

21 May 2025

FURTHER POSITIVE MUTOOROO STUDY PROGRAM RESULTS

HIGHLIGHTS

- Further positive results reported in consultant's studies for the Mutooroo study program funded by JX Advanced Metals Corporation (**JXAM**).
- A 7,511 metre drilling program extended sulphide mineralisation well beyond the current resource limits and confirmed previous drilling intersections within the resource.
- Metallurgical testwork achieved high copper recoveries (>91%) from the sulphide ore and produced high-grade concentrates with relatively low levels of deleterious elements that align well with JXAM's smelter requirements.
- Mining study considered a combined open pit and underground mining operation, with access for the underground portion from a decline at the base of the open pit.

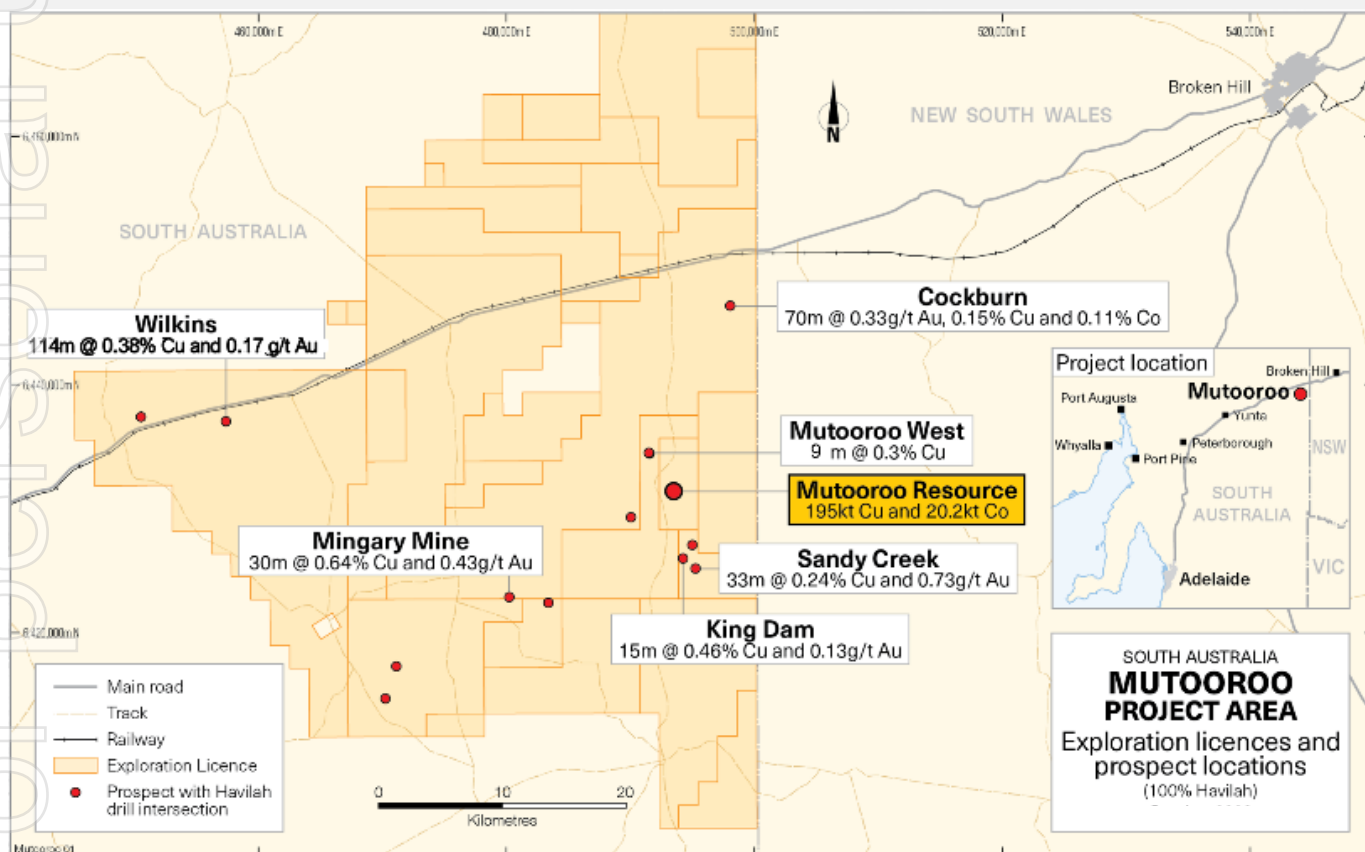


Figure 1 Location of the Mutooroo copper-cobalt-gold project within the prospective Mutooroo Project Area. For the source of the mineralised intersections refer to ASX announcements listed on page 4.

Commenting on the Mutooroo study program results Havilah's Technical Director, Dr Chris Giles, said:

"The technical outcomes of the JXAM sponsored study program are supportive of Havilah's earlier work.

"Based on the results, JXAM has entered into discussions with Havilah to negotiate an agreement to proceed with a comprehensive pre-feasibility study that could inform its decision on whether to acquire a Mutooroo project equity interest.

"Discussions towards finalising an agreement are presently in progress."

Havilah Resources Limited (**Havilah** or the **Company**) (**ASX: HAV**) is pleased to report the final results of a recently completed study program of the Mutooroo copper-cobalt-gold project (**Mutooroo**), 60 km southwest of Broken Hill (Figure 1). This follows signing of a binding MOU with JXAM ([ASX announcement 19 August 2024](#)) who sponsored the ~\$3 million study that involved drilling plus detailed metallurgical testwork and a mining study ([ASX announcement 17 February 2025](#)). A brief summary of the main conclusions of this work is presented below.

1. Drilling program

A 7,511 metre drilling program managed by Havilah consisted of both reverse circulation (**RC**) and diamond drilling (**DD**). The program successfully achieved its dual objectives of obtaining representative massive sulphide ore samples for metallurgical testwork and expanding the current JORC resource. Twinned metallurgical drillholes within the existing resource envelope intersected grades and widths of sulphide mineralisation that were not materially different to adjacent drillholes such as:

MTDD276: 33.45 metres of 1.93% copper, 0.22% cobalt and 0.25 g/t gold from 89.55 metres ([ASX announcement 27 November 2024](#)).

The substantial resource expansion potential at the northern end of the deposit, outside of the current Mutooroo JORC Mineral Resource estimate (**MRE**) envelope, is supported by the new drillholes, including:

MTRC278: 21 metres of 1.60% copper, 0.18% cobalt and 0.31 g/t gold from 122 metres, which lies approximately 200 metres north of the resource envelope ([ASX announcement 27 November 2024](#)).

The new drillhole intercept grades compare favourably to the average Mutooroo JORC sulphide resource grade of 1.53% copper, 0.16% cobalt and 0.20 g/t gold (refer to JORC MRE table below) and over potentially mineable widths.

Downhole electromagnetic (**DHEM**) survey results revealed conductive zones at depth, indicating the likely continuation of massive sulphide mineralisation to at least 200 metres below Havilah’s deepest drillholes to date ([ASX announcement 4 April 2025](#)) (Figure 2).

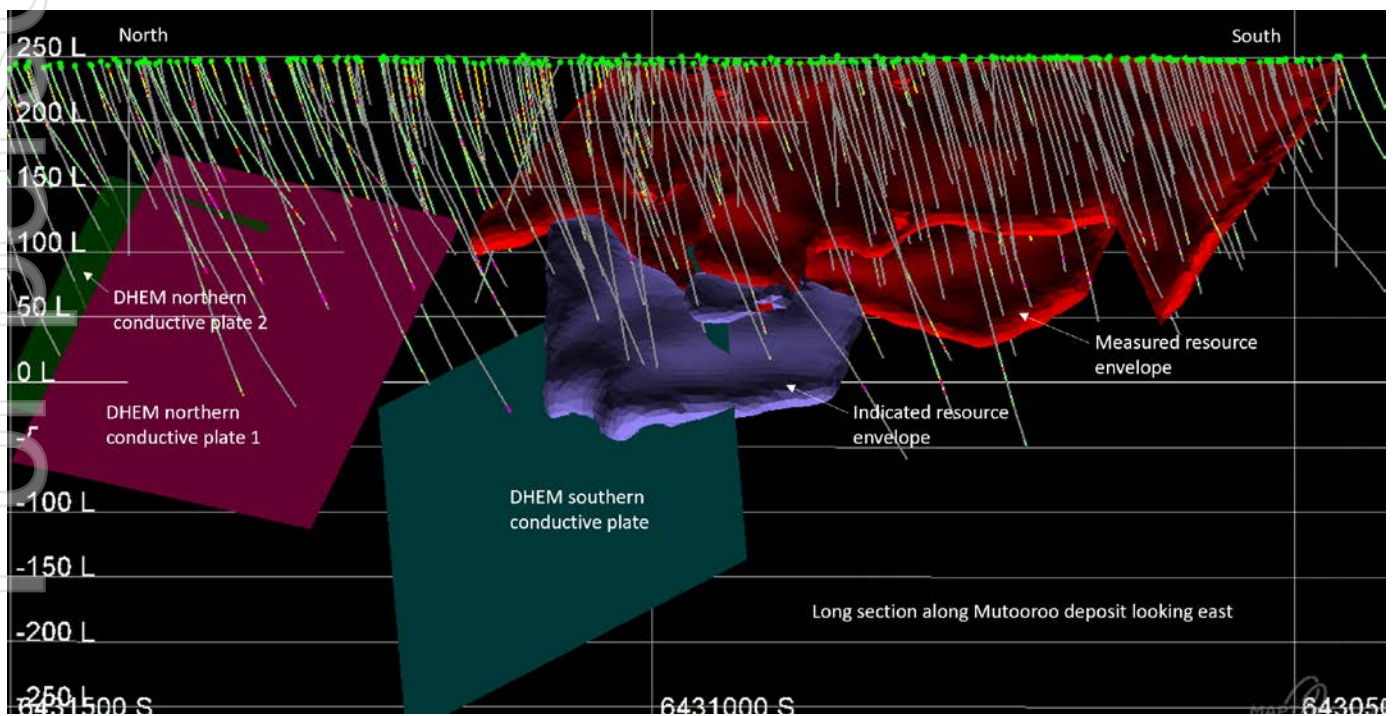


Figure 2 Long section through the Mutooroo orebody showing Havilah drilling to date and the location of the three DHEM modelled conductive plates. The deepest conductive plate extends to more than 500 metres below surface and more than 200 metres below Havilah’s deepest drillholes.

2. Metallurgical testwork results

Core Resources Pty Ltd (**Core**) was engaged by JXAM to conduct a metallurgical testwork program on the Mutooroo project using representative drillcore samples obtained from diamond drillholes drilled specifically for this purpose (Table 1). Testwork was carried out on composite samples generated by Core from the drillcore samples, as per instructions from JXAM (Table 2 and Appendix 1). The testwork, which was supervised and reported on by a Competent Person (see relevant Competent Person's Consent Form and Statement on page 7), confirmed that:

- The comminution (crushing and grinding) data indicates that the Mutooroo massive sulphide ore is amenable to a low-cost, energy-efficient grinding circuit design.
- The Mutooroo sulphide ore responds well to conventional flotation, achieving high copper recoveries (>91%) and producing high grade concentrates with relatively low levels of deleterious elements, in line with JXAM's smelter specifications. The testwork validated multiple flow-sheet options, with the ability to produce a high-grade copper concentrate (~28-30% copper), a higher sulphur and lower copper concentrate (S:Cu = 3), or a higher cobalt and sulphur concentrate, depending on smelter requirements and market conditions.
- Magnetic separation was effective in recovering the (magnetic) pyrrhotite sulphide component, which contains up to 0.175% cobalt.

3. Mining study

Mining One Pty Ltd (**Mining One**) was engaged by JXAM to complete a scoping level mining study for Mutooroo. The study was based on an initial conceptual open pit mining operation followed by underground mining, accessed from a decline at the base of the open pit (Figure 3). A range of mining rates were modelled by Mining One, having regard to orebody geometry, prudent mining advance rates, optimum mine life, economies of scale, metal recoveries, expected dilution and current costs. As expected, the mining study indicates that increased scale driven by a larger resource strengthens the economic development case and the attractiveness of the project. Therefore, expanding the Mutooroo resource to maximise the mining economies of scale and mine life will continue to be a high priority for Havilah and JXAM and would be a key focus of a future pre-feasibility study (**PFS**).

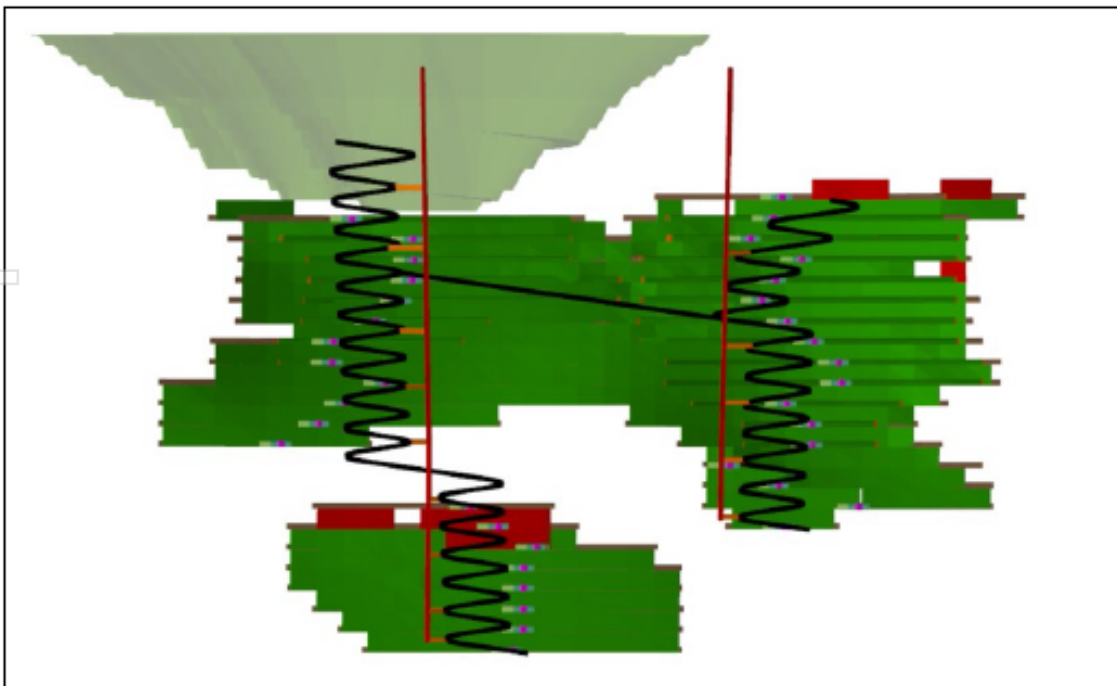


Figure 3 Mining One's Mutooroo conceptual open pit and underground mining layout, long section looking west. (reproduced with the permission of Mining One. Not to scale)

4. Next steps

Havilah and JXAM are presently negotiating to finalise the terms of an agreement to proceed with a comprehensive PFS that could inform a decision on whether JXAM acquires a Mutooroo project equity interest. The present objective is to complete the agreement in time to allow PFS work to commence during July 2025. JXAM maintains an exclusivity over Mutooroo until 30 September 2025.

About Mutooroo

Mutooroo is Havilah's advanced stage copper-cobalt-gold project that is located in a Tier 1 mining jurisdiction within commuting distance of Broken Hill, and 16 km south of the Transcontinental railway line and Barrier Highway. It currently contains **195,000 tonnes of copper, 20,200 tonnes of cobalt and 82,100 ounces of gold** mostly in copper-cobalt rich massive sulphide lodes (see current JORC MRE table below for classifications and grades).

JXAM's metallurgical testwork indicates that copper, sulphur and cobalt levels in the concentrates can potentially be tailored to suit its specific smelter requirements and deleterious element levels are not problematic. Expanding the Mutooroo resource base by further drilling is a priority for any future PFS work to optimise the project economics.

Cockburn prospect: ([refer to ASX announcement 17 October 2023](#))

Mutooroo West prospect: ([refer to ASX announcement 29 November 2021](#))

Mingary Mine prospect: ([refer to ASX announcement 5 July 2023](#))

King Dam – Sandy Creek prospects: ([refer to ASX announcement 5 July 2023](#))

Wilkins prospect: ([refer to ASX announcement 10 August 2012](#))

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

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Table 1 Drillcore samples provided to Core Resources for generation of composite samples for metallurgical testing

Drillhole	Ore Domain	Weight, kg
MTRCD270	MTCO1501 to MTCO1539 (From 128.5m to 153m)	110.2
MTRCD261	MTCO1540 to MTCO1553 (From 191m to 199m)	43.4
MTRCD269	MTCO1554 to MTCO1570 (From 98.8 m to 109.2m)	45.3
MTDD276	MTCO1571 to MTCO1621 (From 86m to 123 m)	178.8
MTRCD272	MTCO1627 to MTCO1667 (From 93m to 181m)	110.8
MTDD279	MTCO1668 to MTCO1698 (From 26.7m to 59m)	75.7

Table 2 Details of composite samples generated by Core Resources for metallurgical testing

Sample Name	Sample Name	Sample ID	Cu (%)	Fe (%)	S (%)	Co (%)	Au (ppm)	S/Cu	Weight (kg)
Composite	Pyrrhotite Composite sample	Po Comp	1.1	35.1	23.9	0.16	0.16	21.7	150
Variability	Pyrite Variability Sample	Py Var	2.7	40.5	34.3	0.23	0.36	12.7	19
	Pyrrhotite Variability Sample	Po Var	2.0	47.3	32.0	0.20	0.18	16.0	20
	High Grade Ore Variability Sample	HG Var	4.3	43.7	31.3	0.32	0.55	7.3	22
	Low Grade Ore Variability Sample	LG Var	0.6	24.6	15.2	0.11	0.07	25.3	20
	Amphibolite Ore Variability Sample	Amp Var	1.8	24.9	16.5	0.15	0.15	9.2	20
	Oxide-Transitional Variability Sample	Ox-Tr Var	1.5	25.9	28.4	0.17	0.19	18.9	23
Comminution	Pyrrhotite Composite Comminution	Po Comp Comminution	1.1	34.4	22.1	0.15	0.14	20.1	107
	Host Rock Comminution	HR Comminution	0.04	9.0	0.6	0.01	0.02	-	87

Mutooroo JORC Mineral Resource Table as at 31 July 2024

Project	Classification	Resource Category	Tonnes	Copper %	Cobalt %	Gold g/t	Copper tonnes	Cobalt tonnes	Gold ounces	
Mutooroo ¹	Measured	Oxide	598,000	0.56	0.04	0.08				
	Total	Oxide	598,000	0.56	0.04	0.08	3,300	200	1,500	
	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				
	Total	Sulphide Copper-Cobalt-Gold	12,529,000	1.53	0.16	0.20	191,700	20,000	80,600	
	Total Mutooroo			13,127,000				195,000	20,200	82,100

Numbers in above table are rounded. ¹ Details released to the ASX: 18 October 2010 and 5 June 2020.

Cautionary Statement

This announcement 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. 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. There is no guarantee that the negotiations with JXAM will result in any transactional outcome for Mutooroo.

Competent Person's Statements

The information in this announcement that relates to Exploration Results and JORC Mineral Resources is based on data and information 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 under consideration and to the activities being undertaken 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 announcement of the matters based on his information in the form and context in which it appears. Information for the Mutooroo Inferred cobalt & gold Mineral Resources complies with the JORC Code 2012. All other Mutooroo Mineral Resource 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 resources continue to apply and have not materially changed. 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.



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Competent Person's Consent Form

Pursuant to the requirements of ASX Listing Rules 5.6, 5.22 and 5.24 and Clause 9 of the JORC Code 2012 Edition
(Written Consent Statement)

Report name: ASX Release: Further Positive Mutooroo Study Program Results

Company Name: Havilah Resources Limited

Deposit: Mutooroo copper-cobalt-gold Project, Broken Hill

Date: 20 May 2025

Statement

I, Maedeh Tayebi, confirm that I am the Competent Person for the information in the report that relates to the Mutooroo Project Testwork and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code 2012 Edition, having five years' experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Fellow Member of the Australasian Institute of Mining and Metallurgy.
- I have reviewed the Report to which this Consent Statement applies.
- I am a full-time employee of Core Metallurgy Pty. Ltd.
- I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.
- I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to metallurgical testwork results.

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Consent

I consent to the release of the Report and this Consent Statement by the directors of:

Havilah Resources Limited

Signature of Competent Person: Maedeh Tayebi
Date: 20 May 2025
Professional Membership: AusIMM
Membership Number: 314098

A handwritten signature in blue ink, appearing to read "Maedeh Tayebi".

Signature of Witness: David Cavanagh
Witness Name and Residence: PO Box 89
Sherwood QLD 4075

A handwritten signature in blue ink, appearing to read "D. Cavanagh".

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Appendix 1

Sections 1 and 2 below provide a description of the sampling and assaying techniques in accordance with Table 1 of The Australasian Code for Reporting of Exploration Results.

Details for drillholes cited in the text

Hole Number	Easting m	Northing m	RL m	Grid azimuth	Dip degrees	EOH depth metres
MTRCD261	493604	6431347	251	96	-60	216.8
MTRCD269	493635	6430896	251	113	-65	114.8
MTRCD270	493534	6430781	250	113	-65	167.3
MTRCD272	493637	6430998	248	112	-64	198.8
MTDD276	493594	6430809	250	113	-60	132.3
MTRC278	493716	6431570	251	120	-59	160
MTDD279	493772	6431060	245	108	-60	69.3

Datum: GDA94 Zone 54.

Note: All azimuths and dips are as measured at surface; deviations from this typically occur at depth.

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> Sample data was derived from Havilah reverse circulation (RC) and diamond (DD) drillholes as documented in the table above. RC assay samples averaging 2-3kg were riffle split at 1 metre intervals. All RC drill samples were collected into pre-numbered calico bags and packed into polyweave bags by Havilah staff for shipment to the assay lab in Adelaide. Some samples that did not appear to be obviously mineralised were composited over 4 metre intervals. These were later resampled on 1 metre intervals if the 4 metre composite assay results were considered to be significant. All diamond drill samples were from HQ size drillcore that was logged on site and was sent to Adelaide to be photographed, and halved and/or quartered by diamond saw. Quartered drillcore samples were collected into pre-numbered calico bags and sent to the ALS assay lab in Adelaide. At the assay lab the samples are crushed in a jaw crusher to a nominal 10mm (method PR102) from which a 3kg split is obtained using a riffle splitter. The split is pulverized in an LM5 to minimum 85% passing 75 microns (method PR303). These pulps are stored in paper bags. All samples were analysed for gold by 30g fire

Criteria	JORC Code explanation	Commentary
		<p>assay, with AAS finish using ALS method Au-aa25 and a range of other metals by ALS method MEMS 61.</p> <ul style="list-style-type: none"> • Six lots of half HQ core samples, bagged at 1 metre intervals, were sent to Core Resources Pty Ltd (Core) metallurgical laboratory in Brisbane for metallurgical test work (Table 1). • A sample inventory was completed by Core to cross-check expected samples against the actual ones received.
Drilling techniques	<ul style="list-style-type: none"> • <i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i> 	<ul style="list-style-type: none"> • All RC holes and RC precollar holes were drilled with a face sampling hammer bit using Havilah's RC drilling rig and a contractor RC drilling rig for a few holes. All samples were collected via riffle splitting directly from the cyclone. • Diamond drilling of HQ size (63.5 mm), usually as tails to RC precollar holes. • MJ Drilling was contracted for the diamond drillholes.
Drill sample recovery	<ul style="list-style-type: none"> • <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i> • <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i> • <i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i> 	<ul style="list-style-type: none"> • The sample yield and quality of the RC samples was routinely recorded in drill logs. • The site geologist and Competent Person consider that overall the results are acceptable for interpretation purposes. • No evidence of significant sample bias due to preferential concentration or depletion of fine or coarse material was observed. • No evidence of significant down hole or inter-sample contamination was observed. • Sample recoveries for both diamond drilling and RC drilling were continuously monitored by the geologist on site in order to effect adjustments to drilling methodology to optimize sample recovery and quality if necessary. • In general, core recoveries were excellent, with almost 100% recovery in the mineralised intervals. The sample yield and quality of the diamond drilling samples was routinely recorded in drill logs. • The site geologist and Competent Person consider that overall the results are acceptable for interpretation purposes.
Logging	<ul style="list-style-type: none"> • <i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i> • <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i> • <i>The total length and percentage of the relevant intersections logged.</i> 	<ul style="list-style-type: none"> • All RC samples were logged by an experienced exploration geologist directly into an Excel spreadsheet and transferred to a laptop computer. • All RC chip sample trays and some representative samples are stored on site. • The drillcore was logged in detail by an experienced geologist directly into a digital logging system with data uploaded directly into an Excel spreadsheet. • Logging is semi-quantitative and 100% of

Criteria	JORC Code explanation	Commentary
<p>Sub-sampling techniques and sample preparation</p>	<ul style="list-style-type: none"> • <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> • <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> • <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> • <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> • <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i> • <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<p>reported intersections have been logged and photographed.</p> <ul style="list-style-type: none"> • Logging is of a sufficiently high standard to support any subsequent interpretations, resource estimations and mining and metallurgical studies. <ul style="list-style-type: none"> • RC drill chips were received directly from the drilling rig via a cyclone and were riffle split on 1 metre intervals to obtain 2-3 kg samples. • Sampling size is considered to be appropriate for the style of mineralisation observed. Assay repeatability for gold and other metals has not proven to be an issue in the past and is checked with regular duplicates. • All Havilah samples were collected in numbered calico bags that were sent to ALS assay lab in Adelaide. • At ALS assay lab the samples are crushed in a jaw crusher to a nominal 10mm (method CRU-42a) from which a 3kg split is obtained using a riffle splitter. The split is pulverized in an LM5 to minimum 85% passing 75 microns (method PUL25e). These pulps are stored in paper bags. • All samples were analysed for gold by 30g fire assay, with AAS finish using ALS method Au-aa25 and a range of other metals by ALS method ME MS61. • Quarter core was submitted for assay in to obtain results that would allow selection of representative half core samples for metallurgical studies. • Sample preparation and assaying methods are summarised above. • Quality control procedures include the insertion of standards, blanks and duplicates into the regular sample number sequence (approximately 1 in 20 samples). The blanks, standards and duplicates are subject to rigorous statistical checks and if any are out of spec, re-assay of retained samples is requested of the laboratory as a first step. For the present program the QAQC report did not identify any material deviations in either accuracy or precision of the lab analyses. • Sampling size is considered to be appropriate for the style of mineralisation observed. Assay repeatability for gold and other metals has not proven to be an issue. • At ALS assay lab the samples are crushed in a jaw crusher to a nominal 10mm (method CRU-42a) from which a 3kg split is obtained using a riffle splitter. The split is pulverized in an LM5 to minimum 85% passing 75 microns (method PUL25e). These pulps are stored in paper

Criteria	JORC Code explanation	Commentary
		<p>bags.</p> <ul style="list-style-type: none"> All samples were analysed for gold by 30g fire assay, with AAS finish using ALS method Au-aa25 and a range of other metals by ALS method ME MS61. All sample pulps are retained by Havilah so that check or other elements may be assayed using these pulps in the future. The drillcore samples received by Core were classified into 9 different domains to allow testing of variable ore types as per JXAM instructions (Table 2). The pyrrhotite composite core samples were crushed to -3.35mm. A 30kg sample was split out and crushed down to -1.0 mm for the magnetic separation testwork. The remaining sample was blended by passing through a rotary splitter three times after which it was split into 8 equal fractions for the testwork program. For each of the 6 variability samples, the core samples were initially crushed to -31.5mm. A 5 kg sample was split out for the comminution testwork. The remaining sample was treated as above.
<p>Quality of assay data and laboratory tests</p>	<ul style="list-style-type: none"> <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> <i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i> <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i> 	<ul style="list-style-type: none"> All samples are prepared at ALS laboratory in Adelaide and assayed at the ALS Perth Hub Lab. The total assay methods are standard ALS procedure and are considered appropriate for resource reporting. All gold was determined by fire assay method Au-aa25 with AAS finish. Other elements were analysed by multi-element digest methods with MS finish. Quality control procedures include the insertion of standards, blanks and duplicates into the regular sample number sequence (approximately 1 in 20 samples). The blanks, standards and duplicates are subject to rigorous statistical checks and if any are out of spec, re-assay of retained samples is requested of the laboratory as a first step. For the present program the QA/QC report did not identify any material deviations in either accuracy or precision of the lab analyses. ALS also insert its own QA/QC samples into the sample sequence. Fire assay method Au-aa25 is a total gold analysis. Assay data accuracy and precision was continuously checked through submission of field and laboratory standards, blanks and repeats which were inserted at a nominal rate of approximately 1 per 20 drill samples.

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul style="list-style-type: none"> <i>The verification of significant intersections by either independent or alternative company personnel.</i> <i>The use of twinned holes.</i> <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> Assay data for laboratory standards and repeats have been previously statistically analysed and no material issues were noted. Rigorous internal QC procedures are followed to check all assay results. All data entry is under control of the responsible geologist, who is responsible for data management, storage and security. No adjustments to assay data are carried out.
Location of data points	<ul style="list-style-type: none"> <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i> <i>Specification of the grid system used.</i> <i>Quality and adequacy of topographic control.</i> 	<ul style="list-style-type: none"> The holes were surveyed using an electronic downhole camera. Present drillhole collar coordinates were surveyed in UTM coordinates using a GPS system with an x:y:z accuracy of <5m and are quoted in GDA94 Zone 54 datum. A differential GPS system with an x:y:z accuracy of 20cm:20cm:40cm will be used to obtain the final drillhole locations used in the database.
Data spacing and distribution	<ul style="list-style-type: none"> <i>Data spacing for reporting of Exploration Results.</i> <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i> <i>Whether sample compositing has been applied.</i> 	<ul style="list-style-type: none"> The objective of the diamond coring program was to obtain representative samples for metallurgical testwork, to carry out geotechnical studies and to twin earlier Havilah RC drillholes in order to check for any systematic bias inherent in the different drilling methods. Hence placing of holes to achieve the above objectives was the main consideration rather than hole spacing. The RC drillholes were positioned at appropriate spacing to test down dip of the surface expression of mineralisation. Sample compositing was not used.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i> <i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i> 	<ul style="list-style-type: none"> The drillhole azimuth and dip was chosen to intersect the interpreted mineralised zones as nearly as possible to right angles and at the desired positions to maximise the value of the drilling data. At this stage, no material sampling bias is known to have been introduced by the drilling direction.
Sample security	<ul style="list-style-type: none"> <i>The measures taken to ensure sample security.</i> 	<ul style="list-style-type: none"> After cutting, the quarter core samples were placed directly in pre-numbered calico bags by experienced personnel for despatch by courier to the assay lab. RC chip samples are directly collected from the riffle splitter in numbered calico bags. Several calico bags are placed in each polyweave bag which are then sealed with cable ties. The samples are transported to the assay lab by Havilah personnel at the end of

Criteria	JORC Code explanation	Commentary
		<p>each field stint.</p> <ul style="list-style-type: none"> There is minimal opportunity for systematic tampering with the samples as they are not out of the control of Havilah personnel until they are delivered to the assay lab. This is considered to be a secure and reasonable procedure and no known instances of tampering with samples occurred during the drilling programs.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> Ongoing internal auditing of sampling techniques and assay data has not revealed any material issues.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area. 	<ul style="list-style-type: none"> Security of tenure is via current exploration licence EL 6592 over the Mutooroo deposit, which is in good standing. Havilah has a binding MOU with JX Advanced Metals Corporation that provides an exclusivity period (until 30 September 2025) for it to complete a study program that will inform an investment decision for Mutooroo. A Native Title Exploration Agreement is in place for the Mutooroo Project Area. The agreement was executed between Havilah and Wilyakali Native Title Aboriginal Corporation.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> Mutooroo was historically mined for oxide and supergene copper to shallow depths in the late 1800's and early 1900's. The area has been explored by a number of groups in the past including Mines Exploration Pty Ltd (Broken Hill South), Noranda, Adelaide Wallaroo and CRAE. Broad spaced drillholes were completed at the prospect area during the mid 1960's by Mines Exploration Pty Ltd. All previous exploration data has been integrated into Havilah's databases.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The mineralisation style is massive sulphide lode style copper-cobalt-gold mineralisation within Broken Hill Domain rocks of the Curnamona Province. The massive sulphide lode has formed by hydrothermal solutions migrating up a shear zone formed at or near the contact between amphibolite and gneiss.
Data aggregation methods	<ul style="list-style-type: none"> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. 	<ul style="list-style-type: none"> Not applicable as not reporting mineral resources. Simple average grades over the specified intervals are reported, with no weighted aggregation of results. Reported

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	<ul style="list-style-type: none"> Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<p>mineralisation does not include intervals that are considered to be of uneconomic grade in the context of adjacent mineralised intervals. This is considered appropriate for reporting of exploration results.</p> <ul style="list-style-type: none"> Not applicable – see above. Not applicable as no metal equivalent values are stated.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. ‘down hole length, true width not known’). 	<ul style="list-style-type: none"> Downhole lengths are reported. Drillholes are typically oriented with the objective of intersecting mineralisation as near as possible to right angles, and hence downhole intersections in general are as near as possible to true width. For the purposes of the geological interpretations and resource calculations the true widths are always used.
Diagrams	<ul style="list-style-type: none"> Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	<ul style="list-style-type: none"> Not strictly applicable as not reporting a mineral discovery. This information is provided.
Balanced Reporting	<ul style="list-style-type: none"> Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	<ul style="list-style-type: none"> Accurate satellite controlled DGPS system was used to measure the location and elevation of drillhole collars. Only potentially economic grade intervals are reported.
Other substantive exploration data	<ul style="list-style-type: none"> Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples - size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	<ul style="list-style-type: none"> Relevant geological observations and metallurgical test results are reported.
Further work	<ul style="list-style-type: none"> The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large- scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	<ul style="list-style-type: none"> Further resource upgrade and resource expansion drilling is planned as part of the PFS. Downhole electromagnetic surveying was undertaken for selected drillholes to identify any off-hole conductive zones that could be indicative of undrilled massive sulphide.