

21 December 2021

## 2021 AGM TECHNICAL REVIEW PRESENTATION

Havilah Resources Limited (**Havilah** or **Company**) is pleased to circulate the 2021 Technical Review presentation that will be presented at the 2021 Annual General Meeting today by Dr Chris Giles, Havilah's Technical Director.

The presentation provides a summary of Havilah's corporate and technical achievements during 2021 and its strategic planning for the year ahead. Havilah is well placed going into 2022 and shareholders can look forward to an exciting year of news flow on exploration and mineral project advances.

The presentation will also be available on the Company's website at [www.havilah-resources.com.au](http://www.havilah-resources.com.au).

This release has been authorised on behalf of the Havilah Resources Limited Board by Mr Simon Gray.

For further information visit [www.havilah-resources.com.au](http://www.havilah-resources.com.au)

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Registered Office: 107 Rundle Street, Kent Town, South Australia 5067



# Havilah Resources

**An Advanced Stage 100% Owned Multi-Commodity Minerals Portfolio**



**AGM 2021 TECHNICAL PRESENTATION**

# Cautionary and Competent Person's Statements

## Cautionary Statement

The information contained in this presentation is not financial product advice. The presentation is for information purposes and is of a general and summary nature only. Neither Havilah Resources Limited (Havilah) nor any member of the Havilah Group of companies, gives no warranties in relation to the statements and information in this presentation. Investors should seek appropriate advice on their own objectives, financial situation and needs.

It is not recommended that any person makes any investment decision in relation to Havilah based on this presentation. This presentation should be read in conjunction with the latest Annual Report together with any announcements made by Havilah in accordance with its continuous disclosure obligations arising under the *Corporations Act 2001*.

This presentation contains certain statements which may constitute 'forward-looking statements'. Such statements are only predictions and are subject to inherent risks and uncertainties which could cause actual values, performance or achievements to differ materially from those expressed, implied or projected in any forward-looking statements. Havilah disclaims any intent or obligation to update publicly any forward-looking statements, whether as a result of new information, future events or results or otherwise. Investors are cautioned that forward-looking statements are not guarantees of future performance and investors are cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty therein.

Given the ongoing uncertainty relating to the duration and extent of the global COVID-19 pandemic, and the impact it may have on the demand and price for commodities, on our suppliers and workforce, and on global financial markets, the Company continues to face uncertainties that may impact its operating and financing activities.

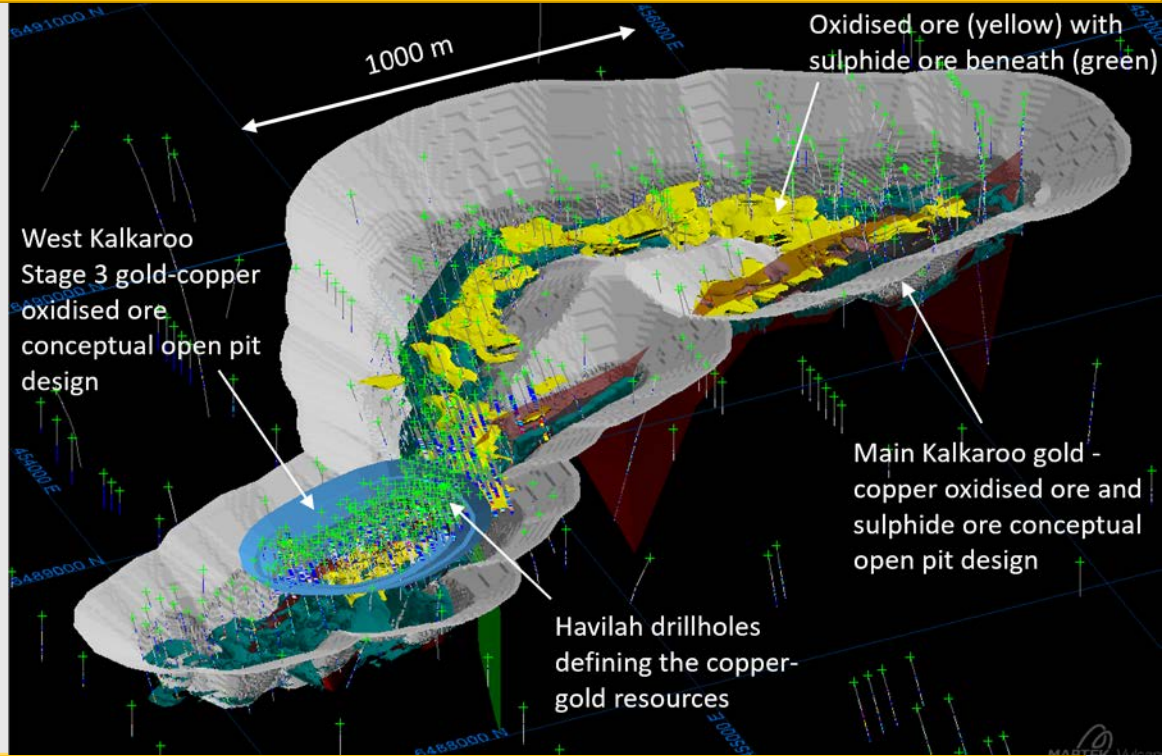
## Competent Person's Statement

The information in this presentation that relates to Exploration Targets, Exploration Results, Mineral Resources and Ore Reserves is based on data compiled by geologist, Dr Chris Giles, a Competent Person who is a member of The Australian Institute of Geoscientists. Dr Giles is Technical Director of the Company, a full-time employee and is a substantial shareholder. Dr Giles has sufficient experience, which is relevant to the style of mineralisation and type of deposit and activities described herein to qualify as a Competent Person as defined in the 2012 Edition of 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Giles consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

Information for the Kalkaroo Ore Reserve & Mineral Resource and the Mutooroo Inferred cobalt & gold Mineral Resources complies with the JORC Code 2012. All other information was prepared and first disclosed under the JORC Code 2004 and is presented on the basis that the information has not materially changed since it was last reported. Havilah confirms that all material assumptions and technical parameters underpinning the reserves and resources continue to apply and have not materially changed. Except where explicitly stated, this presentation contains references to prior exploration results and JORC Mineral Resources, all of which have been cross-referenced to previous ASX announcements made by Havilah. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant ASX announcements.

# 2021 West Kalkaroo progress and achievements

- **March** – after 12 months compilation work, Program for Environment Protection and Rehabilitation (PEPR) document lodged with Department for Energy and Mining (DEM).
- **August to present** – addressed DEM feedback with additional consultant reports and reviews (delayed in part by unavailability of consultants). Expect to relodge PEPR during 1Q 2022 for final approval process.
- **February – July** infill and resource expansion drilling with excellent confirmatory results.
- Ongoing metallurgy work, mine design, mine scheduling required for PFS.
- Engagement with financiers, potential investors, mining contractors, equipment suppliers, construction contractors, native title claimants.
- Expect to be able to close the above tasks once the PEPR is approved and West Kalkaroo PFS is completed.



**A considerable amount of effort has generated solid progress on a number of fronts**

# 2021 Other project progress

## Mutooroo

- Three RC drillholes confirmed good widths of sulphide mineralisation at the Cockburn prospect beneath an undrilled gossan identified by Havilah geologists.
- Regional reconnaissance identified many outstanding prospects for drilling follow up.
- Drilling at Mutooroo deposit demonstrated lode extensions at depth (assay results are being compiled).

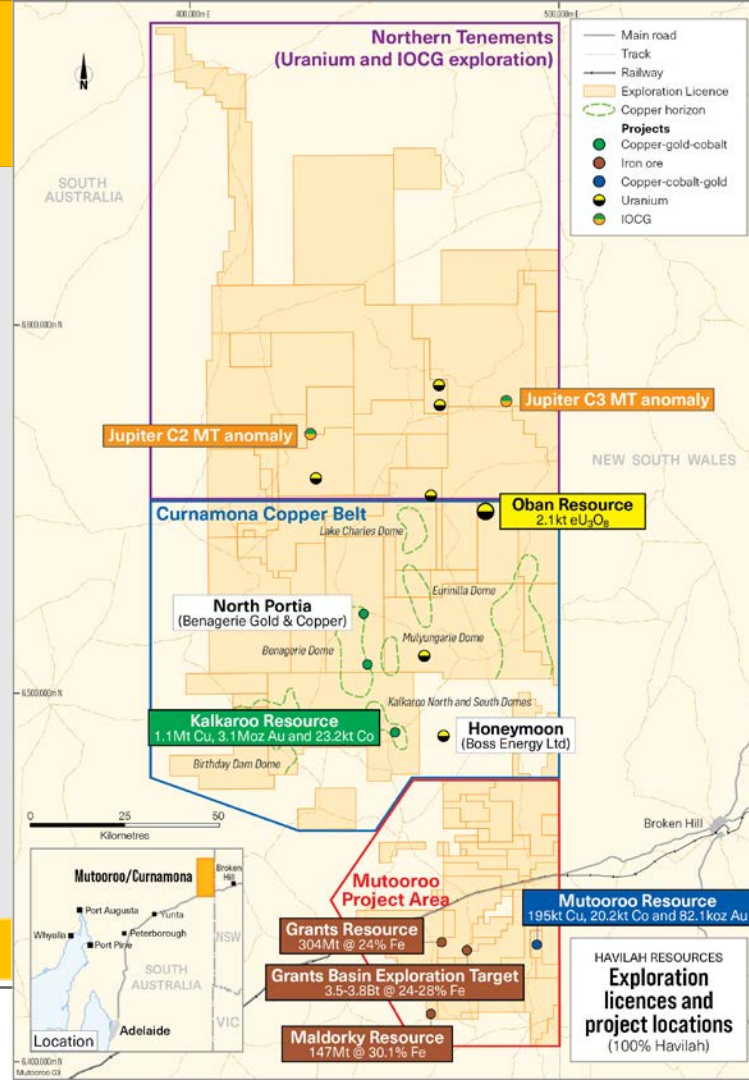
## NU Energy Resources

- Decision to proceed with NU Energy IPO that will hold uranium rights over >11,000 km<sup>2</sup> in the world class Frome Basin sand-hosted uranium province in South Australia.
- Planned priority offer to Havilah shareholders and in specie distribution.

## Jupiter MT anomaly

- Collaborative research work with Adelaide University team narrowed target area. Aeromagnetic susceptibility analysis identified cross-cutting structures.
- Highlights potential mafic-ultramafic dyke complex that could be prospective for platinum group metals and nickel.

**Substantial progress on achieving medium term objectives**



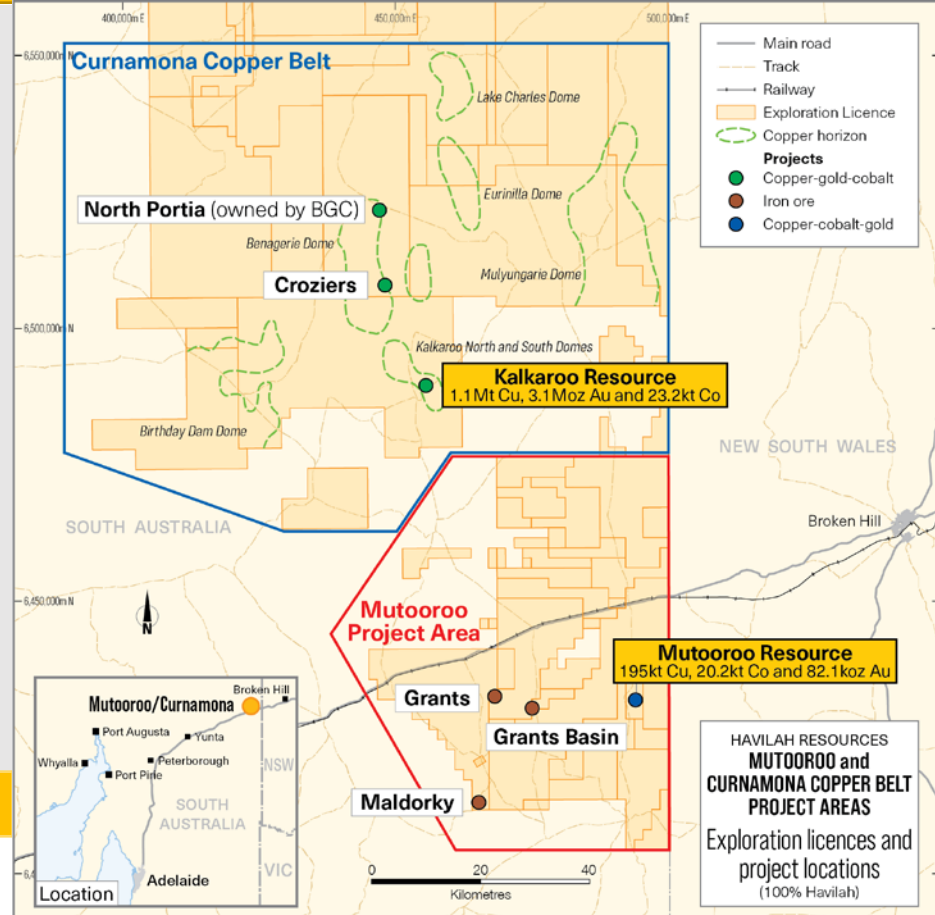


# Positive outlook for Havilah in 2022

For the following reasons.....

- **Right commodities** – critical minerals, copper, gold and uranium.
- **Right time** – favourable commodity prices, excellent medium term outlook for copper, critical minerals and uranium.
- **Right location** – Curnamona Craton, northeastern South Australia.
- **Purposeful 2022 work programs** – key shareholder support for strategic direction and proposed programs.
- **West Karkaroo near term planned gold mine** – subject to completion of PFS, permitting, financing and Board decision, mining development work planned to commence during 2022.
- **High leverage to copper, cobalt and gold** – matched by few other junior resource stocks. Re-rating likely as projects progress and the relative valuation vs peers is recognised.
- **Options to realise value being actively pursued on several fronts**
  - via spin-offs eg uranium assets in NU Energy IPO.
  - via sale of equity interests and/or joint venture eg copper, iron ore, tin.

**Ojective to maximise shareholder value**



HAVILAH RESOURCES  
MUTOOROO and  
CURNAMONA COPPER BELT  
PROJECT AREAS  
Exploration licences and  
project locations  
(100% Havilah)

# Havilah's credentials as a copper investment

## Copper outlook is favourable

- Myriad new uses for copper and greater demand in a renewable energy world.
- Many large copper deposits are waning and are not being replaced at a sufficient rate to maintain supply.

## Five reasons why Havilah is well positioned to benefit

- Favourable location (near Broken Hill), tier 1 ESG regulation and pro-mining South Australian government.
- Two substantial copper projects with a large combined copper, gold, cobalt resource inventory.
- Kalkaroo mining development planned to commence in 2022 (based on 100 Mt open pit Ore Reserve).
- Appreciable upside in resource expansion, new discoveries and additional revenue from cobalt, REE, moly.
- High leverage to copper as compared to ASX listed peers – on any valuation metric.

## JORC RESOURCES:

**1.3 M**

**Tonnes of Copper**

**3.2 M**

**Ounces of Gold**

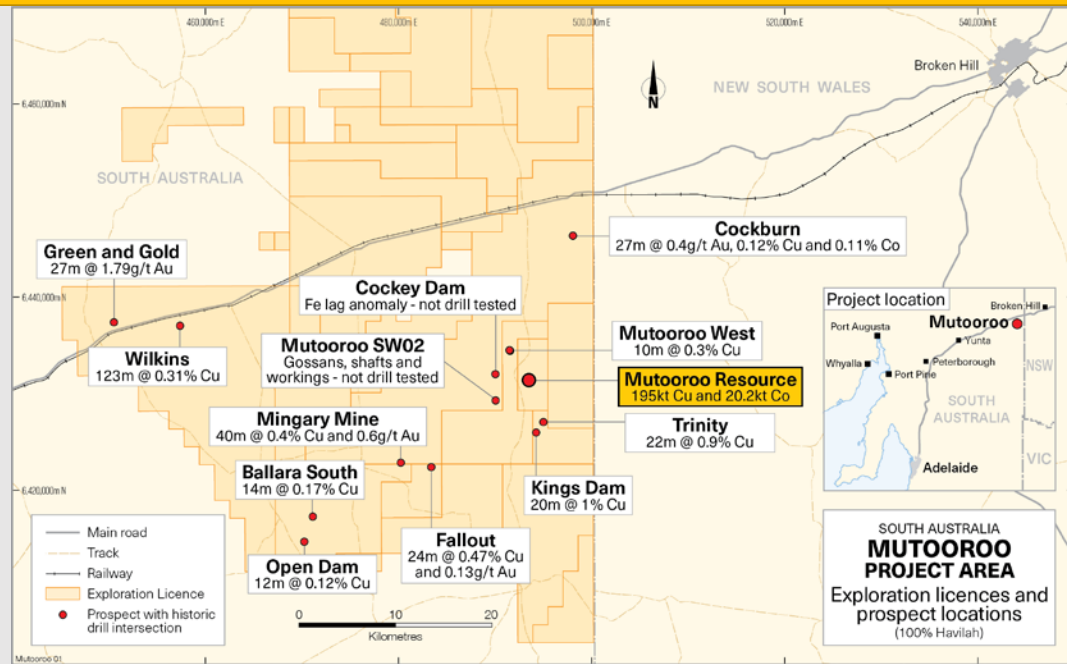
**43.4 K**

**Tonnes of Cobalt**



# Mutooroo Project Area – huge exploration upside

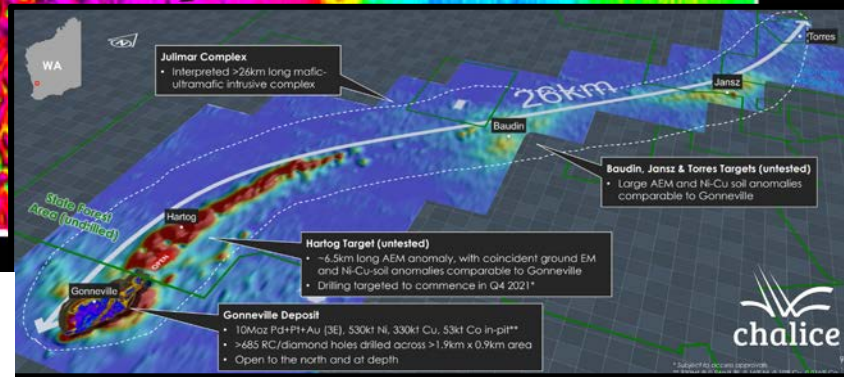
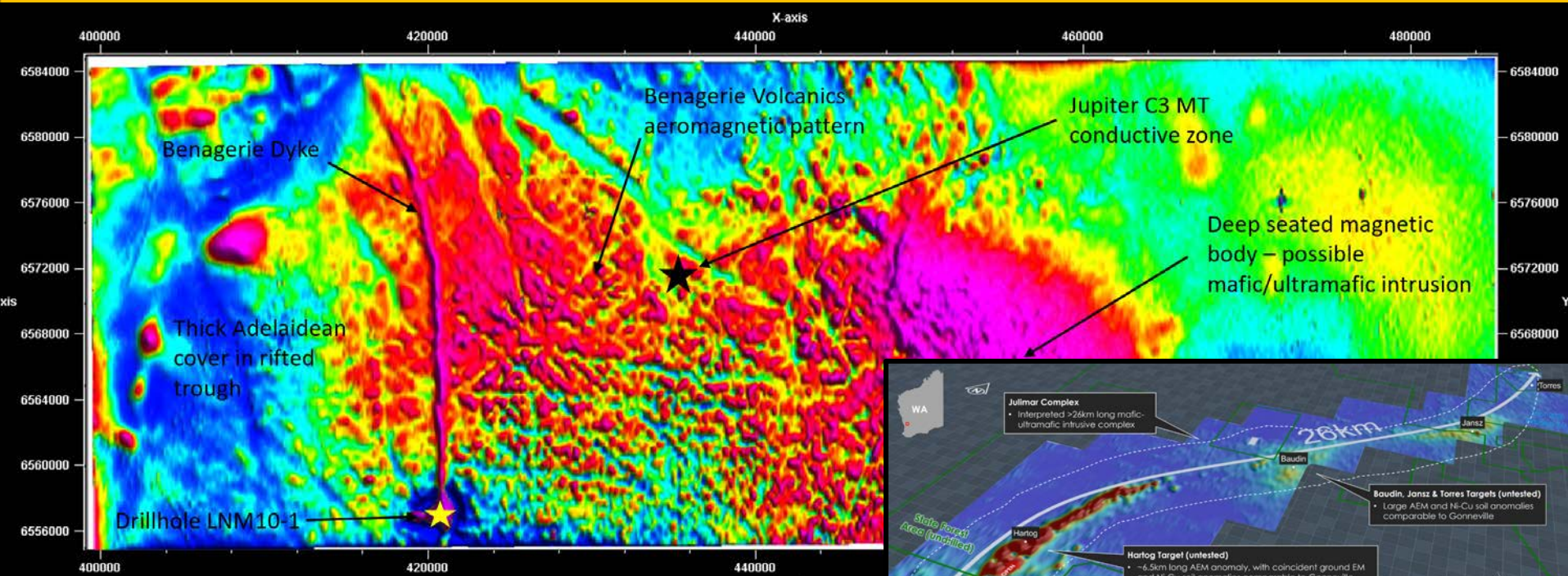
- Many high quality prospects close to Broken Hill.
- An experienced exploration geologist has spent the past twelve months meticulously compiling extensive prospect information dating back 50 years and ranking prospects.
- Several high conviction prospects identified with previous potentially economic drilling intercepts eg Mingary Mine, Fallout, Wilkins, Green and Gold.
- First regional prospect tested in 2021 was a previously undrilled gossan at the Cockburn prospect, which yielded instant success, with a wide zone of quartz-sulphide Au, Cu and Co mineralisation intersected.
- The size and grade of discoveries do not need to be exceptional as the sulphide ore will be additional feed for a planned Mutooroo sulphide ore processing plant.



**A spoke and hub development concept within daily commute from Broken Hill**



# Benagerie Dyke - another Julimar Complex?



The geological setting and aeromagnetic signature of the Curnamona Dyke is comparable to the mafic/ultramafic Julimar Complex which hosts a large recent discovery of platinum group elements and nickel by Chalice Mining Limited near Perth. The proximity of the Jupiter MT conductive anomaly and the rifted margin of the Benagerie Ridge are considered to be positive indicators.



# URANIUM IPO INVESTMENT OPPORTUNITY

World class Frome Basin uranium province in South Australia

Go to [www.nuenergyresources.com.au](http://www.nuenergyresources.com.au) for further information and to register your interest to receive a prospectus when it is ready



- 1:1 correlation between nearby uranium enriched basement rocks and substantial sand-hosted uranium resources within the Frome Basin as follows:

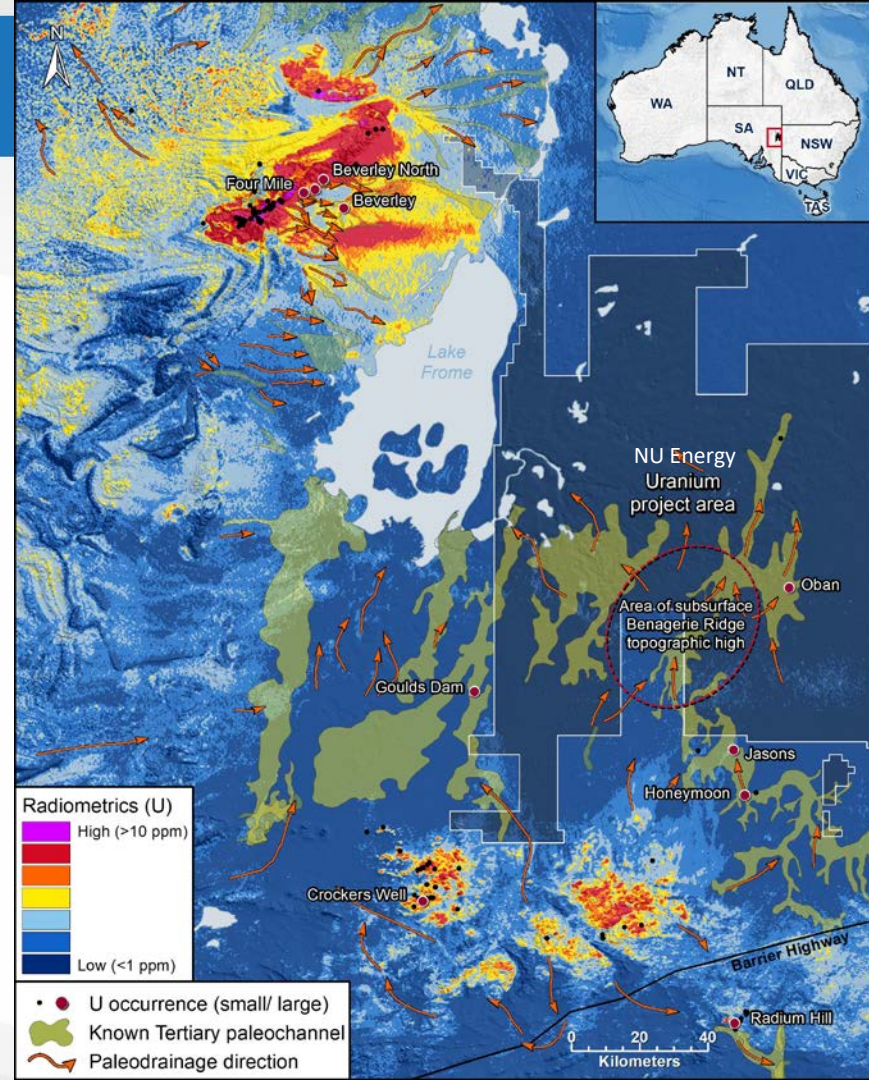
**Mt Painter:** Beverley and associated deposits.

**Crocker's Well:** Gould's Dam.

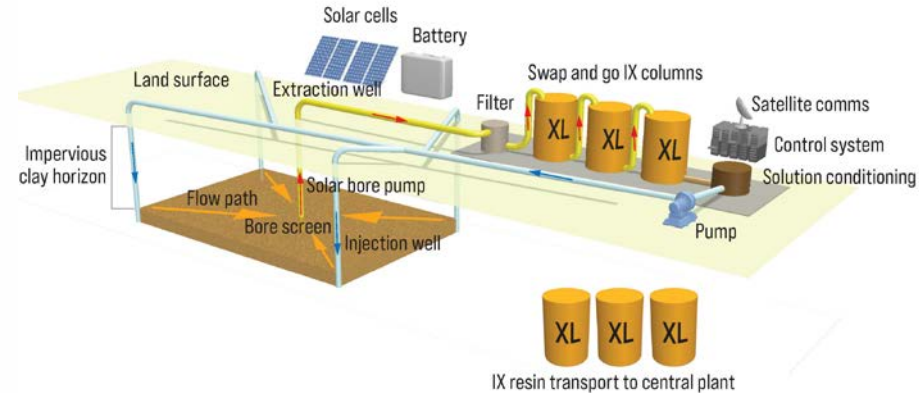
**Kalkaroo granites:** Honeymoon restart and Jason's deposit.

- **Benagerie Ridge** intra-basin topographic high of uranium-rich Precambrian volcanic and granitic rocks has no associated large sand-hosted uranium deposit, but numerous promising prospects with only very limited drilling.
- Indicates that large deposits could exist marginal to the Benagerie Ridge in suitable reduced host sands.
- Oban shows favourable pointers to potentially much larger uranium deposits in the region.

## Favourable vectors for large sand-hosted uranium deposits



- ISR is a well proven uranium mining technology that is extensively utilised to exploit sand-hosted uranium deposits in Kazakhstan and the USA.
- Heathgate Resources Pty Ltd **Beverley and nearby** uranium mines are a successful, long running ISR operation in the western Frome Basin.
- Boss Energy Ltd's **Honeymoon restart** ISR uranium project is located on the Yarramba palaeochannel to the south of Havilah's tenements and is being readied for production.
- ISR mining is an internationally recognised, low impact, safe and environmentally responsible method of mining.
- It is amenable to operating efficiencies afforded by the use of ion exchange resins and remotely controlled automated solar energy driven pumping systems allowing simultaneous mining of multiple satellite deposits.



**Many new technologies can be employed as shown in the picture potentially allowing fully automated ISR circulation systems employing swap and go resins and driven by solar power to operate in several areas at once.**

**Cost-efficient and effective ISR technology that causes minimal environmental disturbance**

# JORC Ore Reserve & Mineral Resources 2021

## JORC Ore Reserves, 2021

Project	Classification	Tonnes (Mt)	Copper %	Gold g/t	Copper tonnes (Kt)	Gold ounces (Koz)
Kalkaroo <sup>1</sup>	Proved	90.2	0.48	0.44	430	1,282
	Probable	9.9	0.45	0.39	44	125
<b>Total</b>		<b>100.1</b>	<b>0.47</b>	<b>0.44</b>	<b>474</b>	<b>1,407</b>

### Footnotes to the JORC Ore Reserve and Mineral Resource Tables

Numbers in tables are rounded

<sup>1</sup> Details released to ASX: [18 June 2018](#) (Kalkaroo)

<sup>2</sup> Details released to ASX: [18 October 2010](#) and [5 June 2020](#) (Mutooroo)

<sup>3</sup> Details released to ASX [30 January 2018](#) & [7 March 2018](#) (Kalkaroo)

<sup>4</sup> Note that the Kalkaroo cobalt Inferred resource is not added to the total tonnage

<sup>5</sup> Details released to ASX: [10 June 2011](#) applying an 18% Fe cut-off (Maldorky)

<sup>6</sup> Details released to ASX: [5 December 2012](#) applying an 18% Fe cut-off (Grants)

<sup>7</sup> Details released to the ASX: [4 June 2009](#) applying a grade-thickness cut-off of 0.015 metre % eU3O8 (Oban)

## JORC Mineral Resources, 2021

Project	Classification	Resource Category	Tonnes	Copper %	Cobalt %	Gold g/t	Copper tonnes	Cobalt tonnes	Gold ounces
Mutooroo <sup>2</sup>	Measured	Oxide	598,000	0.56	0.04	0.08			
	<b>Total</b>	<b>Oxide</b>	<b>598,000</b>	<b>0.56</b>	<b>0.04</b>	<b>0.08</b>	<b>3,300</b>	<b>200</b>	<b>1,500</b>
	Measured	Sulphide Copper-Cobalt-Gold	4,149,000	1.23	0.14	0.18			
	Indicated	Sulphide Copper-Cobalt-Gold	1,697,000	1.52	0.14	0.35			
	Inferred	Sulphide Copper-Cobalt-Gold	6,683,000	1.71	0.17	0.17			
<b>Total</b>	<b>Sulphide Copper-Cobalt-Gold</b>	<b>12,529,000</b>	<b>1.53</b>	<b>0.16</b>	<b>0.20</b>	<b>191,700</b>	<b>20,000</b>	<b>80,600</b>	
		<b>Total Mutooroo</b>	<b>13,127,000</b>				<b>195,000</b>	<b>20,200</b>	<b>82,100</b>
Kalkaroo <sup>3</sup>	Measured	Oxide Gold Cap	12,000,000			0.82			
	Indicated	Oxide Gold Cap	6,970,000			0.62			
	Inferred	Oxide Gold Cap	2,710,000			0.68			
	<b>Total</b>	<b>Oxide Gold Cap</b>	<b>21,680,000</b>			<b>0.74</b>			<b>514,500</b>
	Measured	Sulphide Copper-Gold	85,600,000	0.57		0.42			
	Indicated	Sulphide Copper-Gold	27,900,000	0.49		0.36			
	Inferred	Sulphide Copper-Gold	110,300,000	0.43		0.32			
<b>Total</b>	<b>Sulphide Copper-Gold</b>	<b>223,800,000</b>	<b>0.49</b>		<b>0.36</b>	<b>1,096,600</b>		<b>2,590,300</b>	
		<b>Total Kalkaroo</b>	<b>245,480,000</b>				<b>1,096,600</b>		<b>3,104,800</b>
	Inferred	Cobalt Sulphide <sup>4</sup>	193,000,000		0.012			23,200	
<b>Total All Projects</b>		<b>All Categories (rounded)</b>	<b>258,607,000</b>				<b>1,291,600</b>	<b>43,400</b>	<b>3,186,900</b>
Project	Classification	Tonnes (Mt)	Iron (%)	Fe concentrate (Mt)	Estimated yield				
Maldorky <sup>5</sup>	Indicated	147	30.1	59	40%				
Grants <sup>6</sup>	Inferred	304	24	100	33%				
<b>Total all projects</b>	<b>All categories</b>	<b>451</b>		<b>159</b>					
Project	Classification	Tonnes (Mt)	eU3O8 (ppm)	Contained eU3O8 (Tonnes)					
Oban <sup>7</sup>	Inferred	8	260	2,100					



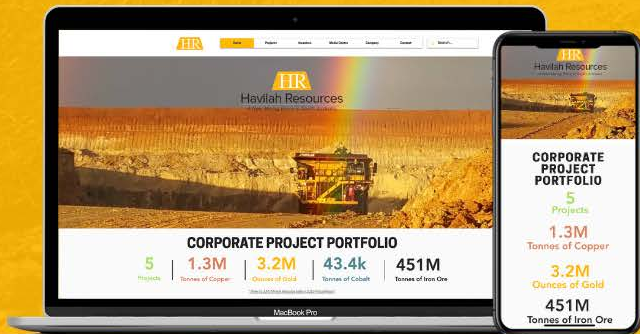
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