



HUTT LAKE PROSPECT

MONTROSE TOWNSHIP (N.T.S. 41P/14), ONTARIO

LARDER LAKE MINING DIVISION

FINAL REPORT - ONTARIO PROSPECTOR'S ASSISTANCE PROGRAM

GEOLOGICAL MAPPING PROGRAM

O.P.A.P. PROJECT REGISTRATION #OP92-004

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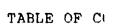
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MINING LANDS BRANCH

August 30th, 1992





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1.0) INTRODUCTION

The following report describes a work program completed in the summer of 1992 on the Hutt Lake Prospect. Funding for the program was provided by the Ontario Prospectors Assistance Program (O.P.A.P.).

Reference is directed to the original project proposal forwarded to the O.P.A.P. incentives office by Mike Dyment in March of 1992.

The work program consisted of three portions:

- geological mapping
- prospecting
- geophysical surveys (mag & VLF)

All work was performed in June - July of 1992 by Mike Dyment & Jocelyn Kidston of Tarzwell, Ontario (mag, VLF, prospecting), Glenn J. Mullan (geological mapping) of Dubuisson, Quebec, with linecutting by Daniel Ferderber and Pat Lanigan both of Val d'Or.

2.0) LOCATION AND ACCESS

The property consists of 7 unpatented mining claims (total 8 units) located in southwest Montrose Township, Ontario (See Figure #1 - claim map).

The area is approximately 45 km north of Shining Tree or 30 km west of Matachewan in the southwest corner of the Temiskaming District. Geographic coordinates are approximately centered at 81.40' west & 47.57' north (NTS #41 P/14).

Access to the claims is via old logging and mine roads trending west from Matachewan or south from Timmins. Approximately 22 km west of Matachewan, a bridge & culvert at Duncan Creek have been washed out with a temporary bypass circumventing the deeper part of the creek on the north side (4 wheel drive). Continuing on the main mine road for approx. 4 km, a well used secondary road heads NNW - NW towards the abandoned Stairs Mine in NW Midlothian Township (Frank Lake, Sirola Lake area). This road continues NNW past the Stairs Mine turnoff and heads into adjacent Montrose Twp. Melick Lake is some 5 km north of the Stairs Mine turnoff, and is 1 km east of the grid area.

A temporary shelter was erected off the main road at Jay Lake (1 km south of Melick Lake). From here, access into the claims is a 400 metre walk due west. Claim post #1-1151412 (#2-1151410) is located at Line 0+00, 24+00 East.

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES. AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER. MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON

"THIS MAP SHOWS THE APPROXIMATE LOCATION OF THE BOUNDARIES OF THE AREA WARCH IS THE SUBJECT OF CURRENT ITIGATION. THE EXACT DCATION WILL BE HOWN FOLLOWING INFIRMATION BY THE RTIES TO THE ACTION."

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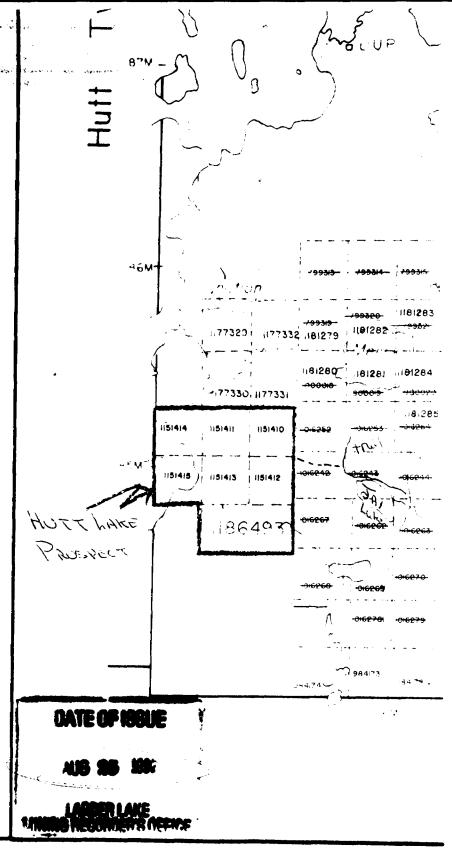
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NSHIP / AREA FALLS WITHIN THE _____ MANAGEMENT UNIT

SUBJECT TO FORESTRY OPERATIONS.
'T FORESTER FOR THIS AREA CAN BE AT: P.O. BOX 129
SWASTIKA, ONT.
POK 1TO
705-642-3222



France # 1

Many of the roads and trails in this area are not shown on the current toprographic sheets. Forestry activity in the last 20 years has generally improved access. Time required for transportation from Matachewan into the grid area is approximately 1 hour.

3.0) PREVIOUS EXPLORATION SUMMARY

Five files describing previous work within portions of the current project area are on record at the office of the Resident Geologist in Kirkland Lake:

- KL-206 "Beder, E.A." (1943 1944)
- KL-1237 "Hutt Lake Claims"
- KL-1405 "Kidd Creek Mines Ltd."
- KL-2754 "United Buffadison G.M.L."
- KL-3017 "Trinity Explorations"

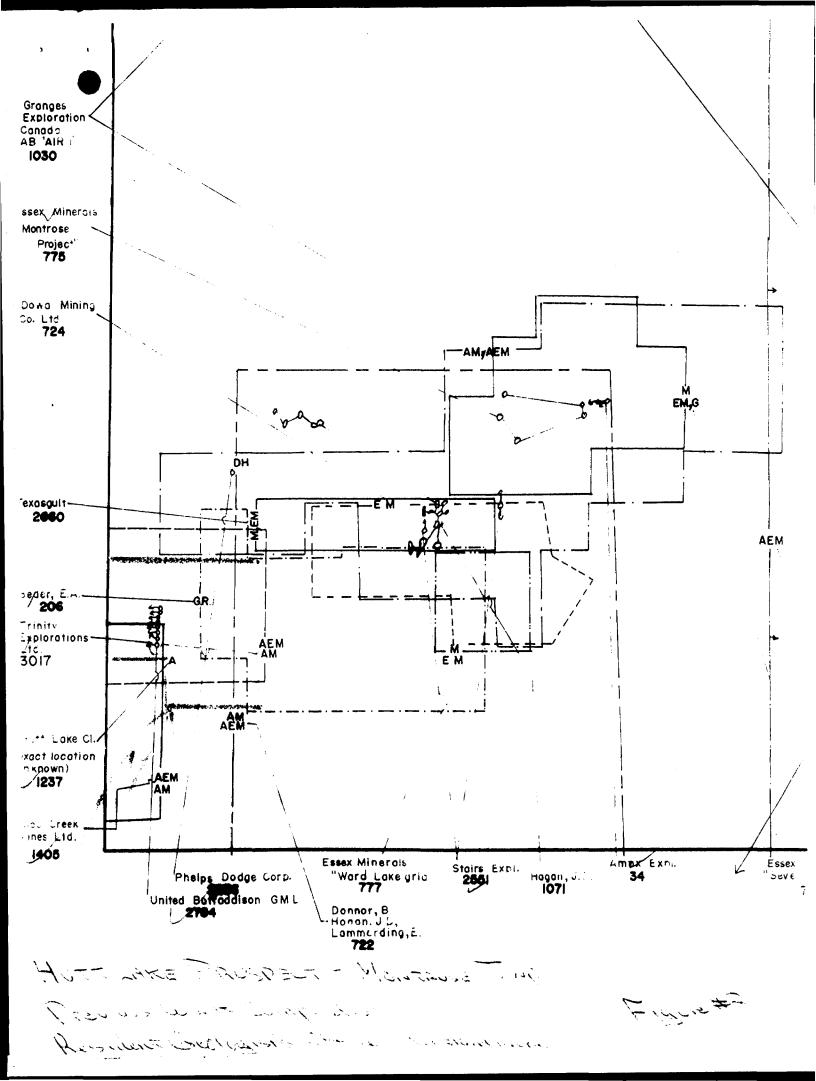
several additional sources were located in newspaper clippings and O.D.M. reports. See Figure #2 (work compilation).

- 3.1) Annual Report 41-2 (1932) "Bannockburn Gold Area"
- 1932 H.C. Rickaby report by the (then) O.D.M. describing developments in the area west of Matachewan. Work in this area was precipitated by the discovery of the Ashley Mine in 1930.
- 9 claims were held by T. Wright, J. Young, and J.R. Todd in the area at the NE end of Hutt Lake (current project area?). Work by the Tump Line Syndicate (p. 21) was directed towards a sulphide deposit associated with iron formation on (then) claim #G.G. 5915, said to be 400' NE of Hutt Lake.

Earlier work had been conducted by the Ogiltree Mining Syndicate. A 30 wide, N10W striking band of rusty schist had been traced for 600 feet. It consisted of several disconnected (ie: boudinaged?) lenses of quartz up to 5 feet wide, variously mineralized with pyrite and chalcopyrite. The quartz was said to be cherty and banded (iron formation) and the schist altered to sericite and carbonate. A small lens shaped felsic intrusive was observed to be altered.

3.2) File #KL-206 "Beder, E.A."

1943 geological report by G.L. Holbrooke of Erie Canadian Mines (Sylvanite Gold Mine exploration affiliate). This regional program was directed towards exploration of several targets, any of which were thought to represent the potential western extension of the "Larder - Cadillac Break".



The #4 zone was described as being located just north of Hutt Lake on the contact of the north rhyolites and the underlying greenstone flows to the north. Its width (400 feet), strike (3000 feet) of N70E, and general location north of the expected location of the "Larder - Cadillac Break" made it a lower priority target in view of other developments nearby in the 1940's.

By 1944, the group consisted of 9 claims covering the #4 zone for 5000' along strike. Claims (then) numbered 13877 & 13880 had a strong NE-SW shear mineralized with bands of pyrite from which assays up to 2.40 (dwts.) were obtained.

A N-S striking shear was located on claims (then) numbered 13873 & 13876. Well mineralized quartz veins and stringers across widths up to 60 feet were hosted in the shear. Low assays were obtained on surface.

Undated (1960's?) property submission notes from the Keevil Mining Group ("K.M.G. Files") indicates the Beder claims adjoin the United Buffadison property where an assay of .21 oz/t Au had been obtained in a recent 8 drill hole program.

3.3) File #KL-1237 "Hutt Lake cl."

Undated (1940's? Sylvanite?) hand written notes describing 14 trenches and mineralization on the "Hutt Lake Group". Summaries follow:

Trench 1: N20E strike. Iron formation. numerous qtz str, heavily mineralized with marcasite, some py. & pyrrhotite (sheared)

Trench 2: N20E strike. Iron formation. numerous qtz str. Qtz vein at east end 10' wide well mineralized over most of trench. Marcasite, pyrite, some pyrr. & sheared.

Trench 3: N20E strike. Iron formation. numerous qtz str. medium marcasite, pyrite, & pyrr, qtz vein at east end 10' wide, sheared

Trench 4: Iron formation sheared with qtz str, medium mineralization, marcasite, pyrite, pyrrhotite.

Trench 5: Iron formation sheared qtz str, medium min. (marcasite) 7' vein at east end of trench

Trench 6: arkose, partly sheared, strike N-S

Trench 7: sheared iron formation, numerous qtz str, massive mar % pyrr

Trench 8: reading west to east, 55' rhyolite, 15' arkose, 30' iron formation, 110(?) rhyolite, some shearing over most of this trench considerable qtz str, medium marcasite & pyrr

TRUM FILE KL-1DST MUTT HAKE CI

Trench 9: 70' rhyolite sheared weak min. (marcasite) 20' iron formation well min. marcasite & pyrr reading north to south

Trench 10: rhyolite

Trench 11: reading south to north; 40° iron formation, well mineralized marcasite, pyrite & a little chalco., 1 assay of 3.20 dwts in s end of trench in 1944, 1 of 2.20 same place , 1 Of 1.60 1943 qtz vein in s end 4' wide

Trench 12: 60' iron formation sheared numerous qtz str, well mineralized marcasite, 30' rhyolite? reading north to west (?)

Trench 13: 15' iron formation in s end, 30' rhyolite?

Trench 14: 50' sheared arkose med. min. marcasite, tied on to picket line at point "A"

See trench sketches.

3.4) File #KL-1405 "Kidd Creek Mines Ltd."

1984 airborne mag and em (Questor) regional survey in the Hutt, Halliday, and Montrose Twp's area. A broad E-W trending mag high was identified in the area to the south of Hutt Lake.

3.5) File #KL-2754 "United Buffadison Mines Ltd."

1960's file contains logs of the 8 hole program and newspaper clippings (Northern Miner?) describing the results.

Work was directed (July, 1962) on a 9-claim group adjacent to the Stairs property. Summer prospecting program located a 20° wide mineralized shear zone striking N-S.

In October (1962) an 8-hole drill program was designed to test the "gold-bearing shear zone, which has been traced by a recently completed surface prospecting and trenching campaign for a length of about 500 feet. Average width of the shear is about 25 feet.

Quartz veins and stringers up to two and a half feet wide occur en echelon within the shear. Surface samples have returned values of .23 oz, .20 oz, and 0.05 oz gold per ton".

Drill logs are brief and describe short holes and are summarized below:

 Hole 7: tuff 0' - 11'
carbonated tuff 11' - 13.7'
tuff 13.7' - 74'
andesite, chloritized 74' - 101' (e.o.h.)

Hole 6: tuff 0' - 51' (e.o.h.)

Hole 5: tuff, sheared 0' - 20'
tuff 20' - 105' (e.o.h.)

Hole 4: rhyolite 0' - 14'

Hole 4: rhyolite 0' - 14'
quartz, well mineralized with pyrite +/- chalcopyrite
14' - 21'
rhyolite 21' - 105' (e.o.h.)

Hole 3: rhyolite 0' - 17.5'
quartz, hard, well mineralized 17.5' - 23.6'
rhyolite 23.6' - 29'
quartz milky white, minor mineralization 29' - 36'
tuff 36' - 108' (e.o.h.)

Hole 2: tuff 0' - 104' (e.o.h.)
graphite 0 - 23.5'
patches of fine pyrite 34.4' - 37.1'
white quartz & fine dark pyrite 37.1' - 40.6'
sections of quartz & some scattered fine pyrite
40.6' - 104'

Hole 1: blue quartz 0' - 2.5' tuff 2.5' - 107'

A drill sketch shows location of ddh's with respect to Hutt Lake.

The group was later restaked and transferred back to United Buffadison (1965). No further work is on record.

3.6) File # KL-3017 "Trinity Explorations"

Consists of an airborne VLF-em and mag survey flown in 1991. A strong mag high is indicated in the Hutt Lake area with a second weaker high suggested in the eastern portion of the claims near the pyrrhotite zone located by Sylvanite. Several linear features are shown on the compilation map ("GI-1"), one of which corresponds to the Mist Lake Fault Zone ("F1"). The United Buffadison showing may be related to this structure.

Ten VLF conductors are indicated, several of which show general correlation with the position of the two showings, and several of which may indicate general geological contacts and/or shearing. Onely the anomalies along the northern boundary appear to be caused by topography.

Anomaly "B2" correlates with the conductor located in 1992 ground surveys using the Crone Radem (NSS)

3.7) Government Surveys

The only geological map by government agencies (1932) is #41-A (AR 41-2) "Bannockburn Gold Area " at a scale of 1" = 3/4 mile, by H.C. Rickaby by the (then) Ontario Department of Mines. The area in the vicinity of the subject claim group is shown to be underlain by basic volcanics to the north, acid volcanics to the southwest, and Temiskaming sediments to the east and southeast.

Two airborne surveys have been funded by the Ministry, both at township scales. Map #P-1020 "Montrose Twp.", airborne em and total field (1" = 1/4 mile) indicates a broad mag-high in the Hutt Lake area.

Map #81401 "Shining Tree Area" (airborne em and total field) at a 1:20,000 scale shows a similar magnetic high feature in the Hutt Lake area. In both surveys, the direction of flight lines was north-south.

A recent O.G.S. Miscellaneous Paper (#156) describes a grant project (#359) entitled "Structural Geology and Stratigraphic Correlations in the Midlothian Lake - Peterlong Lake Area, Abitibi Subprovince" by R.B. Hrabi and H. Helmstaedt, pages 31-40.

The study area included Montrose Twp for which the "Hutt Lake Prospect" is shown to be underlain by Mg-tholeites of the Zavitz-Hutt assemblage to the north and the Halliday assemblage to the south.

4.0) GEOLOGY OF THE PROSPECT (Regional)

The Hutt Lake Prospect is located in the southwestern portion of the Abitibi Greenstone Belt. The greenstone belt is itself located within the Abitibi Subprovince of the Canadian Shield. The Abitibi Greenstone Belt extends in an east - west general direction for over 500 km from Chibougamou, Quebec (northeast) to west of Timmins, Ontario (west) making it the largest greenstone belt in the world.

The Timmins-Kirkland Lake-Rouyn/Noranda area forms a large east trending synclinorium (1985: L. Jensen, in <u>Geology and Petrogenesis of the Archean Abitibi Belt in the Kirkland Lake Area, Ontario</u>, M.P. #123) extending between the Lake Abitibi and Round Lake batholiths. Both limbs of the synclinorium are cut by major geological structures, the Destor-Porcupine Fault Zone (north) and Kirkland Lake-Larder Lake Fault Zone (south).

Supracrustal Archean rocks in the Midlothian - Peterlong Lakes area are subdivided into several metavolcanic assemblages (Beemer, English, Zavitz-Hutt, Halliday) and a single sedimentary assemblage (Midlothian).

Much of the general geological work has been compended from earlier work in the Matachewan area and does not necessarily correlate with similar work in the south Timmins area. Revisions to the existing general stratigraphic relationships are underway with field mapping still in progress in the Matachewan area.

In general, rocks younger than 2800 Ma host all known economic massive (VMS) & base metal deposits of volcanic origin in the Timmins area. Age dating in the south Timmins area has ascribed 2725 Ma for the felsic portion of the Deloro Group (= Skead Equivalents?).

Most of the lode gold deposits in the Abitibi Greenstone Belt are spatially associated with regional ductile shear/fault zones (ie: Larder - Cadillac) which were active later in the tectonic history (<2690 Ma) of the region. 60% of all lode gold production occurs in rocks older than 2500 Ma (1990: Ore Deposit Models, Geoscience Canada, Reprint Series #3, edited by RG Roberts & P.A. Sheahan).

4.1) GEOLOGY OF THE PROSPECT (Local - Montrose Township Area)

As the township has not been mapped with any degree of resolution, the following Table of Formations is derived from several sources including assessment files, government area reports, and general field observations using L.S. Jensen's legend as a guide (1986: M.P. 129).

Table of Formations

Cenozoic

Recent & Pleistocene:

Sands, gravels, clays

Unconformity

Precambrian

Proterozoic:

"Keeweenawan"

Diabase Dykes (NE series)

Intrusive Contact

Archean:

"Matachewan"

Diabase Dykes (NS series)

Granitic Intrusives

Granodiorite, monzonite, quartz monzonite, syenite

Massive to gneissic quartz diorite, tonalite, trondhjemite

Upper Supergroup

Temiskaming Group & Destor-Porcupine Complex Blake River Group Kinojevis Group

** Larder Lake Group & Stoughton - Roquemaure Group

** Porcupine Group

Lower Supergroup

** Skead Group & Hunter Mine Group Catherine Group Wawbewawa Group Pacaud Tuffs

See Figure #3.

** = Represented in the Montrose Township area.

In the Montrose Township area, lithologies are dominated by two assemblages: the Halliday which consists of calc-alkaline felsic tuffs, and the Mg-tholeites of the Zavitz - Hutt assemblage consisting of pillowed and massive basalts and flow-breccia's (1991: R.B. Hrabi & H. Helmstaedt in Geoscience Research Grant Program, Summary of Research 1990 - 1991, Grant #359, pages 31 - 40).

These units have also been referred to in earlier literature as the Larder Lake Group Equivalents (tholeites) Porcupine Group Equivalents (conglomerates), and Skead Group Equivalents (pyroclastics).

General stratigraphy in the Montrose Township area strikes north to northwesterly, as indicated by the regional airborne surveys. Several major lineaments are observed (rivers, creeks, etc.) and trend to the north to northeast. Original work in the Montrose area was directed towards confirming the possibility that the Larder - Cadillac Break might pass through the southern portion of the township.

4.2) GEOLOGY OF The Hutt Lake Prospect

Mapping was completed over the group in a single stage from mid to late June of 1992. The author was assisted by Mike Dyment and Jocelyn Kidston who had already conducted prospecting over most of the group.

All grid lines were mapped although line-cutting was still in progress at time of mapping in the west end. These lines were projected by pace and compass to claim boundaries. Claim lines were also mapped, all claim posts were located and are shown on the map.

36 samples were taken during the prospecting and mapping programs and analysed for gold (36), copper (22), zinc (2), and nickel (1). Several type specimens were kept from the United Buffadison showing. No whole rock analyses were completed.

Purpose of the program was to determine the potential of both of the reported showings ("United Buffadison" and "Sylvanite") in view of previous reported results and with respect to recent exploration results in the Matachewan-Robertson area by Queenston Mining Inc and Strike Minerals Inc.

Both base metals (VMS) and gold are thought to be valid targets within the area of search.

Reference to the geological map (in pocket) and Figure #3 (Matachewan compilation sketch) are suggested. The geological legend (Appendix B) used is that employed by the Ministere de l'Energie et Ressources (1984: M.E.R. - Quebec).

Sobie (M.P.H. Consulting, 1988))

after R. Macfie and P

4.2-1) Morphology

General topography in the area is controlled by underlying bedrock with large ridges and humocks in the area northeast of Hutt Lake and to the north of the property (rising to approx. 75' positive relief) with a general trend of approx. N15E and gentle rolling hills and subcrop located in the southern claims. There is a fairly high degree of outcrop - subccrop within the claims due to forestry activity through much of the area.

A northerly striking lineament is observed in the west portion of the two eastern claims (1151410, 1151412) and is occupied by a creek and narrow pond. This lineament hosts the "Sylvanite Showing".

Several small swamp areas are located within the claims to the south and southeast.

4.2-2) Lithology, Stratigraphy of the Hutt Lake Prospect

Much of the northwestern area (claim #1151414) is underlain by volcaniclastic rocks consisting of agglomerates (V10) and spherulitic lavas (V10*) with breccias (&), tuff breccias (V9&), and tuffs (V9) scattered throughout the claim group.

Fragmentals (V10) were also obeserved in the areas immediately northeast of Hutt Lake and along the central portion of the northern boundary. Bomb sized fragments up to 12" were observed in several of the large ("whale-back") outcrops which tend to be weathered to a pale bleach grey.

Intermediate to mafic volcanics (V5, V5 σ) are distributed throughout the claim block and may be part of the volcaniclastic series without relict textures. Many of these outcrops were difficult to expose due to the dense overburden mat. Pillowed basalt (V7 ϕ) was observed only at the southern end of Tie-Line 14+00 East.

Two series of tuffs (V9, V9) are seen in the central portion of the claims (west portion of claims 1151411, 1151413) and west portion of 1151410, 1151412). Both of the showings appear to be hosted within the tuffs. In both cases, field relationships indicate a northerly strike to the units.

Felsic rocks are confined to the areas in northeastern 1151411 (V2), 1151410 (V1) and southeastern 1151512 (V2).

Alteration typically consists of weak carbonatization (f), locally intense silicification (5), and sericite (λ) development in the tuffs (V9) proximal to the United Buffadison showing.

Contacts are largely assumed from general relationships and from geophysical data. None were observed.

A prominant foliation to the NNE exists in most outcrops (N10E - N20E with dip steeply to the southeast). Shearing and/or faulting appears to be confined to the area near the United Buffadison showing (approx. N10E/75-85SE).

Most of the units exhibit little to no magnetic signature. One exception is the tuffaceous unit hosting the "Sylvanite" showing which shows continuity across the property from L12+00 S to L 12+00 N (12+00 E - 13+50 E). Note that the only sulphide iron formation located during mapping (rubble from an old slumped trench) is located near the northern end of the mag-high.

4.2-3) Geology of the "United Buffadison" Showing

The "United Buffadison" showing is a strong northerly (N10E - N15E) striking shear zone consisting of quartz veins, veinlets, and stringers over much of the 30' - 60' width. Where exposed, it is hosted entirely within the tuffaceous unit (V9) which is variably altered to sericite (λ), carbonate (γ), and locally silicified (γ).

It is located along a narrow area in the western part of the claim group, northeast of Hutt Lake. A large pit (15') is located at approx. $0+50 \pm 0.3+20 \, \text{N}$, with several smaller pits and trenches having been excavated along strike to both the north and south.

Total length (intermittent exposure) of the area is approximately 800 feet although the area of interest may well continue along strike in both directions. Forestry activity has filled most of the trenches and the remaining overburden cover was nearly impenetrable in most areas due to the root maze and large stumps inhibiting access.

Much of the core of the showing may be sericite schist with ankerite alteration yielding the rusty orange hue. Up to 5% pyrite was observed on surface in the walls of the pits. Quartz veins and veinlets from 4" - 2' are conformable to the achist and are composed of both pristine bull white and smokey blue/grey "cherty" varieties. Many of both types of veins are well mineralized with fine to medium grained pyrite.

The pit at $0+50\rm{E}$ @ $3+20\rm{N}$ contains a 5' thick mudstone unit which is also conformable to regional strike.

VLF data from Annapolis (NSS, 21.4 KHz) indicates a coincident conductive zone striking across the property just east of the Base Line 0+00 from L12+00 S to L12+00 M. The anomaly may be displaced due to the southeasterly dip of the showing.

Earlier work here by the Ogiltree Mining Syndicate (pre-1930's) and Tump Line Syndicate (1932) described iron formation in the area. This was not observed and was not indicated by the mag survey. The zone was said to be 600' long, 30' wide, strike N10W, and consist of lenses of quartz up to 5' wide mineralized with pyrite and chalcopyrite.

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Work by United Buffadison Mines in the 1960's described the zone as having a strike of over 500', average width of 25', with quartz veins and stringers up to 2 1/2' wide occuring en echelon within the shear. Assays of .23 oz/t Au, .20 oz/t Au were said to have been obtained. 8 holes were drilled to an average depth of 105'. Newspaper clippings indicate that an assay of .21 oz/t Au resulted from the program.

4.2-4) "Sylvanite" Showing

The "Sylvanite" showing is located north of the beaver pond located at 12+00 E from L0+00 to 10+00 N. Most of the showing lies beneath the pond which did not exist at the time of the original work. Sketches from Sylvanites work were used to locate three trenches in the area near grid 13+00 E, 10+00 N (possible original trenches #12, 13, 11 from north to south).

The three trenches are completely overgrown—with poplars to 12" inside some of the muck piles. One of the samples selected is iron formation (sulphide facies) which corresponds with the original sketches submitted in the 1940's.

Note that this work was directed towards locating areas thought to represent the western extension of the Cadillac-Larder Lake Break in the west Matachewan area. Assays of 3.20 dwts and 2.20 dwts Au had been obtained in one of the above trenches.

There is no outcrop exposure in the immediate area due to flooding by the beaver dam.

Some of the marcasite described may refer to the area of gossan located near Tie-Line 14+00 E @ L 8+00 N. Several old trenches were located among the small rusty outcrops, several of which have a cherty grey quartz component.

The magnetic survey highlighted the Sylvanite showing area as a definite mag-high image is outlined west of TL 14+00 E across the property from L 12+00 S to L 12+00 N. The highest mag readings were taken near the area of the sample containing iron formation.

Two VLF responses characterize the area with a definite anomaly located along the pond (11 E - 13 E, between lines 4+00~S and 8+00~N), likely also coincident with the original trenches (area now flooded). A second, shorter response is observed to be coincident with the area of gossan (TL 14+00~E @ 8+00~N).

5.0) Recommendations

Several primary targets have been outlined by the recent geological mapping & geophysical surveys (mag & VLF). These merit follow-up by power stripping and possibly a modest diamond drilling program (depending on results from mechanical stripping program).

A) "United Buffadison" Showing

A large scale stripping and washing program is required to expose the zone, most of which was covered during forestry activity over the last 20 years. Much of the area subcrops such that a back-hoe would be the most usefull tool in this capacity.

Blasting in areas of interest would be beneficial as most of the surface cap is oxidized.

The coincident mag and VLF anomalies, together with the geological context and historical assays make this a high priority target.

B) "Sylvanite" Showing

The coincident mag and VLF anomalies enhance the target in view of the sample of iron formation obtained from one of the trenches along the north boundary. Along with the historical assays, and in consideration of the excellent work by Erie Canadian Mines (G.L. Holbrooke) through much of the Kirkland Lake area in the 1930's and 1940's, the target should be considered high priority. Note that it was never drilled by the Sylvanite interests as they redirected their efforts to other projects in the Matachewan area.

As the beaver pond has flooded most of the original trenches, the dam would need be broken in order to muck out and investigate the showing along strike to the south.

Stripping with a back hoe could be initiated at the three trenches already located along the northern boundary before proceeding with the program. Diamond drilling with a small machine should also be contemplated as this would avoid the necessity of destroying the beaver dam.

C) Gossan (T.L. 14+00 E @ 8+00 N)

The zone should be followed with a "beep-mat" in order to investigate possibilities along strike. Blasting in the area of exposure would facilitate sampling which was all but useless in the area which now outcrops. Strong shearing is observed to be trending to the northeast in several outcrops such that the directions of the grid system are not efficient (45 degrees off of strike) for geophysical surveys.

D) Rhyolite Unit (1+50 W @ 9+00 N)

This unit should be examined in greater detail. Several small quartz veins and stringers were observed through the area (trending northerly), several with malachite staining. This zone may be continuous through the agglomerate shown near 1+50 W near 11+00 N.

E) "Beep-Mat" Survey

Although not recommended as a geophysical tool, the "Beepmat" is an under-utilized prospecting aid and could be of use in this area with a high degree of outcrop & subcrop. Areas to be investigated include the felsic unit identified along the boundary of 1151412 and new claim #1186493 (2 units).

6.0) Statement of Costs

Item - Description

Cost

A) Geological Mapping

- Field work (10 days * 1 geologist, 2 prospector assistants) = 10 days * \$400\$4000 - Final report (1 * 5 days * \$200) \$1000
- Support costs B)
 - travel (200 km/day * .30/km * 12 days)

- food & accomodation (10 days * \$75/day)

20% of \$5,000: \$1,000. Total \$5,000. Total: \$6470

Amended. \$6,000.

Signed in Dubuisson, Quebec on August 30th, 1992:

Glenn J. Mullan

E) "Beep-Mat" Survey

Although not recommended as a geophysical tool, the "Beepmat" is an under-utilized prospecting aid and could be of use in this area with a high degree of outcrop & subcrop. Areas to be investigated include the felsic unit identified along the boundary of 1151412 and new claim #1186493 (2 units).

6.0) Statement of Costs

Item - Description

Cost

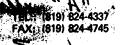
A) Geological Mapping

- Field work (10 days * 1 geologist, 2 prospector assistants) = 10 days * \$400 \$4000 - Final report (1 * 5 days * \$200) \$1000
- B) Support costs
 - travel (200 km/day * .30/km * 12 days) \$720
 - food & accomodation (10 days * \$75/day) \$750

Total: \$6470

Signed in Dubuisson, Quebet on August 30th, 1992:

Glenn . Mullan





LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE BOURLAMAQUE ASSAY LABORATORIES LTD.

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	SAMPLES	e e e e e e e e e e e e e e e e e e e		VAL D'OR (QU	IÉBEC)	19	
v 2 🕏	REÇU DE	Glenn Mullan			36 Au, 22 (Cu, 2 Zn, 1 Ni	•
	Sample		Cu &	Zn &	Ni 2		
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-	12005	20	0.005	-	-		
	12006	20	0.001	-	-		
14.	12007	10	0.011		••	•	
	12008	N.D.	N.D.	••	-		
'	12009	10	0.001		-		
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	12037	N.D.	-	-	-		
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	16501	N.D.	0.003	-	_		

See prospecting report

AMBIVETE / ASSAVER

APPENDIX, "B"

SYMBOLES LITHOLOGIQUES

ROCHES VOLCANIQUES ARCHEENNES ROCHES METAMORPHIQUES v м Roches voicaniques indeterminées Roches metamorphiques indeterminees V١ MI Schiste Roches volcaniques felsiques ou intermediaires V2 Rhyolite ٧3 Trachyte М3 Roches hybrides V4 Dacite V5 Migmatite Roches volcaniques intermediaires ou maliques M5 V6 Andesile V7 Basaite M7 Giriss ∨8 Roches pyroclastiques indeterminées **8M** Amphibolite ٧9 M9 Granulne Mylamite V10 Agglomerat MIO M11 Quartziti M12 Marbin V13 Roches voicaniques ultramatiques ROCHES INTRUSIVES 1 Roches intrusives felsiques indéterminées ROCHES SEDIMENTAIRES ARCHEENNES 15 Syénite 10 Svėnite austiziaue S Roches seamentaires indéterminées 16 Syenite a leldspath alcalin 51 Conglomerat 1E Syánite quartzique à feldspath alcalin **S2** Arkose S3 1G Grauwacke Argilite, shale, aidoise, phyllade 54 10 Granite à leidspath alcalin **S**5 Quartrite 1A Monzonite quartzique 1M Monzonite Monzodiorite quartzique 1 N FORMATIONS DE FER ARCHEENNES 11 Tonaute 10 Granodiorite F٦ Formation de les indetermines 1P Pegmatite F 2 Formation de les sulluree 18 Albitite F3 Formation de les oxydee 1 X Aphte £ 4 formation de les carbonates 12 Granophyre 18 Rivolite el leisite intrusive ROCHES SEDIMENTAIRES PROTEROZOIQUES 2 Roches intrusives intermediaires indeterminées ρ Roches segimentaires indeterminées 2T Diorite quartrique P١ Conglomeral 2M Monzodiorite 92 Arkose 2D Diorite Р3 Grauwacze 2L Lampioph. ie intermediaire Quartzite et gres P4 P5 Argilite, stiale, ardoise et phyllade 3 Roctus intrusives matiques indeterminees P5 Formation de les 3G Gabbro P7 Dolomie et autres roches à carbonates 3N Natite P8 Tillite 3R Anormosite Lamprophyre malique ou indetermine 3L 3D Diabase ROCHES SEDIMENTAIRES PALEOZOIQUES Roches intrusives ultramatiqu 4 4P Peridotite P1 Calcaire 4H Hornblendite

APPENDIX "B"

SUFFIXES POUR LES MINERAUX DES ROCHES

	biotite	i	carbonate	s	Slaurotide
	chlorite	i,	Serione paragonite	1	tremolite actinote
đ	disthene	ın	muscovite	·	amphibole (indetermine)
e	epidote	n	Oephelene	v	"'veine de
1	feldspath (indetermine)	o	feldspath potassique	W	tourmaline
y	grenat	p	plaquoctase	x .	sillimanite
11	hornblende	q.	quartz	v	DALOXILUI
1	talc	1	Chloritoide	,	/eolite
					= ::

MA utiliser avec un autre suffixe de nuneral (vg. veine de quarti-

SUFFIXES POUR COMPOSITION, ORIGINE ET ALTERATION

	COMPOSITION		ALTERATION		
a	leisique	111	amphibolitisee	λ	sericiti s ee
β	matique	a	silicitiee	η	carbonalisee
7	ultramatique	μ	albitisee	Ì	serpentinisee
	ORIGINE	π	pyritisee	٨	atteration potassique
ò	sedimentaire		epidotiseé	,	alteration indeterminee
11	volcanique	<i>u</i>	porphyritisee	į	skarn
Ú	intrusive "	¢1	chloritisee	ŧ	corneenne

SUFFIXES POUR LES SUBSTANCES D'INTERET ECONOMIQUE MINERAUX ET ROCHES

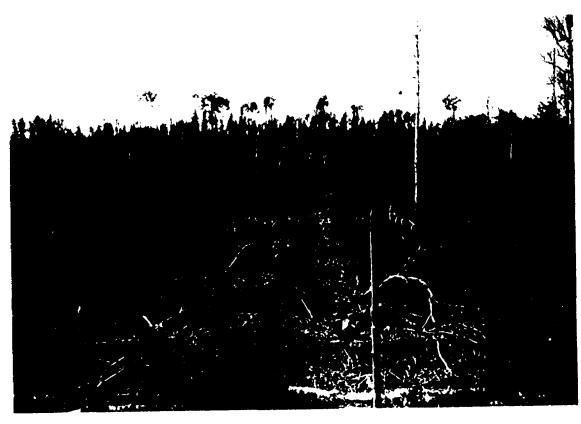
Am	amiante	fp	feldspath	Pn	pentiandite
Ay	anthophyllite	FI	fluorine	Pc	pierre de construction
Αp	apatite			Pm	pierre ornementale
Asp	arsenopyrite	Gn	galène	Py	pyrite
		Gρ	graphite	Pı .	pyrophyllite
Ва	barytine		•	Po	pyrrhotine
Вe	beryl	Hem	hematite		
Bs	bismuth			Ra	mineraux radioactifs
Во	bornite	lim	ilmenite		The state of the s
				Sh	scheelite
Cp	chalcopyrite	Mt	magnetite	Şơ	siderose
Cn	chalcosine	Mc	malachite	Sı	Silice
Ch	chert, jaspe	Ma	marcasite	Sp	sphalerne
Cr	chromite	Mi	mica	Sm	spodumene
Ct	cordierite	Md	mineraux decoratifs	Su	sulfures (indetermines)
Cor	corindon	Mo	molybdenite	J	some standerer mines
Cv	coveline		···oryademie	Та	lantante
Fu	Fuchsite	01	olivine	1.0	romenic

SUFFIXES POUR STRUCTURES PETROGRAPHIQUES ET TEXTURES CARACTERISTIQUES

0	porphyte inius de 50° de phenocristaux		turbidites
	porphyrique 110" - 3 50% de phenocristaux	Δ	brechilorine
•	variolitique, spherulitique	<u> </u>	breche tectonique
Φ	coussinee /, wed	Δ	breche intrusive
ο.	amygdalaire	<u> </u>	breche pyrociastique
. ж	à spinifex		breche explosive
++	Tubance Courses Commentes)	· <u>A</u> ·	breche de coulee
‡	CISAIIIee Seese	∆ •	hyacioclastique
1			•



1. DAN FERDERBER & PAT LANDGAN (LINECUTTERS), CHAINING L 0+00 AT 12+00E



2. I 0+00, APPROX. 6+00E
1 GE IN BACKGROUND IS UNITED BUFFADISON SHOWING



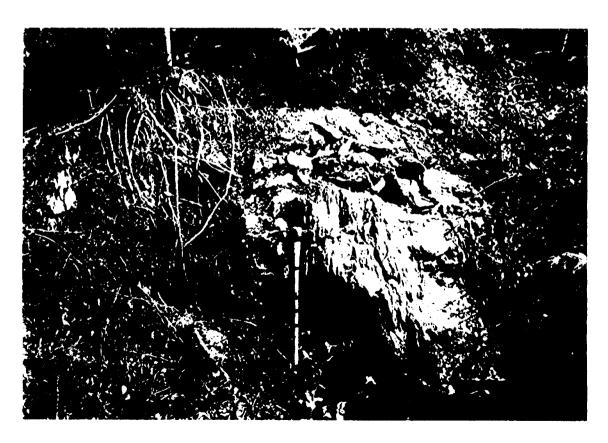
.. OUTLET OF HUTT LAKE NW BOUNDARY OF PROP.



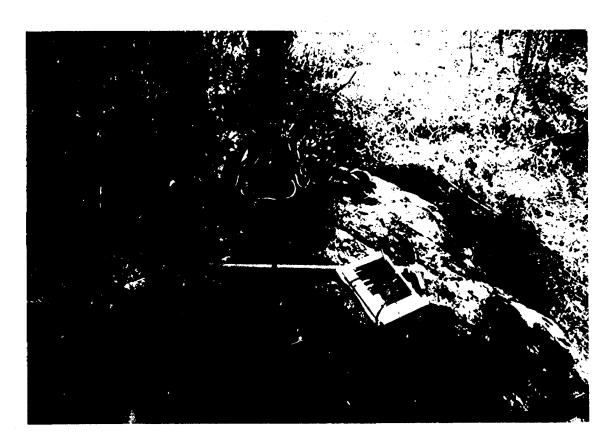
BEAVER FOND OVER SYLVANITE SHOWING



5. TENSION VEINLETS IN SILICIFIED TUFF (vq) BUFFADISON SHOWING @ 3+20N, 0+50E



6. PIT IN UNITED BUFFADISON SHOWING SERICITE SCHIST (vq) @ 3+20N, 0+50E



7. UNITED BUFFADISON SHOWING 1+50N @ 0+35E



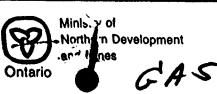
3. UNITED BUFFADISON SHOWING 0+50N @ 0+20E



P. VITNESS POST #3 OL 1151445



10. L. MIKE DYMENT @ LINECUTTERS CAMP.



Report of Work Conducted After Recording Claim

Transaction Number

Mining Act

Personal information collected on this form is obtained under the authority of the Mir this collection should be directed to the Provincial Manager, Mining Lands, Minis Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.



900

Instructions: - Please type or print and submit in duplicate.

- Refer to the Mining Act and Regulations for requirements of filing assessment work or consult the Mining Recorder.

- A separate copy of this form must be completed for each Work Group.

- Technical reports and maps must accompany this form in duplicate.

- A sketch, showing the claims the work is assigned to, must accompany this

92-80-00179.

Recorded Holder(s) Client No. *6301*4.88 MONTRAGE EM OFWIG Work Performed (Check One Work Group Only) Work Group Type Geotechnical Survey Physical Work Including Drilling Rehabilitation Other Authorized Work Assays Assignment from Reserve

Total Assessment Work Claimed on the Attached Statement of Costs

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
Glenn J. Mullum	2130 nu. St. Philippe Dubuison, Quite 278 44
L. M. Dy neut	R.R. W. Torzwell Orland POK 1VX
notebist. E	
fattach a cabadula if passagent	

(attach a schedule if necessary)

Certification of Beneficial Interest * See Note No. 1 on reverse side

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.

ignature)

Certification of Work Report

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after Its completion and annexed report is true

Name and Address of Person Certifying

SEP " ~

For Office Use Only

Total Value Cr. Recorded Date Approved SEP 2 2 1992

Date Notice for Amendments S

MINING LANDS BRANCH

35 2Eb 12

0241 (03/91)

luméro de rapport les travaux exécutés pour l'affectation de la réserve	Numéro de claim	Nombre d'unités	Valeur des travaux d'évaluation exécutés sur ce claim	Valeur affectée à ce claim	Valeur transférée de ce claim	Réserve : travaux à réclamer à une date ultérieure
	1151410		\$1,000	\$ 800	200	
	115/4//		1,000	800	200	
	1151412	1	1,000	800	200	
	1151413		1,000	800	200	
	1151414	1	1,000	800	200	
	1151415	1	1,000	800	200	
	1186493	2	,	1200		
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	éclamez dans le présent rapport, peuvent être réduits. Afin de diminuer les conséquences défavorables de telles liquer l'ordre dans lequel vous désirez au'elles solent appliquées à vos claims. Veuillez cocher (∠) l'une des op-
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- Les crédits doivent être réduits en commençant par le dernier claim sur la liste. ન બ છ
- Les crédits doivent être réduits également entre tous les claims figurant dans le présent rapport. Les crédits doivent être réduits selon l'ordre donné en annexe.
 - - vous n'avez pas choisi d'option, la première sera appliquée. Ø

Examples d'intérêts bénéficiaires : cessions non enregistrées, ententes sur des options, protocoles d'entente, etc. relatifs aux claims. Note 1:

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Note 2:

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Ministry of

and Mines

Ministère du Northern Development Développement du Nord

et des Mines

Mining Lands Branch Geoscience Approvals Section

933 Ramsey Lake Road 6th Floor

Sudbury, Ontario P3E 6B5

Telephone:

(705) 670-5853 (705) 670-5863

Fax:

Our File: 2.14736

Transaction #W9280.179

November 20, 1992

Mining Recorder Ministry of Northern Development and Mines 4 Government Road East Kirkland Lake, Ontario P2N 1A2

Dear Sir/Madam:

subject: APPROVAL OF ASSESSMENT WORK CREDITS ON MINING CLAIMS

L1151410 ET AL. IN MONTROSE TOWNSHIP

The assessment work credits for the Geological survey filed under Section 12 of the Mining Act Regulations have been approved as originally filed.

The approval date is November 17, 1992.

Yours sincerely,

Ron C. Gashinski

Senior Manager, Mining Lands Branch

Mines and Minerals Division

 $\mathbf{L}\mathbf{J}/\mathbf{j}\mathbf{1}$ Enclosures:

cc: Resident Geologist Kirkland Lake, Ontario ONTARIO GEOLOGICAL SURVEY GIS - ASSESSMENT FILES

DEC 1 4 1992

RECEIVED

Assessment Files Office Toronto, Ontario

