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REPORT ON THE MICHAELY PROPERTY SALMO, B. C.

INTRODUCTION

The Michaely property is a lead-zinc deposit known and reported on as the Red Rock. It is situated on the north side of the Salmo River Valley, two miles from where this valley joins the Pend'Oreille. The deposit is one mile northwest of the Reeves MacDonald mine. It is twenty-seven miles by road from Trail and fifteen miles from the nearest railway station which is Waneta on the Great Northern Railway near the International boundary, due south of Trail. The deposit is described in memoir 172 of the Canadian Geological Survey by J. E. Walker and also in the Annual Report of the Minister of Mines of B.C. for 1936, Part E, by H. Sargent. The property is at an elevation of 3300 feet and is reached by a fairly good motor road, now slightly out of repair. The climate is mild and the snowfall light; when the property was examined on April 1st, 1942, there was no snow or frost. There is a good stand of fir and cedar on the property.

There is no equipment on the property except about 800 feet of rails. There is one small cabin but no water supply. As supply of water for domestic purposes could be got from McCormick creek, three-quarters of a mile south of the workings. Water for milling purposes would have to be got from the Salmo River which is about three-quarters of a mile south of and more than one thousand feet lower than the mine workings.

GEOLOGY

The deposit consists of a lense of fairly high grade lead-zinc-silver ore which lies in a fault having a quartzite footwall and limestone hanging wall. The ore spreads out into the limestone for short distances from the fault. The fault, as well as the limestone beds strikes northeast. The limestone beds dip 60 degrees to the southeast, while the fault dips about 75 degrees in the same direction. Judging by the Figure 2, this dip must flatten somewhat with depth.

The ore body has been exposed by surface stripping and by two tunnels. A third tunnel at a lower level did not reach the ore. About 100 tons of ore have been stoped from No. 2 Tunnel.

The general shape and size of this lense of ore are shown in Figure 1 and 2. The length of the lense at the outcrop is 80 feet. Towards the south the lense is covered by over-burden but at its north end it ends abruptly against a transverse fault. Northeast of this transverse fault small patches of mineralization have been found, a small adit has been driven and a small shaft sunk. Very little mineralization is visible in these workings at the present time but it is reported that some high grade ore was taken out of the shaft. This shaft appears to be on a small vein of ore which branches to the north from the main lense, as shown in Figure 1. Nowhere north of the transverse fault has the ore fault been discovered.

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### GEOLOGY (Continued)

The depth of this lense is shown by No. 2 adit, and by the small underhand stope below this adit, to be at least 85 feet. The ore in the back of the stope consists of two small lenses, respectively 1 foot and six inches wide, but the ground is heavily faulted and it seems probable that the ore extends continuously between the back of the stope and the outcrop. From measurements in the stope and on the outcrop the thickness of this ore would seem to be about 4.1 feet. From these measurements it would appear that there are about 1,600 tons of ore in this lense. A fair idea of the values in this ore may be got from, (1) the average value of 100 tons of ore shipped to the smelter; (2) samples taken from two dumps at the mouth of No. 2 adit; (3) samples taken from ore exposed in Nos. 1 and 2 adits and (4) samples taken from the surface outcrop, all of which are listed in Table 1. These show about 8 ounces of silver, 18% lead and 15% zinc.

### ORE POSSIBILITIES

The surface outcrop seems to be limited on the northeast by a transverse fault. In the drifts in No. 2 adit the ore does not seem to have any greater length than that shown on the surface. However the ground in these drifts is very badly faulted and it is possible that further drifting and crosscutting might result in extending the length of this ore body. The transverse fault which terminated the ore on the surface could not be identified in the adit. The depth of the ore body has not been tested below the small underhand stope in No. 2 adit. This stope was not accessible at the time of the examination on account of water. No. 3 adit aimed to cut the ore body at about 120 feet lower than No. 2 adit. My compass survey shows that No. 3 adit was driven far enough to intersect the ore-fault but there is no sign of any faulting in this adit and only a small streak of zinc blende was found. The ore-fault is quite strong and might well be expected to extend to the depth of this tunnel. It may have steepened below adit 2 and if so it would lie some distance beyond the present face. If the fault were found it is probable it would contain ore.

### CONCLUSIONS

The deposit is very well situated with respect to transportation and markets. It is only 27 miles from the Trail smelter and only fifteen miles from the Great Northern Railway over which it would be a short haul to the lead smelter at Kellogg, Idaho. The only difficulty arising out of the location is the lack of water for milling purposes. This will necessitate either pumping water up from Salmo river or the building of the mill near the river and the constructing of an aerial tram to connect it with the mine. The ore is of good grade and would yield a profit if enough could be found to supply a mill of 200 or more tons daily capacity. The ore at present indicated is too small in amount to warrant a mill but it occurs in a structure of considerable strength which might be expected to extend beyond the present known limits. Therefore further testing of the property is warranted.

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CONCLUSIONS (continued)

The following work could be done at a very small cost and without the installation of a compressor. (1) Drive a crosscut 15 feet north and one 15 feet south from the west end of the drift in No. 2 adit. This could be done by hand for about \$400.00. (2) Drill five holes from near the portal of No. 2 adit as indicated on the plan. These will amount to about 600 feet and this should be done for about \$1200.00. Owing to the faulted nature of the ore zone it is probable that the ore would not core well and therefore, it would be necessary to preserve and assay sample from the drills sludge.

Any further work would depend on the results obtained from the above work.

Respectfully yours,

"V. Dolmage"

T A B L E 1.

	<u>Width</u>	<u>Gold</u>	<u>Silver Oz.</u>	<u>Lead%</u>	<u>Zinc %</u>
Average values of 95 tons ore shipped .....			11.5	22.6	18.8
Average values of outcrop samples .....	4.1	tr.	9.6	20.7	14.3
Average value of dump samples .....			8.3	15.7	17.8
Average values of samples from Adit #2 .....	4.1		7.2	25.3	17.1
Average values of samples from Adit #1 .....	3.1	tr. 0.03	3.1	7.4	7.4

# Samples 2032 and 2033 were averaged with 2.58 of barren waste

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