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REPORT

on

THE ESTHER CLAIM GROUP

MISSEZULA LAKE AREA

SIMILKAMEEN MINING DIVISION

for

DELKIRK MINING LTD.

by

D.W. BURNS, B.Sc., P.Eng.

Vancouver, B.C. November 24th, 1969.

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11 12 13 120° 14

SCALE: 1" = 30 MILES

INTRODUCTION

During November of 1969 the author examined the showings and the work in progress on the Esther claim group. He was accompanied by Mr. Colin Campbell, B.Sc., geologist on the property for Delkirk Mining Ltd.

The following report is compiled from information obtained by the writer during his examination of the property, from Government publications, from a private report and maps by Mr. R.W. Phendler, P.Eng., and from discussions with Mr. Phendler.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The Esther claim group is approximately 20 miles north of Princeton, B.C., in the Missezula Lake area. The property is readily accessible by a good ranch road up the Summers Creek valley.

The property is underlain by volcanic rocks of the Nicola group. The main showing found to date occurs within a shear zone in the volcanics. The shear zone is of unknown length but a mineralized zone some 80 feet in length has been developed within the shear by a series of three trenches.

The principal value is in copper and it occurs as chalcocite in lenses and veinlets within the shear.

Initial sampling of the trenches indicates widths and values of possible economic value providing the mineralization can be extended.

The property warrants exploration and it is recommended that a diamond drilling program be carried out along the strike of the known shear zone. In addition, anomalous areas indicated by soil sampling should be trenched by tractor.

The property has the advantage of being readily accessible and, for a very modest mining budget, it could be quickly determined whether a major program is required.

It is estimated that the cost of a preliminary exploration program as outlined in this report would be $20,000.00.

LOCATION AND ACCESS

The property is situated near the south end of Missezula Lake in the Princeton area of British Columbia. The property is reached by taking the Princeton-Merritt highway four miles out of Princeton, then a good gravel road up the Summers Creek valley for approximately 16 miles. The main showings on the property are directly west of the W. Shropshire ranch at about 3000 feet elevation.

The topography is quite steep and the timber growth light.

PROPERTY AND OWNERSHIP

Thirty-one claims are owned jointly by E. Garrison, A. Broomfield and W. Shropshire of Princeton, B.C. The group is presently under option to Delkirk Mining Ltd. Title and ownership were not investigated by the writer.

HISTORY

The prospect was originally known as the Shamrock and in 1929 the property was mentioned in the B.C. Minister of Mines Report. The report stated that six open cuts explored a mineralized shear zone for 1500 feet. A shipment of ore was reported for that year that assayed 5.78% copper.

No further information is available on the property but it is known that diamond drilling was carried out a number of years ago. Two old drill set-ups were found and are noted on the geological map. The drill core is available in Princeton but the exact location of the holes and the assay results are presently not available.

GEOLOGY AND MINERALIZATION

The Princeton area has been prominent in past years because of the copper deposits of the Copper Mountain area. Presently the area is under investigation because of the high price of copper resulting in a re-assessment of large low-grade deposits and the smaller high-grade copper showings.

Copper deposits are found in two geologic settings within the area. The Copper Mountain deposit appears to be related to the contact of a complex intrusive body with steeply folded andesitic and basaltic breccias of the Nicola series. The second type, of which the Shamrock showing is an example, involves a shear zone within the Nicola volcanics and at some distance from any known intrusive body.

The Summers Creek valley, in the vicinity of the Esther group, is underlain by a reddish volcanic breccia, purplish coloured basalts, and andesites of the Nicola group.

The volcanics in the old Shamrock showing have been intersected with a shear zone that strikes N20°E and dips steeply northwest into the hill. This shear zone, according to old reports, has been traced 250 feet by six trenches but at present three of the more northerly trenches are caved. The more important mineralization shown in the three southerly trenches has a strike length of about 80 feet.

Mineralization occurs within the shear zone as lenses of fairly massive chalcocite or veinlets and disseminations of chalcocite and minor chalcopyrite within the sheared volcanics. Copper carbonates are prominent in the shear zone and give the showing a very striking appearance. Cross-fracturing is quite apparent, as shown by trench No. 1, where the junction of two mineralized shears has enlarged the mineralized zone to about 18 feet in width. The mineralization in this No. 1 trench is a very impressive showing.

Mr. R.W. Phendler, P.Eng., took 28 chip samples of the mineralized area and the writer had the assay plan during his examination.

Mr. Phendler's assay results are tabled to show the indicated values of the mineralization encountered on the property.

28 chip samples taken for Delkirk Mining Ltd.

by R.W. Phendler, P.Eng., were as follows:

Trench	Sample No.	Width	% Cu	Oz.Ag	Location	
#1	9273	5.0'	0.88	0.03	0-5.0'	East of face
1	9274	3.0	4.20	0.12	5.0'-8.0'	"
1	9275	5.0	2.80	0.10	8.0'-13.0'	"
1	9276	5.0	1.45	0.06	13.0'-18.0'	"
1	9277	5.0	0.04	0.01	18.0'-23.0'	"
1	9278	5.0	0.02	0.01	23.0'-28.0'	"
1	9279	5.0	0.02	0.01	28.0'-33.0'	"
1	9280	5.0	0.02	0.01	33.0'-38.0'	"
#2	9282	5.0'	0.05	0.03	0-5.0'	W. of tr. collar
2	9283	5.0'	0.01	0.01	5.0'-10.0'	"
2	9284	5.0	0.01	0.01	10.0'-15.0'	"
2	9285	5.0	0.26	0.01	15.0'-20.0'	"
2	9286	5.0	2.40	0.10	20.0'-25.0'	"
2	9287	5.0	0.25	0.01	25.0'-30.0'	
#3 south wall	9288	3.0'	0.05	0.01	3.0'-6.0'	"
3 "	9289	5.0	0.15	0.01	6.0'-11.0'	"
3 "	9290	1.5	4.20	0.20	11.0'-12.5'	"
3 "	9291	6.0	0.11	0.01	12.5'-18.5'	"
3 "	9292	1.0	2.50	0.13	18.5'-19.5'	"
3 "	9293	5.5	0.09	0.01	19.5'-25.0'	"
#3 north wall	9294	3.0'	0.44	0.03	3.0'-6.0'	
3 "	9295	5.0	1.60	0.06	6.0'-11.0'	"
3 "	9296	5.0	0.10	0.01	11.0'-16.0'	"
3 "	9297	4.0	0.04	0.01	16.0'-20.0'	"
3 "	9298	1.0	8.00	0.41	20.0'-21.0'	"
3 "	9299	5.0	0.08	0.01	21.0'-26.0'	"
3 "	9300	6.0	0.05	0.01	26.0'-32.0'	

RECOMMENDATIONS

It is recommended that a diamond drilling program be carried out on the Shamrock shear zone. The drilling should be planned to intersect the shear along its strike and at various depths. The drill set-ups would be collared down slope and drilled northwest to penetrate the shear in cross-section. It is recommended that the first drilling be below trench No. 1 to intersect the mineralization shown in that trench.

A drill program of 1500 feet should be budgeted for.

In addition, trenching with the tractor should continue on the anomalous areas indicated by soil sampling. It is also recommended that the tractor be used to locate the Shamrock shear along strike.

It is estimated that the preliminary program as outlined above would cost a minimum of $20,000.00. This sum would allow $15,000 for diamond drilling, $3,000 for supervision, engineering and sampling, and $2,000 for tractor operation.

Respectfully submitted,

D.W. Burns, B.Sc., P.Eng.

CERTIFICATE OF QUALIFICATIONS

I, David Burns, of Ste. 203, 5976 Tisdall Street, Vancouver, 13, B.C. DO HEREBY CERTIFY THAT:

1. I am a graduate geological engineer from the University of British Columbia.

2. I am and have been a member of the Professional Engineers Association of B.C. since 1950.

3. I have been engaged in senior positions in exploration, exploration development and production in mining operations for the past 23 years.

4. I have been on and examined the Esther claim group showings in the Missezula Lake area in the Similkameen Mining Division during November of 1969.

5. I have no interest, directly or indirectly, in the property or securities concerning the property.

D.W. Burns, B.Sc., P.Eng.

Vancouver, B.C.
November 24th, 1969.