N.T.S. 41 P/15
Latitude 47° 59'
Longitude 80° 57'

GEOLOGICAL REPORT

ON THE

McINTYRE-LELIEVER PROPERTY

MONTROSE TOWNSHIP

MATACHEWAN, ONTARIO

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January 1, 1991

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1. INTRODUCTION

At the request of the Directors of Cascade Pacific Explorations Ltd. a preliminary exploration program was undertaken on the company's McIntyre-Leliever property. This program consisted of line cutting, geological mapping and rock sampling. It commenced on October 11, 1990 and was completed by November 1, 1990. The purpose of this program was to evaluate potential of the McIntyre-Leliever property for hosting stratiform volcanogenic massive sulphide mineralization.

The geological mapping was carried out by Brian V. Hall, company President and Consulting Geologist, at a scale of 1:2,000. Approximately 250 outcrops were mapped for mineralization, structure, lithology and alteration minerals. In addition, 35 rock samples were collected and analyzed for major and trace elements. For control, approximately 20.3 km of cut line was established on lines orientated north-south. The line spacing was 25, 50 or 100 metres depending upon proximity to the Leliever showing and three east-west trending baselines were used due to the presence of lakes. The orientation of this grid was largely based upon the east-west strike of the volcanic stratigraphy as indicated by the regional mapping of the Ontario Department of Mines (Rickaby, H.C., 1932b), plus an old report which stated the mineralization of the Leliever showing had a northeasterly orientation (Rickaby, H.C., 1932a).

The geological mapping of Cascade Pacific now indicates the volcanic stratigraphy strikes roughly north-south. This interpretation coincides with the results of a 1984 airborne geophysical survey which indicates a north-south conductive trend originating from the Leliever showing. A Max-Min electromagnetic survey was scheduled as part of this year's work program, however, once the north-south nature of stratigraphy was ascertained, the existing east-west lines of the grid were deemed not to be suitable.

The geological mapping also suggests the Leliever showing to be stratiform, and likely representing the distal portions of a volcanogenic massive sulphide system.

The results of the rock sampling indicated slightly elevated values in copper and zinc in the area of the Leliever showing. In addition, some of the whole rock samples indicated enhanced amounts of MgO, Fe_2O_3 and K_2O, with some depletion in Na_2O and CaO. These samples were collected from the alteration halo surrounding the Leliever showing.

The property appears to have enough potential for hosting volcanogenic massive sulphide mineralization to warrant further work. This work should concentrate on evaluating the 1.5 km long conductive trend which appears to be the strike extension of the Leliever showing.

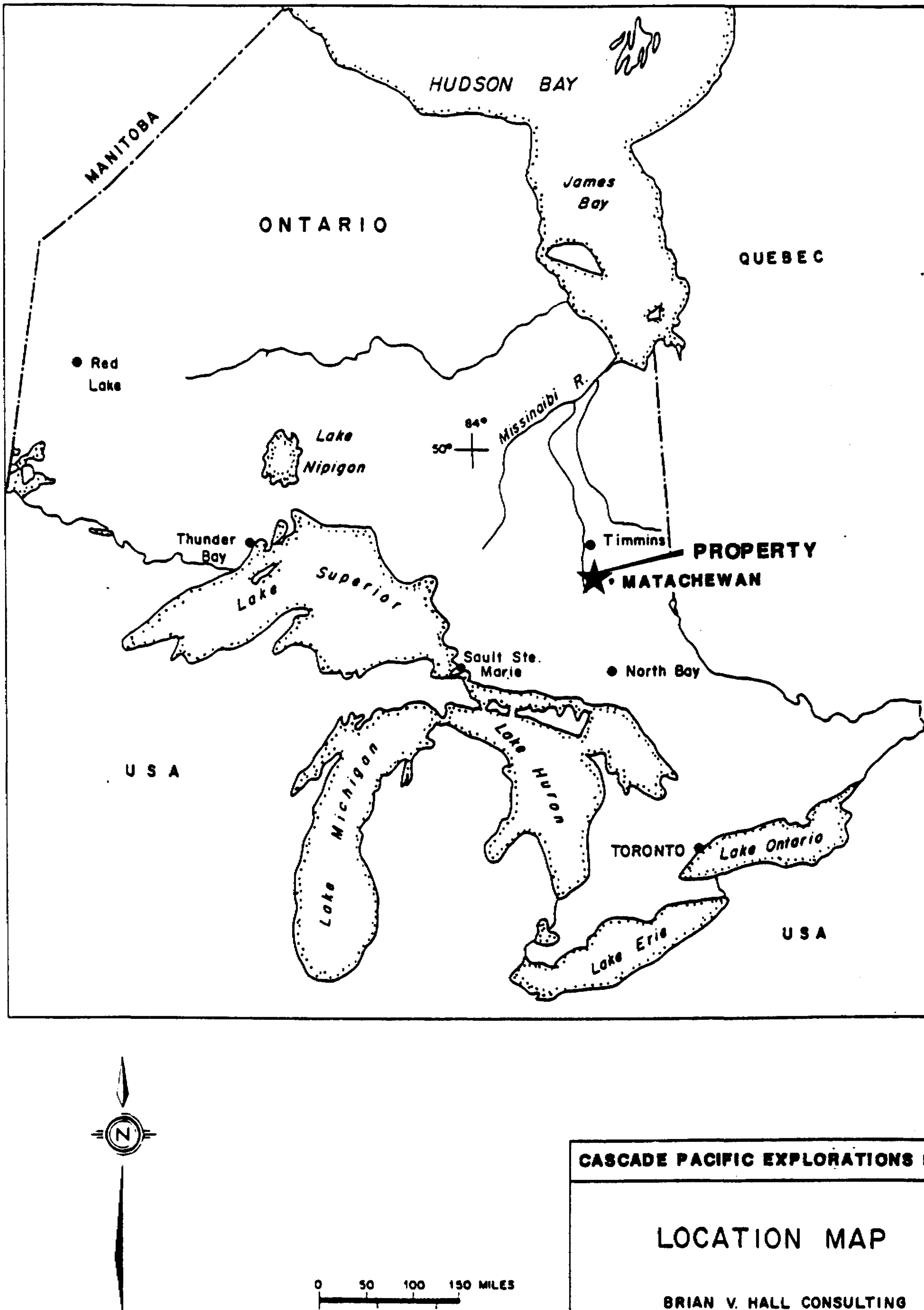
1.1 Location and Access

The McIntyre-Leliever property occupies a portion of the northeastern corner of Montrose Township. This township occurs in the Timiskaming Regional District of Northeastern Ontario. Montrose Township also occurs in the Larder Lake Mining District.

Timmins is the nearest major centre and is located roughly 65 km northwest of the property (Figure 1). Matachewan is the nearest sizeable community (population 500) and is located roughly 22 km to the east. Kirkland Lake where the nearest mining recorder's office is located is roughly 55 km to the northeast.

Geographically the property is roughly centred over Dara Lake. Other bodies of water include the Whitefish River which drains into Dara Lake, and Mount Sinclair Lake which occurs south of the property.

Access to the property is provided by a network of gravel roads. These originate off Highway 566 in the vicinity of Argyle Lake. Although passable for cars, these roads are most reliably used by four-wheel drive vehicles. Numerous old logging roads exist on the property, however, these would require upgrading (Figure 2). Highway 566 originates in Matachewan and continues up to Timmins. In winter this is one of the few roads which is maintained.

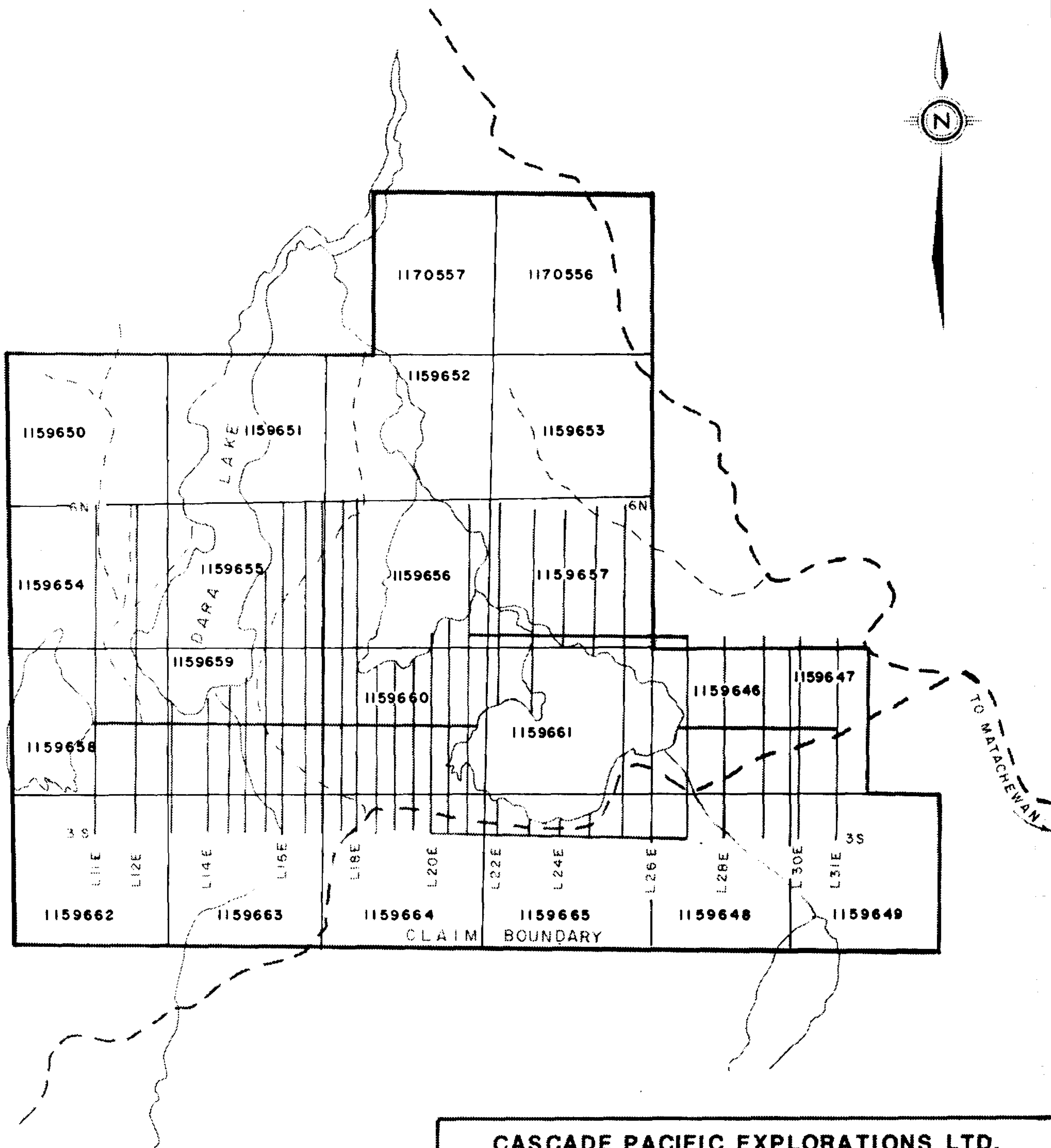


CASCADE PACIFIC EXPLORATIONS LTD.

LOCATION MAP

BRIAN V. HALL CONSULTING

DATE: NOV,1990	MAP No. 1



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CASCADE PACIFIC EXPLORATIONS LTD.

McINTYRE-LELIEVER PROJECT

MONTROSE TOWNSHIP

MATACHEWAN, ONTARIO **NTS:41P/15**

CLAIM AND LOCATION MAP

BRIAN V. HALL CONSULTING

BY BVH
DATE: NOV., 1990 FIGURE: **2**

1.2 Physiography

In general terms, a number of lakes with intervening rolling hills occupy the property. Elevations range from 1,100 to just over 1,300 feet. Dara Lake is the largest body of water, and occupies an area of roughly 200 x 1,000 m. Four other lakes are also present, mostly in the area of the grid. Draining into the south end of Dara Lake is headwaters of the Whitefish River.

Vegetation consists of a mixture of balsam spruce, poplar and birch. Logging has removed many of the mature trees leaving the undergrowth to be quite dense in places. Cedar trees occur in the more swampy portions of the property.

The climate is typical of northern Ontario with the winters cold and harsh, and the summers quite warm. The annual snowfall averages 0.5 to 1.0 m. This usually begins to accumulate in November and generally leaves the area by the end of April.

1.3 Claim Information

At present the property consists of 22 unpatented mineral claims. These were staked between September 8th and 12th for claims 1159646 to 1159665, and on October 22nd for 1170556 and 1170557. The current expiry dates before submission of the work completed this past year are as shown on Table 1. It is anticipated that at least one year can be filed on each of the claims. The locations for most of the claim posts in the area of the grid are shown on Figure 4.

Ownership of the claims currently resides with Brian V. Hall of R.R. #1, Bowen Island, B.C., and are being held in trust for Cascade Pacific Explorations Ltd.

To the north the claims adjoin the holdings of Montrose Gold Ltd. To the east, south and west the ground is for the most part open.

TABLE 1

Claim Information

Claim Number	Staking Date	Expiry Date
1159646	September 12, 1990	September 18, 1991
1159647	September 12, 1990	September 18, 1991
1159648	September 12, 1990	September 18, 1991
1159649	September 12, 1990	September 18, 1991
1159650	September 8, 1990	September 18, 1991
1159651	September 8, 1990	September 18, 1991
1159652	September 9, 1990	September 18, 1991
1159653	September 9, 1990	September 18, 1991
1159654	September 8, 1990	September 18, 1991
1159656	September 9, 1990	September 18, 1991
1159657	September 9, 1990	September 18, 1991
1159658	September 10, 1990	September 18, 1991
1159659	September 10, 1990	September 18, 1991
1159660	September 11, 1990	September 18, 1991
1159661	September 11, 1990	September 18, 1991
1159662	September 10, 1990	September 18, 1991
1159663	September 10, 1990	September 18, 1991
1159664	September 11, 1990	September 18, 1991
1159665	September 11, 1990	September 18, 1991
1170556	October 22, 1990	October 23, 1991
1170557	October 22, 1990	October 23, 1991

1.4 Property History

Prospecting in the Matachewan area commenced about 1906, soon after the important discoveries of the Cobalt Camp to the southeast. The first major discoveries in the area occurred in Powell Township in 1916. Jake Davidson made the initial discovery on what is now held by Young-Davidson Mines Limited. Shortly thereafter Sam Otisse discovered gold on claims that now belong to Matachewan Consolidated Mines Limited. Production began on the Young-Davidson property in September of 1934 at a rate of 500 tons per day. Also in 1934, the Same Otisse discovery went into production by Matachewan Gold Mines Limited at a rate of 85 tons per day. In 1954 when this mine had closed, a total of 3,535,200 tons of ore had been mined, from which 370,427 ounces of gold and 133,710 ounces of silver had been produced. The Young-Davidson Mine ceased production in 1956 having produced 6,128,272 tons of ore containing 585,690 ounces of gold, and 131,989 ounces of silver (Lovell, H.L., 1967).

Interest in the area of Montrose Township increased significantly in the fall of 1930 when several rich gold-bearing quartz veins were discovered by B. Ashely and William Garvey. This discovery was located in Bannockburn Township approximately 4 kms northeast of the claims currently held by Cascade Pacific. Diamond drilling in the winter of 1930-31 preceded the sinking of an inclined shaft with a total of 1,133 feet of drifting on four levels down to 500 feet. By 1932 a 75 ton per day mill was in the process of construction, plus a transmission line had been built by the Northern Ontario Power Company. Access before 1931 consisted of several canoe routes, the best of which originated at Elk Lake. Later a gravel road was constructed from Elk Lake to the Ashley Mine (Rickaby, H.C., 1932a). No records are available on the production history for the Ashley Mine except a passing reference about the mine closing in the 1950's (Watts, A., 1984).

The earliest recorded work on the McIntyre-Lelievre property of Cascade Pacific Explorations Ltd. was by the Ontario Department of Mines in 1932 (Rickaby, H.C., 1932a). The following is extracted from this report.

> "This group of nine claims, Nos. 9170 to 9178, inclusive, lying east of Dara Lake, is controlled by J. Lelievre, of Kirkland Lake. Some work has been done under the direction of Sandy McIntyre. The showings are connected with a pyrite body occurring in the rhyolite on claim No. 9178. The pyrite is associated with a massive cherty quartz, which appears to be in the form of a very acid intrusion, in rhyolite. In places the quartz was glassy and dark-coloured and contained large fragments of jasper. The quartzose bodies were in the form of lenses or plum-shaped bodies with widths of up to 100 feet, and striking N30°E. The rhyolite has been sheared and both rhyolite and quartz are heavily mineralized has been sheared and both rhyolite and quartz are heavily mineralized with massive fine-grained pyrite. Low values in gold were reported, but two grab samples of the pyritized quartz gave no gold on assay."

The work consisted mostly of trenching, of which the remnants of approximately fifteen to twenty trenches are still discernable. These trenches were all hand dug, and the largest was almost 30 m in length with an average depth of approximately 1.0 m.

The next known work program on the property was in the early 1980's when Marjell Mines Limited acquired the property through staking. Although only a limited amount of work was carried out, the existing trenches were refurbished along with some improvements to the roads. Soon afterwards, Marjell Mines Limited ceased to be a viable company and the claims were allowed to lapse (Ed Ludwig personal communication).

Later in 1984 the northern portion of the property was acquired by Canamax Resources Inc. Also in 1984, Aerodat Ltd. completed an airborne survey over most of the Hincks Twp., plus the northern portion of Montrose Twp. This survey was flown at a line spacing of 100 m using flight lines that were orientated at N45°E. As a result of this survey a number of north to northwesterly trending conductors were noted, three of which are situated on ground presently held by Cascade Pacific Explorations Ltd. (Watts, A., 1984).

In 1989, the property was once again staked, this time by M. Trembley of Timmins. Some linecutting and geological mapping was carried out. However, this work was not sufficiently detailed to allow the claims to be held. Consequently, the claims were allowed to lapse in August of 1990.

Adjacent to the McIntyre-Leliever property to the east and north a considerable amount of work has been carried out. This has included drilling programs by Golden Bounty Mining Company Limited, Canamax Resources Inc., plus several individuals (McCannell, J.D., 1974; Watts, A., 1984). At least three airborne geophysical surveys, plus two ground surveys have also been completed. In additional numerous mapping and trenching programs have also been carried out. Most recently Montrose Gold Mines Limited announced the completion of a drilling program on claims that adjoin to Cascade Pacific's northern claim boundary.

Government surveys in the area of Montrose Township began in 1896 with some reconnaissance mapping (Burwash, E.M., 1896). Further mapping was carried out in 1911 by J.G. McMillan who accompanied a party surveying the Timiskaming and Northern Ontario Railway Trial Line between Gowganda and Porcupine. The most detailed mapping project to date was completed in 1932 by H.C. Rickaby of the Ontario Department of Mines. Detailed examinations of all the mineral properties were carried out on all the active mineral properties, plus pace and compass traverses over both Montrose, Hincks, Argyle and Bannockburn Townships (Rickaby, H.C., 1932a, b). Lastly, the Ontario Division of Mines completed an airborne geophysical survey in 1975 over the northern half of Montrose Township. This survey was carried out by Questor Surveys Limited using flight lines that were orientated north-south.

2. REGIONAL GEOLOGY

The McIntyre-Leliever property is situated on the southwestern flank of the Abitibi Greenstone Belt of the Superior Province. The volcanic and sedimentary rocks of the Timmins - Noranda portion of the Abitibi Greenstone Belt form a large easterly trending synclinorium. Domal tonalite to trondhjemitic batholiths and gneissic terrains are present to the north, south and west of this synclinorium. Two major fault zones, the Destor-Porcupine and Kirkland Lake Cadillac transect the northern and southern limbs.

Numerous small plutons of granodioritic to syenitic composition cut all the volcanic and sedimentary rocks. Diabase dykes varying from Archean to Late Proterozoic in age occur throughout the area, and Proterozoic sedimentary rocks of the Huronian Supergroup onlap the Archean rocks to the south (Jensen, L.S., 1986).

2.1 Stratigraphy

The regional mapping for the northern portion of Montrose and Bannockburn Townships according to Rickaby (1932b) consists of an east-west striking sequence of Archean felsic and mafic volcanic rocks. Also, according to Rickaby (1932a), the felsic rocks consist of massive and fine-grained rocks which contain phenocrysts of feldspar and quartz that are for the most part "basic rhyolites". Whereby the mafic volcanic rocks form a thick series of flows of which separate members have thicknesses of up to 100 m. Pillow lavas are a very common rock type as are tuffs and agglomerates which underlie a large part of Argyle and Hincks Townships. The tops and bottoms of the flows are generally fine-grained with spherulitic and amygdaloidal textures, whereas the centres are frequently sufficiently coarse to be called diabases or diorites.

Recent work on the Chemo-Stratigraphic divisions of the Abitibi Greenstone Belt (Figure 3) indicate the felsic volcanic package belongs to the Upper Formation of the Deloro Group and the mafic volcanics to the Lower Formation of the Tisdale

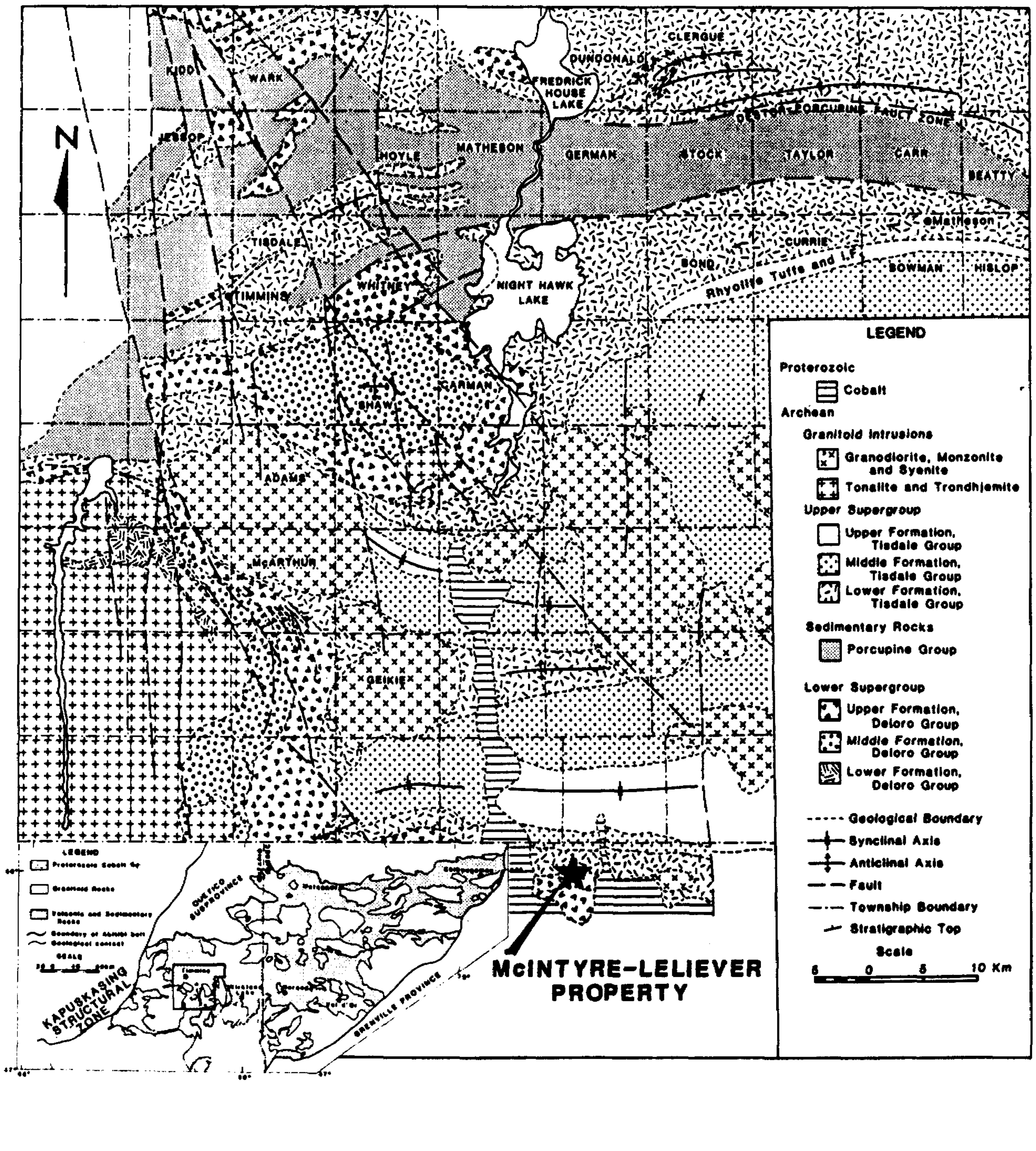


FIGURE 3

DISTRICT GEOLOGY OF THE TIMMONS AREA SHOWING THE LOCATION OF THE McINTYRE-LELIEVER PROPERTY

Group (Jensen, L.S., 1986). South of Timmins an age date of 2,725 Ma has been given for the top of the Deloro Group (Nunes, P.D. and Pyke, D.R., 1980).

Although the stratigraphic relationships described by Rickaby (1932a, b) fit in a general way for the Abitibi Greenstone Belt, the detailed picture appears to be incorrect. Felsic volcanic rocks were not located in the northern portion of Montrose Township. In addition, the stratigraphy consisting primarily of mafic flows and tuffs was found to strike northwest to north, instead of east-west.

Other rock types which are present in the area of Montrose Township include Archean to Proterozoic dykes, basic to ultramafic rocks, plus Proterozoic sediments of the Gowganda Formation.

The basic to ultramafic rocks consist of a series of peridotites, pyroxenites, gabbros and diabase. These occur as an irregular series of sill-like bodies which trend in a northwesterly fashion. In the area of Rahn Lake in Bannockburn Township a mass of peridotite was found to be completely composed of serpentine, talc and calcite with small veinlets of asbestos developed along fractures parallel to the fault planes.

In general terms, the Archean to Proterozoic dykes consist of both quartz and olivine bearing varieties of diabase (Rickaby, H.C., 1932b). Based upon mapping completed in Midlothian Township to the south the quartz diabases appear to be the older, having a distinctive north-south strike. The constituents are labradorite, augite, quartz, magnetite and ilmenite with minor amounts of biotite, apatite and epidote (Marshall, H.I., 1947).

The olivine diabases generally strike in a northwesterly fashion and consist of an ophitic mixture of hypersthene, labradorite, olivine, apatite and magnetite with minor amounts of pyrite. They also appear to belong the Nipissing series and are considerably younger than the quartz diabases of Matachewan series as they are found to cross-cut the Gowganda Formation in Midlothian Township (Bright, E.G., 1970).

The Proterozoic Gowganda Formation onlaps onto the Archean stratigraphy in the southern portions of Montrose and Bannockburn Townships, and is present as an inlier in the central portion of Hincks and Montrose Township. Rocks of the Gowganda Formation consist of horizontal to gently dipping interbedded greywacke, conglomerate, quartzite, argillite and some arkose. The basal conglomerate of this unconformable sequence outcrops along portions of Ashley, Argyle and Bannockburn Lakes (Rickaby, H.C., 1932a).

2.2 Structure

As stated previously, the stratigraphy in Montrose Township appears to strike north to northwesterly. Several factors collaborate this hypothesis such as: 1) the overall northwesterly grain to the regional airborne magnetometer survey (ODM, 1975); 2) the preponderance of northwesterly striking bedding attitudes in Hincks, Argyle and Bannockburn Townships (Rickaby, H.C., 1932b); plus 3) the detailed mapping carried out this past season by Cascade Pacific Explorations Ltd. This evidence is all at odds with east-west strike of Rickaby's 1932 Geological Map. The dip of the stratigraphy in Hincks, Argyle and Bannockburn Townships according to Rickaby (1932a) is between vertical and 35° to the northeast, with the tops to the northeast. Overall this attitude is consistent with the presence of structural dome in Halliday Township to the southwest (Bright, E.G., 1970), a structural feature that has been well documented.

The dominant faulting direction appears to be north-south and to the northeast. This based largely on the orientation of some of the major bodies of water, plus the regional mapping in Midlothian and Halliday Townships to the south (Bright, E.G., 1970). Coincidentally, if the Cadillac-Kirkland Lake Break were projected from the vicinity of Matachewan through the overlying Gowganda Formation it could likely pass through the area of Montrose Township.

2.3 Mineral Deposits

The mineral deposits in the general vicinity of Montrose Township consist of three main types: 1) gold-bearing quartz veins; 2) stratiform volcanogenic massive sulphide bodies; or 3) asbestos bodies hosted by ultramafic rocks.

Mineralization consisting of gold-bearing quartz veins appear to be the most prevalent. In general, these veins tend to represent fissures that occupy small faults or fractures. They tend to be narrow, and are frequently irregular in dip, strike and width. Most of the veins occur in greenstones, but they also cut granitic rocks without any marked difference in appearance. Wall rock alteration does not usually extend for more than a few centimetres and chiefly consists of carbonatization, silicification and pyritization. Ankerite is also very common. Within the veins orthoclase and specularite are almost invariably present. Pyrite is also abundant and is either a fine grained variety characteristic of the wall rock or a coarse variety which occurs along fractures within the quartz. Galena, plus minor amounts of sphalerite and chalcopyrite are also usually present. The gold is generally present in the native state, with the richer veins containing some altaite (Rickaby, H.C., 1932).

Perhaps one of the best known examples of this type of mineralization would be the Ashley Mine, located about 4 km to the northeast of the McIntyre-Leliever property. According to a 1932 report (Rickaby, H.C., 1932), the Ashley vein has been traced for about 400 m in a north-south direction, and down-dip to at least 150 m. Overall the width of the Ashley vein seldom exceeds 65 cm, however, in a number of places it splits into two or more parallel veins. Hosting these veins are a series of mafic volcanic pillow lavas. The mineralogy of the Ashley vein includes pyrite, galena, sphalerite, chalcopyrite, altaite, native gold and specularite, all of which occur along fractures in the quartz. The pyrite is generally coarse-grained and indicates the highest grade ore.

The Garvey vein on the other hard strikes roughly east-west and dips at a very shallow angle (20°) to the north. The host rock is a fine-grained basalt, which has been fractured, silicified and partially replaced by ankerite and pyrite. In strike length, this vein has been traced for approximately 100 m and averages 30 cm in width. Pyrite, galena, native gold and specularite are present along fractures within the quartz (Rickaby, H.C., 1932).

Approximately 3 km to the northwest of the Ashley vein a number of large boulders of quartz vein material were discovered which carried appreciable gold values. After some preliminary work by the Mining Corporation of Canada in 1931, two veins were located. Both veins were orientation at N60°W and had widths between 1.5 and 2.5 m. In one of the mineralized zones quartz stringers in basalt showed a characteristic reddish alteration which also contained disseminated pyrite and ankerite (Rickaby, H.C., 1932).

Immediately to the south of Montrose Township, both Midlothian and Halliday Townships have received a considerable amount attention towards discovering volcanogenic massive sulphide mineralization (Class, L.G. and Sada, E.V., 1982). Most of this work was centred about the Halliday Dome, a structure which is cored by rhyolitic pyroclastic rocks of the Upper Formation of the Deloro Group (the same package of rocks which hosts the Kidd Creek and Kam Kotia ore bodies to the north). Companies that were active in this area in the late 1960's include Amax Exploration Incorporated, Cominco Limited, Dominion Gulf Company, Talisman Mines Limited, and Texas Gulf Sulphur Company. All of these companies were exploring sulphide rich zones associated with felsic volcanic rocks. Some of the properties such as the Adele and Annie Lake Groups had intersections of massive pyrite (Bright, E.G., 1970).

Massive pyrite mineralization has also been encountered immediately to the north of the McIntyre-Leliever property on ground that was once held by the Golden Bounty Mining Company Limited. Highly decomposed massive sulphides were exposed in a small outcrop of fragmental rhyolite in the southwest corner of claim 374743. Elsewhere on the property associated with an altered rhyolite tuff, pyrite with lesser amounts of pyrrhotite are widespread and sometimes occurring in massive concentrations (McCannell, J.D., 1974).

Another occurrence which may represent massive sulphide mineralization occurs in the extreme southwest corner of Montrose Township, near Hutt Lake. In this occurrence a band of rusty schist (rhyolite?) up to 10 m thick contains a series of disconnected lenses of quartz which are heavily mineralized with pyrite and a little chalcopyrite. The quartz is banded and cherty, and up to 1.5 m in width. The schist altered to sericite and carbonate (Rickaby, H.C., 1932a).

As for the asbestos bodies, a number of bodies occur in Midlothian and Halliday Townships, with the nearest being the Rahn Lake occurrence. This deposit occurs about 1½ km due east of Cascade Pacific's McIntyre-Leliever property in Bannockburn Township. The asbestos body is approximately 1.5 m thick and has been traced for approximately 1.0 km in a northwesterly direction. It is hosted by a peridotite which is in contact with a rhyolite. Previous to 1922, a small inclined shaft was sunk on the property by the Empire Asbestos Company (Rickaby, H.C., 1932a).

Other forms of mineralization which could prove to be economic in the area would include nickel-copper bodies associated with ultramafic bodies, and barite veins such as what is presently being mined at the Extender Mine in Baden Township.

3. PROPERTY GEOLOGY

During the course of this past year's field work, a grid was established over the central portion of the McIntyre-Leliever property. This grid consisted of cut and picketed, slope corrected lines which were at intervals of 25, 50 and 100 m. In total, 20.3 km of line were cut. Over most of this grid geological mapping was carried out at a scale of 1:2,000 (Figure 4). The lithologies, structure, mineralization and alteration facies were mapped during the course of this work. In addition, a total of 35 rock samples were collected for analyses. Approximately half of these samples represented mineralized outcrops consisting of sulphides, siliceous exhalite or quartz-calcite veins. The remainder were of the chloritic alteration that is associated with the siliceous exhalite of the Leliever showing. The purpose of these samples was to test for zones of Na_2O and CaO depletion, along with enrichment of MgO, Fe_2O_3, K_2O, Cu and Zn.

3.1 Stratigraphy and Lithology

In general terms, the stratigraphy in the area of the grid is quite simple, consisting of a north to northwesterly striking package of interbedded mafic volcanic flows and tuffs. In the centre of the grid is a 10 m thick interval of siliceous exhalite surrounding which the rocks have undergone the effects of varying amounts of hydrothermal alteration. Based upon the regional mapping of Hincks, Argyle and Bannockburn Townships the stratigraphy appears to both face and dip to the northeast (Rickaby, H.C., 1932b). Two major faults transect the stratigraphy in a northwesterly and northeasterly manner.

In the northwestern portion of the property north of the Mag Fault the oldest unit appears to be a series of mafic pillow lavas (Mvp). These are present in the vicinity of L14+50E, 2+00S and are characteristically dark green, fine-grained and amygdaloidal. Close packed pillows up to 1.0 by 1.5 m in diameter occur in a hyaloclastic matrix's the amygdules constitute up to 5% of the pillows and are most abundant near the peripheral portions. Chlorite is the most common mineral in-filling the amygdules, although quartz is present in places.

Overyling this package of pillows is an amygdaloidal unit of mafic volcanic flows (Mva). This rock type is medium-green, fine-grained, massive and contains 1-5% ovoid amygdules. Chlorite and quartz commonly in-fill these amygdules.

Next in the stratigraphic package is a series of mafic tuffs (Mt). These rocks are pale to medium green, fine-grained, granular, clastic in places, variably amygdaloidal and in some outcrops contain small breccia clasts. Within the centre of this tuffaceous interval fine phenocrysts of hornblende are present

(Mth). The hornblende grains where present are generally less than 1 mm wide and 3 mm long. Associated with this hornblende-bearing tuffaceous band (Mth) is a somewhat limited interval of hornblende-bearing pillow lavas. Within this interval the rocks are dark to medium green, amygdaloidal, fine-grained. The pillows are in general smaller (up to 50 cm in diameter) and contain trace amounts of fine hornblende phenocrysts. Also present within this tuffaceous horizon is a unit of amygdaloidal mafic volcanic flows (Mva) which occur in the northwestern corner of the grid.

Conformably overlying this tuffaceous unit is a 10 m thick unit of siliceous exhalite (Cp.). This unit appears to be a chemical precipitation which consists predominantly of quartz and pyrite. Because of the economic ramifications of this unit a more detailed description is given in Chapter 3.3.1.

Overlying the siliceous exhalite is a somewhat thick unit of intermediate mafic volcanic flow (Iv). This unit is pale to medium green, and is generally more vitreous-looking than the mafic flows (Mv). It is also generally massive, fine-grained and variably amygdaloidal. The amygdules are generally smaller than in the mafic flows (Mva), and are also in-filled with chlorite.

A second sequence of mafic tuffs occurs next in possible fault contact with the intermediate flows (Iv). This unit is in turn overlain by a second sequence of mafic pillow lavas (Mvp), which occupies the northeastern corner of the grid.

South of the Mag Fault a distinctly different stratigraphic is evident. Beginning in the southwestern corner of the grid a unit of hornblende-bearing mafic volcanic flows are present (Mvh). This unit is pale to medium green, massive and fine-grained to aphanitic with 1-3% hornblende phenocrysts 1-3 mm in length.

Overlying this unit is a somewhat thick sequence of amygdaloidal mafic volcanic flows (Mva). This unit is dark to medium green, massive, fine-grained and contains 1-7% chlorite filled amygdules. In the centre of this unit in the vicinity of L19+50E, 2+00S is a somewhat thin unit of mafic flows which lack amygdules (Mv). This unit is also slightly paler green than the amygdaloidal mafic flows (Mva).

A sequence of pillowed mafic lavas (Mvp) also occurs towards the top of the amygdaloidal mafic volcanics in the area of L25+00E, 1+50S. This unit consists of a series of close-packed pillow lavas which are up to 0.5 to 2.0 m in diameter. This unit is also quite amygdaloidal.

Across the inferred position of the Swamp Fault to the northeast is a somewhat distinctive unit in the volcanic stratigraphy. This unit is a feldspar porphyry mafic volcanic flow (Mvf). It contains up to 5% phenocrysts of plagioclase which are up to 5 mm in length. In addition it is also medium-green, fine-medium grained and contains 2-3% amygdules in-filled with quartz. The thickness of this unit is somewhat thin, however, the southwestern contact of this unit is thought to be a fault.

The youngest unit in this portion of the grid is a somewhat thick sequence of mafic tuffs (Mt). This unit is medium to pale green, fine-medium grained, and not amygdaloidal.

Intrusive units on the grid include a mafic dyke (Md) located in the area of L16+75E, 5+50N and a possible syenite (Sy).

The mafic dyke (Md) is approximately 5 to 10 m wide and has been traced for approximately 30 m. It is also quite coarse-grained, melanocratic and contains 2-5% disseminated pyrite.

The syenite (Sy) occurs in the vicinity of L17+75E, 1+00S and is quite a strange rock type in that it does not appear to be intrusive in origin. Rather it more closely resembles a mafic volcanic that has been cross-cut by a series of hematite and/or K-spar veins. This imports a pale pinkish-orange hue to the rock. The emplacement of this unit also appears to be quite late in the geological history of the area in that it does not appear to be affected by the Mag Fault. Rather it may be a rock type related to this fault.

Regional metamorphism to Lower Greenschist facies has affected the entire property. This is manifested by the in-filling of the vesicles by chlorite and the development of irregular veins and pods of quartz-epidote. However, only in a few outcrops are these epidote-quartz pods abundant.

3.2 Structure

In general terms, the structure of the grid appears to be relatively simple. Except for some broad open flexures, the stratigraphy appears to strike roughly north-south. Bedding orientations in the area of the siliceous exhalite suggest a westerly dip. However, these observations were based upon only a few outcrops which were quite complex to decipher. Elsewhere in Hincks, Argyle and Bannockburn Townships, Rickaby (1932b) indicates a north to northwesterly strike with dips that range from vertical to 35° to the northeast.

Two phases of folding may have operative. The first has a northwesterly striking axis and may have resulted in changes in dip for the stratigraphy. The second produced a series of broad open folds which warped the strike of the stratigraphy about a northeasterly axis. Both these phases of folding may have formed by the same event that caused the Halliday Dome to the southwest.

Rickaby (1932b) in his regional mapping suggested the stratigraphy had an east-west trend. However, the mapping completed this last year by Cascade Pacific has shown this to be not a viable working model. In part the contact between the rhyolites and mafic volcanics Rickaby (1932b) shows in the vicinity of L23+00E, 1+50N may be a fault.

Two major faults appear to be present on the property. The first (Mag Fault) strikes northeasterly through the entire length of the property. This fault largely reconciles some of the outcrop patterns in the southwestern corner of the grid. Outside the property approximately 1.0 km to the northeast the projected trace of this fault truncates a prominent magnetic feature (ODM, 1975). The sense of movement on this fault is not known although there appears to be a large component of apparent strike-slip movement.

The other major fault (Swamp Fault) is orientated at N45°W and also passes though the centre of the property. A series of ponds occupy the projected trace of this fault in the southeastern corner of the grid. Whereas off the grid to the north this fault may be responsible for the offset for conductors 2 and 3 (Figure 9) and the pronounced deflection in Dara Lake. No sense of the amount, nor direction of movement can be ascertained for this fault since it parallels the general trend of the stratigraphy.

3.3 Mineralization

During the course of the fieldwork, three areas of mineralization were looked at in some detail. The main area of interest was the old Leliever showing. This constituted the main thrust of this year's work program. Other areas consisted of pyrite showings hosted by mafic volcanic rocks, plus a number of quartz-carbonate veins.

3.3.1 Leliever Showing

This showing occurs roughly in the centre of the grid and consists of chert that contains significant amounts of pyrite. In the past this showing was thought to represent an iron formation (Rickaby, H.C., 1932b). However, this past year's mapping suggests it may represent a siliceous exhalite. In this regard it is similar to what one finds in the distal portions of a volcanogenic massive sulphide system. Previous work on this showing consisted of hand digging 15 to 20 trenches, of which some are up to 30 m long. These trenches occur over an area of 75 by 100 m, centred about L18+50E, 0+00N. Many of these trenches are now badly sloughed in.

In outcrop, this siliceous exhalite (Cp) consists of a dark to medium grey chert which is well fractured and banded. Pyrite occurs in the central portion of this showing attaining concentrations of over 70%. Spatially related to this showing is an envelope of alteration consisting chlorite veins and disseminated pyrite (Figures 5 and 6).

The overall strike of the siliceous exhalite appears to be roughly north-south, although in outcrop the bedding relationships appear to be somewhat contorted. In width this unit appears to be about 10 m, although the old reports suggest a thickness of 30 m (Rickaby, H.C., 1932a). It appears to be conformable with the stratigraphy having an intermediate volcanic flow (Iv) to the footwall and a series of mafic tuffs (Mt) to the hangingwall.

Sulphide minerals associated with this siliceous exhalite consist of fine grained veins of pyrite up to 10 cm wide which form a crude stockwork. Minor laminations of pyrite are also present, as are trace amounts of chalcopyrite and possible sphalerite. The pyrite attains its highest concentrations in the area of outcrop B-105, 107c, 110a, 111a and 111c. Here the siliceous exhalite contains greater than 50% pyrite in places. Iron values reach 37.45% in case of sample B-105, with sample B-111a containing 297 ppm zinc. Hematite and magnetite were not observed in this siliceous exhalite, nor were any of the samples magnetic. Gold values in this siliceous exhalite were quite low, as was lead.

Surrounding the siliceous exhalite (Cp) is a broad and somewhat irregular zone of chlorite veining (Figure 5). Accompanying the chlorite alteration is a similar zone containing disseminated pyrite (Figure 6). Both zones occupy an area of roughly 150 by 500 m.

In general terms the chlorite alteration consists of discrete veins (up to 5 mm wide), which form a stockwork. The mafic volcanics which host these veins are in some cases partially bleached. In addition, these veins are most abundant in close proximity to the Leliever showing, attaining concentrations of 3 to 10%. Whole rock samples were collected from a number of outcrops hosting these chlorite veins (Figures 9-12). In some cases these samples show depleted concentrations of Na_2O as in the case of sample B-10 (0.34%). However, in most cases the Na_2O values were of background levels (1.5 to 3.5%). The CaO values were also somewhat depleted in the case of samples B-84, 86 and 104, however, overall the samples containing the chlorite veining were not markedly depleted in CaO. MgO (Figure 11) and Fe_2O_3 show a significant enrichment in samples B-4, B-10, 90 and

116. These outcrops all carry appreciable quantities of chlorite and pyrite. K_2O is perhaps the best indicator of the chloritic alteration. Samples B-10, 80, 81, 84 and 86, all contained greater than 2% K_2O. All of these samples also carried appreciable amounts of chlorite. However, three of these samples (B-80, 81 and 86) were either within or adjacent to the area where the orthoclase veining was observed (Sy). Copper (Figure 7) was also found to be enriched within three samples (B-109, 90 and 122) which are within the areas of highest pyrite content. All three of these samples had copper contents that were greater than 100 ppm, with the background being about 25 ppm.

Another feature to note is both the disseminated pyrite and chlorite veins appear to be absent south of the Mag Fault. This suggests that the hydrothermal alteration formed previous to the last movement along this fault.

3.3.2 Road Showing

The Road showing consists of two old trenches that are present along the main road in the vicinity of L26+50E, 1+60S. Both these trenches have been blasted to a depth of almost 1.0 m, but are now badly sloughed in. The mineralization consists of veins of pyrite which attain concentrations 20% in the case of sample B-167a. The veins are up to 1.0 cm wide and appear to be orientated at 45/90. Pyrite is also present in some of the amygdules, either totally occupying the amygdule or forming a ring on the outside edge with chlorite in the centre. This latter feature is especially significant in that it indicates the pyrite deposition occurred relatively early after the volcanic stratigraphy was laid down. This being precisely the timing one would expect with a volcanogenic massive sulphide system. Whole rock analyses from outcrop B-167 indicated enriched concentrations in MgO (4.35 and 6.02%) and Fe_2O_3 (13.08 and 12.54%). Copper was also found to be enriched in these samples (108 and 92 ppm).

3.3.3 Other Occurrences

A second occurrence of pyrite veining occurs in outcrop B-153 (L21+40E, 2+90N). This outcrop contains 1-10% pyrite in fine veins, and is crudely aligned with the pyrite zone present in the area of L26+00E, 1+50S. This apparent alignment of these zones may be related to the Swamp Fault, however, there is not enough outcrop data to substantiate this hypothesis. Two samples were collected from this outcrop (B-153a and b). The first (B-153a) represented approximately 10% pyrite and was found to be enriched in iron. The second (B-153b) was collected from a series of quartz veins which comprise up to 5% of the outcrop. These quartz veins were up to 4 mm wide and generally orientated at 108/90.

Several other quartz veins were located on various portions of the grid (B-4, 8, 170 and 180). Calcite was also present in the vein found at outcrop B-8. None of these veins were very wide (generally less than 5 cm) nor could they be traced for any distance. In addition none of these veins contained any appreciable base or precious metal values.

4. GEOPHYSICS

Two airborne geophysical surveys have been flown over claims now held by Cascade Pacific (Figure 13). The first was flown by Questor Surveys Limited for the Ontario Department of Mines in 1975 (ODM, 1975). The second survey was by Aerodat Limited in 1984 and was for Canamax Resources Inc.

The Questor Survey covered the northern half of Montrose Township along with portions of eight other Townships. This survey used the Barringer/Questor Mark VI Input EM system and the Barringer AM-104 Proton Precession Magnetometer. The flight lines were spaced at roughly 100 m, and were orientated north-south.

The Aerodat Survey used a Geometrics G-803 Proton Precession Magnetometer and a Aerodat/Geonics 3 Frequency EM System. The two vertical coxial coil pairs were operated at 950 and 4500 Hz with the horizontal coplanar coil at 4100 Hz.

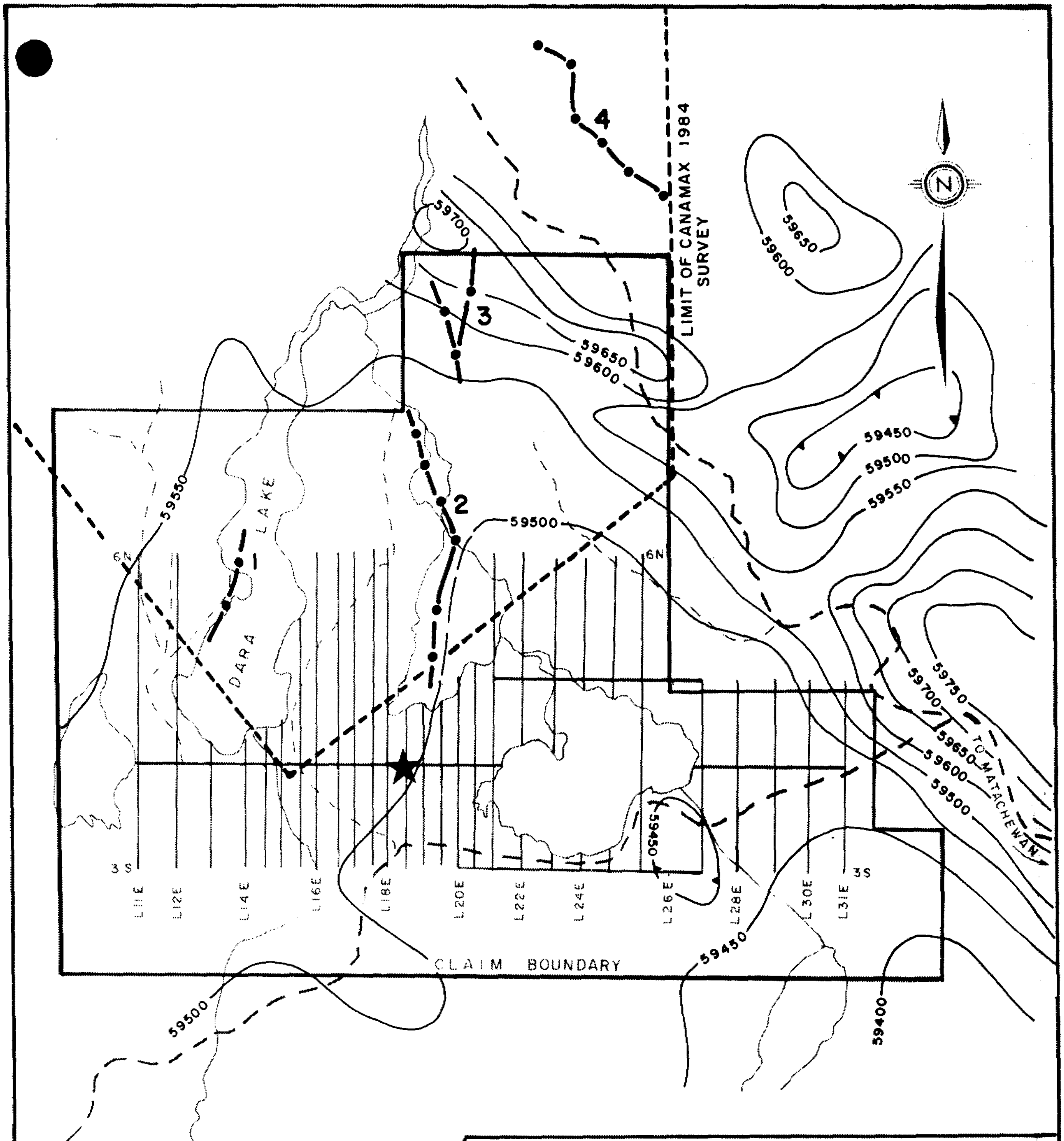
This survey covered most of Hincks Township, but only a small portion of the Montrose Township and the McIntyre-Leliever property (Figure 13). The flight lines were roughly 100 m apart and orientated at N45°E.

The government sponsored Questor Survey identified only one conductor in the area of McIntyre-Leliever property. This was located roughly in the centre of claim 1170557 and was a four channel anomaly containing a channel 2 amplitude of 350 ppm. However, it is not surprising that only one conductor was noted since the flight lines of this survey were orientated in roughly the same direction as the stratigraphy (north-south). Nevertheless, this conductor does coincide with the area represented by Anomaly 3 of the Aerodat Survey, and is along strike from the Leliever showing.

The magnetic data was for the most part relatively flat with the contours generally trending north-south. This suggests a relative absence of magnetic rock types, in stratigraphy that appears to strike north-south. This also suggests that the pyritic chert unit represented by the Leliever showing is likely not an iron formation. One magnetic feature of interest to the McIntyre-Leliever property is the truncation of a pronounced northwesterly trending high in the area north of claim 1159647. This shoulder corresponds with the proposed surface trace of the Mag Fault. The northwesterly trending high is likely one of the peridotite bodies which hosts the Rahn Lake asbestos showing.

The Aerodat Survey conducted for Canamax Resources Inc. proved successful in outlining three conductors on the property. This was largely a function of the northeasterly trending flight lines which could discern bedrock conductors that were conformable with the north-south trending stratigraphy.

The magnetic survey picked up several features which appear to be related to faulting. However, the only magnetic feature of consequence is a northerly trending shoulder situated west of Dara Lake. This feature appears to represent the approximate boundary of the Archean volcanics with the flat-lying Gowganda Formation to the west (Watts, A., 1984).



★ LELIEVER SHOWING

AIRBORNE EM CONDUCTOR (ODM 1975)

59450 AIRBORNE MAGNETOMETER SURVEY (WATTS A., 1984)

0 250 500
Metres

CASCADE PACIFIC EXPLORATIONS LTD.

McINTYRE-LELIEVER PROJECT

MONTROSE TOWNSHIP

MATACHEWAN, ONTARIO **NTS: 41P/15**

GEOPHYSICAL SUMMARY

BRIAN V. HALL CONSULTING

BY: BVH.
DATE: NOV., 1990

FIGURE 13

Of the three EM conductors located on the property, Zones 2 and 3 appear to be aligned with the Leliever showing. Whereas the first conductor (Zone 1) appears to be a surface feature related to the western boundary of Dara Lake.

In the report by A. Watts, a geophysicist employed by Canamax Resources Inc. anomalies 2 and 3 are discussed in some detail. Extracted from his report is the following:

> "**Zone 2**
>
> Closely following a N-S topographic lineament, this weak but narrow quadrature EM response can be related to a quartz-sulphide rich fracture zone located on the old Leliever claims approximately 1 km south of Canamax's claims. Weak Au values were apparently obtained from this quartz vein system sometime in the past and on the strength of this possibility, an otherwise unimpressive EM trend deserves a closer examination on the ground.
>
> **Zone 3**
>
> Located immediately north of Zone 2, this 2-line AEM feature differs markedly in anomaly characteristics from Zone 2, and in fact from any other zone detected by the AEM survey.
>
> The main difference is a reversal of the typical single-peak co-axial and double-peak coplanar responses obtained over the narrow, steeply dipping dyke-type source common in Precambrian greenstone belts. In the case of Zone 3 the exaggerated single peak response produced by the coplanar coil configuration suggest either a near-horizontal sheet of limited down-dip extent, or else a thick (more than 50 m wide) steeply dipping dyke source. The latter explanation appears to be the more likely of the two as the pyrite-rich quartz vein system on the Leliever showing to the south is described (Rickaby, H.C., 1932a) as being at least 100 feet wide.
>
> Though there is a possibility that this conductor was located and surface prospected in the wake of the 1975 Government sponsored Input Survey of the area, it is unlikely that the entire width of the conductor would have been sampled for possible Au association. It is therefore recommended that this intriguing geophysical expression be located on the ground with detailed HEM or VLF traverses, and then drill tested so as to evaluate the full width of the conductor.
>
> It should be noted that the strike Zone 3 is quite different to any obtained from conductors to the north, which are generally conformable to the NW trending stratigraphy.

The closing statement in the report for Canamax Resources Inc. (see Recommendations and Conclusions; Watts, A., 1984) again refers to Conductor #3. These comments are:

> "Finally, the most isolated and interesting EM feature of the survey, Zone 3, should be detailed with ground geophysics and drill tested as this zone is felt to represent the best opportunity for intersecting both massive sulphide an Au-bearing mineralization on the property.

What was not known at the time of writing for the report by Canamax Resources Inc. was the conformable nature of the siliceous exhalite that represents the Leliever showing, and the textural evidence which suggests this occurrence may represent the distal portions of a volcanogenic massive sulphide system. Furthermore, the north-south strike of the volcanic stratigraphy in the area of the Leliever showing was not appreciated. In addition anomalies represented by pyrite hosted by quartz are generally considered to poor conductors. This feature is in agreement with the airborne results for Conductors 2 and 3.

5. CONCLUSIONS AND RECOMMENDATIONS

The McIntyre-Leliever property appears to have the potential for hosting a volcanogenic massive sulphide deposit. Field relations such as the bedded, conformable nature of Leliever showing suggest it to stratiform in nature. The presence of fine-grained pyrite which attains concentrations of greater than 50% indicates the potential for massive sulphide mineralization. The occurrence of a large alteration halo consisting veins of chlorite, plus disseminated pyrite with trace amounts of chalcopyrite indicate the presence of a hydrothermal system. The truncation of the Leliever showing by the Mag Fault, plus the associated alteration halo suggest the timing of mineralization to be relatively early. Substantiating this premise somewhat is the presence of pyritic rims in the amygdules at the Road showing. This suggest the pyrite deposition occurred before the onset of the regional metamorphism which pervasively affected the region upon burial of the volcanic pile.

Other interpretations which have may some validity for the genesis of the Lelievever showing are: 1) a quartz vein system similar to the nearby Ashley Mine; or 2) a siliceous iron formation which has undergone sulphidization.

The presence of a large alteration halo (150 by 500 m) surrounding the Leliever showing argues against it being an iron formation. Substantiating this interpretation is the absence of magnetite or hematite, plus the lack of magnetic expression in the airborne geophysical data. In addition, the elevated values for copper and to a lesser degree zinc also suggest the possibility of a base metal system as opposed to an iron formation.

Arguing against the Leliever showing being a vein system is the stratiform, conformable nature of the mineralization, the early timing of this mineralization, and the widespread hydrothermal alteration which is not characteristic of vein deposits for the area. Consequently, the most compelling interpretation for the Leliever showing appears to be that of the distal portions of volcanogenic massive sulphide system.

The 1984 airborne geophysical survey conducted on the behalf of Canamax Resources Inc. indicates a conductor that is along strike from the Leliever showing. This conductor appears to have been truncated by the Swamp Fault and is at least 1.5 km long. It is also parallel to the strike of the volcanic stratigraphy and appears to be a bedrock source. The relatively weak nature of this conductor is the same sort of expression that sulphides in quartz would product. Consequently, it is likely this conductor is a continuation of the stratiform mineralization present in the Leliever showing. It is also likely this conductor may represent a volcanogenic massive sulphide source.

To further evaluate this possibility a two-phase work program is recommended. The first phase would consist of linecutting, geological mapping and ground geophysics over the surface trace of the airborne conductors, outlined by the 1984 survey of Canamax Resources Inc. This would involve cutting roughly 12 km of grid consisting of east-west lines at 50 m intervals. The lines would be 300 m long and use line 18+00E as a baseline. Over these lines a Max-Min electromagnetic survey should be completed, along with detailed geological mapping. In conjunction with this the trenches in the area of the Leliever showing should be cleaned out using a high pressure water pump and mapped in detail. The approximate cost of this phase should be no higher than $16,990.00.

Depending upon the results of the first phase of work a preliminary drilling program should be initiated. This would entail testing the airborne conductor in at least three different locations. The precise locations of which would be dependent upon the results of the Max-Min electromagnetic survey. Funds for approximately 1,200 feet of drilling should be set aside for this phase. The cost would be approximately $33,400 including assaying and geological supervision. The total proposed budget would be $55,429.00 inclusive of a 10% contingency.

Brian V. Hall

Brian V. Hall, M.Sc.
January 1, 1991

qualifications 2.12181

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APPENDIX A

ANALYTICAL PROCEDURES

ANALYTICAL PROCEDURES

Depending upon the circumstances either grab or representative rock chip samples were collected. Most of the samples came from altered mafic volcanic rocks surrounding the mineralized areas. The remainder came from specifically mineralized outcrops.

The grab samples were generally collected to achieve an approximation of what sort of values a particular type of mineralization could produce. In general, these types of samples consisted of 2 to 5 representative pieces 0.5 to 20 kg in weight. Often with this type of sample the weathered surfaces were not totally removed.

The chip samples generally consisted of more than five pieces of rock which are up to 5 cm in diameter. Generally, these samples were collected in a straight line perpendicular to the strike of the mineralization, and had the weathered surfaces removed.

Upon collection the samples were placed in heavy duty platic bags and shipped to Pioneer Laboratories of #5 - 730 Eaton Way, New Westminster, B.C.

At Pioneer Laboratories the samples were first pulverized to minus 150 mesh using jaw breakers then a shatter box. Initially all the samples were analyzed for 30 major and minor elements using Inductivity Coupled Argon Plasma (ICP). This was carried out at Acme Analytical Laboratories of 852 East Hastings Street, Vancouver, B.C. The procedure involved dissolving a 0500 gm portion of the minus 150 mesh material in 3 mls of aqua-regia solution (3-1-3 HCl - HNO_3 - H_2O) for one hour at 95°C. The resulting solution was then diluted to a volume of 10 mls with distilled water and analyzed using ICP. The results were then compared to prepared standards for the determination of the absolute amounts.

Subsequently 22 of the samples underwent a whole rock analyses since the initial ICP analyses only partially extracted many of the major elements. In this procedure 0.200 gms of the minus 150 mesh material was fused with 1.2 gms of $LiBO_2$ and dissolved in 100 mls of 5% HNO_3. The resulting solution was then analyzed using ICP and the results were then compared to prepared standards for the determination of the absolute amounts.

A total of 13 samples, mostly from the more intensely mineralized outcrops were analyzed for gold using atomic absorption. Using a 10.0 gm portion of the minus 150 mesh material the gold was then digested with aqua-regia and further concentrated using MIBK. The resulting solution was then analyzed by atomic absorption using a graphite furnace. The absolute amounts were again determined by comparing the results to those of prepared standards.

APPENDIX B

ROCK SAMPLE ANALYSES

PIONEER LABORATORIES INC. 5-730 EATON WAY NEW WESTMINSTER, BC CANADA V3M 6J9 TELEPHONE (604)522-3830

GEOCHEMICAL ANALYSIS CERTIFICATE

MR. BRIAN V. HALL
Project:
Sample Type: Rocks

Multi-element ICP Analysis - 0.5 gram sample is digested with 3 ml of aqua regia, diluted to 10 ml with Water. This leach is partial for Mn, Fe, Ca, P, La, Cr, Mg, Ba, Ti, B, W and limited for Na, K and Al. Detection Limit for Au is 3 ppm.

Analyst K Sam
Report No. 21190058
Date: November 16, 1990

SAMPLE	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Notes
90-B-3	1	37	2	91	.1	94	24	1286	5.56	3	5	ND	1	31	.4	2	2	67	2.17	.051	4	111	2.47	14	.29	3	3.49	.04	.03	1	Qtz Vein
90-B-4	1	41	2	146	.1	76	31	1681	7.68	2	5	ND	1	26	.9	2	2	121	1.65	.076	4	171	4.10	17	.64	8	5.72	.01	.02	1	
90-B-8	5	21	2	60	.1	72	15	959	3.60	5	5	ND	1	67	.3	2	2	64	2.00	.051	4	165	1.38	26	.34	4	2.40	.03	.01	8	Qtz-Cal Vein
90-B-10	1	113	2	123	.1	298	53	1507	8.49	4	5	ND	1	30	.9	2	2	73	.82	.071	3	190	2.65	30	.45	7	4.41	.01	.10	1	
90-BR-80	2	22	5	33	.1	4	6	480	1.56	4	5	ND	5	93	.2	2	2	5	2.09	.128	31	30	.28	1315	.01	3	.76	.03	.16	1	
90-BR-81	1	19	4	49	.1	218	29	1524	5.39	6	5	ND	1	61	.4	2	2	27	3.64	.058	2	50	2.02	79	.01	4	1.56	.02	.13	1	
90-B-84	2	15	3	48	.1	76	16	574	3.22	3	5	ND	1	28	.2	3	2	35	1.36	.049	2	129	.87	34	.01	4	1.75	.03	.12	1	
90-B-86	1	44	6	74	.1	117	37	796	7.48	7	5	ND	1	37	.4	2	2	106	1.56	.067	3	122	2.32	36	.02	2	3.37	.04	.01	1	
90-B-90	1	139	2	128	.1	113	31	1552	7.98	10	5	ND	1	40	.8	2	2	89	1.52	.093	4	121	3.57	21	.54	5	5.30	.02	.02	1	
90-B-100	1	34	2	84	.1	109	25	1018	4.76	11	5	ND	1	70	.5	3	2	65	3.53	.059	8	146	2.05	33	.01	2	3.40	.03	.06	1	
90-B-101	1	12	2	55	.1	113	17	1270	3.19	6	5	ND	1	51	.2	2	2	54	3.30	.043	5	154	1.25	33	.01	2	1.97	.03	.05	1	
90-B-104	3	21	2	86	.1	111	22	996	6.11	19	5	ND	1	22	.2	2	2	67	1.38	.061	2	159	1.67	19	.01	3	2.46	.05	.05	1	
90-B-105	1	33	6	37	.1	20	6	453	37.45	29	5	ND	3	6	.2	2	2	44	.18	.037	2	27	.38	15	.01	2	.96	.01	.03	1	Oxide
90-B-107A	15	3	3	7	.1	8	3	1360	1.57	4	5	ND	1	22	.2	2	2	3	2.22	.003	2	177	.03	7	.01	2	.08	.01	.01	2	Chert
90-B-107B	1	2	3	7	.1	9	2	1897	1.45	7	5	ND	1	49	.2	2	2	3	6.25	.002	2	149	.06	1	.01	2	.13	.01	.01	1	Chert
90-B-107C	3	7	2	26	.1	10	4	7329	21.92	23	5	ND	2	30	1.4	2	2	6	2.17	.007	2	40	.64	2	.01	2	.22	.01	.01	1	Chert
90-B-110A	1	39	2	99	.1	120	40	3836	19.37	25	5	ND	2	54	2.0	2	2	56	3.14	.027	3	59	1.77	8	.01	2	3.73	.01	.01	1	
90-B-111A	1	1	2	297	.1	34	4	988	21.05	2	5	ND	2	19	1.5	2	2	92	.55	.086	3	63	1.50	4	.01	2	8.57	.01	.02	1	Chert
90-B-111B	1	2	6	14	.1	13	5	2423	8.41	19	5	ND	1	22	.2	2	2	7	.92	.003	2	141	.11	2	.01	2	.24	.01	.01	1	Chert
90-B-111C	1	27	12	22	.1	20	17	5105	27.97	91	5	ND	3	17	1.2	2	2	6	.80	.005	2	64	.18	2	.01	2	.33	.01	.01	2	Chert
90-B-116	1	90	2	118	.1	17	26	2050	10.31	7	5	ND	1	12	.7	2	2	122	1.32	.043	3	15	2.49	40	.40	3	4.53	.02	.03	1	
90-B-120	1	39	2	101	.1	80	22	987	4.77	12	5	ND	1	70	.2	2	2	55	4.20	.054	8	62	2.20	18	.01	4	3.32	.02	.10	1	
90-B-121	1	22	2	68	.1	96	20	621	3.95	7	5	ND	1	41	.2	2	2	61	2.91	.048	8	108	2.08	22	.01	2	2.96	.04	.06	1	
90-B-122	1	101	2	67	.1	70	34	1036	5.88	2	5	ND	1	21	.3	2	2	209	2.87	.027	2	116	2.16	24	.26	4	3.52	.02	.08	1	
90-B-129	2	14	4	59	.1	17	5	5742	14.81	23	5	ND	1	10	.3	2	2	4	.30	.007	2	129	.03	8	.01	2	.18	.01	.01	1	Chert
90-B-130	1	8	2	5	.1	5	1	1578	1.66	2	5	ND	1	38	.2	2	2	2	2.60	.002	2	205	.03	2	.01	2	.07	.01	.01	1	Chert
90-B-131	1	8	5	10	.1	9	4	1310	2.97	9	5	ND	1	2	.2	3	2	6	.08	.007	2	190	.09	11	.01	2	.16	.01	.01	2	Chert
90-B-153A	1	65	3	95	.2	72	32	1535	8.89	29	5	ND	1	27	.7	2	2	82	3.12	.029	3	94	2.63	6	.23	3	4.07	.04	.01	1	Qtz-vein
90-B-153B	1	47	2	79	.2	41	20	1514	6.46	24	5	ND	1	52	.6	2	2	54	9.70	.019	3	66	1.78	11	.16	2	2.98	.01	.03	1	
90-B-159	1	43	2	83	.1	54	25	894	5.03	4	5	ND	1	21	.5	2	2	67	2.14	.048	2	119	1.80	15	.40	4	3.09	.02	.05	1	

SAMPLE	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	
90-B-167A	1	108	5	60	.2	76	38	734	12.05	27	5	ND	1	12	.8	2	2	63	1.00	.022	2	90	1.96	4	.19	4	3.11	.03	.01	[illegible]	
90-B-167B	1	92	2	90	.1	70	25	1050	7.71	11	5	ND	1	8	.8	2	2	122	1.31	.028	2	105	3.10	6	.25	3	4.52	.05	.02	1	
90-B-170	1	7	2	32	.1	29	8	1934	2.05	10	5	ND	1	48	.4	2	2	30	20.96	.022	2	47	.54	7	.16	2	1.03	.01	.02	1	Qtz Vein
90-B-180	9	12	7	6	.1	7	1	166	.96	4	5	ND	1	135	.2	2	2	35	1.63	.017	3	140	.14	17	.33	4	.93	.08	.01	3	Qtz Vein
90-B-184	1	94	4	74	.2	74	30	880	11.84	23	5	ND	1	11	1.0	2	2	83	1.15	.023	2	102	2.43	4	.27	4	3.84	.04	.01	1	

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. [redacted] PHONE([redacted])253-[redacted] FAX([redacted]04)[redacted]-171[redacted]

WHOLE ROCK ICP ANALYSIS

Brian V. Hall File # 90-6064
R.R. -1 L-9, Bowen Island BC V0N 1G0

SAMPLE#	SiO_2 %	Al_2O_3 %	Fe_2O_3 %	MgO %	CaO %	Na_2O %	K_2O %	TiO_2 %	P_2O_5 %	MnO %	Cr_2O_3 %	Ba ppm	Sr ppm	La ppm	Zr ppm	Y ppm	Nb ppm	LOI %	SUM %	
90-B-3	53.27	14.94	9.93	5.65	5.93	3.03	.26	1.18	.23	.23	.026	181	286	3	120	16	20	5.1	99.86	
90-B-4	41.08	18.22	14.05	10.20	5.50	1.39	.21	1.85	.29	.31	.042	35	403	2	184	25	20	6.6	99.82	
90-B-8	66.12	11.73	6.39	2.61	5.43	2.15	.13	.90	.16	.17	.036	33	511	2	89	10	20	4.0	99.91	
90-B-10	42.67	17.54	16.58	6.50	6.14	.34	2.13	1.58	.29	.30	.050	1026	507	2	155	20	20	5.4	99.78	
90-B-80	63.77	17.07	3.14	.82	2.73	5.11	2.09	.34	.38	.08	.009	1858	168	28	224	13	20	4.0	99.91	
90-B-81	50.68	15.33	9.19	4.17	5.20	2.33	2.46	.91	.20	.25	.021	515	114	2	137	17	20	9.0	99.86	
90-B-84	66.71	14.93	4.93	1.68	1.97	2.03	2.22	.95	.15	.08	.051	323	86	2	94	12	20	4.1	99.88	
90-B-86	54.41	15.76	11.63	4.65	2.63	4.50	.20	1.13	.24	.13	.025	107	96	6	140	15	20	4.5	99.86	
90-B-90	40.21	18.15	15.24	8.54	7.29	1.50	.11	1.89	.36	.29	.030	73	686	2	173	26	20	6.1	99.83	
90-B-100	56.15	15.68	7.14	3.74	4.71	3.19	.84	1.04	.20	.15	.035	268	151	2	103	14	20	6.9	99.85	
90-B-101	67.32	11.20	4.83	2.36	4.35	2.80	.52	.77	.15	.19	.033	152	113	2	89	9	20	5.3	99.88	
90-B-104	61.46	13.75	8.71	3.01	2.12	3.69	.42	1.18	.20	.15	.035	70	105	2	117	14	20	5.1	99.87	
90-B-116	44.27	15.85	16.70	5.25	4.02	1.90	1.73	1.30	.19	.35	.005	957	139	3	105	17	20	8.1	99.86	
90-B-120	34.01	9.05	4.65	2.76	3.55	1.31	.77	.63	.11	.10	.009	132	81	2	74	9	20	42.9	99.89	
90-B-121	59.58	14.85	6.02	3.83	4.06	3.26	.71	.98	.19	.09	.025	258	157	8	106	14	20	6.2	99.87	
90-B-122	57.01	15.17	9.31	4.51	4.76	1.58	1.45	1.30	.11	.17	.025	256	113	2	93	22	20	4.4	99.87	
90-B-159	54.51	12.93	8.56	3.30	6.75	.91	1.64	1.41	.23	.16	.032	512	185	17	108	13	20	9.3	99.86	
90-B-167A	49.27	13.08	20.69	4.35	4.57	1.75	.08	.66	.10	.14	.022	10	230	4	89	15	20	5.1	99.86	
90-B-167B	42.61	12.54	10.30	6.02	3.05	2.34	.05	.69	.09	.15	.021	20	77	2	55	12	20	22.0	99.88	
90-B-170	43.30	6.42	4.94	1.51	39.30	1.21	.27	.67	.13	.42	.018	257	205	10	52	7	74	1.6	99.88	Quartz Vein
90-B-180	60.98	11.89	4.61	3.02	6.92	2.81	.58	.61	.06	.08	.036	359	411	2	84	11	20	8.2	99.92	Quartz Vein
90-B-184	37.03	11.99	16.36	4.81	3.99	1.72	.06	.70	.06	.13	.019	24	169	2	63	10	20	23.0	99.90	
STANDARD SO-4	68.88	10.03	3.32	.93	1.33	1.03	1.92	.57	.21	.08	.007	728	187	24	271	22	20	11.4	99.90	

.200 GRAM SAMPLES ARE FUSED WITH 1.2 GRAM OF LIBO2 AND ARE DISSOLVED IN 100 MLS 5% HNO3.
- SAMPLE TYPE: ROCK PULP

DATE RECEIVED: NOV 23 1990 **DATE REPORT MAILED:** Nov 27/90 . **SIGNED BY**.........D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

PIONEER LABORATORIES 5-730 EATON WAY NEW WESTMINSTER, BC CANADA V3M 6J9 TEL.(604)522-3830

GEOCHEMICAL ANALYSIS CERTIFICATE

Au Analysis - 10 gram sample is digested with aqua regia, MIBK extracted, graphite furnace AA finished to 1 ppb detection.

MR. BRIAN V. HALL

Project:

Sample Type: Rocks

Analyst K Sam

Report No. 21190058

Date: November 29, 1990

SAMPLE	Au ppb
90-B-105	3
90-B-107A	4
90-B-107B	1
90-B-107C	10
90-B-110A	3
90-B-111A	1
90-B-111B	5
90-B-111C	5
90-B-129	9
90-B-130	1
90-B-131	6
90-B-153A	7
90-B-153B	3

APPENDIX C

DESCRIPTION OF ROCK SAMPLES

SUBMITTED FOR ANALYSES

APPENDIX C

DESCRIPTION OF ROCK SAMPLES

SUBMITTED FOR ANALYSES

Sample	Location	Description
90-B-3	L 17+50 E 0+80 N	Mafic Pillow Lava (Mvp), pale green, amygdaloidal containing quartz, minor hornblende grains (2%), up to 2 mm long, trace disseminated pyrite, minor chlorite veins. Rock sample is taken from a 20 by 50 cm area containing 10% quartz veins whcih are up to 1.0 cm wide and orientated at 171/48 W.
90-B-4	L 17+50 E 0+90 N	Mafic Pillow Lava (Mvp), pale green, amygdaloidal, 2% hornblende grains up to 2 mm long, 5-7% chlorite veins forming a grid pattern, note: sample is significantly enriched in MgO and Fe_2O_3.
90-B-8	L 17+45 E 2+40 N	Mafic Tuff (Mth), hornblende-bearing medium green, fine grained. Rock sample is taken over a 10 cm wide interval which contains a series of 2 cm wide quartz-calcite veins which constitute 15% of the interval and are orientated at 157/58W.
90-B-10	L 17+45 E 2+40N	Mafic Tuff (Mth), hornblende-bearing, medium green, fine grained which contains up to 10% pyrite veins up to 1.0 cm wide which are enveloped by chlorite. Note: this sample is depleted in Na_2O and enriched in MgO, plus Fe_2O_3.
90-B-80	L 18+20 E 1+05 S	Mafic Volcanic (Mva) massive, dark brown-green which is cross-cut by a series of K-spar veins, minor chlorite veins also. Note: this sample is enriched in K_2O, SiO_2, Na_2O and depleted in Fe_2O_3 and MgO, plus T_1O_2 (possible syenite).
90-B-81	L 18+10 E 0+90 S	Mafic Volcanic (Mva), local float near the top of a hill which is medium green, partially bleached, and contains 2-3% irregular chlorite veins plus 1% disseminated coarse-grained pyrite somewhat similar to 8-90-81.

Sample	Location	Description
90-B-84	L 18+00 E 0+10 S	Mafic Pillow Lavas (Mvp), medium green, cross-cut by 2-5% chlorite veins partially bleached.
90-B-86	L 17+80 E 0+75 S	Mafic Tuff (Mt), medium to pale green which contains 2-5% disseminated fine-grained pyrite, plus 1-2% chlorite veins.
90-B-90	L 17+80 E 1+50 N	Mafic Tuff (Mt), medium-green angular clasts up to 1 mm in diameter, which contains 1-2% chlorite veins, 1% disseminated pyrite, plus trace amounts of chalcopyrite. Note: copper value is highest at 139 ppm.
90-B-100	L 18+25 E 0+25 N	Mafic Tuff (Mt), medium-green, fine-grained, which contains 1-6% chlorite veins plus trace amounts of disseminated pyrite.
90-B-101	L 18+20 E 0+10 N	Mafic Tuff (Mt), medium-green, which is cross-cut by a series of quartz veins up to 1.0 cm wide which comprise up to 25% of the outcrop, minor chlorite veins are also present.
90-B-104	L 18+50 E 0+40 N	Intermediate Volcanic (Iv), pale green, massive cross-cut by a series of quartz and chlorite veins, also present is 1% disseminated pyrite.
90-B-105	L 18+50 E 0+10 N	Old trench, heavily oxidized, sample taken from a series of rock chips.
90-B-107A	L 18+50 E 0+50 N	Chert (Cp) banding at 161/58W chip sample over 40 cm.
90-B-1076	L 18+50 E 0+05 N	Chert (Cp) banding at 76/35 S chip sample over 30 cm, sample is collected 2 m to the west of 90-B-107a.

Sample	Location	Description
90-B-107c	L 18+50 E 0+05 N	Siliceous Exhalite (Cp) float, series of rock samples which are brecciated multiple phases of quartz veins with up to 5% fine grained pyrite in veins.
90-B-110a	L 18+40E 0+05 N	Mafic Tuff (Mt), medium-green which contains 5-10% chlorite veins and 2-10% pyrite in veins and clots.
90-B-111a	L 18+50 E 0+02 S	Mafic Tuff (Mt), pale-medium green, cross-cut by 2-5% chlorite veins.
90-B-111b	L 18+50 E 0+02 S	Chert (Cp) well fractured with up to 10% fine-grained pyrite in veins, panel sample over 1 m.
90-B-111c	L 18+50 E 0+02 S	Chert (Cp) well fractured with up to 50% pyrite in places.
90-B-116	L 19+10 E 3+00 S	Mafic Volcanic Flow (Mva) dark green chloritie in-filled amygdules, representative rock sample of relatively unaltered mafic volcanics.
90-B-120	L 18+85 E 0+60 S	Mafic tuff (Mt), pale-green, fine-grained, amygdaloidal cross-cut by 2-3% chlorite veins, trace disseminated pyrite.
90-B-121	L 18+95 E 0+10 S	Intermediate Volcanic Flow (Iv), pale green, cross-cut by 2-4% chlorite with trace disseminated pyrite.
90-B-122	L 18+82 E 0+15 N	Intermediate Volcanic Flow (Iv), pale-green, cross-cut by 2-4% chlorite veins.
90-B-129	L 18+80 E 0+17 S	Chert (Cp) approximately 2.0 m wide orientated at 62/50 NW, overall this chert has a rusty-brown colour, bands are up to 4 mm wide in places pyrite is present mostly in veins (3-10%).
90-B-130	L 18+75 E 0+17 S	Chert (Sex) outcrop is 1.5 m high, mottled medium to dark grey in colour, 2-5% pyrite.

Sample	Location	Description
90-B-131	L 18+75 E 0+17 S	Chert (Cp) mottled medium-dark grey in colour.
90-B-153a	L 21+30 E 2+90 N	Intermediate Volcanic Flow (Iv), local float, medium-green amygdules in-filled with chlorite up to 2 mm in diameter. Some quartz veins are present with 1-10% pyrite present as irregular clots and veins which are up to 3 mm in diameter. Some calcite veins are also present.
90-B-153b	L 21+20 E 2+90 N	Intermediate Volcanic Flow (Iv), outcrop series of fine quartz veins up to 4 mm wide which comprise up to 5% of the outcrop and are orientated at 108/90
90-B-159	L 27+05 E 0+90 S	Mafic Tuff (Mt), medium-pale green fine-grained, cross-cut by 1-2% chlorite veins, faintly foliated.
90-B-167a	L 26+60 E 1+60 S	Mafic Volcanic Flow (Mva) 2% amygdules up to 3 mm in diameter chloritic old trench, also in-filling the amygdules ispyrite, which generally envelopes the chloritic portions. Also present is 5-15% pyrite present in veins.
90-B-167b	L 26+55 E 1+60 S	Mafic Volcanic Flow (Mva) 2% amygdules up to 3 mm in diameter chloritic, old trench, also in-filling the amygdules is pyrite, which generally envelopes the chloritic portions. Also present is 0-5% pyrite, samples was taken 20 cm to the west of 90-B-167a.
90-B-170	L 30+70 E 1+00 N	Mafic Tuff (Mt) medium green, granular rock sample taken from a quartz vein minor epidote-quartz clots, minor dark green amygdules up to 2 mm in diameter.
90-B-180	L 28+30 E 2+70 S	Mafic Volcanic Flow (Mvf) Feldspar-Porphyry, medium-green, plagioclase phenocrysts up to 3 by 5 mm. Also present is a 2 cm wide quartz vein in-filling a tension gash at 101/66S.
90-B-184	L 24+90 E 1+20 S	Mafic Pillow Lava (Mvp) medium green, pillows 0.5 to 2.0 m in diameter. Also present is 5% pyrite in clots and irregular clots. Some pyrite is also hosted by the amygdules.

APPENDIX D

COST STATEMENT

COST STATEMENT

Linecutting Hussey Geophysical, Timmins, Ontario 20.3 km at $220/km	$ 4,468.72
Geological Mapping Brian V. Hall Consulting October 11½, 12-31, 1990 November 1, 1990 21½ days at $250/day	5,375.00
Assays and Analyses	
35 rock samples analyzed for 30 element ICP at $725/sample	271.25
22 rock samples analyzed for 17 major and minor elements at $900/sample	198.00
13 gold analyses using atomic absorption at $5.00/sample	65.00
	534.25
Report preparation (including typing and drafting)	5,000.00
Food and accommodation	548.22
Mobilization	689.10
Telephone	396.97
Vehicle rental	1,384.05
Fuel	211.97
Office supplies	88.69
Total	18,696.97
Overhead 5%	934.85
Grand Total	**$19,631.82**

APPENDIX E

COST OF PROPOSED WORK

COST OF PROPOSED WORK

Phase 1

Linecutting 12 km at $250/km	$	3,000
Geological mapping 7 man days at $350/day		2,450
Hydraulic stripping 7 man days at $350/day		2,450
Assays and analyses 50 rock samples at $15/sample		750
Mobilization to and from Vancouver		1,000
Food and accommodation 14 man days at $60/day		840
Reporting		3,000
Office		500
Field expenses		1,000
Electromagnetic survey		2,000
Total Phase 1	**$**	**16,990**

Phase 2

Diamond drilling 1,200 feet at $20/foot	$	24,000
Geological supervision 14 man days at $350/day		4,900
Assays and analyses 50 samples at $10/sample		500
Field expenses		1,500
Food and accommodation		500
Reporting		2,000
Total Phase 2	**$**	**33,400**
Phase 1 and 2 Total		**50,390**
10% Contingency		5,039
GRAND TOTAL	**$**	**55,429**

APPENDIX F

STATEMENT OF QUALIFICATIONS

APPENDIX F

STATEMENT OF QUALIFICATIONS

I, Brian V. Hall, of R.R. #1, Bowen Island, British Columbia, V0N 1G0, do certify that:

1) I am a graduate of the University of British Columbia (B.Sc., 1975) and the University of Waterloo (M.Sc., 1978) in geology.

2) I have practised my profession for 15 years since my graduation from the University of British Columbia.

3) I am member of the Society of Economic Geologists and a Fellow of the Geological Association of Canada.

4) I am currently the President of Cascade Pacific Explorations Ltd. and hold a sizeable stock interest in Cascade Pacific Explorations Ltd.

5) The work described in this report is the result of field work carried out by myself during October of 1990, plus relevant published reports.

Brian V Hall

Brian V. Hall, M.Sc.
January 1, 1991

M:L

Ministry of Northern Development and Mines

Ontario

Report of Work

(Geophysical, Geological, Geochemical and Expenditures)

DOCU W9108

#37

41P15NW8373 2.13911 MONTROSE 900

Type of Survey(s): Assays

Montrose Twp.

Claim Holder(s): Brian V. Hall

2.13911

Prospector's Licence No.: K22255

Address: RR-1 L-9 Bowen Island, B.C. VON-1G0

Survey Company: Brian V. Hall Consulting

Date of Survey (from & to): 1 10 90 / 1 1 91 (Day Mo. Yr. / Day Mo. Yr.)

Total Miles of line Cut: 12.13

Name and Address of Author (of Geo-Technical report): Brian V. Hall RR-1 L-9 Bowen Island, B.C. VON-1G0

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid:	- Radiometric	
Enter 20 days (for each)	- Other	
	Geological	
	Geochemical	

Man Days	Geophysical	Days per Claim
Complete reverse side and enter total(s) here	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

RECEIVED LARDER LAKE MINING DIVISION FEB 4 1991 TIME 3:00 P.M.

RECEIVED LARDER LAKE MINING DIVISION FEB - TIME

RECEIVED FEB 18 1991 MINING LANDS SECTION

Expenditures (excludes power stripping)

Type of Work Performed: Assaying

Performed on Claim(s): 1159652

Calculation of Expenditure Days Credits

Total Expenditures: $ 534.25 ÷ 15 = Total Days Credits 35.6

Instructions: Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L	1159652	35.6	-		

Total number of mining claims covered by this report of work: 1

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
35.6	Feb. 4/91	[signature]
	Date Approved as Recorded	Branch Director
	"SEE REVISED WORK STATEMENT"	

Date: January 25/91

Recorded Holder or Agent (Signature): B. V Hall

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: RR-1 L-9 Bowen Island B.C. VON-1G0 January 25/91 B. V Hall

Ministry of Northern Development and Mines
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

Mining Act

DOCUMENT No. W9108.00050

- If number of mining claims traversed exceeds space on this form, attach a list.
- Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." column.
- Do not use shaded areas below.

Type of Survey(s): Geological
Township or Area: Montrose Twp.
Claim Holder(s): Brian V. Hall 2.13911
Prospector's Licence No.: K22255
Address: RR-1 L-9 Bowen Island, B.C. V0N-1G0
Survey Company: Brian V. Hall Consulting
Date of Survey (from & to): 11 / 10 / 90 — 1 / 1 / 91 (Day / Mo. / Yr.)
Total Miles of line Cut: 12.13
Name and Address of Author (of Geo-Technical report): Brian V. Hall RR-1 L-9 Bowen Island, B.C. V0N-1G0

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	40
	Geochemical	

Man Days	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

RECEIVED
LARDER LAKE MINING DIVISION
FEB 4 1991
TIME 3:00 pm

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

RECEIVED
FEB 18 1991
MINING LANDS SECTION

Expenditures (excludes power stripping)

Type of Work Performed:

Performed on Claim(s):

Calculation of Expenditure Days Credits

Total Expenditures $ ____ ÷ 15 = Total Days Credits ____

Instructions: Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Mining Claims Traversed (List in numerical sequence)

Prefix	Number	Expend. Days Cr.
L	1159655	40
	1159656	40
	1159657	40
	1159659	40
	1159660	40
	1159661	40
	1159646	40

Total number of mining claims covered by this report of work: 7

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
280	Feb. 4/91	[signature]
	Date Approved as Recorded	Branch Director

SEE REVISED WORK STATEMENT

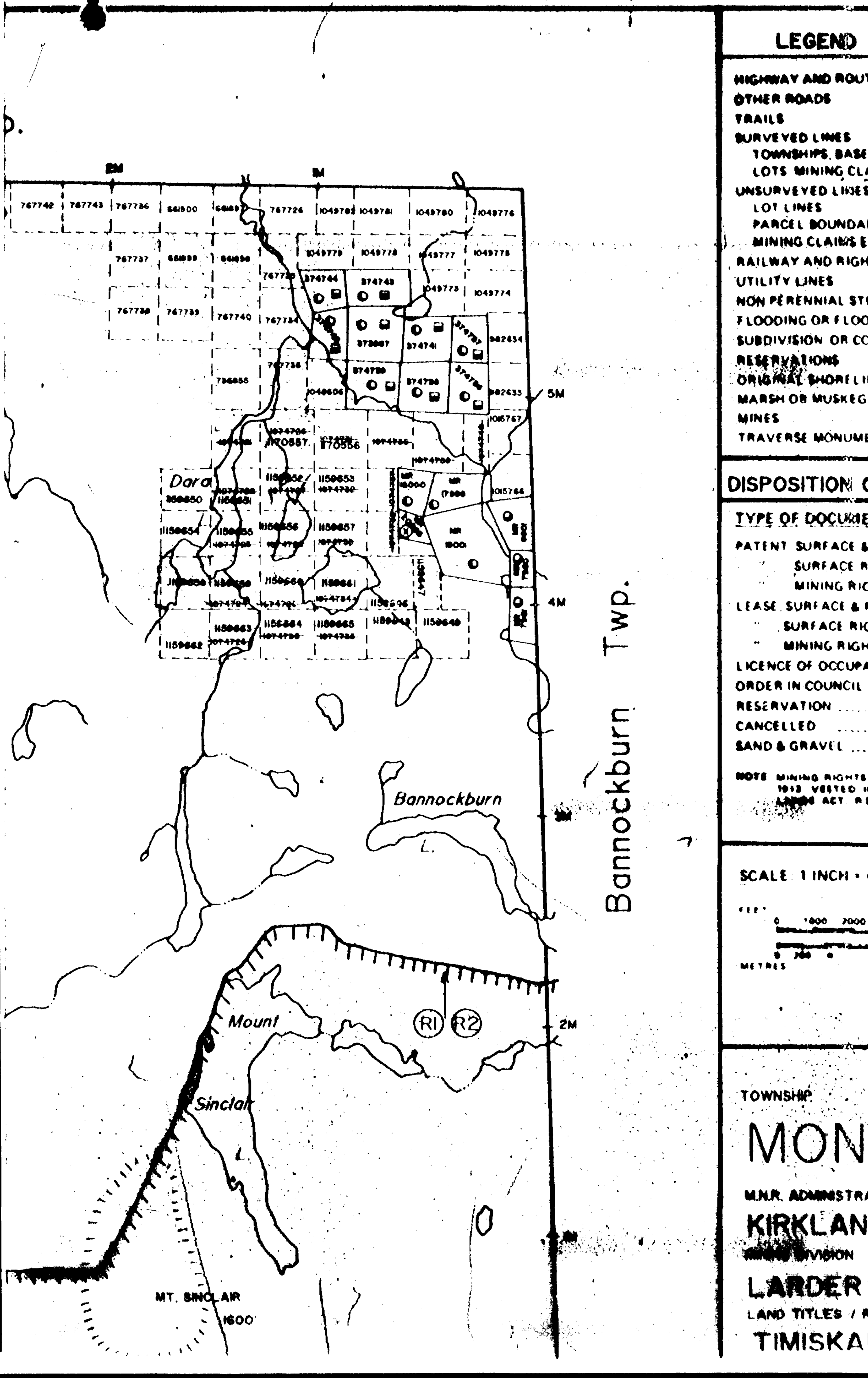
Date: January 25/91
Recorded Holder or Agent (Signature): Brian V. Hall

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true. new forms mailed

Name and Postal Address of Person Certifying: Brian V. Hall RR-1 L-9 Bowen Island, B.C. January 25, 1991 Brian V Hall

M·L.



LEGEND
HIGHWAY AND ROUT
OTHER ROADS
TRAILS
SURVEYED LINES
TOWNSHIPS, BASE
LOTS MINING CLA
UNSURVEYED LINES
LOT LINES
PARCEL BOUNDA
MINING CLAIMS
RAILWAY AND RIGH
UTILITY LINES
NON PERENNIAL ST
FLOODING OR FLOO
SUBDIVISION OR CO
RESERVATIONS
ORIGINAL SHORELI
MARSH OR MUSKEG
MINES
TRAVERSE MONUME
DISPOSITION C
TYPE OF DOCUME
PATENT SURFACE &
SURFACE R
MINING RIG
LEASE SURFACE &
SURFACE RIG
MINING RIGH
LICENCE OF OCCUPA
ORDER IN COUNCIL
RESERVATION
CANCELLED
SAND & GRAVEL
SCALE 1 INCH =
TOWNSHIP
MON
M.N.R. ADMINISTRA
KIRKLAN
DIVISION
LARDER
LAND TITLES / R
TIMISKA
Bannockburn Twp.
Dara
Bannockburn L.
Mount Sinclair L.
MT. SINCLAIR
1600
R1
R2
5M
4M
2M

Ontario

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Mining Lands Section
159 Cedar Street, 4th Floor
Sudbury, Ontario
P3E 6A5

Telephone: (705) 670-7264
Fax: (705) 670-7262

Your File: W. 9108. 00037
Our File: 2. 13911

April 15, 1991

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

Dear Sir/Madam:

Re: Data for Expenditures submitted under Section 77(19) of the Mining Act R. S. O. 1980 on Mining Claims L. 1159646 et al. Montrose Township.

The enclosed statement of assessment work credits for Expenditure has been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours sincerely,

Ron C. Gashinski
Provincial Manager, Mining Lands
Mines and Minerals Division

LJS/jl
Enclosure

cc: Mr. Brian V. Hall
Bowen Island, B. C.

Ministry of Northern Development and Mines
Ontario

Technical Assessment Work Credits

File
2.13911

Date	Mining Recorder's Report of Work No.
April 12/91	W.9108.00037

Recorded Holder
Brian V. Hall

Township or Area
Montrose

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	$534.25 spent on assaying samples taken from mining claims:
Electromagnetic ______ days	
Magnetometer ______ days	L.1159646
Radiometric ______ days	1159648
Induced polarization ______ days	1159655-56
Other ______ days	1159660-61
Section 77 (19) See "Mining Claims Assessed" column	1159664
Geological ______ days	
Geochemical ______ days	35.6 days credit allowed which may be grouped in accordance with Section 76(6) of the Mining Act R.S.O. 1980.
Man days ☐ Airborne ☐	
Special provision ☐ Ground ☐	
☐ Credits have been reduced because of partial coverage of claims.	
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

☐ not sufficiently covered by the survey ☐ insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geologocal - 40; Geochemical - 40; Section 77(19) - 60.

Ontario

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Mining Lands Section
4th Floor, 159 Cedar Street
Sudbury, Ontario
P3E 6A5

Telephone: (705) 670-7264
Fax: (705) 670-7262

Your File: W. 9108. 00050
Our File: 2. 13911

May 15, 1991

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

Dear Sir/Madam:

RE: Notice of Intent dated April 15, 1991 for Geological Survey on mining claims L. 1159646 et al in the Township of Montrose.

The assessment work credits, as listed with the above-mentioned Notice of Intent have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours sincerely,

Ron. C. Gashinski,
Provincial Manager, Mining Lands
Mines and Minerals Division

RJS/jl

cc: Mr. Brian V. Hall
Bowen Island, B.C.

Resident Geologist
Kirkland Lake, Ontario

Ministry of Northern Development and Mines

Ontario

Technical Assessment Work Credits

File	
2.13911	

Date	Mining Recorder's Report of Work No.
April 12/91	W.9108.00050

Recorded Holder
Brian V. Hall

Township or Area
Montrose

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	L.1159646 1159655 to 657 incl. 1159659 to 661 incl.
Electromagnetic ______ days	
Magnetometer ______ days	
Radiometric ______ days	
Induced polarization ______ days	
Other ______ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological 30.3 days	
Geochemical ______ days	
Man days ☐ Airborne ☐	
Special provision ☒ Ground ☒	
☒ Credits have been reduced because of partial coverage of claims.	
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

☐ not sufficiently covered by the survey ☐ insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geologocal - 40; Geochemical - 40; Section 77(19) - 60.

828 (85/12)

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

400 foot surface rights reservation around all lakes and rivers

(R1) Mining and surface rights withdrawn from prospecting staking out,sale or lease Section 36,The Mining Act R.S.O. 1980 Order No. NRW 65/83 Nov.18, 1983 4:35 PM

(R2) Closed to staking subject to Sec. 38I of Mining Act Sept. 20, 1978

TOWNSHIP SUBJECT TO FORESTRY OPERATIONS

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 WHICH IS THE SUBJECT OF CURRENT LITIGATION. THE EXACT LOCATION WILL BE SHOWN FOLLOWING CONFIRMATION BY THE PARTIES TO THE ACTION."

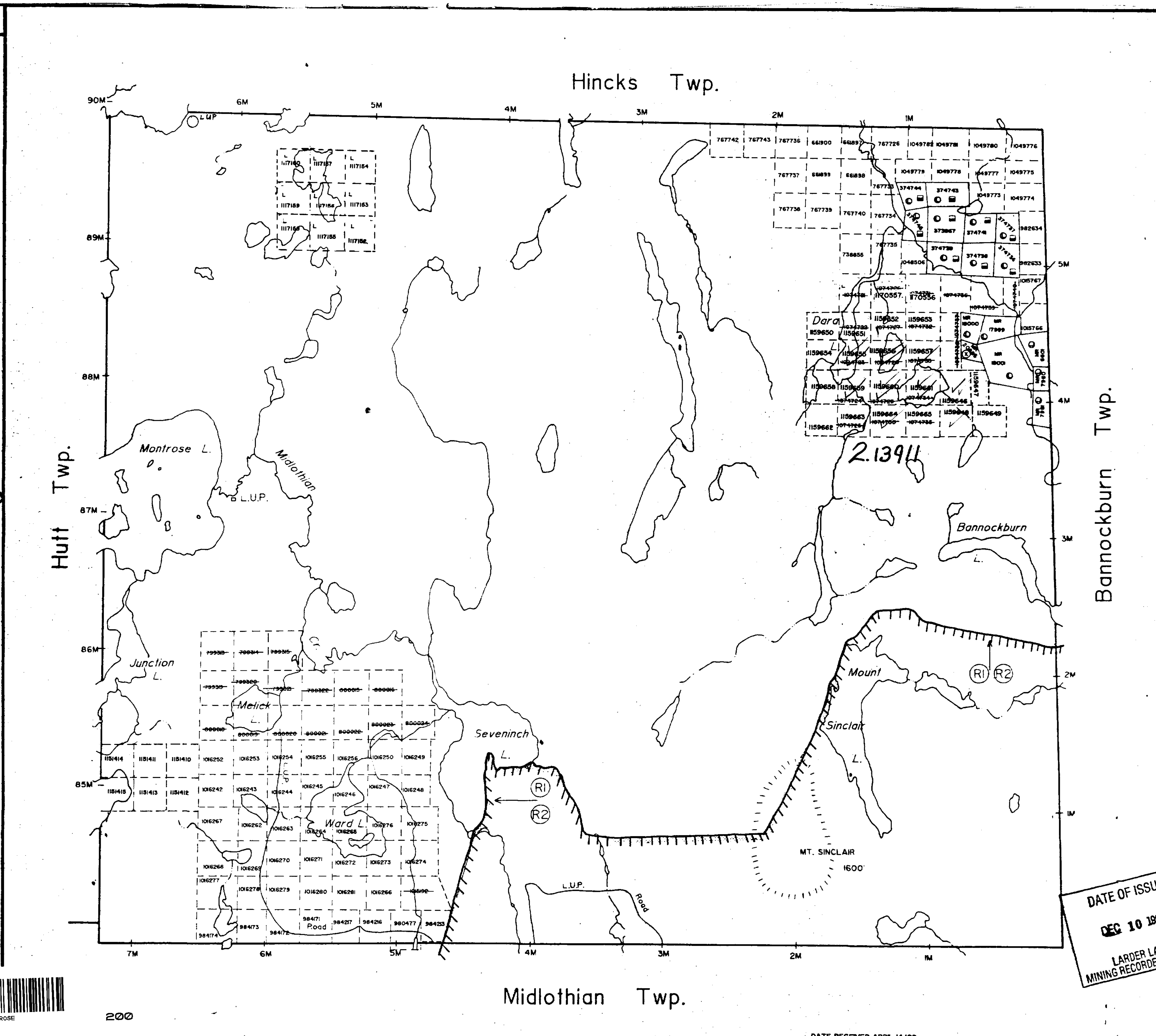
NOTICE OF FORESTRY ACTIVITY

THIS TOWNSHIP / AREA FALLS WITHIN THE ELK LAKE MANAGEMENT UNIT

AND MAY BE SUBJECT TO F... THE MNR UNIT FORESTER I... CONTACTED AT: P.O. BOX ... SWASTIKA, P0K 1T0 705-642-...

41P15NW8373 2.13911 MONTROSE

200



LEGEND

HIGHWAY AND ROUTE No.
OTHER ROADS
TRAILS
SURVEYED LINES
TOWNSHIPS BASE LINES ETC
LOTS MINING CLAIMS PARCELS ETC
UNSURVEYED LINES
LOT LINES
PARCEL BOUNDARY
MINING CLAIMS ETC
RAILWAY AND RIGHT OF WAY
UTILITY LINES
NON PERENNIAL STREAM
FLOODING OR FLOODING RIGHTS
SUBDIVISION OR COMPOSITE PLAN
RESERVATIONS
ORIGINAL SHORELINE
MARSH OR MUSKEG
MINES
TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT — SYMBOL

PATENT SURFACE & MINING RIGHTS
SURFACE RIGHTS ONLY
MINING RIGHTS ONLY
LEASE SURFACE & MINING RIGHTS
SURFACE RIGHTS ONLY
MINING RIGHTS ONLY
LICENCE OF OCCUPATION
ORDER IN COUNCIL
RESERVATION
CANCELLED
SAND & GRAVEL

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC. 1

SCALE: 1 INCH = 40 CHAINS

TOWNSHIP

MONTROSE

M.N.R. ADMINISTRATIVE DISTRICT

KIRKLAND LAKE

MINING DIVISION

LARDER LAKE

LAND TITLES / REGISTRY DIVISION

TIMISKAMING

DATE OF ISSUE DEC 10 1990 LARDER LAKE MINING RECORDER'S OFFICE

MINISTRY OF NORTHERN DEVELOPMENT AND MINES

PLAN UPDATED NOV 30\90

DATE | PLAN NO. M-237


DARA LAKE
MAG FAULT
SWAMP FAULT
LeLIEVER SHOWING
MAIN ROAD
SECONDARY ROAD
TO MATACHEWAN
LEGEND:
Mv MAFIC VOLCANIC FLOW (massive, variably amygdaloidal)
Mvh MAFIC VOLCANIC FLOW (hornblende bearing)
Mva MAFIC VOLCANIC FLOW (amygdaloidal)
Mvp MAFIC VOLCANIC FLOW (pillowed, generally amygdaloidal)
Mvf MAFIC VOLCANIC FLOW (plagioclase phenocrysts)
Md MAFIC DYKE (coarse-grained)
Mt MAFIC TUFF (granular, minor breccia clast)
Mth MAFIC TUFF (granular, minor hornblende grains)
Iv INTERMEDIATE VOLCANIC FLOW (massive, variably amygdaloidal)
Cp PYRITIC CHERT (chert, with minor pyrite)
Sy Syenite heavily altered, possible orthoclase veins
F0 Bedding
F1 Foliation
Jointing (inclined, vertical)
Shear Zone
Fault (inferred)
Rock sample
Claim Post (located)
Claim Post (projected)
qtz Quartz
cal Calcite
0 100 200m
SCALE 1:2000
2.13911
CASCADE PACIFIC EXPLORATIONS LTD.
McINTYRE-LELIEVER PROJECT
MONTROSE TOWNSHIP
MATACHEWAN,ONTARIO
NTS: 41P/15
GRID GEOLOGY
BRIAN V. HALL CONSULTING
BY: BVH
NOVEMBER 1990
FIGURE 4
210

LEGEND:

CHLORITE CONTENT

1 %
2 %
3 %

0 100 200m
SCALE 1: 2000

2.13911

CASCADE PACIFIC EXPLORATIONS LTD.

McINTYRE-LELIEVER PROJECT

MONTROSE TOWNSHIP

MATACHEWAN,ONTARIO NTS: 41P/15

CHLORITE ALTERATION DISTRIBUTION

BRIAN V. HALL CONSULTING

BY: BVH

NOVEMBER 1990 FIGURE 5

220


DARA LAKE
LeLIEVER SHOWING
ROAD SHOWING
MAIN ROAD
SECONDARY ROAD
TO MATACHEWAN
TRACE
LEGEND:
PYRITE CONTENT
TRACE
1%
3%
5%
SCALE 1:2000
0 100 200m
2.13911
CASCADE PACIFIC EXPLORATIONS LTD.
McINTYRE-LELIEVER PROJECT
MONTROSE TOWNSHIP
MATACHEWAN,ONTARIO
NTS: 41P/15
PYRITE DISTRIBUTION
BRIAN V. HALL CONSULTING
BY: BVH
NOVEMBER 1990
FIGURE 6
230


DARA LAKE
LeLIEVER SHOWING
ROAD SHOWING
MAIN ROAD
SECONDARY ROAD
TO MATACHEWAN
LEGEND:
ROCK SAMPLE LOCATION
CLAIM POST (located)
CLAIM POST (projected)
VALUES QUOTED IN PARTS PER MILLION
SCALE 1:2000
CASCADE PACIFIC EXPLORATIONS LTD.
McINTYRE-LELIEVER PROJECT
MONTROSE TOWNSHIP
MATACHEWAN,ONTARIO
NTS: 41P/15
2.13911
Cu GEOCHEMISTRY
BRIAN V. HALL CONSULTING
BY: BVH
NOVEMBER 1990
FIGURE 7
240

LEGEND:

- ▲ ROCK SAMPLE LOCATION
- ■ CLAIM POST (located)
- □ CLAIM POST (projected)

VALUES QUOTED IN PARTS PER MILLION

SCALE 1:2000 (0 — 100 — 200m)

CASCADE PACIFIC EXPLORATIONS LTD.

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MONTROSE TOWNSHIP

MATACHEWAN, ONTARIO NTS: 41P/15

2.13911

Zn GEOCHEMISTRY

BRIAN V. HALL CONSULTING

BY: BVH

NOVEMBER 1990 FIGURE 8

250

LEGEND:

▲ ROCK SAMPLE LOCATION

■ CLAIM POST (located)

□ CLAIM POST (projected)

VALUES QUOTED IN WEIGHT PERCENT

CASCADE PACIFIC EXPLORATIONS LTD.

McINTYRE-LELIEVER PROJECT

MONTROSE TOWNSHIP

MATACHEWAN, ONTARIO NTS: 41P/15

2.13911

CaO GEOCHEMISTRY

BRIAN V. HALL CONSULTING

BY: BVH

NOVEMBER 1990 FIGURE 9

41P15NE0373 2.13911 MONTROSE

260

LEGEND:

- ▲ ROCK SAMPLE LOCATION
- ■ CLAIM POST (located)
- □ CLAIM POST (projected)

VALUES QUOTED IN WEIGHT PERCENT

CASCADE PACIFIC EXPLORATIONS LTD.

McINTYRE-LELIEVER PROJECT

MONTROSE TOWNSHIP

MATACHEWAN,ONTARIO NTS: 41P/15

2·13911

Na_2O GEOCHEMISTRY

BRIAN V. HALL CONSULTING

BY: BVH

NOVEMBER 1990 FIGURE 10

270

DARA LAKE
LeLIEVER SHOWING
ROAD SHOWING
MAIN ROAD
SECONDARY ROAD
TO MATACHEWAN
LEGEND:
ROCK SAMPLE LOCATION
CLAIM POST (located)
CLAIM POST (projected)
VALUES QUOTED IN WEIGHT PERCENT
0 100 200m
SCALE 1:2000
CASCADE PACIFIC EXPLORATIONS LTD.
McINTYRE-LELIEVER PROJECT
MONTROSE TOWNSHIP
MATACHEWAN, ONTARIO
NTS: 41P/15
2.13911
MgO GEOCHEMISTRY
BRIAN V. HALL CONSULTING
BY: BVH
NOVEMBER 1990
FIGURE 11
280

LEGEND:

▲ ROCK SAMPLE LOCATION

■ CLAIM POST (located)

□ CLAIM POST (projected)

VALUES QUOTED IN WEIGHT PERCENT

0 100 200m

SCALE 1:2000

CASCADE PACIFIC EXPLORATIONS LTD.

McINTYRE-LELIEVER PROJECT

MONTROSE TOWNSHIP

MATACHEWAN,ONTARIO NTS: 41P/15

2.13911

K_2O GEOCHEMISTRY

BRIAN V. HALL CONSULTING

BY: BVH

NOVEMBER 1990

FIGURE 12

290