ASX MEDIA RELEASE Havilah Resources



13 September 2024

NEW COPPER DRILLING RESULTS AT MUTOOROO

HIGHLIGHTS

- 12 metres of 1.57% copper, 0.16% cobalt and 0.39 g/t gold intersected in drillhole MTRC260 located approximately 200 metres outside the Mutooroo JORC Measured resource envelope.
- Highlights the potential for Mutooroo resource expansion at relatively shallow depths potentially accessible by open pit mining methods.
- Commencement of the JX Advanced Metals Corporation (JXAM) study program, with completion of 8 reverse circulation (RC) precollar drillholes at Mutooroo in preparation for diamond drill core tails to obtain metallurgical samples.

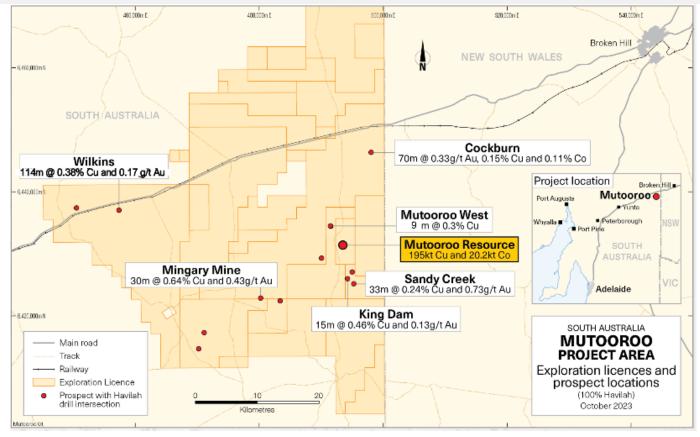


Figure 1 Location of the Mutooroo copper-cobalt deposit within the prospective Mutooroo Project Area. For the source of the mineralised intersections refer to ASX releases listed on page 5.

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

"Expanding the Mutooroo resource base is a priority for Havilah as a larger resource and an increased scale strengthens the economic development case of the project.

"This shallow drilling program achieved its objective of intersecting significant copper-cobalt-gold sulphide mineralisation well outside of the Mutooroo mineral resource envelope and at potentially open pit depths.

"On another note we are very pleased to have commenced work on the JXAM study program with drilling of precollar holes that will facilitate early collection of metallurgical samples."

Havilah Resources Limited ASX: HAV

ABN 39 077 435 520 Tel: +61 (08) 7111 3627



Mutooroo Open Pit Resource Expansion Drilling

Havilah Resources Limited (Havilah or the Company) (ASX: HAV) is pleased to advise that its open pit resource expansion RC drilling at the Mutooroo copper-cobalt-gold deposit (Mutooroo), 60 km southwest of Broken Hill has intersected well mineralised sulphide lodes in most drillholes (Figures 3 and 4) with significant intersections including:

MTRC260:	MTRC260: 12 metres of 1.57% copper, 0.16% cobalt and 0.39 g/t gold from 104 metres; and				
	2 metres of 1.45% copper, 0.09% cobalt and 0.24 g/t gold from 73 metres; and				
	3 metres of 1.26% copper, 0.15% cobalt and 0.11 g/t gold from 95 metres.				
MTRC259:	2 metres of 1.49% copper, 0.10% cobalt and 0.09 g/t gold from 40 metres; and				
	6 metres of 0.72% copper, 0.10% cobalt and 0.18 g/t gold from 80 metres.				
MTRC258:	9 metres of 0.54% copper, 0.09% cobalt and 0.09 g/t gold from 149 metres.				
MTRC257:	2 metres of 0.78% copper, 0.09% cobalt and 0.09 g/t gold from 108 metres; and				
	2 metres of 0.66% copper, 0.06% cobalt and 0.08 g/t gold from 127 metres.				
MTRC256	5 metres of 0.52% conner .0.05% cobalt and 0.05 g/t gold from 33 metres				

MTRC256: 5 metres of 0.52% copper, 0.05% cobalt and 0.05 g/t gold from 33 metres.

Drillhole MTRC260, which lies approximately 200 metres north of the existing Mutooroo JORC Measured Resource envelope, intersected similar grades to the average Mutooroo JORC sulphide resource grade of 1.57% vs 1.53% copper and 0.16% vs 0.16% cobalt, but almost double the gold grade of 0.39 g/t vs 0.20 g/t gold over a true width of approximately 12 metres (see JORC mineral resource table on page 5 for average Mutooroo resource grades of copper, cobalt and gold). The generally increasing grade-thickness of metals in the sulphide zone from MTRC138 through MTRC259 to MTRC260 (see cross-section, Figure 4) may be indicating a trend towards a potentially thicker zone of mineralisation at depth. Notably, the largely untested airborne electromagnetic (AEM) anomaly target that will be a focus of Havilah's future drilling at Mutooroo lies at depth beneath this drillhole (Figure 2). Accordingly, it is Havilah's intention to complete a deeper tier of drillholes beneath this intersection at the earliest opportunity.

The above drilling intersections are at depths shallower than 150 metres that are potentially exploitable by open pit mining methods and support Havilah's original objective of expanding the shallow open pit mineral resources.

JX Advanced Metals Corporation (JXAM) Study Program

Following signing of the binding MOU with JXAM (refer to ASX announcement of 19 August 2024), Havilah has completed 8 precollar RC drillholes to depths of up to 189 metres with its RC drilling rig. This is in preparation for a contractor diamond drilling rig that will extend these drillholes a short distance through the underlying sulphide mineralisation to obtain samples for metallurgical testwork. By drilling the precollar holes with its RC drilling rig Havilah is effectively saving time (diamond drilling is typically significantly slower than RC drilling) and money (diamond drilling is usually considerably more expensive than RC drilling). In accordance with the MOU terms, JXAM is meeting the costs associated with the Mutooroo study program, including the RC precollar and diamond drilling

In conjunction with collection of suitable metallurgical samples and some twinned drillholes for verification purposes, Havilah will continue drilling RC precollar drillholes over the next few weeks until it effectively completes the next tier of resource upgrade and resource extension drillholes at depths of roughly 150 - 200 metres below surface (largely within the grey shaded area shown in Figure 2).



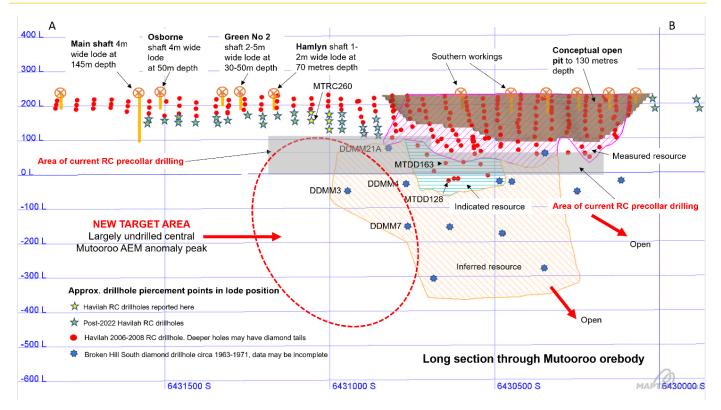


Figure 2 Long section of the Mutooroo sulphide lode zone and defined resource envelopes in relation to recent RC drillholes including MTRC260 reported here (yellow stars). Havilah's RC precollar drilling is presently focussing on the grey shaded area.

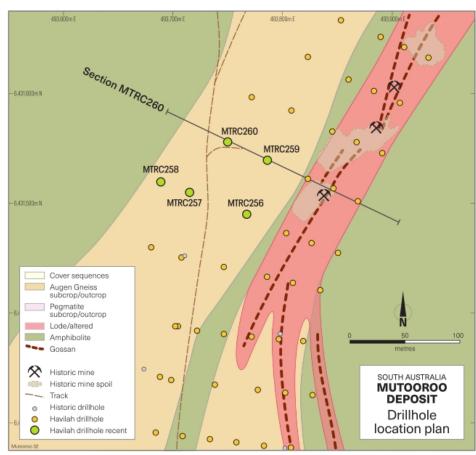


Figure 3 Surface geological plan of the area drilled showing Havilah drillholes in relation to the historical Mutooroo mine workings and locations of mapped sulphide lodes, generally marked by outcropping gossans.



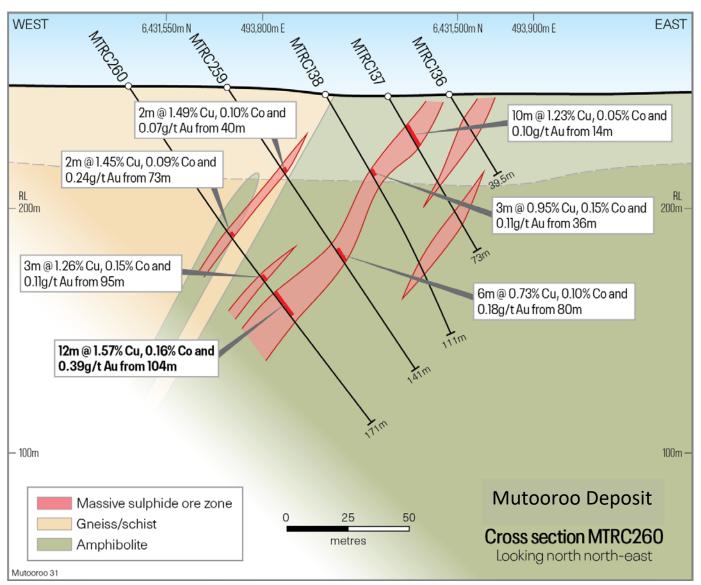


Figure 4 Drillhole cross-section showing recent Havilah RC drillholes (MTRC259 and MTRC260) in relation to earlier Havilah drillholes MTRC136, 137 and 138 (<u>refer to ASX announcement 29 August 2008</u>). The increasing grade-thickness of the main lode sulphide mineralisation may be indicating a more substantial zone of sulphide mineralisation at depth. Drill intercepts cited approximate true width due to the almost perpendicular intersection angle.

About Mutooroo

Mutooroo is Havilah's advanced stage copper-cobalt-gold project that is located within commuting distance of Broken Hill, and 16 km south of the Transcontinental railway line and Barrier Highway. It 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 JORC mineral resource table below).

Havilah has been progressing feasibility studies on the Mutooroo project to determine the viability of producing copper based on current JORC Measured Resources, initially from a conceptual open cut mine that transitions to a longer-term underground mining operation. This aspirational objective is favoured by the comparatively high grades of copper (1.53%) and cobalt (0.16%) in the sulphide ore and could be further enhanced by discovery of additional sulphide resources, which is another objective of the study program. Any revenues from byproduct cobalt, gold and sulphur (potentially as sulphuric acid) could improve returns from the Mutooroo project and this will also be a key focus of the JXAM study program.



Hole_ID	From	То	Width	Au (g/t)	Co (%)	Cu (%)	Comment
MTRC256	33	38	5	0.05	0.05	0.52	Hangingwall lode
including	33	35	2	0.10	0.09	0.95	
	62	63	1	0.03	0.17	0.45	Main lode
	72	73	1	0.30	0.11	0.61	
	83	86	3	0.04	0.03	0.26	
MTRC257	108	110	2	0.09	0.09	0.78	
including	108	109	1	0.08	0.12	1.00	
	121	122	1	0.04	0.05	0.11	
	127	129	2	0.08	0.06	0.66	
MTRC258	149	158	9	0.09	0.09	0.54	Main lode
including	149	154	5	0.11	0.14	0.81	
MTRC259	40	42	2	0.09	0.10	1.49	Hangingwall lode - transition
	78	86	8	0.15	0.10	0.61	Main lode
including	80	86	6	0.18	0.10	0.72	
MTRC260	73	75	2	0.24	0.09	1.45	Hangingwall lode
including	74	75	1	0.40	0.06	2.30	
	89	90	1		0.07	0.14	
	95	98	3	0.11	0.15	1.26	
including	96	98	2	0.15	0.15	1.61	
	104	116	12	0.39	0.16	1.57	Main lode
including	104	113	9	0.41	0.18	1.86	
including	105	106	1	0.92	0.26	2.52	
and	108	111	3	0.41	0.19	2.12	

 Table 1 Significant assay results for recent Mutooroo RC drillholes

Applicable to all drillholes: significant intervals reported above for copper contain no individual 1 metre assay < 0.05% copper and for gold no composite 2 metre assay <0.01 ppm and for cobalt no composite 2 metre assay < 0.01%. No upper limit has been applied, noting that there are no exceptionally high assays for any elements that would justify a top cut in this case.

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

Contact: Dr Chris Giles, Technical Director, on (08) 7111 3627 or email <u>info@havilah-resources.com.au</u> Registered Office: 107 Rundle Street, Kent Town, South Australia 5067 Mail: PO Box 3, Fullarton, South Australia 5063



Project	Classification	Resource Category	Tonnes	Copper %	Cobalt %	Gold g/t	Copper tonnes	Cobalt tonnes	Gold ounces
	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			
Mutooroo ¹	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

Mutooroo JORC Mineral Resource Table as at 31 July 2024

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.

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.



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.

Hole Number	Easting m	Northing m	RL m	Grid azimuth	Dip degrees	EOH depth metres
MTRC256	493765	6431493	251	107	-60	111
MTRC257	493719	6431510	251	107	-60	141
MTRC258	493680	6431525	251	107	-60	171
MTRC259	493786	6431539	251	107	-60	141
MTRC260	493750	6431556	251	107	-60	171
MTRC136	493868	6431501	248	107	-60	39
MTRC137	493846	6431514	247	107	-60	75
MTRC138	493823	6431522	247	107	-60	111
	Datum : GDA94 Zone 54. Note : All azimuths and dips are as measured at surface; deviations from this typically occur at depth.					

Details for drillholes cited in the text

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	 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. 	 Sample data was derived from Havilah reverse circulation (RC) 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 prenumbered 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.
Drilling techniques	• 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	• All RC holes were drilled with a face sampling hammer bit. All samples were collected via riffle splitting directly from the cyclone.



Criteria	JORC Code explanation	Commentary
	oriented and if so, by what method, etc).	
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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. 	 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 intersample contamination was observed. Sample recoveries were continuously monitored by the geologist on site and adjustments to drilling methodology were made in an effort to optimise sample recovery and quality where necessary.
Logging	 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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	 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. Logging is semi-quantitative and 100% of reported intersections have been logged. Logging is of a sufficiently high standard to support any subsequent interpretations, resource estimations and mining and metallurgical studies.
Sub-sampling techniques and sample preparation	 If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all subsampling stages to maximise representivity of samples. 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. Whether sample sizes are appropriate to the grain size of the material being sampled. 	 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 BV assay lab in Adelaide. At BV 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 40g fire assay, with AAS finish using BV methods FA001 and a range of other metals by BV methods MA101 and 102. All sample pulps are retained by Havilah so that check or other elements may be assayed using these pulps in the future.



Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	 The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. 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. 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. 	 Fire assay method FA001 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 25 drill samples. Assay data for laboratory standards and repeats have been previously statistically analysed and no material issues were noted.
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	 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.
Location of data points	 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. Specification of the grid system used. Quality and adequacy of topographic control. 	 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.
Data spacing and distribution	 Data spacing for reporting of Exploration Results. 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. Whether sample compositing has been applied. 	 The RC drillholes were positioned at appropriate spacing to test down dip of the surface expression of mineralisation. Not applicable as not reporting a mineral resource. Sample compositing was not used.
Orientation of data in relation to geological structure	 Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 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. 	 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	• The measures taken to ensure sample security.	 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 each field stint. 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.



Criteria	JORC Code explanation	Commentary
		 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	• The results of any audits or reviews of sampling techniques and data.	 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	 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. 	 Security of tenure is via current exploration licences over the Mutooroo Project Area, owned 100% by Havilah. Exploration drilling reported is undertaken on Mutooroo Exploration Licence EL 6592. 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	Acknowledgment and appraisal of exploration by other parties.	 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 (Broken Hill South), Noranda, Adelaide Wallaroo and CRAE. Broad spaced drillholes were completed at the prospect area in the mid 1960's by Mines Exploration. All previous exploration data has been integrated into Havilah's databases.
Geology	• Deposit type, geological setting and style of mineralisation.	• The mineralisation style is massive sulphide vein style copper-cobalt-gold mineralisation within Broken Hill Domain rocks of the Curnamona Province.
Data aggregation methods	 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. 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. 	 Not applicable as not reporting mineral resources. Simple average grades over the specified intervals are reported, with no weighted aggregation of results. Reported 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. Not applicable – see above. Not applicable as no metal equivalent values are stated.
Relationship between mineralisation widths and	 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 	 Downhole lengths are reported. Drillholes are typically oriented with the objective of intersecting mineralisation as near as possible to right angles, and hence downhole



Criteria	JORC Code explanation	Commentary
intercept lengths	 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'). 	 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	 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. 	 Not strictly applicable as not reporting a mineral discovery. This information is provided.
Balanced Reporting	 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. 	 Not applicable as not reporting mineral resources. Only potentially economic grade intervals are reported.
Other substantive exploration data	 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. 	 Relevant geological observations are reported.
Further work	 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. 	 RC precollars will continue to be drilled within the grey shaded area in Figure 2 to be followed up with diamond drillcore tails in a few weeks, under the JXAM study program. The objective of this drilling is to upgrade the existing mineral resource classification and to test for extensions of the known mineral resource.