis, as detailed below.

	Ref	Low Ş	Preferred \$	High \$
Value of a Havilah share prior to the Funding Component on a control basis	10.3	0.202	0.233	0.267
Value of a Havilah share following the Funding Component on a minority basis	11.1	0.147	0.173	0.202

The value of a Havilah share is based on a fully diluted basis regarding funding of the Kalkaroo Project. Source: BDO analysis

The above valuation ranges are graphically presented below:

### Valuation Summary



Value of a Havilah share following the Transaction on a minority basis



### Source: BDO analysis

The above pricing indicates that, in the absence of any other relevant information, and an alternate offer, the Funding Component is not fair for Shareholders.

We have also concluded that the value of the proceeds of the security that would be provided to SIMEC under the Security Component in the event of insolvency is equivalent or lower than the value of the liabilities that would be settled. This is discussed in section 12 of our Report. Therefore, in the absence of any other relevant information, this indicates that the Security Component is fair to Shareholders.

Given that the Funding Component is not fair and the Security Component is fair, we consider the overall Transaction is not fair to Shareholders.

## 2.5 Reasonableness

We have considered the analysis in section 13 of this Report, in terms of both:

- advantages and disadvantages of the Transaction; and
- other considerations, including the position of Shareholders if the Transaction does not proceed and the consequences of not approving the Transaction.



In our opinion, the position of Shareholders if the Transaction is approved is more advantageous than the position if the Transaction is not approved. Accordingly, in the absence of any other relevant information or a superior offer, we consider that the Transaction is reasonable for Shareholders.

The respective advantages and disadvantages considered are summarised below:

ADVANTAGES AND DISADVANTAGES				
Section	Advantages	Section	Disadvantages	
Funding Component				
13.4.1.	Opportunity to develop a strategic partnership with SIMEC and GFG	13.5.1.	The Funding Component is not fair	
13.4.2.	Structure of the Transaction funding package is value accretive to Shareholders	13.5.2.	Dilution to existing Shareholders' interest	
13.4.3.	Shareholders have the opportunity to participate in the Rights Issue at a discount to SIMEC's investment	13.5.3.	Presence of significant shareholder may reduce the attractiveness of Havilah's shares to potential investors	
13.4.4.	Provides necessary funding to explore value of the Projects			
13.4.5.	Provides potential access to future funding			
13.4.6.	Increased market capitalisation may increase the market presence of Havilah			
13.4.7.	Broader expertise and increased experience of the board of directors			
Security Component				
13.4.8.	The Security Component is fair	13.5.4.	Potentially restrictions placed on Havilah's ability to deal with the secured assets without SIMEC's consent	
13.4.9.	The Security Component allows the Transaction to proceed			

### Other key matters we have considered include:

Section	Description
13.1	Alternative proposals
13.2	Practical level of control



Section

13.3

Consequences of not approving the Transaction

# . Scope of the Report

## 3.1 Purpose of the Report

Description

Section 606 of the Corporations Act expressly prohibits the acquisition of shares by a party if that acquisition will result in that person (or someone else) holding an interest in 20% or more of the issued shares of a public company, unless a takeover bid is made to all shareholders.

The Company is seeking Shareholders' approval for the issue of up to a maximum of 447,733,124 shares to SIMEC, which would take its current shareholding in Havilah from 0% up to a maximum of 60.99%, surpassing the 20% shareholding that requires shareholder approval.

Section 611 of the Corporations Act ('**Section 611**') permits such an acquisition if the shareholders of that entity have agreed to the issue of such shares. This agreement must be by resolution passed at a general meeting at which no votes are cast in favour of the resolution by any party who is associated with the party acquiring the shares, or by the party acquiring the shares. Section 611 states that shareholders of the company must be given all information that is material to the decision on how to vote at the meeting.

The enforcement of the security described in this Report (if it occurred and resulted in a transfer of assets to SIMEC) would be a disposal of a substantial asset by Havilah for the purposes of ASX Listing Rule 10.1. SIMEC would likely be a substantial holder and/or related party of Havilah at that time. As such, in the event that enforcement of the security resulted in a transfer of assets to SIMEC, shareholder approval would be required by ASX Listing Rule 10.1 before the transfer could occur. As required by the SSA, Havilah is seeking shareholder approval so that SIMEC advances funds to Havilah. Listing Rule 10.10.2 requires the Notice of Meeting for shareholders' approval to be accompanied by a report by an independent expert expressing their opinion as to whether the transaction is fair and reasonable to the shareholders whose votes are not to be disregarded in respect of the transaction.

RG 74 states that the obligation to supply shareholders with all information that is material can be satisfied by the non-associated directors of Havilah, by either:

- undertaking a detailed examination of the Transaction themselves, if they consider that they have sufficient expertise, experience and resources; or
- by commissioning an Independent Expert's Report.

The directors of Havilah have commissioned this Independent Expert's Report to satisfy this obligation.

# 3.2 Regulatory guidance

Neither the Listing Rules nor the Corporations Act defines the meaning of 'fair and reasonable'. In determining whether the Transaction is fair and reasonable, we have had regard to the views expressed by ASIC in RG 111. This regulatory guide provides guidance as to what matters an independent expert should consider to assist security holders to make informed decisions about transactions.

This regulatory guide suggests that where the transaction is a control transaction, the expert should focus on the substance of the control transaction rather than the legal mechanism used to effect it. RG 111



suggests that where a transaction is a control transaction, it should be analysed on a basis consistent with a takeover bid.

In our opinion, the Funding Component is a control transaction as defined by RG 111 and we have therefore assessed the Funding Component as a control transaction to consider whether, in our opinion, it is fair and reasonable to Shareholders.

We do not consider the Security Component to be a control transaction. As such, we have used RG 111 as a guide for our analysis but have considered the Security Component as if it were not a control transaction.

## 3.3 Adopted basis of evaluation

RG 111 states that a transaction is fair if the value of the offer price or consideration is equal to or greater than the value of the securities subject of the offer. This comparison should be made assuming a knowledgeable and willing, but not anxious, buyer and a knowledgeable and willing, but not anxious, seller acting at arm's length. When considering the value of the securities subject of the offer in a control transaction it is inappropriate for the expert to apply a discount on the basis that the shares being acquired represent a minority or portfolio interest as such the expert should consider this value inclusive of a control premium. Further to this, RG 111 states that a transaction is reasonable if it is fair. It might also be reasonable if despite being 'not fair' the expert believes that there are sufficient reasons for security holders to accept the offer in the absence of any higher bid.

Having regard to the above, BDO has completed this comparison in three parts:

- A comparison between the value of a Havilah share prior to the Funding Component on a control basis and the value of a Havilah share following the Funding Component, on a minority basis (fairness see Section 12 'Is the Transaction Fair?');
- A comparison between the value of the proceeds from the sale of the security that would be provided to SIMEC under the Security Component in the event of the insolvency with the value of the liabilities that would be settled (fairness see Section 12 'Is the Transaction Fair?'); and
- An investigation into other significant factors to which Shareholders might give consideration, prior to approving the Transaction, after reference to the value derived above (reasonableness see Section 13 'Is the Transaction Reasonable?').

This assignment is a Valuation Engagement as defined by Accounting Professional & Ethical Standards Board professional standard APES 225 'Valuation Services' ('APES 225').

A Valuation Engagement is defined by APES 225 as follows:

'an Engagement or Assignment to perform a Valuation and provide a Valuation Report where the Valuer is free to employ the Valuation Approaches, Valuation Methods, and Valuation Procedures that a reasonable and informed third party would perform taking into consideration all the specific facts and circumstances of the Engagement or Assignment available to the Valuer at that time.'

This Valuation Engagement has been undertaken in accordance with the requirements set out in APES 225.



# 4. Outline of the Funding Component

On 1 May 2019, Havilah announced that it had entered into the SSA with SIMEC, for up to \$100 million in funding to advance Havilah's copper and iron ore work programs for the Maldorky, Grants and Grants Basin iron ore assets (Notice of Meeting reference is "Iron Genesis") and the Mutooroo Copper-Cobalt District (Notice of Meeting reference is "Copper Aura") (collectively '**the Projects'**).

Havilah is seeking approval for the issue of shares under the Funding Component, which comprises the first \$75 million of the funding package, to be potentially issued via the following placements:

- A committed initial placement of \$6 million ('Initial Placement'), funded by way of subscription for fully paid ordinary shares ('Placement Shares'), which will be priced at the 45-day volume weighted average price ('VWAP') of Havilah to 30 April 2019, which was \$0.154 ('Reference Share Price').
- Committed subsequent placements totalling \$43.5 million ('Subsequent Placements') which will be funded by way of subscription for fully paid shares ('Milestone Shares'), to be priced at:
  - a 22% premium to the Reference Share Price (equal to \$0.188) where SIMEC holds no more than 30% of all Havilah shares at the relevant subscription date;
  - a 35% premium to the Reference Share Price (equal to \$0.208) where SIMEC holds more than 30% and equal to or less than 51% of all Havilah shares at the relevant subscription date; and
  - the Reference Share Price, unless otherwise agreed in writing by Havilah and SIMEC, where SIMEC holds more than 51% of all Havilah shares at the relevant subscription date.

The Subsequent Placements funding will be received in 22 tranches over an expected three-year period, with the issue of the Milestone Shares to be over a period longer than three years, upon the achievement of various Project milestones.

(The Initial Placement and Subsequent Placements collectively referred to as the '**Committed Funding**').

- Conditional additional project funding of up to \$17.5 million ('Additional Funding') to be made available at the election of Havilah, if required to complete work programs on the Projects, and subject to the achievement of certain project development criteria being met. It is intended that this will be funded by way of SIMEC purchasing direct equity interests in Havilah's iron ore projects and/or by way of subscription for fully paid ordinary shares to the extent that SIMEC's holding in Havilah has been diluted by a capital raising or the exercise of options ('Additional Funding Shares').
- Conditional \$8 million in discretionary corporate funding ('**Discretionary Funding**'), to fund general corporate costs, tenement administration, Kalkaroo station and discretionary exploration to be funded in one of the following ways, at the discretion of SIMEC:
  - Subscription for fully paid ordinary shares to the extent that SIMEC's holding in Havilah has been diluted, to be issued at the lesser of the price determined in the same manner as for the Milestone Shares and the fair market value of Havilah's shares ('Discretionary Funding Shares');
  - By SIMEC purchasing direct equity interests in Havilah's Iron Genesis Project subject to the satisfaction of certain conditions; or



• By Havilah undertaking a capital raising underwritten by SIMEC.

This Discretionary Funding will only be provided if Havilah decides to request this funding from SIMEC (noting that Havilah is under no obligation to do so) and SIMEC choose to provide the funding. SIMEC can choose to provide the funding in one or more of the above ways, noting that the SSA requires SIMEC to prioritise purchasing direct equity interests in the iron ore project (unless it has been diluted by a capital raising or the issue of shares on the exercise of options).

Under the SSA, SIMEC will also have the right to subscribe for additional shares in Havilah upon the conversion of any existing options to shares. Each time Havilah options in existence at the date of the SSA (or specific employee options granted after that date) are converted to shares, SIMEC will also have the right to subscribe for the same number of shares that were issued upon the relevant conversion ('Additional Option Shares'). The specific employee options refers to 7.20 million options granted, or which will be granted, to employees as disclosed by Havilah to SIMEC prior to the SSA ('Permitted Employee Options'). The price payable by SIMEC will be the same as the relevant option exercise price, except in relation to options exercised by Dr Christopher Giles or Mr Mark Stewart, in which case the price will be determined in the same manner as for the Milestone Shares.

Pursuant to approval of the Transaction, Havilah also plans to undertake a pro-rata rights issue at a 10%, or greater, discount to the Reference Share Price, to raise up to \$5 million (**'the Rights Issue'**). We note that the discount to the Reference Share Price has not been determined, but given the SSA states that it must be 10%, or greater, we have assumed the discount is 10% to show the maximum potential shareholding of SIMEC. The Rights Issue intends to provide existing shareholders an opportunity to acquire shares in Havilah at a discount to SIMEC's subscription prices.

Havilah is seeking shareholder approval for the maximum number of shares, which may be issued under the Transaction to meet all of its contractual obligations under the SSA. We note that the maximum number of shares may not be issued, however for the purpose of this report, in order to provide Shareholders with an independent opinion on their position based on the maximum possible dilution of their interest, we have assumed the maximum number of Additional Funding Shares, Discretionary Funding Shares, Additional Option Shares, Rights Issue shares will be issued, as set out below:

	SIMEC Shareholding	Other Shareholders	Total Shares on Issue
Current shares on issue	-	218,249,052	218,249,052
Rights issue	-	35,971,223	254,220,275
Placement Shares	38,961,039	-	293,181,314
Milestone Shares (<30%)	65,638,298	-	358,819,612
Subtotal	104,599,337	254,220,275	358,819,612
%	29.15%	70.85%	
Milestone Shares (30% - 51%)	123,798,077	-	482,617,689
Discretionary Funding Shares	38,461,538	-	521,079,227
Subtotal	266,858,952	254,220,275	521,079,227
%	51.21%	48.79%	
Milestone Shares (>51%)	35,129,869	-	556,209,096
Subtotal	301,988,821	254,220,275	556,209,096
%	54.29%	45.71%	



	SIMEC Shareholding	Other Shareholders	Total Shares on Issue
Existing Option Shares	-	24,906,867	581,115,963
Permitted Employee Option Shares	-	7,201,072	588,317,035
Additional Option Shares	32,107,939	-	620,424,974
Additional Funding Shares	113,636,364	-	734,061,338
Total	447,733,124	286,328,214	734,061,338
%	60.99%	39.01%	

Source: BDO analysis

In addition to the Transaction, the SSA details an additional \$25 million in conditional development funding for Havilah's Mutooroo Project, which SIMEC may provide at its discretion. The method of funding for the Development Funding is to be negotiated in light of the economics of the project and availability and suitability of alternative financing, and as a result, Havilah is not seeking approval for the issue of shares in relation the Development Funding under the Transaction. The Development Funding has not been considered in our Fairness assessment, however has been considered in our Reasonableness assessment as discussed in Section 13.



# 5. Profile of Havilah Resources

# 5.1 History

Havilah is an ASX-listed mineral exploration and development company, with a portfolio of iron ore, copper, gold, cobalt and uranium mineral tenements located in the Curnamona Craton of South Australia. The Company's flagship mineral project is the Kalkaroo copper-cobalt-gold project, for which a preliminary pre-feasibility study was completed in June 2018. Havilah also owns 100% of the Mutooroo copper-cobalt project, the Maldorky, Grants and Grants Basin iron ore exploration projects, and a substantial portfolio of largely unexplored tenements in the surrounding areas, comprising the Mutooroo Regional Exploration Area, Central Curnamona Regional Exploration Area and Jupiter Regional Exploration Area. In addition, Havilah hold a number of Joint Venture Agreements and are entitled to a receive a 1.5% royalty in relation to the Company's recently divested Portia Gold Mine and North Portia copper-cobalt-gold project.

Havilah's head office is located in Adelaide, South Australia and its current board and senior management are set out below:

- Mr Mark Stewart Non-Executive Chairman;
- Mr Walter Richards Chief Executive Officer;
- Dr Christopher Giles Executive Director;
- Mr Martin Janes Non-Executive Director;
- Mr Simon Newton Gray Joint Company Secretary; and
- Ms Claire Redman Joint Company Secretary.

## 5.2 Projects

### Kalkaroo Copper-Cobalt-Gold Project

The Kalkaroo project ('Kalkaroo') is Havilah's flagship mineral project, located 400 kilometres ('km') north-east of Adelaide and 95km north-west of the mining town of Broken Hill. The project comprises seven tenements spanning 20 square kilometres ('km<sup>2</sup>') and hosts near-surface copper, cobalt and gold deposits, suitable for an open pit mining operation. Havilah also owns the Kalkaroo Station, a 534km<sup>2</sup> non-mineral asset on which Kalkaroo is located, reducing the land access risks for the project.

In May 2017, Havilah entered into a Memorandum of Understanding with international copper and cobalt producer, Wanbao Mining Limited ('Wanbao'), for the completion of a preliminary feasibility study ('PFS') at Kalkaroo. Under the agreement, RPMGlobal was engaged to manage and complete the PFS at Wanbao's expense, in exchange for a period of exclusivity during which Wanbao had the right determine if it wished to participate in the future financing and development of Kalkaroo. The exclusivity period with Wanbao subsequently expired, allowing Havilah to seek alternative development options for Kalkaroo.

Following completion of the PFS in June 2018, Havilah announced a maiden JORC ore reserve of 1.10 million tonnes of copper, 3.10 million ounces of gold and 23,200 tonnes of cobalt for Kalkaroo, identifying it as one of the largest undeveloped open pit copper deposits in Australia, on a copper equivalent basis.

In December 2018, Havilah completed the native title mining agreement for Kalkaroo, allowing for the completion of the Mining Lease application, for which approval was granted in late May 2019. Havilah is now focused on completing additional metallurgical testing as part of an update to the PFS at Kalkaroo,



aimed at improving gold recoveries at the project and evaluating the market potential of the cobalt resources. The updated PFS is expected to be completed in the second half of 2019.

### Mutooroo Copper-Cobalt Project

The Mutooroo project ('**Mutooroo**') is a lode-style copper and cobalt deposit, located approximately 500km by road north-east of Adelaide in South Australia, close to the New South Wales border and 60km south-west of Broken Hill. The project comprises three main tenements spanning 2.55km<sup>2</sup>, in addition to a number of surrounding exploration tenements, collectively referred to as the Mutooroo Copper-Cobalt District ('**Mutooroo District**').

Havilah is currently progressing plans to undertake a scoping study at Mutooroo, with the aim of initially developing a lower risk, higher throughput, longer life and reduced capital copper only project.

Havilah has also developed a detailed work program for Mutooroo, focussed on exploring potential extensions of the existing deposit and surrounding prospects, investigating the possible cobalt potential of the project and completing the mining licence application for Mutooroo, pending adequate funding.

### Maldorky Iron Ore Project

Located approximately 450km by road north-east of Adelaide and 90km south-west of Broken Hill, the Maldorky project ('**Maldorky'**) comprises five tenements spanning close to 9km<sup>2</sup>, prospective in iron ore.

Havilah completed initial drilling at Maldorky in 2010 and released an initial JORC indicated resource estimate of 147 million tonnes at 30.1% iron in 2011. The resource is contained in a flat orebody with a thin overburden, making it well suited to a low-cost open pit mine operation, which is proposed in 3 stages.

Further drilling was completed at Maldorky in November 2018 as part of due diligence undertaken by SIMEC, the positive results of which were announced on 24 April 2019. Approval of the mining lease application for the project has been accepted by the Department of Energy and Mining and is now pending the issue of terms and conditions by the Minister for Energy and Mining and the finalisation of the native title mining agreement. Havilah are also in the process of negotiating the land access agreement for Maldorky.

### Grants and Grants Basin Iron Ore Projects

The Grants Deposit ('**Grants**') and nearby Grants Basin exploration target are located north of Havilah's Maldorky Project, approximately 80km west-south-west of Broken Hill. Initial drilling was undertaken by Havilah at Grants in 2012, identifying a JORC inferred resourced of 304 million tonnes of 24% iron and geology favourable for an open pit mining operation. Grants Basin spans an area of 17.1km<sup>2</sup> located to the east of Grants, and is largely unexplored to date.

Over the last two years, Havilah has acquired a number of key tenements in the vicinity, most recently in May 2018 to gain 100% control of Grants and Grants Basin project areas. Additional drilling and metallurgical test work was completed at Grants and Grants Basin in November 2018, as part of due diligence conducted by SIMEC.

In April 2019, SIMEC concluded due diligence on Maldorky, Grants and Grants Basin which was undertaken with the objective of evaluating the commercialisation potential of the deposits. Under the Transaction, capital contributed by SIMEC will fund work programs for the ongoing development of the Projects, which are both situated in close proximity to a heavy duty rail link to GFG's existing steelwork operations and iron ore export port at Whyalla.



### **Uranium Projects**

Havilah owns a 100% interest in the Oban uranium deposit and a number of surrounding exploration tenements prospective in Uranium, located 520km northeast of Adelaide and 100km north-west of Broken Hill.

Havilah is currently investigating joint venture opportunities to further progress exploration at its uranium projects.

## The Bengarie Royalty

Havilah acquired the North Portia copper-gold-cobalt project ('**North Portia**') in 2003 and in partnership with Consolidated Mining & Civil Pty Ltd ('**CMC**'), explored, financed and developed the Portia Gold Mine ('**Portia**'), which is located 120km north-west of Broken Hill in south-western New South Wales. Mining commenced at Portia in March 2015 and first production was achieved in April 2016.

In November 2017, Havilah announced the modification of the existing 50/50 joint operation and revenue sharing agreement with CMC for Portia. Under the new agreement, CMC assumed full responsibility and costs for the day-to-day operations of Portia, in exchange for a 15% gold revenue stream to be paid to Havilah.

In July 2018, Havilah completed a further agreement with CMC to divest of Havilah's wholly owned subsidiary, Bengarie Gold Pty Ltd ('**Bengarie**'), which is the project vehicle for Portia and North Portia, for staged consideration of \$14.7 million and a 2% net smelter return ('NSR') royalty. Under the royalty agreement, Havilah will receive 2% NSR royalty on all commodity sales from the Bengarie mining licence (comprising the Portia and North Portia), which will increase to 3.25% on all copper once 101,400 tonnes of copper have been produced and sold. Should the quarterly royalty be less than \$0.30 million by November 2020, Havilah will receive guaranteed payments of \$0.30 million per quarter until that date.

In April 2019, Havilah announced revised terms of the divestment of Bengarie, detailing total consideration of \$12.00 million plus a 1.5% NSR royalty and accelerated payments to Havilah. The new agreement also eliminates the 3.25% NSR royalty on copper sales, the minimum payment guarantee and Havilah's previous permitting obligations.

## Joint Venture Agreements

## Prospect Hill Joint Venture

During September 2007, Havilah entered into a farm in agreement with Teale and Associates Pty Ltd for the Prospect Hill tin project ('**Prospect Hill**'), through which it can earn up to an 85% interest in the associated tenements.

The project is located on the northern margins of the Flinders Ranges in South Australia and following initial drilling in the 1980 has been identified as the state's largest known tin resource. Havilah have since completed two rounds of additional drilling to earn a 65% interest in the project and have the option to earn another 20% by completing a bankable feasibility study.

## Pernatty Lagoon Joint Venture

In October 2004, Havilah entered into a farm in agreement with Red Metal Ltd ('**RML**') for three copper exploration licences owned by Havilah, located at the Gawler Craton. As at 31 July 2018, RML had spent \$3.31 million to earn an 87.54% interest in the tenement.



### Exco Acquisition

During November 2011, Havilah entered into a farm in agreement with Exco Operations (SA) Ltd ('Exco') and Polymetals (White Dam) Pty Ltd which would allow Havilah to earn up to a 75% interest in an iron ore exploration licence. Land access issues prevented Havilah from meeting its farm in agreement, however in May 2018 the agreement was modified, allowing Havilah to purchase the licence from Exco for \$75,000 and a 1.25% royalty to be paid on all minerals produced from the tenement. The acquisition was strategically important, providing Havilah with 100% ownership of the Grants and Grants Basin projects.

# 5.3 Historical Balance Sheet

	Reviewed as at	Audited as at	Audited as at
	31-Jan-19	31-Jul-18	31-Jul-17
Statement of Financial Position	\$	\$	\$
CURRENT ASSETS			
Cash and cash equivalents	1,182,000	1,847,000	888,000
Inventory	571,000	571,000	1,843,000
Trade and other receivables	80,000	144,000	238,000
Other current financial assets	6,455,000	3,182,000	-
Other current assets	11,000	156,000	124,000
TOTAL CURRENT ASSETS	8,299,000	5,900,000	3,093,000
NON-CURRENT ASSETS			
Exploration and evaluation expenditure	34,088,000	32,984,000	33,913,000
Property, plant and equipment	2,912,000	2,973,000	9,279,000
Other receivables	-	-	1,020,000
Other non-current financial assets	2,695,000	7,533,000	107,000
TOTAL NON-CURRENT ASSETS	39,695,000	43,490,000	44,319,000
TOTAL ASSETS	47,994,000	49,390,000	47,412,000
CURRENT LIABILITIES			
Trade and other payables	703,000	866,000	2,504,000
Borrowings	2,540,000	171,000	141,000
Provisions	631,000	723,000	694,000
Other current financial liabilities	940,000	1,363,000	-
Deferred income	1,000,000	-	-
Other current liabilities	507,000	508,000	507,000
TOTAL CURRENT LIABILITIES	6,321,000	3,631,000	3,846,000
NON-CURRENT LIABILITIES			
Other non-current financial liabilities	385,000	-	-
Provisions	-	-	1,047,000
Other non-current liabilities	676,000	676,000	1,142,000
TOTAL NON-CURRENT LIABILITIES	1,061,000	676,000	2,189,000
TOTAL LIABILITIES	7,382,000	4,307,000	6,035,000
NET ASSETS	40,612,000	45,083,000	41,377,000
EQUITY			
Contributed equity	71,675,000	71,675,000	65,072,000
Reserves	(2,276,000)	(2,086,000)	(1,841,000)
Accumulated losses	(28,787,000)	(24,506,000)	(21,854,000)
TOTAL EQUITY	40,612,000	45,083,000	41,377,000

**Source:** Havilah's Interim Financial Report for the half-year ended 31 January 2019 and Annual Report for the year ended 31 July 2018.



### Commentary on the historical statement of financial position

We note the following in regards to Havilah's historical statement of financial position:

- Other current financial assets of \$6.46 million at 31 January 2019 comprised \$5.46 million representing the present value of the current portion of revised consideration owed by CMC in relation to the divestment of Bengarie and \$1.00 million to be received from SIMEC, under the extension of the exclusivity agreement which was negotiated during the half year ended 31 January 2019.
- Exploration and evaluation expenditure of \$34.09 million at 31 January 2019 related primarily to Havilah's Kalkaroo and Mutooroo projects, but also includes other general exploration that has been capitalised. Havilah's iron ore and uranium exploration assets have been fully impaired as at 31 January 2019.
- Property, plant and equipment of \$2.91 million as at 31 January 2019 comprised \$2.24 million land and \$0.67 million in plant and equipment comprising mainly the exploration camp at Kalkaroo station and mobile equipment.
- Other non-current financial assets of \$2.70 million as at 31 January 2019 comprised the non-current portion of the revised consideration owed by CMC in relation to the divestment of Bengarie.
- Borrowings of \$2.54 million at 31 January 2019 related primarily to the balance drawn down from a \$6 million standby debt facility, which Havilah entered into with Investec Australia Limited ('Investec') during the half year.
- Other current financial liabilities of \$0.94 million as at 31 January 2019 relates to a payment plan with the Australian Taxation Office which Havilah entered into in respect of Research and Development claims disallowed for the 2013 and 2014 financial years.
- Deferred income of \$1.00 million as at 31 January 2019, related to the payment from SIMEC for the extension of the exclusivity agreement, as the amount will be credited against Additional Funding received under the Transaction.

## 5.4 Historical Statement of Comprehensive Income

	Reviewed for the half-year ended	Audited for the vear ended	Audited for the vear ended
	31-Jan-19	31-Jul-18	31-Jul-17
Statement of Comprehensive Income	\$	\$	\$
Income			
Revenue	111,000	60,000	-
Gain on divestment of subsidiary	-	5,625,000	-
Other income	2,000	51,000	60,000
Gain (loss) on revaluation of financial assets	(2,527,000)	33,000	(69,000)
Gain on sale of property, plant & equipment	-	9,000	-
Expenses			
Administration expenses	(388,000)	(825,000)	(696,000)
Employee benefits expenses	(412,000)	(761,000)	(847,000)
Exploration expenditure written off	-	(491,000)	(199,000)
Finance costs	(496,000)	(213,000)	(430,000)
Impairment of capitalised exploration expenditure	(201,000)	-	-
Corporate expenses	(23,000)	(203,000)	(200,000)
Depreciation & amortisation	(62,000)	(187,000)	(164,000)



	Reviewed for the half-year ended 31-Jan-19	Audited for the year ended 31-Jul-18	Audited for the year ended 31-Jul-17
Statement of Comprehensive Income	\$	\$	\$
Directors' fees	(90,000)	(180,000)	(161,000)
Share based payments expense	(227,000)	(35,000)	(33,000)
Other expenses	(385,000)	(141,000)	-
Loss from continuing operations before income tax	(4,698,000)	2,742,000	(2,739,000)
Income tax expense	-	(963,000)	(2,414,000)
Loss from continuing operations after income tax	(4,698,000)	1,779,000	(5,153,000)
Profit (loss) from discontinued operations		(4,769,000)	924,000
Fair value reversal on hedging instrument, net of tax	-	-	969,000
Total comprehensive loss for the year	(4,698,000)	(2,990,000)	(3,260,000)

**Source:** Havilah's Interim Financial Report for the half-year ended 31 January 2019 and Annual Report for the year ended 31 July 2018.

## Commentary on the historical statement of profit or loss and other comprehensive income

We note the following in regards to Havilah's historical statement of profit or loss and other comprehensive income:

- The gain on the divestment of subsidiary of \$5.63 million for the year ended 31 July 2018 related to the divestment of Bengarie to CMC.
- During the half-year ended 31 January 2019, Havilah recorded a loss on the revaluation of financial assets of \$2.53 million which resulted from the revision of the transaction terms for the divestment of Bengarie and an adjustment for the delay in the receipt of funds under the original divestment terms, as announced to the market on 8 April 2019.
- The Company also recorded a loss of \$4.77 million from discontinued operations relating to the Portia Gold Mine for the year ended 31 July 2018.



# 5.5 Capital Structure

### The share structure of Havilah as at 16 May 2019 is outlined below:

	Number
Total ordinary shares on issue	218,249,052
Top 20 shareholders	116,328,277
Top 20 shareholders - % of shares on issue	53.30%
Source: Havilah Share Registry	

The range of shares held in Havilah as at 28 June 2019 is as follows:

Range of Shares Held	Number of Ordinary Shareholders	Number of Ordinary Shares	Percentage of Issued Shares (%)
1 - 1,000	250	76,210	0.03%
1,001 - 5,000	833	2,467,707	1.13%
5,001 - 10,000	434	3,334,603	1.53%
10,001 - 100,000	1,017	36,656,136	16.80%
100,001 - 1,000,000	211	52,743,625	24.17%
1,000,001 - and over	25	122,970,771	56.34%
TOTAL	2,770	218,249,052	100.00%

Source: Havilah Share Registry

The ordinary shares held by the substantial shareholders as at 28 June 2019 are detailed below:

Name	Number of Ordinary Shares Held	Percentage of Issued Shares (%)
Trindal Pty Ltd	41,945,674	19.22%
First Names (Jersey) Limited	19,955,425	9.14%
Subtotal	61,901,099	28.36%
Others	156,347,953	71.64%
Total ordinary shares on Issue	218,249,052	100.00%

Source: Havilah Share Registry

The options outstanding as at 28 June 2019 are outlined below:

Current Options on Issue	Number	Exercise Price (\$)
Listed Options	13,606,867	0.40
Bergen Options (expiring 6 October 2019)	800,000	0.41
Director Options (expiring 12 December 2020)	600,000	0.40
Investec Tranche 1 (expiring 1 November 2021)	5,000,000	0.23
Director Options (expiring 12 December 2021)	2,400,000	0.36
Investec Tranche 2 (expiring 20 December 2021)	2,500,000	0.22
Total	24,906,867	

Source: SSA

The Company has advised that the Permitted Employee Options of 7,201,072 will be issued on 11 July 2019.



# 6. Profile of SIMEC and the GFG Alliance

# 6.1 History

SIMEC is a member of the GFG Alliance, an international group of businesses spanning the mining, energy generation, metals and engineering sectors, with over 150 locations in over 30 countries.

The SIMEC Group operates internationally through its mining, shipping, infrastructure, renewable energy generation and energy related commodities divisions.

SIMEC Mining was established by GFG in September 2017, following the acquisition and rebranding of Arrium Limited, a previously ASX listed company which went into voluntary administration in April 2016. Through the acquisition, GFG assumed the ownership and operation of the Middleback Ranges iron ore mine, Whyalla Steelworks and Whyalla iron ore export port, located in South Australia.

SIMEC also owns a portfolio of mining assets located in South Australia, including the Ardrossan Dolomite mine, which supplies dolomite flux to the Whyalla Steelworks, and a collection of copper-gold exploration projects. In 2018, SIMEC further acquired the Tahmoor Coal Mine (**'Tahmoor'**), located in New South Wales.

In addition to the mining division, the SIMEC Group owns and operates commercial ports, railway stock, marine fleets and storage facilities, which provide services to the mining division and GFG.

# 6.2 Projects

## Middleback Ranges Iron Ore Mine

The Middleback Iron Ore mine ('Middleback Ranges Mine') is a 10 million tonne per annum iron ore mine, located approximately 60km from the town of Whyalla. Mining operations comprise the Iron Baron, Iron Knob and South Middleback Ranges mine sites.

Ore mined at the Middleback Ranges Mine includes hematite iron ore, which is exported mainly for an Asian customer base, and magnetite iron ore, which is used in the Whyalla Steelworks.

SIMEC also owns a portfolio of non-ferrous mining assets located in South Australia. This includes the Ardrossan Dolomite mine, which supplies dolomite flux to the Whyalla Steelworks. It also owns a collection of copper-gold exploration projects.

## Tahmoor coking coal operations

Tahmoor is an underground 3 million tonne capacity coal mine, located in the southern highlands region of NSW, approximately 75km from Sydney, near the town of Tahmoor. The mine commenced operations in 1979 and now employs approximately 380 employees and contractors.



# 7. Economic analysis

# 7.1 Australia

### Domestic growth

Growth in the Australian economy slowed during the second half of 2018, and was weaker than expected for the year. GDP increased by only 0.2% during the December quarter and 2.3% for the year, leading to further downwards revisions of GDP growth and inflation projections. Some drivers of the recent slowdown, particularly mining activity, are considered to be transitory, while others such as low consumption levels and dwelling investment are anticipated to be longer-term concerns.

The Reserve Bank of Australia's ('**RBA**') revised GDP growth forecasts now stand at approximately 2.75% for 2019 and 2020, below the 3.5% annual trend growth rate. Growth in business investment, public demand and exports, which are forecast to continue growing steadily over the next few years, are expected to support this growth.

### Unemployment

Despite a reduction in GDP growth expectations, positive conditions in the Australian labour market endured during the quarter. The unemployment rate remained low at approximately 5%, which it has averaged since September 2018 and is anticipated to stay relatively unchanged in the mid-term. The reduction in the unemployment rate also saw wage growth pick up moderately during the March quarter although this remained low at 2.3% for the year. Total employment also increased by a further 0.6% in the March quarter to be 2.50% higher, year-over-year.

### Inflation

Underlying inflation during the March quarter was lower than expected at 0.25%, and averaging 1.5% over the year. Slowing in the housing market and government cost-of-living initiatives were important factors in the lower than expected inflation conditions. Inflation forecasts have also been revised downward in line with other advanced economies, with average inflation of 1.75% expected for 2019 and increasing only gradually to 2% for 2020.

### Currency movements

During the March quarter, the Australian Dollar fell to below \$0.70 USD on the back of exposure to the ongoing US-China trade dispute. Domestic factors such as low inflation and falling house prices have also contributed to a depreciating AUD during the quarter, which remained at the low end of the trending range of the past few years. The RBA is also expected to cut interest rates in the second half of the year, which is likely to add further downward pressure to domestic currency markets.

Source: <u>www.rba.gov.au</u> Statement by Glenn Stevens, Governor: Monetary Policy Decision 7 May 2019.



# 8. Industry analysis

## 8.1 Copper

Copper is a soft, malleable, ductile metal used primarily for its electrical and thermal conductive properties and its resistance to corrosion. It is highly versatile and has a variety of applications in construction, electrical and electronic components, communications and transportation.

Copper occurs naturally in the Earth's crust in a variety of forms such as sulphide deposits, carbonate deposits and silicate deposits. Open pit mining is widely utilised in most copper producing countries although in Australia, approximately 93% of output is extracted through underground mining. Copper is often found in conjunction with gold, lead, cobalt or zinc, and a number of industry operators mine these metals and ores as well.

Copper concentrate is derived from an oxide through beneficiation processes and is then converted to copper products through smelting and refining. Copper is also 100% recyclable and approximately 80% of the copper ever produced is still in use today.

### Production and Reserves

According to the United States Geological Survey ('**USGS**'), total global copper production in 2018 was estimated at approximately 20.67 million tonnes, with the majority of copper produced globally mined in South and Central America, particularly in Chile and Peru. In 2018, these two countries accounted for a combined total of 40% of global production. Australia was the sixth largest copper producer globally in 2018, producing 0.95 million tonnes, more than 30% of which was produced in South Australia. The chart below illustrates estimated global copper production for 2018.



Source: U.S. Geological Survey

Although Australia accounted for only 5% of global copper production in 2018, it has substantive reserves, representing approximately 11% of the global estimate. As depicted in the chart below, Chile, Australia and Peru are estimated to collectively account for just over 40% of global reserves of copper.







### **Copper Prices**

Following a deterioration in global economic conditions in 2008, base metal prices, including copper, fell sharply. The copper price recovered over 2010 and 2011, to reach a high of approximately US\$10,180/tonne in February 2011, largely as a result of a global supply shortage.

Between 2011 and 2017, the copper price steadily declined, before increasing in price in mid-February 2017 as a result of strike action at the world's largest copper mine Escondida, located in Chile, which impacted global supply.

The average copper price from January 2018 through June 2019 was US\$6,410/tonne, ranging from a low of US\$5,714/tonne on 3 January 2019 to a high of US\$7,331/tonne on 7 June 2018. According to Consensus Economics, the long term forecast copper price is expected to be between approximately US\$7,000/tonne and US\$7,500/tonne.



# **Copper Spot and Forecast Prices**

Source: Bloomberg and Consensus Economics



### **Copper Outlook**

Global demand for copper is expected to increase in the next five years, driven by strong economic growth in OECD countries. In particular, demand for copper in Japan and Germany is projected to grow as construction and manufacturing activity increase. The growth in production of electric vehicles will also increase demand for copper, which is a key component in battery powered vehicles. Global copper output is expected to grow only 1.2% during 2019 despite rising demand, resulting in a forecast increase in the world price of copper, which is expected to prevail over the next five years.

Australia's copper ore production is projected to grow in 2018-19 as the industry's major players increase their output in response to stabilising prices. In the current year, industry revenue is anticipated to increase by 1.6% over the five years through 2023-24, to reach \$7.0 billion.

## 8.2 Gold

Gold is a soft malleable metal which is highly desirable due to its rarity and unique mineral properties. Gold has been used in jewellery and as a form of currency for thousands of years, however in more recent history there has been increasing demand for its use in the manufacture of electronics, dentistry, medicine and aerospace technology. In addition to its practical applications, gold also serves as an international store of monetary value. Gold is widely regarded as a monetary asset as it is considered less volatile than world currencies and therefore provides a safe haven investment during periods of economic uncertainty.

Gold ore mining is a capital intensive and high cost process, which is becoming increasingly difficult and more expensive as the quality of ore reserves diminishes. The Industry also incurs many indirect costs related to exploration, royalties, overheads, marketing and native title law. Typically, many of these costs are fixed in the short term as a result of Industry operators' inability to significantly alter cost structures once a mine commences production.

Once mined, gold continues to exist indefinitely and is often melted down and recycled to produce alternative or replacement products. Consequently, demand for gold is supported by both gold ore mining and gold recycling.

### Production and Reserves

Until the late 1980s, South Africa produced approximately half of the total gold ore mined globally. More recently however, the Industry has diversified geographically and China and Australia now dominate global gold production. According to the USGS, total estimated global gold ore mined for 2018 was approximately 3,260 metric tonnes. The chart below illustrates the estimated global gold production by country for 2018:



#### 2018 3% 3% 3% Other 4% China 4% Australia 4% Russia 33% United States Canada Peru Ghana South Africa Mexico 6% Uzebekistan 12% 9% Kazakhstan 10% Indonesia

Gold mine production by country

Source: United States Geological Survey and BDO analysis

Despite China leading global gold production in 2018, Australia, South Africa and Russia hold the largest known gold reserves globally, collectively accounting approximately 43% of global reserves. Australia holds 11,800 tonnes of gold, representing 22% of global reserves and the largest percentage held by any country, as depicted in the chart below:



Source: United States Geological Survey and BDO analysis

### Gold prices

The price of gold peaked at US\$1,900/ounce on 5 September 2011, due largely to the debt market crisis in Europe and the Standard and Poor's downgrade of the US credit rating. Global stock markets subsequently went into turmoil, which saw a flood of investors towards safer havens such as gold.

The price of gold fluctuated around US\$1,700 during 2012 before entering a steep decline in 2013. The downturn represented the beginning of a correction in the price of gold, which had almost tripled in the



two-year period prior to the European crisis in 2011. Improved market sentiment and increased risk appetite from investors saw gold prices continue to decline throughout 2014 and 2015 to US\$1,051 in December 2015.

During 2016, gold prices strengthened, likely as a result of heightened uncertainty surrounding the US Presidential election and the United Kingdom's exit from the European Union. The price of gold reached US\$1,363 in late 2016 before stabilising around US\$1,200 for the first half of 2017.

The price of gold reached US\$1,358 late in the first quarter of 2018, prior to a decline in the latter half of 2018. The weakening gold price can be attributed to the U.S. imposing additional tariffs on China. Gold began to stabilise from late August through late September 2018, holding near US\$1,200.

The gold spot price since 2018 has steadily increased with an average gold price from December 2018 through June 2019 of US\$1,299, ranging from a low of US\$1,231 on 3 December 2018 to a high of US\$1,423 on 25 June 2019. According to Consensus Economics, the long term forecast gold price is between US\$1,330 and US\$1,400.

The gold spot price since 2008 and forecast prices through to 2028 are depicted in the graph below:



# **Gold Spot and Forecast Prices**

Source: Bloomberg, Consensus Economics and BDO Analysis

## 8.3 Iron ore

Iron is the fourth most abundant mineral in the earth's crust and is the world's most used metal. It can be economically extracted from rocks known as iron ores, most commonly as the minerals hematite ( $Fe_2O_3$ ) and magnetite ( $Fe_3O_4$ ), and combined with a small amount of carbon or other elements to be made into steel. Approximately 98% of world iron ore production is used to make steel, which due to its relatively low cost and desirable properties, is the primary metal globally, in structural engineering, automobiles and other general industrial applications.

Iron ore mining is a volume intensive process, therefore the commercial development of iron ore deposits is largely constrained by the position of the iron ore relative to its market and the cost of establishing proper transportation infrastructure such as ports and railways. The viability of a deposit is further influenced by the type and grade of ore.



Hematite is a pure iron oxide mineral, with pure hematite mineral containing 69.9% iron ('**Fe**'). Australia's hematite ores average from 56% Fe to 62% Fe. Goethite is an iron bearing hydroxide mineral most commonly formed by the weathering of other iron-rich minerals. Australian goethitic iron ores average from 54% Fe to 60% Fe. High grade iron ore preparation involves a relatively simple crushing and screening process before being exported.

Magnetite is an iron oxide mineral containing 72.4% Fe in its pure form. Magnetite iron ores typically occur in sedimentary rocks, including banded iron formations as detrital grains. While the iron ore content of pure magnetite is higher than hematite and goethite, the presence of impurities and gangue material results in a lower ore grade, making it costlier to produce the concentrates.

### **Production and Reserves**

In 2018, an estimated 2.5 billion metric tonnes of usable ore were mined. Australia was the world's largest iron ore producer, accounting for 36.1% of global estimated production, followed by Brazil, China and India and shown in the graph below:



Source: U.S. Geological Survey

According to the USGS, Australia also holds almost 30% of global iron ore reserves, followed by Brazil and Russia holding 20% and 17% of reserves respectively. The chart below illustrates global iron ore reserves by country in 2018:





Source: U.S. Geological Survey

### Iron Ore Prices

Iron ore prices decreased from US\$158/tonne in February 2013 to US\$113/tonne in May 2013. Iron ore prices recovered in July 2013, driven by heavy steel re-stocking in China following improvements in the Chinese property sector.

At the beginning of 2014, global iron ore prices fell to US\$110/tonne and continued to fall in the second half of 2014. Falling prices were largely a result of a slowdown in steel production in China and an oversupply of iron ore. Inventories at ports in China were at record levels, increasing from 84 million tonnes to a two year high of 106 million tonnes.

During 2015, the price of iron ore continued to follow a downward trend, reaching a low of US\$37.5/tonne in December 2015, as a result of oversupply and concerns regarding the health of the Chinese economy. Stimulus measures implemented by the Chinese government during this period had little effect on price, and the stock market declines further eroded investors' confidence.

Prices trended upwards in 2016, reaching a high of approximately US\$83.7/tonne in December 2016. This was largely due to an increase in Chinese demand, stimulated by spending on infrastructure and property development, which are steel intensive industries.

During 2017, prices trended downwards during the first half of the year, reaching a low of US\$54/tonne in June. However, prices recovered to reach US\$80/tonne in August, following stronger growth in infrastructure.

Prices in 2018 were steady from January through to the beginning of March, fluctuating between US\$70/tonne and US\$75/tonne. However, prices began to decline in the second half of 2018 due to an oversupply in the global market.

Prices have increased significantly since the end of 2018, with an average price of US\$87/tonne from December 2018 to June 2019 and a closing price on 27 June 2019 of US\$112/tonne. According to Consensus Economics, the long term forecast iron ore price is between approximately US\$70/tonne and US\$78/tonne.



A summary of the nominal iron ore spot price, based on the 62% Fe import dry metric tonne, fine ore Cost and Freight ('CFR') Qindao index, from January 2013 through June 2019 and Consensus Economics' long-term forecast for iron ore (fine) - China CFR dry metric tonne to December 2028 is set out below:



Source: Bloomberg, BDO Analysis and Consensus Economics

### Iron Ore Outlook

Global economic conditions are anticipated to remain stable, with a projected increase in demand for steel and iron ore.

Furthermore, Australian industry firms are expected to open new operations and expand existing mines, such as BHP's Jimblebar mine and Hancock Prospecting's Roy Hill mine, which will result in greater output. Industry output is projected to increase at an annualised 0.2% over the five years through 2023-2024, however, higher production volumes are anticipated to reduce iron ore prices over the period.

The revenue of Australia's iron ore industry is forecasted to increase at an annualized 0.4% over the next five years to reach \$66.8 billion due to expectations for Chinese steel smelting companies to increase output over the period to meet demand from steel product manufacturers.



# 9. Valuation approach adopted

# 9.1 The Transaction

There are a number of methodologies that can be used to value a business or the shares in a company. The principal methodologies that can be used are as follows:

- Capitalisation of future maintainable earnings ('FME')
- Discounted cash flow ('DCF')
- Quoted market price basis ('QMP')
- Net asset value ('NAV')
- Market based assessment

A summary of each of these methodologies is outlined in Appendix 2.

Different methodologies are appropriate in valuing particular companies, based on the individual circumstances of that company and available information.

It is possible for a combination of different methodologies to be used together to determine an overall value, where separate assets and liabilities are valued using different methodologies. When such a combination of methodologies is used, it is referred to as a 'sum-of-parts' valuation ('Sum-of-Parts').

The approach using the Sum-of-Parts involves separately valuing each asset and liability of the company. The value of each asset may be determined using different methods as described above. The component parts are then valued using the NAV methodology, which involves aggregating the estimated fair market value of each individual company's assets and liabilities.

# 9.1.1. Valuation of Havilah prior to the Funding Component

In our assessment of the value of a Havilah share prior to the Funding Component, we have chosen to employ the following methodologies for the following reasons:

- Sum-of-Parts, as our primary method, which estimates the market value of a company by separately valuing each asset and liability of the company. The value of each asset may be determined using different valuation methodologies. The component parts of Havilah are valued using the DCF and NAV methods; and
- We have chosen the QMP methodology as our secondary methodology and as a cross check. The QMP basis is a relevant methodology to consider because Havilah's shares are listed on the ASX. This means there is a regulated and observable market where Havilah shares can be traded. However, in order for the QMP to be considered appropriate, the Company's shares should be liquid and the market should be fully informed of the Company's activities; and
- We have not used a FME valuation to value Havilah as the core value of the Company lies in its mining assets which are finite life assets. As such, it would not be appropriate to value Havilah using the FME approach.

## Sum-of-Parts

We have employed the Sum-of-Parts method in estimating the fair market value of Havilah by aggregating the estimated fair market values of its underlying assets and liabilities, having consideration to the following:

• the value of Havilah's 100% interest in the Kalkaroo Project (applying the DCF methodology);



- the value of Havilah's interest in the residual resources at Kalkaroo not included in the DCF, and the value of Havilah's other exploration assets (collectively '**Other Mineral Assets**') (having reliance on an independent specialist opinion); and
- the value of other assets and liabilities of Havilah (applying the NAV method).

## Methodologies adopted

We have adopted the Sum-of-Parts methodology as we consider this to be the most appropriate method to value a company with different components that are most suitably valued on an individual basis using the most appropriate methodology for that component.

In valuing each component for our Sum-of-Parts, we have chosen these methodologies for the following reasons:

- we have used the DCF methodology to value Kalkaroo because the cash flows have a finite life and these cash flows may vary substantially from year to year, rendering it suitable for a DCF valuation. Also, a PFS has been completed for Kalkaroo and a reserve has been identified by Havilah. In our opinion the life of mine model provides a sufficiently reasonable basis to apply the DCF methodology. Additionally, we have engaged AMC Consultants Pty Ltd ('AMC') to provide an opinion on the reasonableness of the technical inputs underpinning the DCF model. We note that the ability to obtain funding for Kalkaroo is assumed through a combination of a notional debt and equity raising assumed to be undertaken by Havilah. Additionally, we consider it appropriate to rely on the use of a DCF methodology under the assumption of the development of Kalkaroo through to production in the low, preferred and high valuation outcomes. Therefore, we do not consider it appropriate to assess the value of Kalkaroo on a sale basis. We consider this to be an appropriate methodology given that Kalkaroo has a declared reserve and any potential acquirer is likely to determine a purchase price using the same approach;
- the Other Mineral Assets not included in the DCF are valued by AMC as we do not have reasonable grounds to include them in the DCF valuation of Kalkaroo (the valuation approaches undertaken by AMC are described in their report in Appendix 4);
- Havilah's projects are not currently generating any income nor are there any historical profits that could be used to represent future earnings, therefore the FME approach is not appropriate; and
- other assets and liabilities of Havilah are valued using the NAV method.

## Notional capital raising

In our Sum-of-Parts valuation approach we have assumed that Havilah will need to raise the capital required for the development of Kalkaroo through a notional capital raising.

We have considered the likely price at which Havilah will have to place its shares to a third party or to current shareholders under a capital raising to raise the capital required.

Whilst we understand that there may be alternatives for Havilah to raise capital, we are required by RG 111.15 to assess the funding requirements for a company that is not in financial distress when considering its value, especially when using the DCF methodology. Further ASIC's Information Sheet 214 states that in arriving at the fair value of the Company's securities, the expert takes into account the funding required, such as considering the increase in the number of shares on issue. This reflects that the value of the project must be shared between existing security holders and new security holders who will assist in



funding the project development. Therefore, we have assumed a 'notional' capital raising that is likely to result in significant dilution for the Company in order to raise this capital.

To determine the likely issue price, we have considered the pre-announcement volume weighted average trading price (**'VWAP'**) of Havilah's shares and the discount at which shares have been issued by ASX listed companies when compared with the companies' share prices prior to the date of the announcement of the capital raising.

### Technical expert

In performing our valuation of Havilah's Kalkaroo Project using the DCF method, we have relied on the technical assessment and valuation report ('Independent Technical Assessment and Valuation Report') prepared by AMC based on AMC's review of the technical project assumptions contained in the cash flow model of Kalkaroo.

This report has been prepared in accordance with the Australasian Code for Public Reporting of Technical Assessments and Valuations of Mineral Assets (2015 Edition) (**'the Valmin Code'**) and the JORC Code.

A copy of AMC's Independent Technical Assessment and Valuation Report is attached in Appendix 4.

### Independent specialist valuation

In valuing Havilah's Other Mineral Assets, we have relied on the Independent Technical Assessment and Valuation Report prepared by AMC in accordance with the Valmin Code and the JORC Code. Specific valuation methodologies used by AMC are referred to in the respective sections of our Report and in further detail in AMC's report contained in Appendix 4.

We are satisfied with the valuation methodologies adopted by AMC which we consider to be in accordance with industry practices and compliant with the requirements of the Valmin Code.

## 9.1.2. Valuation of Havilah following the Funding Component

In our assessment of the value of a Havilah share following the Funding Component, we have considered the following:

- The value of Havilah's 100% interest in the Kalkaroo Project (applying the DCF methodology);
- The value of Havilah's interest in the Other Mineral Assets (having reliance on AMC's Independent Technical Assessment and Valuation Report).
- The effects of the Transaction funding being provided to advance work programs of the Maldorky, Grants and Grants Basin iron ore assets (Notice of Meeting reference is "Iron Genesis") and the Mutooroo Copper-Cobalt District (Notice of Meeting reference is "Copper Aura") (included in the Other Mineral Assets), and the effect on the value of these projects;
- The number of shares on issue to incorporate the shares to be issued upon approval of the Transaction.

## 9.2 The Security Component

Under the Security Component, we have assessed how the value of the proceeds of the sale of the secured assets that would be provided to SIMEC to secure the repayment of monies owed under the Security Component, in the event of insolvency, compares to the value of the liabilities that would be settled.



In the case of the Security Component, the value of the financial benefit to be provided by Havilah to the related party, SIMEC, is the value of the proceeds of the sale of the secured assets that would be provided as settlement or amounts payable to SIMEC in the event of insolvency ('Security Provided').

The value of the consideration being provided to Havilah is the amounts payable to SIMEC that would be settled by the sale of the secured assets ('Liabilities Settled').

The Security Component is fair if the value of the Security Provided to SIMEC is equal to or less than the value of the Liabilities Settled by this security in the event of insolvency.



# 10. Valuation of Havilah prior to the Transaction

We have employed the Sum-of-Parts method in estimating the fair market value of a Havilah share on a control basis prior to the Transaction by aggregating the estimated fair market values of its underlying assets and liabilities, having consideration for the following:

- Value of Havilah's interest in the Kalkaroo Project;
- Value of Havilah's interest in its Other Mineral Assets;
- Value of Havilah's royalty over North Portia;
- Cash received from a notional capital raising;
- Present value of Havilah's corporate costs; and
- Value of other assets and liabilities of Havilah.

We used the QMP methodology as our secondary valuation method. Havilah is listed on the ASX which provides an indication of the market value where an observable market for the securities exists and this reflects the value that a Shareholder may receive for the sale of their shares on market.

## 10.1 Sum-of-Parts

The value of Havilah's assets on a going concern basis is reflected in our valuation below:

		Low value	value	High value
Valuation summary	Note	\$000s	\$000s	\$000s
Equity value of Kalkaroo	10.1.1.4.	240,000	260,000	280,000
Add: value of the Other Mineral Assets	10.1.2.	38,780	62,390	85,980
Add: cash received from notional capital raising	10.1.4.	260,000	260,000	260,000
Less: Placement fee from notional capital raising	10.1.4.	(13,000)	(13,000)	(13,000)
Less: present value of corporate costs	10.1.5.	(22,807)	(19,956)	(17,105)
Add/(less): value of other assets and liabilities	10.1.6.	5,175	5,175	5,175
Value of Havilah on a control basis		508,148	554,609	601,050
Number of Havilah shares on issue (000s)	10.1.7.	2,519,134	2,384,916	2,249,499
Value per share (control basis)	-	0.202	0.233	0.267
Source: BDO analysis				

The table above indicates that the value of a Havilah share held prior to the implementation of the Transaction on a control basis is between \$0.202 and \$0.267, with a preferred value of \$0.233.

## 10.1.1. Discounted cash flow valuation of the Kalkaroo Project

We elected to use the DCF approach in valuing Kalkaroo. The DCF approach estimates the fair market value by discounting the forecast future cash flows arising from Kalkaroo to their net present value. Performing a DCF valuation requires the determination of the following:

- The expected future cash flows that Kalkaroo is expected to generate; and
- An appropriate discount rate to apply to the cash flows of Kalkaroo to convert them to a present value equivalent.



# 10.1.1.1. Future cash flows

The management of Havilah has provided a detailed cash flow model for Kalkaroo ('**the Model**'). The Model estimates the future cash flows expected from gold and copper production at Kalkaroo based on determined JORC compliant reserves only. The Model depicts forecasts of real and nominal post-tax cash flows over the life of the mine on an annual basis. We have reviewed the Model and the material assumptions that underpin it.

BDO has made certain adjustments to the Model where considered appropriate to arrive at an adjusted model ('**the Adjusted Model**'). We have used the Adjusted Model in our DCF valuation. In particular, we have adjusted the Model to reflect any changes to technical assumptions together with operating and capital costs as a result of AMC's review and any changes to the economic and other input assumptions from our research. We have also reflected the Model in cash flows on a nominal basis, only.

The Model was prepared based on estimates of a production profile, operating costs and construction and sustaining expenditure. The main assumptions underlying the Model include:

- Mining and production volumes;
- Commodity prices;
- Operating costs
- Construction and sustaining capital expenditure and corresponding salvage values;
- Rehabilitation costs
- Foreign exchange rates
- Royalties and corporate tax; and
- Discount rate.

We undertook the following analysis of the Model:

- Appointed AMC as technical expert to review and, where required, provided changes to the technical assumptions underlying the Model;
- Conducted independent research on certain economic and other inputs such as commodity prices, exchange rates, inflation and the discount rate applicable to the future cash flows of Kalkaroo;
- Held discussions with Havilah's management regarding the preparation of the forecasts in the Model and its views; and
- Performed a sensitivity analysis on the value of Kalkaroo by flexing selected key assumptions and inputs.

We have undertaken a review of the cash flow forecasts in accordance with the Standard on Assurance Engagements ASAE 3450 'Assurance Engagements involving Corporate Fundraisings and/or Prospective Financial Information' and do not express an opinion on the reasonableness of the assumptions or their achievability. However, nothing has come to our attention as a result of our procedures to suggest that the assumptions on which the Adjusted Model has been based have not been prepared on a reasonable basis.



### Appointment of a technical expert

AMC was engaged to prepare a report providing a technical assessment of the assumptions underlying the Model. AMC's assessment involved the review and provision of opinion on the reasonableness of the assumptions adopted in the Model, including but not limited to:

- Mining physicals (including volume mined, recovery and grade);
- Processing assumptions (including products and recovery);
- Operating costs (comprising mining, processing, refining, transport, maintenance and administration);
- Capital expenditure (construction and sustaining capital required);
- Rehabilitation costs; and
- Other relevant assumptions.

Kalkaroo is expected to have an initial mine life of 15 years.

A copy of AMC's Independent Technical Assessment and Valuation Report is included in Appendix 4.

### Limitations

Since forecasts relate to the future, they may be affected by unforeseen events and they depend, in part, on the effectiveness of management's actions in implementing the plans on which the forecasts are based. Accordingly, actual results may vary materially from the forecasts included in the Model, as it is often the case with some events and circumstances frequently do not occur as expected, or are not anticipated, and those differences may be material.

### **Economic assumptions**

### Inflation

We note that all cash flows contained in the Model are calculated on a real basis. Therefore we have applied a forecast inflation rate to the costs in the Model to convert them to nominal cash flows.

The Kalkaroo Project is situated in South Australia, and as such the capital expenditure and operating costs are denominated in Australian Dollars ('AUD'). Therefore, we consider the most appropriate inflation rate to apply to the cash flows in the Adjusted Model is the forecast Australian inflation rate.

Having regard to the above, we consider the application of an annual Australian inflation rate of 2% over the life of the Kalkaroo Project to be appropriate, based on consensus views of forecast inflation as sourced from Bloomberg.

### Foreign exchange

The commodity prices we have assessed in the Model are denominated in US Dollars ('**USD**'). As mentioned above, the capital and operating expenditure is denominated in AUD. Given that Havilah is an Australian company and we are assessing the value of a Havilah share in AUD, we have converted the cash flows from the sale of gold and copper in the Adjusted Model to AUD at the forecast exchange rates set out in the table below:

Exchange rates	2020	2021	2022	2023+
AUDUSD	0.72	0.73	0.74	0.75

Source: Bloomberg and BDO analysis


In our assessment of foreign exchange rates, we have considered forecasts prepared by economic analysts and other publicly available information including broker consensus to arrive at our foreign exchange rate assumptions.

## Pricing

The Kalkaroo Project life of mine plan includes revenue from the sale of gold and copper.

In assessing forecast gold and copper prices, we have considered:

- Most recent Consensus Economics price forecasts; and
- Historical spot and forward prices from Bloomberg.

Based on our analysis, we have adopted the following future gold and copper prices (in nominal terms):

		2020	2021	2022	2023 2	024-2028
Gold price	US\$/oz	1,350	1,332	1,345	1,347	1,397
Copper price	US\$/t	6,738	6,949	7,222	7,202	7,450

Source: Consensus Economics, Bloomberg and BDO analysis

The resultant forecast gold and copper pricing we have relied on from our review of Consensus Economics and Bloomberg outlines long-term nominal prices for the period from 2024 to 2028. We have applied an inflation rate of 2% per annum (outlined above) to prices beyond 2028 on the basis that we do not have reasonable grounds for assuming that margins are to be eroded or increased in the long term.

## Mining physicals

The graphs below show the forecast ore to be mined and processed over the life of mine of Kalkaroo, with production commencing in 2021.



## Total material mined

Source: Adjusted Model, BDO analysis





#### Source: Adjusted Model, BDO analysis

As illustrated in the graph above, the second processing plant is planned for construction in 2023 and 2024, coming online part way through 2024, increasing the processing capacity of the Kalkaroo Project from 4Mtpa to 11Mtpa.

#### Production assumptions

The graphs below show the production forecast over the life of mine of Kalkaroo.



# Gold produced

Source: Adjusted Model, BDO analysis

As part of AMC's review of the technical inputs of the Kalkaroo Project, AMC noted an underestimate in the gold produced in the Model of approximately 29koz relative to the gold production in the processing schedule. AMC provided us with adjusted gold produced figures over the life of mine of Kalkaroo.





# Copper produced

#### Source: Adjusted Model, BDO analysis

We note the significant increase in copper produced is due to the sulphide processing plant forecast to come online in 2024.

### **Operating costs**

Operating costs included in the Adjusted Model are outlined in the graph below. AMC has noted the operating cost estimate assumptions underlying the Adjusted Model are estimated to a prefeasibility study level of accuracy, and therefore the contingencies included are appropriate. AMC has confirmed the reasonableness of the operating costs included in the Adjusted Model, stating that operating costs are within expected values based on comparable mining operations. However, AMC noted that the unit mining cost is at the lower limit of AMC's benchmarked range. Therefore, we have assessed specific sensitivity analysis on the mining costs in section 10.1.1.3.

AMC also noted that the General and Administration (G&A) unit cost is low when compared to comparable remote mining operations, and have provided us with adjusted G&A costs for inclusion in the Adjusted Model. Further detail on AMC's assessment of the reasonableness of the operating costs at the Kalkaroo Project can be found in Appendix 4.

The graph below outlines the forecast operating costs of the Kalkaroo Project on a nominal basis over the life of mine.



400 350 300 250 \$ millions 200 150 100 50 0 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 Mining Processing Transport G&A Refining & Treatment Infrastructure Rehabilitation Royalty Contingency

# Operating expenditure

#### Source: Adjusted Model, BDO analysis

We note the significant increase in processing, transport and refining and treatment expenses in 2024 is due to the secondary sulphide processing plant coming online, increasing the processing capacity of the Kalkaroo Project from 4Mtpa to 11Mtpa.

## Capital expenditure

Kalkaroo is forecast to require a project investment of approximately \$729 million in nominal terms over the entire life of mine.

The forecast total capital expenditure, in nominal terms, is set out in the graph below.



## Capital expenditure

Source: Adjusted Model, BDO analysis



Note the significant processing plant capital expenditure forecast for 2020 is the initial oxide processing plant with a processing capacity of 4Mtpa. The sulphide processing plant, with a maximum processing capacity of 7Mtpa, is forecast for construction in 2023 and subsequently brought online in 2024.

We note that contingencies of between 10% and 20% are included in each capital expenditure categorisation, which was been considered for reasonableness by AMC in their review.

We note that the Model included significant salvage value for the capital expenditure. AMC assessed the likelihood of these salvage values being realistically attainable as low and considered omission of any salvage value as a reasonable position. We made an appropriate adjustment to the Adjusted Model.

## **Royalties**

Havilah is liable to pay government royalties of 5% levied on all gold and copper revenues. Havilah applied a 'Reduced Royalty for New Mines' of 2% of sales for the first five years of production, which would need to be approved by South Australian Government. AMC outlined that the South Australian Government's normal royalty is 5% for concentrate products however a discount to 2% can be granted for the first five years of a new mining project, but is available only up to 30 June 2026. Therefore we consider Havilah has reasonable grounds to assume such a discount.

## Taxation

Taxation has been applied at the notional rate of 30% which represents the current tax rate for companies operating in Australia. We note that we have accounted for carried forward tax losses in the Adjusted Model to the value of approximately \$56 million, the carried forward tax losses balance last reported in the Annual Report for the year ended 30 June 2018. We note that this balance is likely to have increased since the last reported balance. However, we have sensitised the tax losses and confirm the value of Kalkaroo is not sensitive to the tax losses balance.

## **Closure costs**

A total of \$55.05 million in mine rehabilitation and closure costs are assumed in the Adjusted Model in nominal terms. Rehabilitation costs of \$9.26 million are incurred from year five through to year 15 of the life of mine. Closure costs of \$45.79 million are incurred in the final two years of the life of mine.

We have adjusted the closure costs from real to nominal terms

# 10.1.1.2. Discount rate

We have selected a nominal after tax discount rate in the range of 9% to 13% per annum to discount the cash flows from the Kalkaroo Project to their present value. We have used a rounded discount rate of 11% in our base case.

In selecting this range of discount rates, we have considered the following:

- The rate of return of comparable ASX listed gold and copper exploration and early stage production companies;
- The risk profile of Havilah as compared to other gold and copper exploration and early stage production companies; and
- The funding structure of companies with mineral assets in the development stage comparable to that of the Kalkaroo Project.

A detailed consideration of how we arrived at the adopted discount range is outlined in Appendix 3.



# 10.1.1.3. Sensitivity analysis

The estimated value of Kalkaroo is derived under the DCF approach. Our valuation is highly sensitive to changes in the forecast of operating costs, capital costs, gold and copper prices and foreign exchange rates. We have therefore included an analysis to consider the value of Kalkaroo under various pricing scenarios and in applying

- Changes of +/- 10% to the gold price;
- Changes of +/- 10% to the copper price;
- Changes of +/- 10% to the capital costs;
- Changes of +/- 10% to the operating costs;
- Changes of +/- 10% to the AUD:USD exchange rate;
- Discount rates in the range of 9% to 13%

The following sensitivities have been prepared to assist Shareholders in considering the potential effects to the value of Kalkaroo if our base case assumptions change.

Sensitivity	NPV	NPV	NPV	NPV	NPV
analysis	\$000s	\$000s	\$000s	\$000s	\$000s
Percentage change	Gold price	Copper price	Exchange rate	Operating costs	Capital expenditure
-10%	206,338	145,498	443,580	366,489	299,748
-7.5%	219,656	174,028	393,973	339,875	289,759
-5%	232,994	202,553	346,978	313,262	279,713
-2.5%	246,280	231,082	302,392	286,580	269,662
0%	259,611	259,611	259,611	259,611	259,611
2.5%	272,951	288,147	218,788	232,602	249,560
5%	286,127	316,543	179,909	205,592	239,509
7.5%	299,171	344,799	142,839	178,583	229,457
10%	312,205	373,062	107,454	151,573	219,406

Source: Adjusted Model, BDO analysis

Discount rate						
Discount rate	<b>9</b> %	10%	11%	12%	13%	
NPV (\$000s)	332,804	294,593	259,611	227,556	198,158	

Source: Adjusted Model, BDO analysis

As stated in section 10.1.1.1. above, AMC assessed the mining operating costs as low with the unit mining cost at the lower limit of AMC's benchmarked range. Therefore, we have assessed an additional sensitivity analysis on the mining operating costs, set out below.

Sensitivity	NPV
analysis	\$000s
Percentage change	Mining costs
0%	259,611
5%	253,740
10%	247,870



Sensitivity	NPV
analysis	\$000s
15%	241,999
20%	236,128
25%	230,258

Source: Adjusted Model, BDO analysis

In considering the above sensitivities, Shareholders should note the following:

- The variables described above may have compounding or offsetting effects and are unlikely to move in isolation;
- The variables for which we have performed sensitivities are not the only variables which are subject to deviation from the forecast assumptions; and
- The sensitivities performed do not cover the full range of possible variances from the base case assumptions used (i.e. variances could be greater than the percentage increases or decreases set out in this analysis).

# 10.1.1.4. Conclusion on the value of Kalkaroo Project

Given the uncertainty involved with any forecast of commodity prices, exchange rates, operating costs and capital costs, we consider it appropriate to use the sensitivities outlined in section 10.1.1.3. to form the basis of our valuation range for Kalkaroo. As such, we consider the value of Kalkaroo to be in the range of \$240 million to \$280 million, with a most likely value of \$260 million.

# 10.1.2. Value of Havilah's Other Mineral Assets

In consultation with AMC, it was agreed AMC would provide an independent market valuation of the residual resources owned by Havilah that are not included in the DCF valuation of Kalkaroo. AMC have relied upon the yardstick approach, comparable transactions method and actual transactions method, which we consider appropriate methodologies given the exploratory stage of development of the Other Mineral Assets.

The range of values for the Other Mineral Assets, as assessed by AMC, are set out below:

		Preferred	
	Low value	value	High value
Other Mineral Assets valuation summary	\$000s	\$000s	\$000s
Kalkaroo	8,700	21,700	34,600
Mutooroo	4,700	7,500	10,200
Maldorky	1,770	2,000	2,210
Grants	70	400	730
Oban	240	590	940
Exploration tenements	23,300	30,200	37,300
Total Other Mineral Assets	38,780	62,390	85,980

Source: AMC ITSR

We note that Grants and Grants Basin are iron ore deposits within the same large tenement area. Grants has been valued by AMC, relying on the defined JORC compliant Mineral Resource. Given that Grants Basin is still an exploration target area, AMC's valuation of Grants Basin is included within the Exploration



Tenements line item in the table above. The table above indicates a range of values between \$38.8 million and \$86.0 million, with a preferred value of \$62.4 million.

Further details of the independent market valuation of the Other Mineral Assets can be found in AMC's report in Appendix 4.

# 10.1.3. Value of Havilah's royalty agreement over North Portia

As outlined briefly in section 5.2, Havilah holds a 1.5% NSR royalty on all commodity sales from the North Portia project. We engaged AMC to consider the reasonableness of the production profile of North Portia and conduct valuation analysis for our reliance. AMC conducted valuation analysis of the North Portia NSR royalty and consider the value to be immaterial for the purposes of the Transaction.

## 10.1.4. Notional capital raising

We are required by RG 111.15 to assess funding requirements for a company that is not in financial distress when considering its value, especially when using the DCF methodology. Therefore, we have assumed that Havilah would most likely fund the construction and early stage production of the Kalkaroo Project with a combination of both debt and equity funding, and consider the following notional capital raise to be the equity portion of the funding required.

We have based this assessment of a forecast capital structure based on our analysis of comparable company funding structures. The list of comparable companies contains a mix of copper and gold-producers that funded the development of their projects through debt. Therefore, we have considered the capital structure of these companies as at the date of the initial drawdown of debt to derive an appropriate capital structure of Havilah when the Kalkaroo Project commences development.

Company Ticker	Company Name	Country of Operation	Commodity	D/E on Initial Drawdown
ASX:EVN	<b>Evolution Mining Limited</b>	Australia	Gold	44.1%
ASX:OZL	OZ Minerals Limited	Australia	Copper	49.1%
ASX:SAR	Saracen Mineral Holdings Limited	Australia	Gold	13.9%
ASX:RRL	Regis Resources Limited	Australia	Gold	30.0%
ASX:SFR	Sandfire Resources NL	Australia	Copper	153.3%
ASX:WSA	Western Areas Limited	Australia	Gold	171.7%
ASX:AMI	Aurelia Minerals Limited	Australia	Copper	47.4%
ASX:MOY	Millennium Minerals Limited	Australia	Gold	38.4%
ASX:AIS	Aeris Minerals Limited	Australia	Copper	138.9%
ASX:HGO	Hillgrove Resources Limited	Australia	Copper	23.9%
ASX:GCY	Gascoyne Resources Limited	Australia	Gold	62.2%
ASX:BLK	Blackham Resources Limited	Australia	Gold	33.8%
Mean				67.2%
Median				45.8%

Source: Capital IQ, Bloomberg and BDO analysis

Based on our enquiries of management regarding financing options, as well as our analysis of funding structures of comparable listed companies, we consider there to be reasonable grounds to assume Havilah could obtain a debt to equity structure of approximately 50%.



We have assessed the funding requirement of approximately \$389 million is broadly based on the cash required to fund the construction of the oxide processing plant, initial infrastructure requirements and early stage mining costs. We have used the borrowings of \$2.54 million and equity of \$40.61 million from Havilah's reviewed 31 January 2019 balance sheet as a base from which to add our notional debt and equity raising amounts. Therefore, at our assessed debt to equity ratio of 50%, we consider Havilah would raise \$142 million of notional debt funding and the remaining \$247 million by way of notional capital raising. We have increased the amount of notional equity funding raised to reflect our estimate of the gross amount required to meet the costs likely to be incurred in conducting the capital raising. We have assessed the costs of a capital raising to be approximately 5% of the funds raised. Therefore, Havilah will be required to raise approximately \$260 million (inclusive of a placement fee) in order to meet the funding requirements of the Kalkaroo Project. This is set out in the table below.

Cash raised through notional equity raising	\$000s
Equity required	247,000
Placement fee	13,000
Cash raised through notional equity raising	260,000

Source: Capital IQ, Bloomberg and BDO analysis

In order to determine the likely price at which Havilah would have to place its shares to a third party, or to current shareholders, under the notional capital raising, we considered the VWAP of Havilah's shares and the discount at which shares have been issued by ASX listed companies when compared to the respective companies' 30 day VWAP prior to the announcement of the placement.

We considered the discount at which ASX companies have issued shares over the last three years to raise capital. A summary of our results is set out in the table below:

	Offer size >\$150m	Capital raise to market cap >50%	Market cap <\$100m	All companies
All ASX				
No of companies	35	51	1027	1317
Mean	8.3%	40.2%	22.2%	<b>19.7</b> %
Median	4.5%	25.6%	15.7%	13.8%
ASX Mining				
No of companies	4	17	516	576
Mean	8.4%	46.0%	22.4%	21.6%
Median	7.1%	25.4%	16.1%	15.5%

Source: Capital IQ, Bloomberg and BDO analysis

From our analysis, the average (mean) discount for ASX listed mining companies was 21.6%. Given that the placement discounts have ranged significantly, we have also considered the median of 15.5% as this represents a better measure of central tendency.

However, given that the size of the notional capital raising required to fund the Kalkaroo Project would be more than 100% of Havilah's market capitalisation prior to the announcement of the Transaction, we consider that a higher discount is required to provide a sufficient incentive for investors to participate in any raisings that Havilah performs. We have analysed placement discounts for capital raisings in which the amount raised was more than 50% of the company's market capitalisation at the time of the raising and found that the median discount for ASX mining companies was 25.4% and the median discount across all placements on the ASX was 25.6%.



We have also assessed the discounts capital raisings for companies with market capitalisations below \$100 million (a band in which Havilah's market capitalisation resides). The average (mean) discount across all ASX listed companies in this band was 22.2%, with the median being 15.7%.

Given the above analysis and the size of the notional capital raising, we consider a placement discount in the range of 20% to 25% will be required to provide a sufficient incentive for investors to participate in any raising that Havilah would conduct on the open market.

In section 10.2 of our Report, we consider the QMP of Havilah's shares. From this analysis, we assessed that the value of a Havilah share to be between \$0.15 and \$0.16 on a minority interest basis. Applying a discount in the range of 20% to 25% to the assessed value of a Havilah share prior to the announcement of the Transaction results in an assumed notional capital raising price of between \$0.113 and \$0.128 per share.

The table below outlines the number of new shares that will need to be issued in order to raise an equivalent of \$247 million to provide funding to develop the Kalkaroo Project at between \$0.113 and \$0.128 per share.

Number of shares issued under notional capital raise	Low	Mid	High
Equity funding required (\$000s)	260,000	260,000	260,000
Quoted market price (minority) (\$)	0.160	0.155	0.150
Assessed placement discount	20%	22.5%	25%
Price of capital raising (\$)	0.128	0.120	0.113
Number of shares issued under notional capital raise (000s)	2,031,250	2,166,667	2,300,885

Source: BDO analysis

Note that any debt raised will result in a cash injection (asset) and a corresponding increase in borrowings (liability), equating to a nil effect on the balance sheet, and therefore, nil effect on our Sum-of-Parts valuation.

## 10.1.5. Present value of corporate costs

The Adjusted Model does not include corporate costs, therefore we have deducted the present value of corporate costs separately in our Sum-of-Parts valuation. This assessment of Havilah's forecast corporate costs is based on historical corporate costs incurred by the Company as well as an assessment of the corporate costs incurred by comparable companies. We have considered the corporate costs of comparable companies because we would expect that the corporate costs of Havilah are likely to increase once the Company commences production at Kalkaroo, therefore the historical level of corporate costs incurred are unlikely to reflect the future corporate costs to be incurred. The comparable companies selected for our analysis are companies of similar size, scale and nature of operations to those operations that are included in the forecast of Kalkaroo. A summary of the companies selected and the average corporate costs incurred over the most recent reporting periods are set out below.



Company Name	Commodity	Revenue for the year ended 30 June 2018 (\$m)	Market Capitalisation (\$m)	Average Corporate Costs for FY18 and FY17 (\$m)
Havilah Resources Limited	Copper, Gold, Iron ore	-	32.00	1.94
Grange Resources Limited	Iron Ore	368.20	312.50	4.36
Hillgrove Resources Limited	Copper, Gold	180.10	46.80	4.62
Blackham Resources Limited	Gold	130.50	20.70	4.88
Troy Resources Limited	Gold	129.50	49.30	3.64
Pantoro Limited	Gold, Silver	81.70	223.30	2.66
PanTerra Gold Limited	Gold, Silver	78.80	4.22	2.49
Mean (excluding Havilah)		161.47	109.47	3.77
Median (excluding Havilah)		130.00	48.05	4.00
Source: BDO analysis				

	Annualised	Actual	Actual
	Year ended	Year ended	Year ended
	31-Jul-19	31-Jul-18	31-Jul-17
Corporate costs (\$m)	2.72	1.97	1.91

Source: BDO analysis

Based on the above analysis, we have assessed the level of corporate costs to be incurred by Havilah over the Kalkaroo life of mine to be between \$3 million and \$4 million on a real basis. We have applied our assessed forecast inflation rate for Australia of 2% per annum to the above real corporate costs and have discounted these costs at the Company's assessed WACC of 11%, the workings of which are detailed in Appendix 3.

We have also reduced the corporate cost cash flows to incorporate the tax shield received by Havilah on incurring these corporate costs.

Based on the above, we consider the present value of corporate costs to be in the range of \$17.11 million and \$22.81 million.

# 10.1.6. Value of other assets and liabilities

Other assets and liabilities of Havilah represent the assets and liabilities that have not been specifically addressed elsewhere in our Sum-of-Parts valuation. From our discussions with Havilah and analysis of these other assets and liabilities, outlined in the table below, we do not believe there is a material difference between their book value and their fair value unless an adjustment has been noted below.



The table below represents a summary of the assets and liabilities identified:

		Reviewed as at	Adjusted
		31-Jan-19	31-Jan-19
Statement of Financial Position	Note	\$	\$
CURRENT ASSETS			
Cash and cash equivalents	a)	1,182,000	6,288,000
Inventory		571,000	571,000
Trade and other receivables		80,000	80,000
Other current financial assets	b)	6,455,000	-
Other current assets		11,000	11,000
TOTAL CURRENT ASSETS		8,299,000	6,950,000
NON-CURRENT ASSETS			
Exploration and evaluation expenditure	c)	34,088,000	-
Property, plant and equipment		2,912,000	2,912,000
Other non-current financial assets		2,695,000	2,695,000
TOTAL NON-CURRENT ASSETS		39,695,000	5,607,000
TOTAL ASSETS		47,994,000	12,557,000
CURRENT LIABILITIES			
Trade and other payables		703,000	703,000
Borrowings		2,540,000	2,540,000
Provisions		631,000	631,000
Other current financial liabilities		940,000	940,000
Deferred income		1,000,000	1,000,000
Other current liabilities		507,000	507,000
TOTAL CURRENT LIABILITIES		6,321,000	6,321,000
NON-CURRENT LIABILITIES			
Other non-current financial liabilities		385,000	385,000
Other non-current liabilities		676,000	676,000
TOTAL NON-CURRENT LIABILITIES		1,061,000	1,061,000
TOTAL LIABILITIES		7,382,000	7,382,000
NET ASSETS		40,612,000	5,175,000

Source: Reviewed financial statements of Havilah for the half year ended 31 January 2019, Appendix 5B for the quarter ended 31 April 2019, BDO analysis

We have been advised that there has not been any other significant change in the net assets of Havilah since 31 January 2019 and that the above net assets and liabilities represent their fair values apart from the adjustments detailed below. Where the above balances differ materially from the reviewed position at 31 January 2019, we have obtained supporting documentation to validate the adjusted values used, which provides reasonable grounds for reliance.



## Note a) Cash and cash equivalents

We have relied on the Appendix 5B Quarterly Cash Update for the quarter ended 31 April 2019 to provide material changes to the cash and cash equivalents balance up to 31 April 2019. Havilah has also received \$6 million of the deferred consideration from the divestment of North Portia since 31 January 2019.

These adjustments are set out in the table below.

Cash movements	\$
Opening balance	1,182,000
Exploration expenditure	(648,000)
Other corporate costs	(1,246,000)
SIMEC exclusivity extension payment	1,000,000
North Portia cash consideration received	6,000,000
Adjusted cash and cash equivalents	6,288,000

Source: Appendix 5B for the quarter ended 31 April 2019, BDO analysis

### Note b) Current financial assets

As at 31 January 2019 the current financial assets consisted of the present value of the deferred consideration to be received from the divestment of North Portia and the SIMEC exclusivity extension payment receivable. Both the deferred consideration and the SIMEC exclusivity extension payment have been received since 31 January 2019.

### Note c) Exploration and evaluation expenditure

The book value of exploration and evaluation assets relates to capitalised historical expenditure. We have adjusted the exploration and evaluation assets balance as at 31 January 2019 to nil as we have separately valued Havilah's mineral assets (section 10.1.1. and section 10.1.2.) in our Sum-of-Parts valuation.

# 10.1.7. Number of Havilah shares on issue

We have adjusted the number of shares on issue to account for the notional equity raise as detailed in the section 10.1.4. The number of shares on issue used for our valuation is set out below.

	Low value	Mid value	High value
Number of shares on issue	000s	000s	000s
Havilah shares on issue at the date of our Report	218,249	218,249	218,249
Shares to be issued under notional capital raise	2,031,250	2,166,667	2,300,885
Total number of shares on issue prior to the Transaction	2,249,499	2,384,916	2,519,134

Source: BDO analysis

We note that the low number of shares on issue forms the basis for the high end of our valuation range and the high number of shares on issue forms the low end of our valuation range.



# 10.2 Quoted Market Prices for Havilah Securities

To provide a comparison to the valuation of Havilah in Section 10.1 we have also assessed the quoted market price for a Havilah share.

The quoted market value of a company's shares is reflective of a minority interest. A minority interest is an interest in a company that is not significant enough for the holder to have an individual influence in the operations and value of that company.

RG 111.11 suggests that when considering the value of a company's shares for the purposes of approval under Item 7 of s611 the expert should consider a premium for control. An acquirer could be expected to pay a premium for control due to the advantages they will receive should they obtain 100% control of another company. These advantages include the following:

- control over decision making and strategic direction;
- access to underlying cash flows;
- control over dividend policies; and
- access to potential tax losses.

Whilst SIMEC will not be obtaining 100% of Havilah, RG 111 states that the expert should calculate the value of a target's shares as if 100% control were being obtained. The expert can then consider an acquirer's practical level of control when considering reasonableness. Reasonableness has been considered in Section 13.

Therefore, our calculation of the quoted market price of a Havilah share including a premium for control has been prepared in two parts. The first part is to calculate the quoted market price on a minority interest basis. The second part is to add a premium for control to the minority interest value to arrive at a quoted market price value that includes a premium for control.

## Minority interest value

Our analysis of the quoted market price of a Havilah share is based on the pricing prior to the announcement of the Transaction. This is because the value of a Havilah share after the announcement may include the affects of any change in value as a result of the Transaction. However, we have considered the value of a Havilah share following the announcement when we have considered reasonableness in Section 13.

Information on the Transaction was announced to the market on 1 May 2019. Therefore, the following chart provides a summary of the share price movement over the 12 months to 30 April 2019, which was the last trading day prior to the announcement.





Havilah share price and trading volume history

#### Source: Bloomberg

The daily price of Havilah shares from 30 April 2018 to 30 April 2019 has ranged from a low of \$0.135 on 28 March 2019 and 5 April 2019 to a high of \$0.255 on 18 June 2018 and 16 July 2018. The daily volume of shares traded fluctuated largely over the year. The highest single trading day over the assessed period was on 13 November 2018, when 1,351,050 shares were traded.

During this period a number of announcements were made to the market. The key announcements are set out below:

Date	Announcement	Closing Share Price One Day Prior to Announcement \$	Closir Price F Annou \$ (mo	Closing Share Price Following Announcement \$ (movement)		Closing Share Price Three Days After Announcement \$ (movemen <u>t)</u>		
10/04/2019	New Mutooroo Scoping Study Seeks to Enhance Economics	0.145	0.145		0.0%	0.155		<b>6.9</b> %
03/04/2019	Grant Basin Iron Ore Exploration Target	0.155	0.155		0.0%	0.145		6.5%
28/03/2019	SIMEC Exclusivity Extended on Iron Ore Projects	0.145	0.140		3.4%	0.155		10.7%
25/03/2019	Retraction of Non-JORC Compliant Information	0.155	0.150		3.2%	0.140		6.7%
27/02/2019	Quarterly Activities Report - Period Ending 31 January 2019	0.165	0.160		3.0%	0.155		3.1%
01/02/2019	SIMEC Exclusivity Extended on Iron Ore Projects	0.165	0.175		6.1%	0.180		2 <b>.9</b> %
29/01/2019	486m Iron Ore Intersection in Grants Basin Drilling	0.160	0.165		3%	0.175		6%
16/01/2019	Response to ASX Query Letter	0.165	0.160		3%	0.170		6%
28/12/2018	SIMEC Due Dilligence Extended on Havilah's Iron Ore Projects	0.155	0.145		6%	0.170		17%
11/12/2018	Havilah Board Sucession Update	0.185	0.175		5%	0.160		<b>9</b> %
11/12/2018	Notice of Inadvertent Breach of ASX Listing Rule 10.11	0.185	0.175		5%	0.160		<b>9</b> %



Date	Announcement	Closing Share Price One Day Prior to Announcement \$	Closii Price I Annou \$ (mo	ng Sh Follov Incen	are wing nent ent)	Clos Price Anno \$ (m	ing Sł Three After uncer ovem	nare 2 Days ment ent)
04/12/2018	Grants Iron Ore Basin Discovery Confirmed	0.180	0.190		6%	0.180		5%
11/09/2018	Kalkaroo PFS Metallurgical Program Update	0.185	0.185		0%	0.195		5%
03/09/2018	Quaterly Activities Report - Period Ending 31 July 2019	0.180	0.190		6%	0.185		3%
12/07/2018	North Portia Divestment Completed	0.230	0.245		7%	0.240		2%
21/06/2018	High Cobalt Recoveries for Mutooroo in Cobalt Blue District	0.230	0.240		4%	0.250		4%
20/06/2018	SIMEC Commences Due Dilligence on Havilah's Iron Ore Projects	0.245	0.230		<b>6</b> %	0.230		0%
18/06/2018	Kalkaroo Maiden Ore Reserve Confrims Large Copper Project	0.210	0.255		21%	0.240		6%
04/06/2018	North Portia Divestment for \$14.7 Million and 2% NSR Royalty	0.180	0.210		17%	0.225		7%
01/06/2018	Quarterly Activities Report - Period Ending 30 April 2018	0.180	0.180		0%	0.225		25%
30/05/2018	Mutooroo Deeper Cobalt Potential Confirmed	0.180	0.175		3%	0.210		20%
22/05/2018	Havilah's Copper Strategy - Enhanced by Cobalt (Corrected)	0.200	0.190		5%	0.185		3%
21/05/2018	Havilah's Copper Strategy - Enhanced by Cobalt	0.195	0.200		3%	0.190		5%
ource: Bloomberg	, BDO analysis							

On 21 May 2018, Havilah presented its Copper Strategy, which outlined the substantial cobalt resources from its Advanced Copper-Cobalt-Gold Projects in Kalkaroo, Mutooroo and North Portia. On the date of the announcement, the share price increased 3% to close at \$0.200, before decreasing by 5% over the subsequent three-day trading period to close at \$0.190.

On 22 May 2018 the Company issued a correction to its Copper Strategy Presentation released on 21 May 2018. On the date of the retraction the share price fell 5%, to close at \$0.190, before falling a further 3% over the subsequent three day trading period to close at \$0.185.

On 30 May 2018 Havilah reported positive results for the resampling of drill core from five Mutooroo diamond drillholes completed in the 1960's. The share price on the date of the announcement fell by 3%, to close at \$0.175, before increasing by 20% over the subsequent three day trading period, to close at \$0.210.

On 1 June 2018, Havilah released its quarterly activities report for the period ending 30 April 2018, which highlighted key developments during the quarter, including:

- an upgrade to of the combined JORC resource base for the Mutooroo, Kalkaroo, and North Portia projects, to 1.4 million tonnes of copper, 32,200 tonnes of cobalt, and 3.4 million ounces of gold;
- the results from sampling at the Scorpion Prospect; and
- the results from the re-sampling of Mutooroo diamond drill core.

On the date of the announcement the share price closed unchanged, before increasing by 25% over the subsequent three day trading period to close at \$0.225.



On 4 June 2018, Havilah announced the divestment of its North Portia assets for cash consideration of \$14.7 million and a 2% Net Smelter Return ('**NSR**') Royalty over the proceeds of all metal and concentrate sales derived from the mining lease. On the date of the announcement the share price increased 17% to close at \$0.210, before increasing a further 7% over the subsequent three day trading period to close at \$0.225.

On 18 June 2018, Havilah announced a maiden ore reserve for the Kalkaroo project, of 474,000 tonnes of copper and 1.41 million ounces of gold. It was independently determined by RPMGlobal as part of the Company's PFS. Havilah's share price increased by 21% on the date of the announcement, to close at \$0.255, before declining by 6% over the subsequent three day period to close at \$0.240.

On the 20 June 2018, Havilah announced that SIMEC had commenced due diligence on the Company's Maldorky and Grants iron ore projects. The share price fell 6% on the date of the announcement to close at \$0.230.

On 21 June 2018, Havilah announced that it had received results from Cobalt Blue Holdings Limited, for cobalt recovery testing undertaken on its Mutooroo sulphide Ore. The testing demonstrated that the overall recovery of cobalt in the ore to leach solution was approximately 88%. On the day of the announcement the share price rose 4% to close at \$0.240, before increasing a further 4%, over the subsequent three day trading period to close at \$0.250.

On 12 July 2018, Havilah announced that it had completed the transaction to divest its North Portia assets. The share price rose 7%, to close at \$0.245 on the date of the announcement, before declining by 2% over the subsequent three day trading period to close at \$0.240.

On 3 September 2018, Havilah released its Quarterly Report for the period 1 May 2018 to 31 July 2018. The share price rose 6% to close at \$0.190 on the day of the announcement, before falling by 3% over the subsequent three day trading period to close at \$0.185.

On 11 September 2018, Havilah provided an update on its Kalkaroo PFS program, noting a three hole metallurgical drilling program had been completed and that additional metallurgical testing had commenced. The share price closed unchanged on the date of the announcement at \$0.185 before increasing by 5% over the subsequent three trading days to close at \$0.195.

On 4 December 2018, Havilah announced the discovery of a major new iron ore deposit in the Grants Iron Ore Basin, following the completion of a 13 hole, reverse circulation drilling program. The drilling was conducted as part of SIMEC Mining's due diligence into the Grants Iron Ore Project. On the date of the announcement the share price increased by 6%, to close at \$0.190, before decling by 5% over the subsequent three trading days to close at \$0.180.

On 11 December 2018, Havilah released two announcements to the market. The first being a notice of inadvertent breach of ASX Listing Rule 10.11, following the issue of shares and free attaching options to directors (or their associated entities) as part of a shortfall placement. The second announcement related to the appointment of Mr Mark Stewart as Chairman following the Annual General Meeting on 12 December 2018. One the date of the announcements, the share price fell 5%, to close at \$0.175, before declining a further 9% over the subsequent three trading days to close at \$0.160.

On 28 December 2018, Havilah announced that it had reached an agreement with SIMEC to extend its due diligence on the Maldorky and Grants iron ore projects until the end of January 2019, or extended until March 2019 conditional on a \$1 million payment to Havilah. This amount would be deductible from any transaction concluded between the parties in 2019. On the date of the announcement the share price fell 6% to close at \$0.145 before increasing by 17% over the subsequent three trading days to close at \$0.170.



On 16 January 2019, Havilah responded to a query letter from the ASX regarding the aforementioned breach of Listing Rule 10.11. On the date of the announcement, the share price fell 3% to close at \$0.160 before increasing by 6% over the subsequent three day trading periof to close at \$0.170.

On 29 January 2019, Havilah reported that a diamond drill hole completed as part of SIMEC's due diligence, had intersected a significant iron bearing sequence. The share price rose 3% on the date of the announcement to close at \$0.165, before increasing a further 6% over the subsequent three day trading period to close at \$0.175.

On 1 February 2019, Havilah announced that SIMEC intended to extend its period of due diligence to 31 March 2019, and was therefore entitled to receive \$1 million from SIMEC. The share price increased by 6% on the date of the announcement to close at \$0.175, before increasing a further 2.9% over the subsequent three day trading period to close at \$0.180.

On 27 February 2019, Havilah released its Quarterly Report for the period 1 November 2018 to 31 January 2019. The share price fell 3% to close at \$0.160 on the day of the announcement, and fell a further 3.1% to \$0.155 three days after.

On 25 March 2019, Havilah retracted information on projects it presented on the Hot Copper Website which the ASX believed to be misleading. The ASX was concerned with the Company's failure to:

- Explain metal equivalent calculations.
- Disclose separate resource/reserve categories for the different projects.
- Release quoted production targets for both Kalkaroo and Mutooroo in a pre-feasibility study in compliance with Listing Rule 5.16.

The share price fell 3.2% to \$0.150 on the day of the retraction, and fell a further 6.7% to \$0.140 in the three days following.

On 28 March 2019, Havilah announced that it had agreed to extend SIMEC's due diligence period to 31 April 2019 in order to provide SIMEC additional time to structure a deal for the Maldorky and Grants iron ore projects. The share price fell 3.4% on the date of the announcement, to close \$0.140 before increasing by 10.7% over the subsequent three day trading period to close at \$0.155.

On 3 April 2019, Havilah announced an Initial Exploration Target for iron ore in the Grants Basin. This was based on the drilling funded by SIMEC as part of their due diligence. The share price remained unchanged on the date of the announcement to close at \$0.155, and decreasing by 6.5% over the subsequent three day trading period to close at \$0.145.

On 10 April 2019, Havilah announced that it had commenced a new scoping study for the Mutooroo Project. The share price remained unchanged on the date of the announcement to close at \$0.145 before increasing by 6.9% over the subsequent three day trading period to close at \$0.155.

To provide further analysis of the market prices for an Havilah share, we have also considered the weighted average market price for 10, 30, 60 and 90 day periods to 30 April 2019.

Share Price per unit	30-Apr-19	10 Days	30 Days	60 Days	90 Days
Closing price	\$0.155				
Volume weighted average price (VWAP)		\$0.156	\$0.151	\$0.157	\$0.158
Source: Bloomberg, BDO analysis					



The above weighted average prices are prior to the date of the announcement of the Transaction, to avoid the influence of any increase in price of Havilah shares that has occurred since the Transaction was announced.

An analysis of the volume of trading in Havilah shares for the twelve months to 30 April 2019 is set out below:

Trading days	Share price	Share price	Cumulative volume	As a percentage of
	low	high	traded	issued capital
1 Day	\$0.155	\$0.165	62,160	0.03%
10 Days	\$0.140	\$0.165	758,864	0.35%
30 Days	\$0.135	\$0.165	2,206,636	1.01%
60 Days	\$0.135	\$0.185	4,039,371	1.85%
90 Days	\$0.135	\$0.185	6,222,450	2.85%
180 Days	\$0.135	\$0.225	21,172,705	9.70%
1 Year	\$0.135	\$0.270	40,452,553	18.54%

Source: Bloomberg, BDO analysis

This table indicates that Havilah's shares display a low level of liquidity, with 18.54% of the Company's current issued capital being traded in a twelve month period. RG 111.69 states that for the quoted market price methodology to be an appropriate methodology there needs to be a 'liquid and active' market in the shares and allowing for the fact that the quoted price may not reflect their value should 100% of the securities not be available for sale. We consider the following characteristics to be representative of a liquid and active market:

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

A company's shares should meet all of the above criteria to be considered 'liquid and active', however, failure of a company's securities to exhibit all of the above characteristics does not necessarily mean that the value of its shares cannot be considered relevant.

In the case of Havilah, we believe that the shares are of low liquidity on the basis of less than 1% of securities being traded weekly on average, with 18.54% of the Company's issued capital being traded in the last 12 months.

Our assessment is that a range of values for Havilah shares based on market pricing, after disregarding post announcement pricing, is between \$0.150 and \$0.160.

## **Control Premium**

We have reviewed the control premiums paid by acquirers of companies listed on the ASX. We have summarised our findings below:



# General mining companies

Year	Number of Transactions	Average Deal Value (AU\$m)	Average Control Premium (%)
2019	5	72.64	36.22
2018	10	96.04	56.52
2017	4	16.20	28.55
2016	13	59.54	74.92
2015	9	340.82	57.86
2014	15	118.46	47.88
2013	17	117.99	63.99
2012	18	207.01	52.45
2011	21	811.55	37.42
2010	21	555.11	50.61
2009	20	121.99	50.44

Source: Bloomberg, BDO Analysis

## All ASX companies

Year	Number of Transactions	Average Deal Value (AU\$m)	Average Control Premium (%)
2019	16	7,138.27	31.20
2018	40	1,228.74	41.96
2017	28	1,009.52	42.67
2016	42	718.51	49.58
2015	33	850.04	33.23
2014	45	518.59	40.00
2013	41	128.21	50.99
2012	52	472.10	51.68
2011	68	891.85	44.43
2010	53	574.61	44.37
2009	61	521.10	54.61

Source: Bloomberg, BDO Analysis

The mean and median of the entire data set comprising control transactions from 2009 onwards for general mining companies is set out below.

	General Minin	g companies	All ASX companies		
Entire Data Set Metrics	Average Deal Value (AU\$m)	Average Control Premium (%)	Average Deal Value (AU\$m)	Average Control Premium (%)	
Mean	289.67	52.04	890.52	45.58	
Median	40.44	43.56	97.10	35.89	

Source: Bloomberg, BDO Analysis

In arriving at an appropriate control premium to apply we note that observed control premiums can vary due to the:

- Nature and magnitude of non-operating assets;
- Nature and magnitude of discretionary expenses;
- Perceived quality of existing management;



- Nature and magnitude of business opportunities not currently being exploited;
- Ability to integrate the acquiree into the acquirer's business;
- Level of pre-announcement speculation of the transaction;
- Level of liquidity in the trade of the acquiree's securities.

When performing our control premium analysis, we considered completed transactions where the acquirer held a controlling interest, defined at 20% or above, pre transaction or proceeded to hold a controlling interest post transaction in the target company.

The table above indicates that the average long term control premium paid by acquirers of mining companies and all ASX-listed companies is 52.04% and 45.58% respectively. However, in assessing the transactions included in the table, we noticed several outliers. These outliers included 17 general mining transactions and 37 ASX-listed transactions for which the premium was in excess of 100%.

In a population with the presence of outliers, the median can often represent a superior measure of central tendency when compared to the mean. We note the median announced control premium since 2009 was 43.56% for general mining companies, and 35.89% for all ASX-listed transactions.

Based on the above analysis, we consider an appropriate premium for control to be 30% to 40%, with a midpoint of 35%.

# Quoted market price including control premium

Applying a control premium to Havilah's quoted market share price results in the following quoted market price value including a premium for control:

	Low Ş	High \$
Quoted market price value	0.150	0.160
Control premium	30%	40%
Quoted market price valuation including a premium for control	0.195	0.224

#### Source: BDO analysis

Therefore, our valuation of a Havilah share based on the quoted market price method and including a premium for control is between \$0.195 and \$0.224, with a midpoint value of \$0.210.

# 10.3 Assessment of Havilah Value

The results of the valuations performed are summarised in the table below:

	Low Ş	Preferred \$	High Ş
Sum-of-Parts (Section 10.1)	0.202	0.233	0.267
QMP (Section 10.2)	0.195	0.210	0.224
Source: BDO analysis			



Based on the results above we consider the value of a Havilah share prior to the Transaction on a control basis to be between \$0.202 and \$0.267, with a preferred value of \$0.233. We consider the Sum-of-Parts approach to be the most appropriate methodology to value Havilah as it includes a DCF valuation of the Kalkaroo Project premised on the technical assumptions provided by AMC and our assessment of the economic assumptions.

We note the range of values of a Havilah share on a control basis derived from the QMP approach supports our Sum-of-Parts range of values of a Havilah share on a control basis. We also note that:

- The core value of our Sum-of-Parts valuation lies in our DCF valuation of the Kalkaroo Project. Our DCF valuation of Kalkaroo is based on our view of economic assumptions including (but not limited to) exchange rates, forecast pricing and discount rates as well as AMC's view of the technical assumptions underpinning the DCF. Specifically, we note that our assumptions of forecast commodity pricing (including effects from forecast exchange rates) are current as at the date of our Report, which have increased significantly since the date of the announcement, being the date that the QMP approach has been assessed. We consider this may be a factor to account for the higher range of values in our Sum-of-Parts valuation;
- Our Sum-of-Parts valuation includes an independent valuation of Havilah's Other Mineral Assets completed by AMC. AMC has relied on a combination of valuation methodologies, which reflect the market value of the Other Mineral Assets. Depending on the assumptions used, investors may yield a different value than that derived from the valuation methodologies adopted by AMC;
- As detailed in section 10.2, the shares of Havilah display a low level of liquidity, with only 1.85% of Havilah's issued capital being traded in the three months (60 trading days) prior to the announcement of the Transaction; and
- The Sum-of-Parts valuation includes a funded value of the Kalkaroo Project. Therefore, the Sumof-Parts valuation reflects the dilution of existing issued capital upon raising our assessed level of equity funding. The quoted market price also reflects this potential dilution but investors may have different views on the quantum and pricing of this.



# 11. Valuation of Havilah following the Transaction

# 11.1 Sum-of-Parts

We employed the Sum-of-Parts method in estimating the fair market value of Havilah following implementation of the Transaction by aggregating the estimated fair market value of its underlying asset and liabilities as set out below.

			Preferred	
		Low value	value	High value
Valuation summary	Note	\$000s	\$000s	\$000s
Equity value of Kalkaroo	11.1.1.	240,000	260,000	280,000
Add: value of the Other Mineral Assets	11.1.2.	103,780	127,390	150,980
Add: cash received from notional capital raising	11.1.4.	232,632	232,632	232,632
Less: Placement fee from notional capital raising	11.1.4.	(11,632)	(11,632)	(11,632)
Less: present value of corporate costs	11.1.5.	(22,807)	(19,956)	(17,105)
Add/(less): value of other assets and liabilities	11.1.6.	19,175	19,175	19,175
Value of Havilah on a controlling basis	-	561,148	607,609	654,050
Number of Havilah shares on issue (000s)	11.1.7.	2,728,536	2,608,445	2,487,283
Value per share (controlling basis)	-	0.206	0.233	0.263
Minority interest discount	11.1.8.	<b>29</b> %	26%	23%
Value per share (minority basis)		0.147	0.173	0.202

Source: BDO analysis

The table above indicates that the value of a Havilah share following the implementation of the Transaction on a minority basis is between \$0.147 and \$0.202, with a preferred value of \$0.173.

# 11.1.1. Value of Kalkaroo Project

We have performed our DCF valuation of the Kalkaroo Project after the Transaction. Given that the project assumptions are identical both prior to and following the Transaction, the value of Kalkaroo is the same prior to and following the Transaction.

All project assumptions of the Kalkaroo Project are detailed in section 10.1.1.

# 11.1.2. Value of Other Mineral Assets

As outlined in section 10.1.2., we commissioned AMC to provide an independent market valuation of the residual resources owned by Havilah that are not included in the DCF valuation of Kalkaroo. AMC have relied upon the yardstick approach, comparable transactions method and actual transactions method, which we consider appropriate methodologies given the exploratory stage of development of the Other Mineral Assets.



	Low value	value	High value
Other Mineral Assets valuation summary	\$000s	\$000s	\$000s
Kalkaroo	8,700	21,700	34,600
Mutooroo	4,700	7,500	10,200
Maldorky	1,770	2,000	2,210
Grants	70	400	730
Oban	240	590	940
Exploration tenements	23,300	30,200	37,300
Total Other Mineral Assets	38,780	62,390	85,980

The range of values for the Other Mineral Assets, as assessed by AMC, are set out below:

#### Source: AMC ITSR

Grants and Grants Basin are iron ore deposits within the same large tenement area. Grants has been valued by AMC, relying on the defined JORC compliant Mineral Resource. Given Grants Basin is still an exploration target area, AMC's valuation of Grants Basin is included within the Exploration Tenements line item in the table above.

We note that as part of the Funding Transaction, Havilah is seeking approval from Shareholders for SIMEC to provide up to \$75 million of funding for development of Havilah's copper and iron ore projects, excluding the Kalkaroo Project which has a copper component. From our review of the SSA and following discussions with Havilah management, we consider \$65 million of the funding will be set aside for direct exploration and development expenditure on Havilah's copper and iron ore projects, excluding Kalkaroo ('Committed Project Expenditure'), with the remaining \$10 million of SIMEC funding to be available for working capital, corporate administration expenditure and discretionary exploration ('Working Capital Expenditure'). We note that the Working Capital Expenditure can be spent on discretionary exploration expenditure. However, we have not been provided with details of any discretionary exploration expenditure and therefore have assumed it will be used for working capital and corporate administration expenditure.

We have assumed that any exploration and development expenditure will be value accretive to the amount of expenditure. We note that the uplift in value may be greater than the amount of expenditure incurred, however we do not have reasonable grounds to quantify any potential uplift in excess of the amount of expenditure. Therefore, we have considered the Committed Project Expenditure to be value accretive to the amount of \$65 million.

As a cross-check to our assumption above, we have analysed the prospectivity enhancement multiplier ('PEM') methodology adopted by AMC as a cross-check methodology for their Other Mineral Assets valuation, found in AMC's ITSR in Appendix 4.

The PEM methodology is effectively a multiple of historical exploration expenditure, with multiples generally ranging between 0.5 and 3.0. AMC has assessed a number of multiple ranges, which have been applied to Havilah's Other Mineral Assets including Havilah's copper and iron ore assets. The average assessed PEM range applied to Havilah's Other Mineral Assets is 0.67 to 1.20, which implies a midpoint multiple of 0.93.

Given that AMC's assessed PEM ranges are calculated for application to historical expenditure, we consider it reasonably foreseeable to assume future exploration and development expenditure on prospective exploration assets such as Havilah's copper and iron ore assets would accrue value at a higher rate than



historical expenditure. Therefore, we consider the analysis supports our assumption that any exploration and development expenditure will be value accretive equal to the amount of expenditure.

A summary of the value of the Other Mineral Assets following the Transaction is set out below.

		Preferred	
	Low value	value	High value
Other Mineral Assets valuation summary	\$000s	\$000s	\$000s
Kalkaroo	8,700	21,700	34,600
Mutooroo	4,700	7,500	10,200
Maldorky	1,770	2,000	2,210
Grants	70	400	730
Oban	240	590	940
Exploration tenements	23,300	30,200	37,300
Value accretion from Committed Project Expenditure	65,000	65,000	65,000
Total Other Mineral Assets	103,780	127,390	150,980

Source: AMC ITSR, BDO analysis

## 11.1.3. Value of Havilah's royalty agreement over North Portia

The post-Transaction value of Havilah's royalty agreement over North Portia is consistent with the pre-Transaction value. Refer to section 10.1.3. for further details.

# 11.1.4. Notional capital raising

We are required by RG 111.15 to assess funding requirements for a company that is not in financial distress when considering its value, especially when using the DCF methodology. Therefore, we have assumed that Havilah would most likely fund the construction and early stage production of the Kalkaroo Project with a combination of both debt and equity funding, and consider the following notional capital raise to be the equity portion of the funding required.

We have based this assessment of a forecast capital structure based on our analysis of comparable company funding structures, outlined in section 10.1.4.

As detailed in section 10.1.4., we consider there to be reasonable grounds to assume Havilah could obtain a debt to equity structure of approximately 50%.

We have assessed the funding requirement of approximately \$389 million is broadly based on the cash required to fund the construction of the oxide processing plant, initial infrastructure requirements and early stage mining costs. We have used the borrowings of \$2.54 million and equity of \$40.61 million from Havilah's reviewed 31 January 2019 balance sheet as a base from which to add our notional debt and equity raising amounts. On a post-Transaction basis, we have included the \$75 million Funding Transaction and \$5 million Rights Issue in the equity balance, taking the base equity balance to \$120.61 million.

Therefore, at our assessed debt to equity ratio of 50%, we consider Havilah would raise \$168 million of notional debt funding and the remaining \$221 million by way of notional capital raising. We have increased the amount of notional equity funding raised to reflect our estimate of the gross amount required to meet the costs likely to be incurred in conducting the capital raising. We have assessed the costs of a capital raising to be approximately 5% of the funds raised. Therefore, Havilah will be required to raise approximately \$233 million (inclusive of a placement fee) in order to meet the funding requirements of the Kalkaroo Project. This is set out in the table below.



Cash raised through notional equity raising	\$000s
Equity required	221,000
Placement fee	11,632
Cash raised through notional equity raising	232,632

Source: Capital IQ, Bloomberg and BDO analysis

In order to determine the likely price at which Havilah would have to place its shares to a third party, or to current shareholders, under the notional capital raising, we considered the VWAP of Havilah's shares and the discount at which shares have been issued by ASX listed companies when compared to the respective companies' 30 day VWAP prior to the announcement of the placement.

We considered the discount at which ASX companies have issued shares over the last three years to raise capital. A summary of our results is set out in section 10.1.4.

We consider a placement discount in the range of 20% to 25% will be required to provide a sufficient incentive for investors to participate in any raising that Havilah would conduct on the open market, as outlined in section 10.1.4.

In section 10.2 of our Report, we consider the QMP of Havilah's shares. From this analysis, we assessed that the value of a Havilah share to be between \$0.15 and \$0.16 on a minority interest basis. Applying a discount in the range of 20% to 25% to the assessed value of a Havilah share prior to the announcement of the Transaction results in an assumed notional capital raising price of between \$0.113 and \$0.128 per share.

The table below outlines the number of new shares that will need to be issued in order to raise an equivalent of \$247 million to provide funding to develop the Kalkaroo Project at between \$0.113 and \$0.128 per share.

Number of shares issued under notional capital raise	Low	Mid	High
Equity funding required (\$000s)	232,632	232,632	232,632
Quoted market price (minority) (\$)	0.160	0.155	0.150
Assessed placement discount	20%	22.5%	25%
Price of capital raising (\$)	0.128	0.120	0.113
Number of shares issued under notional capital raise (000s)	1,817,438	1,938,600	2,058,690

Source: BDO analysis

Note that any debt raised will result in a cash injection (asset) and a corresponding increase in borrowings (liability), equating to a nil effect on the balance sheet, and therefore, nil effect on our Sum-of-Parts valuation.

## 11.1.5. Present value of corporate costs

The assumptions made for the post-Transaction present value of corporate costs are consistent with the pre-Transaction assumptions. Refer to section 10.1.5. for further details.



# 11.1.6. Value of other assets and liabilities

We have made a number of additional adjustments to Havilah's other assets and liabilities as a result of the proposed approval of the Transactions. The adjustments are outlined in the table below:

Other assets and liabilities	Note	\$000s
Other assets and liabilities	10.1.6.	5,175
Transaction adjustments:		
Add: SIMEC funding package	a)	10,000
Deduct: SIMEC exclusivity extension payment	b)	(1,000)
Rights Issue	c)	5,000
Adjusted other assets and liabilities		19,175

Source: BDO analysis

## a) SIMEC funding package

As outlined in section 11.1.2., we note that as part of the Transaction, Havilah is seeking approval from Shareholders for SIMEC to provide up to \$75 million of funding for development of Havilah's copper and iron ore projects. We consider \$65 million of the funding will be set aside for Committed Project Expenditure with the remaining \$10 million of SIMEC funding to be available for Working Capital Expenditure. Given that this Working Capital Expenditure will be incurred over the following three year period, we have included it as a cash increase at the time of the Transactions.

### b) SIMEC exclusivity extension payment

The SSA stipulates that if the Transaction is approved, the \$1 million SIMEC exclusivity extension payment shall be deducted from amounts owed by SIMEC to Havilah as part of the funding package. Given that we have accounted for the entire \$75 million, we have deducted the \$1 million SIMEC exclusivity extension payment received.

#### c) Rights Issue

As outlined in section 4, pursuant to approval of the Transaction, Havilah also plans to undertake the Rights Issue, which will see \$5 million cash injected into Havilah.

# 11.1.7. Number of Havilah shares on issue

The adjustment to the number of shares currently on issue is set out in the table below:

		Low value	value	High value
Number of shares on issue	Section	000s	000s	000s
Havilah shares on issue at the date of our Report	4	218,249	218,249	218,249
Shares to be issued under notional capital raise	11.1.4	1,817,438	1,938,600	2,058,690
Shares issued under the Transaction	4	415,625	415,625	415,625
Shares issued under the Rights Issue	4	35,971	35,971	35,971
Total number of shares on issue following the Transaction		2,487,283	2,608,445	2,728,536

Source: BDO analysis

We note the low total number of shares on issue above forms the high end of our valuation range and the high total number of shares on issue forms the low end of our valuation range.



# 11.1.8. Minority interest discount

The value of a Havilah share derived under the Sum-of-Parts method is reflective of a controlling interest. This suggests that the acquirer obtains an interest in the company which allows them to have an individual influence in the operations and the value of that company. However, if the Transaction is approved, the current Shareholders will be minority holders in Havilah, meaning that their individual holding will not be considered significant enough to have an individual influence in the operations and the value of that company.

Therefore, we have adjusted our valuation of a Havilah share following the Transaction to reflect the minority interest holding. The minority discount is based on the inverse of the control premium and is calculated using the formula 1-1/(1+control premium).

As discussed in section 10.2 of our Report, we consider an appropriate control premium for Havilah to be in the range of 30% to 40%, giving rise to a minority interest discount in the range of 23% to 29%.



# 12. Is the Transaction fair?

# The Funding Component

A comparison between the value of a Havilah share prior to the Funding Component, on a control basis, and the value of a Havilah share following the Funding Component, on a minority basis, is set out below:

	Ref	Low \$	Preferred \$	High \$
Value of Havilah share prior to the Funding Component on a control basis	10.3	0.202	0.233	0.267
Value of Havilah share following the Funding Component on a minority basis	11.1	0.147	0.173	0.202

We note from the table above that the value of a Havilah share following the Funding Component, on a minority basis, is less than the value of a Havilah share prior to the Funding Component, on a control basis, assuming the maximum number of shares are issued to SIMEC following the Transaction. Therefore, we consider that the Funding Component is not fair.

## The Security Component

As stated in section 9.2, the Security Component is fair if the value of the Security Provided is equal to or less than the value of the Liabilities Settled in the event of insolvency.

In the scenario that the value of the secured assets is greater than or equal to the amounts owed to SIMEC, and there is an event of insolvency, then SIMEC would only be entitled to recover the amounts owed to SIMEC under the Security Component.

In a scenario that the value of secured assets is less than the amounts owed to SIMEC, in an event of insolvency, then the secured assets would be sold and the proceeds provided SIMEC. This can be summarised as follows:

Scenario			Consequence		Fairness	
Secured Assets	>	Liabilities to be settled	Security Provided	=	Liabilities Settled	Fair
Secured Assets	=	Liabilities to be settled	Security Provided	=	Liabilities Settled	Fair
Secured Assets	<	Liabilities to be settled	Security Provided	<	Liabilities Settled	Fair

#### Source: BDO analysis

Therefore, on the terms of the Security Component, specifically if there is an event of insolvency, then SIMEC is only entitled to be repaid the amounts outstanding, we consider that the Security Component is fair in all scenarios.

## Conclusion on fairness

In our opinion:

- the Funding Component is not fair to Shareholders; and
- the Security Component is fair to Shareholders.



Therefore, the Transaction, which is comprised of the Funding Componentand the Security Component, is not fair.

# 13. Is the Transaction reasonable?

# 13.1 Alternative Proposal

We are unaware of any alternative proposal that might offer the Shareholders of Havilah a premium over the value resulting from the Transaction.

# 13.2 Practical Level of Control

If the Transaction is approved and the maximum number of shares are issued, then SIMEC will hold an interest of approximately 61% in Havilah. In addition to this, Havilah will have up to four Board members nominated by SIMEC, to be appointed as follows:

- Upon completion of the Initial Placement one director;
- Upon SIMEC reaching 30% interest in Havilah, one additional director, who must be an independent director; and
- Upon SIMEC reaching 45% interest in Havilah, two further directors, one of whom must be an independent director.

Havilah's Board currently comprises three directors and Havilah has stated an intention to appoint a fourth director independently of the Transaction. Upon SIMEC reaching a 45% interest in Havilah, SIMEC will have nominated up to four additional directors, which could take Havilah's Board to eight directors. This means that SIMEC nominated directors will comprise up to 50% of the Board, however non-independent SIMEC nominee directors will only comprise 25% of the board. Further, the SSA provides that the board must have a majority of independent directors at all times, as well as an independent chair.

When shareholders are required to approve an issue that relates to a company there are two types of approval levels. These are general resolutions and special resolutions. A general resolution requires 50% of shares to be voted in favour to approve a matter and a special resolution required 75% of shares on issue to be voted in favour to approve a matter. If the Transaction is approved, following the issue of the Placement Shares and Milestone Shares, SIMEC will be able to pass general resolutions. Note however that SIMEC will be excluded from voting on any transaction that is considered to be a related party transaction, which further limits SIMEC's ability to control assets or transactions.

SIMEC's control of Havilah following the Transaction will be significant when compared to all other shareholders, with SIMEC holding up to a 61% interest in Havilah. Therefore, in our opinion, while SIMEC will be able to significantly influence the activities of Havilah, it will not be able to exercise a similar level of control as if it held 100% of Havilah.

# 13.3 Consequences of not Approving the Transaction

## Consequences

If the Transaction is not approved, Havilah will have to reassess its funding options and recommence the funding process for the exploration and development of the copper and iron ore assets. There is no certainty that the Company will be successful in obtaining the funding it requires to fund the copper and iron ore exploration assets through to definitive feasibility study stage. Furthermore, there is no certainty



that the Company will be able to successfully secure funding under terms that are superior to those under the Transaction.

### Potential impact on share price

We have analysed movements in Havilah's share price since the Transaction was announced on 1 May 2019. A graph of Havilah's share price and trade volume leading up to and following the announcement of the Transaction is set out below.



Source: Bloomberg

The daily closing price of Havilah's shares from the period 7 December 2018 to 1 July 2019 ranged from a low of \$0.130 on 24 June to a high of \$0.225 on the day of the announcement on 1 May 2019. On the day of the announcement, a six-month high of 1.76 million shares were traded, which represents approximately 0.80% of the Company's total issued capital. On 2 May 2019, the first full day of trading following the announcement, the share price closed down from the previous day, at \$0.180 with a traded volume of 0.65 million shares. In the period since the announcement, the share price of Havilah continued to trend downward below pre-announcement pricing, before increasing back to a closing price of \$0.160 on 1 July 2019.

The table below details the Volume Weighted Average Price ('VWAP') of Havilah shares for the 10- and 20-day periods pre and post announcement of the Transaction on 1 May 2019 (excluding the day of the announcement).

Share Price per unit	1 May 2019	10 days pre	10 days post	20 days pre	20 days post
Closing price	\$0.225				
Volume weighted average price (VWAP)		\$0.1561	\$0.1758	\$0.1516	\$0.1692

Source: Bloomberg

Following the announcement of the Transaction, Havilah's share price has increased from a VWAP of \$0.1516 over the ten days prior to the announcement to \$0.1758 over the ten days subsequent to the announcement (excluding the day of the announcement). However, since then the Havilah share price continued to trend below pre-announcement pricing, to a low of \$0.130, before increasing to close at \$0.160 on 1 July 2019.



# 13.4 Advantages of Approving the Transaction

We have considered the following advantages when assessing whether the Transaction is reasonable.

The Funding Component

# 13.4.1. Opportunity to develop a strategic partnership with SIMEC and GFG

Through undertaking the Transaction with SIMEC, Havilah has the ability to develop a strategic alliance with GFG, and benefit from the Groups' significant experience and investment in the mining, infrastructure and shipping industries globally.

GFG has over 150 locations in over 30 countries and significant experience in the mining and mineral processing industries. Developing a strategic alliance with GFG may therefore provide Havilah with access to international capital markets and commercial support, which may not be otherwise available.

Furthermore, though SIMEC and its other subsidiaries, GFG has already made significant investment in South Australia and internationally, and owns mineral processing and transport infrastructure including commercial ports, marine fleets, storage facilities and rail networks. The Transaction therefore provides Havilah with an opportunity to benefit from potential transport and production synergies in the development of the Projects, including access to the GFG's steelworks operations, iron ore export port at Whyalla and heavy-duty rail network located nearby the Projects.

Under the terms of the Transaction, SIMEC will also have first right of refusal in relation to any iron ore, copper, or other mineral offtake from the Projects.

# **13.4.2.** Structure of the Transaction funding package is value accretive to Shareholders

We note the Transaction's \$49.5 million Committed Funding is to be provided at the following share prices:

- The committed Initial Placement of \$6 million, funded by way of subscription for fully paid ordinary shares at the Reference Share Price, \$0.154;
- a 22% premium to the Reference Share Price (equal to \$0.188) where SIMEC holds no more than 30% of all Havilah shares at the relevant subscription date; and
- a 35% premium to the Reference Share Price (equal to \$0.208) where SIMEC holds between 30% and 51% of all Havilah shares at the relevant subscription date.

Given that a significant portion of the committed funding package is at specific Havilah share prices that are above current share price levels, we consider this to be an advantage and to be value accretive to current Shareholders.

# 13.4.3. Shareholders have the opportunity to participate in Rights Issue at discount to SIMEC's investment

Pursuant to approval of the Transaction, the Rights Issue provides existing shareholders with the opportunity to acquire additional shares in Havilah at a discount to SIMEC's subscription prices.

As set out in section 4 of this Report, Havilah intends to undertake the Rights Issue at a 10%, or greater, discount to the Reference Share Price as set out in the SSA, which represents a discount to SIMEC's



subscription prices, allowing existing Shareholders' to increase their exposure to the potential value created in Havilah through the Transaction.

# 13.4.4. Provides necessary funding to explore value of the Projects

The Transaction provides Havilah with the immediate and mid-term funding necessary to undertake work programs on the Projects to advance them to DFS stage, which could foreseeably be seen to add value to the Projects.

The Committed Funding of \$49.5 million pledged by SIMEC will be used to fund corporate and administrative costs and agreed work programs on the Projects, staged over an expected three-year period. This will include major works on the Grants Basin exploration area (Notice of Meeting reference is "Iron Genesis") and the Mutooroo Copper-Cobalt District (Notice of Meeting reference is "Copper Aura") area with the aim of declaring JORC compliant mineral resources and completing two definitive feasibility studies. The Transaction will therefore provide Havilah with the ability to advance the Projects and complete work programs, which Havilah could not otherwise complete at this point given the Company's existing cash reserves, while the value created through further exploration remains with Havilah.

Under the Transaction, Havilah also has the ability to access to the following:

- \$17.5 million in Additional Funding to be made available by SIMEC, should further funding be required to complete work programs on the Projects;
- \$8 million in Discretionary Funding to fund general corporate costs, tenement administration, Kalkaroo station and discretionary exploration. This Discretionary Funding will only be provided if Havilah decides to request this funding from SIMEC (noting that Havilah is under no obligation to do so) and SIMEC choose to provide the funding. SIMEC can choose to provide the funding in one or more of the above ways, noting that the SSA requires SIMEC to prioritise purchasing direct equity interests in the iron ore project (unless it has been diluted by a capital raising or the issue of shares on the exercise of options).

# 13.4.5. Provides potential access to future funding

The Transaction also provides Havilah with the ability to access to future funding to be made available by SIMEC, at Havilah's election. Under the Discretionary Funding, SIMEC may provide an additional \$8 million to fund general corporate costs, tenement administration, Kalkaroo Station expenditure and/or discretionary exploration.

In addition to the Transaction, SIMEC may also provide access to future funding not considered as part of the Transaction, in the form of an additional \$25 million of conditional development funding for Mutooroo, post-delivery of a positive DFS, to be negotiated in light of the economics of the project and suitability of alternative financing.

Having access to this addition funding is a significant advantage to Havilah, reducing the Company's future funding risk, while also allowing Havilah to seek alternative funding at more attractive terms or through other means at its discretion.

# 13.4.6. Increased market capitalisation may increase the market presence of Havilah

On completion of the Transaction, Havilah's market capitalisation is likely to increase. An increased market capitalisation is expected to provide Havilah with increased media and analyst coverage, which



may translate to increased levels of interest form financial markets and access to a wider range of investors. Ultimately, the potential increase in market capitalisation may also lead to an increase in the liquidity of the Company's shares traded on the ASX.

# 13.4.7. Broader expertise and increased experience of the board of directors of Havilah

SIMEC has the right to nominate directors to Havilah's board based on the progression of the Transaction and SIMEC's shareholding in Havilah, as discussed in section 13.2. SIMEC is entitled to nominate its first director following completion of the Initial Placement.

As set out in the Notice of Meeting, SIMEC has nominated Mr Benjamin Bolot for appointment as a director of Havilah upon the completion of the Initial Placement.

Mr Bolot is employed by One Steel Trading Pty Ltd (a member of the GFG Alliance and a related body corporate of SIMEC) and is the Head of Mergers & Acquisitions for GFG Alliance Australia. Further summary of Mr Bolot's experience is outlined within the Notice of Meeting.

## The Security Component

## 13.4.8. The Security Component is fair

As set out in section 12, the Security Component is fair to Shareholders. RG 111.12 states that an offer is reasonable if it is fair.

# 13.4.9. The Security Component allows the Transaction to proceed

As stated in the Report, the Security Component is an integral part of the Transaction process, as the SSA outlines that Transaction will not proceed without the provision of the Security Component.

## 13.5 Disadvantages of Approving the Transaction

The Funding Component

# 13.5.1. The Funding Component is not fair

As set out in section 12, the Funding Component is not fair to Shareholders.

# 13.5.2. Dilution of existing Shareholders' interest

If the Transaction is approved, existing Shareholders' interest in Havilah will be significantly diluted. Assuming Havilah receives only the Committed Funding and issues the associated Placement Shares and Milestone Shares, the expected interest held by SIMEC will be approximately 51%, reducing existing Shareholder's interest to approximately 49%.

On a fully diluted basis, assuming the maximum number of shares approved under the Transaction are issued by Havilah, including the Discretionary Funding Shares, the Additional Option Shares and the Additional Funding Shares, existing Shareholders' interest in Havilah will be reduced to approximately 39%.



# 13.5.3. Presence of significant shareholder may reduce the attractiveness of Havilah's shares to potential investors

If the Transaction is approved, the maximum shareholding that SIMEC could obtain would be approximately 61%. With the presence of a significant shareholder, the attractiveness of the Company's shares to potential investors may be reduced. Furthermore, the ability for Shareholders to receive a takeover premium in the future may also be diminished.

However, we note that as SIMEC is a strategic investment partner, its primary goal is to generate a return on its investment, which we consider to be consistent with a Shareholder's primary goal. Therefore, although it is likely that any offer to acquire the Company would require SIMEC's approval, we do not consider SIMEC's potential interest in Havilah will necessarily deter a takeover offer being made or accepted by Havilah if an acceptable offer is made.

## The Security Component

# 13.5.4. Potentially restrictions placed on Havilah's ability to deal with the secured assets without SIMEC's consent

As part of the Security Component, the provision of security over the Copper Aura, Mutooroo Metals and Iron Genesis assets to SIMEC, as is common to most security arrangements, may place restrictions on Havilah's ability to deal with its assets.

# 14. Conclusion

Given that Shareholders are required to vote on one resolution regarding approval of the Transaction, we outline a single opinion for the Transaction, which is comprised of the Funding Component and Security Component.

We have considered the terms of the Transaction as outlined in the body of this Report and have concluded that, in the absence of a superior offer and any other relevant information, the Transaction is not fair but reasonable to the Shareholders of Havilah. This opinion is derived from the Transaction comprising the Funding Component and Security Component, with each component having the following opinions:

- We have considered the terms of the Funding Component as outlined in the body of this Report and have concluded that, in the absence of a superior offer and any other relevant information, the Funding Component is not fair but reasonable to the Shareholders of Havilah.
- We have considered the terms of the Security Component as outlined in the body of this Report and have concluded that, in the absence of a superior offer and any other relevant information, the Security Component is fair and reasonable to the Shareholders of Havilah.

# 15. Sources of information

This report has been based on the following information:

- Draft Notice of General Meeting and Explanatory Statement on or about the date of this report;
- Audited financial statements of Havilah for the years ended 31 July 2018 and 31 July 2017;
- Reviewed financial statements of Havilah for the half year ended 31 January 2019;
- Independent Valuation Report of Havilah mineral assets dated 29 July 2019 performed by AMC;
- Share Subscription Agreement;



- The Model for the Kalkaroo Project;
- Share registry information;
- Information in the public domain; and
- Discussions with Directors and Management of Havilah.

# 16. Independence

BDO Corporate Finance (WA) Pty Ltd is entitled to receive a fee of \$80,000 (excluding GST and reimbursement of out of pocket expenses). The fee is not contingent on the conclusion, content or future use of this Report. Except for this fee, BDO Corporate Finance (WA) Pty Ltd has not received and will not receive any pecuniary or other benefit whether direct or indirect in connection with the preparation of this report.

BDO Corporate Finance (WA) Pty Ltd has been indemnified by Havilah in respect of any claim arising from BDO Corporate Finance (WA) Pty Ltd's reliance on information provided by the Havilah, including the non provision of material information, in relation to the preparation of this report.

Prior to accepting this engagement BDO Corporate Finance (WA) Pty Ltd has considered its independence with respect to Havilah and SIMEC and any of their respective associates with reference to ASIC Regulatory Guide 112 'Independence of Experts'. In BDO Corporate Finance (WA) Pty Ltd's opinion it is independent of Havilah and SIMEC and their respective associates.

Neither the two signatories to this report nor BDO Corporate Finance (WA) Pty Ltd, have had within the past two years any professional relationship with Havilah, or their associates, other than in connection with the preparation of this report.

A draft of this report was provided to Havilah and its advisors for confirmation of the factual accuracy of its contents. No significant changes were made to this report as a result of this review.

BDO is the brand name for the BDO International network and for each of the BDO Member firms.

BDO (Australia) Ltd, an Australian company limited by guarantee, is a member of BDO International Limited, a UK company limited by guarantee, and forms part of the international BDO network of Independent Member Firms. BDO in Australia, is a national association of separate entities (each of which has appointed BDO (Australia) Limited ACN 050 110 275 to represent it in BDO International).

# 17. Qualifications

BDO Corporate Finance (WA) Pty Ltd has extensive experience in the provision of corporate finance advice, particularly in respect of takeovers, mergers and acquisitions.

BDO Corporate Finance (WA) Pty Ltd holds an Australian Financial Services Licence issued by the Australian Securities and Investment Commission for giving expert reports pursuant to the Listing rules of the ASX and the Corporations Act.

The persons specifically involved in preparing and reviewing this report were Sherif Andrawes and Adam Myers of BDO Corporate Finance (WA) Pty Ltd. They have significant experience in the preparation of independent expert reports, valuations and mergers and acquisitions advice across a wide range of industries in Australia and were supported by other BDO staff.


Sherif Andrawes is a Fellow of the Institute of Chartered Accountants in England & Wales and a Fellow of Chartered Accountants Australia & New Zealand. He has over 30 years' experience working in the audit and corporate finance fields with BDO and its predecessor firms in London and Perth. He has been responsible for over 300 public company independent expert's reports under the Corporations Act or ASX Listing Rules and is a CA BV Specialist. These experts' reports cover a wide range of industries in Australia with a focus on companies in the natural resources sector. Sherif Andrawes is the Corporate Finance Practice Group Leader of BDO in Western Australia, the Global Natural Resources Leader for BDO and a former Chairman of BDO in Western Australia.

Adam Myers is a member of the Australian Institute of Chartered Accountants. Adam's career spans 20 years in the Audit and Assurance and Corporate Finance areas. Adam is a CA BV Specialist and has considerable experience in the preparation of independent expert reports and valuations in general for companies in a wide number of industry sectors.

### 18. Disclaimers and consents

This report has been prepared at the request of Havilah for inclusion in the Explanatory Memorandum which will be sent to all Havilah Shareholders. Havilah engaged BDO Corporate Finance (WA) Pty Ltd to prepare an independent expert's report to consider Havilah's proposal to enter into a funding agreement with SIMEC and proposal to grant security over specific Havilah assets to SIMEC.

BDO Corporate Finance (WA) Pty Ltd hereby consents to this report accompanying the above Explanatory Memorandum. Apart from such use, neither the whole nor any part of this report, nor any reference thereto may be included in or with, or attached to any document, circular resolution, statement or letter without the prior written consent of BDO Corporate Finance (WA) Pty Ltd.

BDO Corporate Finance (WA) Pty Ltd takes no responsibility for the contents of the Explanatory Memorandum other than this report.

We have no reason to believe that any of the information or explanations supplied to us are false or that material information has been withheld. It is not the role of BDO Corporate Finance (WA) Pty Ltd acting as an independent expert to perform any due diligence procedures on behalf of the Company. The Directors of the Company are responsible for conducting appropriate due diligence in relation to Havilah. BDO Corporate Finance (WA) Pty Ltd provides no warranty as to the adequacy, effectiveness or completeness of the due diligence process.

The opinion of BDO Corporate Finance (WA) Pty Ltd is based on the market, economic and other conditions prevailing at the date of this report. Such conditions can change significantly over short periods of time.

The forecasts provided to BDO Corporate Finance (WA) Pty Ltd by Havilah and its advisers are based upon assumptions about events and circumstances that have not yet occurred. Accordingly, BDO Corporate Finance (WA) Pty Ltd cannot provide any assurance that the forecasts will be representative of results that will actually be achieved. We note that the forecasts provided do not include estimates as to the effect of any future emissions trading scheme should it be introduced as it is unable to estimate the effects of such a scheme at this time.

With respect to taxation implications it is recommended that individual Shareholders obtain their own taxation advice, in respect of the Transaction, tailored to their own particular circumstances. Furthermore, the advice provided in this report does not constitute legal or taxation advice to the Shareholders of Havilah, or any other party.



BDO Corporate Finance (WA) Pty Ltd has also considered and relied upon independent valuations for mineral assets held by Havilah.

The valuer engaged for the mineral asset valuation, AMC, possess the appropriate qualifications and experience in the industry to make such assessments. The approaches adopted and assumptions made in arriving at their valuation is appropriate for this report. We have received consent from the valuer for the use of their valuation report in the preparation of this report and to append a copy of their report to this report.

The statements and opinions included in this report are given in good faith and in the belief that they are not false, misleading or incomplete.

The terms of this engagement are such that BDO Corporate Finance (WA) Pty Ltd is required to provide a supplementary report if we become aware of a significant change affecting the information in this report arising between the date of this report and prior to the date of the meeting or during the offer period.

Yours faithfully

### BDO CORPORATE FINANCE (WA) PTY LTD

Sherif Andrawes Director

Adam Myers Director



# Appendix 1 - Glossary of Terms

Reference	Definition
The Act	The Corporations Act 2001 Cth
Additional Funding	Conditional additional project funding of up to \$17.5 million to be made available at the election of Havilah, if required to complete work programs on the Projects, and subject to the achievement of certain project development criteria being met.
Additional Funding Shares	113,636,364 Havilah shares issued as part of the \$17.5 million Additional Funding
Additional Option Shares	Each time Havilah options in existence at the date of the SSA (or specific employee options granted after that date) are converted to shares, SIMEC will also have the right to subscribe for the same number of shares that were issued upon the relevant conversion
APES 225	Accounting Professional & Ethical Standards Board professional standard APES 225 'Valuation Services'
ASIC	Australian Securities and Investments Commission
ASX	Australian Securities Exchange
Bengarie	Bengarie Gold Pty Ltd
BDO	BDO Corporate Finance (WA) Pty Ltd
СМС	Consolidated Mining & Civil Pty Ltd
Committed Funding	Collective reference to Initial Placement and Subsequent Placements
The Company	Havilah Resources Limited
Corporations Act	The Corporations Act 2001 Cth
DCF	Discounted Future Cash Flows
Discretionary Funding	Conditional \$8 million in discretionary corporate funding to fund general corporate costs, tenement administration, Kalkaroo station and discretionary exploration
Discretionary Funding Shares	38,461,538 Havilah shares issued as part of the \$8 million Discretionary Funding
EBIT	Earnings before interest and tax
EBITDA	Earnings before interest, tax, depreciation and amortisation



Reference	Definition
Exco	Exco Operations (SA) Ltd
FME	Future Maintainable Earnings
FOS	Financial Ombudsman Service
The Funding Component	\$75 million funding package, which is to comprise a \$6 million initial placement and further \$43.5 million in placements over a three-year period committed by SIMEC, with the potential for SIMEC to also provide an additional \$17.5 million in conditional project funding and \$8 million in conditional discretionary corporate funding.
Grants	Grants Iron Ore Project
Grants Basin	Grants Basin Iron Ore Project
Havilah	Havilah Resources Limited
Initial Placement	A committed initial placement of \$6 million, funded by way of subscription for fully paid ordinary shares, which will be priced at the 45-day VWAP of Havilah to 30 April 2019, which was \$0.154
JORC Code	The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012 Edition)
Kalkaroo or Kalkaroo Project	Kalkaroo Copper-Cobalt-Gold Project
Km	Kilometres
Km²	Square kilometres
Maldorky	Maldorky Iron Ore Project
Milestone Shares	224,566,244 Havilah shares issued as part of the \$43.5 million Subsequent Placements
The Model	Detailed cash flow model for the Kalkaroo Project prepared by Havilah with the assistance of advisors
Mutooroo	Mutooroo Copper-Cobalt Project
Mutooroo District	Mutooroo Copper-Cobalt District
NAV	Net Asset Value
NoM	Notice of Meeting



	Reference	Definition
	North Portia	North Port
>	NSR	Net smelt
	Permitted Employee Options	7,201,072 disclosed
)	PFS	Preliminar
/	Placement Shares	38,961,03
	Portia	Portia Gol
)	Prospect Hill	Prospect H
	QMP	Quoted m
)	RBA	Reserve B
1	Reference Share Price	45-day VW
)	Regulations	Corporatio
	Our Report	This Indep
	RG 74	Acquisitio
	RG 111	Content o
	RG 112	Independe
)	The Rights Issue	Havilah to Reference
)	RML	Red Metal
	Section 611	Section 61
	The Security Component	SIMEC is se prepayme grant SIME Aura, Mute
		these subs
	Shareholders	Sharehold

orth Portia	North Portia Copper-Gold-Cobalt Project
SR	Net smelter return
ermitted Employee Options	7,201,072 specific employee options granted, or to be granted, to employees as disclosed by Havilah to SIMEC prior to the SSA
FS	Preliminary feasibility study
acement Shares	38,961,039 Havilah shares issued as part of the \$6 million Initial Placement
ortia	Portia Gold Mine
rospect Hill	Prospect Hill tin project
MP	Quoted market price
ВА	Reserve Bank of Australia
eference Share Price	45-day VWAP of Havilah share price to 30 April 2019, which was \$0.154
egulations	Corporations Act Regulations 2001 (Cth)
ur Report	This Independent Expert's Report prepared by BDO
G 74	Acquisitions approved by Members (December 2011)
G 111	Content of expert reports (March 2011)
G 112	Independence of experts (March 2011)
he Rights Issue	Havilah to undertake a pro-rata rights issue at a 10%, or greater, discount to the Reference Share Price, to existing shareholders to raise up to \$5 million
ML	Red Metal Ltd
ection 611	Section 611 of the Corporations Act
he Security Component	SIMEC is seeking protection for its interest in Havilah between each milestone prepayment date and the date of issue of subscription shares by requiring Havilah to grant SIMEC security over the shares that the Company holds in each of Copper Aura, Mutooroo Metals and Iron Genesis, and over the tenements held by each of these subsidiaries pursuant to specific security deeds
nareholders	Shareholders of Havilah not associated with the Transaction



Reference	Definition
SIMEC	OneSteel Manufacturing Pty Ltd trading as SIMEC Mining, a subsidiary of the SIMEC Group, which is a member of the GFG Alliance
SSA	Share subscription agreement
Subsequent Placements	Committed subsequent placements totalling \$43.5 million
Sum-of-Parts	A combination of different methodologies used together to determine an overall value where separate assets and liabilities are valued using different methodologies
The Transaction	Collectively, the Funding Component and the Security Component
Valmin Code	Australasian Code for Public Reporting of Technical Assessments and Valuations of Mineral Assets (2015 Edition)
Valuation Engagement	An Engagement or Assignment to perform a Valuation and provide a Valuation Report where the Valuer is free to employ the Valuation Approaches, Valuation Methods, and Valuation Procedures that a reasonable and informed third party would perform taking into consideration all the specific facts and circumstances of the Engagement or Assignment available to the Valuer at that time.
VWAP	Volume Weighted Average Price
WACC	Weighted Average Cost of Capital
Wanbao	Wanbao Mining Limited

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For permission requests, write to BDO Corporate Finance (WA) Pty Ltd, at the address below:

The Directors

BDO Corporate Finance (WA) Pty Ltd 38 Station Street SUBIACO, WA 6008 Australia



# Appendix 2 - Valuation Methodologies

Methodologies commonly used for valuing assets and businesses are as follows:

### Net asset value ('NAV')

Asset based methods estimate the market value of an entity'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
- Net assets on a going concern method

The orderly realisation of assets method estimates fair market value by determining the amount that would be distributed to entity holders, after payment of all liabilities including realisation costs and taxation charges that arise, assuming the entity is wound up in an orderly manner.

The liquidation method is similar to the orderly realisation of assets method except the liquidation method assumes the assets are sold in a shorter time frame. Since wind up or liquidation of the entity may not be contemplated, these methods in their strictest form may not be appropriate. The net assets on a going concern method estimates the market values of the net assets of an entity but does not take into account any realisation costs.

Net assets on a going concern basis are usually appropriate where the majority of assets consist of cash, passive investments or projects with a limited life. All assets and liabilities of the entity are valued at market value under this alternative and this combined market value forms the basis for the entity's valuation.

Often the FME and DCF methodologies are used in valuing assets forming part of the overall Net assets on a going concern basis. This is particularly so for exploration and mining companies where investments are in finite life producing assets or prospective exploration areas.

These asset based methods ignore the possibility that the entity's value could exceed the realisable value of its assets as they do not recognise the value of intangible assets such as management, intellectual property and goodwill. Asset based methods are appropriate when an entity is not making an adequate return on its assets, a significant proportion of the entity's assets are liquid or for asset holding companies.

### Quoted Market Price Basis ('QMP')

A valuation approach that can be used in conjunction with (or as a replacement for) other valuation methods is the quoted market price of listed securities. Where there is a ready market for securities such as the ASX, through which shares are traded, recent prices at which shares are bought and sold can be taken as the market value per share. Such market value includes all factors and influences that impact upon the ASX. The use of ASX pricing is more relevant where a security displays regular high volume trading, creating a liquid and active market in that security.

### 3 Capitalisation of future maintainable earnings ('FME')

This method places a value on the business by estimating the likely FME, capitalised at an appropriate rate which reflects business outlook, business risk, investor expectations, future growth prospects and other entity specific factors. This approach relies on the availability and analysis of comparable market data.

2



The FME approach is the most commonly applied valuation technique and is particularly applicable to profitable businesses with relatively steady growth histories and forecasts, regular capital expenditure requirements and non-finite lives.

The FME used in the valuation can be based on net profit after tax or alternatives to this such as earnings before interest and tax ('EBIT') or earnings before interest, tax, depreciation and amortisation ('EBITDA'). The capitalisation rate or 'earnings multiple' is adjusted to reflect which base is being used for FME.

### 4 Discounted future cash flows ('DCF')

The DCF methodology is based on the generally accepted theory that the value of an asset or business depends on its future net cash flows, discounted to their present value at an appropriate discount rate (often called the weighted average cost of capital). This discount rate represents an opportunity cost of capital reflecting the expected rate of return which investors can obtain from investments having equivalent risks.

Considerable judgement is required to estimate the future cash flows which must be able to be reliably estimated for a sufficiently long period to make this valuation methodology appropriate.

A terminal value for the asset or business is calculated at the end of the future cash flow period and this is also discounted to its present value using the appropriate discount rate.

DCF valuations are particularly applicable to businesses with limited lives, experiencing growth, that are in a start up phase, or experience irregular cash flows.

### 5 Market Based Assessment

The market based approach seeks to arrive at a value for a business by reference to comparable transactions involving the sale of similar businesses. This is based on the premise that companies with similar characteristics, such as operating in similar industries, command similar values. In performing this analysis it is important to acknowledge the differences between the comparable companies being analysed and the company that is being valued and then to reflect these differences in the valuation.



# Appendix 3 - Discount rate assessment

Determining the correct discount rate, or cost of capital, for a business requires the identification and consideration of a number of factors that affect the returns and risks of a business, as well as the application of widely accepted methodologies for determining the returns of a business.

The discount rate applied to the forecast cash flows from a business represents the financial return that will be required before an investor would be prepared to acquire (or invest in) the business.

The capital asset pricing model ('CAPM') is commonly used in determining the market rates of return for equity type investments and project evaluations. In determining a business' weighted average cost of capital ('WACC') the CAPM results are combined with the cost of debt funding. WACC represents the return required on the project, whilst CAPM provides the required return on an equity investment.

In valuing the Kalkaroo Project, we consider the most appropriate discount rate to apply to the respective projects' cash flows is the WACC, being the return required on the business. This is because we are assessing Havilah Resources' 100% interest in the Kalkaroo Project on a project level from which the cash flows are based on.

### Cost of Equity and Capital Asset Pricing Model

CAPM is based on the theory that a rational investor would price an investment so that the expected return is equal to the risk free rate of return plus an appropriate premium for risk. CAPM assumes that there is a positive relationship between risk and return, that is, investors are risk averse and demand a higher return for accepting a higher level of risk.

CAPM calculates the cost of equity and is calculated as follows:

САРМ	
Ke	$= R_f + \beta x (R_m - R_f) + \alpha$
Where:	
K <sub>e</sub>	= expected equity investment return or cost of equity in nominal terms
R <sub>f</sub>	= risk free rate of return
R <sub>m</sub>	= expected market return
R <sub>m</sub> - R <sub>f</sub>	= market risk premium
В	= equity beta
А	= inherent risk adjustment

The individual components of CAPM are discussed below.

### Risk Free Rate (Rf)

The risk free rate is normally approximated by reference to a long term government bond with a maturity equivalent to the timeframe over which the returns from the assets are expected to be received.

We have considered current and implied forward yields for the 10-year Australian Government Bond yield. Based on our analysis, we have adopted a long term estimate of the 10-year Australian Government Bond yield of 2.61%.



### Market Risk Premium (Rm - Rf)

The market risk premium represents the additional return that investors expect from an investment in a well-diversified portfolio of assets. It is common to use a historical risk premium, as expectations are not observable in practice. In order to determine an appropriate market risk premium in Australia, we analysed historical data. Our sample of data included the daily historical market risk premiums in Australia over the last ten years, from May 2009 to May 2019. Our research indicated the market risk premium in Australia has ranged from a low of 4.01% to a high of 11.89%.

The market risk premium is derived on the basis of capital weighted average return of all members of the S&P 200 Index minus the risk free rate, which is dependent on the 10-year Australian Government Bond rate.



Source: Bloomberg and BDO analysis

The graph above illustrates the frequency of observations of the Australian market risk premium over the past ten years. The graph indicates that a high proportion of the sample data for Australian market risk premiums lie in the range of 6% to 8%. This is supported by the long term historical average market risk premium of between 6% and 8%, which is commonly used in practice. For the purpose of our report we have adopted a market risk premium of between 6% and 8%.

### Equity Beta

Beta is a measure of the expected correlation of an investment's return over and above the risk free rate, relative to the return over and above the risk free rate of the market as a whole; a beta greater than one implies that an investment's return will outperform the market's average return in a bullish market and underperform the market's average return in a bearish market. On the other hand, a beta less than one implies that the business' will underperform the market's average return in a bullish market and outperform the market's average return in a bearish market.



Equity betas are normally either a historical beta or an adjusted beta. The historical beta is obtained from the linear regression of a stock's historical data and is based on the observed relationship between the security's return and the returns on an index. An adjusted beta is calculated based on the assumption that the relative risk of the past will continue into the future, and is hence derived from historical data. It is then modified by the assumption that a stock will move towards the market over time, taking into consideration the industry risk factors which make the operating risk of the company greater or less risky than comparable listed companies.

It is important to note that it is not possible to compare the equity betas of different companies without having regard to their gearing levels. Thus, a more valid analysis of betas can be achieved by "ungearing" the equity beta (Ba) by applying the following formula:

$$Ba = B / (1+(D/E \times (1-t)))$$

In order to assess the appropriate equity beta for the Kalkaroo Project, we have had regard to the equity betas of listed companies with projects similar in nature to the Kalkaroo Project, with respect to commodity type and location. Our analysis includes exploration and development companies as well as companies in production. Given that the Kalkaroo Project is likely to move into production in the medium term, we consider these companies to represent a reasonable basis on which to assess the discount rate. The geared betas below have been calculated against the S&P ASX All Ordinaries Index using weekly data over a three-year period.

	Market Capitalisation	Geared Beta	Gross Debt/Equity	Ungeared Beta
Company	17-May-19	(B)	(%)	(ва)
	(A\$m)			
OZ Minerals Limited (ASX:OZL)	3,104.3	1.16	0%	1.16
Sandfire Resources NL (ASX:SFR)	1,078.6	1.34	0%	1.34
Panoramic Resources Limited (ASX:PAN)	188.6	1.90	4%	1.85
Metals X Limited (ASX:MLX)	165.4	1.30	6%	1.24
Heron Resources Limited (ASX:HRR)	148.6	0.89	0%	0.89
Aeon Metals Limited (ASX:AML)	148.1	0.95	24%	0.81
Mincor Resources NL (ASX:MCR)	94.7	0.87	0%	0.87
Talisman Mining Limited (ASX:TLM)	16.7	1.04	0%	1.04
Mean		1.18	4%	1.15
Median		1.10	0%	1.10

Source: Bloomberg and BDO analysis

### Selected Beta (B)

In selecting an appropriate beta for the Kalkaroo Project, we considered the similarities between the comparable companies selected above. The comparable similarities and differences noted are:

- the comparable companies all have copper, copper-cobalt or copper-gold operations;
- the operations of the comparable companies are all located in Australia;
- the comparable companies' mining and development assets have varying risk profiles depending on the assets maturity and stage of production; and
- companies such as OZ Minerals Limited and Sandfire Resources NL operate on a significantly larger scale compared to Havilah Resources.



Having regard to the above, we consider an appropriate ungeared beta to apply to the Kalkaroo Project is between 1.1 to 1.2.

We note that Havilah's debt to equity ratio as at 31 Jan 2019 was 6.3%, however, we have applied a forecast debt to equity ratio of 50% to regear the aforementioned beta. We consider a 50% debt to equity ratio reflective of the approximate capital structure of Havilah and its funding of the Kalkaroo Project.

We have based this assessment of a forecast capital structure based on our analysis of comparable company funding structures. The list of comparable companies contains a mix of copper and gold-producers that funded the development of their projects through debt. Therefore, we have considered the capital structure of these companies as at the date of the initial drawdown of debt to derive an appropriate capital structure of Havilah when the Kalkaroo Project commences development.

Company Ticker	Company Name	Country of Operation	Commodity	D/E on Initial Drawdown
ASX:EVN	Evolution Mining Limited	Australia	Gold	44.1%
ASX:OZL	OZ Minerals Limited	Australia	Copper	49.1%
ASX:SAR	Saracen Mineral Holdings Limited	Australia	Gold	13.9%
ASX:RRL	Regis Resources Limited	Australia	Gold	30.0%
ASX:SFR	Sandfire Resources NL	Australia	Copper	153.3%
ASX:WSA	Western Areas Limited	Australia	Gold	171.7%
ASX:AMI	Aurelia Minerals Limited	Australia	Copper	47.4%
ASX:MOY	Millennium Minerals Limited	Australia	Gold	38.4%
ASX:AIS	Aeris Minerals Limited	Australia	Copper	138.9%
ASX:HGO	Hillgrove Resources Limited	Australia	Copper	23.9%
ASX:GCY	Gascoyne Resources Limited	Australia	Gold	62.2%
ASX:BLK	Blackham Resources Limited	Australia	Gold	33.8%
Mean				67.2%
Median				45.8%

Source: Capital IQ, Bloomberg and BDO analysis

Based on the research summarised above, we consider a debt to equity funding structure of approximately 50% to be reasonable.

Consequently, we consider an appropriate geared beta for the Kalkaroo Project to be between 1.5 and 1.6 (rounded to 1 decimal place).

### Cost of Equity

We have assessed the cost of equity to be in the range of 12% to 16% with our preferred value being a rounded midpoint of 14%.

Input	Value /	Adopted
	Low	High
Risk free rate of return	2.61%	2.61%
Equity market risk premium	6.00%	8.00%
Beta (geared)	1.5	1.6
Cost of Equity (rounded)	12%	16%
Source: BDO analysis		



### Weighted Average Cost of Capital

The WACC represents the market return required on the total assets of the undertaking by debt and equity providers. WACC is used to assess the appropriate commercial rate of return on the capital invested in the business, acknowledging that normally funds invested consist of a mixture of debt and equity funds. Accordingly, the discount rate should reflect the proportionate levels of debt and equity relative to the level of security and risk attributable to the investment.

In calculating WACC there are a number of different formulae which are based on the definition of cash flows (i.e., pre-tax or post-tax), the treatment of the tax benefit arising through the deductibility of interest expenses (included in either the cash flow or discount rate), and the manner and extent to which they adjust for the effects of dividend imputation. The commonly used WACC formula is the post-tax WACC, without adjustment for dividend imputation, which is detailed in the below table:

WACC	
WACC	$= \underbrace{E}_{E+D} K_e + \underbrace{D}_{D+E} K_d (1-t)$
Where:	
Ke	= expected return or discount rate on equity
K <sub>d</sub>	= interest rate on debt (pre-tax)
Т	= corporate tax rate
E	= market value of equity
D	= market value of debt
(1- t)	= tax adjustment

### Cost of Debt

We have assessed the relevant cost of debt for the Kalkaroo Project based on the terns of debt currently seen in the market for comparable companies at similar stages of development. Our analysis of comparable debt has provided us with comfort to consider an appropriate cost of debt of 8% per annum.

We have crosschecked this analysis with Havilah's current cost of debt for the \$6.0m debt facility from Investec, which we note as the floating Bank Bill Swap Bid Rate plus a credit margin of 8%.

### Calculation of WACC

Using the inputs above, we have calculated the WACC for the Kalkaroo Project as set out below:

Input	Value Adopted	
	Low	High
Cost of Equity (Ke)	12%	16%
Cost of Debt (Kd)	8%	8%
Proportion of Equity (E/(E+D)	67%	67%
Proportion of Debt (D/(E+D)	33%	33%
WACC	9.6%	12.3%

Source: BDO analysis

The WACC is therefore in the range of 9.6% to 12.3%, with a rounded midpoint value of 11%.



### **Comparable Listed Companies**

Descriptions of comparable listed companies are summarised as follows:

	Company	Business Description
D	OZ Minerals Limited (ASX:OZL)	OZ Minerals Limited engages in the exploration, development, mining, and processing of mining projects in Australia. The company is primarily known as a major copper producer in Australia. It owns and operates the Prominent Hill copper-gold mine located in northern South Australia and the Carrapateena copper-gold project located in South Australia. The company was founded in 2008 and is headquartered in Adelaide, Australia.
	Sandfire Resources NL (ASX:SFR)	Sandfire Resources NL explores for, evaluates, and develops mineral tenements and projects in Australia and internationally. It operates through two segments, DeGrussa Mine, and Exploration and Evaluation. The company primarily explores for copper, gold, and silver, as well as volcanogenic massive sulphide deposits. Its flagship project is a 100% owned DeGrussa copper-gold mine located in the Bryah Basin mineral province of Western Australia. Sandfire Resources NL is based in West Perth, Australia.
	Panoramic Resources Limited (ASX:PAN)	Panoramic Resources Limited engages in the exploration, evaluation, and development of mineral properties. The company's flagship project is the Savannah nickel-copper-cobalt project in Western Australia. The company has reported proven and probable nickel ore reserves and is preparing to enter into production within the next six to nine months. The company was founded in 2001 and is based in Perth, Australia.
	Metals X Limited (ASX:MLX)	Metals X Limited engages in the operation of tin and copper mines in Australia. The company is also involved in the exploration and development of base metals projects. It operates through Renison Tin Operations, Nifty Copper Operations, Maroochydore Copper Project, and Wingellina Nickel Project segments. The company holds 100% interest in the Nifty copper project, as well as Maroochydore copper project in Western Australia. The company was incorporated in 2004 and is based in Perth, Australia.
	Aeon Metals Limited (ASX:AML)	Aeon Metals Limited engages in the exploration and development of mineral properties in Australia. The company explores for copper, cobalt, gold, lead, zinc, molybdenum, silver, and base metal deposits. Its flagship property is the Walford Creek project comprising 3 exploration permits covering an area of 173 square kilometres located in northwest Queensland. Aeon Metals Limited was incorporated in 2006 and is headquartered in Sydney, Australia.
	Heron Resources Limited (ASX:HRR)	Heron Resources Limited engages in the exploration and development of base and precious metal deposits in Australia. It explores for zinc, copper, lead, gold, silver, and nickel deposits. The company's primary project is the Woodlawn zinc-copper project located to the southwest of Sydney, New South Wales and has commenced development. Heron Resources Limited is headquartered in Sydney, Australia.
	Mincor Resources NL (ASX:MCR)	Mincor Resources NL engages in the exploration, development, and mining of mineral resources in Australia. It explores for gold, nickel, and copper deposits. The company holds interests in the Durkin North, Miitel/Burnett, and Cassini nickel projects, as well as the Widgiemooltha gold project located in Kambalda, Western Australia. It also holds interests in the Tottenham copper-gold project located in the Lachlan Fold Belt of New South Wales. The company has progressed its development in its nickel assets and has commenced production in the Widgiemooltha gold project Mincor Resources NL is headquartered in West Perth, Australia.
	Talisman Mining Limited (ASX:TLM)	Talisman Mining Limited engages in the exploration and development of mineral properties in Western Australia. The company explores for base metals and other minerals, including copper, copper-gold, gold, and nickel. It holds 100% interests in the Sinclair nickel project covering a tenement package of 290 square kilometres situated in southern portion of the Agnew-Wiluna Greenstone belt, the Doolgunna copper-gold project in Western Australia and the Lachlan copper-gold project in New South Wales. The company has been developing the Monty Copper-Gold Mine as part of its Doolgunna copper-gold project. The company is based in Perth, Australia.
	source: Capital IQ	



## Appendix 4 - Independent Valuation Report

### AMC Consultants Pty Ltd

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# Report

### **Independent Technical Expert Report** Havilah Resources Limited

AMC Project 819009 29 July 2019

SHERIF ANDRAWES Partner, Corporate Finance Global & National Practice Leader - Natural Resources BDO Corporate Finance (WA) Pty Ltd Level 1, 38 Station Street Subiaco WA 6008 AUSTRALIA

### Dear Sir

The Directors of Havilah Resources Ltd (Havilah) have appointed BDO Corporate Finance (WA) Pty Ltd (BDO) to prepare an Independent Expert Report (IER) in relation to a proposed transaction involving the acquisition of an interest in more than 20% of the shares in Havilah by SIMEC Mining Ltd (SIMEC).

AMC Consultants Pty Ltd (AMC), as a Specialist as defined in the VALMIN Code<sup>1</sup> has prepared this independent technical Specialist's report (ITSR) commissioned by BDO. AMC has taken instruction from and will provide its report to BDO for use by BDO in preparing its IER. AMC is advised that the ITSR will be included in full as an appendix to BDO's IER that will form part of a notice of meeting to be sent by Havilah to its shareholders in relation to the proposed transaction. AMC is being paid and indemnified by Havilah.

AMC's scope of work for the ITSR is to provide:

- A brief description and key characteristics of the Kalkaroo copper gold project (Kalkaroo or the Project).
- An opinion as to the reasonableness (within a range if necessary) of key technical parameters for Kalkaroo.
- A brief description and a valuation (within a range) of the other mineral assets of Havilah (including the residual Kalkaroo Mineral Resources, Mutooroo, Maldorky, Grants, and Oban Mineral Resources), and valuation of exploration tenements hosting targets such as Grant's Iron Ore Basin (Grants Basin) project, using exploration asset valuation methods.
- An assessment as to whether the future production benchmarks of North Portia are likely to be achieved and what the net smelter return (NSR) value will be.

This report and the conclusions in it are effective at 24 June 2019.

### Kalkaroo

Kalkaroo is located in north-east South Australia approximately 90 km west of Broken Hill and 400 km north-east of Adelaide.

Kalkaroo is a metalliferous mining project consisting of two years of construction and prestripping followed by an open pit mining operation extracting 100 Mt of ore and 350 Mt waste over a fourteen-year period. The ore will be processed through a plant with separate 4 Mtpa oxide and 7 Mtpa sulphide circuits to produce gold, coarse native copper, and copper-gold concentrate products.

The Kalkaroo Mineral Resources and Ore Reserve for Kalkaroo have been estimated with reference to the JORC Code  $(2012)^2$ .

<sup>&</sup>lt;sup>1</sup> The Australasian Code for the Technical Assessment and Valuation of Mineral Assets. The VALMIN Code 2015 Edition. The VALMIN Code has been prepared by the VALMIN Committee, a joint committee of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and the Mineral Industry Consultants Association.

<sup>&</sup>lt;sup>2</sup> JORC Code. Australasian Joint Ore Reserves Committee (JORC), Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code), 2012 edn, effective December 2012, 44 pp., available <http://www.jorc.org/docs/JORC\_code\_2012.pdf>, viewed 22 May 2019.

Mr Robert Dennis of RPMGlobal Asia Ltd has signed off as the Competent Person (CP), as defined by the JORC Code, for the Kalkaroo copper and gold Mineral Resources. Dr Chris Giles, executive director and a consultant to Havilah has signed off as the CP for the Kalkaroo cobalt Mineral Resources, and Igor Bojanic of RPMGlobal Asia Ltd has signed off as the CP for the Ore Reserves.

In providing its opinion on Kalkaroo, AMC has used information provided by Havilah, including a 2018 pre-feasibility study (PFS). The PFS was prepared by RPMGlobal Asia Ltd on behalf of Wanbao Mining Limited, under an agreement with Havilah. AMC has reviewed the production and cost schedules, provided by Havilah, for reasonableness and adjusted the production and cost schedules provided to BDO where AMC considers adjustment is appropriate.

### **Mineral Resource and Ore Reserve**

The Kalkaroo deposit contains 224 Mt of copper-gold Mineral Resource (Table E.1) The cobalt sulphide Inferred Mineral Resource has been estimated separately within the copper-gold Mineral Resource. The Mineral Resource is inclusive of the Ore Reserve of 100 Mt (Table E.2).

Category	Quantity (Mt)	Cobalt grade (ppm)	Copper grade (%)	Gold Grade (g/t)	Cobalt content (kt)	Copper content (kt)	Gold content (koz)
Cobalt							
Inferred	193.3	120	-	-	23.2	-	-
Oxide gold cap							
Measured	12.0	-	-	0.82	-	-	316.4
Indicated	6.97	-	-	0.62	-	-	138.9
Inferred	2.71	-	-	0.68	-	-	59.2
Total	21.7	-	-	0.74	-	-	514.5
Sulphide coppe	er-gold						
Measured	85.6	-	0.57	0.42	-	487.9	1,160
Indicated	27.9	-	0.49	0.36	-	136.7	324
Inferred	110.3	-	0.43	0.32	-	474.3	1,139
Total	223.8	-	0.49	0.36	-	1098.9	2623

able E.1 Mineral Resource-	Kalkaroo	copper	gold	project
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Notes: Source document for Mineral Resource is Havilah ASX announcements March 2018 and November 2018. The copper-gold resource was initially release in Havilah ASX announcement January 2018.

The cobalt Mineral Resource falls within the copper-gold Mineral Resource outline. These tonnes are not additional.

Mr Robert Dennis, an employee of RPMGlobal is the competent person for the copper and gold Mineral Resource. The competent person for the cobalt Mineral Resource is Dr Chris Giles, an executive director and consultant to Havilah.

### Ore Reserve

AMC considers that the Ore Reserve estimation methodology is reasonable, and the Ore Reserve has been classified and reported in accordance with the JORC Code. AMC considers the production schedule, operating expenditure, capital expenditure to be reasonable.

The Ore Reserve has been prepared as part of the Kalkaroo PFS. AMC considers that the PFS complies with the definition of a pre-feasibility study as defined in the JORC Code.

Category	Quantity (Mt)	Cobalt grade (ppm)	Copper grade (%)	Gold Grade (g/t)	Cobalt content (kt)	Copper content (kt)	Gold content (koz)
Proved	90.2	N/A	0.48	0.44	N/A	430	1,282
Probable	9.9	N/A	0.45	0.39	N/A	44	125
Total	100.1	N/A	0.47	0.44	N/A	474	1,407

### Table E.2Ore Reserve – Kalkaroo copper gold project

Notes: Source document for the Ore Reserve is Havilah ASX announcement June 2018. Cobalt recovery is not included in the Ore Reserve.

The competent person is Igor Bojanic, a full-time employee of RPMGlobal Asia Ltd.

### Geology

The Kalkaroo deposit is hosted by Proterozoic age rock of the Willyama Supergroup in the Olary Domain of the Curnamona Province. The primary mineralization consists predominantly of chalcopyrite, pyrite, molybdenite, cobalt, and gold, in both replacement and vein styles. The mineralization has been weathered to approximately 150 m below surface.

### Mineral Resource estimation

The mineralization has been defined by drilling methods that are standard across the mining industry. Recognised mining industry software has been used to validate geological data for consistency, overlaps etc.

Assay QA/QC protocols were in place that included certified reference material, blanks and duplicate assays. QA/QC submission rates are considered by AMC to be reasonable, although not always to accepted industry practice. Results of the available QA/QC data suggests anomalies within the data were either not present, have been addressed, or were not considered material to the Mineral Resource estimation.

In AMC's opinion, the geological interpretation and overprinted domaining is appropriate for the estimation. Grade estimation uses internationally recognised processes. Validation included visual checks and swath plots, and estimation by two methods.

Classification of the Mineral Resource is based on drilling density and classifications within a re-blocked model to provide continuous envelopes with similar confidence levels.

AMC considers that the Mineral Resource estimate classification, given the geometry of the geology and the drillhole data densities, is reasonable. The estimates are appropriately classified as Measured, Indicated and Inferred Resources in accordance with the JORC Code. AMC broadly concurs with the Mineral Resource classification.

### Geotechnical and hydrogeology

The deeply weathered rock has significant implications for open pit slope design. Experience with mining at Havilah's Portia Mine has informed the slope design criteria that has been determined for the Namba Formation and the saprolite.

The groundwater is at approximately 50 m below surface with total dissolved solids of 22,000 ppm. Groundwater studies predict that dewatering will produce 9.7 to 15.5 ML/day, of which processing will consume 80%. The remaining 20% will be used for dust suppression and lost to evaporation. Dewatering is considered critical for pit wall stability.

### Mine plan

The proposed mine is a conventional truck and excavator bulk mining operation, utilising 5 m benches for ore and 10 m benches for waste. The Namba Formation and saprolite are expected to be free dig. Drill-and-blast will be used in the transition material and in fresh rock.

The open pit is designed in six stages with the initial stage starting at Kalkaroo West. The ultimate pit is planned to be 3.5 km long by 0.9 km wide with a depth of 280 m.

The Kalkaroo open pit plan is to mine approximately 452 Mt over a fourteen-year period. Following the initial pre-strip in Year-1, the mine plan establishes a relatively constant mining rate of 42 Mtpa until Year-9, after which the planned mining rate decreases as Stage 6 is the only stage being mined.

### Processing

The Project includes two processing plants for treating mined ore:

- A 4 Mtpa oxide processing plant to treat blends of saprolite, native copper and chalcocite ores. This processing plant will commence production in Year-2. When processing chalcocite ore only, the plant will have a maximum throughput of 2 Mtpa.
  - A 7 Mtpa sulphide processing plant to treat blends of chalcocite and chalcopyrite ores. This processing plant will commence production in Year-5 of operation.

The oxide processing plant is designed to produce a native copper product and a separate gold concentrate using gravity circuits. A gold-rich copper concentrate will also be produced using a flotation circuit. The sulphide processing plant will produce a gravity gold concentrate and a gold-rich copper flotation concentrate.

The concentrate will be transported in containers from the Mutooroo siding to Port Pirie, from where it will be shipped to China for smelting and refining.

### Infrastructure

The proposed infrastructure, additional to the processing plant and administration facilities, includes plans for:

- A diversion channel to divert water flowing north in an ephemeral creek around the open pit site.
- A 200-person camp to accommodate fly-in-fly-out employees from Adelaide and drive-indrive-out employees from Broken Hill.
- The use of the Honeymoon Mine airstrip.
- A power supply, as either on-site diesel or renewable generation, or connection to the national electricity grid at Silverton.
- A tailings storage facility.

### **Project schedule**

The timing for commencing development of the Project will depend on the ability of the Project owner to obtain finance to advance development of the Project. Some government approvals such as a program for environment protection and rehabilitation (PEPR) are also required.

Once commenced, development of the Project is planned to take 18 months. During the initial four years of production the processing plant is designed to treat 4 Mtpa of oxide ore to recover concentrates containing approximately 60 koz per year of gold and 11 kt of copper per year. A sulphide processing plant added in Year-5 is designed to increase processing throughput to 11 Mtpa. The combined production of the two plants results in a planned production of 80 koz of gold per year and 40 ktpa of copper.

### Costs

The Project has an estimated initial capital cost of A\$580 million. This is spent over the five years as it includes the construction of the sulphide plant in year three and four. Sustaining capital is a total of A\$100 million over the life of Project.

The estimated operating costs over the life of the Project are:

- Mining (and contingency), A\$2.24 per tonne of mined ore and waste.
- Processing, A\$10.14 per tonne of ore processed.
- General and administration (G&A), A\$1.57 per tonne of ore processed.
- Concentrate selling cost, transport, smelting and royalty, A\$6.00 per tonne of ore.

### Assessment of the Project's key technical parameters

The key technical parameters of the Kalkaroo Project have been provided to AMC in by Havilah as a spreadsheet model<sup>3</sup>. AMC has reviewed the model and provides the following conclusions:

- The mine plan is supported by the PFS and the total tonnage and grade of the ore mined matched the Ore Reserve. AMC considers that the mine plan is achievable and is based on reasonable grounds. AMC notes that gold production shown in the spreadsheet model is approximately 29 koz of gold less than is reported in the detailed processing schedule. AMC has included this additional contained metal in the production schedules provided to BDO.
- The plans for processing ore together with the estimates of copper and gold recovery to concentrates are supported by testwork carried out as part of the PFS, and in AMC's opinion are based on reasonable grounds.
- Capital costs included in the spreadsheet model are based on work carried out at during the PFS. AMC considers them to be based on reasonable grounds.
- In AMC's opinion, the operating costs estimates for mining and G&A are achievable but optimistic when benchmarked against comparable open pit operations. AMC has doubled the G&A costs in the inputs provided to BDO. AMC believes that the adjustments and the resulting operating costs provided to BDO are based on reasonable grounds.

### **Exploration assets**

AMC considers that the Mineral Resource estimates for the exploration assets have been completed using recognised processes with drillhole data supported by a QA/QC protocol. The estimates are appropriately classified as Measured, Indicated and Inferred Mineral Resources in accordance with the JORC Code (2012). AMC broadly concurs with the Mineral Resource classifications.

The methods considered by AMC in this ITSR for valuation of the exploration assets include:

- The Yardstick Value method
- Actual Transaction method
- Comparable Transaction method
- Exploration Expenditure method

The valuation methods used by AMC, based on the available information, are appropriate for the nature of the deposits and the amount of exploration carried out on the assets. The exploration assets include the Mineral Resources reported as at July 2018 that have not been included in Havilah's production cases. At Kalkaroo this is approximately 55% of the total Mineral Resource.

AMC considers the valuation for Havilah's mineral assets other than the Kalkaroo production cases to be between A\$38.8 million and A\$86.0 million with a preferred value of A\$62.4 million.

### **North Portia royalty**

Havilah divested the mining lease on which Portia and North Portia are located to Consolidated Mining & Civil Pty Ltd (CMC) and Benagerie Gold & Copper Pty Ltd (BGC) (subsidiary of CMC) in July 2018, and retained a NSR royalty as part of the sale agreement.

AMC was requested to assess whether the future production benchmarks of North Portia are likely to be achieved and what the NSR value will be.

AMC has assessed the possible productions scenarios for North Portia and considers the NSR value to not be material.

<sup>&</sup>lt;sup>3</sup> Havilah\_Economic Model\_V18\_UpdateHavilahPress Release\_CuPayablev2\_values\_AMC.xlsb 30 May 2019

Yours sincerely

Andrew Proudman Principal Consultant

unas 0

Mike Thomas Principal Consultant

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### Appendices

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### Distribution list

1 e-copy to Havilah Resources Ltd 1 e-copy to AMC Consultants Pty Ltd

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### 1 Introduction

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### 1.1 Scope of work

AMC's scope of work for the ITSR is to provide:

- A brief description and key characteristics of the Kalkaroo copper gold (Kalkaroo or the Project).
- An opinion as to the reasonableness (within a range if necessary) of key technical parameters for Kalkaroo. The key technical parameters specified were:
  - The size and quality of the mineral resource and ore reserve estimates.
  - The anticipated timing for development of the Project.
  - The expected production profiles.
  - The initial and sustaining capital cost estimates.
  - The estimated operating costs.
- A brief description and a valuation (within a range) of the other mineral assets of Havilah (including the residual Kalkaroo mineral resources, Mutooroo, Maldorky, Grants, and Oban Mineral Resources) and valuation of exploration tenements hosting targets such as Grant's Iron Ore Basin (Grants Basin) project, using exploration asset valuation methods.
- An assessment as to whether the future production benchmarks of North Portia are likely to be achieved and what the net smelter return (NSR) value will be.

ITRS was a desktop study based on a review of documents provided by Havilah, discussion with Havilah personnel, and publicly available information.

In providing its opinion on Kalkaroo, AMC has used information provided by Havilah, including information from the 2018 pre-feasibility study (PFS) and up to date data relative to each project. The PFS was prepared by RPMGlobal Asia Ltd (RPMGlobal) on behalf of Wanbao Mining Limited, under an agreement with Havilah. Dr Chris Giles, an executive director and consultant to Havilah has signed off as the Competent Person (CP), as defined by the JORC Code, for the Kalkaroo cobalt Mineral Resources. Mr Robert Dennis, of RPMGlobal, has signed off as the Competent Person (CP), as defined by the JORC Code, for the Kalkaroo copper and gold Mineral Resources. Mr Igor Bojanic of RPMGlobal has signed off as the CP, as defined by the JORC Code, for the Kalkaroo Ore Reserves.

AMC did not undertake a site visit. Data provided by Havilah was comprehensive and detailed, including photographs of sites and drill core. Other than drilling, there has been no intrusive activity on the relevant tenements. AMC deemed that with the available data, there was no additional benefit to be had from a site visit.

<sup>&</sup>lt;sup>4</sup> The Australasian Code for the Technical Assessment and Valuation of Mineral Assets. The VALMIN Code 2015 Edition. The VALMIN Code has been prepared by the VALMIN Committee, a joint committee of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and the Mineral Industry Consultants Association.

### **1.2 Report qualifications**

All monetary figures in this ITSR are expressed in 2019 Australian dollars (A\$) or United States dollars (US\$) unless otherwise noted. Costs are presented on a cash cost basis unless otherwise specified.

AMC has undertaken its commission to prepare this Preliminary ITSR as a Specialist in accordance with the VALMIN Code to the extent that the code is relevant to AMC's engagement.

AMC's use, in this Preliminary ITSR, of the terms Mineral Resources and Ore Reserves is in accordance with the 2012 JORC Code. The totals of Mineral Resource and Ore Reserve estimates presented in this Preliminary ITSR have been rounded.

For the purposes of preparing this ITSR, AMC reviewed material technical reports and management information, and communicated with management in Havilah's Adelaide office.

In undertaking its commission in accordance with the VALMIN Code, AMC requested Havilah to provide it with all relevant technical, financial, and other information relating to the Mineral Assets required to prepare the ITSR. Further, AMC is entitled to rely upon and assume the accuracy and completeness of all material information that has been furnished to it by Havilah.

AMC has not audited the information provided to it by Havilah but has aimed to satisfy itself that all of the information has been prepared in accordance with proper industry standards and is based on data that AMC considers to be of acceptable quality and reliability. Where AMC has not been so satisfied, AMC has included comment in this ITSR and made reasonable modifications in the production case provided to BDO.

### 2 Kalkaroo copper project

### 2.1 Project description

Kalkaroo is a metalliferous mining project consisting of two years of construction and prestripping followed by an open pit operation extracting 100 Mt of ore and 350 Mt waste over a fourteen-year period. The ore will be processed through a plant with separate 4 Mtpa oxide and 7 Mtpa sulphide circuits to produce gold, coarse native copper, and copper-gold concentrate products.

Kalkaroo is located in north-east South Australia approximately 90 km west of Broken Hill and 400 km north-east of Adelaide Figure 2.1. The Project is accessed via the Barrier Highway and the Kalkaroo Access Road north from Mingary.





Source: Havilah ASX Announcement June 2018

### 2.1.1 Project history

The Kalkaroo deposit was discovered in 1992 by Placer Dome Inc (Placer) while drilling a magnetic anomaly. Further work was undertaken by Newcrest Mining Limited (Newcrest) and Mount Isa Mines Limited (MIM).

Havilah acquired the exploration licence from the Placer MIM joint venture in 2004, compiled the previous data and drilled out a 70 Mt copper-gold resource. In 2007 to 2010 an open pit feasibility study was funded by Glencore Limited (Glencore) who elected not to proceed with development. From 2010 to 2018 Havilah continued with further drilling and evaluation work and resource on the Project.

In 2017 the Mineral Resource was re-estimated to include new drilling data and Havilah signed a memorandum of understanding (MOU) with Wanbao Mining Limited to fund a pre-feasibility study which was undertaken by RPM Global Asia Ltd. This pre-feasibility study resulted in a maiden Ore Reserve being released in June 2018 coincident with the expiry of the MOU.

### 2.1.2 Project morphology

The Project site is within the Barrier Range outwash zone, north of the Olary Ranges. Climate is semi-arid. Topography across the site is generally flat with a surface between 118 m RL and 121 m RL, and a with a gradient of 1:1000 north towards Lake Frome. The site is intersected by an ephemeral creek running north towards Lake Frome within the Lake Eyre catchment.

### 2.1.3 Project geology

Kalkaroo is hosted in Proterozoic age rocks of the Willyama Supergroup within the in the Olary Domain of Curnamona province. The Proterozoic rocks are overlain by Tertiary sediments of the Namba formation.

The deposit occurs as an arcuate structure at the northern end of the Kalkaroo Dome magnetic complex, on Benagerie Ridge (Figure 2.2). Mineralization is stratabound, up to approximately 200 m in thickness, and between 50 m and 500 m deep. Copper and gold are hosted in a replacement style mineralization in a favourable stratigraphic horizon with later faulting and vein emplacement causing enrichment in places.

Mineralization occurs adjacent to the contact between the Curnamona group oxidised rocks and the reduced Strathearn Group rocks. Mineralization is crosscut by the Kalkaroo West vein and the Central vein systems.

Figure 2.2 Regional geology



The primary mineralization consists predominantly of chalcopyrite, pyrite, molybdenite and gold, in both replacement and vein styles, and cobalt in pyrite. The mineralization has been weathered to approximately 150 m below surface.

The key copper-gold mineralized horizons are:

- Gold supergene enrichment
- Native copper zone
- Chalcocite zone
- Chalcopyrite zone

### 2.2 Mineral Resources

The Kalkaroo Mineral Resource estimate as reported by Havilah is summarized in Table 2.1. Mr Robert Dennis, and employee of RPMGlobal is acting as the Competent Person (CP) for the public reporting of the copper and gold Mineral Resource estimate in accordance with the JORC Code. Dr Christopher Giles (MAIG<sup>5</sup>), an executive director and consultant to Havilah is acting as the CP for the public reporting of the cobalt Mineral Resource estimate. The Inferred Mineral Resource for the cobalt sulfide has been estimated separately within the copper-gold Mineral Resource and has not been added to the total tonnage.

The Mineral Resource estimate for Kalkaroo is as at July 2018. It was reported publicly by Havilah in its July 2018 Annual Report and January 2018 ASX announcement. The 2018 Mineral Resource is an update of the 2017 Mineral Resource as there have been material changes including additional drilling. The copper-gold Mineral Resource for Kalkaroo was estimated, with reference to the JORC Code, in the PFS.

The Mineral Resource for Kalkaroo is reported by application of a cut-off of 0.4% copper equivalent (Cueq).

Category	Quantity (Mt)	Cobalt grade (ppm)	Copper grade (%)	Gold grade (g/t)	Cobalt content (kt)	Copper content (kt)	Gold content (koz)
Cobalt							
Inferred	193.3	120	-	-	23.2	-	-
Oxide gold ca	p						
Measured	12.0	-	-	0.82	-	-	316.4
Indicated	6.97	-	-	0.62	-	-	138.9
Inferred	2.71	-	-	0.68	-	-	59.2
Total	21.7	-	-	0.74	-	-	514.5
Copper-gold							
Measured	85.6	-	0.57	0.42	-	487.9	1,160
Indicated	27.9	-	0.49	0.36	-	136.7	324
Inferred	110.3	-	0.43	0.32	-	474.3	1,139
Total	223.8	-	0.49	0.36	-	1098.9	2623

### Table 2.1Mineral Resource – Kalkaroo copper project

Notes: Source document is Havilah Annual Report 2018, The copper-gold resource was initially release in Havilah's ASX announcement January 2018. Cobalt tonnes are included within the copper-gold Mineral Resource.

Mr Robert Dennis, an employee of RPMGlobal is the competent person for the copper and gold Mineral Resource. Dr Chris Giles, an executive director and consultant to Havilah is the competent person for the cobalt Mineral Resource.

<sup>&</sup>lt;sup>5</sup> Member of the Australasian Institute of Geoscientists.

### 2.3 Data collection

### 2.3.1 Drilling

As at July 2018, a total of 1,204 holes, for 151,969 m total length are in the database as having been drilled in the vicinity of the Project area. Of these 493 holes for 82,434 m, drilled by Havilah, and 65 earlier holes for 15,047 m are attributed to Kalkaroo deposit.

All holes are drilled from surface, included in the database, and are diamond drillholes (DD), reverse circulation (RC), air core (AC), or rotary-mud (RM) drillholes. Core diameter includes PQ, HQ and NQ. RC drilling used face sample bits. Drilling was performed by Havilah's driller with hired drill rigs, or Titeline Drilling Pty Ltd. Drill core was orientated where possible.

Drilling at Kalkaroo is predominantly angled between 60° and vertical, with many of the holes drilled between 70° and 75°. Holes are spaced horizontally on 50 m sections at Kalkaroo West to 100 m sections at Kalkaroo Main Dome.

AMC considers the drill-hole-to-target orientation and density of drilling are reasonable for the style of mineralization and mining method.

### 2.3.2 Logging and sampling

Geological data such as lithology, alteration, mineralization, veining and structure were collected. This data, from both core and RC chips was logged onto Field Marshall software using palmtop logging units, or directly into a digital logging system using Excel and saved to a database. Data is then uploaded to the master drilling database. Core and RC chips are photographed.

Diamond drill core is cut in half for sampling. One half of all core is retained for geological record. Sampling is on one metre intervals, or to geological boundaries. Drill core was reassembled to confirm core recovery. Over 93% core recovery was achieved.

RC and AC samples were collected on one metre or two metre intervals and riffle split to a weight of two to three kilograms. RC samples were reported as generally sufficiently dry to riffle split.

### 2.3.3 Assay

ALS laboratories (ALS) was used for routine assay. Samples are crushed to 6 mm, with a 3 kg riffle split sample taken off, which is pulverised to 85% passing 75 microns. Amdel samples were pulverised to 90% passing 106 microns.

Samples are analysed using a four-acid digest followed by ICP-atomic emission spectrometry and ICP mass spectrometry (ME-OG61 method). Samples over limit are re-assayed using ALS's ME-OG62 method.

Gold is assayed using fire assay on a 50 g charge with an atomic absorption spectrometry finish.

AMC considers that the preparation and analytical methods use were recognized methods for a broad spectrum of analytes with acceptable detection limits at a commercial laboratory. Analysis is performed on samples for suites of up to 33 different elements.

### 2.3.4 Drillhole collars and survey

The coordinate system used the ADG 66 datum. Collar positions were surveyed using a Differential Global Positioning System (DGPS) with accuracy to 0.2 m horizontally and 0.4 m vertically.

Downhole surveys were performed at 30 m intervals with an Eastman single-shot or multi-shot camera, digital Camteq or Flexit survey camera. Early RC drillholes were not surveyed. However, later RC drilling programmes indicated deviations of less than one degree.

AMC considers for the depths of the drillholes and the accuracy of down hole measurement that minor errors in RC drill collar locations will not be material for the Mineral Resource estimate.

### 2.3.5 Bulk density

Bulk density determinations were carried out on 11,774 diamond drill core samples. The method used is the water immersion method (air-dried core sample weighed on a tray in air and in water). Bulk density is determined from the weight in air divided by the difference between weights in air and water.

Bulk density is assumed to have very little variability within each material type and a single value is applied to each material type.

AMC considers that the bulk density determination process is of a good standard. The assumed limit of variability is reasonable but should be confirmed.

### 2.3.6 Data management

Logged data was captured electronically. Data was imported into Vulcan software to generate a drillhole database. Vulcan was used to validate data.

Validation checks carried out on the data included:

- Checks that the data is from the correct database, the correct holes are present.
- Checks in Vulcan that the relevant variables are present.
- Erroneous entries including overlaps, repeated data and absent data.
- Visual and automated checks of raw data and when loaded to the database.
- Surveyed collars are entered into the database.
- The dip and azimuth of all drilled holes are compatible.
- Issues in relation to hole or sampling numbers.
- Correct loading of assay results with visual validation in mining software of hole traces and assay.
- Visual validation between assay and lithology.

### 2.3.7 Summary of data management processing and checks

Havilah has:

- Automated processes for inputting data from sampling and logging into the database.
- Drilling methods that are standard across the mining industry.
- A long-term relationship with one main laboratory, some inter-laboratory checks and an understanding of the historical data.
- Validation checks as data is entered into the database.
- Vulcan's validation processes in place for checking data consistency, overlaps etc.

### 2.4 Data quality assurance and quality control (QA/QC)

Monitoring of assay quality control has been in place since Placer. Havilah has maintained QA/QC practices since acquiring the asset.

### 2.4.1 QA/QC frequency

AMC considers the frequency of QA/QC submissions for standards are generally acceptable or just less than this. AMC recommends submission rates should typically be 5%, or 1 in 20, for each QA/QC protocol.

In 2007-2008, standards were generally inserted in pairs, and occasionally as singles or in batches of three to four. The submission rate of blanks and standards was approximately one in ten. Blanks were inserted one per hole and one per batch. Duplicates were collected from every riffle split RC sample. QA/QC data were with a testing frequency at an acceptable level.

In 2004 to 2006, samples comprising standards, blanks, and duplicates were alternated at a rate of one in 50.

Placer, Newcrest, and MIM are all reported by Havilah to have undertaken QA/QC.

Results of QA/QC for 2018 is not documented. Insertion frequency is understood to be at a rate of one sample in 25 in total, or one sample in 75 for each QA/QC protocol.

### 2.4.2 Results to 2008

For diamond drillholes, to 2008, a sequence of 25 standards was run with each batch of samples. The standards, sourced from a number of companies including Gannet Pty Ltd, Geostats Pty Ltd, and Ore Research and Exploration Pty Ltd, were certified. Havilah continued to use standards obtained from Pasminco in 2003 and had them re-certified.

Review of copper and gold standards, and blanks, showed 98% of results fall within acceptable limits, with results outside these ranges being poor assay explained as mixed up samples or poor assays.

Minor contamination of copper and molybdenum results and lesser gold was explained by Havilah as occurring in the pulverising stage of sample preparation. The degree of contamination is reported by Havilah as very low, with each being an order of magnitude lower than ore grade, and therefore not material to the Mineral Resource estimate.

### 2.4.3 Twin hole analysis

Havilah compares relative intersection widths for data from ten pairs of RC and DD holes. Havilah reports there is no significant difference between the total intercepts, although local wide variations do occur. Sample size and type do not affect the metal content, and no material bias is present.

### 2.4.4 QA/QC summary

Assay QA/QC protocols were in place that included certified reference material, blanks and duplicate assays. QA/QC submission rates were reasonable, although not always to accepted industry practice. Results of the available QA/QC data suggests anomalies within the data were either not present, have been addressed or were not considered material by Havilah to the Mineral Resource estimation.

Certified reference materials were used to monitor the performance of copper, gold and molybdenum analysis. AMC considers that overall the results reviewed were good with no biases or spreads in data.

Samples were generally processed and analysed at ALS Laboratories' facilities.

### 2.5 Mineral Resource grade estimation review

### 2.5.1 Interpretation

Geological interpretations were developed into three-dimensional wireframes for the Mineral Resource estimation, based on sections spaced between 25 m and 100 m apart.

Multiple types of domains have been modelled using geology.

These are:

- Namba Formation.
- Eyre Formation.
- Saprolite.
- Kalkaroo Main Dome with five subdivisions: k2.2, k2.5, k2.8, k3.2, k3.5.
- Kalkaroo West with four subdivisions.
- Kalkaroo West Vein with two subdivisions.

Oxidation within the lithologies has allowed the mineralization to be divided into discrete oxidation domains that overprinted the lithology domains:

- Saprolite
- Native copper
- Chalcocite
- Chalcopyrite

Havilah statistically validated the domains to identify any extreme outliers that needed addressing.

### 2.5.2 Compositing

Kalkaroo downhole composite length was one metres with length weighting for shorter intervals at domain boundaries. One meter was chosen as it aligned with most sample lengths in both the DD and RC drilling.

### 2.5.3 Variography

The variography for the interpreted domains was investigated to assess continuity orientations. Copper and gold were analysed separately in each mineralized domain. Domains in the Kalkaroo Main domain, Namba and Saprolite were unfolded prior to the variogram generation. Spatial variograms were generated in individual directions and along fans.

Unfolded domains were given a search orientation that is perpendicular to the control surface used to unfolds the domain.

No top capping was applied to the data.

### 2.5.4 Grade interpolation

Grade in the block model has been interpolated using the ordinary kriging (OK) and inverse distance interpolation methods. The estimation was run for copper and gold, as well as cobalt, molybdenum and sulfur.

The dimensions of the blocks within the domains are  $10 \text{ mX} \times 10 \text{ mY} \times 10 \text{ mZ}$ . This is appropriate for the drill spacing in the upper levels and the steep nature of the drilling. The limits of the block model dimension cover the extent of the mineralization.

The estimation was run in three passes with the search for each pass twice the previous pass. Domain perimeters were used as hard boundaries to control the estimation search within the mineralized domains in line with the model for mineralization.

Soft boundaries were used for bulk density due to continuity of rock types beyond the defined mineralized zones.

Octant searches was applied to control data searches in each pass. A specified number of samples was applied to control data searches each pass. Each pass required a minimum of four composite samples and a maximum of thirty-two.

AMC considers that the estimation approach used is reasonable.

### 2.5.5 Validation

To validate the estimation of the block model Havilah undertook a series of validation checks.

Blocks were visually validated once domains are assigned from the wireframes to confirm the domain variables are correctly assigned.

The block model generated was visually checked to ensure all variables and codes were correct and that the domain overlap prioritisation had performed correctly.

Wireframes were checked to be closed and consistent with the block model and sub-blocking.

Statistical comparison of raw data versus declustered data versus the block model was performed.

Havilah has generated a series of swath plots to validate the model grades. These plots compare block model grades and composite grades in slices through each domain for copper and gold.

Visual assessment and validation plots of the block model against the declustered data all indicate generally good conformance. As most of the declustered data is on one metre intervals, smoothing of the block model grades with a larger block size is expected.

To validate if the model has honoured the data appropriately, a block model was generated using a second, different estimation method that was compared with the OK model.

### 2.5.6 Classification criteria

The Mineral Resources have been classified as Measured, Indicated and Inferred in accordance with the JORC Code based on wireframes outlines interpreted from a block model derived from the estimated block model by re-blocking the model to 50 m x 50 m x 20 m blocks. The re-blocked model contained both copper-equivalent grade and resource category fields. Management of the resource category field ensured single-drillhole estimated blocks were flagged as Inferred. Wireframes generated from the re-blocked model based on the resource category and grade, were applied to the Mineral Resource block model to classify the Mineral Resource estimate.

### 2.5.7 Cut-off grade

The cut-off for the copper-gold Mineral Resource was calculated as a copper equivalent value (Cueq). It was calculated for each block based on copper (US\$5,030/t), gold (US\$1,278/oz) and 1 ppm gold equal to 8,169 ppm copper with an exchange rate of US\$0.74/A\$1. Prices are derived from World Bank average pricing from 2016.

For the Namba Formation and saprolite oxidised zone, copper was set to zero on the calculation as it is not recoverable.
The Mineral Resource is reported at a cut-off grade of 0.4% Cueq.

The cut-off grade for the cobalt resource was 20 ppm cobalt and confined to blocks already defined by the copper-gold Mineral Resource.

# 2.5.8 Reporting

It is important that processes used in generating a Mineral Resource estimate are transparent and clearly reported. The estimation processes at Kalkaroo are relatively simple. However, the current Mineral Resource has been built up from work carried out over a number of campaigns. While the rationale for changes made with time to the estimation are understood, the 2018 Mineral Resource estimate is not captured in one document.

### 2.5.9 Estimation summary

AMC makes the following observations:

- The geological interpretation and domaining is complex but appropriate for the estimation.
- Grade estimation uses internationally recognised processes.
- Validation included visual checks and swath plots, and estimation by two methods.
- Classification of the Mineral Resource was created based on drilling density and classifications within a re-blocked model to provide continuous envelopes with similar confidence levels.
- The documentation should capture detail to provide full transparency in a single document, including supporting documentation, as would be required for a formal external audit carried out for financial purposes.

### 2.6 Estimation validation

AMC has independently interrogated the block model estimations as a global confirmation of grade for the Kalkaroo using data and parameters supplied by Havilah. This was undertaken in the Datamine software and AMC's process and outcomes are summarised as follows.

## 2.6.1 Block model estimation check

Manipulation and interrogation to replicate the Mineral Resource estimates reported was very similar with subtle differences likely to be due to the software used and data management processes.

AMC is comfortable with the modelling approach given the stage of the Project. The overarching rationale for the processes is understood.

AMC interrogated the block model. This showed consistent outcomes at the reported cut-off of 0.4% Cueq as shown in Table 2.2.

	Category	Tonnes (M)	Copper (%)	Gold (g/t)	
Havilah	Measured	85.6	0.57	0.42	
	Indicated	27.9	0.50	0.36	
	Inferred	110.3	0.43	0.32	
	Total	223.8	0.49	0.36	
AMC	Measured	77.1	0.57	0.42	
	Indicated	28.9	0.51	0.37	
	Inferred	114.4	0.43	0.32	
	Total	220.4	0.49	0.36	

#### Table 2.2 Global comparison for the Mineral Resource estimation

# 2.6.2 Swath Plots

AMC generated swath plots to assess the distribution of block grade versus drilling composite grades. The swath plots in Figure 2.3 are examples showing the good global correlation in the Measured Resource between the copper grades in all domains. However, it is also evident the model grade smoothed the drillhole data. By level the block model appears to under-estimate the composite grades with a difference of up to 0.15% copper grade around -25 mRL. The humber of composites support a reasonable density of data for the estimation due to internal smoothing of the grade from surrounding composite data in the levels above and below, and the broad aerial extent of the slices.







Statistical checks were run. Results show the model has smoothed the grades and reduced variance within the populations while not significantly affecting mean grade. As an example, the statistics for the classifications within the mineral resource envelope are provided in Table 2.3.

The mean of higher reported grade in domains are very similar. Greater variability in the mean grade is seen for lower grades due to greater sensitivity to changes at these low levels.

Class	Source	Variable	Number	Minimum	Maximum	Mean	Variance	Std Dev
Measured	Composite	Cu%	47,035	0.0001	21.0	0.26	0.378	0.614
		Au ppm	4,6866	0.001	260.0	0.29	2.387	1.545
	Model	Cu%	141,943	0.0001	8.02	0.19	0.0975	0.312
		Au ppm	141,943	0.000078	148.2	0.18	0.324	0.569
Indicated	Composite	Cu%	49,198	0.0005	20.2	0.16	0.421	0.649
		Au ppm	49,029	0.001	6.79	0.15	0.163	0.403
	Model	Cu%	121,694	0.0001	6.22	0.10	0.0371	0.192
		Au ppm	121,694	0.000186	11.2	0.09	0.0385	0.206
Inferred	Composite	Cu%	54,399	0.0001	11.0	0.07	0.0477	0.218
		Au ppm	53,939	0.001	3.42	0.05	0.0239	0.154
	Model	Cu%	454,304	0.0001	5.79	0.09	0.019	0.147
		Au ppm	454,304	0.000004	5.65	0.07	0.0191	0.138

# Table 2.3 Statistics for the Mineral Resource

The Havilah report supporting the Mineral Resource estimate is documented in the June 2018 Kalkaroo Maiden Ore Reserve ASX announcement, and in internal reports. It is important that the estimation processes, and their association with each other, are sufficiently detailed, preferably in one document, to be transparent for future users and readers.

# 2.6.3 Conclusions

AMC's conclusions for the validation are:

- AMC considers that the Mineral Resource estimate classification, given the complexity of the geology and the drillhole data densities, is based on reasonable grounds.
- The estimates were appropriately classified as Measured, Indicated and Inferred Resources in accordance with the JORC Code. AMC broadly concurs with the Mineral Resource classification.

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The Ore Reserve for Kalkaroo was prepared as part of the Kalkaroo PFS by RPMGlobal Asia Ltd. The Mineral Resource is inclusive of the Ore Reserve. The Ore Reserves are tabulated in Table 2.4.

Category	Quantity (Mt)	Copper grade (%)	Gold Grade (g/t)	Copper content (kt)	Gold content (koz)
Proved	90.2	0.48	0.44	430	1,282
Probable	9.9	0.45	0.39	44	125
Total	100.1	0.47	0.44	474	1,407

#### Table 2.4 Ore Reserve – Kalkaroo copper project

Notes: Source document is Havilah ASX announcement June 2018.

The competent person is Igor Bojanic, a full-time employee of RPM Advisory Services Pty Ltd.

AMC considers that the Ore Reserve estimation methodology is reasonable, and the Ore Reserve has been classified and reported in accordance with the JORC Code. AMC considers the production schedule, operating expenditure, capital expenditure to be reasonable.

The Ore Reserve has been prepared as part of the Kalkaroo PFS. AMC Considers that the PFS complies with the definition of a pre-feasibility study as defined in the JORC Code.

# 2.7.1 Geotechnical

The deeply weathered rock has significant implications for open pit slope design. Experience with mining at Havilah's Portia Gold Mine has informed the slope design criteria in the Namba Formation and the saprolite. Overall slopes of 25 degrees are designed in the Namba Formation. Overall slopes in the saprolite are 43 degrees, and in the fresh rock are up to 55 degrees.

The geotechnical performance of the Namba Formation and the underlying saprolite is a key area of uncertainty. Weathering is to a significant and variable depth across the deposit. The geotechnical properties of the Namba Formation, combined with a depth of up to 80 m, require shallow overall slopes compared to most conventional open pit mines, and this contributes to a significant increase in waste mining.

## 2.7.2 Hydrology and hydrogeology

The groundwater is at approximately 70 m elevation (approximately 50 m below surface) with total dissolved solids of 22,000 ppm. Groundwater studies predicted an initial pumping rate of 45 to 50 L/s increasing to 85 L/s in year three and 108 L/s in year five. This will produce 9.7 to 15.5 ML/day.

Processing will consume 8.5 ML/day which is 80% of the water produced from dewatering. The remaining 20% of water will be used on dust suppression (1 ML/day) and lost to evaporation (1.2 ML/day).

Dewatering is considered critical for pit wall stability.

# 2.8 Mine plan

The proposed mine is a conventional truck and excavator bulk mining operation, utilising 5 m benches for ore and 10 m benches for waste. The Namba Formation and saprolite are expected to be free dig with drill-and-blast required in the transition zone and in fresh rock.

Whittle 4x optimization software was used to identify ore and the optimum pit depth and shape. The optimization price inputs were:

- Copper price US\$2.74/lb, A\$3.65/lb.
- Gold price US\$1,200/oz, A\$1,600/oz.

The optimization output was used to select and design the open pit which is designed in six stages with the initial stage starting at Kalkaroo West. The second stage pit is a separate pit located at Kalkaroo East. Stage 3 combines Kalkaroo West and Kalkaroo East, with pit stages 4, 5 and 6 representing cut-backs on the combined pit. The ultimate pit is planned to be 3.5 km long by 0.9 km wide with a depth of 280 m.

The pit design includes a number of haul roads which will be used to provide flexibility and access to the run-of-mine ore pad, low grade stockpile and the waste dump. These haul roads will also provide some redundancy in the event of slope failure.

The run-of-mine ore pad and processing plant is planned to the east of the pit with waste planned to be stockpiled in a single facility located to the east and south.

The PFS assumes owner mining however recommends a detailed study of owner mining verses contract mining is undertaken prior to development.

The mine plan is supported by the PFS and the total tonnage and grade of the ore mined matched the Ore Reserve. AMC considers that the mine plan is achievable and is based on reasonable grounds. AMC notes that gold production shown in the spreadsheet model is approximately 29 koz of gold less than is reported in the detailed processing schedule. AMC has included this additional contained metal in the production schedules provided to BDO.

# 2.8.1 Sensitivity to Inferred Resource

The optimization process investigated the sensitivity of the Project to Inferred Resources with the following findings:

- Including Inferred Resource increases the size of the pit by approximately 10 Mt.
- Most of the Inferred Resource mineralization is of lower grade and located in the edges and deeper area of the pit and is therefore only mined in the final pit stages.
- The inferred material makes no significant difference to the Project economics.

## 2.8.2 Mine production schedule

The Kalkaroo open pit in planned to mine approximately 452 Mt over a fourteen-year period. Following the initial pre-strip year, the operation mine plan establishes a relatively constant mining rate of 42 Mtpa until Year-9. In the final four years, the planned mining rate decreases as Stage 6 is the only pit being mined.

The mine production plan matches the Ore Reserves. In AMC's opinion the mine production schedule is based on reasonable grounds and is achievable.

The total mining quantities is shown in Table 2.5. The schedule is shown graphically in Figure 2.4 and as a table in Appendix A.

#### Table 2.5 Mine Production

Mining parameter	Quantity
Ore (Mt)	100
Au grade (g/t)	0.44
Cu grade (%)	0.47
Waste (Mt)	352
Stripping ratio (W:O)	3.5
Au contained metal (koz)	1,408
Cu contained metal (kt)	474

Figure 2.4 Mine production



Stockpiling is used to align mine production with processing capacity.

# 2.9 Metallurgy and Processing

AMC has reviewed the metallurgical testwork, process design and plant cost estimate sections of the PFS.

# 2.9.1 Metallurgical testwork

# 2.9.1.1 Metallurgical testwork programmes

Several metallurgical testwork programmes have been conducted over the history of the Project. These programmes were completed on the four Kalkaroo ore types:

- Saprolite ore
- Native copper ore
- Chalcocite ore
  - Chalcopyrite ore

A summary of these programmes is shown in Table 2.6.

### Table 2.6Summary of testwork programmes completed on Kalkaroo ores

Testwork Program	Laboratory	Date	Program	Ore Type
P0214	Optimet (ALS)	March-August, 2008	Comminution, separation	Saprolite, Native Copper, Chalcocite, Chalcopyrite, Mixed Chalcocite- Chalcopyrite
A11233	Ammtec (ALS)/JKTech	April, 2008	Comminution	Native Copper, Chalcocite, Chalcopyrite
P0236	Optimet (ALS)	2012	Separation	Continuation of P0214
P0461	ALS	March, 2013	Separation & pyrite leaching	Chalcocite, Chalcopyrite,
P0463	ALS	March, 2013	Leaching	Saprolite
P0502	ALS	August, 2013	Leaching	Namba
P0672	ALS	April, 2012; October & December, 2014; January & March, 2015	Separation	Chalcocite, Chalcopyrite
MIN2068	ALS	November, 2014	Mineralogy	Chalcocite Flotation Products
P0936	ALS	July-November, 2017	Mineralogy, comminution, separation and	Saprolite, Native Copper, Chalcocite and Chalcopyrite

Sourced from documents provided to AMC by Havilah

These programmes were completed by ALS Laboratories Limited (ALS), Ammtec Limited (Ammtec) and JKTech Limited (JKTech). AMC considers all these laboratories to be appropriately qualified for these types of tests.

The testwork programme which supported the PFS included the following testwork types:

- Comminution testwork.
- Gravity separation testwork to recovery a native copper product.
- Gravity gold separation testwork.
- Desliming testwork.
- Flotation testwork to produce a gold-rich copper concentrate.
- Flotation testwork to produce a gold-rich pyrite concentrate.
- Cyanide leaching of the pyrite concentrate.
- Mineralogical testwork.
- Dewatering testwork.

AMC considers that, in general, this testwork programme was adequate.

#### 2.9.1.2 Sample representivity

The samples used for metallurgical testwork were made up from drill core samples. These samples were separated into the four ore types. AMC has reviewed the metallurgical testwork samples and considers that they were representative of the Kalkaroo deposit and covered the variability of the deposit in terms of spatial representivity, depth, copper head grade and geological domains.

#### 2.9.1.3 Comminution testwork

Comminution testwork was conducted on samples of all ore types. The purpose of the comminution testwork is to select equipment and circuits for crushing and grinding that would suit all ore types. This testwork demonstrated that the Saprolite and Native Copper ores can be considered soft; the Chalcocite ore can be considered medium-to-hard and the Chalcopyrite ore can be considered very hard.

### 2.9.1.4 Cyanide leach recovery testwork on Saprolite ores

Additional testwork was performed after the PFS was completed, including cyanide leaching of the Saprolite ore. In the Kalkaroo financial model, the total gold recovery for the Saprolite ore is 49% (which is a combination of gold recoveries from the flotation and gravity separation circuits). Cyanide leaching tests were conducted on Saprolite ores to try to improve gold recovery. These tests showed that gold recoveries of 90% were achievable.

Previous cyanide leaching testwork on Saprolite ores showed that copper in the ore was also leaching into solution. Copper in solution can cause significant processing issues in downstream gold processing circuits including carbon loading circuits. Havilah successfully tested a process which treated loaded carbon with a sodium cyanide (NaCN)/caustic soda (NaOH) combination that removed 97% of the copper that was loaded on the carbon, whilst only removing 0.45% of the loaded gold.

#### 2.9.1.5 Locked-cycle tests on chalcopyrite ores

In the post-PFS testwork program, bench locked-cycle flotation tests were conducted on blended composites of both the Chalcocite and Chalcopyrite ores. The objective of these tests was to achieve higher flotation gold recoveries than the historical testwork. These composites were made of different samples that covered different areas of the Kalkaroo deposit. The sample make-up of these composites is shown in Table 2.7. It also shows the drillholes and intervals used for making up the individual samples.

Sample	Copper Head Grade (%)	Proportion in Blend (%)	Drill Holes	Intervals (m)
	•	Chalcocite Ore C	omposite	-
Chalcocite 1	0.62%	25.0%	KKDD0486	123 - 141
Chalasaita 2	0.01%	25.0%	KKDD0487	124 - 129
Chalcocite 2	0.91%	25.0%	KKDD0488	128 - 151
			KKDD0486	129 - 143
Chalcocite 3	0.62%	25.0%	KKDD0487	126 - 127
Sample Chalcocite 1 Chalcocite 2 Chalcocite 3 Chalcocite 6A Chalcocite 6B Composite Chalcopyrite 1 Chalcopyrite 2 Chalcopyrite 3 Chalcopyrite 4			KKDD0488	126 - 150
			KKDD0146	113 - 119
		-	KKDD0150	125 - 126
Chalcocite 6A	1.55%	12.5%	KKDD155A	155 - 176
			KKDD0171	131 - 146
			KKDD0175	124 - 128
	0.570/	10.5%	KKDD0147	121 - 132
Chalcocite 6B	0.57%	12.5%	KKDD0307	178 - 237
Composite	0.80%	100.0%		
		Chalcopyrite Ore 0	Composite	
Chalcopyrite 1	0.43%	16.7%	KKDD0486	143 - 160
Chalcopyrite 2	0.54%	16.7%	KKDD0488	168 - 188
	0.440/	40.70/	KKDD0486	145 - 147
Chaicopyrite 3	0.41%	16.7%	KKDD0488	155 - 176
			KKDD0150	169 - 215
			KKDD0154	168 - 247
			KKDD0155A	211 - 244
	0.000/	50.0%	KKDD0171	203 -210
Chaicopynie 4	0.00%	50.0%	KKDD0174	145 - 236
			KKDD0175	181 - 213
			KKDD0147	141 - 161
			KKDD0152	190 - 197
Composite	0.56%	100.0%		

#### Table 2.7 Chalcopyrite and Chalcocite composite blends

Sourced from documents provided to AMC by Havilah

AMC notes that these composites were made up from samples that cover different parts of the deposit in terms of spatial representivity and depth, and therefore will not be processed at the same time. Subsequently, AMC recommends that future locked-cycle flotation tests are conducted on each of the individual samples that are used to make up the composites. This approach will give a better understanding of the achievable recoveries for a particular ore type and production year.

# 2.9.2 Metallurgical inputs

The Kalkaroo processing model has process plant recoveries (copper and gold) for each ore type.

For the Saprolite ore, where the testwork results did not show a definitive relationship between head grade and recovery, the metal recoveries in the model are fixed at:

- Gravity processes: Copper: 26.7%; Gold: 36.1%.
- Flotation processes: Copper: 20.3%, Gold: 12.9%.
- Total: Copper 47%; Gold: 49%.

For the Native Copper, Chalcocite and Chalcopyrite ores, the testwork results identified that there were some relationships between head grade and metal recoveries (for both copper and gold). Head-grade metal-recovery relationships for these ores have been used to forecasts metals recoveries over the life-of-mine. AMC agrees with this methodology.

A 2% recovery reduction has been discounted from the recoveries achieved in the bench-scale flotation testwork and applied to the metal recoveries. AMC agrees with this methodology, as process plant recoveries are typically lower than bench-scale recoveries. This is typically because a bench-scale test is conducted at optimum conditions; whereas the processing plant will experience variability in terms of ore type, mineralogy and grade that will cause fluctuations in plant recoveries.

# 2.9.3 Process plant design

The Project is proposed to have two processing plants for treating mined ore:

- A 4 Mtpa oxide processing plant to treat blends of Saprolite, Native copper, and Chalcocite ores. This processing plant will commence production in Year-2. When processing chalcocite ore only, the plant will have a maximum throughput of 2 Mtpa.
- A 7 Mtpa sulphide processing plant to treat blends of Chalcocite and Chalcopyrite ores. This processing plant will commence production in Year 5 of mine operation.

The oxide processing plant is designed to have the flexibility to process different ore types and with specific equipment that will be only be applicable for certain ore types. The oxide plant proposed flowsheet is shown in Figure 2.5.

When processing Saprolite or Native Copper ores, the oxide plant design consists of a:

- An MMD sizer for size reduction.
- A scrubbing circuit (trommel).
- A ball mill circuit.
- A desliming cyclone circuit where the cyclone overflow (slimes fraction) reports to final tailings.
- An inline jig for recovering a saleable high-grade native copper product.
- A gravity gold circuit for recovering a saleable copper gold concentrate.
- A flotation circuit consisting of roughing/scavenging and two stages of cleaning for recovering a saleable copper concentrate.
- An optional pyrite flotation circuit consisting of roughing/scavenging and two stages of cleaning for recovering a saleable pyrite concentrate.
- An optional Wilfey Table circuit which would treat the gravity gold concentrate to upgrade it to gold dore.

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When processing Chalcocite ore, the oxide plant design consist of a:

- A primary jaw crusher.
- A SAG mill, ball mill, pebble crusher circuit.
- A gravity gold circuit for recovering a saleable copper gold concentrate.
- A flotation circuit consisting of roughing/scavenging, regrind (tower mill) and three stages of cleaning for recovering a saleable copper concentrate.
- An optional pyrite flotation circuit consisting of roughing/scavenging, and two stages of cleaning for recovering a saleable pyrite concentrate.
- An optional Wilfey Table which would treat the gravity gold concentrate to upgrade it to gold dore.

Figure 2.5 Kalkaroo oxide processing plant flowsheet



Sourced from PFS document provided to AMC by Havilah

The sulphide processing plant proposed flowsheet is shown in Figure 2.6.

The sulphide processing plant is designed to have the flexibility to process blends of Chalcopyrite and Chalcocite ores. The sulphide plant design consists of:

- A primary gyratory crusher.
- A SAG mill, ball mill, pebble crusher circuit (SABC circuit).
- A gravity gold circuit for recovering a saleable copper gold concentrate.
- A flotation circuit consisting of roughing/scavenging, regrind (tower mill) and three stages of cleaning for recovering a saleable copper concentrate.
- An optional pyrite flotation circuit consisting of roughing/scavenging and two stages of cleaning for recovering a saleable pyrite concentrate.



Figure 2.6 Kalkaroo sulphide processing plant flowsheet

Sourced from PFS document provided to AMC by Havilah

## 2.9.3.1 Comminution circuit

AMC notes the selection of an MMD sizer for treating the oxide ores (Saprolite and Native Copper) and a SABC grinding circuit for treating the Chalcopyrite and Chalcocite ores. AMC agrees with these circuit selections given the differences in hardness amongst the different ore types demonstrated in the comminution testwork.

## 2.9.4 Concentrate products

The oxide processing plant is designed to produce a native copper product, and a separate gold concentrate using gravity circuits. A gold-rich copper flotation concentrate will also be produced using a flotation circuit. The sulphide processing plant will produce a gravity gold concentrate and a gold-rich copper flotation concentrate.

The concentrate is planned to be transported in containers from the Mutooroo siding to Port Pirie, from where it will be shipped to China for smelting and refining.

# 2.9.4.1 Plant production ramp-up

Both the oxide and sulphide plants are proposed to take nine months to ramp-up to full production. AMC considers these time frames to be reasonable.

## 2.10 Processing plan

The processing parameters are tabulated in Table 2.8. Life-of-mine processing quantities are shown in Table 2.9.

The processing schedule is shown graphically in Figure 2.7 and as a table in Appendix A.

The processing schedule matches the mining schedule. In AMC's opinion the processing schedule is based on reasonable grounds.



# Table 2.8 Metallurgical recovery and concentrate payability

Metallurgical recovery	Copper recovery (%)	Gold recovery (%)	
Saprolite (%)	50	48	
Native copper (%)	84	87	
Chalcocite (%)	79	69	
Chalcopyrite (%)	94.5	90	
All ore (%)	82.5	66.4	
Concentrate grades	Copper grade (%)	Gold grade (g/t)	
Gravity concentrate	5.4 to 31.5	90	
Floatation concentrate	23.5 to 27.5	13 to 36	
Smelter Payability	Copper payability	Gold payability	
Payability	0.96	0.93	

## Table 2.9 Processing production – life-of-mine

Processing parameter	Quantity
Oxide circuit (Mt)	40
Sulphide circuit (Mt)	60
Total ore processed (Mt)	100
Au grade (g/t)	0.44
Cu grade (%)	0.47
Au Recovery (%)	66
Au metal recovered (koz)	935
Cu Recovery (%)	82
Cu metal recovered (kt)	392
Au Payable ratio	0.93
Cu Payable ratio	0.96

The mineralization includes molybdenum and cobalt. While these elements may have value once recovered, the current processing circuit does not include the recovery of these in a saleable form, and smelter terms do not include payment for them.

The plans for processing ore together with the estimates of copper and gold recovery to concentrates are supported by testwork carried out as part of the PFS, and in AMC's opinion are based on reasonable grounds.

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AMC considers the flotation copper recoveries that are used in the Kalkaroo financial model for both the Saprolite and Native Copper ores to be reasonable (in the processing plan, the Saprolite ore has a fixed flotation copper recovery of 20.3% and the Native Copper has a fixed flotation copper recovery of 3.9%).

The flotation testwork on these ores used flotation reagents that are more suited to copper sulphide minerals. For example, sodium isobutyl xanthate (SIBX) which was used in the testwork, is primarily used for floating sulphide minerals.

AMC recommends completing additional flotation testwork on these ores utilising speciality flotation reagents and flotation conditions suited to these ore types with an objective of achieving higher copper recoveries.

# 2.10.1.2 Flotation circuit flowsheet

AMC notes that in both plant flowsheets, the tailings from the 1<sup>st</sup> cleaner flotation reports back to the feed of the rougher circuit. Whilst this flowsheet reduces the risk of recovery losses in the 1<sup>st</sup> cleaner circuit (as any valuable minerals that short-circuit the 1<sup>st</sup> cleaner will have another opportunity for recovery in the Rougher circuit); the additional feed to the rougher circuit from the 1<sup>st</sup> cleaner tailings will reduce rougher residence time. The reduced rougher residence time will subsequently reduce rougher copper recovery.

# 2.11 Infrastructure

The main site infrastructure is to be located to the north west of the open pit, Figure 2.8.



# Figure 2.8 On-site infrastructure

Sourced from PFS document provided to AMC by Havilah

An ephemeral creek flows north through the open pit site. A diversion channel will divert water flows around the site to re-join the drainage line downstream.

The operation will be fly-in-fly-out from Adelaide and drive-in-drive-out from Broken Hill. A 200person camp will be located approximately 5 km south of the mine.

The PFS assumes use of airstrip and temporary accommodation facilities for 100 people located 13 km east at Honeymoon Mine. However, no discussions or agreements have been made with Boss Resources Limited (Boss), the owners of Honeymoon Mine. Contingencies are available if agreement is not made, such as a daily bus from Broken Hill.

Site power requirement in 40 MW of which 35 MW is processing. Supply options are to be investigated in a future feasibility study but are:

- Onsite renewable or diesel generation, or a combination of diesel and renewable.
- Grid connection to Silverton at 75 km.

Grid power is available at Honeymoon; however, this is a low capacity line and unsuitable for upgrading to supply Kalkaroo.

The tailings storage facility (TSF) is located to the west of the processing facility. The TSF is a conventional facility consisting of three paddock type cells subdivided into eight sectors. Tailings will be thickened to approximately 60% by weight and deposited via perimeter spigots. A central decant will collect tailings water and rainwater for return to the process water dam.

The TSF will be periodically raised using upstream lifts during the life-of-mine to a final height of 22 m. The area of the TSF is 350 Ha with a final volume of 66 Mm<sup>3</sup>.

The TSF is considered in the information provide to AMC by Havilah as very low risk given the flat topography, low rainfall and absence of population. AMC agrees with this assessment.

## 2.12 Project operating costs

The Project operating costs provided in the PFS are provided as total life-of-mine cost and unit costs in Table 2.10. The operating costs estimates can be considered real cost at the time of estimation which was December 2017.

#### Table 2.10 Operating costs

Parameter	Value
Operating cost	
Mining (A\$M)	774
Processing (A\$M)	1,017
G&A (A\$M)	157
Contingency (A\$M)	239
Total site operating cost (A\$M)	2,187
Selling costs	
Transport, smelting and refining (A\$M)	439
Royalty (A\$M)	164
Total selling costs (A\$M)	602
Total site operating and selling costs (\$M)	2,789
Unit costs, onsite	
Mining + contingency (A\$/t mined)	2.24
Mining + contingency (A\$/t ore mined)	10.11
Processing (A\$/t ore processed)	10.14
G&A (A\$/t ore processed)	1 57

Table note: Operating costs were sourced from PFS economic model December 2017 and updated based on subsequent updated model dated 30 May 2019. Contingency is included in the mining unit cost.

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AMC has separated the costs into onsite operating cost such as Mining, Processing and General and Administration (G&A), and off-site cost associated with the concentrate product such as concentrate transport, smelting, refining and royalty. This allow comparison of the unit costs with other similar mining operations. Contingency was included in the unit cost for mining.

# 2.12.1 Mining cost

The unit mining cost (with contingency) of A\$2.24/t is at the lower limit of AMC Benchmarking with only 10% of open pit mines achieving comparable costs. The low mining cost can be attributed to the assumption of owner mining and the large amount of free dig material. The mining cost have been developed as part of a pre-feasibility study and in AMC's opinion are based on reasonable grounds.

## 2.12.2 Processing costs

The process plants operating costs are estimated in the PFS by applying different costs for the various ore types through the two processing plants.

The average processing cost for the life-of-mine is A\$10.14/t. AMC has benchmarked these costs against similar processing plants and considers these costs are within the normal ranges of similar processing plants. In AMC's opinion, the processing costs are based on reasonable grounds.

# 2.12.3 General and Administration costs

The G&A unit cost is low compared with comparable remote mining operations with camp accommodation and a commute workforce. An average benchmark G&A cost for comparable remote mines is in a range of A\$3.50/t to A\$4.00/t ore processed. AMC has adjusted the G&A costs in the cost table in Appendix A into this range by doubling the G&A cost in provided in the PFS. This increase in G&A costs will also account for community and native title obligations.

## 2.12.4 Selling cost and royalty

The selling costs comprise costs associated with the transport treatment and refining of concentrate. Some of cost to produce refined metal is also accounted for in the payable terms provided by the concentrate purchaser. Payable terms are defined in marketing contracts once a concentrate product is available and marketed.

The South Australian Government normal royalty is 5% of the value of contained metal for concentrate products however a discount to 2% of the value of contained metal can be applied for and granted for the first five years of a new mining project. The 2% discount is available until 30 June 2026.

AMC considers the selling costs and the payable terms to be reasonable at a pre-feasibility level of study.

## 2.12.5 Conclusion

In AMC's opinion, the operating costs estimated for mining and G&A are achievable but optimistic when benchmarked against comparable open pit operations. AMC has doubled the G&A costs in the inputs provided to BDO. AMC believes that the adjustments and the resulting operating costs provided to BDO are based on reasonable grounds

## 2.13 Project capital costs

The Project capital costs from the PFS are provided as an initial capital cost and an all-in sustaining capital cost in Table 2.11. The capital costs estimates can be considered real cost at the time of estimation which was December 2017.

# Table 2.11 Capital costs

Capital area	Initial capital	Sustaining capital
Mining (A\$M)	76	73
Processing (A\$M)	228	24
G&A (A\$M)	194	5
Contingency (A\$M)	82	-
Total Capital *(A\$M)	578	102

Note: Capital costs were sourced from PFS working data.

Capital costs included in the spreadsheet model are based on work carried out at during the PFS. AMC considers them to be based on reasonable grounds.

# 2.13.1.1 Mining capital

The mining capital cost represent the initial purchase of two 330 t excavators, one 245 t excavator, eight 136 t dump trucks, and a number of drill rig, dozers and auxiliary support equipment. The sustaining capital is estimated in the PFS from a mobile fleet replacement schedule and represents replacement of all items of mining equipment at the end of operating life.

Mining capital costs include a 10% contingency. AMC believes the contingency allowances is reasonable.

AMC considers the type and number of equipment, replacement schedule, and purchase cost are consistent with a pre-feasibility level study and that the mining capital cost estimate is based on reasonable grounds.

# 2.13.1.2 Processing capital

For both the sulphide and oxide processing plants, the plant capital cost estimates from the PFS were based on quotations for key equipment, in-house data and standard estimation practices. Processing capital costs include a 20% contingency.

AMC considers the methodology used to estimate the processing capital is consistent with a pre-feasibility level study and based on reasonable grounds.

## 2.13.1.3 Infrastructure capital

The infrastructure capital estimate in the PFS was sourced from detailed work undertaken in 2010 with a 16% inflation factor applied consistent with CPI data over the period. The infrastructure includes roads, buildings, site services, and tailing storage facility.

The infrastructure capital costs estimate includes approximately 14% indirect cost or owners cost and a 20% contingency.

AMC considers the infrastructure capital cost estimate to be based on reasonable grounds.

## 2.13.1.4 Sustaining capital

Sustaining capital was identified separately in the financial model for Processing and G&A. This allows initial capital for the sulphide processing plant in Year-3 and Year-4 to be separated from oxide processing plant sustaining capital expended in the same year.

Sustaining capital for mining consists of all capital spend after the initial purchase of the mining fleet up to the end of Year-2. This capital spend is generated from a fleet replacement schedule and deferred waste mining cost for pit cut-backs.

Sustaining capital for processing is approximately 3% of annual processing operating cost. Sustaining capital for infrastructure is approximately 2% of total annual operating cost.

# 2.13.2 Salvage value

Salvage value is only applicable if a sale is likely at the end of the operation. The capital assets of the Project that might have some value the end of life-of-mine are:

- Mobile equipment such as the mining fleet.
  - A fleet replacement schedule used to estimate the sustaining capital indicates most items of mobile plant are near the end of their working life at the end of the life-ofmine. Extension to the life-of-mine will require capital expenditure to replace excavators, trucks, and some auxiliary equipment. The salvage value of the mining fleet is minimal.
- Fixed infrastructure such as the processing plant, camp and administration facilities.
  - The fixed infrastructure and the processing facility have some residual value if additional resources remain in the Project or district that are able to be mined and processed at the Kalkaroo processing facility. This salvage value would be recovered by selling the processing operation. It is only possible to realise this salvage value however if the surrounding resources are owned by third party as a potential purchaser. Any value obtained by dismantling and selling the plant components is minimal within the context of closure and rehabilitation costs.
- Additional resources either as resource extension to Kalkaroo or in close proximity.
  - The value of additional resources is considered in the exploration assets section of this document. Once a processing plant is constructed, its presence will encourage further exploration expenditure in the area and contribute some value to these additional resources. This value but can only be realised with Mineral Resource and Ore Reserve definition.

AMC considers salvage value is very dependent on the development, operation and exploration of the Project as well as changes to the technical, economic and political environment over a 15-year period. AMC considers a salvage value is not material within the accuracy of the capital estimates.

# 2.14 Schedule of project costs

The estimated life-of-mine project costs are shown graphically in Figure 2.9 and provided in a table in Appendix A.

The following sections summarise the key values.

### Figure 2.9 Life of project costs



Based on model provided to AMC by Havilah dated 30 May 2019.

## 2.14.1 Revenue inputs

The Project revenue inputs parameters used in the PFS are tabulated in both US\$ and A\$ in Table 2.12. The copper payability factor used in the PFS was 0.93. This was changed to 0.96 in May 2019 following updated advice on smelter terms.

### Table 2.12 Project revenue inputs

Parameter	Value
Exchange rate A\$/US\$	0.75
Copper price (US\$/lb)	2.90
Copper price (US\$/t)	6,380
Copper price (A\$/Ib)	3.86
Copper price (A\$/t)	8510
Gold price (US\$/oz)	1200
Gold price (A\$/oz)	1600
Gold price (A\$/g)	51.4
Copper payability (%)	96
Gold payability (%)	93
Royalty (%)	2% for first five years then 5%

Based on information provided to AMC by Havilah

#### 2.15 Risks and Opportunities

The following risks and opportunities have been identified in relation to the Project.

#### 2.15.1 Geology and Mineral Resources.

The Kalkaroo Mineral Resource is an undeveloped resource is an area with no previous mining of comparable resources. There is a greater level of uncertainty with the geology and mineral resource at Kalkaroo compared to Mineral Resource in regions with existing mining operations in similar types of deposits.

This greater uncertainty is both a risk and an opportunity in that the geology and Mineral Resource may be both better or worse than anticipated in the evaluation work done to date.

The geology may be more complex than identified in drilling and this may result in lower mining recovery and greater dilution. The mineralisation may be less continuous than indicated by the resource drilling and modelling resulting in a reduction in the Mineral Resource.

Further studies will result in an increased in the understanding of the Kalkaroo geology and this may lead to the targeting and identification of extensions to the Mineral Resource, and the targeting of similar mineralization in the region.

# 2.15.2 Mining

The mining plan assumes an owner mining model. The PFS also recommend that a contract mining model is evaluated. A contract mining model will reduce the initial capital cost and reduce the technical risk with establishing the management, maintenance and labour expertise required to operate an open pit mining fleet.

The Namba Formation, deep saprolite and presence of groundwater results in geotechnically difficult open pit mining conditions and shallow pit slope designs. The PFS design has been informed by experience in mining in similar conditions at Portia. The conditions at Kalkaroo while similar are different and the slopes may behave differently. The planned mining of Kalkaroo is in a series of pit stages with cutbacks. This provides the opportunity to better understand the geotechnical conditions and the slope design criteria prior to designing and mining the final pit slopes.

Mining costs and productivities are estimated in the PFS based on experience with other comparable operations. These are influenced by the specific rock materials in each operation. However, with no existing mining at Kalkaroo there is a possibility of unforeseen conditions increasing costs or reducing productivities.

# 2.15.3 Processing

Testing and studies on metallurgical recovery are ongoing. Processing recoveries are lower than comparable operations. Further test work and studies may increase the amount of recovered metal.

With no existing processing experience on the Kalkaroo mineralization there is a higher possibility of unforeseen conditions increasing costs or reducing processing throughput or metallurgical recoveries.

# 2.15.4 Marketing

Kalkaroo is planned to produce several different concentrate products. These concentrates will be similar but not identical to existing concentrate products produced by other existing operations. The revenue received will depend on how the concentrate is marketed and how well the processing plant can match the quality of concentrate required by the potential buyers. The presence of deleterious penalty elements in copper and gold concentrate can significantly reduce the price of the product.

# 3 Other mineral assets

# 3.1 Operations background

In addition to Kalkaroo, Havilah holds a number of Mineral Assets in the Curnamona region and beyond.

These Mineral Assets consist of:

- **Mutooroo** A copper, gold, cobalt project on exploration licence (EL) EL 5753. A Measured, Indicated and Inferred Mineral Resource estimate has been reported for Mutooroo. The project includes two mineral claims (MC) and a mining lease (ML) with historical open pit mine workings.
- **Maldorky** An iron oxide deposit on EL 6041. An Indicated Mineral Resource has been reported.
- **Grants** An iron oxide deposit on EL 6041 and EL 6280. An Inferred Mineral Resource has been reported.
- **Oban** A uranium deposit on EL 5423. An Inferred Mineral Resource has been reported.
- North Portia Havilah retains a 1.5% NSR royalty on all commodity sales from the mining lease, and the exploration rights to the Bassanio exploration target on the mining lease (ML).
- **Curnamona exploration tenements** Approximately 16,400 km<sup>2</sup> of exploration tenements in the Curnamona region (Figure 3.1) including Grants Basin. The tenements under consideration are listed in Table 3.1.
- Joint Venture and other exploration tenements Joint venture tenements are held at Prospect Hill (65%), north of Arkaroola, Pernatty (12.6%) northwest of Port Augusta, and the Frome geothermal project, 150 km west of Broken Hill.

### Figure 3.1 Mineral Asset locations



# Table 3.1Tenements under consideration

	Туре	No	EL Name	Grant Date	Expiry Date	Area (sq km)	Annual Expenditure Commitment	Curnamona Amalgamated Expenditure Agreement (AEA)	Tenement Rental	Rehabilitation Bank Guarantees	Third party Obligations (JVs & Royalty Agreements)	Company	Reapplication/ Renewal	Reapplication/ Renewal Date
	EL	5873	Benagerie	13-Oct-16	12-0ct-21	585	\$340,000	Curnamona AEA*	\$7,476.50	\$15,000	1% Net Smelter Return payable to MMG	Havilah Resources Limited		
	EL	5593	Billeroo West	10-Mar-15	09-Mar-20	152	\$180,000	Curnamona AEA*	\$2,064.00	NA		Havilah Resources Limited		
	EL	6054	Bindarrah	23-Nov-17	22-Nov-19	157	\$45,000	Curnamona AEA*	\$2,126.50	NA		Iron Genesis Pty Ltd		
	EL	5755	Bonython Hill	02-Nov-15	01-Nov-20	20	\$60,000	Curnamona AEA*	\$414.00	NA		Copper Aura Pty Ltd		
$\mathcal{D}$	EL	5831	Bonython Hill (2)	19-May-16	18-May-21	111	\$160,000	Curnamona AEA*	\$1,551.50	NA		Copper Aura Pty Ltd		
)	EL	5903	Border Block	21-Dec-16	20-Dec-21	32	\$140,000	Curnamona AEA*	\$564.00	NA		Havilah Resources Limited		
	EL	5760	Bumbarlow	04-Mar-16	03-Mar-21	999	\$125,000	Curnamona AEA*	\$12,651.50	NA		Havilah Resources Limited		
)	EL	5703	Bundera	04-Feb-16	03-Feb-21	343	\$65,000	Curnamona AEA*	\$4,451.50	NA		Copper Aura Pty Ltd		
リ	EL	6194	Bundera Dam	11-Jul-18	10-Jul-20	58	\$35,000	Curnamona AEA*	\$889.00	NA		Havilah Resources Limited		
2	EL	5448	Carnanto	22-Jul-14	21-Jul-19	836	\$110,000	Curnamona AEA*	\$10,614.00	NA		Havilah Resources Limited	ELA2019/00025	29-Mar-19
))	EL	6161	Chocolate Dam	30-Apr-18	29-Apr-20	59	\$140,000	Curnamona AEA*	\$901.50	NA		Havilah Resources Limited		
	EL	6211	Cochra	29-May-18	28-May-20	17	\$60,000	Curnamona AEA*	\$376.50	NA		Havilah Resources Limited		
))	EL	5502	Collins Tank (Cockburn)	22-Oct-14	21-Oct-19	29	\$70,000	Curnamona AEA*	\$526.50	NA		Havilah Resources Limited		
	EL	5824	Coolibah Dam	11-Aug-16	10-Aug-21	47	\$35,000	Curnamona AEA*	\$751.50	NA		Havilah Resources Limited		
	ELA	2019/00067	Coombs Bore	NA	NA	640	NA	NA	NA	NA		Havilah Resources Limited		
3	EL	5940	Coonarbine	06-Apr-17	05-Apr-22	619	\$90,000	Curnamona AEA*	\$7,901.50	NA		Havilah Resources Limited		
IJ	EL	6164	Cootabarlow	06-Jun-18	05-Jun-20	989	\$125,000	Curnamona AEA*	\$12,526.50	NA		Havilah Resources Limited		
	EL	6041	Cutana	16-Aug-17	15-Aug-19	363	\$520,000	Curnamona AEA*	\$4,701.50	\$10,000		Iron Genesis Pty Ltd		
	EL	5915	Emu Dam	06-Feb-17	05-Feb-22	345	\$520,000	Curnamona AEA*	\$4,476.50	NA	1% Net Smelter Return payable to MMG	Havilah Resources Limited		
))	EL	5488	Eurinilla	30-Sep-14	29-Sep-19	70	\$140,000	Curnamona AEA*	\$1,039.00	NA		Havilah Resources Limited	ELA2019/00052	22-May-19
)	EL	6056	Frome	02-Jul-17	01-Jul-22	47	\$140,000	Curnamona AEA*	\$751.50	NA		Curnamona Energy Pty Limited		
ク	EL	5951	Jacks Find	19-Apr-17	18-Apr-22	103	\$160,000	Curnamona AEA*	\$1,451.50	NA		Curnamona Energy Pty Limited		
_	EL	5578	Kalabity	13-Mar-15	12-Mar-20	148	\$45,000		\$2,014.00	NA to ano				
	EL	5800	Kalkaroo	18-Jan-16	17-Jan-21	998	\$500,000	Curnamona AEA*	\$12,639.00	\$5,000		Havilan Resources Limited		
2	ML	6498	Kalkaroo	22-May-19	21-May-40	497.5 Hectares	NA	NA	\$32,575.75	NA		Kalkaroo Copper Pty Ltd		
))	ML	6499	Kaikaroo	22-May-19	21-May-40	Hectares	INA	NA	\$03,308.05	NA		Kaikaroo Copper Pty Ltu		
	ML	6500	Kalkaroo	22-May-19	21-May-40	138 Hectares	NA	NA	\$9,388.00	NA		Kalkaroo Copper Pty Ltd		
	MPL	158	Kalkaroo	22-May-19	21-May-40	248.8 Hectares	NA	NA	\$16,534.60	NA		Kalkaroo Copper Pty Ltd		
)	MPL	159	Kalkaroo	22-May-19	21-May-40	51.68 Hectares	NA	NA	\$3,820.36	NA		Kalkaroo Copper Pty Ltd		
リ	MC	3827	Kalkaroo	21-Aug-07	20-Aug-08	248.3	NA	NA	NA	NA		Kalkaroo Copper Pty Ltd	Mining Lease Appln	04-Jul-08
	EL	6258	Kidman Bore	27-Sep-18	26-Sep-20	201	\$50,000	Curnamona AEA*	\$2,676.50	NA		Havilah Resources Limited		
	EL	6099	Lake Carnanto	17-Jan-18	16-Jan-20	854	\$115,000	Curnamona AEA*	\$10,839.00	NA		Havilah Resources Limited		
	EL	6323	Lake Charles	24-Feb-19	23-Feb-21	322	\$480,000	Curnamona AEA*	\$4,189.00	NA		Havilah Resources Limited		
	EL	5505	Lake Frome	27-Oct-14	26-Oct-19	106	\$40,000	Curnamona AEA*	\$1,489.00	NA		Havilah Resources Limited		
	EL	5420	Lake Namba	27-Apr-14	26-Apr-19	490	\$320,000	Curnamona AEA*	\$6,289.00	NA		Havilah Resources Limited	ELA2018/00202	06-Dec-18
	EL	5476	Lake Yandra	16-Sep-14	15-Sep-19	329	\$60,000	Curnamona AEA*	\$4,276.50	NA		Havilah Resources Limited	ELA2019/00050	22-May-19
	A	2019/00066	Lucky Hit	NA	NA	706	NA	NA	NA	NA		Havilah Resources Limited		

	Туре	No	EL Name	Grant Date	Expiry Date	Area (sq km)	Annual Expenditure Commitment	Curnamona Amalgamated Expenditure Agreement (AEA)	Tenement Rental	Rehabilitation Bank Guarantees	Third party Obligations (JVs & Royalty Agreements)	Company	Reapplication/ Renewal	Reapplication/ Renewal Date	
	MC	4271	Maldorky	18-Oct-10	17-Oct-11	249.49 Hectares	NA	NA	NA	\$10,000		Maldorky Iron Pty Ltd	Mining Lease Appln date	02-Jun-11	ML application date
	МС	4272	Maldorky	18-Oct-10	17-Oct-11	248.06 Hectares	NA	NA	NA			Maldorky Iron Pty Ltd	Mining Lease Appln date	02-Jun-11	ML application
	MC	4273	Maldorky	18-Oct-10	17-0ct-11	131.95 Hectares	NA	NA	NA			Maldorky Iron Pty Ltd	Mining Lease Appln date	02-Jun-11	ML application
$\overline{)}$	MC	4274	Maldorky	18-Oct-10	17-Oct-11	116.82 Hectares	NA	NA	NA			Maldorky Iron Pty Ltd	Mining Lease Appln date	02-Jun-11	ML application
9	MC	4364	Maldorky	07-Mar-14	06-Mar-15	112.24 Hectares	NA	NA	NA			Maldorky Iron Pty Ltd	Mining Lease Appln date	23-May-14	ML application
5	EL	5764	Maljanapa	31-Mar-16	30-Mar-21	996	\$125,000	Curnamona AEA*	\$12,614.00	NA		Havilah Resources Limited			uate
	EL	6280	Mingary	12-Nov-18	11-Nov-20	229	\$400,000	Curnamona AEA*	\$3,026.50	NA	1.25% Net Smelter Return payable to Exco operations (SA), Polymetals (White Dam) Pty Ltd	Iron Genesis Pty Ltd			
Ľ	EL	5848	Mingary (2)	06-Jul-16	05-Jul-21	354	\$260,000	Curnamona AEA*	\$4,589.00	NA		Iron Genesis Pty Ltd			
	EL	5785	Moko	25-May-16	24-May-21	795	\$105,000	Curnamona AEA*	\$10,101.50	NA		Havilah Resources Limited			
	EL	5966	Moolawatana	11-May-17	10-May-22	196	\$200,000	Curnamona AEA*	\$2,614.00	NA		Curnamona Energy Pty Limited			
$\mathcal{N}$	EL	5802	Mulyungarie	24-Feb-16	23-Feb-21	942	\$480,000	Curnamona AEA*	\$11,939.00	NA		Havilah Resources Limited			
2	EL	5904	Mundaerno Hill	21-Dec-16	20-Dec-21	58	\$140,000	Curnamona AEA*	\$889.00	NA		Havilah Resources Limited			
	EL	5754	Mundi Mundi	02-Nov-15	01-Nov-20	73	\$70,000	Curnamona AEA*	\$1,076.50	NA		Havilah Resources Limited			
	EL	5753	Mutooroo Mine	02-Nov-15	01-Nov-20	23	\$60,000	Curnamona AEA*	\$451.50	NA		Copper Aura Pty Ltd			
2	ML	5678	Mutooroo Mine	30-Aug-11	29-Aug-18	16 Hectares	NA	NA	\$1,519.00	NA		Mutooroo Metals Pty Ltd	Renewed	29-Aug-18	
J	MC	3565	Mutooroo Mine	25-Oct-05	24-Oct-06	100.3	NA	NA	NA	\$10,000		Mutooroo Metals Pty Ltd	Mining Lease	23-Oct-06	
)	MC	3566	Mutooroo Mine	25-Oct-05	24-Oct-06	Hectares 138.2 Hectares	NA	NA	NA	NA		Mutooroo Metals Pty Ltd	Appln date Mining Lease Appln date	23-Oct-06	
	EL	6163	Mutooroo South	06-Jun-18	05-Jun-20	151	\$45,000	Curnamona AEA*	\$2,051.50	NA		Copper Aura Pty Ltd			
)	EL	5801	Mutooroo West	18-Jan-16	17-Jan-21	72	\$70,000	Curnamona AEA*	\$1,064.00	NA		Copper Aura Pty Ltd			
))	EL	5882	Mutooroo(2)	04-Nov-16	03-Nov-21	64	\$35,000	Curnamona AEA*	\$964.00	NA		Copper Aura Pty Ltd			
	EL	5396	Olary	16-Apr-14	15-Apr-19	76	\$35,000	Curnamona AEA*	\$1,114.00	NA		Havilah Resources Limited	ELA2018/00201	06-Dec-18	
	EL	5853	Oratan	02-May-16	01-May-21	107	\$160,000	Curnamona AEA*	\$1,501.50	NA		Havilah Resources Limited			
	EL	6165	Poverty Lake	06-Jun-18	05-Jun-20	999	\$125,000	Curnamona AEA*	\$12,651.50	NA		Havilah Resources Limited			
))	EL	5463	Prospect Hill	30-Jun-14	29-Jun-19	15	\$60,000	NA	\$351.50	NA		Havilah Resources Limited	Not renewed	Expires on 29-	
	EL	6271	South Prospect Hill SW	19-Oct-18	18-Oct-20	15	\$30,000	NA	\$351.50	NA		Havilah Resources Limited		Jun-19	
	EL	5579	Sandstone	21-Jan-15	20-Jan-20	107	\$80,000	NA	\$1,501.50	NA		Havilah Resources Limited			
	EL	5421	Swamp Dam	27-Apr-14	26-Apr-19	53	\$140,000	Curnamona AEA*	\$826.50	NA		Havilah Resources Limited	ELA2018/00203	06-Dec-18	
	EL	5478	Tarkarooloo	16-Sep-14	15-Sep-19	26	\$55,000	Curnamona AEA*	\$489.00	NA		Havilah Resources Limited	ELA2019/00051	22-May-19	
	EL	5422	Telechie	27-Apr-14	26-Apr-19	347	\$260,000	Curnamona AEA*	\$4,501.50	NA		Havilah Resources Limited	ELA2018/00204	06-Dec-18	
	EL	5803	Telechie North	21-Mar-16	20-Mar-21	35	\$70,000	Curnamona AEA*	\$601.50	NA		Havilah Resources Limited			
	ELA	2019/00021	Терсо	NA	NA	70	NA	NA	NA	NA		Havilah Resources Limited			
		1	1					1				1			

Туре	No	EL Name	Grant Date	Expiry Date	Area (sq km)	Annual Expenditure Commitment	Curnamona Amalgamated Expenditure Agreement (AEA)	Tenement Rental	Rehabilitation Bank Guarantees	Third party Obligations (JVs & Royalty Agreements)	Company	Reapplication/ Renewal	Reapplication/ Renewal Date	
EL	5952	Thurlooka	19-Apr-17	18-Apr-22	221	\$200,000	Curnamona AEA*	\$2,926.50	NA		Curnamona Energy Pty Limited			
EL	6203	Watsons Bore	25-Jul-18	24-Jul-20	243	\$55,000	Curnamona AEA*	\$3,201.50	NA		Havilah Resources Limited			
EL	5956	Wompinie	03-May-17	02-May-22	139	\$45,000	Curnamona AEA*	\$1,901.50	NA		Havilah Resources Limited			
EL	5437	Woodville Dam (Cockburn)	24-Jun-14	23-Jun-19	64	\$70,000	Curnamona AEA*	\$964.00	NA		Havilah Resources Limited	ELA2019/00012	7-Feb-19	
EL	6298	Yalkalpo	12-Jan-19	11-Jan-21	194	\$200,000	Curnamona AEA*	\$2,589.00	NA		Curnamona Energy Pty Limited			
EL	5964	Yalkalpo East	11-May-17	10-May-22	77	\$140,000	Curnamona AEA*	\$1,126.50	NA		Curnamona Energy Pty Limited			
EL	5423	Yalu	27-Apr-14	26-Apr-19	249	\$320,000	Curnamona AEA*	\$3,276.50	NA		Havilah Resources Limited	ELA2018/00205	06-Dec-18	
GEL	181			21-Nov-20	1305	NA	NA	\$3,759.00	\$100,000			Suspension to 07 May 2020		
	Total Exploration Tenements					\$7,125,000								
	*Curnamona 2019 Havila	a AEA is an agree h has expended	ement with D \$7,968M and	EM by which I are on track to	Havilah meet o satisfy the o	s expenditure conditions of t	commitment by ex he agreement.	pending \$8M in the	e two years 2018,	19 on any of the l	isted tenements. As at 31 M	arch		

## 3.2 Tenement standing

AMC has undertaken a review of certain information to assess the standing of Havilah's tenements. Information referenced included internal information, Native Title agreements, Royalty agreements, expenditure requirements and the title for Kalkaroo Station, all provided by Havilah, and data extracted by Havilah from the South Australian government database. The tenements, summarised in Table 3.1, and include the newly granted MLs over Kalkaroo.

The Curnamona AEA is an agreement with Department of Energy and Mining (DEM) by which Havilah is required to meet its expenditure commitment by expending A\$8 million in the two years 2018/19 on any of the listed tenements. As at 31 March 2019 Havilah has expended A\$7.968 million and are on track to satisfy the conditions of the agreement. Meeting this target will require a relinquishment of a minimum of 15% of the area under the AEA. The actual amount is negotiated at the end of the year based on actual expenditure.

Applications have been lodged for the renewal of the ELs. Havilah has received confirmation for some of these that they will be granted and is waiting on responses for the others. AMC has no information to suggest the EL renewals will not be granted.

The ML applications over the MCs, lodged on the dates shown in Table 3.1, remain in place indefinitely, and are assessed by DEM once all required documentation is ultimately lodged. The MLs and MCs are within Havilah ELs.

From this review, AMC concluded that the tenements are in good standing and this report has been prepared on that basis.

# 4 Mineral Resources

# 4.1 Mutooroo

## 4.1.1 Location and background

Mutooroo is located in South Australia at the southern extent of the tenement package approximately 30 km south of the Barrier Highway and 30 km west of the NSW boarder.

The Mutooroo deposit and associated mineral claims (MC) are totally enclosed by EL 6041. The material tenements are listed in Table 3.1. EL 6041 also hosts half of Grants.

# 4.1.2 Geology

Geology at Mutooroo comprises Broken Hill-age, high-grade metamorphic rocks. Mineralization occurs within shear zone that dips at 45° hosted within an amphibolite sill. The mineralization occurs as a series of stacked sulphide-rich lodes.

Vertical zonation is due to weathering and oxidation with a completely oxidized zone, a supergene pyrite zone and a primary sulphide zone developed.

# 4.1.3 Data available

Drilling used for resource estimation is surface diamond drilling and reverse circulation drilling (RC). PQ, HQ and NQ core sizes have been used and core loss in the mineralized zones was minimized by using triple tube drilling methods. RC drillholes were used in resource estimation. Face sample drill bits were used.

All drillholes were geologically logged directly into a digital logging system. Drillhole collar positions were surveyed. Diamond drillholes were surveyed downhole. Drill core was routinely orientated.

Drill core from diameter drilling was generally cut as half-core samples. These were 0.5 m samples for Havilah drilling with historical data split over 1.5 m intervals. Half core was sent for sample preparation and the other half retained as a reference sample. RC samples were collected on one-metre intervals and riffle split to between two and three kilograms.

Sample preparation and assay for drill core was conducted at a commercial laboratory. Samples were assayed using multi acid digest with ICP<sup>6</sup> for base metals and fire assay for gold. Standards, blanks and repeat samples were submitted at a rate of one in 50 samples. No issues were identified from quality control results.

Bulk density determinations were completed using the weight in air/weight in water method.

## 4.1.4 Estimation

Domains were interpreted on 50 m spaced cross sections and linked to create 3D wireframe models. Domaining was based on a combination of lithological and oxidation information.

Block models were created with sub-blocking to define boundaries. Grade estimation was applied to whole blocks, which is accepted in industry practice. Data was composited to one metre intervals.

Block grades were estimated in each domain using inverse distance (ID) and multiple search passes. Unfolding was used to honour the geology in the interpolation. The number of composites used from a single estimate was between one and five.

<sup>&</sup>lt;sup>6</sup> Inductively coupled plasma

Copper, gold and cobalt grades were estimated along with the bulk density.

### 4.1.5 Classification and reporting

In general, the resource model classification was based on the confidence of the geological model and the continuity of mineralization. Deeper mineralization defined by historic drilling was classified as Inferred Mineral Resource. Indicated Mineral Resource was generally informed with Havilah drilling.

The Mineral Resource was reported without a cut-off grade as it is considered to be constrained by geological boundaries.

### 4.1.6 Conclusion

The Mutooroo Mineral Resource estimate is considered to have been prepared using acceptable industry practice and the classification of the estimate is appropriate In AMC's opinion the Mineral Resource estimate is reasonable.

#### 4.1.7 Mineral Resource

The Mutooroo Mineral Resource as at 31 July 2018 was estimated by Havilah and is classified as indicated in Table 4.1.

#### Table 4.1Mutooroo Mineral Resource estimate as at 18 October 2010

Category	Tonnes (kt)	Copper (%)	Cobalt (%)	Gold (g/t)	Copper (t)	Cobalt (t)	Gold (oz)
Measured Oxide	598	0.56	0.04	0.08	3,300	200	1,500
Measured Sulphide	4,149	1.12	0.14	0.18	46,500	-	-
Indicated Sulphide	1,697	1.52	0.14	0.35	25,800	-	-
Inferred Sulphide	6,683	1.71	ISD*	ISD*	114,300	-	-
Total	13,127	1.53			191,700	8,200	43,100

Note: \* Insufficient assay data as reported by Havilah. Table subject to rounding. Resource as stated in Annual report 2018

# 4.2 Maldorky

## 4.2.1 Location and background

Maldorky is located on the eastern margin the tenement package approximately 20 km south of the Barrier Highway and 5 km west of the NSW boarder, in South Australia.

The Maldorky deposit and associated mining lease and mineral claims are totally enclosed by EL 5753. The material tenements are listed in Table 3.1.

#### 4.2.2 Geology

The Maldorky magnetite Mineral Resource is hosted within the Neoproterozoic Braemar Iron Formation. At this location it is up to 200 m thick comprising multiple interbedded iron formations and tillite beds. The deposit is shallowly dipping with drag folds and shearing resulting in an apparent thickening.

### 4.2.3 Data available

Drilling used for resource estimation is surface RC drilling performed by Havilah. Face sample drill bits were used.

All drillholes were geologically logged directly into a digital logging system. Drillhole collar positions were surveyed. RC drillholes were surveyed downhole.

RC samples for Havilah drilling were collected on one metre intervals. Samples were assayed using an Xray fluorescent (XRF) analyser. Further assay was undertaken for samples over 15% iron. These samples were collected from the one-metre intervals and riffle split or speared, and then composited to three-metre intervals to produce between two and three kilogram samples.

Sample preparation and assay was conducted at a commercial laboratory. Samples were assayed using whole rock fusion XRF analysis. Precision and accuracy were monitored using least square regression analysis of laboratory versus field results. A low bias in the field results was attributed to field related issues such as moisture and instrument use. No issues were identified from quality control results.

Bulk density determinations were completed by a commercial laboratory for a range of iron contents. This relationship was used to assign density to blocks in the estimation.

## 4.2.4 Estimation

Domains were interpreted on 100 m spaced cross sections and linked to create 3D wireframe models. Domaining was based on a combination of lithological and a natural grade cut-off at 15% to 18% iron.

Block models were created with sub-blocking to define boundaries. Grade estimation was applied to whole blocks, which is accepted in industry practice. Data was composited to three-metre intervals. Search criteria was manually determined based on geological alignment and data density.

Block grades were estimated in each domain using ID and multiple search passes. The number of composites used from a single estimate was between two and ten.

Iron grade was estimated along with the bulk density.

#### 4.2.5 Classification and reporting

The resource model was classified as Indicated Resource based on the quality of drillhole sampling and assay data and confidence of the continuity of mineralization.

The Mineral Resource was reported at a cut-off grade of 18% iron. Havilah reports that SIMEC Mining's test work on Maldorky iron ore samples showed the targeted product grade of 65% Fe was achieved for a 40% product yield and an overall 85% iron recovery with conventional processing methods.

#### 4.2.6 Conclusion

The Maldorky Mineral Resource estimate is considered to have been prepared using acceptable industry practice and the Indicated Resource classification of the estimate is appropriate for the practices used.

#### 4.2.7 Mineral Resource

The Maldorky Mineral Resource as at 31 July 2018 was estimated by Havilah and is classified as Indicated Resource as listed in Table 4.2.

Table 4.2	Maldorky	Mineral	Resource	estimate	as at	10 June	2011
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Category 18% Fe cut-off	Tonnes (Mt)	Iron (%)	Fe Concentrate (Mt)	Yield (%)
Indicated	147	30.1	59	40
Total	147	30.1	59	40

Resource as stated in Annual report 2018

# 4.3 Grants

# 4.3.1 Location and background

Grants is located approximately 20 km north of Maldorky and within 8 km south of the Barrier Highway and 30 km west of the NSW boarder, in South Australia.

The Grants deposit is within EL 6041 and EL 6280. EL 6041 also hosts Mutooroo. EL 6280 also hosts Grants Basin exploration target.

## 4.3.2 Geology

The Grants magnetite-hematite Mineral Resource is hosted within the Neoproterozoic Braemar Iron Formation. At this location it is up to 200 m thick comprising multiple interbedded iron formations and tillite beds. The deposit is shallowly dipping with drag folds and shearing resulting in an apparent thickening.

## 4.3.3 Data available

Drilling used for resource estimation is surface RC drilling performed by Havilah. Face sample drill bits were used.

All drillholes were geologically logged directly into a digital logging system. Drillhole collar positions were surveyed. RC drillholes were surveyed downhole.

RC samples for Havilah drilling were collected on one metre intervals. Samples were assayed using an XRF analyser. Further assay was undertaken for samples over 15% iron. These samples were collected from the one mete intervals and riffle split or speared, and then composited to three-metre intervals to produce between two and three-kilogram samples.

Sample preparation and assay was conducted at a commercial laboratory. Samples were assayed using whole rock fusion XRF analysis. Precision and accuracy were monitored using least square regression analysis of laboratory versus field results. A low bias in the field results was field related issues such as moisture and instrument use. No issues were identified from quality control results.

Bulk density determinations were completed by a commercial laboratory for a range of iron contents. This relationship was used to assign density to blocks in the estimation.

## 4.3.4 Estimation

Domains were interpreted on 150 m spaced cross sections and linked to create 3D wireframe models. Domaining was based on a combination of lithological and a natural grade cut-off at 15% to 18% iron.

Block models were created with sub-blocking to define boundaries. Grade estimation was applied to whole blocks, which is accepted in industry practice. Data was composited to three-metre intervals. Search criteria was manually determined based on geological alignment and data density.

Block grades were estimated in each domain using ID and multiple search passes. The number of composites used from a single estimate was between two and ten.

Iron grade was estimated along with the bulk density.

#### 4.3.5 Classification and reporting

The resource model was classified as Inferred Resource based on the density of drillholes averaging  $180 \text{ m} \times 180 \text{ m}$  spacing. The quality of drillhole sampling and assay data and confidence of the continuity of mineralization is considered by Havilah to be good.

The Mineral Resource was reported at a cut-off grade of 18% iron.

### 4.3.6 Conclusion

The Grants Mineral Resource estimate is considered to have been prepared using acceptable industry practice and the classification of the estimate as Inferred Resource is appropriate for the practices used.

### 4.3.7 Mineral Resource

The Grants Mineral Resource as at 31 July 2018 was estimated by Havilah and is classified as Inferred as provided in Table 4.3.

Table 4.3 Grants Mineral Resource estimate as at 25 Decemb	er 2012
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Category 18% Fe cut-off	Tonnes (Mt)	Iron (%)	Fe Concentrate (Mt)	Yield (%)
Inferred	304	24	100	33
Total	304	24	100	33

Resource as stated in Annual report 2018

#### 4.4 Oban

### 4.4.1 Location and background

Grants is located approximately 100 km north of the Barrier Highway and 25 km west of the NSW boarder, in South Australia.

The Oban deposit is within EL 5423.

#### 4.4.2 Geology

The Oban uranium mineralization occurs within the Eyre Formation of the Lake Eyre Basin of Tertiary age as uniformly bedded blanket sands. These are covered by clay sediments of the Namba Formation and more recent sediments. The deposit is underlain by the Cretaceous age Marree Formation clay sequence.

#### 4.4.3 Data available

Drilling used for resource estimation is surface rotary mud drilling. The drillholes are used in resource estimation to obtain downhole geophysical data. This includes logging with gamma and induction tools to determine radiometric responses. The work is undertaken by a recognised contractor in this field using regularly calibrated equipment.

Drillholes were spaced between 40 m and 400 m apart. These were geophysically logged directly into a digital logging system with equivalent uranium grades (eU3O8) calculated and assigned to logged intervals. Drillhole samples were not assayed.

Drillhole collar positions were surveyed. Rotary drillholes were surveyed downhole.

## 4.4.4 Estimation

Grade-thickness intercepts have been modelled in plan-view to produce grade-thickness contours. A cut-off of 0.01 of metres intercept multiplied by percent of eU308 (m%eU308) has been applied and a minimum intercept thickness of 0.3 m. Polygons were generated from the contours. Estimates of tonnes were validated using a second software package.

A secondary grade-thickness cut-off of 0.03 m%eU3O8 was selected to define the Mineral Resource.

A bulk density  $1.9 \text{ t/m}^3$  was adopted based on the experience of the Competent Person.

# 4.4.5 Classification and reporting

The resource estimate was classified as Inferred Resource due to the lack of assessment to determine the likely recovery percentage.

### 4.4.6 Conclusion

The Oban Mineral Resource estimate is considered to have been prepared using acceptable industry practice and the classification of the estimate as Inferred is appropriate for the practices used.

### 4.4.7 Mineral Resource

The Oban Mineral Resource as at 31 July 2018 was estimated by Havilah and is classified as Inferred Resource as listed in Table 4.4.

Table 4.4Oban Mineral Resource estimate as at 4 June 2009

Category Cut-off 0.03 m%eU308	Tonnes (Mt)	eU308 (ppm)	Contained eU3O8 (t)	
Inferred	8	260	2,100	
Total	8	260	2,100	

Resource as stated in Annual report 2018

# 5 Valuation methods – exploration properties

Where projections of production physicals and related costs can be reasonably determined for an operation or development project, it is accepted industry practice to prepare discounted cash flow (DCF) models from which net present value (NPV) estimates can be determined for the operation or project. Accordingly, for Kalkaroo, production and capital and operating cost projections have been prepared (production cases) for consideration by BDO in its generation of NPVs for that project.

The methods used for valuation of the exploration properties of Havilah have been selected by AMC based on available data and as methods considered appropriate as described below:

- Mineral Resources reported for Kalkaroo, as at July 2018, that have been excluded from the production cases have been valued using yardstick and past expenditure exploration valuation methods.
- Where a tenement has a reported Mineral Resource but is not sufficiently advanced to provide a reasonable basis for use of the DCF method, those tenements have been considered on the basis of the yardstick value for the reported Mineral Resources, and the past expenditure exploration method for valuation purposes.
- Tenements without Mineral Resources have been considered as exploration properties for valuation purposes. The methods used are the Past Expenditure method and Comparable Transactions.

The valuation of exploration properties, particularly those for which Mineral Resources have not been estimated, is very subjective. There are, however, several generally accepted methods to value exploration projects as appropriate to arrive at balanced judgments of value.

Where possible, AMC has used more than one method for determining the valuation appropriate to that project. Values are rounded, and outliers in contributing estimates are sometimes excluded.

The methods considered in this ITSR for valuation of the Mineral Resources reported as at July 2018 that have been excluded from the Kalkaroo production cases are as follow.

# 5.1 The Yardstick Value method

Yardstick values can be used for properties where a Mineral Resource has been quantified. A value per unit of metal contained in the Mineral Resource is calculated from transactions and applied to the contained metal in the Mineral Resource that is the subject of the valuation (refer to Appendix B to this report for descriptions of valuation methods used by AMC). A high, mid and low valuation are generally derived.

Transactions used to determine yardstick values reflect a range of mineral deposit types, geographical locations and operating conditions. The transactions may include operating projects with a processing plant, projects about to start or restart or companies with one significant mining asset. The transactions are likely to include tenements with significant rehabilitation liabilities or other obligations, but AMC does not have details of those liabilities and obligations.

AMC has identified a number of transactions for copper, gold and iron oxide deposits that indicate yardstick values. All of these deposits are in Australia. Western Australian transactions have generally been excluded as the scale and strategic nature of mineral assets in Western Australia tend to indicate different values. Some of the mineral deposits that are the subject of the transactions include subordinate metals that may add value. AMC has assumed that most of the value in the transaction is indicated by the primary metal contained in the Mineral Resource in determining the yardstick values, and in applying them to the Mineral Resource.

Transactions considered include tenements with reported Measured, Indicated and Inferred Mineral Resources but without Ore Reserves.

A value is determined by reference to actual transactions for the property in question. Actual transactions for exploration tenements made by Havilah have been considered in this instance. However, the value of the transaction may not reflect the strategic value, adjacent mineral assets or subsequent development of associated projects. Therefore, the listed value of the transaction is not always relevant.

# 5.3 Comparable Transaction method

A value is determined by reference to recent transactions for projects considered to be similar to those under review. Comparable transactions are converted to a value per unit area. A high, mid and low valuation are generally derived.

The preferred value for the valuation ranges presented in this report is the midpoint of the range. The methods selected by AMC are based on data available.

# 6 Valuation Mineral Resources outside production cases

To value Mineral Resources outside of production cases, a search of a subscription database was completed to identify comparable transactions. In assessing the transactions, it was apparent that transactions in eastern and central Australia indicated different ranges of yardstick values for Mineral Resources compared to transactions in Western Australia. Accordingly, the ranges of yardstick and unit area values have been applied from eastern Australian transactions to determine values.

## 6.1 Kalkaroo and Mutooroo copper gold cobalt projects

The methods used for the valuations have been selected by AMC based on data that is available, and are methods considered appropriate.

The yardstick values for Kalkaroo and Mutooroo are based on the transactions listed in Table 6.1 for valuation of Mineral Resources outside of production cases. The transactions are copper, gold and polymetallic copper-based projects, and are considered relevant to the valuation date without adjustment. Gold-dominant project resource ounces are converted to copper equivalent tonnes using commodity prices of A\$8.20/kg copper and A\$1,800/oz gold.

	Date	Project	Buyer	Resource (kt Cueq)	Value (A\$M)	Implied Value (A\$/contained metal t)
Cu	31/07/2015	Chunderloo	Auris Minerals Limited	354	20.30	57.34
	4/06/2018	Portia, North Portia	Consolidated Mining and Civil Pty Ltd	160	7.00	43.75
	17/03/2017	Mount Gunson	Gindalbie Metals	555	2.00	3.60
	31/10/2016	Leigh Creek	Resilience Mining	20	0.10	5.08
	19/08/2016	Thaduna	Sandfire Resources	81	1.54	18.94
	16/10/2017	Leigh Creek	Strategic Minerals	37	1.50	40.65
	15/12/2015	Mount Gunson	Torrens Mining	711	0.40	0.56
	24/04/2017	Barbara Copper	Washington H. Pattinson	44	4.60	103.59
	14/06/2017	Stockman	Washington H. Pattinson	287	11.20	39.02
Au	29/02/2016	Spring Hill	PC Gold Pty Ltd.	86	3.50	40.90
	21/07/2016	Glencoe gold	Ark Mines Limited	9	0.18	19.03
	30/09/2016	NT tenements	Ark Mines Limited	5	0.30	64.94
	31/01/2017	Cargo	Agricultural Equity	62	0.50	8.09
	27/02/2017	Marsden	Evolution Mining Limited	242	10.00	41.32
	19/05/2017	Blayney	Regis Resources Limited	241	3.25	13.48
	30/11/2017	Norton	Undisclosed buyer	8	0.53	68.83
	27/06/2018	Central Tanami	Northern Star	91	20.00	220.65
	-	-	-	-	mean	35.57
	-	-	-	-	median	39.84

#### Table 6.1Transactions for tenements with Mineral Resources

Transaction values exclude options and conditional payments.

Excludes transactions on operating mines.

Excludes company takeovers unless single project.

The implied values per tonne are compared with the size of the deposits in Figure 6.1. Transactions fall within the range of A\$1 to A\$70 per tonne of contained metal. The implied value does not appear to be influenced by deposit size.



The Mineral Resources that are subject to the transactions vary in size, mining status and relative proportion of Measured, Indicated and Inferred Resource. The Mineral Resource estimates to which the yardstick values will be applied are Measured, Indicated and Inferred at Mutooroo. At Kalkaroo most of the Mineral Resource not included in the production cases is Inferred Resource.

A range of implied values has been used, excluding the outlier above \$100 per tonne, indicated by the transactions to assign ranges of values to be applied to Measured, Indicated and Inferred Resources. Figure 6.2 shows the basis of the ranges of values for Measured, Indicated and Inferred Resources.



Figure 6.2 Ranges of values assigned Measured, Indicated and Inferred Resources

The ranges of yardstick values applied to each Mineral Resource category are:

Measured Resource:	A\$50/t to A\$70/t.
Indicated Resource:	A\$30/t to A\$50/t.
Inferred Resource:	A\$1/t to A\$30/t.

Kalkaroo Mineral Resources include the open pit resources. The reasonable prospects for economic extraction for the open pit are considered in the production cases. The deeper resource is defined by an underground stope optimization. The Mineral Resources are reported above 0.4 % Cueq for the open pit. For the valuation, the tonnes in the Proved and Probable Ore Reserve was considered equivalent to mining of the oxide gold cap and copper Measured Mineral Resource.

The total value for the Mineral Resources outside the production case by this method is between A\$8.7 million and A\$34.6 million for Kalkaroo, between A\$4.7 million and A\$10.2 million for Mutooroo.

AMC reviewed past expenditure information provided by Havilah as a second method of evaluation. The data provided dates from 2008 to 2018. Expenditure data for the last five years typically reflects the level of exploration success being achieved. AMC considers a large proportion of the total expenditure has been in recent years proving up the Ore Reserves and Mineral Resources. Within the tenements hosting the Mineral Resources the expenditure will also reflect size of the Mineral Resource, the density of drilling, the area of investigation, and the quantity and prospectivity of other targets also explored within each tenement.

The total past expenditure by Havilah on the tenements hosting these Mineral Resources is approximately A\$23.7 million on Kalkaroo and A\$4 million on Mutooroo. Each tenement hosting a Mineral Resource with past expenditure has had a prospectivity enhancement multiple (PEM) applied. The PEMs range from 0.9 to 1.1 for the tenements. The expenditure has also been adjusted to account for Mineral Resources within Ore Reserves, and exploration activities at other targets on the tenements. The total value for the mineral Resources by this method is between A\$8.2 million and A\$9.1 million for Kalkaroo, between A\$4.0 million and A\$4.4 million for Mutooroo.

AMC considers the valuation using the yardstick values is more reliable than the past expenditure as it relates to market transactions. Past expenditure is an indication of the exploration effort to realise a Mineral Resource, although, it is not necessarily related to the successful identification of material in the ground. In these cases, the valuation using the yardstick values are supported by the valuations using paste expenditure that have similar ranges.

The valuation of Kalkaroo and Mutooroo Mineral Resources outside the Kalkaroo production case is summarized in Table 6.2.

Table 6.2	Valuation	of coppe	r based	Mineral	Resource	es outside t	he Kalkaroo	production case	е
_		-				_			

Asset	Measured Resource (kt Cu)	Indicated Resource (kt Cu)	Inferred Resource (kt Cu)	Low (A\$M)	Preferred (A\$M)	High (A\$M)
Kalkaroo	-	268	706	8.7	21.7	34.6
Mutooroo	66	44	114	4.7	7.5	10.2

# 6.2 Maldorky and Grants iron projects

The methods used for the valuations have been selected by AMC based on data that is available, and are methods considered appropriate.

The yardstick values for Maldorky and Grants are based on the transactions listed in Table 6.1 for valuation of Mineral Resources outside of production cases. The transactions are iron ore projects with Mineral Resources and with no Ore Reserves and are considered relevant to the valuation date without adjustment.
Date	Project	Buyer	Contained Fe (t)	Grade (Fe%)	Value (A\$M)	Implied Value (A\$/contained metal t)
22/02/2018	Yalleen	API Management	48,219,600	57.2	3.57	74.07
2/09/2015	Strike Resources	Bentley Capital	188,291,00 0	50.4	7.99	42.45
22/11/2018	Iron Ridge	Fenix Resources	3,205,000	64.1	1.13	351.01
31/08/2016	Flinders Mines	Todd Corporation	774,648,00 0	52.2	0.09	0.11
27/07/2017	Eastern Iron	Undisclosed buyer	4,597,400	50.8	2.40	522.22
31/08/2017	Pilbara Iron	WA Iron Pty Ltd.	96,230,200	52.7	0.15	1.59
-	-	-	-	-	mean	165.23
-	-	-	-	-	median	58.26

### Table 6.3 Transactions for tenements with Mineral Resources

Transaction values exclude options and conditional payments.

Excludes transactions on operating mines.

Excludes company takeovers unless single project.

The implied values per tonne of contained metal are compared with the size of the deposits in Figure 6.1. Transactions fall within the range of A\$1 to A\$530 per tonne of iron. The implied value appears to be influenced by deposit size. The iron grades are above 50% iron for all of the transactions.

### Figure 6.3 Comparison of yardstick value and deposit size



The Mineral Resources that are subject to the transactions vary in size, mining status and relative proportion of Measured, Indicated and Inferred Resource. The Mineral Resource estimates to which the yardstick values will be applied are Indicated Resource at Maldorky and Inferred Resource at Grants.

A range of implied values has been used, excluding the outliers, indicated by the transactions to assign ranges of values to be applied to the Indicated and Inferred Resources. Consideration has been given to the iron content at Havilah's deposits being below 30% iron, when compared with the yardstick transactions, and the high values per tonne attributed to the low tonnage transactions. Figure 6.2 shows the basis of the ranges of values for Measured, Indicated and Inferred Resources.



The ranges of yardstick values applied to each Mineral Resource category are:

Measured Resource:A\$70/kt to A\$80/kt.Indicated Resource:A\$40/kt to A\$50/kt.Inferred Resource:A\$1/kt to A\$10/kt.

The total value for the Mineral Resources by this method is between A\$1.7 million A\$2.2 million for the Indicated Resource at Maldorky, between A\$0.07 million and A\$0.73 million for the Inferred Mineral Resource at Grants.

AMC reviewed past expenditure information provided by Havilah as a second method of evaluation. The data provided dates from 2008 to 2018. Expenditure data for the last five years typically reflects the level of exploration success being achieved and project advancement. The Mineral Resources for Maldorky and Grants were first announced in 2011 and 2012 respectively with most activity towards developing the Mineral Resources prior to this. Within the tenement hosting the Mineral Resource the expenditure will also reflect size and prospectivity of the Mineral Resource, the density of drilling, the market, the quantity and prospectivity of other targets within the tenement.

The total past expenditure by Havilah on the tenements hosting these Mineral Resources and several other prospective exploration targets including Grants Basin, is approximately A\$7.3 million. The tenements hosting the Mineral Resources with the past expenditure have had PEMs applied to the expenditure apportioned to the Mineral Resources. The PEMs range from 0.7 to 1.0 for the Mineral Resources. The total value for the Mineral Resources with past expenditure by this method are between A\$1.5 million and A\$2.2 million for Maldorky, and between A\$1.0 million and A\$1.4 million for Grants.

AMC considers the valuation using the yardstick values for recent transactions is more reliable than the past expenditure. For these cases, past expenditure to establish the Mineral Resources is considered to have occurred in the years prior to their announcements in a different market. There has been no advance on the Mineral Resources since that time. As such AMC has considered the yardstick values. These are somewhat supported by the valuations using past expenditure that are not significantly different.

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The valuation of Maldorky and Grants Mineral Resources are summarized in Table 6.4.

Table 6.4	Valuation	of iron	ore Mineral	Resources
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	Asset	Measured Resource (MtFe)	Indicated Resource (MtFe)	Inferred Resource (MtFe)	Low (A\$M)	Preferred (A\$M)	High (A\$M)
0	Maldorky	-	44.2	-	1.77	2.0	2.21
	Grants	-	0	73.0	0.07	0.40	0.73

### 6.3 Oban

The methods used for the valuations have been selected by AMC based on data that is available, and are methods considered appropriate.

The yardstick values for Oban valuation are based on the transactions listed in Table 6.5 for valuation of Mineral Resources. The transactions are  $U_3O_8$  projects with Mineral Resources and with no Ore Reserves and are considered relevant to the valuation date without adjustment.

Date	Project	Buyer	U308 (klb)	TransacValue (A\$k)	Implied Value (A\$/Contained lb)
26/10/2018	Wheeler River	Denison Mines	135,000	77,796	0.58
27/05/2016	Roca Honda	Energy Fuels	25,600	9,500	0.37
17/02/2015	Wate breccia	Energy Fuels	617	624	1.01
27/10/2015	Wate uranium	Energy Fuels	559	750	1.34
10/06/2016	African assets	GoviEx Uraniu	80,000	4,738	0.06
30/10/2017	Zambian projects	GoviEx Uranium	11,079	550	0.05
5/01/2017	Churchrock Crownpoint	Laramide Resources	59,600	11,180	0.19
31/10/2018	Lagoon Creek	Laramide Resources	716	25	0.03
7/08/2015	Carley Bore	Paladin Energy	15,600	9,700	0.622
31/10/2016	Three properties	Summit Point Uranium	13,400	791	0.059
14/12/2016	exploration assets	Uranium Africa	39,600	2,500	0.063
9/08/2017	Reno Creek	Uranium Energy	27,490	33,600	1.22
30/11/2015	Gurvan Saihan	Uranium Industry	21,800	1,470	0.07
-	-	-	-	mean	1.65
-	-	-	-	median	0.58

	able 6.5	Transactions	for	tenements	with	Mineral	Resources	
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Transaction values exclude options and conditional payments.

Excludes transactions on operating mines.

Excludes company takeovers unless single project.

The implied values per tonne are compared with the size of the deposits in Figure 6.5. Transactions fall within the range of A0.03 million to A1.34 per pounds of U<sub>3</sub>O<sub>8</sub>. The implied value does not appear to be influenced by deposit size.



The Mineral Resources that are subject to the transactions vary in size, mining status and relative proportion of Measured, Indicated and Inferred Resource. The Mineral Resource estimates to which the yardstick values will be applied are Inferred Resource at Oban.

A range of implied values has been used, excluding the outliers, indicated by the transactions to assign ranges of values to be applied to Measured, Indicated and Inferred Resources. Consideration has been given to the grade at Oban compared with the yardstick transactions, and the anomalously high values per tonne attributed to the low tonnage transactions. Figure 6.6 shows the basis of the ranges of values the Inferred Resources.



Figure 6.6 Ranges of values

The ranges of yardstick values applied to each Mineral Resource category are:

Measured Resource:	A\$1.00/lb to A\$1.30/lb.
Indicated Resource:	A\$0.35/lb to A\$0.65/lb.
Inferred Resource:	A\$0.05/lb to A\$0.20/lb.

The total value for the Inferred Mineral Resources at Oban by this method is between A\$0.24 million and A\$0.94 million.

AMC reviewed past expenditure information provided by Havilah as a second method of evaluation. The data provided dates from 2008 to 2018. Expenditure data for the last five years typically reflects the level of exploration success being achieved and project advancement. The Oban Indicated Mineral Resource was announced in 2009 with most activity towards developing the Mineral Resource prior to this. Within the tenement hosting the Mineral Resource the expenditure will also reflect size and prospectivity of the Mineral Resource, the density of drilling, field trials and investigations, and the quantity and prospectivity of other targets within the tenement.

The total past expenditure on the tenement hosting the Indicated Mineral Resources announced in 2009 is approximately A\$3.7 million. The tenement hosting the Mineral Resource with the past expenditure has had prospectivity enhancement multiple (PEM) applied to twenty percent of the total expenditure. The PEMs range from 0.7 to 1.0 for the Mineral Resource. The total value for the Mineral Resource with past expenditure by this method is between A\$0.48 million and A\$0.69 million.

AMC considers the valuation using the yardstick values is more reliable than the past expenditure given the years in which most of the expenditure to define the Mineral Resource occurred. In this case the yardstick values are considered to reflect the current market for uranium.

The valuation of Oban Mineral Resources is summarized in Table 6.6.

Table 6.6 Valuation of U3O8 Mineral Resource	es
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Asset	Measured Resource (MIb)	Indicated Resource (Mlb)	Inferred Resource (Mlb)	Low (A\$M)	Preferred (A\$M)	High (A\$M)
Oban	-	-	4.7	0.24	0.59	0.94

# 7 Exploration properties

Mineral tenements that do not host Mineral Resources or Ore Reserves can be valued by using a number of industry-accepted methods.

In this report, mineral tenements without Mineral Resources have been valued using ranges of value per unit area (km<sup>2</sup>) derived from comparable transactions, and the exploration expenditure method. The VALMIN Code specifies that at least two valuation methods should be applied. The methods used for the valuations have been selected by AMC based on data that is available, and are methods considered appropriate.

Transactions in eastern Australia have been considered separately from Western Australia due to differences in influencing factors such as geology, prospectivity and available infrastructure.

### 7.1 Actual and Comparable transactions valuation

A number of recent transactions of tenements without Mineral Resources have been considered to determine values per unit area for exploration tenements in Eastern Australia that are prospective for polymetallic deposits based on copper. These are listed in Table 7.1. The historical transactions are considered to be still relevant to the test date and do not require adjustment.

Date	Project	Buyer Comparable transactions	Area (km²)	Value (A\$M)	Implied Value (A\$/km²)
30/05/2016	Overflow, Eurow, Girilambone	Alchemy Resources Limited	647	0.52	804
4/05/2017	Briggs, Mannersley	Canterbury Resources Limited	41.6	0.10	2,404
5/09/2017	Five projects	Castillo Copper Limited	637.1	0.72	1,129
11/08/2017	Three assets	Castillo Copper Limited	286.6	1.76	6,141
2/10/2015	Olympic Domain	Forte Energy NL	2,365	0.40	169
15/02/2016	Moonmera	GBM Resources Limited	5	0.04	7,000
16/08/2017	Mount Isa tenements	Hammer Metals Limited	133	0.06	444
27/03/2017	Unca Creek	KGL Resources Limited	72.9	0.50	6,859
22/04/2015	Yambah tenements	KGL Resources Limited	315.97	0.02	63
20/07/2018	Highlands	Minotaur Exploration Limited	776	0.40	515
30/01/2019	Four projects	OZ Minerals Limited	5,400	11.6	2,148
26/09/2017	Churchill Dam	Riversgold Limited	107	0.10	935
4/01/2016	Temora & Currumburrama	Sandfire Resources NL	495	2.50	5,051
10/04/2015	Glenthompson copper	Stavely Minerals Limited	83	0.01	60
8/06/2018	Crowl Creek	Talisman Mining Limited	278	0.25	899
3/08/2018	Montejinni & Claypan Dam	Tempus Resources Limited	765.13	0.14	182
5/10/2018	Bonya tenements	Thor Mining PLC	143.282	1.38	9,596
				mean	2,612
				median	935
		Actual transactions			
18/05/2018	EL5393 (EL6280)	Havilah Resources Ltd	229	0.08	328
	EL5848	Havilah Resources Ltd	354	0.10	282

### Table 7.1 Transactions for tenements in Eastern Australia without Mineral Resources

Table note: Transaction values stated are for the percent of the tenement ownership transacted. The value for 100% of the property is implied from the transaction to determine the implied value per km.

The implied values per square kilometre are compared with the area of the tenements subject to the transaction in Figure 7.1. Outliers have been removed. There is no distinct relationship between tenement area and the unit area value indicated by transactions. A large cluster of tenements return a value less than A\$1,000/km<sup>2</sup> reflecting their prospectivity.

The values of the actual transactions in Table 7.1 fall within this range, but are not considered reliable as these values do not reflect the increase in knowledge or prospectivity for the associated tenements and projects.

Comparison of unit area value and tenement area



The unit area values indicated by transactions are clustered into three groups to distinguish between tenements that might be more prospective than others. Tenements have been grouped to reflect available date, geological understanding and recognised prospectivity within the following ranges.

- A\$100 to A\$3,000 per km<sup>2</sup>.
- A\$5,000 to A\$7,000 per km<sup>2</sup>.
- Above A\$7,000 per km<sup>2</sup>.

Within the lower cluster, less than A\$3,000 per km<sup>2</sup>, tenements within transactions have had limited exploration or have no established exploration potential. Tenements with early-stage exploration activity indicating further potential are considered at the higher end of this range.

The middle cluster, A\$5,000 to A\$7,000 per km<sup>2</sup> are considered to show a moderate or high level of prospectivity from exploration activities and geological understanding, correlation with known mineralization styles, or assay results. These may also be identified as targets adjacent to identified Mineral Resources, and with exploration data suggesting high prospectivity. Those tenements are the focus of further exploration and resource definition activity.

The third cluster, above A\$7,000 per km<sup>2</sup>, is considered to be high prospectivity or within small exploration tenement areas.

Havilah's exploration tenements cover a wide area with reasonable prospectivity. Havilah's tenements have been valued by applying the following unit area values to the tenement areas based on the ranges, and subsets of the ranges, described above, as follow:

- Tenements of small area, and very high prospectivity: A\$7,000 to A\$10,000 per square kilometre.
- Tenements with identified targets, mineralized grade intercepts and supporting geology: A\$5,000 to A\$7,000 per square kilometre.
- Tenements with identified anomalies, prospective exploration targets, supporting geology and some supporting data: A\$2,000 to A\$3,000 per square kilometre.
- Tenements with identified anomalies or prospective exploration targets and supporting geology: A\$1,000 to A\$2,000 per square kilometre.

Figure 7.1

Other tenements: A\$100 to A\$1,000 per square kilometre.

Each tenement has been assessed individually using these ranges. This method indicates a total combined unit area value of A\$23.3 million to A\$37.3 million with a preferred value of A\$30.2 million.

The ELs owned or joint ventured by Havilah, or its subsidiaries, cover over 16,400 km<sup>2</sup>. ELs under application are not considered as part of the valuation as their ownership is not assured and attributing a percentage value would not be significant. Current ELs that are subject to renewal are considered here. Tenements with Mineral Resources are considered to be valued by the yardstick valuation of Mineral Resources with which they are associated. As such, EL 6280 has an implied value based on the Grants Mineral Resource. However, additional value is attributed to the tenement in this case in consideration of the highly prospective Grants Basin. Prospect Hill has been considered here as the Mineral Resource is no longer annually reported.

### 7.2 Past Expenditure method

AMC reviewed past expenditure information provided by Havilah. The data dates from 2008 to 2018 for the various stages of exploration undertaken by Havilah. Expenditure data for the last five years typically reflects the level of exploration success being achieved. While some tenements are prospective, there has been limited exploration activity due the economic climate and available funding. AMC has considered Havilah's expenditure data back to 2008. Exploration expenditure by previous lease holders has not been considered.

The total past expenditure by Havilah on the tenements is A\$69 million. Approximately A\$42.2 million of this expenditure has been on defining Mineral Resources, including approximately A\$23.7 million on Kalkaroo, A\$4 million on Mutooroo, and A\$7.3 million on Maldorky, Grants and Grants Basin. Approximately A\$3.8 million has been spent on the ML at Portia and North Portia within the Benagerie tenement, and approximately A\$3.4 million has been spent on Oban.

Each exploration tenement with past expenditure has had prospectivity enhancement multiple (PEM) applied. The PEMs range from 0.6 to 1.6 for the tenements. The total value for the tenements with past expenditure by this method is between A\$27.0 million and A\$29.7 million. The value assigned to EL 5873 (Benagerie) is based on a 70% discount of past expenditure attributed to the Portia/North Portia ML that has been divested, and where most exploration activity occurred. It has not been possible to separate the costs for each prospect. Value is assigned to EL 6280 due to the exploration target Grants Basin in addition to the value implied from the Grants Mineral Resource.

### 7.3 Summary of valuations for the tenements without Mineral Resources

Table 7.2 provides the valuation of tenements that do not host Mineral Resources. In considering the valuation, only granted ELs were included. Tenement applications were excluded. The Benagerie EL was considered exclusive of the ML for Portia/North Portia but included the Bassanio prospect. Tenement EL 6280, hosting part of Grants Mineral Resource was considered due to Grants Basin. Joint venture projects were prorated based on Havilah's percentage ownership and prospectivity.

The valuation for the tenements considers the exploration expenditure and unit area valuations. The past expenditure value range falls within the unit area valuation range. AMC has applied the unit area value for this valuation, based on the additional potential identified by Havilah of both individual prospects and the region.

Location	Value From	Value Preferred	Value To
	(A\$M)	(A\$M)	(A\$M)
Total	23.3	30.2	37.3

### Table 7.2 Valuation of tenements without Mineral Resources

# 8 Summary Valuation – other than the Kalkaroo production cases

The summary of AMC's Valuation for Havilah's Mineral Assets other than the Kalkaroo production case is presented in Table 8.1.

Asset	Low (A\$M)	Preferred (A\$M)	High (A\$M)
Kalkaroo	8.7	21.7	34.6
Mutooroo	4.7	7.5	10.2
Maldorky	1.77	2.0	2.21
Grants	0.07	0.4	0.73
Oban	0.24	0.59	0.94
Exploration Tenements	23.3	30.2	37.3
Total	38.8	62.4	86.0

# 9 North Portia royalty

### 9.1 Background

Portia is an open pit mine located approximately 30 km north of Kalkaroo. Open pit mining commenced in March 2015.

The current operation was put of care and maintenance in Quarter 4 of 2018 while an updated PEPR (Program for Environment Protection and Rehabilitation) is prepared.

### 9.2 Divestment

Havilah divested the mining lease on which Portia and North Portia are located to Consolidated Mining & Civil Pty Ltd (CMC) and Benagerie Gold & Copper Pty Ltd (BGC) (subsidiary of CMC) in July 2018.

The divestment terms are:

- A\$1.0 million in July 2018.
- A\$2.0 million in April 2019.
- A\$4.0 million on completion of Head of Agreement paid in May 2019.
- Final payment of A\$3.8 million, once A\$3.5 million production revenue from North Portia project achieved.
- CMC funding of A\$1.2 million rehabilitation bond, releasing Havilah from the obligation.
- A 1.5% net smelter return royalty to Havilah.
- Exploration agreements on the surrounding EL5873.

### 9.3 Royalty

Havilah retains a financial interest in the Portia Mining Lease to the extent of A\$3.8 million future payments and a production royalty. The royalty is a 1.5% NSR royalty on all commodity sales from the Mining Lease.

### 9.4 Mineral resource

The Mineral Resource for North Portia was reported in May 2018. This consisted of an unchanged estimate for the primary sulphide from November 2010 and an update of the oxide gold resource and supergene sulphide resource. The Mineral Resource is provided in Table 9.1.

Table 9.1Mineral Resource – North Portia project

Category	Quantity (Mt)	Copper grade (%)	Gold Grade (g/t)	Cobalt grade (ppm)	Cobalt grade (ppm)	Copper metal (kt)	Gold metal (koz)	Cobalt metal (kt)	Moly metal (kt)
Oxide									
Inferred	0.49	N/A	1.17	N/A	N/A	N/A	18	N/A	N/A
Supergene Sulphide									
Measured	3.24	0.77	0.50	151	293	25	52	0.5	1
Indicated	0.48	0.53	0.58	157	210	3	9	0.1	0
Inferred	0.14	0.45	0.44	209	82	1	2	0.0	0
Subtotal	3.86	0.73	0.51	154	275	28	63	0.6	1
Inferred	8.61	0.85	0.64	0	531	73	177	-	4.6
Total sulphide	12.5	0.81	0.60	N/A	452	101	240	0.6	5.6
Total resource	12.96	-	0.62	-	-	101	259	0.6	5.6

Notes: Source document is Havilah ASX announcement 15 May 2018.

Oxide gold resource is estimated using a lower cut-off value of 0.5 g/t.

Supergene sulphide Resource is based on a lower cut-off of 0.4% Copper equivalent calculated using US\$1,279/oz, US\$2.91/lb, FX US\$ 0.75.

The primary sulphide resource has not been re-estimated and relies on a previously published resource in November 2010.

The competent person is Dr Chris Giles, who is Technical Director and a consultant to Havilah.

### AMC has not reviewed the Portia Mineral Resource estimate.

### 9.5 Project status

BGC announced in August that the Portia mine was being placed on care and maintenance while an updated PEPR was prepared and approved. Additional metallurgical test work was carried out on the oxide gold mineralization and on the sulphide copper gold mineralization in December 2018.

The revised divestment term announced April 2019 removed Havilah permitting obligations. A PEPR has not yet been submitted to the regulator for approval.(http://www.energymining.sa.gov.au/minerals/mining).

### 9.6 Future production

The North Portia resource consists of three separate zones. These are the:

- Oxide gold inferred resource comprising 490 kt at 1.17 g/t gold for 18 koz.
- Supergene sulphide copper gold zone comprising 3.9 Mt at 0.73% copper and 0.51 g/t gold.
- Primary sulphide copper gold zone comprising Inferred Resource of 8.6 Mt at 0.86% copper and 0.64 g/t gold.

AMC has assessed the likely royalty value from future production from North Portia to be immaterial.

# 10 Qualifications

### **10.1 AMC's qualifications**

AMC is a firm of independent geological, geotechnical, mining engineering, and business analyst consultants offering expertise and professional advice to exploration, mining, and mining finance industries from our offices in Australia, Canada, Singapore, Russia and the UK. A copy of an AMC profile detailing AMC's capability and available consulting services is available from our website (www.amcconsultants.com).

AMC's activities include the preparation of independent technical specialist reports, and reviews of, mining and exploration projects related to equity and debt funding. In these assignments, AMC and its subconsultants act as an independent party.

The review of the geology and Mineral Resources and the valuation of the Mineral Resources and Exploration Properties was completed by AMC Principal Consultant, Mr Andrew Proudman (FAusIMM (CP)). Andrew is a geologist with thirty years' experience in the minerals industry, including 15 year as a consultant. He has extensive experience in mineral exploration and mine operations, and has performed numerous due diligence reviews, valuations and evaluations. Andrew has broad based knowledge of mineral exploration and resource development. He has completed independent evaluations and valuations of numerous assets ranging from exploration stage to operating mines across various commodities. Andrew has the relevant qualifications, experience, competence and independence to be considered a Specialist under the definitions provided in the VALMIN Code and a Competent Person as defined in the JORC Code.

The review of the Ore Reserves, Kalkaroo mining, infrastructure, economics, Portia Royalty was completed by AMC Principal Mining Engineer, Mr Wilson Feltus (MAusIMM). Wilson is a mining engineer with thirty years' experience in the minerals industry, including 8 year as a consultant. He has extensive experience in mining operations and has performed numerous due diligence reviews and audits. Wilson has broad based knowledge of mine planning, scheduling and ore reserve estimation. He has completed independent evaluations and assessments of numerous assets ranging from scoping study, pre-feasibility and feasibility studies to operating mines across various commodities. Wilson has the relevant qualifications, experience, competence and independence to be considered a Specialist under the definitions provided in the VALMIN Code and a Competent Person as defined in the JORC Code.

The review of the mineral processing and metallurgy was completed by AMC Principal Metallurgist, Mr Andrew Millar (MAusIMM)). Andrew is a metallurgist with sixteen years' experience in the minerals industry, including two years as a consultant. He has extensive experience in mineral processing and processing plants and has performed numerous due diligence reviews and assessment. Andrew has broad based knowledge of metallurgy and mineral processing. He has completed independent evaluations and assessments of numerous assets ranging from design stage to operating plants across multiple commodities. Andrew has the relevant qualifications, experience, competence and independence to be considered a Specialist under the definitions provided in the VALMIN Code and a Competent Person as defined in the JORC Code.

The following people have contributed to this ITSR:

Name	Position	Role
Andrew Proudman (FAusIMM (CP))	Principal Consultant – An employee of AMC.	Project manager, Geology and Mineral Resources, valuation of exploration assets.
Wilson Feltus (MAusIMM)	Principal Mining Engineer - An employee of AMC.	Ore Reserves, Kalkaroo mining, infrastructure, economics, Portia Royalty
Andrew Millar (MAusIMM)	Principal Metallurgist - An employee of AMC.	Metallurgy and processing.
Dean Carville (MAusIMM)	Principal Geologist, Practice leader exploration Valuation- An employee of AMC.	Peer review of valuation of exploration assets.
Mike Thomas (MAusIMM(CP))	Principal Mining Consultant – An employee of AMC.	Peer Review.

### **10.2 Independence**

AMC has considered its independence with respect to ASIC Regulatory Guide 112: Independence of Experts and is, in its opinion, independent of Havilah. AMC notes that:

In the interests of full disclosure, we advise that AMC, has completed no previous consulting assignments on the projects in this ITSR.

AMC is of the view that it is independent of Havilah and has no ongoing business relationship with any party in connection with the Kalkaroo project, or the exploration prospects discussed in this ITSR.

While some employees of AMC and its subconsultants may have small direct or beneficial shareholdings in Havilah, neither AMC nor the contributors to this report nor members of their immediate families have any interests in Havilah that could be reasonably construed to affect their independence. AMC has no pecuniary interest, association or employment relationship with BDO or Havilah and has no interest in the outcome of the proposed transaction.

Havilah will pay AMC a fee according to AMC's normal per diem rates for professional services, for the preparation of this ITSR, plus reimbursement of out-of-pocket expenses. The fee estimated at approximately A\$78,110 is not contingent upon the outcome of the proposed transaction. AMC will receive no other benefit for the preparation of this ITSR.

### 10.3 Matters relating to AMC's engagement as a Specialist

In letters relating to our engagement, Havilah agreed to comply with those obligations of the Commissioning Entity under the VALMIN Code including that to the best of its knowledge and understanding, complete, accurate and true disclosure of all relevant material information will be made.

AMC has relied on the information provided by Havilah and has no reason to believe that the information is materially misleading or incomplete or contains any material errors. AMC has not audited the information provided by Havilah, but has reviewed the information to the extent necessary to satisfy itself that the AMC Production Case presented in this ITSR is based on reasonable grounds and that the information AMC has used in relation to the valuation of the exploration properties, is sufficient.

Havilah has been provided with drafts of this ITSR to enable correction of any factual errors and notation of any material omissions.

Havilah has provided AMC with indemnities in relation to damages, losses and liabilities related to or arising out of its engagement other than those arising from illegal acts, bad faith or gross negligence on its part, and has also provided indemnities in relation to damages, losses and liabilities related to AMC's reliance on any information received that is false, misleading or incomplete.

This Report has been provided to BDO for the purposes of forming its opinion in relation to the proposed transaction. AMC has given its consent for its report to be appended to BDO's IER and for it to be provided to shareholders and has not withdrawn that consent before lodgement of the ITSR with the Australian Securities & Investments Commission. Neither this report nor any part of it may be used for any other purpose without AMC's written consent.

This ITSR and the conclusions in it are effective at 21 June 2019. Those conclusions may change in the future with changes in relevant metal prices, exploration and other technical developments in regard to the operation, underground resource and exploration tenements and the market for mineral properties.

The signatories to this report are corporate members of the AusIMM and are bound by its Code of Ethics.

Yours sincerely

Andrew Proudman Principal Consultant

unas

Mike Thomas Principal Consultant

## 11 References

Australian Securities Exchange website and announcements for Havilah Havilah's website, reports and announcements Kalkaroo block model and data files provided by Havilah Kalkaroo 2017 resource and reserve announcements and Table 1 Kalkaroo resource report 2017 provided by Havilah RPMGlobal PFS reported data Kalkaroo QAQC data provided by Havilah Exploration expenditure data provided by Havilah

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V14

V13

# Appendix A Production and cashflow schedules Table A.1 Mining schedule Total Y00 Y01 Y02 Y03 Y04 Y05 Y06 Ore (Mt)

	····				.05	104					.05					
Ore (Mt)	100	-	3.5	4.4	4.5	12.2	11.0	11.4	10.4	10.3	8.2	9.3	7.6	6.2	1.1	-
Au grade (g/t)	0.44	-	0.95	0.79	0.74	0.54	0.38	0.41	0.37	0.40	0.32	0.33	0.31	0.27	0.27	-
Cu grade (%)	0.47	-	0.40	0.45	0.35	0.57	0.57	0.44	0.50	0.40	0.50	0.46	0.44	0.42	0.42	-
Waste (Mt)	352	28.5	37.6	37.1	37.4	29.0	30.2	30.0	33.2	33.7	33.6	11.4	5.4	3.7	0.8	-
Stripping ratio (W:O)	3.5	-	10.9	8.5	8.2	2.4	2.7	2.6	3.2	3.3	4.1	1.2	0.7	0.6	0.7	-
Au metal (koz)	1,408	-	105.5	111.3	108.2	211.2	135.2	152.7	124.8	134.4	84.9	100.0	76.6	53.2	9.8	-
Cu metal (kt)	474	-	13.8	19.6	15.9	68.9	62.9	50.9	52.2	41.6	40.8	42.7	34.0	26.1	4.8	-

V07

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V11 V12

### Table A.2 Processing schedule

	Total	Y00	Y01	Y02	Y03	Y04	Y05	Y06	Y07	Y08	Y09	Y10	Y11	Y12	Y13	Y14
Oxide circuit (Mt)	40	-	2.9	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.3	1.6	0.5	-	-
Sulphide circuit (Mt)	60	-	-	-	-	3.0	6.7	7.0	7.0	7.0	7.0	7.0	7.0	7.0	1.3	-
Total ore processed (Mt)	100	-	2.9	4.0	4.0	7.0	10.7	11.0	11.0	11.0	11.0	10.3	8.6	7.5	1.3	-
Au grade (g/t)	0.44	-	1.05	0.85	0.77	0.60	0.39	0.44	0.40	0.44	0.32	0.34	0.29	0.25	0.26	-
Cu grade (%)	0.47	-	0.42	0.47	0.38	0.76	0.63	0.46	0.48	0.37	0.43	0.45	0.42	0.39	0.40	-
Au Recovery (%)	66	-	68	58	53	59	58	69	68	67	69	73	79	87	89	-
Au metal in concentrate (koz)	935.1	-	66.4	63.5	52.2	80.7	77.9	107.1	96.0	105.4	77.4	82.2	64.3	52.7	9.3	-
Cu Recovery (%)	82	-	74	75	71	81	81	83	82	85	81	84	87	90	92	-
Cu metal in concentrate (kt)	391.5	-	9.1	14.3	10.8	43.1	54.7	42.4	43.0	34.7	38.1	38.8	31.6	26.3	4.7	-
Payability ratios																-
Au Payable	0.93	-	0.96	0.95	0.95	0.93	0.91	0.93	0.92	0.93	0.92	0.92	0.92	0.91	0.91	-
Cu Payable	0.96	-	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	-
Au payable (koz)	869.1	-	64.0	60.6	49.8	74.8	70.6	99.4	88.6	98.5	71.5	75.6	58.9	48.1	8.5	-
Cu Payable (koz)	375.8	-	8.7	13.7	10.4	41.4	52.5	40.8	41.2	33.3	36.6	37.2	30.3	25.2	4.5	-

Based on model dated 30 May 2019. Gold metal in concentrate has been adjusted from the model provided by Havilah

### Table A.3 Cost schedule

	Total	Y00	Y01	Y02	Y03	Y04	Y05	Y06	Y07	Y08	Y09	Y10	Y11	Y12	Y13	Y14
Operating costs	II											i	1	I		
Mining (A\$M)	1,013	42	62	66	67	85	91	94	96	93	101	81	57	51	21	6
Processing (A\$M)	1,017	0	23	31	29	64	100	113	114	111	113	112	101	92	15	-
G&A (A\$M)	157	7	10	10	11	13	13	13	13	13	13	13	12	10	4	1
G&A adjustment (\$M)	157	7	10	10	11	13	13	13	13	13	13	13	12	10	4	1
Selling costs (A\$M)	603	-	12	19	14	53	68	71	71	61	62	65	53	45	8	-
Total (A\$M)	2,947	56	117	136	131	228	286	306	308	291	302	283	234	207	53	8
Capital costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mining (A\$M)	149	50	26	2	2	9	3	0	18	9	25	4	-	-	-	-
Processing (A\$M)	251	62	21	-	109	38	3	4	4	4	4	3	-	-	-	-
Infrastructure (A\$M)	198	103	24	1	8	1	2	13	3	2	2	2	1	1	15	20
Contingency	82	35	11	0	22	8	0	0	2	1	3	0	-	-	-	-
Total capital (A\$M)	680	250	82	4	141	57	9	17	26	15	33	10	1	1	15	20

Based on model provided by Havilah dated 30 May 2019. Values are real as estimated at December 2017. G&A adjustment is added and reflects a doubling of the G&A cost compared to the model provided by Havilah.

# Appendix B Valuation Methods

### **1** Valuation Methods

The valuation of exploration projects, particularly those for which it is not possible to quantify Mineral Resources, is very subjective. There are, however, several generally accepted procedures to value exploration projects and we have used such methods as appropriate to arrive at balanced judgments of value.

Where possible, AMC attempts to use more than one method before selecting the valuation appropriate to that project. Values are rounded, outliers in contributing estimates sometimes excluded and usually, because of the subjectivity, the mid-point of the value range has been chosen as the Preferred Value.

### The Past Expenditure Method

A Prospectivity Enhancement Multiplier ("PEM") generally between 0.5 and 3.0 is applied to past expenditure which we judge to be effective in regard to future prospectivity.

### The Yardstick Value Method

Rules of Thumb or Yardstick Values can be used for properties where a Mineral Resource has been quantified. A value per contained metal unit (eg ounce of gold or gold equivalent) is assigned to an actual Mineral Resource or to a preliminary mineralisation estimate.

### **Actual or Comparable Transaction Method**

A value is determined by reference to either actual transactions for the property in question (Actual Transaction) or to recent transactions for projects considered to be similar to those under review. (Comparable Transaction). Comparable Transactions are converted to a value per unit area.

### **Joint Venture Terms Method**

Many transactions on exploration tenements are of a farm-in nature and we assess a "cash equivalent" value for them from the terms the "deemed expenditure" on the property at the time of the deal discounted by a time and probability factor for the likelihood that the farm-in will complete its earning requirement. We adjust the resulting value for any other terms of the joint venture and/or for the results of work carried out since the commencement of the farm-in.

### **Expected Value Method**

An Expected Value valuation can be applied where there is sufficient information to enable an indicative Net Present Value ("NPV") calculation, which takes into account the costs of that ongoing exploration and with a probability/risk factor for the chances of that exploration being successful.

This method is most relevant when the exploration area is closely associated with an existing mining operation or development project where a production scenario has been developed for valuation.

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# Havilah Resources Limited

ABN 39 077 435 520

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PLEASE NOTE: For security reasons it is important that you keep your SRN/HIN confidential.

### X For your vote to be effective it must be received by 11:00am (Adelaide time) on Tuesday, 10 September 2019

# How to Vote on Items of Business

All your securities will be voted in accordance with your directions.

### Appointment of Proxy

Voting 100% of your holding: Direct your proxy how to vote by marking one of the boxes opposite each item of business. If you do not mark a box your proxy may vote or abstain as they choose (to the extent permitted by law). If you mark more than one box on an item your vote will be invalid on that item.

Voting a portion of your holding: Indicate a portion of your voting rights by inserting the percentage or number of securities you wish to vote in the For, Against or Abstain box or boxes. The sum of the votes cast must not exceed your voting entitlement or 100%

Appointing a second proxy: You are entitled to appoint up to two proxies to attend the meeting and vote on a poll. If you appoint two proxies you must specify the percentage of votes or number of securities for each proxy, otherwise each proxy may exercise half of the votes. When appointing a second proxy write both names and the percentage of votes or number of securities for each in Step 1 overleaf.

A proxy need not be a securityholder of the Company.

# Signing Instructions for Postal Forms

Individual: Where the holding is in one name, the securityholder must sign.

Joint Holding: Where the holding is in more than one name, all of the securityholders 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 form when you return it.

Companies: Where the company has a Sole Director who is also the Sole Company Secretary, this form must be signed by that person. If the company (pursuant to section 204A of the Corporations Act 2001) does not have a Company Secretary, a Sole Director can also sign alone. Otherwise this form must be signed by a Director jointly with either another Director or a Company Secretary. Please sign in the appropriate place to indicate the office held. Delete titles as applicable.

### Attending the Meeting

Bring this form to assist registration. If a representative of a corporate securityholder or proxy is to attend the meeting you will need to provide the appropriate "Certificate of Appointment of Corporate Representative" prior to admission. A form of the certificate may be obtained from Computershare or online at www.investorcentre.com under the help tab, "Printable Forms".

Comments & Questions: If you have any comments or questions for the company, please write them on a separate sheet of paper and return with this form.





Change of address. If incorrect, mark this box and make the correction in the space to the left. Securityholders sponsored by a broker (reference number commences with 'X') should advise your broker of any changes.

Please mark |X| to indicate your directions

# **Proxy Form**

STEP 1

### Appoint a Proxy to Vote on Your Behalf

XX

I/We being a member/s of Havilah Resources Limited hereby appoint

### the Chairman <u>OR</u> of the Meeting

PLEASE NOTE: Leave this box blank if you have selected the Chairman of the Meeting. Do not insert your own name(s).

or failing the individual or body corporate named, or if no individual or body corporate is named, the Chairman of the Meeting, as my/our proxy to act generally at the meeting on my/our behalf and to vote in accordance with the following directions (or if no directions have been given, and to the extent permitted by law, as the proxy sees fit) at the Extraordinary General Meeting of Havilah Resources Limited to be held at Adelaide Convention Centre, North Terrace, Adelaide SA 5000 at 11:00am (Adelaide time) on Thursday, 12 September 2019 and at any adjournment or postponement of that meeting.

ST	Items of Business	PLEASE NOTE: If you mark the Abstain box for an item, you are directing your behalf on a show of hands or a poll and your votes will not be counted in computing the statement of the statemen	proxy not to vote on your ng the required majority.
	SPECIAL BUSINESS		or Against Abstain
	1 Approval of SIMEC Transaction		

The Chairman of the Meeting intends to vote undirected proxies in favour of each item of business. In exceptional circumstances, the Chairman of the Meeting may change his/her voting intention on any resolution, in which case an ASX announcement will be made.

### Signature of Securityholder(s) This section must be completed.

Individual or Securityholder 1	Securityholder 2	2	Securityh	older 3		
Sole Director and Sole Company Secretary	Director		Director/0	Company Secretary		
Contact		Contact Daytime		Date	7	1
Name				Date	•	•

SIGN

