

30 May 2018

Mutooroo Deeper Cobalt Potential Confirmed

HIGHLIGHTS

- **Resampling of 5 historic deep core holes returned high grade cobalt up to 3,180 ppm (0.32%), and up to 3.8% copper and 1.7 g/t gold.**
- **Confirms that the current JORC Inferred copper sulphide resource at Mutooroo also contains appreciable cobalt and gold.**
- **Expected to positively impact total JORC cobalt resources in future resource estimates for the Mutooroo deposit.**

Havilah Resources Limited (Havilah) is pleased to report assay results from recent resampling of drill core from five Mutooroo diamond drillholes completed by Mines Exploration (**MEPL**) in the 1960's, that were retained in the Department for Energy and Minerals South Australia Drill Core Reference Library in Adelaide.

Originally, these holes were only assayed for copper and the present resampling and multi-element analysis of the available massive sulphide intervals has defined new cobalt and gold intersections that include:

- 17.1 m @ 1.66% copper, 0.16% cobalt and 0.18 g/t gold from 162.0 m in DDMM21A.
- 9.4 m @ 1.72% copper, 0.19% cobalt and 0.63 g/t gold from 469.4 m in DDMM7.
- 6.9 m @ 1.32% copper, 0.13% cobalt and 0.07 g/t gold from 637.7 m in DDMM15D1.

See Table 1 below for full results and further details.

The mineralisation in these holes is mostly typical Mutooroo style, coarse-grained, massive sulphide breccia, consisting of 60 - 80% pyrrhotite (iron sulphide, Po) with, on average, 5% chalcopyrite (copper iron sulphide, Cpy) and 5% pyrite (iron sulphide, Py) along with typically 10 - 30% rounded quartz or altered host rock clasts. The width of mineralisation varies from less than 1 m (e.g. DDMM27A) to more than 17 m (e.g. DDMM21A).

There is a relatively good correlation between the original MEPL copper assays and the new copper assays. The massive sulphide intervals all returned high cobalt results with individual samples returning values up to 3,180 ppm (0.32%) as is typical of the mineralisation intersected at shallower levels by Havilah. Of additional interest is the locally higher gold results, particularly in DDMM7 which returned consistently elevated gold results over the 9.4 m interval with individual results ranging up to 1.69 g/t gold.

Table 1 Summary results for new drillcore assays (full assay and drilling data are available in Tables 3 and 4).

Hole No	From (m)	To (m)	Interval (m)	Cu % new	MEPL Cu %	Co % new	Au g/t new	Description
DDMM7	469.4	478.8	9.4	1.72	1.96	0.19	0.63	Po dominant massive sulphide breccia with quartz clasts and 5% Cpy and Py.
DDMM8	684.2	687.4	3.2	2.17	2.76	0.17	0.14	Po dominant massive sulphide breccia with quartz clasts and 5% Cpy and Py.
DDMM15D1	637.7	644.6	6.9	1.32	0.95	0.13	0.07	Mostly Po dominant breccia as above with 2 internal zones of weak sulphide min.
DDMM21A	162.0	179.1	17.1	1.66	1.38	0.16	0.18	Mostly Po dominant breccia as above with one internal zone of weak to moderate sulphide mineralisation.
DDMM27A	462.4	462.7	0.3	3.75	3.20	0.30	0.41	Po dominant massive sulphide breccia with quartz clasts and 5 - 10% Cpy and Py.
DDMM27A	470.7	471.1	0.4	0.20	NA	0.13	0.02	Quartz and Po dominant sulphide, minor Cpy.

Notes

1. MEPL Cu % is the original 1960's Cu assay by MEPL, no other elements were analysed at the time.
2. NA = not assayed.

Previously, the deeper Inferred portion of Havilah's Mutooroo JORC copper resource (refer Table 2 below and [ASX announcement of 18 October 2010](#))* was calculated mostly using data from these and some additional MEPL and Havilah drillholes (see Figure 1). It is planned to use this new assay data to update part of the Inferred Resource covered by these holes to include copper, cobalt and gold estimations. This work is part of the Mutooroo pre-feasibility study that is expected to be completed before the end of 2018.

** The Company confirms that it is not aware of any new information or data that materially affects the resource figures included in Table 2 and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.*

Commenting on the results of the resampling of deep core holes from Mutooroo, CEO, Mr Walter Richards said:

"These resampling results conclusively confirm that the earlier deeper sulphide intersections comprising the current Inferred copper resource also contain appreciable cobalt and gold.

"The mineralogy and grades of mineralisation are typical of the upper parts of the Mutooroo Measured and Indicated sulphide resource defined by Havilah's drilling.

"We expect that incorporation of these results should give a significant boost to the total JORC cobalt resources contained in the forthcoming upgraded resource estimate for the Mutooroo deposit", he said.

For further information visit www.havilah-resources.com.au

Contact: Mr Walter Richards, CEO, on (08) 8155-4500 or email: info@havilah-resources.com.au

About the Mutooroo Copper-Cobalt-Gold Project

The Mutooroo copper-cobalt-gold project is located 40 minutes drive west of Broken Hill and 16 km south of the transcontinental railway line. It is a lode-style massive sulphide copper-cobalt-gold deposit that contains a published Measured + Indicated + Inferred JORC Resource of 13.1 million tonnes of 1.5% copper for a total contained 195,000 tonnes of copper, 8,400 tonnes of associated cobalt and 44,600 ounces of gold (refer to resource table below). Havilah's immediate objective at Mutooroo is to complete the pre-feasibility study, required permitting for an open pit mining operation to 130 metres depth, and exploration to extend the deposit and test regional targets. This will include processing of sulphide ore in a conventional grinding and flotation circuit that will recover high quality copper concentrate. The best method of recovering cobalt is currently being addressed by the pre-feasibility study.

Table 2 2010 JORC Resource for Mutooroo (refer ASX announcement 18 October 2010)

Classification	Mt	Copper %	Cobalt %	Gold g/t	Copper Kt	Cobalt Kt	Gold Kozs
Measured Oxide	0.60	0.56	0.040	0.08			
Total Oxide	0.60	0.56	0.040	0.08	3.3	0.2	1.5
Measured	4.15	1.23	0.140	0.18			
Indicated	1.70	1.52	0.140	0.35			
Inferred	6.68	1.71	ISD	ISD	114.3	(using only MEPL data)	
Total sulphide	12.53	1.53			191.7	8.2	43.1
Total Mutooroo	13.13				195.0	8.4	44.6

Minor rounding errors may occur. ISD = insufficient assay data, relates to 1960's MEPL core drilling where there has been only limited analysis for copper and gold.

Table 3 All assayed intervals

Hole_ID	Sample_ID	From(m)	To(m)	Interval(m)	Sample Size	Comments	Au g/t	Ag ppm	As %	Bi %	Cd %	Co %	Co ppm	Cu %	Fe %	Mn %	Ni %	Pb %	S %	Zn %
DDMM7	MM7_01	469.40	470.19	0.79	1/4 NQ	Po dominant breccia	0.28	1	0.001	0.003	-0.001	0.178	1780	1.43	42.30	0.02	0.024	0.002	21.20	0.009
DDMM7	MM7_02	470.19	471.51	1.32	1/4 NQ	Po dominant breccia	0.23	-1	-0.001	0.002	-0.001	0.206	2060	1.12	52.20	0.02	0.030	0.003	23.50	0.009
DDMM7	MM7_03	471.51	472.83	1.32	1/4 NQ	Po dominant breccia	0.38	1	0.003	0.004	-0.001	0.229	2290	1.17	46.80	0.02	0.028	0.001	23.70	0.013
DDMM7	MM7_04	472.83	474.15	1.32	1/4 NQ	Po dominant breccia	1.69	1	-0.001	0.001	-0.001	0.196	1955	2.78	46.30	0.01	0.026	0.001	21.70	0.007
DDMM7	MM7_05	474.15	475.47	1.32	1/4 NQ	Po dominant breccia	0.15	-1	-0.001	0.002	-0.001	0.199	1985	1.65	43.60	0.03	0.022	0.001	19.10	0.014
DDMM7	MM7_06	475.47	476.79	1.32	1/4 NQ	Po dominant breccia	0.97	1	-0.001	0.011	-0.001	0.132	1315	1.72	35.40	0.03	0.018	0.002	15.40	0.010
DDMM7	MM7_07	476.79	478.11	1.32	1/4 NQ	Po dominant breccia	0.49	1	-0.001	0.002	-0.001	0.214	2140	1.54	53.10	0.01	0.030	0.002	23.80	0.005
DDMM7	MM7_08	478.11	478.80	0.69	1/4 NQ	Po dominant breccia	0.72	1	-0.001	0.002	-0.001	0.187	1865	2.79	48.50	0.01	0.027	-0.001	22.80	0.006
DDMM8	MM8_01	684.20	685.80	1.60	1/4 BQ	Po dominant breccia	0.15	6	-0.001	0.001	-0.001	0.116	1155	1.81	31.30	0.02	0.030	0.004	23.30	0.014
DDMM8	MM8_02	685.80	687.40	1.60	1/4 BQ	Po dominant breccia	0.13	3	-0.001	-0.001	-0.001	0.227	2270	2.53	42.40	0.02	0.019	0.002	23.90	0.011
DDMM15D1	MM15D1_01	637.70	638.84	1.14	1/4 BQ	weak sulphides in gneiss	0.21	1	-0.001	-0.001	-0.001	0.067	674	0.85	14.45	0.02	0.006	0.003	7.86	0.007
DDMM15D1	MM15D1_02	638.84	639.70	0.86	1/4 BQ	Po dominant breccia	0.06	1	-0.001	0.002	-0.001	0.153	1530	0.91	49.30	0.02	0.038	0.001	23.80	0.005
DDMM15D1	MM15D1_03	639.70	640.50	0.80	1/4 BQ	Po dominant breccia	0.04	1	0.001	0.001	-0.001	0.168	1675	1.74	46.30	0.02	0.034	0.001	24.70	0.006
DDMM15D1	MM15D1_04	640.50	641.36	0.86	1/4 BQ	weak sulphides in gneiss	0.01	-1	0.001	0.001	-0.001	0.053	529	0.75	8.63	0.03	0.003	0.001	4.63	0.012
DDMM15D1	MM15D1_05	641.36	642.39	1.03	1/4 BQ	Po dominant breccia	0.01	-1	-0.001	0.001	-0.001	0.157	1565	1.17	34.90	0.01	0.023	0.002	19.60	0.006
DDMM15D1	MM15D1_06	642.39	643.42	1.03	1/4 BQ	Po dominant breccia	0.04	1	0.001	0.001	-0.001	0.158	1580	0.97	40.40	0.01	0.028	0.001	19.50	0.007
DDMM15D1	MM15D1_07	643.42	644.60	1.18	1/4 BQ	Po dominant breccia	0.10	-1	-0.001	0.002	-0.001	0.128	1280	2.65	43.30	0.01	0.031	0.003	21.40	0.011
DDMM21A	MM21A_01	162.00	163.10	1.10	1/4 BQ	Po dominant breccia	0.26	-1	-0.001	-0.001	-0.001	0.318	3180	2.63	44.90	0.02	0.019	0.002	29.90	0.024
DDMM21A	MM21A_02	163.10	164.20	1.10	1/4 BQ	Po dominant breccia	0.19	-1	-0.001	0.001	-0.001	0.202	2020	2.76	46.80	0.01	0.026	0.001	25.30	0.011
DDMM21A	MM21A_03	164.20	165.30	1.10	1/4 BQ	Po dominant breccia	0.13	-1	-0.001	-0.001	-0.001	0.167	1665	1.88	47.80	0.01	0.028	-0.001	23.70	0.011
DDMM21A	MM21A_04	165.30	166.30	1.00	1/4 BQ	Po dominant breccia	0.09	1	-0.001	-0.001	-0.001	0.170	1700	2.13	45.70	0.01	0.027	0.001	23.80	0.011
DDMM21A	MM21A_05	166.30	167.40	1.10	1/4 BQ	Po dominant breccia	0.08	-1	-0.001	-0.001	-0.001	0.122	1220	1.68	39.90	0.02	0.025	-0.001	19.90	0.013
DDMM21A	MM21A_06	167.40	168.50	1.10	1/4 BQ	weak sulphides in amphibolite	0.05	-1	-0.001	0.001	-0.001	0.023	228	0.22	9.09	0.14	0.007	0.001	1.79	0.010
DDMM21A	MM21A_07	168.50	170.31	1.81	1/4 BQ	weak-moderate sulphides in gneiss	0.59	-1	0.001	0.002	-0.001	0.034	344	1.15	15.95	0.03	0.008	0.002	8.09	0.018
DDMM21A	MM21A_08	170.31	171.77	1.46	1/4 BQ	Po dominant breccia	0.09	-1	-0.001	-0.001	-0.001	0.170	1700	0.89	46.00	0.01	0.028	-0.001	23.90	0.011
DDMM21A	MM21A_09	171.77	173.23	1.46	1/4 BQ	Po dominant breccia	0.08	-1	-0.001	0.001	-0.001	0.181	1805	1.03	46.00	0.01	0.027	-0.001	23.40	0.013
DDMM21A	MM21A_10	173.23	174.69	1.46	1/4 BQ	Po dominant breccia	0.16	-1	-0.001	0.002	-0.001	0.170	1695	1.60	45.70	0.01	0.027	0.001	22.60	0.016
DDMM21A	MM21A_11	174.69	176.15	1.46	1/4 BQ	Po dominant breccia	0.29	-1	-0.001	0.004	-0.001	0.159	1590	1.75	43.40	0.01	0.026	-0.001	21.40	0.016
DDMM21A	MM21A_12	176.15	177.61	1.46	1/4 BQ	Po dominant breccia	0.03	-1	-0.001	-0.001	-0.001	0.172	1720	1.71	48.50	-0.01	0.029	-0.001	24.00	0.011
DDMM21A	MM21A_13	177.61	179.07	1.46	1/4 BQ	Po dominant breccia	0.17	-1	-0.001	-0.001	-0.001	0.176	1760	2.62	43.90	0.01	0.025	-0.001	21.40	0.007
DDMM27A	MM27_01	462.38	462.69	0.31	1/4 BQ	Po dominant breccia	0.41	1	-0.001	0.001	-0.001	0.301	3010	3.75	33.00	0.02	0.029	0.005	30.40	0.015
DDMM27A	MM27_02	470.70	471.10	0.40	1/4 BQ	Po breccia+quartz	0.02	-1	0.006	0.001	-0.001	0.126	1255	0.20	13.80	0.11	0.003	0.005	6.20	0.060

Table 3 All assayed intervals

Figure 1 Location of MEPL holes cited in the text

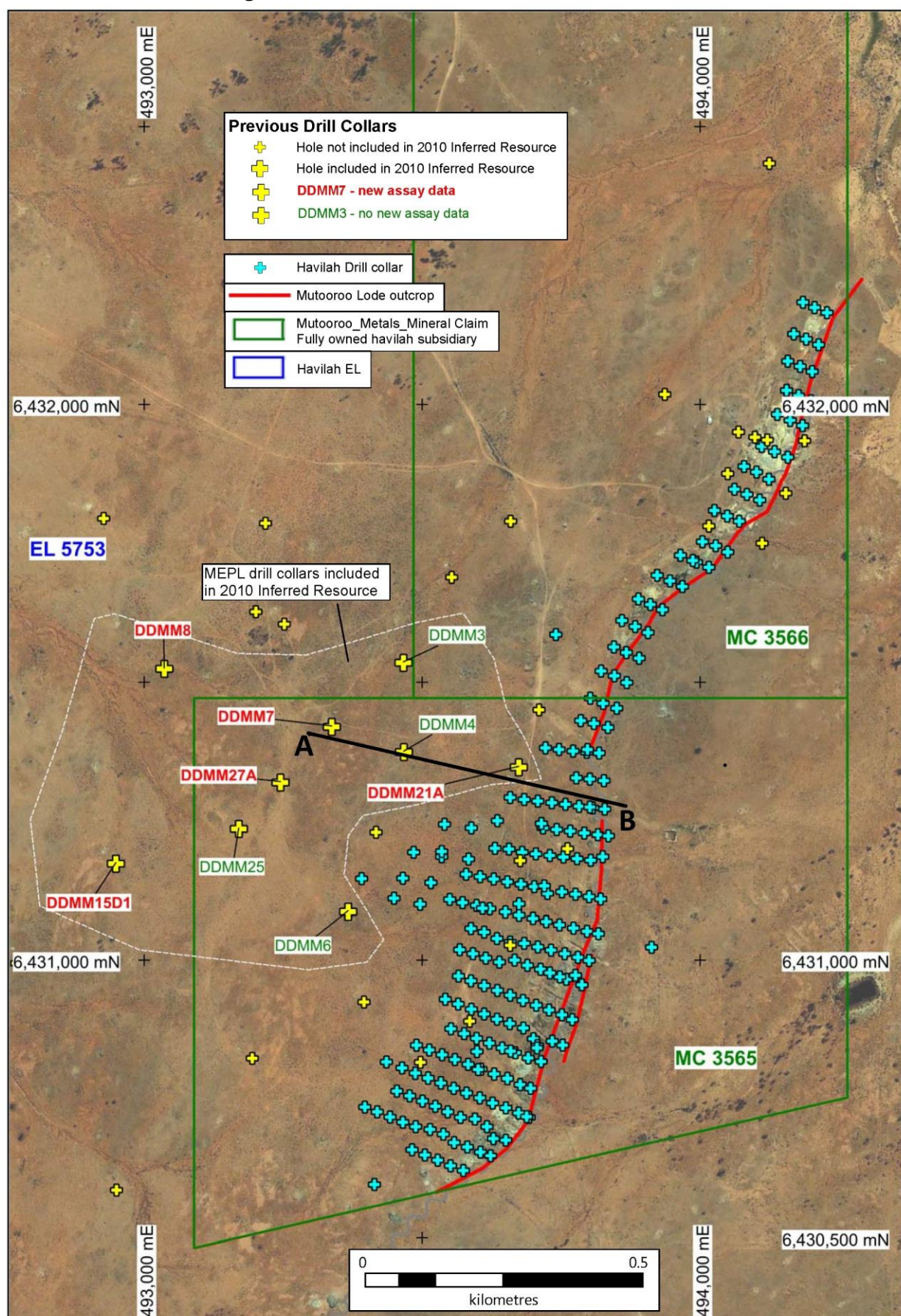


Figure 2 Cross-section through drillholes DDMM7 and DDMM21A (A-B of Figure 1)

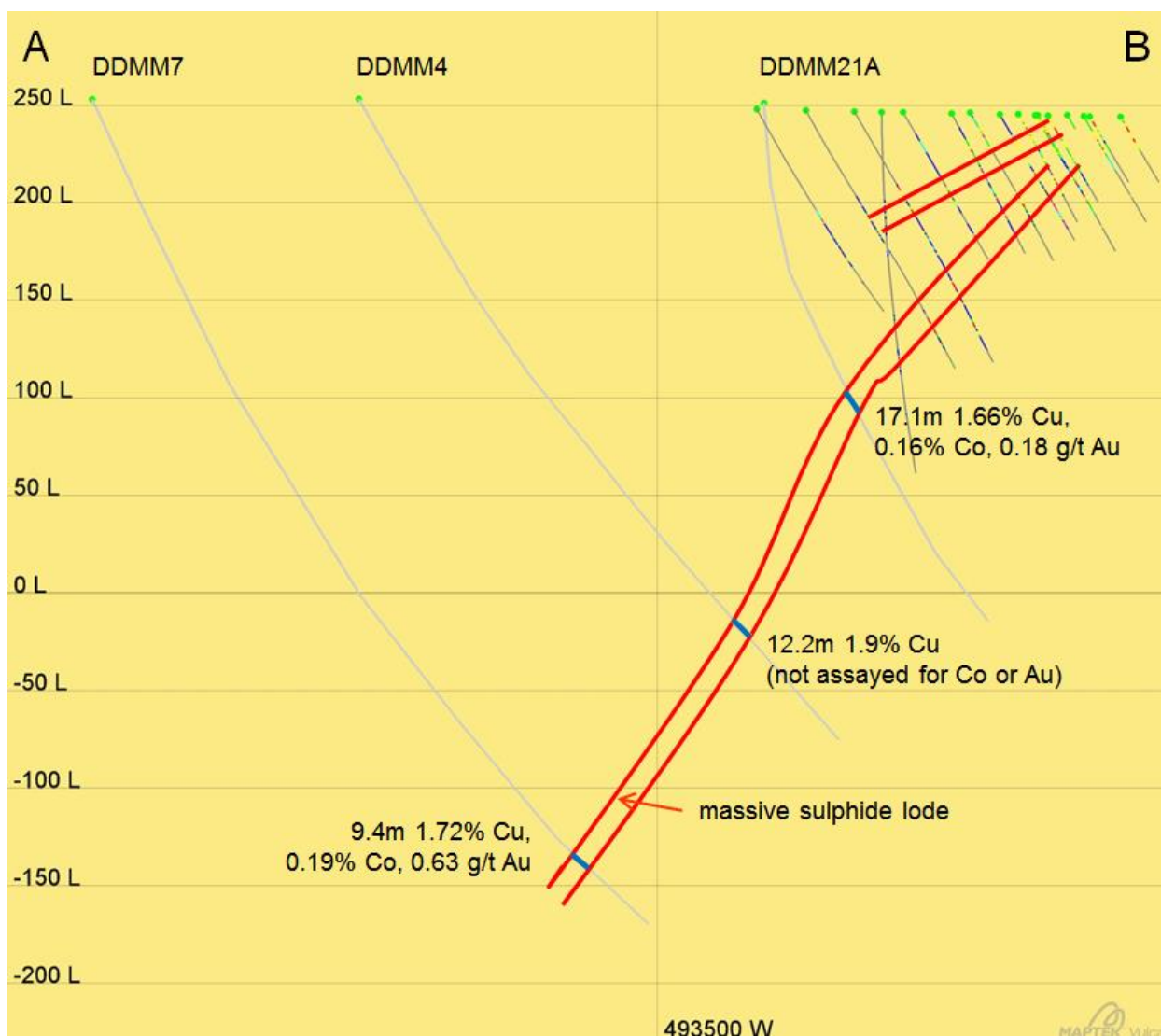


Table 4 Drillhole data for MEPL holes shown on Figure 1

Hole_ID	AMG E	AMG N	RL	Azimuth	Dip	Depth
DDMM3	493345	6431358	250	110	-60	420.3
DDMM4	493345	6431197	253	110	-60	425.2
DDMM6	493245	6430910	253	110	-60	410.3
DDMM7	493215	6431242	253	110	-65	522.4
DDMM8	492914	6431347	248	110	-78	824.5
DDMM15D1	492827	6430996	252	122	-81	731.5
DDMM21A	493552	6431170	251	124	-85	303.6
DDMM25	493048	6431059	252	124	-85	590.1
DDMM27A	493124	6431143	252	124	-80	595

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 Persons Statement

The information in this announcement that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves 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 and is employed by the Company on a consulting contract. 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. This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported

APPENDIX 1: TABLE 1 OF THE 2012 EDITION OF THE JORC CODE

The table below is a description of the assessment and reporting criteria for the resampling of drill core from five diamond holes, drilled by MEPL at Mutooroo in the 1960s, which are stored at the SA Drill Core Reference Library in Adelaide, in accordance with Table 1 of The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves.

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	- All drill core was cut using a diamond saw. Samples of quarter core were collected. - Sample intervals ranged from 0.31m to 1.81m depending on the geology and core recovery. - Measures taken to ensure sample representivity included cross checking the old logs against actual core which showed that there is good correlation between the old logs and recent observations of remaining drill core. - All samples were collected into pre-numbered calico bags and packed into polyweave bags for transport by Havilah staff to the ALS assay lab in Adelaide.
Drilling techniques	Diamond core sizes ranged from BQ (37mm) to NQ (48mm).
Drill sample recovery	- Original core recovery within mineralisation is reported to have been good, based on drill log comments, with losses only documented in unmineralised mica schist zones. - Core recovery for the intervals sampled in this report was calculated based on the remaining available core and ranged from 53% to 100% for individual sample intervals averaging 68% for all intervals sampled.
Logging	Sulphide rich intervals of these old MEPL holes, that were included in Havilah's 2010 Inferred resource, were selected based on the original MEPL logs and were cross checked with the available drill core. Each sulphide mineralised interval was logged by experienced geologists to record lithology, sulphide mineralisation type and intensity and other features of interest. The old drill logs have been re coded and entered into Havilah's drill database.
Sub-sampling techniques and sample preparation	- Quarter core samples were collected as detailed above. - At the ALS laboratory the samples were crushed in a jaw crusher to a nominal 6mm (method CRU-21) from which a 3kg split was obtained using a riffle splitter. The split was pulverized in an LM5 to 85% passing 75 microns (method PUL-23). The pulps are stored in paper bags.
Quality of assay data and laboratory tests	- The samples were assayed by ALS in Adelaide. Samples were assayed for Au by 50g fire assay (Au-AA26) & base metals by 4 acid digest with ICP AES finish (ME-OG62). - ALS insert a range of blanks and standards into each batch and no data quality issues of significance were identified.
Verification of drilling sampling and assaying	- Assay results received compared well to visual estimates of sulphide mineralisation and to the existing MEPL copper assays conducted in the 1960s. - Comparison of "new" versus "old" copper assays showed local variations in grade per intersection of $\pm 14 - 28\%$ but when all intersections are averaged, the difference was reduced to 5%.
Location of drillholes	- All of the MEPL collars referred to in this report have been previously located on the ground and surveyed using an Omnistar DGPS with decimeter accuracy by Havilah personnel. - MEPL holes were surveyed using a combination of acid etch and tropari methods. Distance between effective surveys averaged 56m with some surveys excluded due to excessive dip or azimuth variations (i.e. erroneous readings).

Criteria	Commentary
Data spacing and distribution	- MEPL holes were drilled at approximately right angles to the lodes and were generally spaced at 150m intervals targeting mineralisation between 150m and 560m below surface. - The intersection angle of most holes varied between 70 and 90 degrees depending on hole deviations.
Orientation of data in relation to geological structure	- The intersection angle of most holes varied between 70 and 90 degrees depending on hole deviations. - At this stage, no material sampling bias is known to have been introduced by the drilling direction.
Sample security	- All samples were collected by Havilah personnel and placed in pre- numbered calico bags which were placed in polyweave bags which were then sealed with cable ties. The samples were transported to the ALS assay lab by Havilah personnel. - There is minimal opportunity for systematic tampering with the samples as they are not out of the control of Havilah 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, reviews	Ongoing internal auditing of sampling techniques and assay data has not revealed any material issues.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	Commentary
Mineral tenement and land tenure status	The Mutooroo deposit lies within current Mineral Claims MC3565 and MC3566 held by Mutooroo Metals Pty Ltd, a 100% Havilah Resources Limited owned subsidiary within Exploration Licence EL5753 held 100% by Havilah Resources Limited.
Exploration done by other parties	- Most exploration of significance, in this announcement, was undertaken by MEPL who drilled 29 deep diamond holes at Mutooroo in the 1960s targeting copper resources. - All previous exploration data has been integrated into Havilah's databases.
Geology	- The Mutooroo copper-cobalt mineralisation occurs as a series of an echelon, locally structurally remobilised, sulphide rich breccia zones/lodes developed within a locally altered shear/fracture zone largely confined to an amphibolite body. The amphibolite body/sill is flanked by a high grade deformed felsic gneiss and schist package. - The mineralisation trends NNE and dips to the west at approx 45°. - The upper 30-40m is oxidised and consists of iron oxides and quartz fragments with local secondary copper minerals including atacamite, chrysocolla, malachite and cuprite. - A variably developed secondary/supergene sulphide zone occurs below the base of oxidation and extends down along the footwall and hanging contacts of most lodes. Secondary vuggy/powdery pyrite after pyrrhotite occurs along with chalcocite, bornite/covellite and remnant chalcopyrite. Secondary sulphides have been intersected up to 250m below surface with the thicker lodes having a selvage of secondary sulphides around a core of primary sulphides while thinner lodes are commonly completely replaced by secondary sulphides. - Primary sulphides are dominated by pyrrhotite with lesser pyrite and chalcopyrite. Breccia fragments include quartz and a range of variably altered wall rock fragments. Primary pyrrhotite dominant mineralisation has been intersected from 35m vertical depth. - Sulphide lodes have been interpreted generally using a minimum 10% logged sulphide content. Most lode contacts are relatively sharp with generally only minor disseminated sulphides occurring outside the lode margins.

Criteria	Commentary
	Six lodes with good continuity from section to section were modelled and used in the resource estimation. Other discontinuous or crosscutting sulphide zones have not been included in the resource at this stage.
Drill hole Information	- Mines Exploration (MEPL) drilled 29 diamond drillholes totaling approximately 14,400m in the 1960s. Nine of these holes were used to define the deeper, inferred part of the 2010 resource. - There is good general correlation of the geology and assay data between these earlier drillholes and some nearby Havilah drillholes although only the higher sulphide intervals were sampled by MEPL and assayed for Cu with only limited local Au analyses.
Data aggregation methods	Weighted averages are used for intersection calculations.
Relationship between mineralisation widths and intercept lengths	Down-hole lengths are reported. Drillholes were oriented to intersect mineralisation as close as possible to right angles.
Diagrams	Refer to figures in the accompanying text.
Balanced reporting	All results are reported.
Other substantive exploration data	- All relevant data is reported. - The assays reported here and previous assays from Mutooroo have not identified any deleterious elements.
Further work	- An upgraded resource estimation may be calculated using this new drill data. - Additional infill drilling may be carried out in the future to upgrade the Inferred Resource to Indicated and Measured Resources and also to explore for strike and depth extensions outside of the current resource envelopes.