

Property Exam:
823809
BC-Loranger

MINNOVA INC.

DATE: June 20, 1989
TO: Ian Pirie.
COPIES TO: Alex Davidson
FROM: Dave Heberlein
SUBJECT: BC-Loranger Property Examination.

A property examination of the BC-Loranger claim group was made on Saturday June 17th.

The claims are located on the north side of Birk Creek on the south slope of Green Mountain. Access to the property is via the Birk Creek logging road that turns off the North Barriere Lake road 8km north of the East Barriere Lake Road junction. The claims occupy a recently clear-cut area that provides good road access to most of the property. The claims lie between 1188 and 2164m in elevation. Slopes are generally gentle at higher elevations, becoming steeper towards the steeply incised Birk Creek valley at the south end of the property. Thick overburden (2 to >10m) covers much of the property. It consists of bouldery lodgement till with an upper layer of stratified fluvio-glacial sediment in places. Outcrop distribution does not exceed 5% and generally averages <1% over most of the area.

Claims:

Claim information is as follows:

<u>Claim</u>	<u>Record No.</u>	<u>Units</u>	<u>Due Date</u>
BC 1	4400	20	04/18/1992
BC 2	5953	20	11/07/1990
BC 3	5954	20	11/07/1990

The claims are currently held by:

Mr. Leo Loranger
6546 Beaver Crescent,
Kamloops, B.C.,
V2C 4V2.

Property History:

The claims were staked by Leo Loranger in 1983 to cover several soil geochemical anomalies defined an earlier Cominco survey. Noranda optioned the ground from Loranger in 1984 and proceeded to explore the property for the following 4 seasons. Work done by Noranda included: linecutting, soil geochemistry, HLEM, Mag and mapping in 1984; 552.6m of diamond drilling in 1985 (10 holes); 484.3m of diamond drilling in 1986 (4 holes); and 605m of trenching accompanied by a southerly soil grid extension in 1987. An Aerodat survey was flown over the BC claim group and adjoining Roberts and Semco options in 1985.

Geology:

The claims are underlain by Unit EBP of the Eagle Bay Assemblage; a south to southeast trending belt of argillites, phyllites, sandstones and lesser intermediate to felsic volcanoclastics. On the property the rocks have been thermally metamorphosed to biotite hornfels grade by the Baldy Batholith which outcrops at the north end of the BC 1 claim. Most primary textures have been destroyed by the metamorphism, making identification of the units difficult. In places relict bedding is preserved; particularly in the argillaceous rocks. Geological mapping by Noranda identified several intermediate and felsic volcanic units that include crystal and lapilli tuffs. They apparently did not recognize the hornfelsing and as a result may have mistaken hard, glassy hornfelsed sediment for felsic lithologies.

Most rocks on the property have a distinctive spotted texture caused by porphyroblastic minerals. Pyrrhotite is the most widespread. It occurs as rounded blebs that are often mantled by biotite, that comprise up to 15% of the rock. These appear to be a product of the hornfelsing rather than a mineralization event. Cordierite spotting has also been noted in the more argillaceous units.

Structurally, the area appears to be fairly complicated. Bedding and foliation measurements by Noranda suggest that the stratigraphy is strongly folded about southeast plunging, northeasterly overturned folds. This fold attitude is anomalous for the Eagle Bay and may be caused by local deformation along the contact of the Baldy Batholith.

Mineralization:

Polymetallic sulphide mineralization has been identified at several localities on the property. In trench NTR 84-1 (30800N, 29980E), a 2m wide meta-argillite unit contains semi-massive to disseminated Cp, Gl, Sl and Py over a 10-30cm width. The mineralization appears to be stratabound. The best assay from this locality was:

Cu%	Pb%	Zn%	Ag opt	Au opt	Width (m)
0.50	2.22	2.86	0.018	0.018	0.25

At trench 84-2 (30600N, 29910E), a 0.3m wide sulphide stringer

zone in meta-argillite returned:

Cu%	Pb%	Zn%	Ag opt	Au opt	Width (m)
0.02	4.32	33.0	29.2	0.011	0.30

Trench 84-4 (30950N, 30030E), exposed two well mineralized boulders of meta-argillite that contained 20 to 30% sulphide. Cp, Gl, Sl and Py were noted. The size of the boulders suggests that they came from a source with a width of at least 1m. Grab samples from these returned:

Cu%	Pb%	Zn%	Ag opt	Au opt	Width (m)
0.78	9.60	15.70	9.4	0.002	Grab
0.74	2.74	3.48	4.02	0.050	Grab

All of these occurrences were drill tested with poor results. Holes LOR 85-3,4,5 drilled under the boulder occurrence (trench 84-4) did not intersect any mineralization, this suggests that the source is most likely uphill (or up-ice) from the boulder site. Silver values of approximately 1.01 opt were encountered over a 5m interval.

Drillholes LOR 85-1,2 tested the mineralized argillite in trench 84-01. These holes hit a meta-argillite/argillite breccia that contained traces of Gl, Sl and Cp. Values of 3029 ppm Pb, 5813 ppm Zn, 13.8 ppm Ag and 120 ppb Au over 3.35m were obtained from LOR 85-1. LOR 85-2 returned: 4080 ppm Pb, 2820 ppm Zn, 9.8 ppm Ag and 130 ppb Au over 2.0m. Similar geochemically anomalous values were obtained from the same argillite in holes LOR 85-3 and 4 (see Noranda report).

One interesting intersection was produced by hole NDD 86-12. This hole was drilled into a coincident mag and HLEM anomaly at the north end of the grid. It produced quite anomalous silver values (from 12.34 to 149.8 ppm) over approximately 5m (true width). The mineralization was hosted in a fuchsite altered unit described as an andesite. Examination of the core revealed that the host rock is a pyrrhotite bearing feldspar porphyry intrusion; possibly related to the Baldy Batholith.

Our sampling of the mineralization produced sub-economic grades from the best looking material. Results are as follows:

<u>SAMPLE #</u>	<u>Cu%</u>	<u>Pb%</u>	<u>Zn%</u>	<u>Ag g/t</u>	<u>Au g/t</u>	<u>Hg ppm</u>	<u>As ppm</u>
LORNTR84-1A	0.10	0.42	0.60	13.7	0.03	110	129
LORNTR84-1B	0.08	1.10	1.18	34.0	0.02	255	35
LORNTR84-1C	0.08	1.16	1.67	36.2	0.04	295	34
LORNTR84-1D	0.08	0.47	0.60	14.1	0.02	100	44
LORNTR84-4A	1.06	2.15	1.93	104.0	0.55	1250	4
LORNTR84-4C	0.12	0.53	0.40	22.1	0.01	195	11
LORNTR84-1D	0.10	3.01	3.01	34.5	0.01	670	3

Samples labelled 84-1A to D were taken from mineralized float on the dump at trench 84-1. Samples 84-4 A, C and D were from mineralized boulders at trench 84-4.

Conclusions and Recommendations:

Although this property has a what appears to be a mineralized horizon that contains sub-economic grades, the potential for a significant deposit seems to be limited. Noranda thoroughly tested most of the strike length of the zone of interest and showed that the mineralization was low grade and sporadic. The only target that remains untested on the property is a 600 by 500 m Cu-Pb-Zn-Ag soil anomaly that lies on the strike of the mineralized argillite on the BC-2 claim. This target has not been drilled or had EM coverage. It lies in an area of relatively good exposure on the north slope of the Birk Creek valley, at the south end of the claims. Here too, the potential is limited by the relatively short strike length of the target horizon on the property.

I do not recommend any further action of this property.

Synthesis: - Mineralization appears to be associated hosted in a 5-10m thick argillite / argillite breccia unit that was ~~was~~ traced for a strike length of 2km across the BC-1 claims. This unit is hosted in hornfelsed, argillaceous sediments and perhaps felsic ^{to int.} dykes. ~~The zone~~ Stratabound (Stratiform?) ^{is} Cu, Pb, Zn, Ag.

Exploration Potential:

Although Noranda thoroughly tested a most of the 2km strike length of the mineralized argillite zone, they left two good targets unexplained.

The most attractive ~~zone~~ ^{one at the north end of the BC-1 grid, where a} coincident mag + UEM anomaly centered at 31550 N, 30025 E.

The most attractive lies at the north end of the BC-1 grid at **TARGET 1**

The most attractive target on the property is a ^{250m long} coincident mag and UEM feature centered at 31550 N, 30025 E on the BC-1 grid. This zone lies approximately 150m from the contact with the Baldy Batholith, directly on the surface trace of the mineralized argillite. This zone is associated Zn anomaly, that is displaced 75m to the E. Noranda drilled two holes into this area (NDD 86-12, 14) and intersected the ~~site~~ ^{what} was described as an altered andesite or 'spotted andesite' unit that contained anomalous Ag values in a zone of Fuchsite alteration. They failed to ~~to~~ explain the mag or UEM anomalies.

The boulder occurrence in trench 84-4 lies directly down hill from the mag high. As mentioned above, the size of the mineralized boulders suggests a source of at least 1m in width. ~~This had not been located.~~ Our examination of this zone revealed ~~no~~ several variably mineralized boulders, not just 2 as indicated in the Noranda description. The source for these has not been found.

Diamond drillbitting of these occurrence failed to produce any significant intersections. Noranda interpreted ~~this~~ the zone to be faulted off or to pinch out at depth.

drilled into a mag + em target at the north end of the grid,
One hole, NDD 86-12, intersected an 8.1 m wide zone of juchite bearing 'andesite' that contained 5% sph + st. This zone contained ^{0.17 g/t} ~~up to~~ 149.8 g/t Ag.

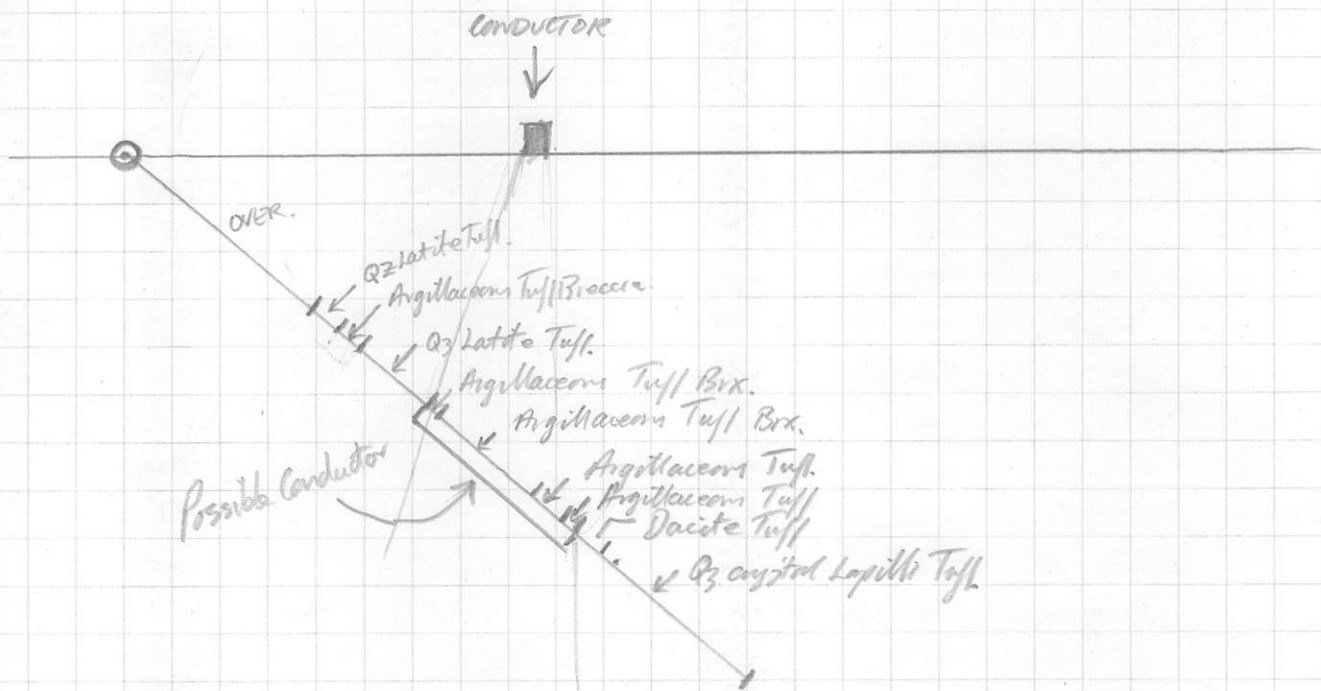
Targets

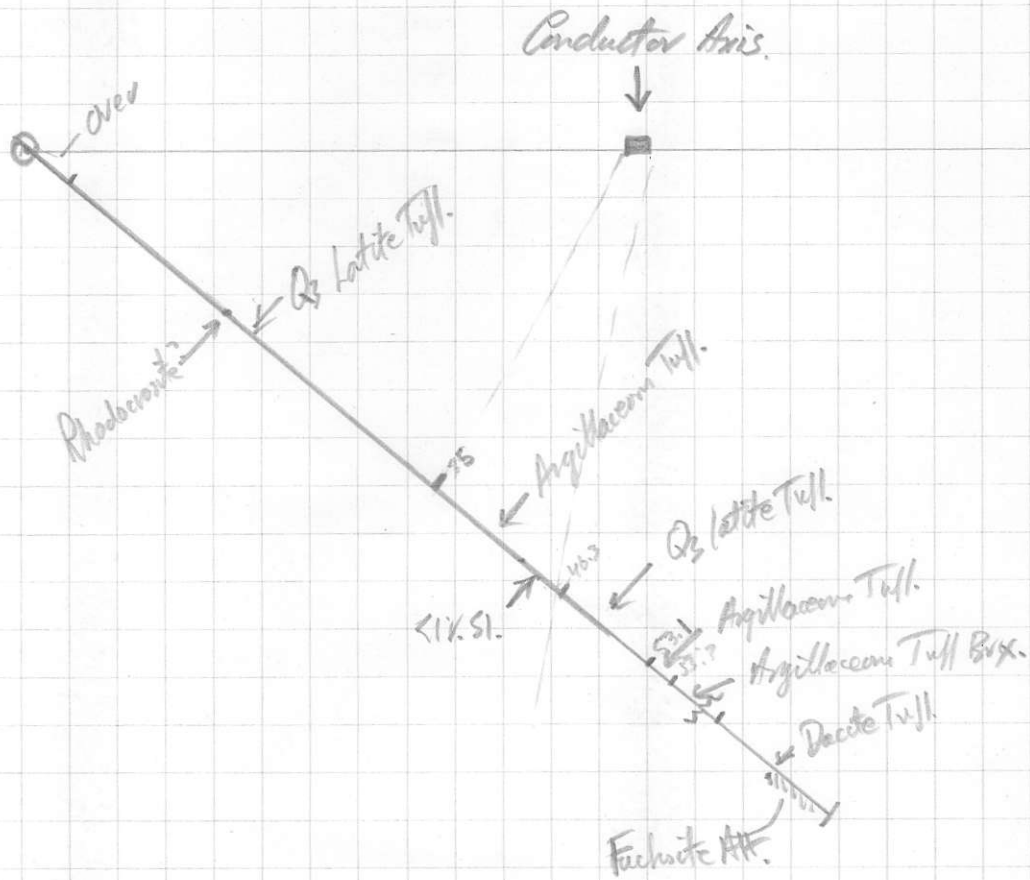
All of the known sulphide occurrences appear to be associated with a NW striking conductive feature that extends from the intrusive contact at the north ^{end} of the property - south ~~for~~ ^{for} a strike length of over 2.0 km. This feature has coincident, ^{but} localized mag highs and ^{spotty} Cu, Pb, Zn, Ag soil geochem. The trend is offset ^{at} several locations suggesting a ^{some} degree of faulting. In trench exposures (see above) the ~~sub~~ ^{conductive} unit is a hornfelsed, graphitic argillite, that contains ~~sp~~ ^{small}, disseminated Pb spots (to 5%) and disseminated, stringer and blebby Cu, Si, Cr + Py . The zone appears to be a continuous, mineralized horizon.

Noranda drilling tested the conductor in holes ~~85-7, 85-8, 85-9, 85-10, 85-11~~

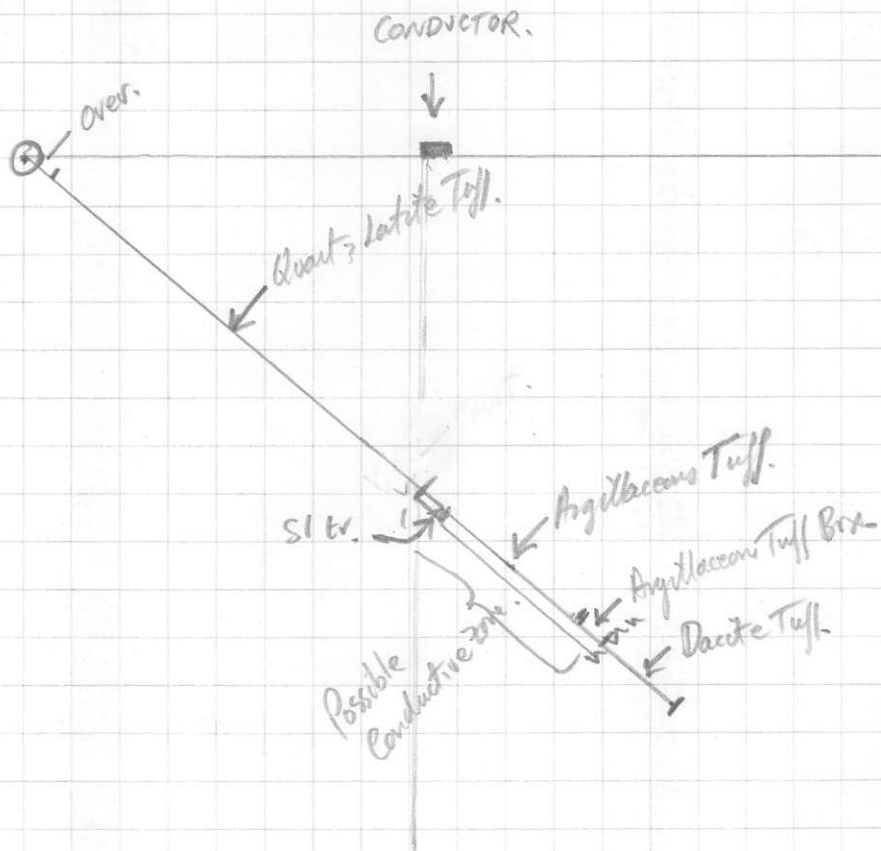
To date 13 holes have been drilled into the conductor. ~~Of these~~

Target 2. lies 1.5 km SE from the boulder trench, on the BC-2 claim. Here a coincident Pb-Zn-Ag soil geochemical anomaly is indicated by the Noranda data. This zone lies directly on strike. No anomaly occupies an area of approximately 500 x 400 m and is elongated in a southerly direction. A mineralized outcrop containing 150 ppm Cu, 340 ppm Zn, 1500 ppm Pb & 16.2 ppm Ag is located 100 m to the NW of the zone. This target has not been drilled or tested or geophysically surveyed.





PDH LOR 85-8.





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VANCOUVER OFFICE:
705 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE:
33 EAST IROQUOIS ROAD
P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate

9V-0535-RG1

Company: MINNOVA INC.
Project: 608
Attn: D. HEBERLEIN/I. PIRIE

Date: JUN-21-89
Copy 1. MINNOVA INC., BARRIERE, B.C.
2. MINNOVA INC., VANCOUVER, B.C.

We hereby certify the following Geochemical Analysis of 7 ROCK samples submitted JUN-20-89 by A. LOWE.

Sample Number	AS PPM	SB PPM	HG PPB
LOR NTR 84-1A	129	2	110
LOR NTR 84-1B	35	38	255
LOR NTR 84-1C	8	34	295
LOR NTR 84-1D	44	16	100
LOR NTR 84-4A	4	59	1250
LOR NTR 84-4C	11	11	195
LOR NTR 84-4D	3	50	670

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TELEX: VIA U.S.A. 7601087 • FAX (604) 980-9621

TIMMINS OFFICE:

33 EAST IROQUOIS ROAD
P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Assay Certificate

9V-0535-RA1

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We hereby certify the following Assay of 7 ROCK samples submitted JUN-20-89 by A. LOWE.

Sample Number	CU %	PB %	ZN %	AG G/TONNE	AG OZ/TON	AU G/TONNE	AU OZ/TON
LOR NTR 84-1A	.101	.42	.60	13.7	.40	.03	.001
LOR NTR 84-1B	.080	1.10	1.18	34.0	.99	.02	.001
LOR NTR 84-1C	.082	1.16	1.67	36.2	1.06	.04	.001
LOR NTR 84-1D	.079	.47	.60	14.1	.41	.02	.001
LOR NTR 89-4A	1.060	2.15	1.93	104.0	3.03	.55	.016
LOR NTR 89-4C	.124	.53	.40	22.1	.64	.01	.001
LOR NTR 89-4D	.097	3.01	3.01	34.5	1.01	.01	.001

Certified by

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