SUMMARY REPORT OF WORK DONE

ON CLAIMS 471008
    471006   Lots 1 @ 2
    471661   Concession VI
    471662

IN COLEMAN TOWNSHIP

DISTRICT OF TEMISKAMING

SUDBURY MINING DIVISION

By

Michael Malouf, Mining Student

HAILEYBURY, ONTARIO

December 1, 1977
INTRODUCTION

The following is a summary report on past work carried out on the claims, 471006, 471008, 471661 and 471662. These claims are in lots 1 and II Concession VI, Township of Coleman, District of Timiskaming, Sudbury Mining Division, Ontario.

STATUS

The claims are wholly owned by Malouf Bros. Limited and are in good standing.

LOCATION AND ACCESS

The property of Malouf Bros. Limited, comprises 4 unpatented and contiguous mining claims situated in the east corner of Coleman township, District of Timiskaming, Ontario. The general area is commonly referred to as the Cobalt Camp. The claims, numbered 471008, 471006, 471661 and 471662 adjoin the property known as the "The Deer Horn Mine" now owned by Canadaka Mines; a subsidiary of St. Joseph's head to the southeast. The property (Malouf Holdings) is southwest of the Silver Cliff, immediately east of the "Webb claim", a part of the New Violet Holdings, southeast of the Sycee Mines and Silver Bird property and southwest of the Twentieth Century Mining Company property.

The Malouf Holdings are north and northeast of the north end of Crosswise Lake and are fully accessible by a serviced secondary road which runs approximately three quarters of a mile southeast of Highway 11-B. This intersection is approximately one mile west of
the town of North Cobalt and two and one half miles east of the town of Cobalt. (See location map).

**GENERAL**

The Cobalt area between 1903 and 1966 has produced from the silver-cobalt type ores 442,533,479 ounces of silver making it one of the greatest silver producing areas in the world, only exceeded by Potosi, Bolivia and Butte, Montana, but greater than Guanajuato, Mexico.

Silver production reached its peak in 1911 and continued at a high level until 1922 with a total of 42,219,518 ounces of silver being shipped. With the drop in the price of silver during the 1920's and the depletion of silver ore the mines began closing. By 1929 most mines had ceased operations and the town of Silver Centre, which served the mines in South Lorrain township, ceased to exist. In the Cobalt and Gowganda areas, however, a few mines continued to operate, most of them intermittently, and local miners leased mines that had been closed but were believed to contain small silver veinlets. Operations continued in this manner until about 1950.

In the early 1950's, as a result of world-wide demand for cobalt, mining activity again increased. Extensive diamond drilling from underground workings of old mines led to discoveries of new veins and nests of veins that had not been found by the early workers.

The demand for cobalt dropped in 1957 and mining activity began to wane. The increase in the price of silver (1960) again brought more underground diamond drilling and led to the finding of still more veins. In 1963, Cobalt's 60th anniversary, eight mines were operating in the Cobalt and Gowganda areas. At the time of this writing there
are three companies working in the Cobalt camp. It is not the intent
nor within the scope of this report to describe fully what these com-
panies have done in the Cobalt camp. However, the author would like
to include the data accumulated at Haileybury College in his year and
a half of study and research on the area:

Agnico Mines Limited has been working underground on a group of claims
in lots 3, 4 & 5 in the north half of concession V almost in the middle
of the town of Cobalt. Agnico holds a very large group of claims in
the Cobalt camp. In the winter (March) of 1977 they reported a good
intersection of high grade silver on the "lower contact". No further
news has been given.

Silverfield's Mine, owned and operated by Teck Corporation has
been producing silver for thirteen consecutive years. The average grade
of ore is ten ounces per ton with their cut off being six ounces.
The property is one and one-half miles southeast of the town of
Cobalt. Silverfield's underground workings are limited to one (only)
claim and go to a depth of six hundred feet.

This author and brother worked at this property for four months
and during their employment took every opportunity to question both
miners and mine geologist on the "secret" that has been keeping this
mine forecasting three years of ore reserves, for the past thirteen years.
When asked what his secret was, Silverfield's geologist, Hugh Moore,
considered by many to be one of the leading authorities in the Cobalt
camp, answered, "Secret? There is no secret. We just drill to sat-
uration." Silverfield's has one longhole diamond drill running
full time as well as two packsack diamond drills. The policy is to
drill in a fan pattern at 50 ft. centers. The mine employs forty
men of which one half are underground miners. They hoist four hundred
tons per day. The Teck story and the part the little Silverfield's
mine played in it is highly recommended and extremely educational –
an excellent example of applied geology.

Canadaka, subsidiary of St. Joseph's lead purchased the property
known as Deer Horn Mines, within the last two years. The purchase
price is rumored to have been $35,000.00. Work done by Canadaka
to date has been the milling of the Deer Horn's "waste" dump and
a geochemical soil sampling survey of the surface part of the north-
east part of their property. This property adjoins the south part
of the Malouf Holdings claim number 471008. Rumor has it that Canadaka
is planning an extensive diamond drill program for the winter of
1977 to 1978. The author anticipates that this work will be done
either on the north end of Cross Lake or on Fraleck Pond.

The past exploration in the form of underground drifting on the part
of the "Malouf" holdings has not uncovered sufficient ore of commercial
importance. However, drifting had indicated geological conditions
which appear attractive and favourable for silver-cobalt deposits.

The Claims are in the right geological environment and the results
obtained in the mines immediately surrounding the claims, Deer Horn
9 million ounces silver, 100 thousand pounds cobalt, Colonial Mining
Company Limited, 1.2 million ounces silver, 4 thousand pounds cobalt,
King Edward Mining Company 1.3 million ounces silver, 4 thousand pounds cobalt, Silver Cliff, one-half million ounces silver, ten thousand pounds cobalt, Violet Mining Company Limited, 900 thousand ounces silver and the Twentieth Century Mining Company with a confirmed but undisclosed amount of silver ore make the MALOUF HOLDINGS an attractive exploration bet.

The Cobalt camp must still be regarded as highly important. While production at present is not particularly large, the possibilities of expanding the ore picture appear to be excellent. Exploratory drilling on a much broader scale than ever before attempted will be necessary to find and develop new veins. The similarity of rock types and geological conditions on the Malouf Holdings and many of the past successes in the Cobalt Camp, especially the Deer Horn Mine are significant factors in favour of ore chances in the Malouf Holdings ground.
The major amount of work done on the Malouf Holdings has been on claim number 471008. This claim contains one-half of the workings of Nerlip Mines. The Nerlip Mines workings run approximately east-west from the center of claim 471008 to the center of the claim immediately west numbered 315 and sometimes referred to as the Webb claim. The major part of the workings has been on the Webb claim and on the west part of claim 471008, thus leaving the east part of 471008 virtually unexplored both as to the Nipissing Diabase and the lower Keewatin contact.

Claim numbers 471006 and 471661 are unexplored by long hole diamond drilling or underground workings.

The author found an "unrecorded shaft" on claim 471662. There is no record of any work having been done on this claim at the Department of Natural Resources in Kirkland Lake nor is this shaft shown on any government maps. The wastedump (grown over) indicates a depth of around two to four hundred feet assuming very little if any lateral work or drifting. There are no markings on the trees, no debris in the form of construction timber or trails or roads which give evidence of any work done within recent years. The author assumes from this lack of evidence that this operation was terminated before, or wiped out during the fire of 1922 and for some reason was never reactivated. It is indeed a mystery. The shaft is six feet by eight feet and is flooded. Timbers are still intact and visible four feet below the collar. The shaft appears to be sunk on a calcite vein. The author has to date taken no samples. Visual examination showed no silver or cobalt.
NERLIP MINES LIMITED

As previously stated, the property of Nerlip Mines Limited at one time included claim number 647 (north part of N.W. 1/4, S 1/2, Lot 2, Concession VI) (now CLAIMS 471008 MALOUF HOLDINGS) and claim number 315 (N.E. 1/4, S. 1/2, Lot 3, Concession VI) sometimes referred to as the Webb claim. During 1925 and 1926 Menago Mining Company Limited extended the 1130 foot level of the Menago shaft (S.W. 1/4, S. 1/2, Lot 3, Concession VI) into the Webb claim. Encouragement for the extensive work on the Nerlip property in the 1930's was the highly successful development of the nearby Cross Lake O'Brien Mine. In 1931 J. C. O'Donald and A. B. Pillner put down a shaft later known as the Nerlip; to a depth of 90 feet. In 1937 the shaft was deepened 160 feet making a total depth of 277 feet. A level was established at the 275 foot horizon. Approximately 30 feet of crosscutting and 70 feet of drifting were done. The work was done between April and December under the direction of T. Rava, mine foreman. Later in 1937 the 2 compartment vertical shaft was sunk from 277 feet to 620 feet. A small amount of drifting and crosscutting was done under the direction of A. B. Pillner. In 1939 the shaft was deepened from 620 to 700 feet. A total of 1205 feet of drifting and 190 feet of crosscutting was done. Six diamond drill holes, having a total length of 1414 feet were drilled from underground. A dry house and powder magazine were built. In 1940 the shaft was deepened 45 feet to a total depth of 745 feet at which depth a new level was cut. An additional 200 feet of crosscutting was done. In 1941 the depth of the shaft was 760 feet, 860 feet of drifting, 420 feet of crosscutting and 165 feet of raise work were completed. Nine drill holes totalling 1402 feet in length were drilled from underground. A small shipment of nickel-cobalt ore was reported.
In 1942 an additional 175 feet of crosscutting, 665 feet of drifting and 100 feet of raise work was done. In 1943 an internal 2-compartment winze was put down 145 feet and a new level was established at 820 feet from surface. Seven drill holes, totalling 1163 feet were drilled from underground. An 8\(\frac{1}{2}\) by 10 foot Canadian Ingersoll Rand air hoist was installed to service the winze. In 1944 a new level was established from the winze at 895 feet and some drifting, crosscutting, and raising was done. During this time the property was under lease to the Austin Mining Syndicate. About 1,200 tons of mill rock were hoisted from which 340 tons were shipped. In 1945 Augener Mines Limited leased the Nerlip property and carried on work until the end of that year. The work was continued from the Webb claim into the west part of the S.E. 1/4, S. 1/2 Lot 3, Concession VI, which was at that time owned by the Augener Mines Limited. About 160 feet of diamond drilling was done. The hoist and equipment from the Augener winze were removed and the workings were allowed to flood. The property has been dormant from 1945 to present.

GEOLOGY

A marked topographic depression, extending in a north-westerly direction across the Webb claim, is presumably due to erosion along the Cross Lake fault. The thin layer of mill tailings and slimes at surface is presumably underlain by post-glacial varved clays deposited in Glacial Lake Barlow.

The Nipissing diabase on the property lies on the north-west flank of the Peterson Lake diabase basin. A 795 foot thickness of Nipissing diabase was passed through by the Nerlip shaft. On the 745 foot level the lower contact is said to be quite uneven with rapid dip changes. An inclusion of Keewatin rock some 350 feet long and 100 feet wide is
reported near the lower contact. At surface, near the shaft, irregular banding occurs in the diabase; lighter-coloured feldspar-rich varieties, alternate with others which are darker and contain abundant pyroxene. The transition zone between the hypersthene diabase (below) and quartz diabase (above) is exposed at surface near the shaft.

That Cobalt series sediments underlie the diabase in the northwesterly part of the property is based on a communication between A. B. Pillner and Robert Thomson that a raise put up near the winze went through 12 feet of flat-lying argillite before entering the diabase. This would be the southeast end of the large body of Cobalt series sediments exposed on the Sycee property (Lot 3, Concession VI).

The Keewatin rocks exposed in the underground workings of the Nerlip shaft, that is on the north part of claim number 315 (Webb claim) and in the contiguous claim to the north are bedded sediments with strike north of west and steep dips. They are shown on mine maps as chert and quartzite although A.B. Pilliner states in correspondence with Thomson that lavas were present also. Keewatin bedded sediments were exposed also in the southwestern part of claim number 315 by the 1130 foot level of the Menago shaft and are marked "iron formation" on an old Menago Mines map available to Thomson.

As shown by maps of underground workings held by Thomson, lamprophyre dikes cutting Keewatin rocks appear to be more common here than usual in the Cobalt camp, according to Thomson.

The Cross Lake olivine diabase dike (of Keweenawan age) was exposed in the 1130 foot level Menago crosscut, at about 170 feet north and 370 feet east of the southwest corner of claim number 315. (Webb)
FAULTING

In the maps of the underground workings numerous faults are shown but in general these are not correlated nor their surface expression indicated. On the 745 foot level, at some 165 feet north of the shaft, a zone of faulting, striking about north 70° west and dipping steeply to the south is exposed in many placed along the main drift which has a length of about 1100 feet. The main vein is in or adjacent to this. On the 275 foot level a fault is shown, striking N 65°W and dipping 75°N, which if projected lies about 75 feet north of the shaft. This may be the fault described on the 745 foot level. Its projection to surface is under a topographic depression. On map P-97 of his report Thomson has indicated this projection as a tentative fault.

The Cross Lake fault was exposed in the 1130 foot level crosscut from the Menago shaft. On a plan by this company, the fault zone is shown as extending in the crosscut from the number 315 (Webb), Silver Cliff boundary. The fault zone is shown as a fault breccia including a 1½ foot width of gouge dipping 76° to the southwest. The fault zone lies 15 feet northeast of the Cross Lake olivine diabase dike.

ECONOMIC GEOLOGY

A small amount of ore has been produced from the property. Statistics from Thomson's report are given below:

<table>
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<tr>
<th>Year</th>
<th>Cobalt lb.</th>
<th>Silver oz.</th>
<th>Nickel lb.</th>
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<tr>
<td>1940</td>
<td>68</td>
<td></td>
<td>269</td>
</tr>
<tr>
<td>1943</td>
<td>2,437</td>
<td>400</td>
<td>1,500</td>
</tr>
<tr>
<td>1944</td>
<td>444</td>
<td>511</td>
<td>733</td>
</tr>
<tr>
<td>Total</td>
<td>2,949</td>
<td>911</td>
<td>2,502</td>
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The "Main Vein", exposed partially on the 745 foot level, strikes approximately N. 65° W. and was developed over a length of some 1100 feet. On map P-97 (Thomson's report) the vein is shown as projected vertically from the 745 foot level; the outcrop of the vein structure may lie a little north of this. Near the west end it branched and the northwesterly branch was followed about 150 feet. The branch vein was further explored by a 90 foot winze from which two levels were established. Most of the ore obtained came from the branch vein. The main vein is closely associated with a well marked fault and is in proximity to a lamprophyre intrusive. These veins were explored by raises but it is not clear if they were identified in the levels above the 745 foot or in diamond drilling done from them. The productive part of the vein was in Keewatin rock or near the bottom contact of the Nipissing diabase sill.

There is a small calcite vein running northeast at the Nerlip shaft. There is no visible cobalt mineralization in it.

At the southwest corner of claim number 315 the Webb shaft vein, which strikes west, has been explored by a drift, some 70 feet long on the 100 foot level. At surface the vein is not visible now. No vein was discovered on claim number 315 (Webb) by the 1130 foot level crosscut from the Menago shaft. The vicinity of the Cross Lake fault was barren on valuable mineral.

UNDERGROUND WORKINGS

The Nerlip shaft, elevation approximately 925 feet, has a depth of about 760 feet with levels at 175, 275, 410, 610, and 745 feet. The 745 foot level is by far the most extensive one as is shown on Thomson's map P-97A. A winze, whose projection to surface is also shown, goes
down 150 feet below the 745 foot level and there are winze levels at 860 and 895 feet.

The 1130 level crosscut is connected with the Menago shaft, elevation 977 feet sea level. The connection passed through the Colonial and the northwest corner of the Silver Cliff properties.

The position of the Webb shaft appears not to be definitely determined; possibly this shaft is in the northwest corner of the Silver Cliff. The shaft is 100 feet deep and at about this depth has a level with about 150 feet of lateral work.

The collar of the Nerlip shaft has been cemented with a removable cap. (Iron eyelets have been placed in a reinforced concrete lid so that the lid can be removed with a small crane.)

A combination house and office remain on the property. This building is in very poor shape but is repairable. The hoist room building is still standing and could be used for a garage. The cage is in this building. The road into the property is still in excellent shape.
CONCLUSIONS

1. The Malouf Holdings claims are favourably located with respect to mineral possibilities.

2. The underground development of the Nerlip Mine has indicated geological conditions which appear attractive and favourable for silver-cobalt deposits.

3. The southeast part of the "lower contact" with respect to claim number 471008 (Nerlip Mine claims) is unexplored.

4. The claims 471006 and 471661 are unexplored.

5. The past success of the Deer Horn Mines, the 20th Century Mines, Sycee Mines and the Silver Bird Mine disprove the generally accepted belief that Fault #64 and the Cross Lake fault act as north and east boundaries beyond which silver values do not exist.

6. That the silver and cobalt taken from the Nerlip Mine, although in a small quantity, prove that the values are there.

7. That while the diamond drilling and underground development at the Nerlip Mine has not resulted in the discovery of a commercial orebody, it has provided important geological data which in turn enhances the ore finding prospects on the property.

8. That at today's price of silver, considerable additional exploration is warranted in the Cobalt camp.

9. That the past work done, namely directed at calcite veins in diabase on the Nerlip property, while very courageous and geologically helpful, has in no way explored this property. The work could, however, indicate the location of silver-cobalt veins below the diabase.
RECOMMENDATIONS

It is recommended that an exploration program be undertaken. This program should involve rock geochemistry, E.M. Survey, diamond drilling on surface and underground. The drilling would be vertical to a depth sufficient to outline the base of the diabase and indicate the presence or absence of a trough of Cobalt sediments. Details on the drilling will have to await the completion of the geophysics and geochemistry but a program of twenty 500 foot holes is anticipated. Dewatering the shaft should be relatively inexpensive because of the proximity of the air pipe line, i.e., 200 feet south of the Nerlip shaft.

This exploration program should be financed by a $300,000.00 underwriting.

ACKNOWLEDGEMENTS

The author wishes to acknowledge the advice and co-operation offered by Mr. Lester Hermiston, Cobalt Museum, Mr. John Gore, prospector, Mr. Ted Marvin, Geologist, Mr. Kevin O'Flaherty, Geologist, Department of Natural Resources, especially Resident Geologist office, Mr. Hugh Koore, Geologist and many others in the Haileybury and Cobalt area.
BIBLIOGRAPHY

The literature upon which the author has leaned upon heavily are as follows.

Ontario Department of Mines Reports: Vol. 41 Pt. 1 1932 P-112
Vol. 46 Pt. 1 1937 P-232
Vol. 47 Pt. 1 & 2 1938 P-244-5
Vol. 48 Pt. 1 1939 P-234
Vol. 49 Pt. 1 P-237-8
Vol. 50 Pt. 1 1941 P-162
Vol. 51 Pt. 1 1942 P-231
Vol. 52 Pt. 1 1943 P-224
Vol. 53 Pt. 1 1944 P-193
Vol. 54 Pt. 2 1945 P-112-113
Vol. 55 Pt. 2 1946 P-93

Silver Arsenide Deposits - Cobalt - Gowganda Area
Report by Robert Thomson Colman Township Concession VI

Silver Cobalt Calcite Vein Deposits of Ontario 1968

Literature Which Aided in Justifying This Property as an Exploration Bet
The above and:

Genetic Relations of Silver Deposits and Keweenawan Diabases in Ontario
By: E. S. Moore
BETWEEN 15-35 MILLION OUNCES SILVER
BETWEEN 5-15 MILLION OUNCES SILVER
UNDER 5 MILLION OUNCES SILVER

Note: For exact silver values see Cobalt Production Table
page #86. SILVER COBALT CYCLOIDE VEIN DEPOSITS OF ONTARIO
Mineral Resources Circular No. 10

STATISTICAL REVIEW
Assuming ALL Properties Equally Explored

Scale: 1" = 1 MILE
• OPERATING MINES IN 1968
• NON OPERATING MINES

Drawn by: Michael Mela
December 1977
A. Description of work:
The survey was conducted on a N.S. Line pattern. The lines were at 400-foot intervals. The pickets were placed at 100-foot stations. The instrument used was a VLF-2 one-man unit made by and rented from Phoenix Geophysics, 200 Yrokland Blvd., Willowdale, Ontario, Canada.

Method:
2 frequencies were chosen; Frequency 1 was Cutler, Maine, Frequency 2 was Seattle, Washington.

Field Measurements were recorded as follows:

Dip Angle in degrees as North or South. These angles were plotted on the profiles as North (to the left of the line) or as South (to the right of the line). Zero dips were not plotted. The Dip Angle is the null obtained when the operator is facing the station with the instrument held in a vertical position.

Out-of-Phase Signal. This is the signal read when the instrument is held in a vertical position and is taken at the same time as the Dip Angle. This reading was not plotted as generally only the horizontal field strength and the dip are recorded in a survey of this nature.

Horizontal Field Strength. This was recorded with the instrument held horizontal at right angles to the station. In the map presentation the Horizontal Field Strength was not plotted. It was found, however, that the Horizontal Field Strength increased with an increase in Dip Angle.

Time. The time was taken upon the completion of reading Dip, Out of Phase and Horizontal Field Strength of both Frequency 1 and Frequency 2. A diurnal correction was applied to the dip angles shown on the map. The reason for this was to ascertain to the operator's satisfaction if there was appreciable battery drain to affect significantly the readings and also as a record in the event of a station shutdown. It was concluded that the change was negligible.

B. Purpose of using two transmitting stations:
Two transmitting stations were used, one as a check against the other. While this is not essential, it is good practice. It was hoped to pick up generally north-south conductors as a result of a study of the Harrison Hibbert ore body to the north east and the Deer-Horne Mine to the south east of the Malouf Holdings.
C. Map Scale and scale of profiles:
The lines were plotted at 20 scale and the scale should read 1" = 200'.
The dip angles were plotted at 40 scale and Dip Angle readings should read 1" = 40°.

Respectfully submitted,

Michael S. Malouf

Michael S. Malouf

MSM/cy
Ministry of Natural
GEOPHYSICAL – GEOLOGICAL
TECHNICAL DATA

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s)  Electromagnetic  Ulf-Z
Township or Area  Chama-Trip
Claim Holder(s)  Michael Weir

Survey Company
Author of Report
Address of Author
Covering Dates of Survey
Total Miles of Line Cut

SPECIAL PROVISIONS
CREDITS REQUESTED

Geophysical
- Electromagnetic  40
- Magnetometer
- Radiometric
- Other
Geological
Geochemical

ENTER 40 days (includes line cutting) for first survey.
ENTER 20 days for each additional survey using same grid.

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)
Magnetometer
Electromagnetic
Radiometric
(enter days per claim)

DATE:  Dec 17  SIGNATURE:  Michael Weir
Author of Report or Agent

Res. Geol.  Qualifications

Previous Surveys
File No.  Type  Date  Claim Holder

MINING CLAIMS TRAVERSED
List numerically

MINING LANDS SECTION

RECEIVED

DEC 27 1979

TOTAL CLAIMS
**GEOPHYSICAL TECHNICAL DATA**

**GROUND SURVEYS** — If more than one survey, specify data for each type of survey

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**GRAVITY**

| Instrument          |       |                 |
| Scale constant      |       |                 |
| Corrections made    |       |                 |
| Base station value and location |       |                 |

| Elevation accuracy  |       |                 |

**INDUCED POLARIZATION RESISTIVITY**

| Instrument          |       |                 |
| Method              | ☐     | Frequency Domain |
| Time Domain         |       | ☐ Frequency Domain |
| Parameters — On time |       | Frequency       |
| Off time            |       | Range           |
| Delay time          |       |                 |
| Integration time    |       |                 |
| Power               |       |                 |
| Electrode array     |       |                 |
| Electrode spacing   |       |                 |
| Type of electrode   |       |                 |
Location & Access: The Malouf holdings, claim numbers 471008, 471006, 471662, 472906 and 471661 are located in Lots #1 and 2, Concession VI, Coleman Twp., Sudbury Mining Division. The property is accessible by a serviced road which run S.W. by one and a half miles from the intersection Highway 11-B and Cross Lake Road.

Description: There is a bush road which cuts across the property in a North Easterly direction. There has been a considerable amount of trenching and pit sinking done on this property as well as the working of the Nerlip Mine. (See Map attached)

Linecutting: A line pattern was established this year between September 26th and October 6th. The base line was laid out in an east-west direction. The north-south lines were spaced at 400' intervals with picket stations every 100'. While establishing line pattern the pits and trenches shown on the attached map were tied in.

E.M. Survey: A VLF-2 Electromagnetic Instrument was rented by Phoenix Geophysics, November 16th/79 and was used to conduct this survey. (See Map attached) Two Frequencies were used. Frequency 1 shown in red on the map being Cutler Maine and Frequency 2 shown in yellow - being Seattle, Washington. Check stations were established and readings were adjusted to account for deviations due to time. There were five anomalies (crossovers), of which the writer feels bear further consideration. The other three were in swampy areas which throw some doubt on their validity. The two are as follows: Crossover 1 is in the middle of Claim No. 471008. Crossover 4 is in the middle of the S.E. corner of Claim No. 471006.

Conclusion: I believe that this property has merit and should be prospected further.

Sincerely yours,

Michael Malouf
c/o S.E. Malouf Consulting Geologists Ltd.