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SUMMARY REPORT ON THE LABRADOR TROUGH PROJECT

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SUMMARY REPORT

on the

LABRADOR TROUGH PROJECT

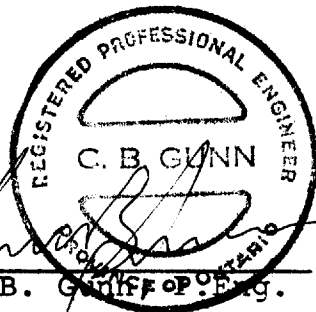
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CITIES SERVICE MINERALS CORPORATION

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Toronto, Ontario
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SUMMARY AND RECOMMENDATIONS

Eight of the nine properties owned by Cities Service Minerals Corporation in the Gerido Lake area of the Labrador Trough were examined and prospected during the summer of 1971 in varying degrees of detail. The Big 'M' property, which remains as one of the best prospects, was not examined this year as the question of ownership remained unresolved. All of these properties, with the exception of Folding Lake, contain mineralized blotchy gabbros and sediments which, when exposed, weather to prominent gossans. As far as is known, the Folding Lake Group contains only the shaley sediment type of mineralization with encouraging copper-zinc values.

These eight properties were mapped at 1" = 400 ft. In addition to magnetometer surveys on five of the properties and EM surveys on three, 781 feet of Winkie drilling was completed on the Sauve, Folding and Mutch Lake properties. A number of trenches were excavated and sampled. In many instances while prospecting, former trenches were located and sampled.

The area was increasingly active this year with six other companies, including Imperial Oil and International Nickel, engaged in exploration and it promises to be more so next year.

Some encouraging copper-nickel assays were obtained on the following properties:

- (1) Massive Lake
1.15% Cu, 0.60% Ni/14.3' - trenching in semi-massive to massive sulphides
- (2) Boundary Lake
1.10% Cu, 0.24% Ni/15' - old trench in blotchy gabbro
- (3) Folding Lake
0.44% Cu, 0.02% Zn/37' including
0.70% Cu, 0.02% Zn/17' - drill core in pyrrhotiferous shales
- (4) Mutch Lake
0.55% Cu, 0.23% Ni/40' - drill core in blotchy gabbro

Additional prospecting to include mapping, geophysics and sampling by trenching and drilling at selected places on each of these properties, in addition to a minimum amount of work on the Sandy Bay, Harveng and Sauve Lake groups is recommended for next year. Details of this work are given in individual sections of the report pertaining to each property.

No further work is recommended on the northern and western part of the Sauve group nor on the Prinzeles group, which properties should be allowed to lapse as assessment work expires. It is proposed to test a selected area by geochemical methods following a winter review of the various techniques available pertaining to tundra soil sampling.

INTRODUCTION

This report describes the second season's field work, carried out in the Fort Chimo area by Derry, Michener & Booth between June 1st, 1971 and September 2nd, 1971, on eight of the nine claim groups held by Cities Service Minerals Corporation. This is part of a continuing exploration program in the Gerido Lake area of the Labrador Trough, New Quebec. This field work, under the direction of Mr. C. B. Gunn, covered the Sauve Lake, Massive Lake, Boundary Lake, Prinzeles Lake, Folding Lake, Sandy Bay, Mutch Lake and Harveng Lake properties (Map 2). The Big 'M' group was not examined as the question of ownership has not been settled.

Field work comprised a combination of geological mapping, prospecting, trenching, geophysics and diamond drilling. For geological and practical reasons this work was not evenly divided among the properties. Five additional claims were staked on the Sauve Lake and two on the Folding Lake groups.

Messrs. R. Osterstock, H. W. Ranspot and W. Loring of Cities Service visited a number of the properties in early August.

PROPERTY AND ASSESSMENT WORK REQUIREMENTS

The following is a summary of claims presently held in the area.

<u>Name</u>	<u>1970 Claims</u>	<u>1971 Claims</u>	<u>Initial Assessment Requirements Due</u>
Sauve Lake	75	5	May 6, 1972
Massive Lake	46		August 26, 1972
Mutch Lake	35		June 9, 1972
Harveng Lake	15		July 28, 1972
Sandy Bay	14		August 25, 1972
Boundary Lake	10		August 24, 1972
Prinzeles Lake	10		August 25, 1972
Folding Lake	<u>8</u>	<u>2</u>	August 25, 1972
Total	213	7	

A detailed tabulation of all claims, by group, number and staking dates may be found in Schedule A.

At the time of writing it is not clear how assessment work is to be applied to claims under the new Mining Code of the Province of Quebec. It is expected that considerable credit will be applicable to Sauve Lake and Folding Lake; a large amount to Massive Lake, Boundary Lake and Sandy Bay, and smaller amounts to Prinzeles Lake, Mutch Lake and Harveng Lake.

OPERATIONS

The exploration work was done by three full-time and one part-time two-man field parties living in fly camps supported by float-equipped Beaver aircraft, on charter from Laurentian Air Services and based at Fort Chimo. Helicopters were used on a casual basis before break-up and for some drill moves during the season. This year float aircraft could not be used until July; the normal mid-June break-up being about two weeks late.

Bunk house, office space and ground transportation in Fort Chimo were rented from Ross Toms who also assisted our work in many other useful respects.

Close daily contact between the base of operations at Fort Chimo and the field camps was maintained by radio and outside contact was available via Bell radio-telephone through either Frobisher or Fort Chimo. Imperial Oil Enterprises stationed a radio operator-expediter in Fort Chimo who rendered us excellent part-time services.

Nearly all consumable stores were supplied by the Hudson's Bay Company at Fort Chimo. Fuel was bought in bulk from the Shell agent in Fort Chimo and one cache was put out at Gerido Lake by DC-3 early in the spring.

Camps were outfitted in normal prospector style using 10' x 12' canvas tents with collapsible wooden ridges and a pup tent for stores and emergency shelter. Oil heat was used throughout the summer.

One Sharpe SE-200 vertical loop EM unit and two Sharpe MF-1 Fluxgate magnetometers were used. A GIS-1 scintillometer was taken into the field but no radioactive targets were found.

Rock trenches were made by drilling 1 to 4 ft. long holes with an Atlas Copco "Cobra" percussion drill followed by blasting.

A Winkie GW-15 diamond drill with lightweight magnesium rods and I.A.X. bits was operated throughout July and August. Permafrost was encountered and, with only one

drill crew, time was lost reaming ice from the holes. Consequently, we are recommending two drill crews for next year.

Trenches and in some cases exposed gossans were generally sampled by representative chips and less frequently by grab samples. Hot acid extractable Cu, Ni, Zn values and, in a few instances Au and Ag, were analysed by Atomic Absorption in the Bondar-Clegg Laboratory in Ottawa. The A.A. method was used so that the results would be directly comparable with the geochemical work done in 1970 in a continuing build-up of geochemical data. Fire assays of higher grade samples from mineral showings were also made and these predictably give slightly lower values for copper, nickel and zinc.

Descriptions covering property location, physiography, early exploration and other matters may be found in the 1970 report and no purpose will be served by repeating this information. Map 2 shows the location of the nine Cities Service properties as well as other holdings in the general area.

Pages 7 and 8 have been extracted from the report because it did not represent work carried out by Derry, Michener & Booth on behalf of Cities Service and is of a confidential nature.

GENERAL GEOLOGY

A general account of the geology of the northern end of the Labrador Trough was given in the 1970 report.

All the properties are situated in a tract of pelitic sedimentary and basic igneous rocks belonging to a relatively late stage in the evolution of the Labrador geosyncline. In essence the stratigraphy of the Gerido Lake area falls into three principal units:

- (i) the underlying Baby Formation composed of pelitic schists, shales and quartzites
- (ii) an overlying series of lavas, the Hellancourt volcanics, and between these two units
- (iii) an extensive gabbroic intrusive

These three units have been subjected to pressure from the east-northeast resulting in folding and strike faulting of varying intensity. Some folds, such as that through Gerido Lake, are overturned to the west. A few folds can be traced for + 50 miles along strike and seldom exceed 3 or 4 miles in width. Parallel folds to the west, such as at Hook Lake 3 miles west of Gerido, have local closures to the north and south while 10 to 20 miles east of Gerido, such as at Thevenet Lake, broad, open pitching folds are developed. In general, metamorphism is low-grade but more intense to the east and northeast of Gerido.

The gabbro sill is composed of a number of different compositional and textural types, the most notable and interesting of which is the so-called "blotchy" gabbro. Other types are massive gabbro, quartz diorite and a dark "ultramafic" gabbro. The gabbro encloses slabs of sediments and in many places sediments separate the gabbro from the overlying Hellancourt volcanics. These structural relationships indicate that the sills are primarily intrusive into the upper horizons of the Baby Formation sediments. Emplacement probably took place during a single stage in the development of the Trough before folding and metamorphism.

In detail the contact relationships between the gabbro and other units are complex and may be further complicated by folding, faulting and shearing.

The potential Cu-Ni deposits of the area normally occur at or near the base of the blotchy gabbro. Examples are Hollinger's Erickson No. 1 and Leslie No. 2 deposits at Holannah Lake and our own showings at Massive Lake, the Big 'M', Mutch Lake and others. All these deposits occupy the same stratigraphic position and, if the sulphides were formed by fractionation from a melt as their texture suggests, this would imply that all the blotchy gabbro mineralization was contemporaneous. Some later mobilization is indicated by sulphides on fracture faces.

Strong folding and strike faulting followed by erosion have combined to expose a very large mileage of favourable contact.

As far as is known, significant copper-nickel prospects in this area of the Trough are confined to the blotchy gabbro and its immediate borders. A sedimentary ferruginous member lower in the Baby Formation, between Lac Rougemont and Lac Hellancourt, develops intense gossans, clearly visible from the air but there are no known Cu-Ni-Zn prospects associated with it.

Shaley sediments containing laminated beds of pyrrhotite and lesser amounts of pyrite are extensive throughout the area. Included in this category are rocks of probably widely differing origin but similar in present appearance. Probably included here are tuffs and mylonites as well as arenaceous and argillaceous sediments. These sulphide-rich sediments contain trace amounts of sphalerite and chalcopyrite and at least three copper-zinc deposits; the Prud'homme 1, Prud'homme North and Ungava Copper. In this respect, the top of the Baby Formation is particularly favourable to prospecting, and especially so when in contact with blotchy gabbro or massive gabbro and nearby volcanics. Locally the gabbro may be intruded above, below or on both sides of a mineralized shale horizon as at the Ungava Copper deposit. The mineralization at Folding Lake may be a similar type of occurrence and the many sulphide-rich sedimentary beds on the Sauve Lake property contain traces of copper and

zinc. There seems to be a definite correlation between sulphide concentrations in the gabbro and massive sulphides in the adjacent sediments which may possibly provide an exploration guide to potential ore zones.

The Prud'homme No. 1 Cu-Zn-Ag deposit, although associated directly with sediments, is also associated with pillow lavas. This association and certain structures observed in the massive sulphides which look suspiciously like pillows suggest to the writer a volcanic-exhalative origin. It may well be that the heavy sulphide mineralization at the top of the Baby Formation is due to an early sulphide-rich exhalative phase of volcanism in a reducing environment on the ocean floor and eruptions later in the volcanic cycle led to the deposition of the Hellancourt volcanics. Whatever the reasons a favourable environment for copper-zinc mineralization appears to exist when mineralized Baby Formation sediments and Hellancourt volcanics are close together.

We recognize the advantage of some understanding of sulphide distribution and patterns of concentration in planning our exploration effort and we are endeavouring to develop working hypotheses to focus attention on the most promising areas.

GEOPHYSICS AND GEOCHEMISTRY

Copper values in blotchy gabbro are, it appears, directly related to the amount of pyrrhotite present; a similar relationship may apply to mineralized sediments. Consequently the magnetometer gives a quick and relatively accurate indication of the amount of pyrrhotite present. Prospecting to date indicates that the magnetite content of the rocks is either low or relatively well distributed and the only concentration located in the Gerido area is in the hanging wall of the Massive Lake No. 1 zone. Consequently most magnetic anomalies can be assumed to be caused by pyrrhotite.

In areas of suspected pyrrhotite in semi-massive to massive sulphides under overburden or rock cover check EM work to determine the conductivity and to locate the conductor axis is a useful follow-up technique.

Experience on the properties examined to date indicates that these two methods are complementary with magnetometer surveys conducted first followed by detailed EM over the magnetic highs. Any resulting coincident anomalies become a prime target for sampling by trenching or drilling.

Unfortunately EM work is much less useful over gabbro containing disseminated pyrrhotite. We would suggest that some test I.P. work for orientation purposes should be undertaken over at least one exposed zone of this type as an alternative geophysical technique.

As more published information is becoming available on the mobility of metals in the tundra environment, geochemical soil, silt and water prospecting becomes a more feasible proposition. We recommend that the present state of the art be reviewed during the winter with a view to testing a selected area, probably Massive Lake, by whatever methods appear to be the most promising.

MASSIVE LAKE (Map 3A)

Work Completed

The entire claim group and some areas around the periphery were mapped by pace and compass traverses at 1,000 foot line intervals. Three separate areas were covered by reconnaissance magnetometer surveys on lines 800 feet apart using 100 foot station intervals; (1) the east side of Massive Lake over the No. 1 and No. 3 zones, (2) the southwest side of Leslie Lake covering the No. 4 zone (which is the strike extension of Hollinger's Leslie No. 2 deposit), (3) along the west side of Surprise Lake in the vicinity of No. 7 and No. 8 zones.

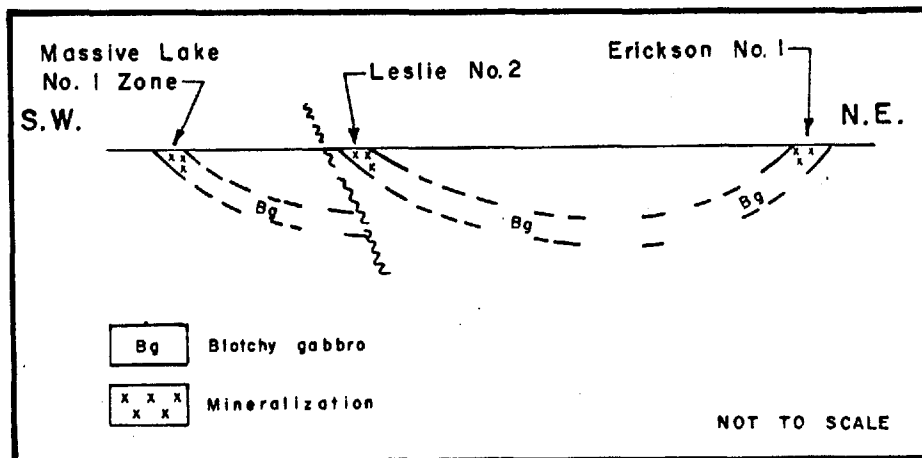
Six trenches and three former drill holes were blasted on the No. 1 zone over a strike length of 200 feet for sampling purposes.

Geology

The claim group lies on the eastward dipping west limb of a major syncline which extends southeast from Sauve Lake for several miles. The axis of the syncline is believed to lie just east of Hollinger's Leslie No. 2 deposit near the eastern boundary of the property.

Southeast of the claim group the synclinal structure appears to be of simple geometry but to north (Sauve Lake area) the picture is more complex. There, two adjacent synclines are in fault contact with each other, the intervening anticlinal structure having been largely eliminated by a presumed eastward dipping thrust fault. We interpret this major thrust fault to strike southeast from Sauve Lake through the Massive Lake claims with ever-decreasing displacement to the south and eventually dying out about two miles south of the claim group. The surface trace of this fault apparently follows an incompetent shaley horizon at the base of the eastern blotchy gabbro unit near the centre

of a debris-covered valley. A diagrammatic interpretation through this structure, near Holannah Lake, showing the mineralized blotchy gabbro horizon is illustrated below:



DIAGRAMMATIC CROSS SECTION
MASSIVE LAKE — HOLLANAH LAKE AREA

The blotchy gabbro on the western limb of the eastern syncline hosts the Leslie No. 2 deposit. This blotchy gabbro passes southeastward for 12,000 feet, with local pinchings and swellings, throughout the Massive Lake property and beyond. Surface mineralization in this member occurs sporadically on surface throughout its length and the five most prominent gossans have been designated from north to south the Nos. 4, 5, 6, 7 and 8 zones.

If our structural interpretation is correct, then the Massive Lake No. 1 zone may be the original lateral continuation of the mineralized blotchy gabbro hosting the Leslie and Erickson deposits. The gabbro unit near the western side of the property, in the western syncline, and associated with the No. 1 zone, is intermittently exposed for 14,000 feet throughout the property. Combined, these two gabbro units total approximately 5 miles of strike length on the claim group. Both gabbro bands vary between 100 and 600 feet in thickness and often have a basal marginal zone of dark green massive metagabbro.

The stratigraphy on this property is basically similar to that on the other Gerido Lake properties except for the duplication due to faulting.

The western side of the property is underlain by a thick massive gabbro unit which is overlain by an easterly dipping, mineralized, metasedimentary unit up to 300 feet thick. This in turn is overlain by a gabbro unit exposed over a variable width of from 800 to 2,000 feet. A blotchy gabbro unit of varying thickness but reaching a maximum of 600 feet occurs near the base of the unit and in the northern part of the property is succeeded by a lens of metasediments up to 200 feet wide and which pinches out just southeast of Massive Lake.

The central section of the property is occupied by pillowed volcanics. On surface the interpreted thrust fault marks the eastern boundary of the volcanics and the eastern part of the property is a repeat of the aforementioned units starting with metasediments along the fault succeeded to the east by massive gabbro, blotchy gabbro and more pillowed volcanics. At the northern end of the property, two 10 to 20 foot wide volcanic breccia horizons approximately 1,400 feet apart were noted.

Mineralization

Both gabbroic units have widespread surface gossans exposed intermittently throughout their length. The eight gossans, designated on Map 3A, are essentially the most prominent gossans in gabbro found during our mapping and prospecting. As elsewhere throughout the belt, the shaley sediments where exposed are mineralized and give a prominent limonitic staining.

Zones 3, 4 and 5 are within the blotchy gabbro member, the latter two being on the strike extension of the Leslie No. 2 deposit of Hollinger's. The remaining five zones are associated with the lower blotchy gabbro-massive gabbro contact.

Very little attention was paid this year to the sediments on this property and only two grab samples of well weathered material, one at Massive Lake and the other east of Massive Lake, were assayed. Both gave only trace amounts of copper, zinc and nickel.

Zone No. 1

The No. 1 zone, although small, is one of the more intense gossans and was therefore selected for initial detailed investigation. At this location it was found after trenching that a small lens of blotchy gabbro located a few feet below the main blotchy member is mineralized with disseminated to massive pyrrhotite containing chalcopyrite and some magnetite. The presence of chalcopyrite was not known until after the gossan was trenched. Details of this trenching together with results of sampling are illustrated on Inset 3 on Map 3A at a scale of 20 ft. = 1".

Trench No. 1, across the most massive sulphides, averaged 1.15% copper and 0.60% nickel from five contiguous samples over a total width of 14.3 feet.

Trench No. 2 averaged 1.15% copper and 0.45% nickel over 15 feet and Trench No. 3, which was primarily in unmineralized gabbro below the blotchy gabbro, assayed 0.25% copper and 0.09% nickel, also over 15 feet.

The massive green gabbro separating the lens of blotchy gabbro and the overlying main blotchy gabbro contains abundant large, well-disseminated cubes of pyrite.

The No. 1 zone can be followed on surface for 250 feet and appears to fade out to the north in outcrop but cannot be traced further south because of overburden. Reconnaissance vertical loop EM indicated that the conductive zone continues a further 2,400 feet to the southeast. Although a weak magnetometer response was obtained over the showing, this response is less distinct than responses obtained at many other localities over gabbro and metasediments.

Conclusions and Recommendations

This property which contains two sub-parallel gabbro units, the eastern one of which is the extension of the Leslie No. 2 deposit, is regarded next to the Big 'M', on the basis of our present work, as the most interesting of the nine properties held.

On this basis, we would concentrate a good portion of the 1972 efforts on this property. The proposed work would include drilling and confirmatory EM work on the No. 1 zone and sampling by trenching or drilling of the other seven gossans designated on the map.

In addition, we would recommend reconnaissance vertical loop EM work along the basal contact of both blotchy gabbro members. While this work is in progress, some additional detailed mapping would further complete the geological picture and prospecting both north and south of the property is warranted.

As discussed in the section on Geochemistry, it is recommended that a portion of the property be soil sampled on a grid pattern for research and orientation purposes.

SAUVE LAKE (Map 4A - North and
South Sheets)

Work Completed

Numerous prominent gossans both in gabbro and in sedimentary horizons, together with a wide exposure of favourable rocks, on the largest and earliest staked of the nine claim groups led to a concentration of work on this property.

The claim block, together with adjacent ground to the west, was mapped at a scale of 1" = 400 ft. by pace and compass traverses on lines 800 feet apart. A one square mile area around Yoyo Lake in the west-central part of the group was mapped on a detailed grid at 1" = 200 ft., the results of which are incorporated into geological map 4A.

In the Yoyo area, detailed vertical loop EM and magnetometer surveys were run on lines 200 feet apart on a north-south grid over north trending rocks and on lines 400 feet apart on an east-west grid at the north end of the Holannah Lake syncline.

On these grids, 18 trenches and 8 pop holes were excavated in four separate areas. Of these, nine trenches and three pop holes were put down on the '100' zone, five trenches on the '104' zone, three trenches and three pop holes on the '106' zone and one trench and two pop holes on the '107' zone.

Seven diamond drill holes giving an aggregate total of 542 feet were drilled in this same area, as shown on Map 4A. Holes 1 and 2 were on the '103' zone, holes 3 and 4 on the '107' zone and holes 5 and 6 on the '100' zone. Hole 7 tested a mineralized blotchy gabbro on the '106' zone.

Geology

The property covers portions of two adjacent synclinal structures both of which strike northwest and

plunge southeast. These synclines separated by an interpreted eastward dipping thrust fault, which has carried the eastern syncline up and partly over the western one, eliminate the original intervening anticlinal structure. This thrust fault continues southeast, near the Leslie deposit, through to the Massive Lake claims and beyond where it eventually dies out. Recognition of this thrust is important in interpreting the geology of the Sauve Lake and Massive Lake groups and a more detailed description of this structure was given in the preceding section on the Massive Lake claims.

The blotchy gabbro member of the eastern syncline hosts the Leslie and Erickson deposits on the west and east limbs respectively and is well exposed along the large assymmetrical nose of this syncline on the Sauve Lake group. This member contains a 50 to 100 foot thick bed of sheared and mineralized siliceous shaley sediments. The presence of these sediments enclosed in gabbro suggest the possibility that the gabbro may be metamorphosed basic volcanics rather than an intrusive sill. The eastern limb of this syncline contains a number of intermittent small gossans along the gabbroic unit which eventually lead to the Erickson No. 1 showing of Hollinger's which is located a few hundred feet south of the property. South beyond the Erickson deposit, further intermittent gossans exist for about one mile along strike to the Big 'M' group and beyond.

The western limb of the syncline which hosts the Leslie deposit is partly eliminated by the thrust fault which separates the eastern and western synclines. However, the blotchy gabbro member does continue southeastwards beyond the Leslie and through the Massive Lake claims. This blotchy gabbro is underlain by metasediments and massive gabbro and is overlain by more massive gabbro above which the Hellancourt volcanics outcrop as the upper unit occupying the centre of the syncline.

The western syncline is much narrower and a large part of its eastern limb has been overthrust by rocks of the eastern syncline. Weakly mineralized blotchy gabbro can be traced along the western limb around the nose and part way down the east side where it slowly pinches out or merges with the same unit of the eastern syncline along the thrust

fault plane. A fine-grained banded rock which appears to be a combination of carbonaceous shales and volcanic tuffs separates the blotchy gabbro from overlying pillow lavas occupying the centre of the western syncline.

Intense gossans derived from weathered sulphides in the sediments and containing visible chalcopryrite in the '100' and '107' showings indicated the possible presence of a copper-zinc bearing sedimentary member in this area similar to the sediments hosting the Prud'homme deposit. The discovery of trace amounts of chalcopryrite in these zones early in the season resulted in more detailed geophysics, mapping, trenching and drilling in the area than originally planned.

Five additional claims were staked along the western side of the property to cover gossans exposed along the interpreted outcrop along the western limb of the syncline.

Mineralization

The sedimentary horizons in and above the blotchy and adjacent massive gabbro are consistently mineralized with disseminated to massive pyrrhotite and pyrite and weather to form long conspicuous gossans. Deep trenching or drilling is required in order to properly sample these friable and deeply weathered rocks.

Two mineralized zones on the nose of the eastern syncline, the '103' and '106' were examined by drilling and by trenching. Drill holes 1 and 2, about 500 feet apart on zone '103', penetrated the mineralized base of the blotchy gabbro as well as the semi-massive to massive sulphides in underlying mineralized shale. Both mineralized rock types returned only trace amounts of copper, nickel and zinc. In the '106' showing approximately 1,000 feet further east, mineralized blotchy gabbro was sampled by means of four trenches and one drill hole. The best value intersected by drilling was 0.52% Cu and trace Ni over 5 feet in the gabbro.

Drill holes 3 and 4, 300 feet apart, on zone '107' returned only trace amounts of Cu, Zn and Ni from banded

pyrrhotite and pyrite in shaley sediments as did holes 5 and 6, which were 50 feet apart on zone '100' in the same type of mineralization.

The trench sketches for the 100, 104, 106 and 107 zones provide details and assay results from all the trenches excavated on these zones and drill hole sections 1 to 7 inclusive also show the detailed geology and assay values obtained by drilling.

Conclusions and Recommendations

The Sauve claim group is well situated, particularly with respect to the Erickson #1 deposit of Hollinger's, and six of the claims cover the centre of the narrow syncline on which both the Erickson and Leslie deposits are situated. These claims have long-term value for this reason alone and sufficient assessment work should be completed to hold them for some years to come.

Some of the more prominent gossans in the west-central part of the property have been adequately examined by trenching and drilling with disappointing assay results. However, the amount of work done on these claims was by no means exhaustive and certain known gossans north of the Erickson zone which may in fact be part of the north end of this deposit should be sampled by trenching and/or drilling particularly near the boundary.

Consideration in future years should be given to deep drilling on Holannah Lake to test for mineralization in the blotchy gabbro member at depth between the Erickson and Leslie deposits. Detailed mapping and magnetometer work should be undertaken if insufficient work is available to continue holding this selected portion of the property at this time.

The claims should be grouped for assessment work purposes in such a manner as to concentrate as much of the work completed to date on the southern part of the group thus permitting the continued retention of this portion of the property and allowing the northern claims to lapse.

BOUNDARY LAKE GROUP (Map 5A)

Work Completed

The entire group of 10 claims was prospected and mapped by detailed traverses at 600 foot spacings with observations between traverses where necessary.

A magnetometer survey, over the blotchy gabbro sill and adjacent wall rocks, on lines 400 feet apart with readings at 50 foot stations covered three-quarters of the property.

A number of pre-existing trenches were examined and some of these sampled.

Geology

The group lies on the steeply-dipping east limb of an anticline whose axis strikes N25W and follows the narrow southern arm of Gerido Lake. The Big 'M' showing occurs opposite the Boundary Lake Group on the western limb of this anticline. All of the formations dip vertically to steeply east and strike approximately N20°W through the property.

Baby Formation sediments, occurring as isolated outcrops along the eastern shore of Gerido Lake, underlie the western edge of the group. These sediments are succeeded by 1,000 foot thick sills of massive gabbro which form steeply rising ground. Along the southwestern boundary a block of sediments has been incorporated into this gabbro.

A 300-400 foot wide depression extending the length of the property is underlain by shaley metasediments and separates the massive gabbro from overlying mineralized blotchy gabbro to the east.

The well mineralized blotchy gabbro is 800 to 1,000 feet thick in the northern two-thirds of the property but

at around L24N the surface exposure narrows rapidly to about 300 feet and as outcrop is sparse in this area may pinch out completely near the southern boundary. The upper contact of blotchy gabbro which has a marginal metagabbroic phase, up to approximately 150 feet thick, is poorly exposed throughout the claim group.

The gabbro is succeeded to the east by pillowed volcanics of the Hellancourt series.

Magnetometer Survey (Map 5B)

The magnetometer survey defined strong sub-parallel anomalies along the upper and lower contacts of the blotchy gabbro. At the western or lower side the anomaly coincides with metasediments, whereas on the upper side no sediments were observed. In neither case were sulphides observed to underlie these magnetic highs but undoubtedly pyrrhotite is present in the sediments to the west and pyrrhotiferous sediments are likely present along the east side where outcrop is poor. Both contacts should be tested for copper-zinc mineralization in this environment of associated sediments, mineralized blotchy gabbro and lava. In the southeast corner the magnetic trend indicates the blotchy gabbro continues southward beneath the volcanics. A third magnetic anomaly of variable intensity exists along the centre trace of the gabbro throughout the length of the property with the exception of L52N. Other shorter anomalous zones are present in the south part of the blotchy gabbro and are associated with gossans.

The complex magnetic pattern within and along the contact of the blotchy gabbro is regarded as very encouraging and further work is definitely warranted in view of the chip sample assays discussed below.

Mineralization

Disseminated sulphides were noted in most outcrops of the blotchy gabbro but the heavier and more interesting mineralization is confined to the lower half of the unit, particularly near the base.

These showings have been investigated previously by Holannah Mines as the Erickson No. 8 group. Their work included mapping, geophysics, trenching and shallow drilling below trenches 1, 2 and 4 and elsewhere but nothing useful was recorded.

Four trenches were located and sampled. The assay results are as follows:

Trenches:

<u>Trench No.</u>	<u>Sample No.</u>	<u>Cu</u>	<u>Ni</u>	<u>Width</u>	<u>Remarks</u>
1	716	0.35	0.45	24.0'	Grab
1	717	0.87	0.17	24.0'	Chip
2	718	0.19	0.08	-	Grab
3	714	1.10	0.21	15.0'	Chip-Grab
3	719	1.10	0.24	15.0'	Chip
4	713	0.08	0.07	-	Chip-Grab
4	720	0.16	0.08	-	Grab

Untrenched Material:

712	0.10	0.01	-	Base of BG-Grab
715	0.02	0.01	-	Volcanics -Grab

Assays 714 and 719 represent duplicate sampling of semi-massive and massive pyrrhotite with chalcopyrite along each side of former Trench No. 3 located in a small outcrop near the base of the blotchy gabbro and gave very encouraging copper values. Magnetometer results indicate that this zone could be up to 1,000 feet long. However, grab sample 718 from Trench No. 2 on the same zone 300 feet north gave only 0.19% Cu and 0.08% Ni but may not be representative of the zone.

Chip samples 716 and 717, also duplicate samples in Trench No. 1, gave encouraging copper and nickel assays over a width of 24 feet. A magnetic anomaly 1,600 feet long and open to the south closely parallels the showing but it is difficult to know whether the source of the anomaly is in the blotchy gabbro or in the sediments which lie immediately below. In either case, further follow-up work is warranted. The sediments characteristically show strong magnetic anomalies over thousands of feet of strike length where they are mineralized with pyrrhotite.

Seven additional trenching sites were selected by the field crew but no trenches were excavated this year.

Conclusions and Recommendations

In view of the complex pattern and encouraging assay values obtained in Trenches 1 and 3, additional detailed prospecting and sampling is warranted on this property.

After resampling Trenches 1 and 3 for check purposes detailed EM work should be undertaken to select the most conductive zones coincident with magnetic highs for detailed drill testing.

MUTCH LAKE (Map 6A)

Work Completed

This 35 claim group was mapped by pace and compass traverses 800 feet apart together with a limited amount of prospecting. It was planned to cross-section the main mineralized blotchy gabbro with a minimum of three drill holes but unfortunately after only 55 feet of coring the drill broke down and as it was near the end of August the drilling was terminated.

Geology

Mutch Lake, which is some 30 miles north-northeast of Gerido Lake, is in the southern end of the less well known eastern branch of the greenstone belt. The northward continuation of this belt, north of Leaf River, contains a number of very promising looking showings and exploration activity in that area, for the last two years, particularly by Imperial Oil, has produced encouraging results.

The detailed geology of the Mutch Lake area, which has received very little exploration interest in the past, is not well known and our own mapping and prospecting over a limited area has not clarified the regional picture.

Mutch Lake is underlain by metasediments, possibly up to 1,000 feet thick, which strike NS and dip approximately 60 to 65° east. West of Mutch Lake the sediments are flanked by sparsely outcropping pillow lavas and further west by a complex of metagabbros and volcanics. The relationship of the rocks to the west of the Lake with those to the east is not known.

The main showing, outcropping on the east shore of Mutch Lake, consists of blotchy gabbro well mineralized along the base, with pyrrhotite and chalcopyrite from which encouraging assays have been obtained by sampling old trenches. This gabbro unit overlies finely bedded metasediments outcropping along the lake shore and is in turn overlain by

by an alternating series of metagabbros and thinly bedded shaley metasediments intermittently exposed over a width of about 1/2 mile. This latter alternating sequence may quite well be a volcanic pile consisting of coarse-grained lavas separated by tuffs and minor sediments. The rocks in this area are somewhat more metamorphosed than those in the Gerido Lake area in keeping with the general metamorphic gradient which increases to the eastern side of the Trough.

The main blotchy gabbro, which in the vicinity of the showing is approximately 300 feet thick, has been traced intermittently for a strike length of 7,000 feet and is open at both ends.

At the north end of Mutch Lake a smaller and apparently less extensive zone of mineralized blotchy gabbro was found during 1970 but no trenches have been put into this zone.

Mineralization

The blotchy gabbro unit contains disseminated pyrrhotite and minor chalcopyrite throughout but is more concentrated near the base. The 1970 sampling indicated that values in the order of 0.3% copper and 0.1% nickel are still present 100 feet above the lower contact.

Only 55 feet of core were obtained this year as part of the program to cross-section the main showing and this core returned 0.55% Cu and 0.23% Ni from 0 to 40 feet. The next 10 feet which includes an unmineralized chill margin returned an additional 10 feet of .27% Cu and .14% Ni. Individual assays are given on the cross-section of hole No. 10.

Conclusions and Recommendations

Insufficient work was done this year to assess the true potential of the Mutch Lake group. The gabbro horizon appears to be thick and extensive but little is known about this area of the Trough.

Proposed work for 1972 would consist of additional detailed mapping, magnetometer coverage of most of the property together with a limited amount of EM work as determined from the results of the magnetometer survey and mapping.

The previously proposed cross-sectional drilling program should be completed and the mineralized gabbro at the northern end of the claim group sampled.

Some thought might be given to conducting test I.P. work over the blotchy gabbro and to additional prospecting along the belt.

FOLDING LAKE (Map 7A)

Work Completed

In addition to mapping the property at a scale of 1" = 400 ft., the mineralized sedimentary horizon through the centre of the property was mapped in detail at 1" = 200 ft.

Broadside and fixed transmitter vertical loop EM, together with magnetometer work on lines 400 feet apart, covered close to 75% of the property.

Ten former trenches were freshened up by blasting and resampling and two diamond drill holes were put down near the centre of the main zone. In checking claim boundaries it was found that a small area was open on the shaley horizon to the south and two claims were staked to cover this strike extension.

Geology

The Folding Lake claims cover a segment of the east limb of a very prominent symmetrical syncline which trends northwest and plunges at a low angle southeast. The sulphide mineralization occurs in a carbonaceous shaley unit along a volcanic-sedimentary contact which has been intruded by gabbro.

The core of the syncline, located just west of the claim group, is occupied by Hellancourt volcanics and at least one generally conformable gabbroic sill. Proceeding east across the limb of the syncline the underlying sedimentary unit on the property is separated from these volcanics by a gabbroic sill up to 1,300 feet thick just east of Folding Lake. Along the sediment-gabbro contact, lenses of volcanic rocks 100 to 200 feet long and 10 to 50 feet thick have been separated from the main volcanic mass by the gabbro. These lenses of volcanic rocks may be directly associated with the mineralization in the sediments.

The sediments are comprised of a sequence of carbonaceous shales, phyllites and minor quartzite approximately 800 feet thick. This unit has been sub-divided into an upper carbonaceous unit and a lower phyllite-quartzite unit. The upper unit is well mineralized with pyrrhotite, pyrite, minor chalcopyrite and traces of sphalerite and appears to be wedge-shaped thickening to the north whereas the lower unit is less well mineralized and thickens to the south indicating a facies change. The unit as a whole dips southwest at 60° but crumpling has caused a wide variety of local dips. Originally the unit may have been composed largely of tuffaceous sediments with the mineralization resulting from sulphur rich volcanism in a reducing environment. The volcanic lenses present within the sediments may be 'in situ' volcanic flows. We associate this type of environment with the Prud'homme No. 1 and Ungava Copper deposits to the north.

The sediments are bounded to the east by a massive gabbro unit within which a 600 foot thick quartz diorite intrusive, which may also be a volcanic metamorphic rock, is present near the base. In the northeast corner of the claims a sliver of massive gabbro up to 100 feet thick occurs between the diorite and the overlying sediments to the west. A weak gossan has been developed in this unit where it outcrops along the east shore of a small lake but was not trenched or sampled during the past season.

Geophysics (Maps 7B and 7C)

The upper carbonaceous sulphide bearing sedimentary unit has been well defined by the magnetometer survey as shown on Map 7B. This survey also indicates that the unit dips west in the north part of the property close to the nose of the syncline and steepens, somewhat, south of line 20N. On a number of lines there are two distinct magnetic peaks which probably reflect concentrations of pyrrhotite along the upper and lower parts of the sedimentary unit.

The conductive zones, detected by the broadside electromagnetic survey over the entire grid, were detailed by a fixed transmitter vertical loop EM and the results of both surveys are shown on Map 7C. The broadside EM more

or less defined the same unit as the magnetometer survey whereas the fixed transmitter survey indicated good cross-overs on both the eastern and western boundaries of the unit with the exception of line 24N and lines 0 and 4N at the south end where geological mapping indicates the sediments narrow. It may be that the maximum sulphide concentrations consisting predominantly of pyrrhotite are along the contacts of this unit, as suggested by the magnetometer work, but since vertical loop EM is not as qualitative as horizontal loop and may have merely picked up the margins of the shaley unit the zone may be well mineralized throughout with pyrite and therefore should be cross-sectioned by drilling.

Mineralization

The mineralization of interest on the Folding Lake property is of the copper-zinc shaley sediment type as opposed to the blotchy gabbro type. Some encouraging assays as high as 2.4% copper with trace zinc and 5.2% copper with 1% zinc were obtained from grab samples from freshened-up former trenches. Gossans, some of which have been trenched, occur intermittently between line 0 and 32N and weak gossans are present along the horizon further north and south. The main body of mineralized metasediments and particularly the eastern contact has not been adequately trenched or sampled at any time in the past and it is not difficult to visualize a substantial orebody occurring, in sub-outcrop, along this trend. Two drill holes were put down near the centre of the exposed mineralization this year, one of which, Hole No. 8, failed to penetrate as much of the mineralized sediments as planned but did return .52% Cu over 17 feet at the bottom of the hole while the second hole, No. 9, gave 17 feet of 0.70% copper succeeded by 20 feet of .21 copper for a total of 37 feet of 0.44% Cu. These assays are encouraging and further drilling is warranted along this trend. Previous diamond drill sites were located west of the zone but assay values were not recorded.

Conclusions and Recommendations

In view of the assays obtained in holes 8 and 9, we recommend that the mineralized shaley member be cross-sectioned by drilling on at least two sections, one through hole 9 and a second section approximately 1,000 feet further north where the zone is largely overburden covered and not previously tested.

SANDY BAY GROUP (Map 8A)

Work Completed

This 14 claim group was prospected and mapped by pace and compass traverses at 800 foot intervals.

A magnetometer survey also on lines 800 feet apart with 50 foot station intervals covered an area 9,000 feet by 1,800 feet over the mineralized blotchy gabbro and adjacent rocks along the west-central part of the property.

Three trenches, A, B and C, were excavated and chip sampled on the best exposed gossan in massive gabbro on the east side of the small lake between lines 0 and 8S at approximately 4+00W. Trench C is located on line 8S, Trench B is about 380 feet further north and Trench A is 20 feet beyond Trench B. In addition, six former trenches at various localities on the property were chip sampled.

Geology

The geology of the Sandy Bay Group is similar to that of the Boundary Lake and Prinzeles Lake groups. All three groups are on the same eastward dipping fold structure. Six miles north, along strike, is the Prud'homme No. 1 deposit.

Outcrops less than 100 feet wide, expose the upper part of the Baby Formation metasediments on the lake shore at the north and south ends of the group. These sediments and the overlying rocks dip eastwards at about 65° towards a synclinal axis which passes just east of the claims and parallel to the regional strike.

The sediments are overlain by massive gabbro which varies from 400 and 1,200 feet in thickness and forms a steep west-facing escarpment. An intermittently exposed 100 to 200 foot thick horizon of carbonaceous and sulphide bearing metasediments extends over the full length of the property. To the north these sediments occupy the contact

between massive gabbro and blotchy gabbro but in general are within the massive gabbro about 100 feet from the contact but in some instances appear to be 400 feet away.

The upper gabbro is a composite intrusion, 800 to 1,000 feet thick, consisting largely of massive gabbro with a weakly mineralized blotchy gabbro phase at the base. Near the centre of the property on both sides of the blotchy gabbro narrow, discontinuous ultrabasic phases of the intrusive were noted. The massive gabbro above and below the blotchy gabbro phase is also mineralized with pyrrhotite and trace chalcopyrite and in fact most of the trenching and sampling on this claim group is within the gabbroic phases rather than the blotchy gabbro.

The eastern part of the claims is underlain by a complex of lavas, tuffs and gabbros.

Magnetometer Survey (Map 8B)

A magnetometer survey over the blotchy gabbro and adjacent rocks indicated that a more or less continuous magnetic anomaly sub-parallel both sides of the blotchy gabbro with peak values occurring from 100 to 600 feet from the poorly defined gradational contact. The most continuous anomaly exists over the footwall sedimentary horizon referred to above between lines 16N and 40N (i.e. 2,400 feet) with a maximum peak of 6,000 gammas. The blotchy gabbro in general follows a magnetic low but on lines 24S, 16N and 40N, sharp peaks occur within the blotchy gabbro and are interpreted as responses to concentrations of pyrrhotite.

Mineralization

The blotchy gabbro and adjacent gabbroic phases are weakly mineralized with disseminated pyrrhotite throughout the entire 9,000 feet of strike length on the property. Six former trenches, one on line 8N, three on line 16N, one on line 24N, as well as one on line 24S, were sampled and three new trenches excavated and sampled in the vicinity of line 8S. These trenches are in the

following rock types: five in gabbro, three in blotchy gabbro and one in pyrrhotiferous shaley sediments. The assays of representative chip samples from each of the trenches are tabulated below.

<u>Trench</u>	<u>Assay Number</u>	<u>Cu %</u>	<u>Ni %</u>	<u>Zn %</u>	<u>Remarks</u>
A*	738	0.23	0.010	0.004	3' in gabbro
B*	739	0.17	0.023	0.004	17' in gabbro
B*	740	0.18	0.015	0.005	17' in gabbro (duplicate)
C*	741	0.27	0.044	0.011	3' in gabbro
2	742	0.014	0.008	0.008	6' in gabbro
3A	736	0.058	0.013	-	3' in blotchy gabbro
3A	732	0.010	0.015	-	4' in blotchy gabbro
3B	737	0.065	0.021	0.010	11' in blotchy gabbro
4	735	0.025	0.020	0.020	3' in shaley sed. - 10% Po
5	733	0.25	0.240	0.004	2' in gabbro
6	734	0.15	0.083	0.004	6' in blotchy gabbro

* Trenches excavated and sampled during 1971.

On the Sandy Bay Group, the typical coarse, blotchy gabbro phase is narrow but passes gradationally, over widths of 50 to 100 or more feet, into gabbroic phases. The gossan which extends discontinuously throughout the claim length along the blotchy gabbro unit is very prominent. It is of interest to note that in the list of trench assays that the copper values from the shallow trenches put in this year, although low, are approximately 10 times as high as those from all of the older trenches except for Trench 5. Based on the strength of the gossan, it is possible that either deeper trenching or preferably drilling would give higher grades in this zone.

Recommendations

While prospecting three sites were selected for additional trenching and sampling in 1972.

One drill hole is required to test the magnetic high in the vicinity of line 24N and two holes should be drilled to sample the gossan between lines 0 and 8S. In both cases, a minimum grid fixed transmitter EM survey should be completed to pinpoint the conductor axis.

If encouraging results are not obtained, no further work can be recommended at this time.

HARVENG LAKE (Map 9A)

Work Completed

In 1970, this property was briefly examined and three pre-existing trenches were sampled. In 1971, work was confined at the end of the field season to reconnaissance mapping of the entire claim group at 1" = 400 ft. together with a limited amount of prospecting and sampling of two other pre-existing trenches near the centre of the property.

Geology

The claims lie on the western limb of a major synclinal structure which plunges at a shallow angle to the south. To the east of the claims the geometry of this fold is complicated by strike faulting. The average dip of all rock units on the property is approximately 45° east and the mineralized blotchy gabbro outcrops along the crest of a steep, westward facing escarpment.

The rock succession is essentially similar to that observed on the Sandy Bay, Boundary and Prinzeles groups but the detailed relationships between the different rock units is much more complex on this group. Harveng Lake itself, lying to the west, is believed to be underlain by Baby Formation sediments which pass upward into massive gabbro several hundred feet thick and which forms a steep west-facing escarpment. The blotchy gabbro unit exposed at the top of the escarpment appears to pinch and swell irregularly and it is difficult to determine its continuity along strike. The gossans occur in large part near the base of blotchy gabbro lenses and are also somewhat discontinuous.

Overlying the blotchy gabbro is a complex of lavas intruded by massive gabbro sills and dykes. This complex caps the hills to the east of the property and appears to be a relatively thin, shallow dipping unit, and therefore the underlying blotchy gabbro possibly could be sampled, at least in part, by vertical drill holes of less than 500 feet in length.

Mineralization

In addition to the three trenches sampled in 1970, the assays of which are given on Map 9A, two additional trenches, Nos. 4 and 5 located respectively 1,500 and 2,500 feet to the north, were sampled this year. Trench No. 4 returned 0.10% copper and 0.04% nickel over 30 feet and Trench No. 5 returned 0.23% copper and 0.13% nickel over 10 feet. These trenches indicate that the gabbro horizon continues at least intermittently for over 3,000 feet within the property.

Assessment reports filed by Holannah Mines in 1955 show that seven other small trenches and five short drill holes below these trenches were put down but none of this work was located. Reported assays in these assessment files are very similar to our own. Medium to heavy concentrations of pyrrhotite with minor chalcopyrite occur sporadically along the base of this irregular blotchy gabbro horizon over a strike length in excess of 3,000 feet. Assays from previously trenched and partially weathered material have consistently shown low copper and very low nickel grades. During the past year, Holannah Mines have completed a considerable amount of drilling at the south end of this group of claims and we regard this as an encouraging factor.

Conclusions and Recommendations

The Harveng Lake property was the last one examined during the past season and we would recommend additional mapping, prospecting and detailed magnetometer work be undertaken along the gabbro unit in order to determine if concentrations of sulphide are present or alternatively whether substantial tonnages of low-grade material are likely to be present.

PRINZELES LAKE GROUP (Map 10A)

Work Completed

In addition to prospecting the entire group, seven of the 10 claims were mapped at a scale of 1" = 400 ft. by detailed traverses at 800 foot intervals. Within this area of detailed mapping covering about 7,000' x 3,000' (i.e. about 0.75 square miles) outcrops are small and sparse. Bedrock along the shore of Prinzeles Lake is entirely covered by overburden. Claim 309620-4 at the northeast corner of the group was entirely in pillow lavas and did not warrant detailed examination. All of the outcrops were visited and examined for mineralization. A number of pre-existing trenches were examined and four of these sampled.

Geology

The claim group lies four miles south of the Boundary Lake group on the same steep eastward-dipping limb of a tight anticline, the axis of which strikes N25°W parallel with Gerido Lake, Prinzeles Lake and Lake Livaudiere.

On the corresponding western limb of the anticline and in the same stratigraphic position, directly west, is the Holannah No. 5 zone.

The geological succession on the Prinzeles Lake claims appears to be straightforward and basically similar to the Boundary Lake area. Passing northeast up the hill from Prinzeles Lake the first outcrops present are massive gabbro. The upper contact is not exposed and this unit is separated from the overlying blotchy gabbro by a 200 ft. to 400 ft. wide depression filled with overburden which is thought to obscure a sedimentary horizon.

The mineralized blotchy gabbro which strikes S60°E varies from about 100 ft. to 600 ft. in width and extends the full length of the claims.

The blotchy gabbro is overlain by 100 ft. to 300 ft. of massive gabbro, and this in turn by a thick series of pillow lavas which dip and face steeply east.

Mineralization

The claims were staked to cover gossans in the blotchy gabbro some of which have been trenched previously by Hollinger who referred to it as the Anna Lake claim group. Their work also included mapping and some drilling but no assays appear in the assessment files.

Disseminated pyrrhotite with rare chalcopyrite is present sporadically and generally quite weak over a length of about 4,000 feet. Sulphide content rarely reaches 10%.

Assays from four old trenches and one untrenched exposure are given below:

<u>Trench No.</u>	<u>Sample No.</u>	<u>Width</u>	<u>Cu %</u>	<u>Ni %</u>	<u>Zn %</u>	<u>Remarks</u>
1	721	6'	0.08	0.04	tr.	Chip
2	722	8'	0.07	0.05	tr.	Chip
3	724	30'	0.09	0.04	tr.	Chip
3	725	27'	0.13	0.08	tr.	Chip
4	726	13'	0.05	0.03	tr.	Chip
5	727	6'	0.34	0.08	tr.	Chip
L40+00N 8+00W	723	-	0.05	0.06	tr.	Grab

Only one sample (No. 727) taken from Trench 5 at the south end of the group returned an encouraging assay of 0.34% Cu while others gave only trace amounts of Cu, Ni and Zn.

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Conclusions and Recommendations

A well gossaned blotchy gabbro is present on the group but prospecting and sampling indicated that the mineralization is spotty and consists primarily of pyrrhotite with only traces of chalcopyrite. No further work is recommended on this group.

THE BIG 'M' GROUP

The question of ownership of the Big 'M' showing remained unresolved at the end of the field season and therefore no work was carried out.



In an attempt to settle the matter the Mining Inspector visited the property in August in the company of C. B. Gunn for Cities Service and F. Tuffy for Hollinger Mining and Exploration. Details of the visit have been reported previously in Progress Report #4. It is expected that the matter will be put before the Mining Court in the near future.

We still feel that this zone is one of the most interesting held in the area and if ownership is secured this showing will be a prime target for follow-up work.

CERTIFICATE OF QUALIFICATION

I, Orval E. Leigh, residing at 40 Rumsey Road, Toronto, Ontario, do hereby certify that:

1. I am a consulting geologist associated with the firm Derry, Michener & Booth since January 1st, 1969.
2. I am a graduate of the University of Toronto, Faculty of Applied Science and Engineering with a degree of B.A.Sc. (1958) Applied Geology, and have been practising my profession since graduation.
3. I am a registered Professional Engineer in the Province of Ontario and the Province of Manitoba.
4. Derry, Michener & Booth have a 5% interest in the properties described in this report.
5. The field work described in this report was directed in the field by Mr. C. B. Gunn under my supervision.
6. The properties were visited during the period July 30th to August 11th, 1971.



Orval E. Leigh, P.Eng.

Toronto, Ontario
December 7, 1971

B. & C. LTD. A 14672

SCHEDULE A

SCHEDULE A

LABRADOR TROUGH PROJECT

LIST OF CLAIMS

<u>Claim Group</u>	<u>Licence Number</u>	<u>Claim Number</u>	<u>Staking Date</u>	<u>Assessment Work Due</u>
Mutch Lake	305075. ✓	1	July 29, 1970	July 29, 1972
		2	"	"
		3	"	"
		4	"	"
		5	"	"
	306238. ✓	1	June 9, 1970	June 9, 1972
		2	"	"
		3	"	"
		4	"	"
		5	"	"
	306239. ✓	1	June 10, 1970	June 10, 1972
		2	"	"
		3	"	"
		4	"	"
		5	"	"
306240. ✓	1	June 10, 1970	June 10, 1972	
	2	"	"	
	3	"	"	
	4	"	"	
	5	"	"	
306241. ✓	1	June 11, 1970	June 11, 1972	
	2	"	"	
	3	"	"	
	4	"	"	
	5	"	"	
306242. ✓	1	June 11, 1970	June 11, 1972	
	2	"	"	
	3	"	"	
	4	"	"	
	5	"	"	
306248. ✓	1	July 29, 1970	July 29, 1972	
	2	"	"	
	3	"	"	
	4	"	"	
	5	"	"	

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<u>Claim Group</u>	<u>Licence Number</u>	<u>Claim Number</u>	<u>Staking Date</u>	<u>Assessment Work Due</u>
Massive Lake	305076. ✓	1	August 28,1970	August 28,1972
		2	"	"
		3	"	"
		4	"	"
		5	"	"
	305077. ✓	1	August 29,1970	August 29,1972
		2	"	"
		3	"	"
		4	"	"
		5	"	"
	305078. ✓	1	August 30,1970	August 30,1972
		2	"	"
		3	"	"
		4	"	"
		5	"	"
305079. ✓	1	August 31,1970	August 31,1972	
	2	"	"	
	3	"	"	
	4	"	"	
	5	"	"	
305080. ✓	1	September 2,1970	September 2,1972	
	2	"	"	
	3	"	"	
	4	"	"	
	5	"	"	
306251. ✓	1	August 28,1970	August 28,1972	
	2	"	"	
	3	"	"	
	4	"	"	
	5	"	"	
306252. ✓	1	August 29,1970	August 29,1972	
	2	"	"	
	3	"	"	
	4	"	"	
	5	"	"	
309621. ✓	2	August 28,1970	August 28,1972	
	3	"	"	
	4	"	"	
	5	"	"	

B. & C. LTD. A 14672

<u>Claim Group</u>	<u>Licence Number</u>	<u>Claim Number</u>	<u>Staking Date</u>	<u>Assessment Work Due</u>	
Massive Lake	309622.	1	August 29, 1970	August 29, 1972	
		2	"	"	
	310196.	1	August 26, 1970	August 26, 1972	
		2	"	"	
		3	"	"	
		4	"	"	
		5	"	"	
	Sauve Lake	305099. ✓	1	May 6, 1970	May 6, 1972
			2	"	"
			3	"	"
4			"	"	
5			"	"	
305100. ✓		1	May 7, 1970	May 7, 1972	
		2	"	"	
		3	"	"	
		4	"	"	
		5	"	"	
305101. ✓		1	May 9, 1970	May 9, 1972	
		2	"	"	
		3	"	"	
		4	"	"	
		5	"	"	
305102. ✓		1	May 10, 1970	May 10, 1972	
		2	"	"	
		3	"	"	
		4	"	"	
		5	"	"	
305103. ✓		1	May 11, 1970	May 11, 1972	
		2	"	"	
		3	"	"	
		4	"	"	
		5	"	"	
305104. ✓	1	May 12, 1970	May 12, 1972		
	2	"	"		
	3	"	"		
	4	"	"		
	5	"	"		

<u>Claim Group</u>	<u>Licence Number</u>	<u>Claim Number</u>	<u>Staking Date</u>	<u>Assessment Work Due</u>
Sauve Lake	305105. ✓	2	May 6, 1970	May 6, 1972
		3	"	"
		4	"	"
		5	"	"
	305106. ✓	2	May 7, 1970	May 7, 1972
		3	"	"
		4	"	"
		5	"	"
	305107. ✓	1	May 9, 1970	May 9, 1972
		2	"	"
		3	"	"
		4	"	"
		5	"	"
305108. ✓	1	May 10, 1970	May 10, 1972	
	2	"	"	
	3	"	"	
	4	"	"	
	5	"	"	
305110. ✓	4	May 13, 1970	May 13, 1972	
	5	"	"	
306243. ✓	1	June 13, 1970	June 13, 1972	
	2	"	"	
	3	"	"	
	4	"	"	
	5	"	"	
306244. ✓	1	June 13, 1970	June 13, 1972	
	2	"	"	
	3	"	"	
	4	"	"	
	5	"	"	
306245. ✓	1	June 14, 1970	June 14, 1972	
	2	"	"	
	3	"	"	
	4	"	"	
	5	"	"	
306246. ✓	1	June 14, 1970	June 14, 1972	
	2	"	"	
	3	"	"	
	4	"	"	
	5	"	"	

B. & C. LTD. A14672

B. & C. LTD. A14672

<u>Claim Group</u>	<u>Licence Number</u>	<u>Claim Number</u>	<u>Staking Date</u>	<u>Assessment Work Due</u>
Sauve Lake	306247. ✓	1	June 15, 1970	June 15, 1972
		2	"	"
		3	"	"
		4	"	"
		5	"	"
	316908 ✓	1	June 18, 1971	June 18, 1973
		2	"	"
		3	"	"
		4	"	"
		5	"	"
Harveng Lake	306297. ✓	1	July 28, 1970	July 28, 1972
		2	"	"
		3	"	"
		4	"	"
		5	"	"
	306298. ✓	1	July 30, 1970	July 30, 1972
		2	"	"
		3	"	"
		4	"	"
		5	"	"
306299. ✓	1	July 30, 1970	July 30, 1972	
	2	"	"	
	3	"	"	
	4	"	"	
	5	"	"	
Boundary Lake	309615. ✓	1	August 24, 1970	August 24, 1972
		2	"	"
	309622. ✓	3	August 31, 1970	August 31, 1972
		4	"	"
		5	"	"
	309623. ✓	1	September 1, 1970	September 1, 1972
		2	"	"
		3	"	"
		4	"	"
5		"	"	

B. & C. LTD. A 14672

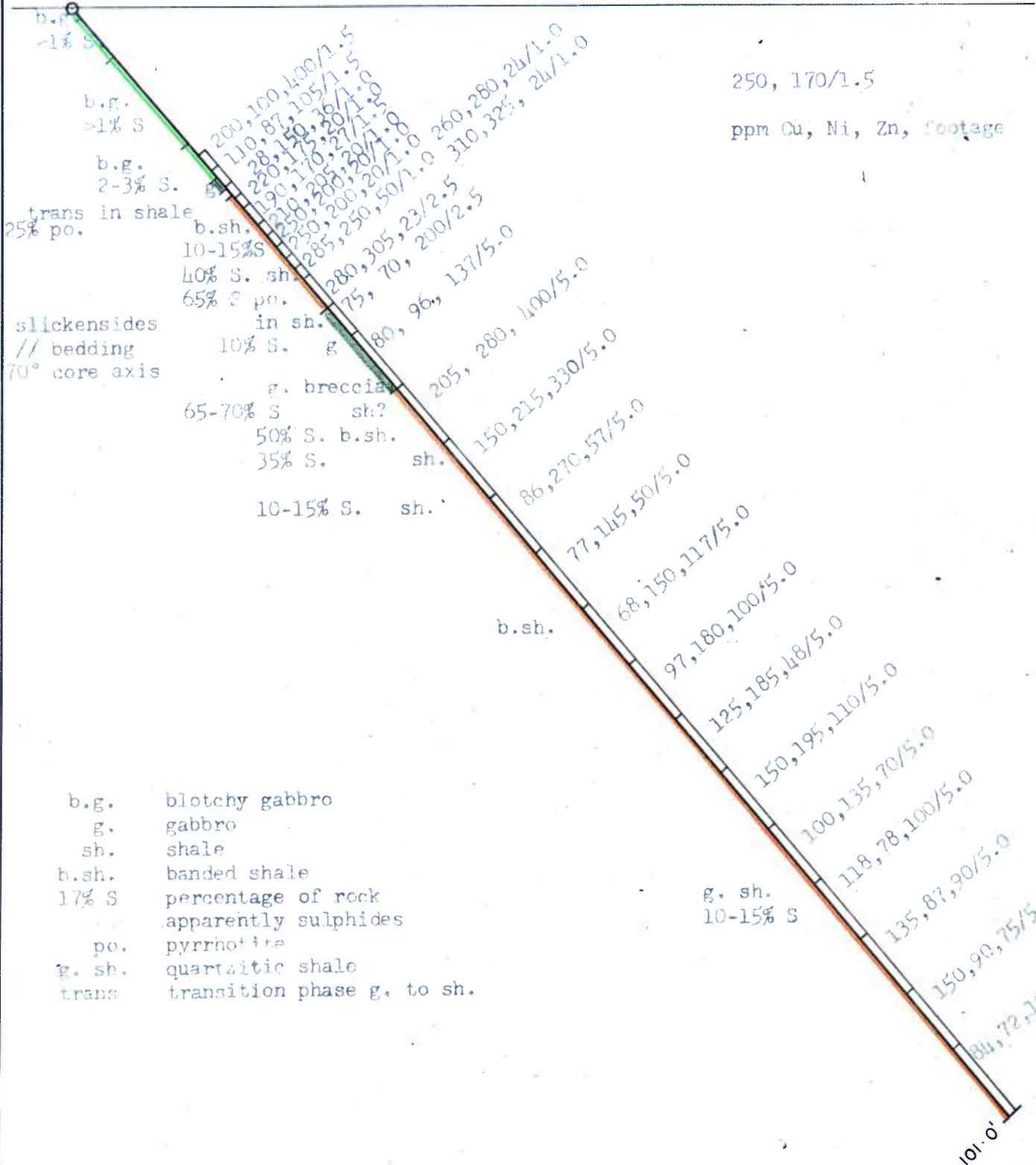
<u>Claim Group</u>	<u>Licence Number</u>	<u>Claim Number</u>	<u>Staking Date</u>	<u>Assessment Work Due</u>	
Sandy Bay	309616. ✓	2	August 25,1970	August 25,1972	
		3	August 26,1970	August 26,1972	
		4	"	"	
		5	"	"	
	309617. ✓	1	August 28,1970	August 28,1972	
		2	"	"	
		3	"	"	
		4	August 29,1970	August 29,1972	
		5	"	"	
	310195. ✓	1	August 25,1970	August 25,1972	
		2	"	"	
		3	"	"	
		4	"	"	
		5	"	"	
Folding Lake	309618. ✓	1	August 26,1970	August 26,1972	
		2	"	"	
		3	"	"	
		4	"	"	
		5	"	"	
	309619. ✓	1	August 25,1970	August 25,1972	
		2	"	"	
		3	"	"	
	316906. ✓	1	August 7,1971	August 7,1973	
		2	"	"	
	Prinzeles Lake	309619. ✓	4	August 25,1970	August 25,1972
			5	"	"
		309620. ✓	1	August 30,1970	August 30,1972
			2	"	"
			3	"	"
4			"	"	
5			"	"	

<u>Claim Group</u>	<u>Licence Number</u>	<u>Claim Number</u>	<u>Staking Date</u>	<u>Assessment Work Due</u>
Prinzeles Lake	309621. ✓	1	August 28,1970	August 28,1972
	310197. ✓	1 2	August 27,1970 "	August 27,1972 "
Big M (Ownership Under Review)	306296.	1		
		2		
		3		
		4		
		5		
	306300.	1		
		2		
		3		
		4		
		5		
	306301.	1		
		2		
		3		
		4		
		5		

B. & C. LTD. A 14672

B. & C. LTD. A 14672

DRILL SECTIONS



250, 170/1.5
ppm Cu, Ni, Zn, Footage

b.g. blotchy gabbro
g. gabbro
sh. shale
b.sh. banded shale
17% S percentage of rock
apparently sulphides
po. pyrrhotite
g. sh. quartzitic shale
trans transition phase g. to sh.



DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
D.D.H. No. 1		
LOOKING WEST		
Scale: 1" = 10'	By: C. B. Gunn Date: Nov, 1971	Map No.

b.g.

5%

105, 125, 96/2.0

b.g.

1-2% S.

m. po, g.

ppm Cu, Ni, Zn/footage

b.g.

trans g. to sh.

30-35% S. Sh.

30% S

165, 125, 96/2.0

170, 190, 250/5.0

b.sh.

85, 195, 66/5.0

250, 240, 300/5.0

35-40% S.

sh.

cp.

210, 285, 1100/5.0

10-15% S.

sh.

po, cp.

130, 225, 730/5.0

103, 165, 350/5.0

92, 165, 240/5.0

sh.

90, 135, 200/5.0

10-15% S.

po, m.cp.

65, 140, 190/5.0

77, 145, 310/5.0

g gabbro

b.g. blotchy gabbro

sh. shale

b.sh. banded shale

cp. chalcopyrite

po. pyrrhotite

m.po. minor po.

17% S percentage of rock
apparently sulphides

trans transition phase g. to sh.

90, 170, 510/5.0

110, 195, 930/5.0

sh.

140, 185, 1700/5.0

10-15% S

160, 200, 37/5.0

125, 150

118/5.0

10% S.

sh.

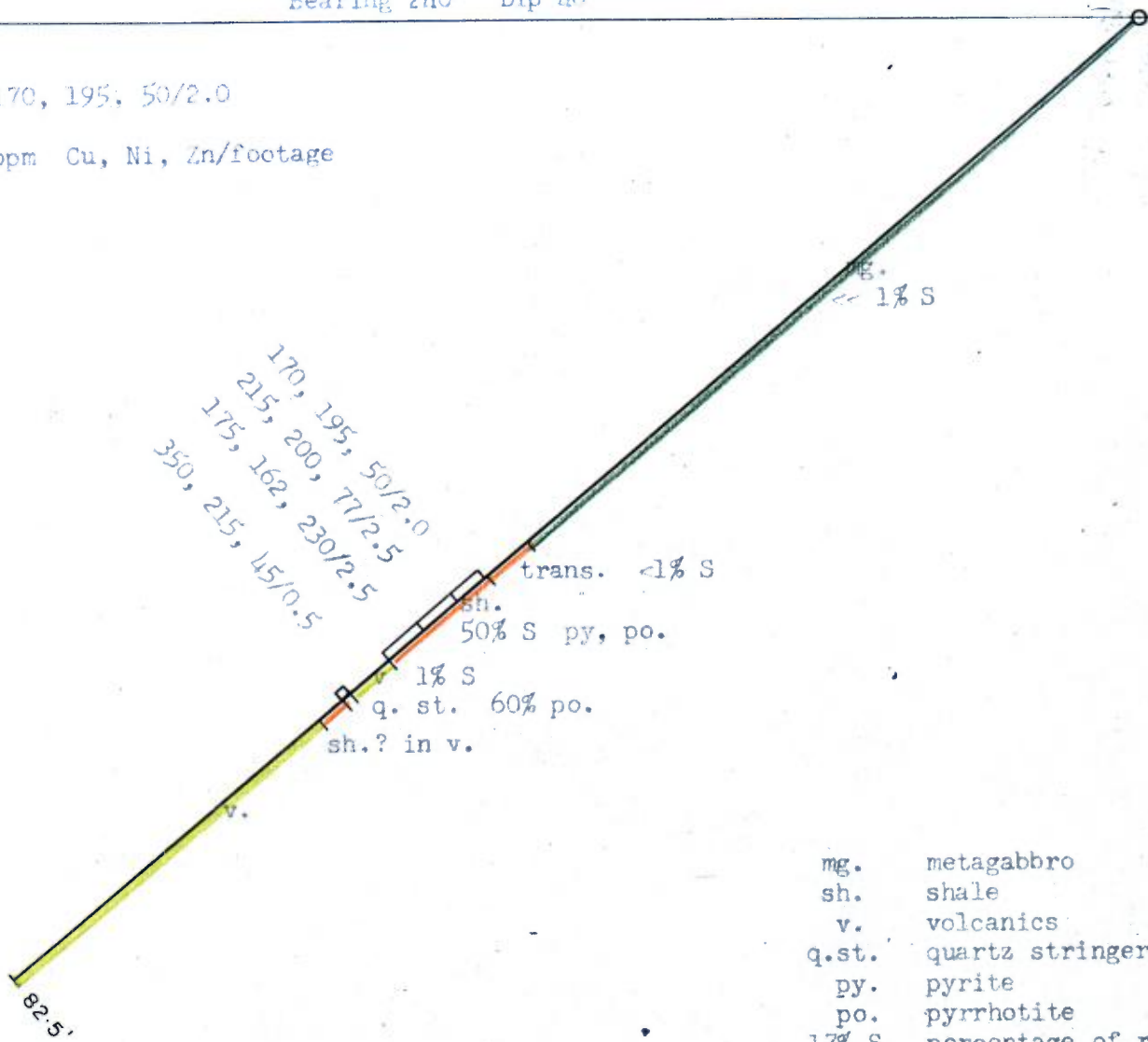
100-5'



DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
D.D.H. No. 2		
LOOKING WEST		
Scale: 1" = 10'	By: C. B. Gunn Date: Nov, 1971	Map No.

170, 195, 50/2.0

ppm Cu, Ni, Zn/footage



← 1% S

170, 195, 50/2.0
 215, 200, 77/2.5
 175, 162, 230/2.5
 350, 215, 45/0.5

trans. <1% S

sh. 50% S py, po.

q. st. 60% po.

sh.? in v.

- mg. metagabbro
- sh. shale
- v. volcanics
- q.st. quartz stringers
- py. pyrite
- po. pyrrhotite
- 17% S percentage of rock apparently sulphides
- trans. transition phase
- mg. to sh.

82.5'

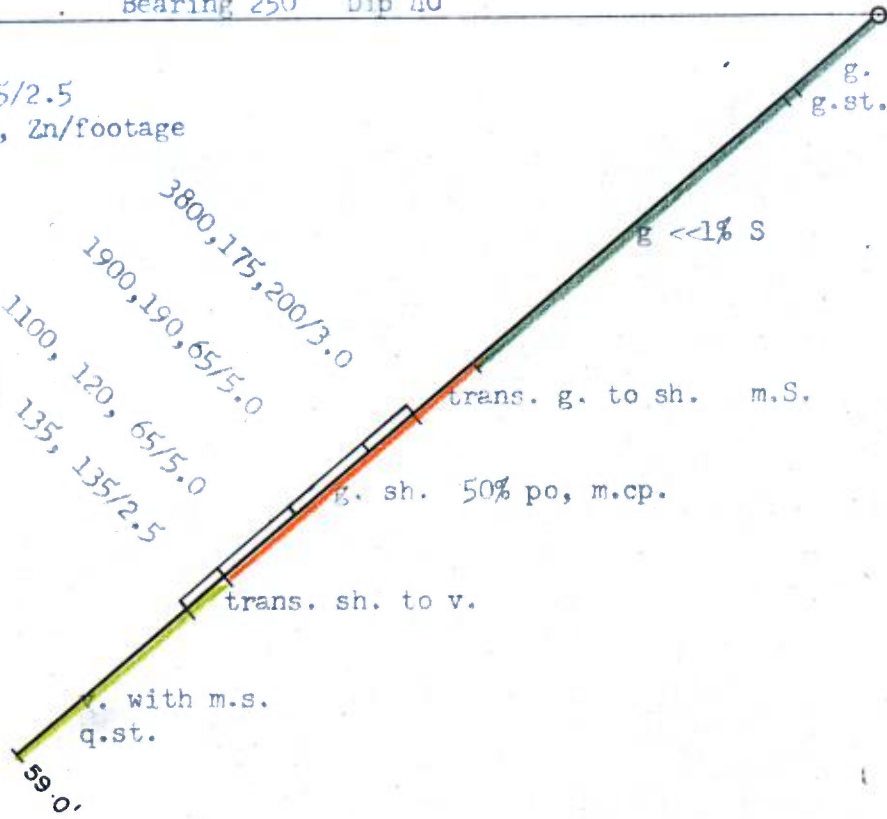


DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
D.D.H. No. 3		
LOOKING NORTH		
Scale: 1" = 10'	By: C. B. Gunn Date: Nov, 1971	Map No.

Bearing 250° Dip 40°

600, 135, 135/2.5
ppm. Cu, Ni, Zn/footage

3800, 175, 200/3.0
1900, 190, 65/5.0
1100, 120, 65/5.0
600, 135, 135/2.5



- g. gabbro
- sh. shale
- v. volcanics
- trans transition phase
- po. pyrrhotite
- cp. chalcopyrite
- 17%S percentage of rock
apparently sulphides
- m.s. minor sulphides
- q.st. quartz stringers
- g. sh. quartzitic shale



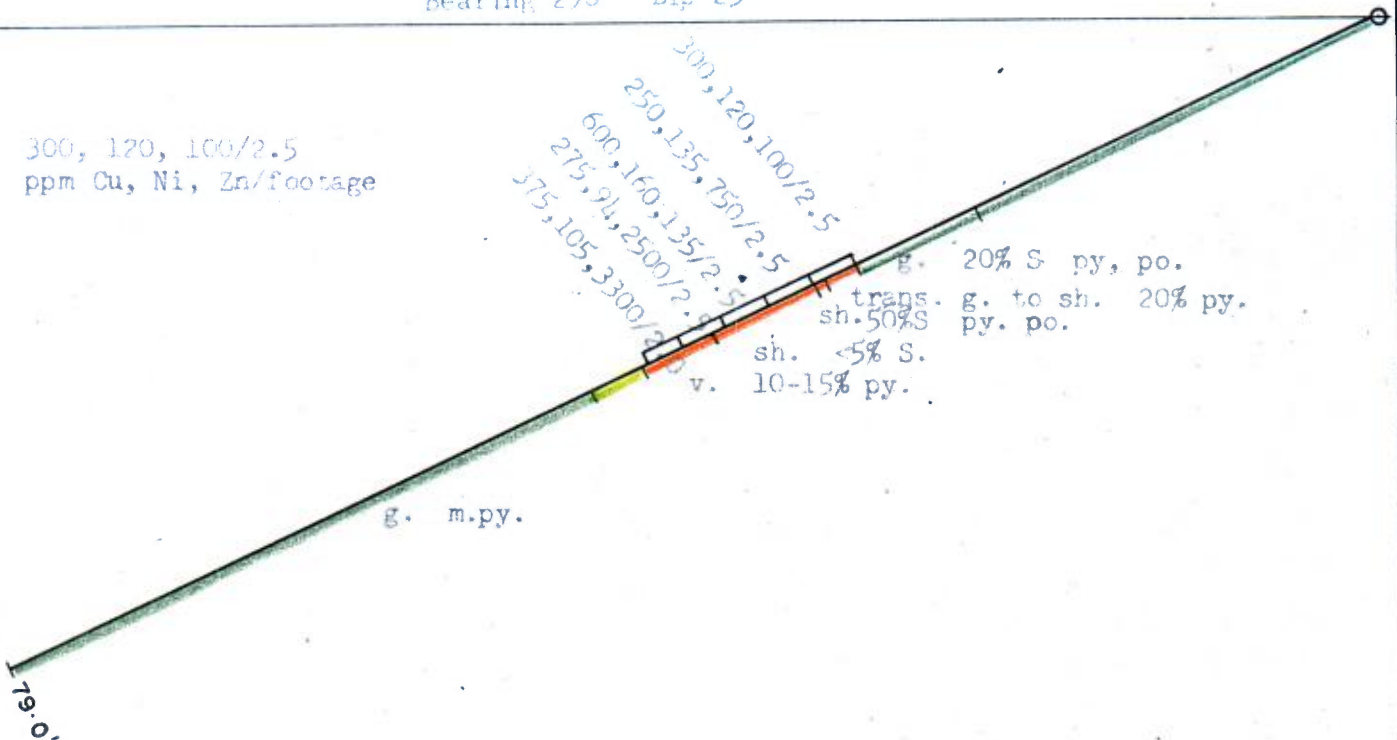
DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
D.D.H. No. 4		
LOOKING NORTH		
Scale: 1" = 10'	By: C. B. Gunn Date: Nov, 1971	Map No.

D.D.H.

Looking North

Bearing 290° Dip 25°

300, 120, 100/2.5
ppm Cu, Ni, Zn/footage



- g. gabbro
- sh. shale
- v. volcanics
- trans transition phase
- py. pyrite
- m. py. minor pyrite
- po. pyrrhotite
- 17% S percentage of rock
apparently sulphides



DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
D.D.H. No. 5		
LOOKING NORTH		
Scale: 1" = 10'	By: C. B. Gunn	Map No.
	Date: Nov, 1971	

Bearing 250° Dip 50°

310, 180, 750/5.0
ppm Cu, Ni, Zn/footage

310, 180, 750/5.0

300, 180, 630/5.0

350, 180, 55/5.0

360, 185, 85/5.0

300, 160, 350/6.0

300, 155, 27/5.0

325, 150, 200/5.0

240, 130, 420/6.0

trans. sh. to v.

v., m.py.

q. vein

73.5'

v?
trans.
m. py.

v? 5-10% py.

sh.
50 - 60% S
py, po

- v. volcanics
- sh. shale
- q. quartz
- py. pyrite
- po. pyrrhotite
- m.py. minor pyrite
- trans transition phase
- 17% S percentage of rock apparently sulphides



DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
D.D.H. No. 6		
LOOKING NORTH		
Scale: 1" = 10'	By: C. B. Gunn Date: Nov, 1971	Map No.

Looking West

DDH 7

Bearing 310°
Dip 42°

b.g.

5-10% S
m. cp.

360, 465, 25/1.0

ppm Cu, Ni, Zn/footage

b.g.
40% S

360, 465, 25/1.0
620, 485, 45/6.0

g.
< 75% S
po, 1-2% cp

1600, 900, 30/5.0

g
m.po. 47.0' 47.0

g - gabbro
b.g. blotchy gabbro
po. -pyrrhotite
cp. -chalcopryite
m.cp. -minor chalcopryite
17% S percentage of rock
apparently sulphides



DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
D.D.H. No. 7		
LOOKING WEST		
Scale: 1" = 10'	By: C. B. Gunn Date: Nov, 1971	Map No.

DDH 8

Looking North
Bearing Grid East (NE)
Dip 45°

5200, 300, 105/16.0

ppm Cu, Ni, Zn/footage

g

minor py, po, cp.

- g - gabbro
- v - volcanics
- py - pyrite
- po - pyrrhotite
- cp - chalcopyrite
- m.cp. - minor chalcopyrite

5200, 300, 105/16.0

v

20-40% po.
m. cp.

108.0'



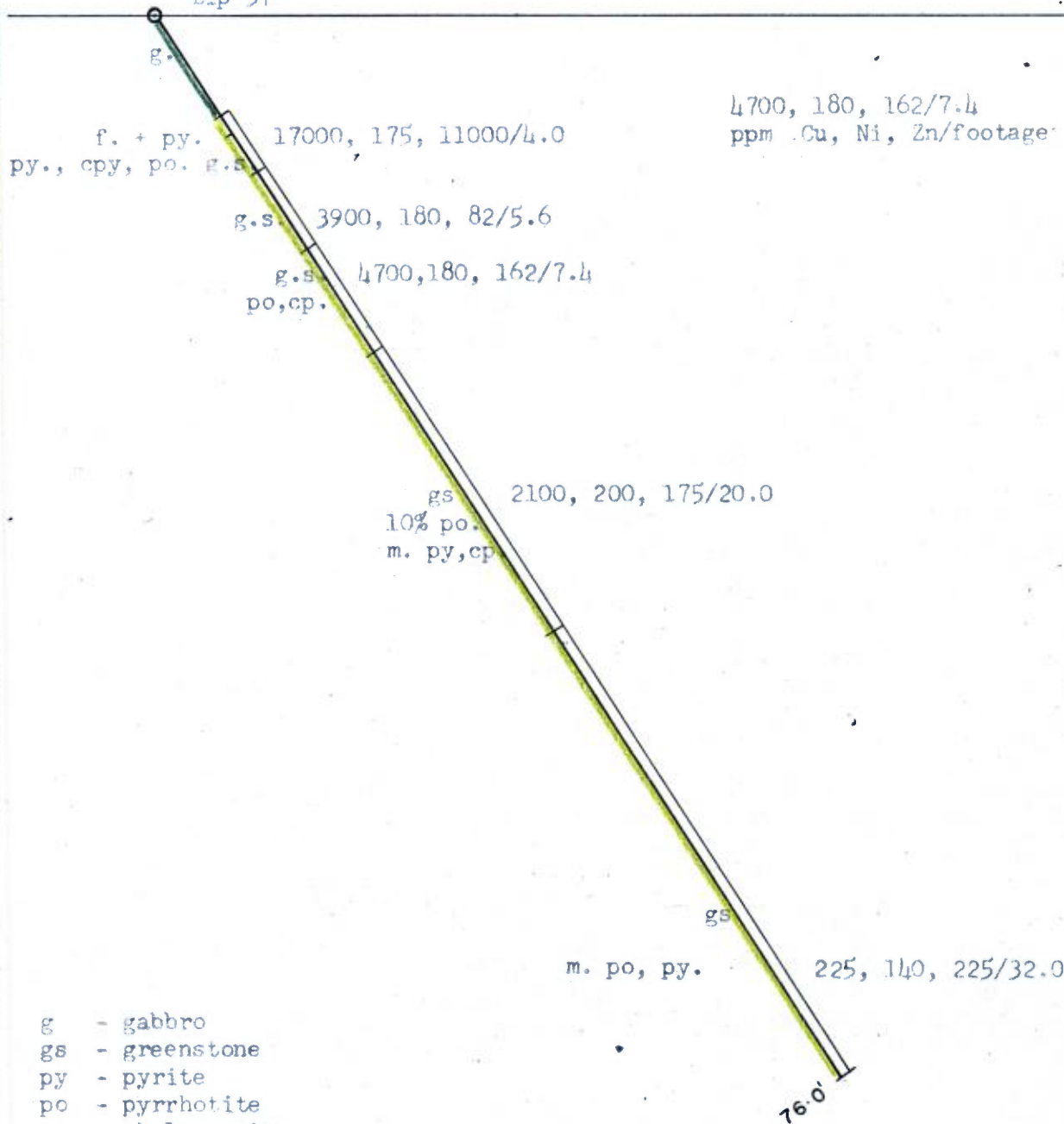
DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
FOLDING LAKE AREA		
D.D.H. No. 8		
LOOKING NORTH		
Scale: 1" = 10'	By: C. B. Gunn Date: Nov, 1971	Map No.

Looking North

DDH 9

Bearing Grid East (NE)

Dip 57°



- g - gabbro
- gs - greenstone
- py - pyrite
- po - pyrrhotite
- cp. - chalcopyrite
- Ag - silver
- m.py- minor pyrite
- 17% S- percentage of rock
apparently sulphides

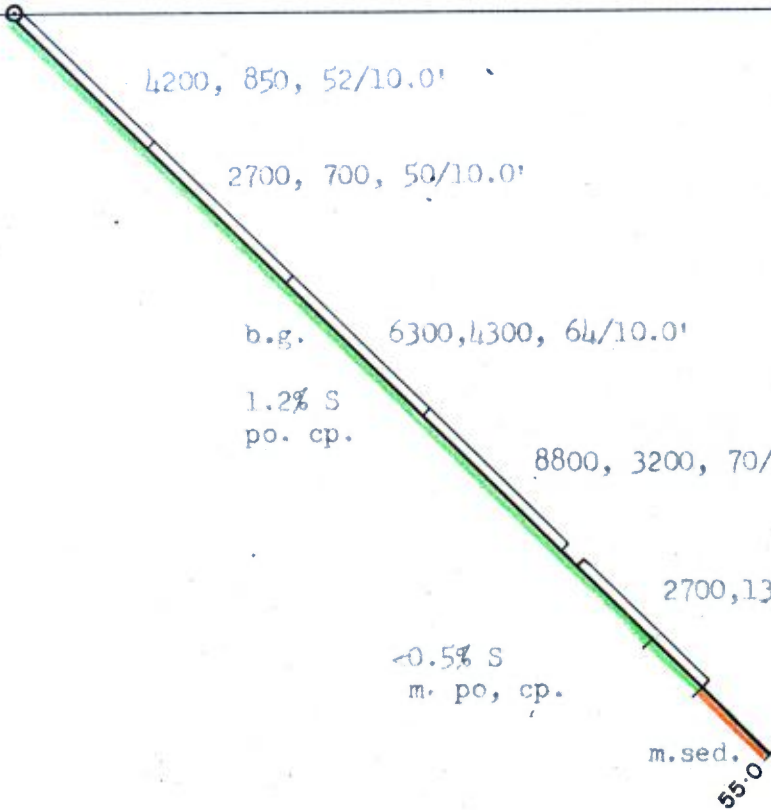


DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
FOLDING LAKE AREA		
D.D.H. No. 9		
LOOKING NORTH		
Scale: 1" = 10'	By: C. B. Gunn	Map No.
	Date: Nov, 1971	

Looking South

DDH 10

Bearing 245° Dip 45°



4200, 8500, 52/10.0

ppm Cu, Ni, @n/footage

g gabbro
 b.g. blotchy gabbro
 m.sed. meta sediments
 po. pyrrhotite
 cp. chalcopyrite
 m.cp. minor cp.
 17% S percentage of rock
 apparently sulphides



DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
MUTCH LAKE AREA		
D.D.H. No. 10		
LOOKING SOUTH		
Scale: 1" = 10'	By: C. B. Gunn Date: Nov, 1971	Map No.

TRENCH SKETCHES

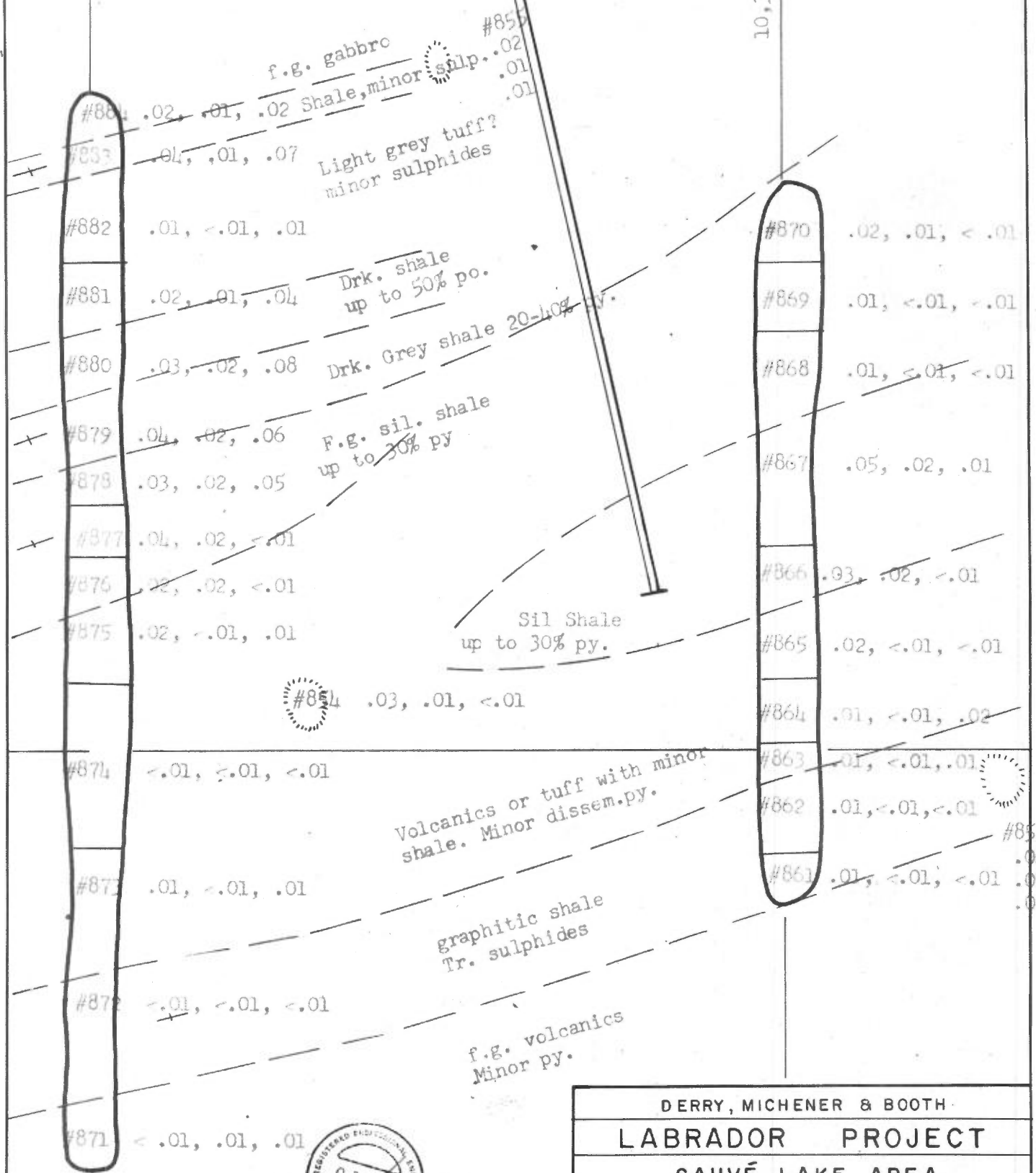
Assays by atomic absorption reported in percent
thus:

<u>Sample #</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
879	.04	.02	.06

DDH 6
 Az. 250° Dip 50
 Length 73.5'



10,350N



DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
MAP 100A		
TRENCH SKETCH		
Scale: 1" = 10'	By: R. Garvey Date: Aug, 1971	Map No.

#859
.01
.01
.01



Qtz vein in f.g. gabbro
minor py.

701 north

#858
.04
.01
.02



v.f.g. siliceous shale
30% v.f.g. dissem. py.

A. N.

Light grey
volcanics,
pillows poorly
developed



#857 .01, .01, .01
Graphitic shale, minor sulphides



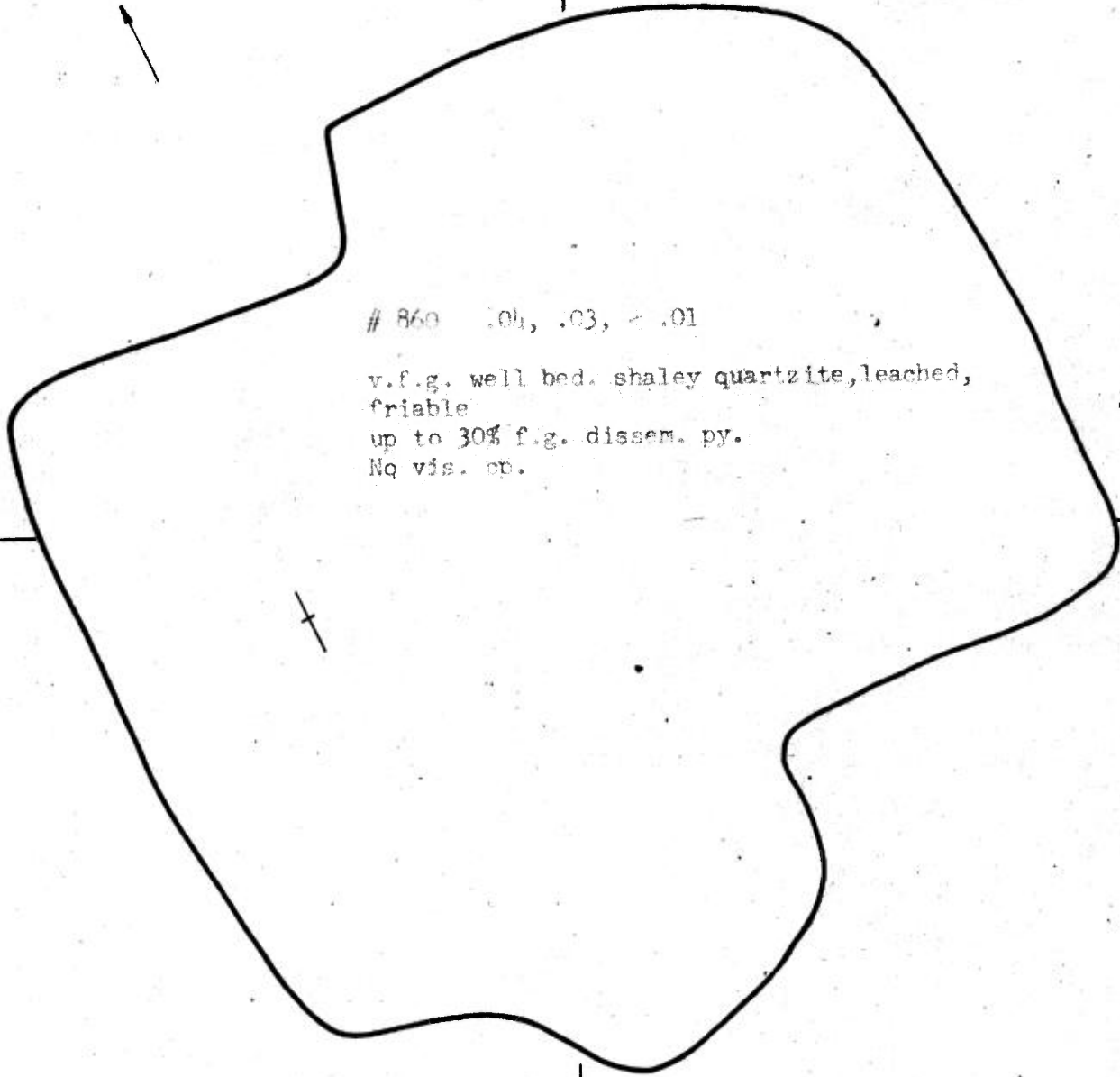
#856 .01, .01, .01
Graphitic shale



DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
MAP 100B		
TRENCH SKETCH		
Scale: 1" = 10'	By: R. Garvey Date: Aug, 1971	Map No.

A.N.

5,500E



860 10h, 103, < 101
 v.f.g. well bed. shaley quartzite, leached,
 friable
 up to 30% f.g. dissem. py.
 No vis. cr.

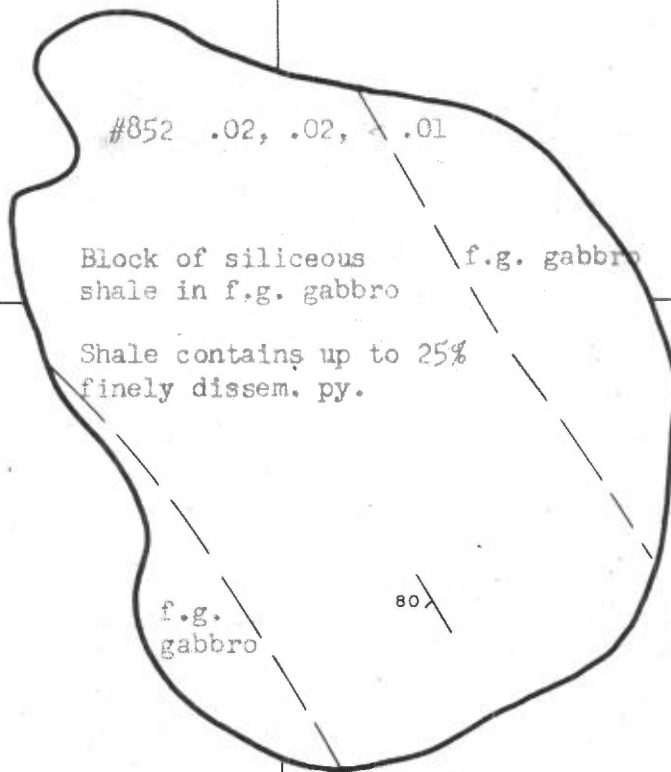
11,130N



DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
MAP 100C		
TRENCH SKETCH		
Scale: 1" = 1'	By: R. Garvey Date: Aug, 1971	Map No.

A. N.

5,390E



#852 .02, .02, .01

Block of siliceous shale in f.g. gabbro

Shale contains up to 25% finely dissem. py.

f.g. gabbro

80

10,170



DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
MAP 100D		
TRENCH SKETCH		
Scale: 1" = 1'	By: R. Garvey Date: Aug, 1971	Map No.

A. N.

6000E

#851 .02,.02,<01

Quartzite shale in
f.g. gabbro.

Up to 30%
py. po. tr. cp.

10,030N



DERRY, MICHENER & BOOTH

LABRADOR PROJECT

SAUVÉ LAKE AREA
MAP 100E

TRENCH SKETCH

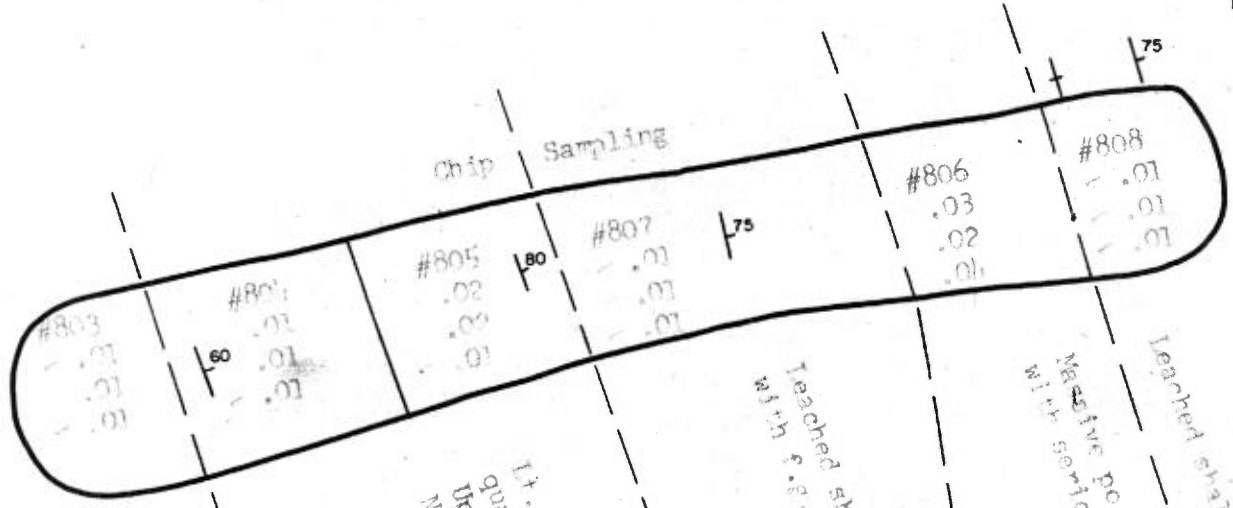
Scale: 1" = 1'

By: R. Garvey
Date: Aug, 1971

Map No.

A. N.

50' BG



P.S. bluish gabbro

lt. to dk. grey shaley quartzite. Up to 10% py. No visible sp.

leached shale or tuff with f.f.s. quartz

Massive bc. hard, nodular with sericite

leached shale or tuff



60' to 104 B

300' due west to 104 B



DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
MAP 104A		
TRENCH SKETCH		
Scale: 1" = 5'	By: R. Garvey Date: Aug, 1971	Map No.

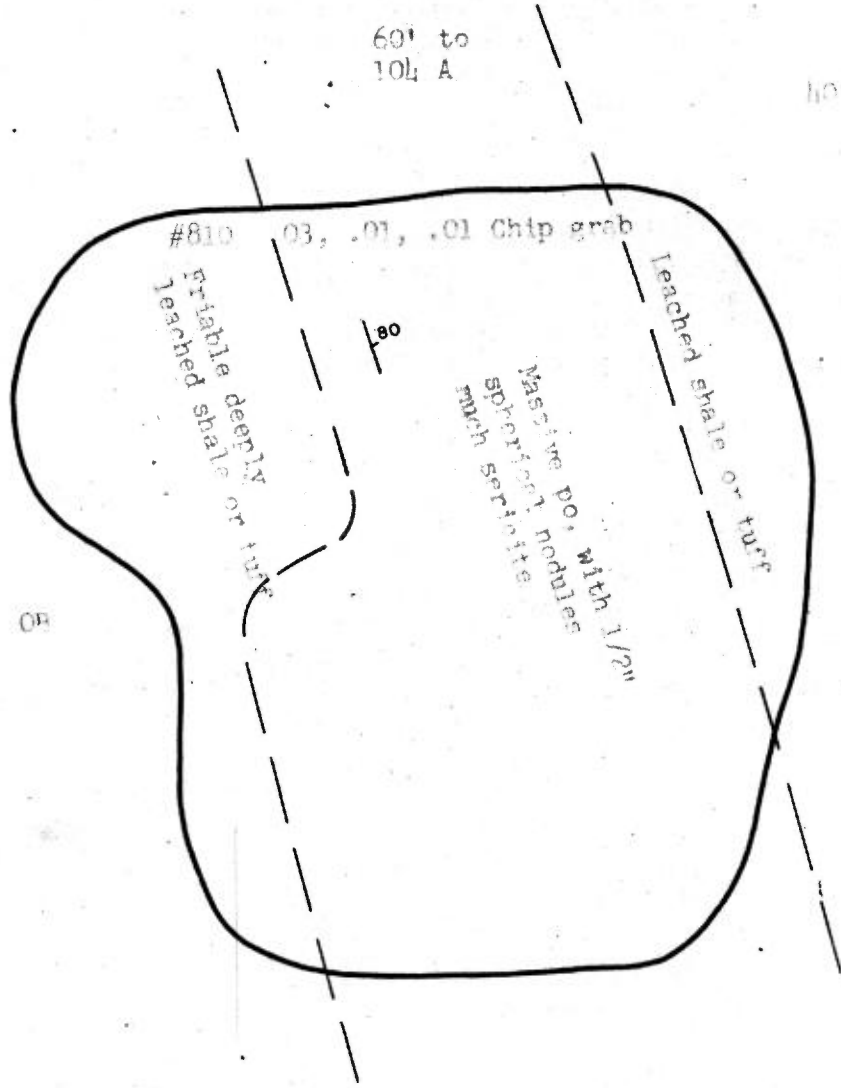
A. N.



60' to 104' A

101' to 50

20' of gossan Cabro beyond



#810 03, .01, .01 Chlp grab

Leached shale or turf

L 80

Massive po. with 1/2" spherical nodules
with sericitic

Leached shale or turf

CB

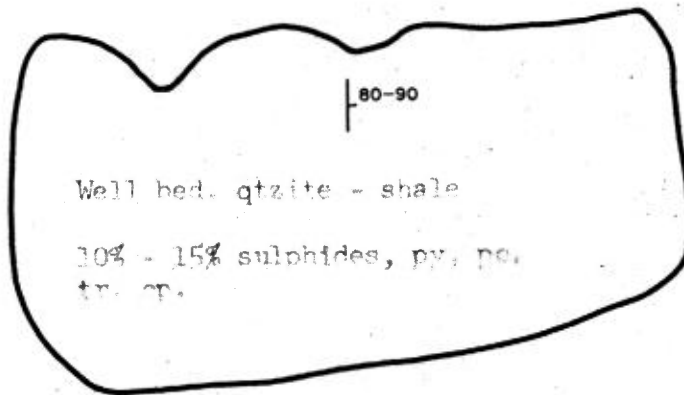


DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
MAP 104 B		
TRENCH SKETCH		
Scale: 1" = 1'	By: R. Garvey Date: Aug, 1971	Map No.

A.N.

#811 .09, .02, - .01 Chip grab

OR



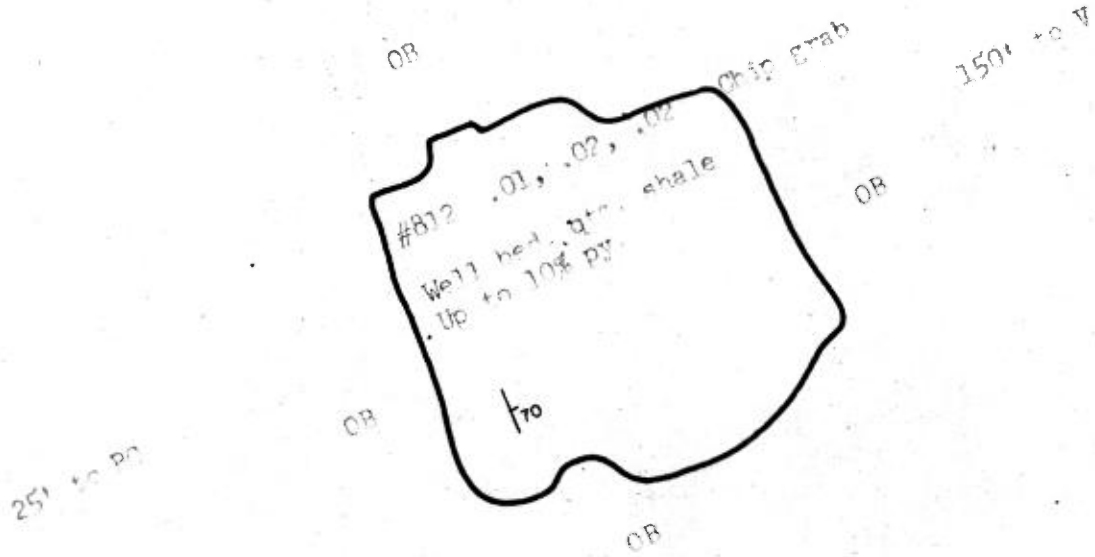
OR

300' due E to 104A



DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
MAP 104C		
TRENCH SKETCH		
Scale: 1" = 2'	By: R. Garvey Date: Aug, 1971	Map No.

A.N.

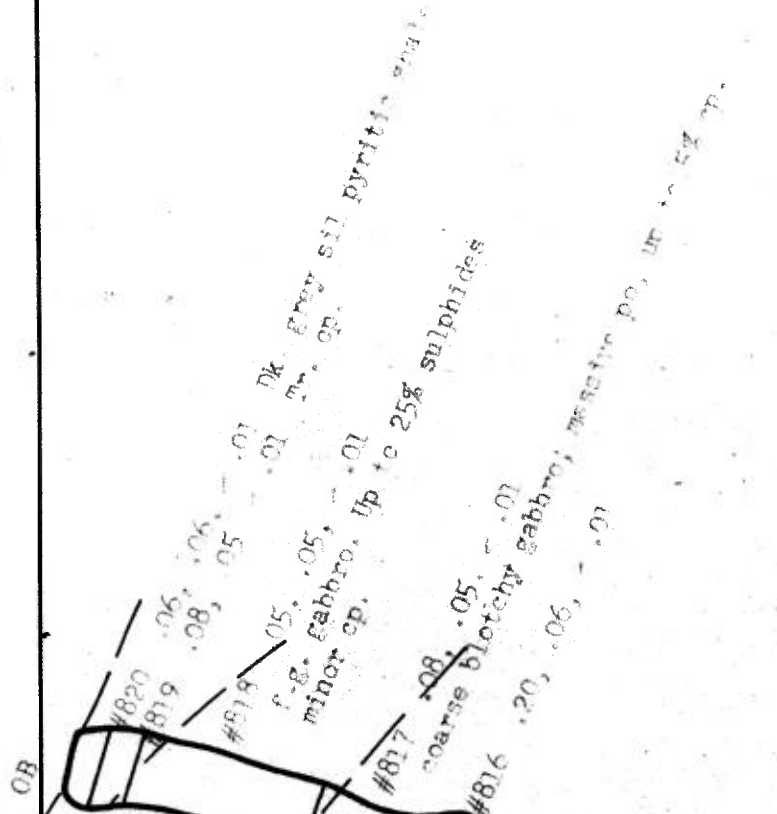


DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
MAP 104D		
TRENCH SKETCH		
Scale: 1" = 1'	By: R. Garvey Date: Aug, 1971	Map No.

A. N.

10,500N

10,200F



Grab Samples

Surface	#653	.16, .04, -
	#654	.15, .05, -
	#663	.06, .09, -
	#664	.61, .07, -

#814 .24, .03, .01

#813 .04, .02, .01

Coarse blotchy gabbro. Minor dissem sulphide. Minor ep. as fracture fillings.

DDH #7
Az 340°
Dip 42°
Length 47.0'



DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
MAP 106A		
TRENCH SKETCH		
Scale: 1" = 10'	By: R. Garvey Date: Aug, 1971	Map No.

9,900E

10,200N

A.N.

Shale or buff. Up to 40% sulph. Minor ep.

f.g. gabbro
minor dissem. sulph.

Plotchy Gabbro

Dk. grey gabbro.
Minor dissem. sulph.
Heavy sulph. on
joint surfaces.
Minor ep.



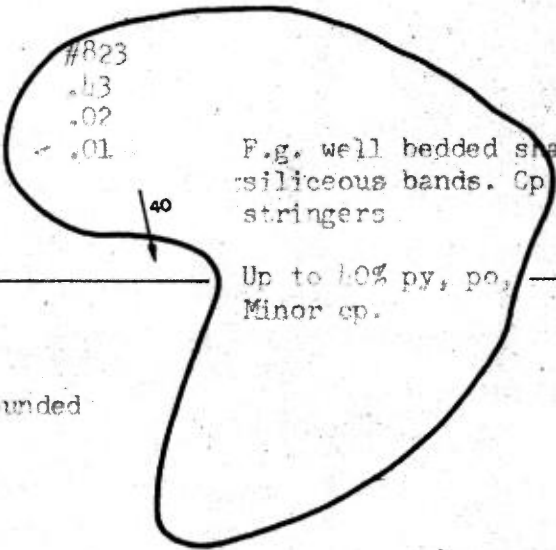
Pits surrounded by swamp



DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
MAP 106 B		
TRENCH SKETCH		
Scale: 1" = 10'	By: R. Garvey Date: Aug, 1971	Map No.

A. N.

9.830F



10,200N

pop hole surrounded by swamp

F.g. well bedded shale or tuff with siliceous bands. Cp in minor quartz stringers

Up to 40% py, po, Minor ep.



DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
MAP 106C		
TRENCH SKETCH		
Scale: 1" = 1'	By: R. Garvey Date: Aug, 1971	Map No.

A. N.

#821 .03, .02, < .01

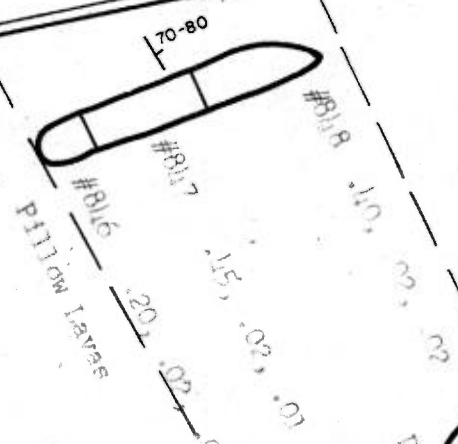
Med. grained blotchy
gabbro. Dissem sulph.
Tr. sp.



DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
MAP 106 D		
TRENCH SKETCH		
Scale: 1" = 1'	By: R. Garvey	Map No.
	Date: Aug, 1971	



DDH #1
Az. 250°
Dip 40°
Length 59.0'



Pillow lavas

C.G. gabbro in rusty patches

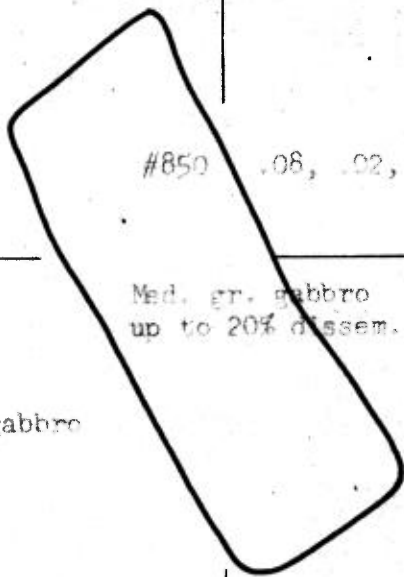
DK Grey shaley quartzite
up to 10% py with minor sp
on fracture faces



DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
MAP 107A		
TRENCH SKETCH		
Scale: 1" = 10'	By: R. Garvey Date: Aug, 1971	Map No.

A. N.

6,315N



#850 .06, .02, .01

8,445N

Med. gr. gabbro
up to 20% dissem. py., po.

pop hole in rusty gabbro



DERRY, MICHENER & BOOTH		
LABRADOR PROJECT		
SAUVÉ LAKE AREA		
MAP 107B		
TRENCH SKETCH		
Scale: 1" = 1'	By: R. Garvey Date: Aug, 1971	Map No.

APPENDIX I

DIAMOND DRILL LOGS

Drilling by Winkie GW-15 machine. Ax core size.

Assays by atomic absorption and reported in parts per million (divide by 10,000 for percentage).

DIAMOND DRILL RECORD

PROPERTY LAB. PROJECT (SAUVE LAKE) HOLE NO. 1

SHEET NUMBER 1 SECTION FROM _____ TO _____ STARTED June 23, 1971
 LATITUDE _____ DATUM _____ COMPLETED June 27, 1971
 DEPARTURE _____ BEARING 10° ULTIMATE DEPTH 101'
 ELEVATION _____ DIP 50° PROPOSED DEPTH 100'

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE-GOLD \$	Ni	Zn	(ppm)
0 - 4.5	- blotchy gabbro - occasional sulphides visible (< 1%)				Cu.			
	- blotches up to 1.5" - anhedral							
	- blotches ≈ 40% of bulk composition of rock.							
	- matrix light & dark (salt & pepper) probably F.S. and pyroxenes							
	- g.s. matrix ≈ 3 mm.							
4.5 - 12.5	- blotchy gabbro percentage of sulphides increasing slightly.							
	- blotches 25 - 30% of bulk							
	- matrix becoming finer grained (1-2 mm)							
	- blotches up to 1".							
12.5 - 15.5	- blotches decreasing in size and in bulk composition of rock	608	13.5-15.0		200	100		400
	until disappearance @ 15.5							
	- matrix g.d. ≈ 1 mm							
	- sulphides in fractures up to 2-3% bulk composition of rock							

N.M.P. TORONTO - STOCK FORM NO. 501 REV. 12/51

DRILLED BY Paul Tremblay
Jack Cunningham

Approved *[Signature]*
 SIGNED Ray Garvey



DIAMOND DRILL RECORD

PROPERTY LAB. PROJECT (SAUVE LAKE)

HOLE NO. 1

SHEET NUMBER 2 SECTION FROM _____ TO _____ STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$ Cu	ppm Ni	Zn
15.5 - 16.5	- w.f.g. gabbro (< 1 mm) with minor amounts of sulphides concentrated mainly in fractures (no blotches)	609	15.0-16.5		110	87	105
16.5 - 17.0	- transition zone from v.f.g. gabbro to shale with increasing amounts of sulphide mineralization both through the bulk of the rock and in fine seams. (≈ 10% of bulk)	610	16.5-17.5		28	150	36
@ 17.1	- 1/10 ft. of "spotty" pyrrhotite in shale - "spots" 5 mm in diam. ≈ 25% of bulk. - shale contains minor amounts of fine sulphide minerals.						
17.2 - 22.5	- light & dark banded shale with bands from a few mm's to 1.5" - < C.A. = 70° including bands of massive sulphides (mainly pyrrhotite) up to 5 mm thick.	611	17.5-18.5		220	175	20
		612	18.5-20.0		190	170	27
		613	20.0-21.0		210	205	20
	- sulphides ≈ 15-20% of bulk	614	21.0-22.0		250	200	20
	- some evidence of soft sediment deformation						

DIAMOND DRILL RECORD

PROPERTY LAB. PROJECT (SAUVE LAKE) HOLE NO. 1

SHEET NUMBER 3 SECTION FROM _____ TO _____ STARTED _____
LATITUDE _____ DATUM _____ COMPLETED _____
DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD \$	SULPHIDE GOLD \$	<u>Cu</u>	<u>Ni</u>	<u>Zn</u>
	- occasional band of gabbro up to 2 mm g.s. with minor sulphide mineralization.							
22.5 - 23.5	- Shale with \approx 40% sulphides both conformable with bedding.	615	22.0-23.0		260		280	24
	($<$ C.A. \approx 75°) and in fractures across bedding	616	23.0-24.0		285		250	50
	- very minor amounts of lighter bands which appear to be f.g. gabbro							

N.M.P., TORONTO-STOCK FORM No. 501 REV. 12/51

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DIAMOND DRILL RECORD

PROPERTY LAB. PROJECT (SAUVE LAKE) HOLE NO. 1

SHEET NUMBER 4 SECTION FROM _____ TO _____ STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUGS GOLD \$	Ni	Zn
23.5 - 25.0	- interbedded shale and sulphide bands (probably all pyrrhotite) with evidence of soft sediment deformation.	617	24.0-25.0		310	325	24
	- %age sulphide 65%						
	- overall < C.A. $\approx 70^\circ$						
	- shearing & slickensides in many sulphide seams giving evidence of shearing parallel to bedding. (probably due to folding)						
25.0 - 27.5	Ditto	619	25.0-27.5		280	305	23
27.5 - 34.5	Gabbro, v.f.g. (≈ 1 mm) with only minor amounts of sulphides in fractures nearly parallel to core axis ($\approx 10\%$)	620	27.5-30.0		75	70	200
	- salt & pepper texture	621	30.0-35.0		80	96	137
	- occasional f.s. inclusion (up to 1")						

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DIAMOND DRILL RECORD

PROPERTY LAB. PROJECT (SAUVE LAKE) HOLE NO. 1

SHEET NUMBER 5 SECTION FROM _____ TO _____ STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$ <u>Cu</u>	<u>Ni</u>	Zn
34.5 - 35.0	- gabbroic breccia - like fragments surrounded by sulphides (probably all pyrrhotite)						
35.0 - 37.0	- thin bands (up to 8 mm) of massive sulphides interbedded with less sulphide rich bands of fine grained rock (altered shale?) - sulphide \approx 65-70% of bulk composition - occasional light colored F.S. inclusions.	622	35.0-40.0		205	280	400
37.0 - 38.5	- interbedded sulphides and dark f.g. shale - sulphides \approx 50% of bulk. - < C.A. \approx 80°						
38.5 - 41.0	- i.b. shale & sulphides but sulphides decreasing to \approx 35%.						

DIAMOND DRILL RECORD

PROPERTY LAB. PROJECT (SAUVE LAKE) HOLE NO. 1

SHEET NUMBER 6 SECTION FROM _____ TO _____ STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SILVER CU	Ni	Zn
41.0 - 51.5	- predominantly dark f.g. shale with occasional sulphide layer and mineralized fracture (sulphides ≈ 10-15%) < C.A. ≈ 80°	623	40.0-45.0		150	215	330
	- sulphide bands are up to 8 mm thick.	624	45.0-50.0		86	270	57
51.5 - 68.5	- interbedded light and dark shale with minor sulphide mineralization (few per cent)	625	50.0-55.0		77	145	50
	- evidence of graded bedding with tops predominantly toward top of hole (right side up)	626	55.0 - 60.0		68	150	117
	- some phases appear to have a texture between shale and f.g. gabbro (perhaps assimilation)	627	60.0 - 65.0		97	180	100
	- bedding almost normal to C.A.	628	65.0 - 70.0		125	185	48

DRILLED BY _____ SIGNED _____

DIAMOND DRILL RECORD

PROPERTY LAB. PROJECT (SAUVE LAKE)

HOLE NO. 1

SHEET NUMBER 7 SECTION FROM _____ TO _____ STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$	Ni	Zn
68.5 - 101	- quartzitic appearance of shale - light and dark bands	629	70.0 - 75.0	150	195		110
	- an increase in the amount of sulphides (10-15%) much of it occurring as "spots" a few mm in diameter - also in fractures parallel to core axis.	630	75.0 - 80.0	100	135		70
		631	80.0 - 85.0	118	78		100
		632	85.0 - 90.0	135	87		90
	- perhaps more assimilated shale (some light bands have speckled appearance)	633	90.0 - 95.0	150	90		75
		634	95.0 - 101.0	84	72		104
	- "quartzitic" shale continues to bottom of hole with same type of sulphide mineralization with change in attitude @ 71.0 (gradual) to 45° to C.A. & back to normal @ 78.0'						
	- some minor faulting @ 72.5' (50° to C.A.)						
	- sulphides up to 25% at few locations						
	- still in mineralized shales at end of hole.						

DIAMOND DRILL RECORD


PROPERTY LAB. PROJECT (SAUVE LAKE) HOLE NO. 2

SHEET NUMBER 1 SECTION FROM 00 TO 12.0 STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED July 4, 1971
 DEPARTURE _____ BEARING _____ 00° ULTIMATE DEPTH 100.5'
 ELEVATION _____ DIP _____ 50° PROPOSED DEPTH 100'

DEPTH FEET	FORMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$
00 - 7.0	blotchy gabbro with blotches up to 2.5" - F.S. blotches approximately 40% of bulk of rock. - salt & pepper matrix g.s. 3-4 mm - sulphide minerals in blotchy gabbro up to 5% of bulk with concentrations in fractures.				
7.0 - 12.0	- blotchy gabbro - decrease in size and percentage of bulk composition of blotches till disappearance at 11.0' (last foot is salt & pepper gabbro g.s. \approx 4 mm) - some visible sulphides 1-2% - fractures are weathered rusty and show higher concentration of sulphide minerals.				

H.M.P. TORONTO-STOCK FORM NO. 501 REV. 12/51

DRILLED BY Paul Tremblay
Jack Cunningham


 Approved [Signature]
 SIGNED Ray Garvey

DIAMOND DRILL RECORD

PROPERTY LAB. PROJECT (SAUVE LAKE) HOLE NO. 2

SHEET NUMBER 2 SECTION FROM _____ TO _____ STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$
12.0 - 14.0	- gabbro with salt & pepper text & occasional small f.s. blotch (10 mm) g.s. ≈ 4 mm - "spots" have faded boundaries and appear to be composed of fine grains of pyrrhotite. - fractures are rusted.				
14.0 - 20.0	- blotchy gabbro with blotches up to 1" in diameter - blotches approximately 25% of bulk composition - some visible sulphides. - salt & Pepper matrix g.s. ≈ 2-3 mm. - fractures are weathered rusty				

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DIAMOND DRILL RECORD

PROPERTY LAB. PROJECT (SAUVE LAKE) HOLE NO. 2

SHEET NUMBER 3 SECTION FROM _____ TO _____ STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$	Ni	Zn (ppm)
20.0 - 22.0	- blotchy gabbro - blotches up to 2" - blotches \approx 25% of bulk composition - matrix 1 - 2 mm - no visible sulphides						
22.0 - 24.5	- grading from f.g. gabbro (1 mm) to shale - occasional blotches disappear at 23.0' - finely disseminated sulphides in the f.g. gabbro from 23.0 - 24.5	635	23.0-25.0		165	125	96
24.5 - 25.0	- f.g. grey shale with both thin bands (2-3 mm) of sulphide mineralization conformable to bedding ($<$ C.A. 60°) and in "spots" up to 5 mm in diameter. - also finely disseminated sulphides throughout shale. - sulphides \approx 30-35% of bulk						

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DIAMOND DRILL RECORD

PROPERTY LAB. PROJECT (SAUVE LAKE) HOLE NO. 2

SHEET NUMBER 4 SECTION FROM _____ TO _____ STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$ Cu	Ni	Zn	(ppm)
25.0 - 35.5	light & dark banded shale with sulphide mineralization occurring as narrow bands conformable to the bedding (up to 5 mm thick)	636	25.0-30.0		170	190		250
	- as spots throughout, as irregular shaped blebs up to 1" across and as finely disseminated sulphides throughout the shale.	637	30.0 - 35.0		85	195		66
	- sulphides approximately 30% of bulk							
	- some chalcopyrite present							
	- bedding < C.A. \approx 60°							
	- in places evidence of soft sediment deformation							
35.5 - 41.5	- predominantly dark shale with a few narrow light bands	639	35.0-40.0		250	240		300
	- < C.A. \approx 70°							
	- sulphides occur in thin beds (conformable) up to 8 mm thick, also as irregular blebs up to 1" across that are located in fractures.							

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DIAMOND DRILL RECORD

PROPERTY LAB. PROJECT (SAUVE LAKE)

HOLE NO. 2

SHEET NUMBER 5 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE		(ppm)
					GOLD \$	Ni	
	- sulphides \approx 35-40% of bulk. (chalcopyrite a few per cent)						
	- sections high in sulphide concentration show soft sediment deformation characteristics.						
41.5 - 50.0	- v.f.g. - black shale with conformable bands of sulphide mineralization	638	40.0 - 45.0	210	285		1100
	- often the sulphide bands are associated with a white mineral (not a carbonate)	640	45.0 - 50.0	130	225		730
	- occasional bands up to 1" thick.						
	- sulphides also occur as irregular shaped blebs up to 1/2" across - seems to be some accomodation of bedding around the blebs. - bedding $<$ C.A. \approx 80°						
	- the blebs are mainly pyrrhotite with minor amounts of chalcopyrite						
	- sulphides \approx 10-15% of bulk						
	- Some sulphides also as very fine grains disseminated throughout shale.						

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DIAMOND DRILL RECORD

PROPERTY LAB. PROJECT (SAUVE LAKE) HOLE NO. 2

SHEET NUMBER 6 SECTION FROM _____ TO _____ STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$ Cu	Ni	Zn(ppm)
50.0 - 75.5	v.f.g. black shale with occasional thin (5mm) conformable bands of pyrrhotite (minor chalcopyrite)	641	50.0 - 55.0		103	165	350
		642	55.0 - 60.0		92	165	240
	- also the occasional phase of v.f.g. pyrrhotite with indistinct gradation boundaries (seem to fade in and out)	643	60.0 - 65.0		90	135	200
	- up to 2" across	644	65.0 - 70.0		65	140	190
	- very fine grained sulphides disseminated throughout shale	645	70.0 - 75.0		77	145	310
	- bedding < C.A. 75°						
	- thin (up to 4 mm) veinlets in fractures < C.A. ≈ 45°						
	- 10-15% sulphides						

M.M.P., TORONTO-STOCK FORM No. 501 REV. 12/51

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DIAMOND DRILL RECORD

PROPERTY _____ LAB. PROJECT (SAUVE LAKE) _____ HOLE NO. 2

SHEET NUMBER 7 SECTION FROM _____ TO _____ STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD \$	SLUDGE-GOLD \$ (u)	Ni	ppm Zn.
75.5 - 96.0	dark grey to black f.g. shale with scattered conformable seams of sulphides (pyrrhotite & pyrite)	646	75.0-80.0		90	170	510
	- most of the seams are associated with a white mineral	647	80.0 - 85.0		110	195	930
	- sulphides 10-15% of bulk composition						
	- a few narrow (< 1") bands of light grey shale	648	85.0-90.0		140	185	1700
	- sulphides also occur as very fine grains disseminated throughout the shale	649	90.0-95.0		160	200	37
	- bedding < C.A. $\approx 75^\circ$						
96.0 - 100.5	- predominantly a light coloured shale with minor amounts of sulphide mineralization $\approx 10\%$ bulk.	650	95.0 - 100.5		125	150	118
	- sulphides are finely disseminated throughout with only the occasional thin conformable seam						
	- hole ends in same. < C.A. 75°						

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DIAMOND DRILL RECORD

PROPERTY LABRADOR PROJECT (SAUVE LAKE)

HOLE NO. 3

SHEET NUMBER 1

SECTION FROM 0.0 TO 48.0

STARTED July 15, 1971

LATITUDE _____

DATUM _____

COMPLETED July 17, 1971

DEPARTURE _____

BEARING 240°

ULTIMATE DEPTH 82.5

ELEVATION _____

DIP 40°

PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$
0.0 - 45.0	Metagabbro decreasing in grain size down the hole from 4 mm @ the collar to 2 mm @ 45.0 ft.				
	Only occasional just visible grain of pyrite (<< 1%) in the bulk of the rock with thin smears of pyrite and/or pyrrhotite in a few fractures.				
	- no blotches				
	- few very narrow (1 mm) randomly oriented quartz stringers and mineralized fractures @ 42.0 - 43.0 feet.				
45.0 - 48.0	- transition from f.g. (1 mm) metagabbro to siliceous shale. (almost quartzitic) < 1% sulphide mineralization				



Approved [Signature]

SIGNED Ray Garvey

Paul Tremblay

DRILLED BY Jack Cunningham

DIAMOND DRILL RECORD

PROPERTY LABRADOR PROJECT (SAUVE LAKE) HOLE NO. 3

SHEET NUMBER 2 SECTION FROM 48.0 TO 58.0 STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	Cu SLUDGE GOLD-\$	Ni	Zn
48.0 - 55.0	- well mineralized siliceous shale approximately 50% sulphides. mainly pyrite & pyrrhotite (no visible chalcopyrite) - < bedding to C.A. 75° - 90° - occasional bleb of pyrrhotite 2" across	655	48.0-50.0		170	195	50
	- siliceous shale is dark grey to black	656	50.0-52.5		215	200	77
	- one weathered fracture surface	657	52.5-55.0		175	162	230
55.0 - 58.0	- light and dark "patchy" f.g. (< 1 mm) volcanics - appearance of a fine breccia or a stockwork of fine quartz stringers. - only minor sulphide mineralization (1%) - fractures are rusty.						

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DIAMOND DRILL RECORD

PROPERTY LABRADOR PROJECT (SAUVE LAKE)

HOLE NO. 3

SHEET NUMBER 3

SECTION FROM 58.0 TO 82.5

STARTED _____

LATITUDE _____

DATUM _____

COMPLETED _____

DEPARTURE _____

BEARING _____

ULTIMATE DEPTH _____

ELEVATION _____

DIP _____

PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	Cu PLATINUM GOLD \$	Ni	Zn
58.0 - 58.5	- sulphide rich band (pyrrhotite) - approximately 60% pyrrhotite - accompanied by very fine quartz stringers	658	58.0-58.5		350	215	45
58.5 - 60.1	- dark colored f.g. rock (< 1 mm) with many very fine quartz stringers. (perhaps a shale inclusion in the volcanics) - occasional speck of pyrite.						
60.1 - 82.5	- very fine grained (< 1 mm) light grey volcanic with occasional quartz segregation and narrow quartz stringers (randomly oriented) - scattered dark patches appear throughout.						
	End of Hole						

DIAMOND DRILL RECORD

PROPERTY LABRADOR PROJECT (SAUVE LAKE) HOLE NO. 4

SHEET NUMBER 1 SECTION FROM 0.0 TO 32.0 STARTED July 18, 1971
 LATITUDE _____ DATUM _____ COMPLETED July 20, 1971
 DEPARTURE _____ BEARING 250° ULTIMATE DEPTH 59.0
 ELEVATION _____ DIP 40° PROPOSED DEPTH -

DEPTH FEET	FORMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$		
0.0 - 28.0	Gabbro decreasing in g.s. down the hole from 4-5 mm @ the collar to 1 mm @ 28.0' - just visible disseminated pyrite (<< 1%) - @ 6.0' 8" of fine quartz stringers cut the gabbro in several directions (6.0' to 6.7') - overall gabbro has "salt and pepper" texture - approximately 50% f.s.'s and 50% mafics.						
28.0 - 32.0	- transition from f.g. gabbro to dark grey mineralized, siliceous shale. - gabbro appears to have assimilated shale - small pieces of shale occur in the gabbro. - minor sulphide mineralization in the fractures.						

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Jack Cunningham

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DIAMOND DRILL RECORD

PROPERTY LABRADOR PROJECT (SAUVE LAKE) HOLE NO. 4

SHEET NUMBER 2 SECTION FROM 32.0 TO 47.5 STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD \$	CU STUPE GOLD \$	Ni	Zn
32.0 - 47.5	dark grey siliceous shale with quartzitic phases < C.A. 70°	659	32.0-35.0		3800	175	200
	- pyrrhotite occurs throughout in disseminated grains, occasional massive bands, and irregular blebs. - pyrrhotite is approximately 50% of bulk composition	660	35.0-40.0		1900	190	65
	- minor chalcopyrite occurs as fine stringers and in the fractures.	661	40.0-45.0		1100	120	65
	- approximately 20% of the core is shattered.	662	45.0-47.5		600	135	135
	- 45.0' - 47.5' grades from siliceous shale to volcanics - brecciated looking rocks with some sulphide mineralization.						

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DIAMOND DRILL RECORD

PROPERTY LABRADOR PROJECT (SAUVE LAKE) HOLE NO. 4

SHEET NUMBER 3 SECTION FROM 47.5 TO 59.0 STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$
47.5 - 59.0	- Volcanics, very f.g. (< 1 mm)				
End of Hole	- predominantly light grey with dark grey patches and many very narrow quartz stringers & quartz segregations				
	- in places has the appearance of quartz stockwork.				
	- only minor sulphide mineralization (few per cent) in the fractures.				
	- no pillow structure evident.				

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DIAMOND DRILL RECORD

PROPERTY LABRADOR PROJECT (SAUVE LAKE)

HOLE NO. 5

SHEET NUMBER 1

SECTION FROM _____ TO _____

STARTED July 23, 1971

LATITUDE _____

DATUM _____

COMPLETED July 24, 1971

DEPARTURE _____

BEARING 290°

ULTIMATE DEPTH 79.0

ELEVATION _____

DIP 25°

PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$
0.0 - 23.0	Gabbro v.f.g. (1-2 mm) with occasional very narrow quartz stringer (no preferred orientation) - no visible sulphides - "salt & pepper" texture - gabbro varies in colour from light grey to medium grey				
23.0 - 30.0	- light & dark banded gabbro growing finer grained down the hole to less than 1 mm @ 30.0 (transition zone from gabbro to shale) - dark bands probably assimilations of dark shale - @ 32.0' a 3" inclusion of v.f.g. light grey volcanics - an increasing no. of quartz stringers (some are veins up to 2" wide) - sulphide mineralization occurs as isolated small blebs in fractures in the gabbro and in the quartz stringers (approx. 20% of total bulk composition of rock) - (pyrite & pyrrhotite)				



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DIAMOND DRILL RECORD

PROPERTY LABRADOR PROJECT (SAUVE LAKE) HOLE NO. 5

SHEET NUMBER 2 SECTION FROM _____ TO _____ STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	CU SLUDGE GOLD \$	Ni	Zn
30.0 - 31.5	gradation from v.f.g. gabbro to dark grey shale - quartzitic in appearance - ≈ 20% pyrite	666	30.0-32.5		300	120	100
31.5 - 38.0	- < C.A. ≈ 70° Shale, dark grey to black - interbedded medium to v.f.g. - evidence of soft sediment deformation - sulphides (pyrite and pyrrhotite) occur as bands up to 1" thick of f.g. granular variety. - sulphides ≈ 50% bulk composition.	665	32.5-35.0		250	135	750
		667	35.0-37.5		600	160	135
		668	37.5-40.0		275	94	2500
38.0 - 42.0	- Shale, dark grey, extremely f.g. - fractures conchordally < C.A. ≈ 50° - very thin bands of quartz and pyrite (up to 3 mm thick) - sulphides - 5% of bulk composition.	669	40.0-42.0		375	105	3300

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PROPERTY LABRADOR PROJECT (SAUVE LAKE)

HOLE NO. 5

SHEET NUMBER 3 SECTION FROM _____ TO _____ STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$
42.0 - 45.0	Volcanics (?) v.f.g. and containing minor amounts of calcareous material (spotty effervesence)				
	- specks of pyrite throughout (10% to 15% of bulk)				
	- a network of very fine (1 mm) strings of black mineral.				
45.0 - 79.0	- f.g. gabbro with only occasional speacks of minor pyrite mineralization.				
End of Hole	- randomly oriented quartz strings are scattered throughout some with minor pyrite mineralization.				

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PROPERTY LABRADOR PROJECT (SAUVE LAKE) HOLE NO. 6

SHEET NUMBER 1 SECTION FROM 0.0 TO 31.0 STARTED July 25, 1971
 LATITUDE 10,370 N DATUM _____ COMPLETED July 29, 1971
 DEPARTURE 5,860 E BEARING 250° ULTIMATE DEPTH 73.5
 ELEVATION _____ DIP 50° PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE Cu GOLD \$	Ni	Zn
0.0 - 1.0	Volcanics (?) (perhaps v.f.g. gabbro segregations and very narrow stringers of black mineral (probably quartz))						
1.0 - 3.5	light colored calcareous rock (spotty effervescence) with pyrite mineralization as small blebs and in fractures.	(670)	1.0-5.0		No Assay		
3.5 - 31.0	well mineralized siliceous shale < C.A. 60° usually						
	- sulphides (pyrite & pyrrhotite)	671	5.0 - 10.0		310	180	750
	approx. 60% - 70% of total bulk composition	672	10.0-15.0		300	180	630
	- some sections show evidence of soft sediment deformation.	673	15.0-20.0		350	180	55
		674	20.0-25.0		360	185	85
	- narrow bands (few inches) of black, v.f.g. shale	675	25.0-31.0		300	160	350

DRILLED BY Paul Tremblay
Jack Cunningham

Approved *[Signature]*
 SIGNED Ray Garvey

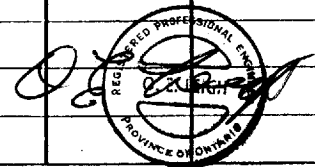


DIAMOND DRILL RECORD

PROPERTY LAB. PROJECT (SAUVE LAKE) HOLE NO. 7

SHEET NUMBER 1 SECTION FROM 0.0 TO 23.0 STARTED July 31, 1971
 LATITUDE 10,460N DATUM _____ COMPLETED August 4, 1971
 DEPARTURE 10,165E BEARING 340° ULTIMATE DEPTH 47.0'
 ELEVATION _____ DIP 42° PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$
0.0 - 23.0	Blotchy Gabbro - sections varying from 50% blotches up to 80% blotches (blotches are anhedral phenocrysts of feldspar, medium grey in color and weather white) - blotches vary in size up to 2" - scattered sulphides (5% - 10%) mineralization throughout the matrix with only minor chalcopyrite. - matrix is generally f.g. (2 mm) with "salt & "pepper texture - fractures are rusted and contain slightly higher amounts of sulphide minerals.				



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DIAMOND DRILL RECORD

PROPERTY LAB PROJECT (SAUVE LAKE) HOLE NO. 7

SHEET NUMBER 2 SECTION FROM _____ TO _____ STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD \$	CU SLUDGE GOLO	Ni	Zn
23.0 - 24.0	Blotchy Gabbro (as from 0.0 - 23.0) but matrix is composed almost entirely of sulphides (\approx 40%) - sulphides are mainly pyrrhotite with some minor amounts of visible chalcopyrite.	(683)	23.0-24.0		360	465	25
24.0 - 35.0	- An ultra-mafic phase of the gabbro - very dark colored - g.s. \approx 3 mm. (No blotches) - high concentration of sulphide minerals (up to 75%) - sulphides are mainly pyrrhotite but some chalcopyrite is visible (1% to 2%)	(684) (685)	24.0-30.0 30.0-35.0		620 1600	485 900	45 30
35.0 - 47.0	- v.f.g. - gabbro (1 mm) with few scattered blotches up to 1" in diameter. - medium gray matrix with "salt and pepper" texture - occasional fracture contains minor pyrrhotite mineralization.						

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DIAMOND DRILL RECORD


PROPERTY LABRADOR FOLDING LAKE HOLE NO. 8

SHEET NUMBER 1 SECTION FROM _____ TO _____ STARTED August 1971
 LATITUDE 21 + 30N 0 + 70W DATUM _____ COMPLETED August 1971
 DEPARTURE (Site of old DDH) BEARING Grid East (NE) ULTIMATE DEPTH 108
 ELEVATION 15' above BL DIP 45° PROPOSED DEPTH 108+

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	Cu SLUDGE GOLD \$	Ni	Zn
0 - 92	Fine to medium grained gabbro fairly well chloritized. Massive with slight foliation at small angle to c/a. V minor dissemination sulphides (py + po + a little cpy) Also a little py & cpy sealing rare cracks. grain size becomes extremely fine towards bottom where rock resembles aphanitic volcanics.						
92 - 108	- Finely banded ?greenstone tuff of sedimentary appearance but probably volcanic in origin. Brecciated in a few places and partly sealed by f.g. po. Heavy (20% - 40%) f.g. banded and disseminated po at varying large angles to c/a . Minor stringer cp in fractures. N.B. Hole ends in mineralization due to lack of available drill rods. Total width and content of mineralized zone not known.	219	92-108		5200	300	105

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Approved *C. B. Gunn*
 SIGNED C. B. Gunn


DIAMOND DRILL RECORD

PROPERTY LABRADOR PROJECT FOLDING LAKE

HOLE NO. 9

SHEET NUMBER 1

SECTION FROM 0 TO 76

STARTED August 1971

LATITUDE 15 + 90N 0 + 60W

DATUM _____

COMPLETED August 1971

DEPARTURE West end of trench No. 4

BEARING Grid east (NE)

ULTIMATE DEPTH 76'

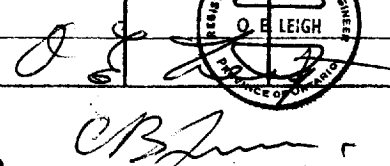
ELEVATION _____

DIP _____

PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	Cu		Ni	Zn
					SLUGS	GOLD-\$		
0 - 7' 0"	Massive f.g. gabbro. Light green and chloritized							
7'0" - 7'2"	Ditto with coarse stringer pyrite							
7'2" - 8'4"	Probably ditto but core very broken & weathered. Blocky fragments of massive po.							
8'4" - 16'6"	Chloritic greenstone heavily mineralized with a mosaic of eyes of py up to 1/4" across surrounded by some cpy. Ground mass and stringer f.g. po throughout.	212	7'0" - 11'0"		17000		175	11000
	8'4" to 11'0" practically massive sulphides	213	11' - 16'6"		3900		180	82
	11'0" to 16'6" about 30% sulphides							
16'6" - 24'0"	Dark green chloritic gs in patchy mineralization and stringers of fine disseminated po W occasional blebs of cp. Po nearby massive over lengths of a few inches	214	16'6" - 24'0"		4700		180	162
24'0" - 44'0"	Chloritic greenstone tuff with banded stringers of finely disseminated po + 10% and occasional stringers of cp & py	215	24-44		2100		200	175
44' - 76'	Chloritic greenstone or tuff weakly mineralized with po and py over lengths of a few inches	216	44-76		225		110	225
	End of Hole							




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DIAMOND DRILL RECORD

PROPERTY LABRADOR PROJECT MUTCH LAKE HOLE NO. 10

SHEET NUMBER 1 SECTION FROM 0 TO 40 STARTED August 1971
 LATITUDE 4 + 50S 0+75E DATUM _____ COMPLETED August 1971
 DEPARTURE _____ BEARING 245° ULTIMATE DEPTH 55
 ELEVATION _____ DIP -45° PROPOSED DEPTH 55

DEPTH FEET	FORMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD \$	Cu SLUDGE GOLD	Ni	Zn
0' - 10'	Blotchy gabbro. Feldspar "blotches" occupy 50% by volume. White in colour Average size 15mm diameter Pyroxene xtals 1-2 mm plus minor amounts black biotite 1mm diameter sulphides - pyrrhotite and chalcopyrite in small disseminations and blebs. Maximum bleb diameter 10mm. Estimated sulphide content by volume 1-2% No foliation in gabbro	144	0 - 10.0		4200	850	52
10' - 20'	Same as 0 - 10'	145	10.0-20.0		2700	700	50
20' - 30'	Same as 0 - 10'	146	20.0-30.0		6300	4300	64
30' - 40'	Same as 0 - 10'	147	30.0-40.0		8800	3200	70



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SIGNED P. Leitch

DIAMOND DRILL RECORD

PROPERTY LABRADOR PROJECT MITCH LAKE HOLE NO. 10

SHEET NUMBER 2 SECTION FROM _____ TO _____ STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD \$	Cu SLUDGE GOLD \$	Ni	Zn
40' - 46.5'	Blotchy gabbro. Large feldspar blotches become less well defined. Sulphides still occur as disseminations and blebs but exhibit slight foliation approximately normal to core	148	41.0-50.0		2700	1350	58
46.5 - 50	Foliated gabbro - Bands of pyroxenes + white feldspar 1 - 5 mm in diameter occur. bands continuous over 5-10 cm, but variable in width Average Py, feldspar grains 0.5 - 2.0 mm Biotite present along foliation planes. Total sulphide content <0.5% by volume. Pyrrhotite, cpv. present as small specks 0.5 - 1.0 mm in length.						
50 - 55'	Foliated metasediments.						

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APPENDIX II

- G.R. 104 Gerido Lake - Thevenet Lake Area - P. Sauve and R. Bergeron,
1964.
111 Berard Lake Area - Jean Berard, 1965
- Special
Paper 5 Metallic Mineralization In Part Of The Labrador Trough,
- J. Dugas, 1970
- General Dimroth, Erich (1970), The Evolution Of The Labrador
Geosyncline (with bibliography), Bull. - Geological Society
of America, Vol. 81, pp. 2717 - 2742
- Hogg, G. M. (1966) The Exploration of a Sulphide-Bearing
Belt, Labrador and New Quebec - C.I.M.M. Bulletin Vol. LXIX,
pp. 339-346.