

21 June 2018

High Cobalt Recoveries for Mutooroo in Cobalt Blue Testwork

HIGHLIGHTS

- **88% of the cobalt in the Mutooroo sulphide ore recovered to leach solution in initial COB test results.**
- **Demonstrates the potential wider applicability of COB's proprietary cobalt recovery process to treatment of massive sulphide type ores in the Mutooroo Cobalt District.**
- **Opens up future new co-operation possibilities between Havilah and COB.**

Havilah Resources Limited (Havilah) is pleased to report that Cobalt Blue Holdings Limited (**ASX:COB**) has provided Havilah with the final results of its cobalt recovery testing of a 13 kg sample of Mutooroo massive sulphide ore, pursuant to the Memorandum of Understanding (**MOU**) signed in February 2018.

Details of the ore samples provided to COB are as summarized in the following table:

Analysis of Mutooroo Ore			
Element	%	Mineral	%
Cu	2.16	Albite	3.0
Fe	47.3	Biotite	0.9
Co	0.20	Chalcopyrite	7.6
S	31.5	Chlorite	0.4
SiO ₂	14	Hornblende/amphibole	0.9
Ni	0.04	Magnetite	0.6
Ca	0.24	Pyrite	2.4
		Pyrrhotite	70.9
		Quartz	13.3

Applying COB's proprietary cobalt recovery processing methodology, **the overall recovery of cobalt in the ore to leach solution was approximately 88%**. This is very similar to the results achieved by COB on its Thackaringa cobaltian pyrite ore.

Initially the Mutooroo ore was split into a magnetic and non-magnetic fraction as summarized in the schematic testing flow sheet below. The magnetic pyrrhotite fraction was treated directly in COB's leach circuit with 94% of the contained cobalt being leached. The non-magnetic pyrite fraction was calcined prior to leaching, using the same process as for COB's Thackaringa cobaltian pyrite ore with 93% of the cobalt in the calcine reporting to solution.

The test work, at a high level, supports a COB style flowsheet that requires an additional magnetic separation step in order to process the Mutooroo pyrrhotite-pyrite sulphide ore.



The copper in the sulphide ore was recovered as a separate clean copper concentrate (copper grade of ~29%) and the preliminary testwork showed that only 2.7% of the cobalt reports to the copper concentrate. Recoveries of copper can be optimized by using finer milling sizes of the ore prior to magnetic separation of the pyrrhotite fraction, as determined by previous Havilah testwork. No attempt to recover gold was undertaken during the current test program.

The parties are pleased with the success of the preliminary cobalt processing tests, which shows that Mutooroo massive sulphide ore is potentially amenable to COB's proprietary cobalt processing technology. Additional, more comprehensive, testwork is required on Mutooroo ore samples in order to confirm details of the process and its economic viability.

Accordingly, COB and Havilah have agreed in principle to extend the co-operation as contemplated under the MOU recognising the geographical proximity and similar cobaltian pyrite ore types. The timing and form of the future co-operation depends to some extent, on the respective work programs and priorities of both parties in coming months.

Commenting on the cobalt recovery initiative with COB, Havilah CEO, Mr Walter Richards said: "The successful application of COB's cobalt recovery process is a positive outcome and an important first step from our MOU co-operation initiative.

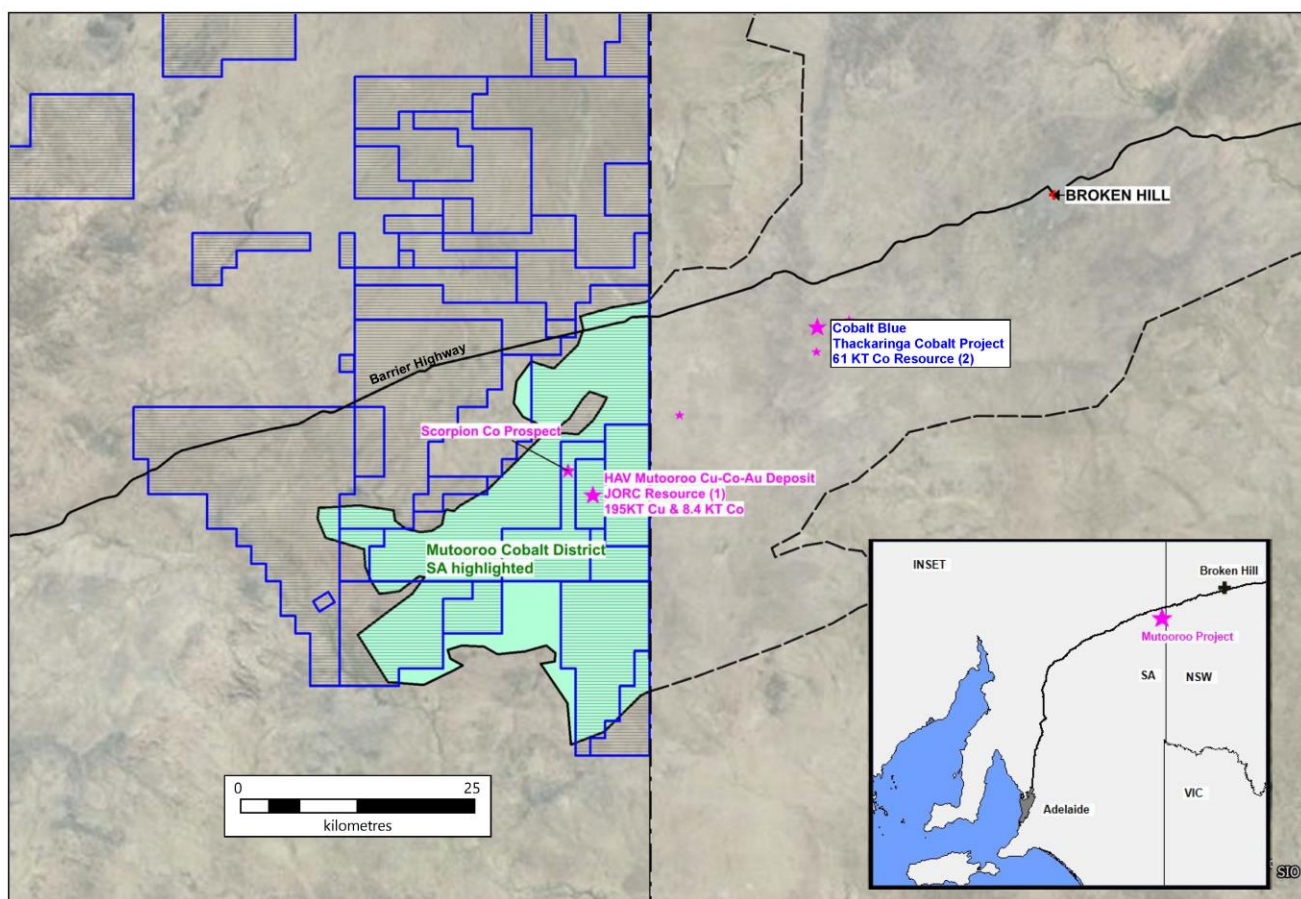
"We have agreed with COB to investigate, at the appropriate time, how we can jointly capitalise on these results for our mutual benefit going forward," he said.

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 project

The Mutooroo copper-cobalt 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 deposit. Havilah's immediate objective at Mutooroo is to complete the pre-feasibility Study and required permitting for an open pit mining operation to 130 metres depth. This will include sulphide ore throughput in a conventional grinding and flotation circuit that will recover high quality copper concentrate. The best method of recovering cobalt is being investigated and the testing results from COB reported here is an important positive step in this process.



Regional view of the Mutooroo Cobalt District highlighting Havilah tenements and cobalt resources.