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NORTHSTAR COPPER MINES, LTD.

PROGRESS REPORT #2

For the period July 11th to August 25th., 1967

by: Wm.H. White, P.Eng.

September 4th, 1967

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PROPERTY FILE

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For the period July 11th to August 25th., 1967

During this period an eight-man crew carried on active mineral exploration of claims held by the Company near Kaza Lake, which is some 25 miles north northeast of Takla Lake. The area of interest is a timbered mountain spur which ranges in elevation from 4000 feet at Kaza Lake to above timber-line at about 5200 feet. Except at the discovery showing, where rock is exposed in a landslide scar, the surface is mantled by thin but continuous overburden through which bedrock rarely protrudes. The scarcity of outcrops greatly hinders surface exploration and rapid property evaluation.

At the end of the period under review a geochemical survey had been completed, geological mapping was well advanced, three new mineral discoveries had been lightly trenched and a preliminary diamond drilling program initiated.

GEOCHEMICAL SURVEY

The geochemical survey, covering some 1600 acres, involved cutting 168,100 feet of base-lines and cross-lines, collecting and analysing 800 soil samples for copper. Samples were spaced 200 feet apart on lines spaced 400 feet apart. In critical places samples were taken at closer intervals. Samples were analysed in a field laboratory using hot acid digestion and biquinoline extraction. Replicate analyses showed that precision of results was sufficiently high for the intended purpose. Statistical analysis of results indicates that copper contents of soil in excess of 100 ppm are anomalous. On this basis, four large anomalous areas have been outlined. These anomalies

, up to 4000 feet long and 1000 feet wide, are aligned roughly parallel both to surface contours and to the gross structural trend of underlying rocks. All of the known mineralized showings are within one or another of these anomalies.

GEOLOGICAL MAPPING

An area of 600 acres has been mapped by plane table, part at a scale of one inch to 50 feet and the remainder at a scale of one inch to 100 feet. At present the larger area covered by the geochemical grid is being geologically mapped at a scale of one inch to 400 feet. Surface and helicopter reconnaissance by resident geologist, T.C. Scott, and the writer indicates that the Caribou Heart Range on which the property is located has the gross form of an anticline (upward fold), the axis of which trends east of north, and that the cupriferous sedimentary and volcanic rock units are overlain by barren conglomerates and underlain by equally barren greenstone. Although the major geological structure is reasonably simple, much of the detail of rock sequence and structure needed for efficient mineral exploration is only imperfectly known because of the extreme scarcity of outcrops.

MINERALIZED SHOWINGS

To date five mineralized showings have been discovered. Designated by the initials of the discoverer, these are: DB (north), RHT (main), BC, CV and CVH. The first two are original discoveries made in 1966, the other three are recent discoveries made during the course of line-cutting and geological mapping. Figure 1 shows the relative positions of these showings. It may be noted that these showings are irregularly distributed over a horizontal distance of 3200 feet and a vertical range of 700 feet.

As yet no surface work has been done on the DB showing which is an outcrop of andesite porphyry containing some native copper, copper carbonate and traces of copper sulphides. Several new shallow pits and trenches have been made on and around the RMT showing. These help to clarify the local structure and continuity of the cupriferous siltstone and associated tuffs.

The BC showing is a vein in andesite porphyry, ranging from 3 to 9 inches wide, exposed at short intervals for a horizontal distance of 100 feet. Both ends are concealed by overburden. The vein is composed essentially of primary chalcocite and bornite. A channel sample (#13001) of fresh vein material across a true width of 6 inches assayed:

Gold, 0.01 oz/ton; silver, 17.60 oz/ton; and copper, 50.90%

The hangingwall of this vein for a distance of at least 10 feet contains veinlets of bornite and chalcocite.

Because of its favourable position on a rock bluff and its steep dip, the BC showing will be explored at shallow depth by a fan of short EX diamond drill holes totalling between 600 and 800 feet.

At the CVH showing a trench 80 feet long has been excavated in andesite porphyry, exposing a flow contact zone of brecciated and highly vesicular rock. In addition to fairly abundant copper carbonates and oxides, this zone contains primary bornite, chalcocite and specular hematite. A large chip sample (#13002) 24 feet long taken from this trench assayed:

Gold, 0.005 oz/ton; silver, 0.15 oz/ton; and copper, 2.60%

From present exposures neither the attitude nor true width of this interesting mineralized zone is readily apparent.

The CV showing, about 150 feet west of the CVH showing, is exposed in rock trenches distributed as shown in Figure 2. The rock is brecciated and vesicular andesite porphyry cut by a gougy fault and irregularly mineralized with bornite, covillite, chalcocite, specular hematite, as well as secondary copper minerals. Five channel samples were taken from this working. Sample positions are shown in Figure 2 and assay results tabulated below:

Sample #	Length(ft)	Gold(oz/ton)	Silver(oz/ton)	Copper(%)
13005	6	tr	tr	1.25
13006	8	tr	tr	0.25
13007	12	0.005	0.30	3.30
13008	12	tr	tr	0.80
13009	12	tr	tr	1.60
13010	7	tr	tr	0.50
	<u>57</u>			<u>1.4 %</u>

It is very likely that the CV and CVH showings represent the same or closely associated mineralized zones, but more surface work will be needed to gain some idea of possible tonnages and grades.

DIAMOND DRILLING

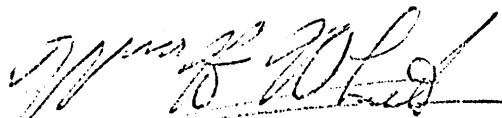
A diamond drilling program involving a minimum of 2000 feet of AQ (wire-line) in at least four holes began on August 26th. This is a preliminary program designed primarily to provide further information about the distribution, structure and sequence of cupriferous rocks. Tentative drill hole sites are widely-spaced in the general area between the RMT and CV showings and these may be changed as information accumulates. The BX diamond drilling program on the BC showing is an addition to the to-the main program.

SUMMARY AND RECOMMENDATIONS

The writer is well satisfied with exploration results obtained during the period under review. The detection of four large soil anomalies and the discovery of three new mineralized showings in an area almost devoid of outcrop suggest a wide distribution of cupriferous rocks. At the conclusion of the preliminary drilling program about the end of September, all data will be reviewed and recommendations made for the next phase of exploration and development.

Respectfully submitted,

Dated: September 4th, 1967



J. H. White, P. Eng.

x DB showing
elev. 5350'

x RMT showing
elev. 5020'

BC showing x
elev. 4800'

B
A
S
E
L
I
N
E

CV showing x CVH showing
elev. 4570' elev. 4600'

Scale: 1 in. = 400 ft.

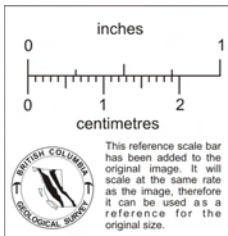
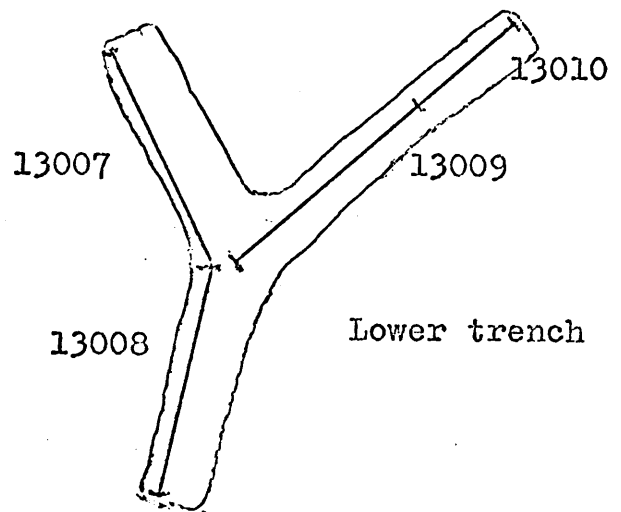
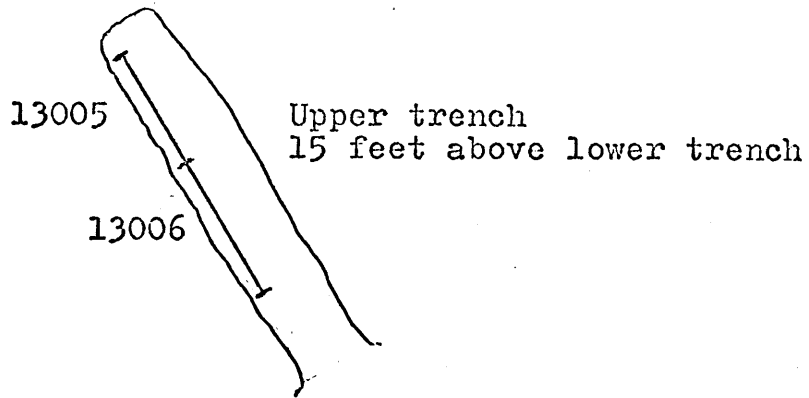


Figure 1 - Relative position of showings,
Northstar Copper Mines, Ltd.



Scale: 1 in. = 10 ft.

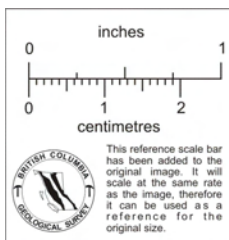


Figure 2 : Plan of trenches at CV showing, giving channel sample positions with their sample numbers.
Northstar Copper Mines, Ltd.