MOUNT ISA MINES LIMITED

TECHNICAL REPORT

No. 8.30

TITLE: REDBANK EXPLORATORY DRILLING

ISSUING DEPARTMENT: GEOLOGICAL

AUTHOR: H. DE VRIES

INVESTIGATIONS CONDUCTED BY: R.BERESFORD and T.H.HANEY

SUBMITTED BY: S.R.CARTER

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AUTHOR H. de Vries

DATE February, 1959

SUMMARY

OBJECT: To assess the economic significance of the Redbank copper deposits.

PRECIS: The Redbank and Azurite deposits were discovered at the turn of the century, and have been worked intermittently on a small scale. Total export from the district since production began in 1910 is under 1,000 tons of ore at an average grade of 33% copper.

The core diamond drilling carried out by this Company during October-November, 1958 represents the first attempt to search for possible extensions of the known deposits in depth.

CONCLUSIONS: Eight holes were drilled for a total footage of 1,011 feet.

Only low grade copper mineralisation was intersected.

The drilling results show that the Redbank - Azurite mines are not of any economic interest to this Company.

RECOMMENDATIONS: On the present information available, expenditure on additional drilling is not warranted.

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DISTRIBUTION LIST

1. DEPUTY GENERAL MANAGER

2. CHIEF GEOLOGIST

3. FILE (GEOLOGICAL OFFICE) — TO MR MASTERTON

4. SPARE

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INTRODUCTION.

Located near Wollogorang Station in the Northern Territory, and about one hundred and twenty miles W.N.W. of Burketown in Queensland, the Redbank and Azurite mines are the more important of a group of copper deposits.

During 1940, R. Blanchard, then Chief Geologist for Mount Isa Mines Limited, collated all available information on these deposits, and prepared a comprehensive report.

Other investigations of the district are published in Australian Geological and Geophysical Survey of Northern Australia reports, Commonwealth Scientific Industrial Research reports, and a report by the Zinc Corporation Limited; all during 1939-40, and again in a Consolidated Zinc Pty.Ltd. report of 1947.

Towards the end of 1956, R. Beresford, Senior Geologist, Outside Exploration, Mount Isa Mines Limited, visited the Wollogorang district. His inspection of the Redbank mine led to a free option agreement with the owner, Mr. Masterton. Outright purchase price, if option was exercised, was to be £50,000. The present option agreement expires on the 29th November, 1959.

As a preliminary test, eight core holes, for a total of 1,100 feet, were proposed.

To protect the area surrounding the lease, an Authority to Prospect of ten square miles, was applied for. The Authority to Prospect No. 655, Northern Territory, was granted on the 30th July, 1958 for a period of one year.

WORK PERFORMED

Core drilling was done with a Mindrill F20 trailer mounted diamond drill machine (also known as the E1000 machine.) Drilling commenced on the 1st October, 1958 and was completed on the 13th November, 1958.

A summary of the core logged and assay values follows. Hole positions are indicated on plan No. D153 attached to this report.

Hole No.	From feet	To feet	Recovery feet	Geological Interpretation	Assays From-To	%Cu
1	0	12	3.75	Decomposed volcanics with little iron staining	0 - 33 33 - 97	0.10% 0.50%
	12	54	37.0	Kaolinized agglomerate, watercoursed, some copper staining.		
	54	86	28.0	Compact pink coloured volcanics, with specks of glauconite and few patches of copper mineralisation, consisting mainly of chalcocite and malachite.		
	86	97	3.0	Some chalcopyrite, chalcocite and secondary pyrite in jointing of pinkish coloured volcanics.		
2	0	30	20.5	Puggy kaolin.	0 - 30	0.07%
	30	35	5.0	Heavily leached glauconitic tuff with weak copper mineralisation.	30 - 35 35 - 47 47 - 53	1.20% 0.47% 3.25%
	35	47	11.5	Partly leached agglomerate with patches of copper mineralisation and glauconite	53 - 62 62 - 100.5	0.40% .05%
	47	53	5.5	Highly leached and watercoursed agglomerate with copper mineralisation in cracks.		
	53	100.5	48.25	Mainly glauconitic agglomerate with short sections of tuff. Slight copper mineralisation visible in vughs.		
3	0	42.5	30.0	Kaolinised agglomerates with occasional evidence of leaching.	0 - 143 143 - 151.5	0.05% Not sampled
	42.5	90	40.75	Crushed agglomerate with calcite veinlets.		

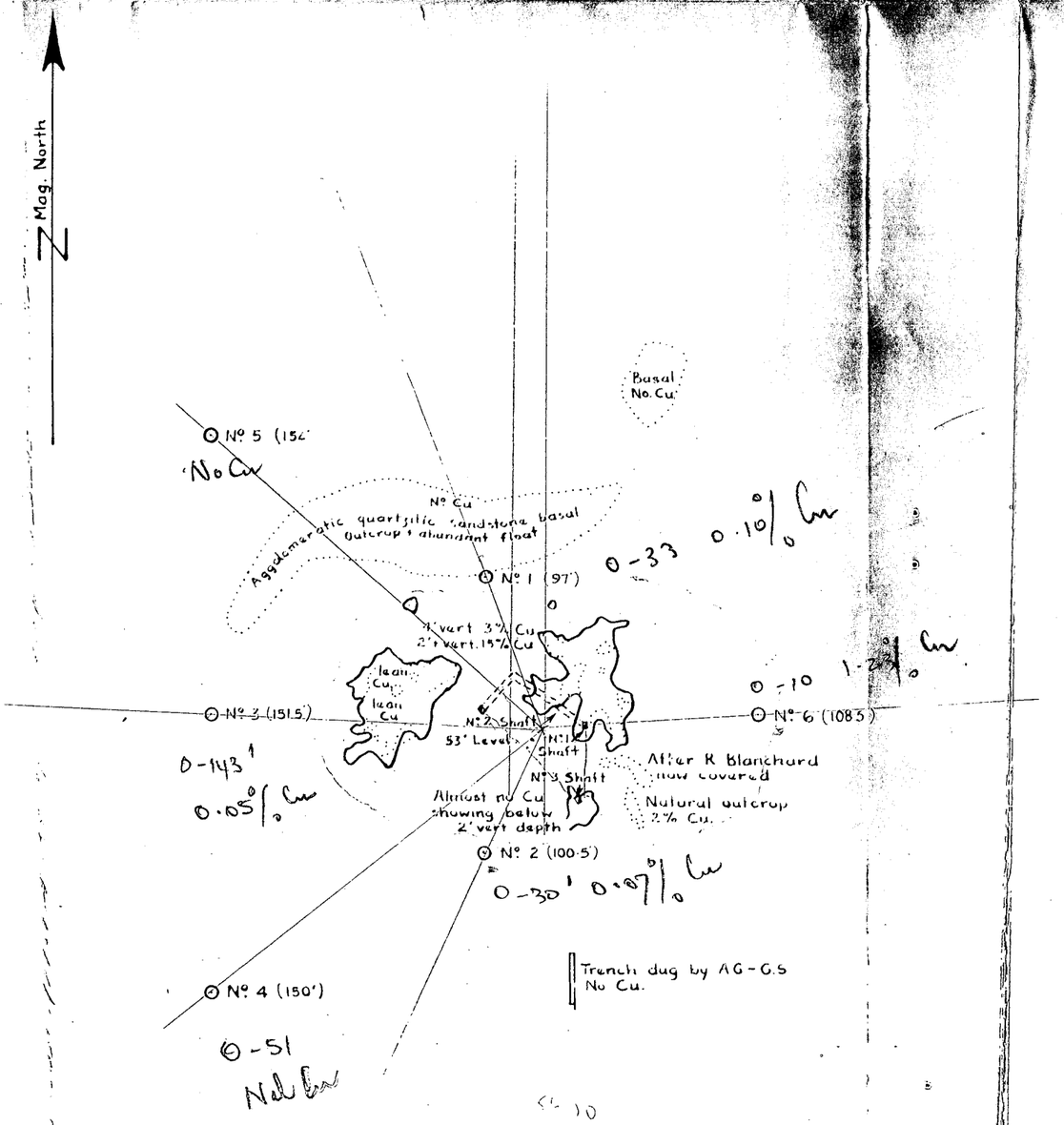
Hole No.	From feet	To feet	Recovery feet	Geological Interpretation	Assays From-To	Assays Cu%
3 (Cont.)	90	113	22.5	Sandy textured volcanics, with blebs of calcite.		
	113	130	17.0	Pinkish sandy volcanics. Pinkish rhyolite (?)		
4	0	25.5	15.5	Decomposed kaolinized agglomerate	0 - 51 51 - 140	Nil Not sampled
	25.5	51	22.0	Sandy agglomerate with few veinlets of calcite.	140 - 150	Nil
	51	75	24.0	Banded basalt with flow structures and agglomerate with fracture fill of celadonite and calcite.		
	75	97	22.0	Basalt with calcite filled fractures.		
	97	150	47.5	Mainly grey coloured volcanics with calcite stringers and minor specks of chalcopyrite.		
5	0	94	71.5	Agglomerate, few calcite veins and small bands of glauconite.	Not assayed - core barren	
	94	152	58	Fine grained volcanics with occasional specks of glauconite.		
6	0	10	4.75	Crushed and leached volcanics, Cu stained and glauconitic.	0 - 10 10 - 108.5	1.23% 0.12%
	10	73	61.25	Mainly buff coloured volcanics with fine vesicular textures.		
	73	108.5	33.0	Agglomerate, slightly copper stained and some secondary pyrite.		
7	0	67	54.5	Decomposed agglomerate, mainly grey sandy tuff, slightly kaolinised and glauconitic.	0 - 89 89 - 104 104 - 112 112 - 126.5	Nil 0.05% 0.10% Not sampled

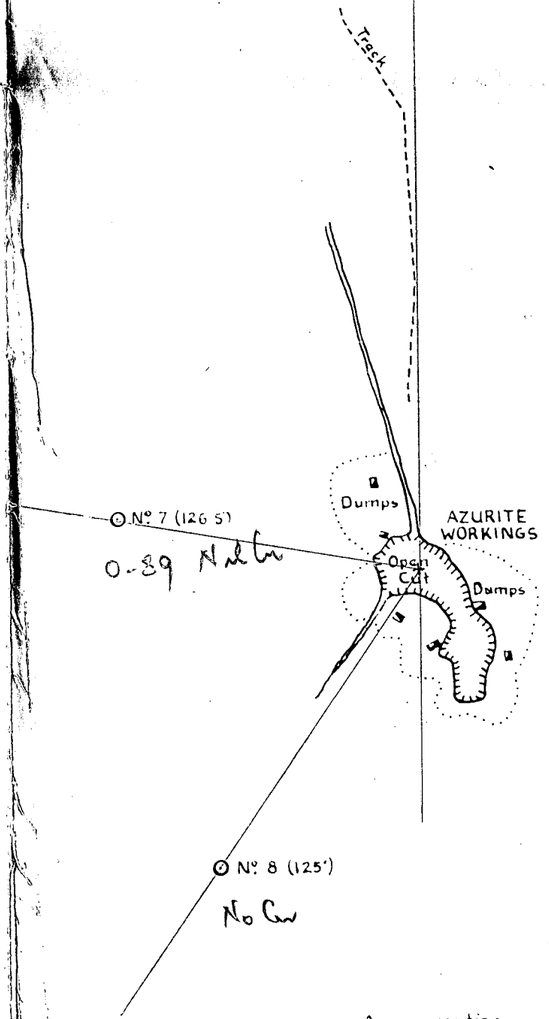
Hole No.	From feet	To feet	Recovery feet	Geological Interpretation	Assays * From-To	Cu%
8	0	125	99.5	Pinkish and grey volcanics with some glauconite	Not assayed - core barren.	

* No reduction factor applied for poor core recovery.

EXPENDITURE SUMMARY

	£
Wages, Salaries and Overhead	478
General Stores	489
Provisions	27
Transport	120
Bit Shells	1545
Core Barrel Assemblages ..	257
Freight	463
Miscellaneous	12
Total:	£3,391





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MT. ISA MINES LTD. GEOLOGICAL DEPT.

REDBANK COPPER MINES
SHOWING POSITIONS OF
DIAMOND DRILL HOLES

SCALE:	DATE:	TRACING N°:
1" = 100'		190 RGS