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REPORT ON THE
COGBURN CREEK PROPERTY
HARRISON LAKE, B.C.
NEW WESTMINISTER M.D.
92H-12E

for

ORBEX MINERALS LIMITED

by

R.H. Beaton, P.Eng.

July 5, 1982.

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SUMMARY

The Cogburn Creek property consisting of two metric claims including twenty-one units was discovered and received preliminary work in the summer of 1981. Situated on the east side of Harrison Lake, some thirty-six km by road from Harrison Hot Springs, it is readily accessible from Vancouver.

Initial soil geochemical, Max-Min EM, and SP work have indicated that the 1.15 metre discovery width of massive sulphide found during road construction has a NNW-trending linear expression of at least one hundred metres.

With an average grade at the showing of 3.28% copper, 1.27% zinc, 1.28 oz/T silver, 0.006 oz/T gold; and lacking benefit of diamond drilling and mapping or extensive grid work, the occurrence warrants further investigation.

Accordingly it is recommended that additional work consisting of mapping, expansion of original geochemical and geophysical grid work, and a preliminary three hole drill program be undertaken.

Cost of such a program is estimated to be $ 58,400.

INTRODUCTION

LOCATION

49° 35' North Latitude, 121° 45' West Longitude.

The Cogburn Creek property showing at approximately 930 metres (3050 feet) elevation (Figure 1) is situated on a nose between two south-east flowing tributaries of the first main south-flowing tributary (North Fork) of Cogburn Creek which enters the east side of Harrison Lake some twenty-five km (16 miles) north of Harrison Hot Springs (Figure 2).

Direct distance southwesterly to the nearest point on Harrison Lake is 4.5km (2.8 miles); and to the mouth of Cogburn Creek, 5km (3.1 miles).

ACCESS

Access is by road up the east side of Harrison Lake from Harrison Hot Springs. Apart from an initial paved portion of a few kilometres, the greater part is gravelled and used primarily for logging. Approximate distance from Harrison Hot Springs to the mouth of Cogburn Creek (Pretty Timber Co. Ltd. camp) is twenty-seven km, hence an additional 3.5km to the turnoff up the North Fork of Cogburn Creek and finally a further 5.5km on North Fork branch to the showing directly on the uppermost switchback of the road.

The latter portion (North Fork section) is steep at its upper end requiring four-wheel drive vehicles; and may require upgrading due to washout or rock fall. It is adviseable to make arrangements with Pretty Logging regarding use of the roads particularly when in active use or when the North Fork branch is secured by gate.

TO ACCOMPANY REPORT BY J.M. ANDERSON, Geophysicist

GEOTRONICS SURVEYS LTD.

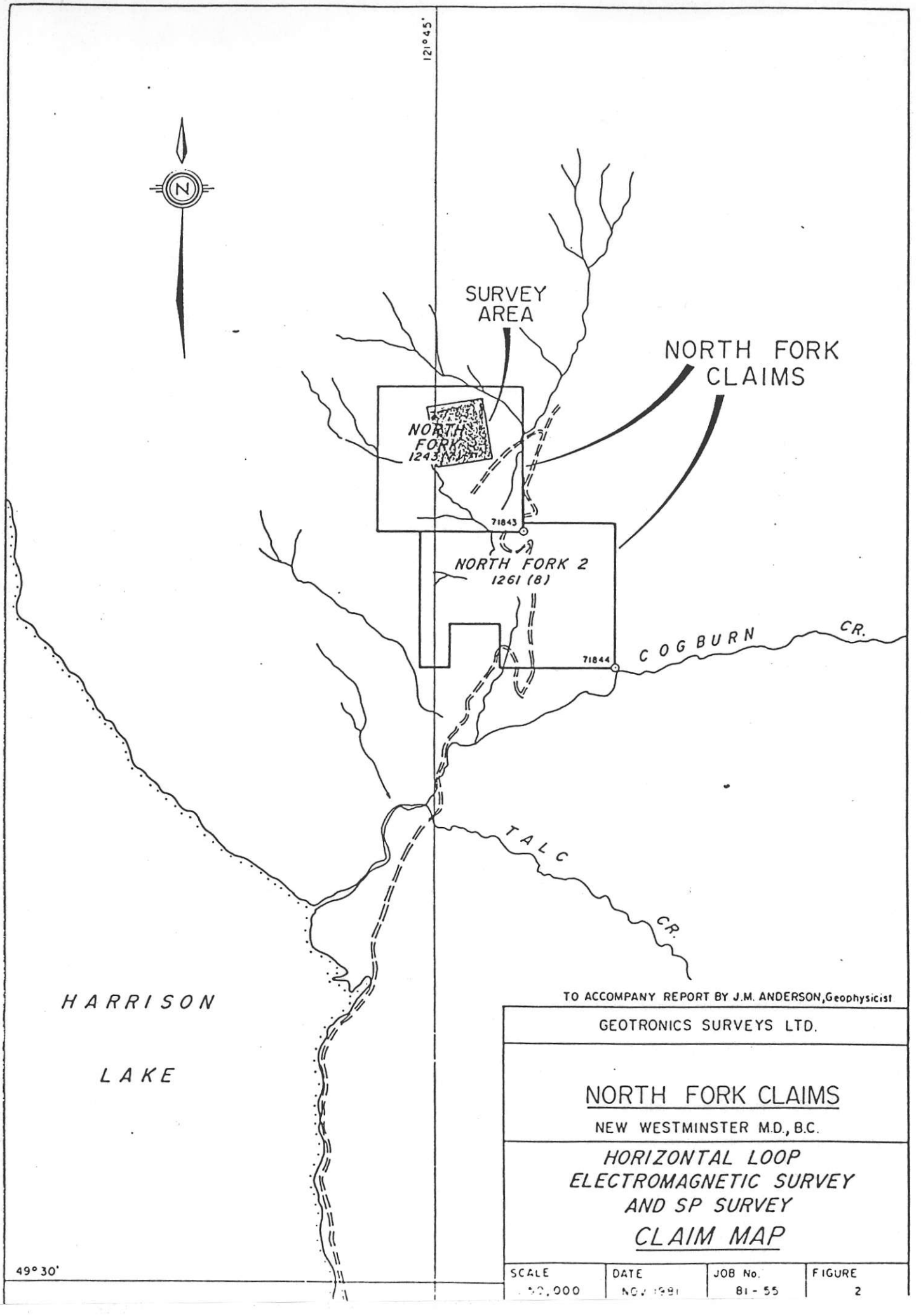
NORTH FORK CLAIMS

NEW WESTMINSTER M.D., B.C.

HORIZONTAL LOOP ELECTROMAGNETIC SURVEY AND SP SURVEY

LOCATION PLAN

SCALE	DATE	JOB No	FIGURE
1:8,000,000	NOV 1981	81-55	1



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HORIZONTAL LOOP ELECTROMAGNETIC SURVEY AND SP SURVEY

CLAIM MAP

SCALE	DATE	JOB No.	FIGURE
1:2,000	NOV. 1981	81-55	2

TOPOGRAPHY AND VEGETATION

The terrain in the vicinity of the showing is rugged with slopes to 30^{o} and more. Forest cover consists of a relatively dense growth of hemlock and cedar which at time of examination in 1981 was being prepared for logging. Water supply from nearby creeks is abundant. This is fed by heavy snow accumulation which commences buildup near the showing in the latter half of November and persists to June.

PROPERTY

The property includes two metric claims, North Fork 1, which includes the showing; and North Fork 2 adjoining on the south. The former with nine units and the latter with twelve have had sufficient work applied in 1982 to keep them in good standing for two years as follows:

Name	Units	Record No.	Expiry
North Fork 1	9	1243	July 22, 1984.
North Fork 2	12	1261	Aug. 24, 1984.

The claims staked in the name of Dale McCallum are currently under option to Orbex Minerals Limited.

HISTORY

The Cogburn Creek showings were found by Messrs. Dale McCallum, 5368 McCallum Road, Agassiz, B.C., V0M 1A0.; Hank Nickel; and Don Crowhurst while constructing new logging road. Noticing sulphide mineralization after blasting, the three men, employees of Pretty Timber Co. Ltd. of Vancouver, decided to form a partnership and staked the North Fork 1 claim June 27, 1981.

After examination by the writer on July 21, 1981 the property was optioned by Silver Standard Mines Ltd. under an agreement dated July 29, 1981. Following preliminary programs of prospecting, limited soil geochemistry, and limited SP and EM ground surveys, the property was returned to the owners in December 1981 prior to proposed drilling of two or three holes.

At time of this writing, Orbex Minerals Limited have reoptioned the property from the partnership and plan to continue with exploration on the property.

GEOLOGY

REGIONAL

The latest G.S.C. mapping (Monger, 1969) indicates the showing to be underlain by a north-pinching tongue of Pennsylvanian-Permian volcanic and sedimentary rocks assigned to the Chilliwack Group. With a width locally of 1.3km, the tongue is bounded on the west by Upper Cretaceous quartz diorite; an outlier of Spuzzum Pluton; and fault-bounded on the east by a north trending belt of schist and amphibolite of unknown age (" included ... are rocks whose ages may range from pre-Mid Devonian to latest Cretaceous").

LOCAL

In the vicinity and particularly east of the showing rocks, which are generally steep-dipping, schistose, and trending NNW, consist of mostly dark-colored flows, tuffs, and argillaceous to sandy sediments. These are excellently exposed in an east-west trending section of newly-blasted road cut.

Within an intermediate to mafic volcanic section of the foregoing, a continuously-mineralized schistosity-oriented zone with an overall width of 14.9 metres is exposed consisting of a westerly 3.2 metre division of rather sparse mineralization, a 1.2 metre width of massive mineralization; and an easterly 10.5 metre division of mineralization similar to the west interval.

Measured attitude of the main mass is 342 degrees azimuth with vertical dip. Small tight drag folds can be found in the sulphide suggestive of flow movement. What may be a low-angle fault can be seen in the rock cut a short distance west of the exposure. Strike-slip movement along schistosity planes, although lacking field evidence, is a distinct possibility.

MINERALIZATION

Mineralization consisting of predominant pyrite, much lesser chalcopyrite, and minor sphalerite occurs as a central mass or as small lenses, clots and blebs in the partly schistose basalt-andesite host. A little magnetite is present and pyrrhotite may also occur. Quartz veining is sparse to negligble but some epidote is present. Interbeds of biotite and/or hornblende schist are closely associated with the mafic volcanic host. Rocks west of the showing in addition to altered lava include horizons serpentinized in places with pods of talc and chlorite; and also locally a few thin intervals of pale grey quartzite or metamorphosed tuff.

Assay returns from surface chip sampling across the freshly-blasted exposure along the road cut are as follows:

Sampler	% Cu	% Pb	% Zn	oz/T Au	oz/T Ag	% Ni	% Mn	% As
D. McCallum (grab, main mass)	3.2			.008	1.8	tr.	tr.	tr.
Silver Standard Mines (weighted averages)								
West 3.2m (2 samples)	0.385	0.01	0.16	.003	0.05			
Central 1.2m (2 ")	3.41	0.01	1.11	.003	1.00			
East 10.5m (7 samples)	0.105	0.01	0.16	.025	0.26			
Orbex Minerals Ltd.								
West (partial) 1.4m	0.28	0.03	0.22	.001	0.06			
Central 1.1m	3.23	0.01	1.43	.008	1.04			

An arithmetric average of the independant samplings of the central sulphide mass gives the following:

Width	% Cu	% Pb	% Zn	oz/T Au	Oz/T Ag
1.15M	3.28	0.01	1.27	.006	1.28

A semi quantitative spectrographic analysis conducted on a specimen of the massive mineralization detected the following:

	ppm		ppm
Cr	100	Ag	30
Co	500	Ti	1000
Cu	>5000	V	70
Pb	15	Zn	>5000
Mn	300	Zr	50

GEOCHEMISTRY

Following option, Silver Standard Mines Ltd. conducted a brief program of prospecting and soil grid sampling for copper and zinc in the vicinity of the showings. Apart from a strong copper kick directly over the discovery showing, and a few moderate copper and zinc returns directly down slope, the grid area provided largely background values.

The grid originating at the showing was laid out as east-west lines stemming from a north-south baseline. Lines were spaced metrically at 50 N, 100 N, 200 N, 300 N and 50 S with adjacent road also utilized. Stations were flagged along pace and compass lines at approximately twenty-five metre intervals for two hundred and fifty metres west and one hundred and twenty-five east for a total of one hundred and thirty determinations.

GEOPHYSICS

As a followup to the geochemistry, Silver Standard conducted trials along the road at the showing employing Max-Min EM and SP procedure. Both provided excellent response over the showing; and were subsequently employed in a program by Geotronics Surveys Ltd. to cover approximately the same ground as the soil grid. Steep terrain hampered full useage of the Max-Min EM equipment; however, the SP procedure was not affected.

Results supported previous observations to indicate the presence of a NNW-trending linear anomaly passing through the showing extending at least fifty metres northerly and southerly. The SP plot also showed strong response on the switchback road some one hundred and fifty metres southerly at the limit of both soil and geophysical testing.

CONCLUSIONS

Limited preliminary work on the North Fork 1 claim following discovery in 1981 has established the presence of a NNW-trending massive sulphide occurrence in schistose volcanic rocks of the Paleozoic Chilliwack Group east of Harrison Lake. Although host rocks do not appear typical of most massive sulphide occurrences, the mineralization is similar. Insufficient work has been done to define limitations and extent of the zone on surface; and similarly no drilling has been attempted to determine behaviour at depth. With an indicated grade in the order of 3% copper, 1% plus zinc, and 1 oz/Ton plus silver across an exposed width of 1.15 metres of massive pyrite mineralization; and in view of its convenient location, the investigation is obviously warrented.

RECOMMENDATIONS

As followup to the preliminary work conducted in 1981 following discovery, it is recommended that further investigation include -

1. A program of at least reconnaissance geological mapping on the claims
2. Extension and upgrading of soil and geophysical work along lines similar to those commenced in 1981
3. A modest drill program to test the main showing on the road; or any new anomaly that may subsequently be found.

COST ESTIMATE

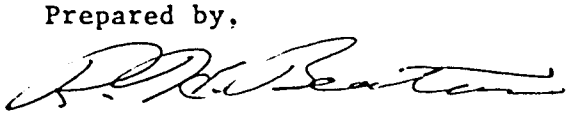
Stage 1 - Mapping, line work, geochemistry, geophysics - 4 weeks

Geologist	$ 4200.00	
Geological assistant	2100.00	
Support costs - transportation, meals, accom. and overhead	5600.00	
Contract geophysics	15,000.00	$ 26,900.00

Stage 2 - Diamond Drilling - @ $ 25/foot

Light drill, 3 holes @ 120 metres each	$ 29,500.00	
Core logging and support costs	1,000.00	30,500.00
Report Preparation, supervision, administration		1,000.00
	TOTAL	$ 58,400.00

Prepared by,



R.H. Beaton, P.Eng.

July 5, 1982.

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Monger, J.W.H., G.S.C., Paper 69-47.

Silver Standard Mines Limited - File data on work conducted 1981.
(examination reports, geochemistry, assay returns)

Apex Airborne Surveys Ltd. - October 14, 1981.
North Fork Geophysical Test Report

Geotronics Surveys Ltd. - November 9, 1981.
Geophysical/Geochemical Report on Electromagnetic,
Self Potential and Soil Geochemistry Surveys over
North Fork Claims.

CERTIFICATE

I, Robert H. Beaton, of the city of Vancouver, British Columbia do hereby certify that:

1. I am a graduate of the University of British Columbia in Geological Engineering, 1952.
2. I have been practising my profession as a geological engineer for 30 years.
3. I am a member of the Association of Professional Engineers of British Columbia, Registration No. 2938.
4. I examined the Cogburn Creek showing on July 21, 1981 and am fully familiar with data listed under references.
5. I have no interest, nor do I expect to receive any interest in the North Fork claims or in securities of Orbex Minerals Limited.
6. Orbex Minerals Limited is hereby authorized to use this report or any part of this report for financing purposes, providing that no portion be used in such manner as to misrepresent the intent set out in its entirety.

Dated at Vancouver, B.C. this 5th day of July 1982.

R.H. Beaton, P.Eng.