

800931

MOLYBDENE EXPLORATIONS LTD. (N.P.L.)

MINERAL HILL PROJECT

SUMMARY REPORT
DIAMOND DRILLING PROGRAMME
BRECCIA AND ALASKITE ZONES

PREPARED BY: R. McMICHAEL

MANEX MINING LTD (N.P.L.)

JUNE, 1967

TABLE OF CONTENTS

	PAGE
SUMMARY AND RECOMMENDATIONS -----	1
INTRODUCTION -----	2
GEOLOGY -----	4

ILLUSTRATIONS

- FIGURE 1 -- CROSECTIONS DDH 21-26
- FIGURE 2 -- DETAILED DIAMOND DRILL LOGS
- FIGURE 3 -- LOCATION MAP DDH 21-24
- FIGURE 4 -- LOCATION MAP DDH 25 AND 26

- 1 -
SUMMARY AND RECOMMENDATIONS

It is the opinion of the writer that it would be uneconomic to continue testing for the tetrahedrite vein by means of diamond drilling. Further testing could be done by detailed geochemical sampling on a grid with 25 foot centres. This would give the necessary coverage to delimit any further tetrahedrite mineralization, however, the overburden in this area is approximately 44 feet deep. Overburden drilling in this area would be helpful in future testing of molybdenite mineralization in the quartz-breccia zone.

Diamond drill hole 25 did prove that the alaskite does extend to the north of the previously determined alaskite. Economic grades of molybdenite were not present. Therefore, I feel that it is not necessary to continue drilling for the alaskite in this area.

Drill hole 26 produced the most interesting results. This hole proved the existence of a series of quartz-veins with associated molybdenite cutting across the hole for a distance of 174 feet. Structural trends in this area appear to be ^{E. to N.E.} ~~south~~ easterly. It is the opinion of the writer that this area warrants further diamond drilling on a prearranged pattern, or possibly detailed overburden drilling. ??

INTRODUCTION

May 17, 1967 Canadian Longyear crews began setting up camp on the Mineral Hill property to commence drilling, with BQ wireling equipment, for the tetrahedrite vein intersected in DDH 16. Drilling was completed June 10. The angles of intersection (between zero and ninety degrees) of the tetrahedrite vein with DDH 16 were projected to the surface and a drill programme laid out to test various possible attitudes of the vein. Diamond drill holes 21 to 24 inclusive were drilled to delimit the vein.

Drill hole 25 was spotted between the alaskite and breccia zones to test a possible northerly extension of the alaskite body. To obtain maximum coverage this hole was drilled at minus 40 degrees in an easterly direction.

Previous drilling (DDH'S 1,3, and 3A) in the alaskite zone indicated the presence of an easterly trending set of mineralized fractures and quartz veins. Drill hole 26 was collared in the alaskite and drilled north-westerly to crosscut this fracture system and determine the possible values.

This fairly conclusively established prelim. (May 1965) inference of N.E. 92-moly vein trends.

RESUME OF DRILLING PROGRAMME

HOLE	DEPTH FEET	CASING & LOCATION REAMING NEW GRID	<i>Inclination</i>	BEARING	RECOVERY %	
			ANGLE MINUS DEGREES			
21	265	40	320S-540E	60	Due W	88
22	276	44	285S-490E	45	Due E	84
23	200	47	350S-570E	45	Due N	88

RESUME OF DRILLING PROGRAMME

HOLE	DEPTH FEET	CASING & REAMING	LOCATION NEW GRID	ANGLE MINUS DEGREES	BEARING	RECOVERY %
24	200	42	350S-570E	45	Due S	83
25	500	22	1250S-975W	40	Due E	96
26	200	11	3100S-1580W	40	N45W	93

Total footage 1,641 feet

GEOLOGY

The geology of the quartz-breccia and alaskite zone have been covered in reports by W.M. Sharp, P.Eng. 1966 and M.J. Beley, Geologist 1966 and does not warrant additional discussion.

The tetrahedrite vein intersected in DDH 16 attained a width of approximately 2.5 feet assaying 135.6 ounces per ton silver and 7.23 per cent copper. Drill holes 21 to 24 inclusive were collared to test the lateral and vertical extensions of the structure controlling the tetrahedrite mineralization. Scattered blebs of tetrahedrite were observed in DDH 22 from 200 to 220 feet. This was the only section of tetrahedrite mineralization encountered in the drilling near DDH 16 indicating that the metallization was pod or lens-like with no apparent continuity.

A number of small faults or shear zones were intersected in the area but these were minor and would not likely have resulted in any major displacements. No evidence of major faulting was observed in the core.

A mafic dyke was encountered in DDH 24 from 84 to 88 feet. This was a very fine grained black to dark purple rock with large quartz and clacite phenocrysts. It resembled the mafic dyke encountered in DDH 16 from 453 to 462 feet. This dyke makes an angle of 45 degrees

with the core in DDH 24 and when projected to depth it intersects DDH 16 at 450 feet. This would substantiate the hypothesis that no major fault is present in the immediate area displacing the tetrahedrite vein.

Jointing in the quartz-breccia zone is fairly prominent but frequency is variable. The major joints intersect the axis of the core at 60 to 90 degrees in DDH 21, 23, and 24; and 10 to 45 degrees in DDH 22. When this data is correlated with known surface data, it indicates a north easterly trending feature. This substantiates previous interpretations made by the consultant, Mr. W.M. Sharp.

Molybdenite mineralization in the quartz-breccia zone was poor. Finely disseminated molybdenite occurring along joints and small fractures. Disseminated molybdenite is also present in the hornfels host rock, but is confined to areas immediately adjacent to quartz veins and small quartz stringers. These quartz veins and stringers occur irregularly in the core and do not demonstrate any potentially economic interest.

Diamond drill hole 25 proved the extension of the alaskite zone to the north. This zone was 65 feet wide (from 272 to 337 feet) and thinning to the north with a large fault representing the alaskite-hornfels contact. The rock at this contact is intensely bleached and altered

to kaolin, sericite, limonite and associated minerals.

Mineralization in the alaskite is very finely disseminated. Average values for the 65 feet of core (272 to 337) are as follows:

0.03% Cu 0.01% MoS₂

Again mineralization in the hornfels was minor with molybdenite occurring in the areas immediately adjacent to the quartz veins.

The best results of the programme were obtained in DDH 26. Good mineralization was encountered in the alaskite sections of the hole. The alaskite was encountered at 29 to 91.5 feet, 159 to 166 feet, and 185 to 200 feet, however poor mineralization was noted from 166 to ^{185(?)}200 feet.

Mineralization from 11 to 166 feet was again highly disseminated with occasional sporadically placed hairline veinlets of molybdenite.

Average grades for the alaskite zones are as follows:

<u>WIDTH</u>	% MoS ₂	%Cu
29 to 91.5	0.183	0.04
159 to 166	0.05	0.06
185 to 200	0.07	0.05

A continuous section 110 feet long (20 to 130 feet) averaged 0.153 MoS₂ and 0.055% Cu. Copper mineralization in DDH 26 was negligible. Trace amounts of chalcopyrite occurred from 24 to 25 feet, and 130 to 140 feet. These were the

only occurrences noted and do not warrant any further mention at this time.

This hole intersected a series of alternating alaskite and hornfels units. This indicates that the alaskite-hornfels contact is irregular. The contact in each case is sharp with very little alteration due to intrusion of the magma. The exact limit of the alaskite body is not critical at this time and additional drilling to this end is not warranted.

Respectfully submitted,

Roy McMichael
Roy McMichael