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**A GEOLOGICAL/GEOCHEMICAL SAMPLING  
AND  
ANALYTICAL EXPENDITURE REPORT**

**EASTERN 7 CLAIM BLOCK  
THUNDERWOOD PROJECT  
HEARST TWP, ONTARIO**

**2.13785**

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**MINING LANDS SECTION**

**Submitted by:**

**LAC Minerals Ltd.  
Chris Pegg  
December, 1990**

*63.1277*

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GEOLOGICAL/GEOCHEMICAL REPORT - EASTERN 7 CLAIM BLOCK

THUNDERWOOD PROJECT

INTRODUCTION

During the period from September 15 to October 18, 1990, a geological mapping and sampling program was completed over seven (7) of the unpatented claims of the larger Thunderwood (Martin-Bird) property group. This package of claims is significant in that it may host the, as yet undiscovered, extension of the Martin-Bird gold-bearing zone.

LOCATION AND ACCESS

The Thunderwood property is located in central Hearst township, District of Temiskaming, in the Larder Lake Mining Division (Figures 1-3). It lies immediately adjacent to the southeast shore of the Southwest Arm of Larder Lake.

The property can be reached via a forty minute drive from the Town of Kirkland Lake. Highways 66 East and 624 South lead to the Martin-Bird mine access road which is located approximately three miles south of the town of Larder Lake. Then, from the former mine site, trails and baselines provide access to the eastern grid area.

PROPERTY DESCRIPTION

The claim group consists of seven contiguous unpatented claims listed as follows:

- L. 979429
- L. 955114
- L. 955115
- L. 955116
- L. 955124
- L. 955125
- L. 955126

They were staked and recorded in March of 1987.

For the current program of geological mapping and sampling the original baseline and crosslines were re-established to provide continuity with previous surveys. The baseline is oriented at 050° azimuth with crosslines at 400 foot centres. The surrounding lease and patent lines and pin positions provide fairly rigorous controls for data positioning.

ONTARIO

QUEBEC

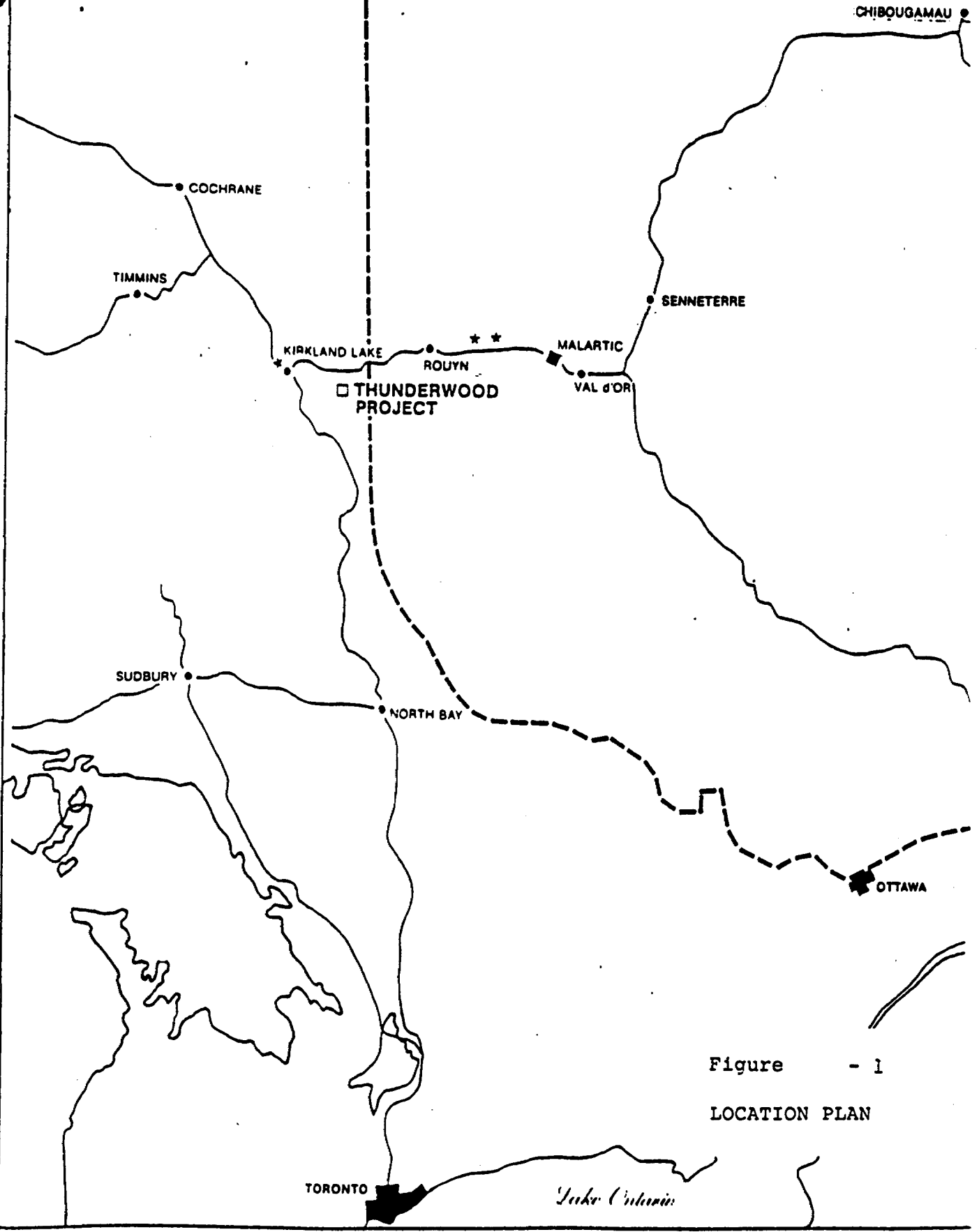
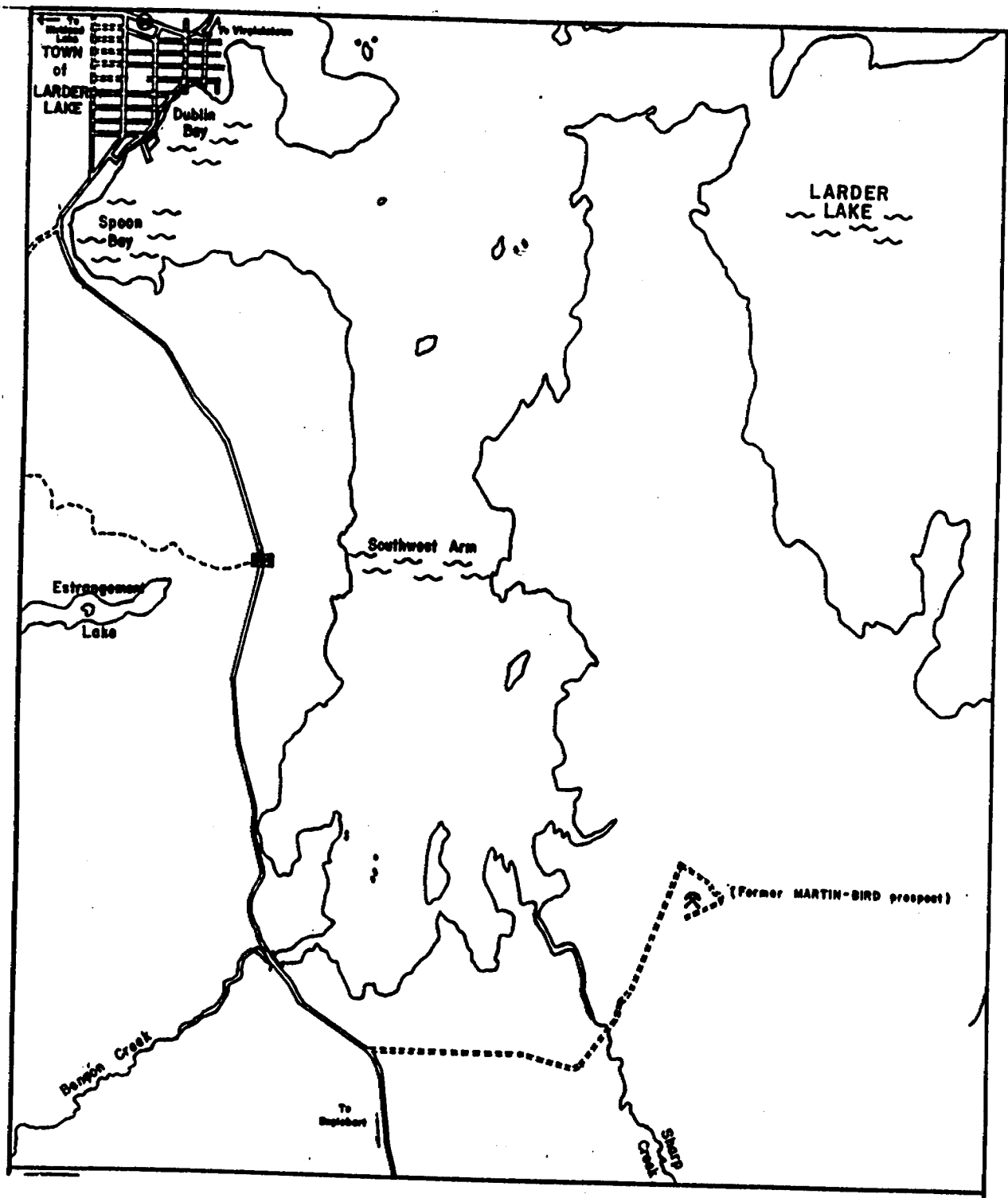
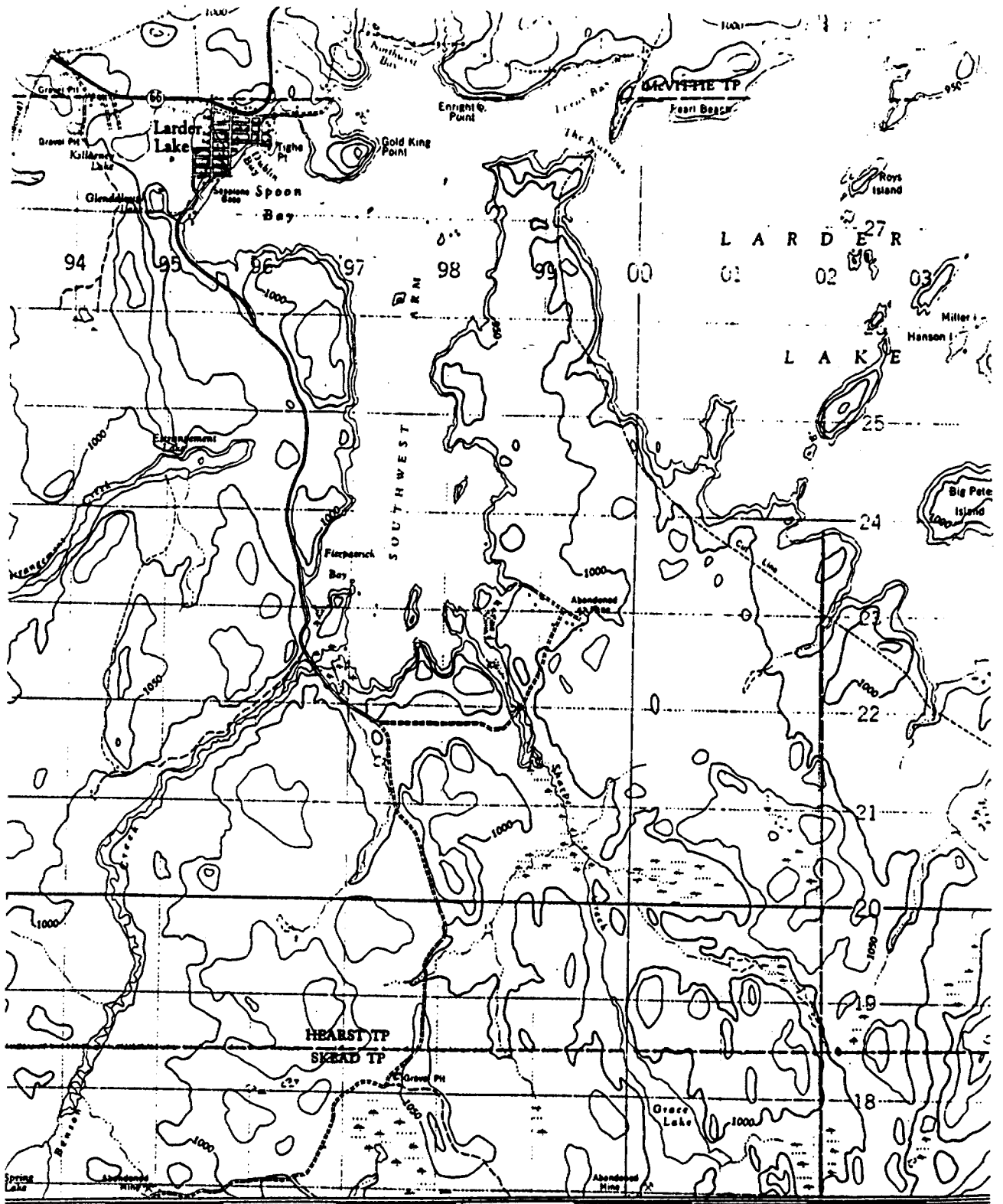


Figure - 1  
LOCATION PLAN





The northern and southern portions of the claim ground were logged during the late 1980's (see Plan Kthu 2).

#### PREVIOUS EXPLORATION WORK

Numerous old claim posts and the presence of historical pits and trenches are all signs of former exploration on the claims.

Quinn-Hearst property interests once held claims L.25024 through to L.25027 and L.25061. These claims still exist today, however, only as surface rights patents. They were probably active during the late twenties and the 1930's, although little is known of the work that was done.

Velvet Larder ML held patented claims L.25084, 25083, and 40982, among others. These claims were probably active during the 1930's and 1940's.

It is likely that the Martin-Bird Gold Mining interests also performed some work on the claims, most likely some of the old trenching.

In 1973, Kerr Addison Mines Ltd. performed a geological survey on the claims.

In 1980, Thunderwood Explorations Ltd. drilled one exploration hole (TS-80-Ex 2) for a total of 394 feet.

During the early 1980's, Long LAC Mineral Exploration Ltd. (LAC Minerals Ltd.) were active on the claim group performing ground geophysics, overburden stripping, humus geochemistry and diamond drilling (8 holes totalling 3655 feet).

#### REGIONAL GEOLOGY

The Thunderwood property is underlain by rocks of the Larder Lake Group. These consist largely of komatiitic flows and flow top breccias, high magnesium basalts, turbiditic sediments and related intrusives. Younger lamprophyre dyke swarms are seen locally. Structurally, the geological setting is highly complex having undergone at least two periods of folding. The claim group lies within a major NNW trending syncline that has been over printed by a more northeasterly trending series of crossfolds.

This NNW trending syncline forms the peninsula separating the SW Arm and the main body of Larder Lake and is flanked by faults of Temiskaming Rift Valley trend. The youngest rocks observed in the area are Huronian in age and are seen adjacent to the





Thunderwood ground, preserved as outliers within Temiskaming Rift Valley fault graben blocks.

A strongly defined schistosity at a 055° trend, probably related to the second period of folding, is, in places, highly evident. Lamprophyre dykes appear to have intruded preferentially in this direction.

The Quartz vein lodes at the Martin-Bird mine occur in this direction of schistosity and gold values are best developed where they intersect flectures in lean magnetite iron formation.

### PROPERTY GEOLOGY

The seven claims were mapped at a scale of 1"=200 feet. Chris Burk of London, Ontario, mapped the western portion of the claim group, while Chris Pegg mapped the eastern half.

#### A. Lithologies

The project area is underlain by rocks of the Larder Lake Group. These are typically sequences of ultramafic to mafic flows and flowtop breccias interlayered with turbiditic greywacke assemblages. They are described more fully below:

##### i) Sediments

The sedimentary rocks represent the predominant rock type on the property. They consist largely of siltstones, mudstones, grits and argillites with minor chert and interflow sediments. Graphitic and carbonaceous sediments occur in two bands as defined from the induced polarization survey (IP anomalies I, IIa and IIb). Their presence has been confirmed in diamond drilling, as well as in several outcrop occurrences.

The sedimentary sequence on the claim group has been interpreted as representing a turbidite terrain. Numerous exposures of trough crossbedding exist especially on the northern part of Line 8 west.

##### ii) Volcanics

Most of the observed volcanics on the property are ultramafic to mafic flows. The ultramafic rocks are largely dark polygonally jointed komatiitic flows showing no obvious spinifex textures or marked flow zoning. They were not especially obvious in outcrop as they tended to underlie low

lying areas (recessive units) but were observed numerous times in drill core

Mafic pillowed basalt units form about 10% of the rock types present on the property. This rock type was especially prominent in flows lying adjacent to the large feldspar porphyry intrusive mapped out in the southern part of the property. Smaller pillowed flows were observed on the NW claim.

### iii) Volcaniclastics

Two main varieties of volcaniclastics were differentiated in the current study.

The first is the more volcanic dominated interflow and flowtop breccia variety. It is observed more frequently in core than in outcrop. Fragments and/or clasts are largely of ultramafic volcanics. This rock type is typically accompanied by a large amount of sparry calcite alteration. Due to the strong deformation fabric in many of the rocks in the area, there is debate as to whether the rock should be classed as a conglomerate or an agglomerate. Most of this variety of volcaniclastic is found in the south and southwestern portion of the map area. It is usually found adjacent or interbedded with volcanic flow rocks.

The second variety distinguished is a more sedimentary dominated volcaniclastic. It may be correlatable with Unit 5 as mapped by J.E. Thomson, which lies to the north of the map area along the eastern flank of the peninsula. This unit occurs in the northern part of the map area along Lines 4W, 8W and 12W. The rock varies from clast supported to matrix supported and appears to lie sandwiched within the greywacke sequence. The clasts are highly variable ranging from large (2") angular feldspar porphyry fragments to small (4 mm) rounded sedimentary appearing clasts.

### iv) Intrusives

A large intrusive of feldspar porphyry lies in the southern part of the map area. It shows a north-south elongation, a bimodal feldspar phenocryst population and forms a topographic high.

An intrusive syenite body was defined on the western side of claim L.955124. It is characterized by its content of angular mafic inclusions.

Lamprophyre dykes are fairly common throughout the map area, especially in the zones where the 055 degree deformation

fabric is strongly developed. Dykes vary from 6 inches to 20 feet wide and are fairly diverse in character. Some are biotite-rich, others are rich in garnets, some appear to be folded and some appear to be sill-form. The whole rock analyses performed indicate they are quite enriched in a multitude of trace elements.

A large diabase dyke is found in the southern map area. It trends ENE and is most prominent where it cuts the feldspar porphyry intrusive.

## B. Structural Geology

Structural relations on the property are certainly of a complex nature reflecting at least two deformation events. This has resulted in some cross folding.

Generally, rocks in the map area strike roughly NNW and are often accompanied by a weak northerly trending penetrative schistose fabric. However, in the area adjacent to, and for several hundred feet on either side of the baseline, a strong secondary schistosity fabric overprints the initial NNW one. This secondary fabric is oriented at roughly 055 degrees. In this zone, a lot of the bedding strikes deviate towards the 055 degree trend. Outcrop evidence reveals strong bedding transposition and small scale folds along this 055 degree trend (ie. small fold @ BL+2W clearing). Dykes of lamprophyre and quartz-carbonate veins appear to occupy this trend as well.

Closer scale mapping and stripping will be required to get a better understanding of the geology here.

## C. Faults

The following is a listing of the most significant directions of faulting:

1. Rift NNW - 315-330 - produces some large fault scarp cliff faces (vertical and rotational movement)
2. E-W (ESE) - 95-105 - indicated by low lying areas
3. NNE - 10-20 - offsets and dislocates Martin-Bird ore zone
4. NE - 60-80 - 055 degree trend (often filled by lamprophyre dykes or quartz veins some mineralized with gold)

# LONG LAC MINERALS

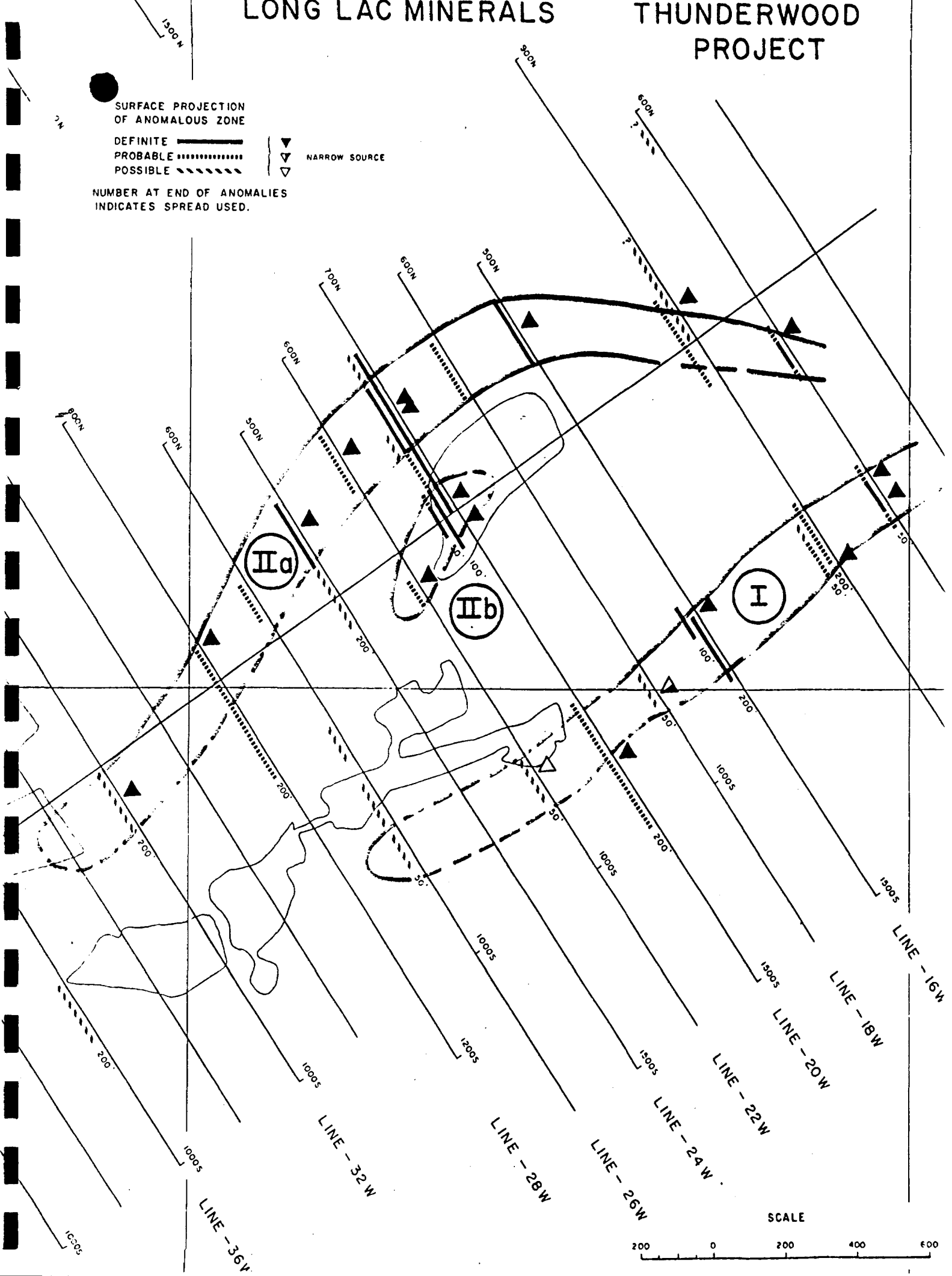
# THUNDERWOOD PROJECT

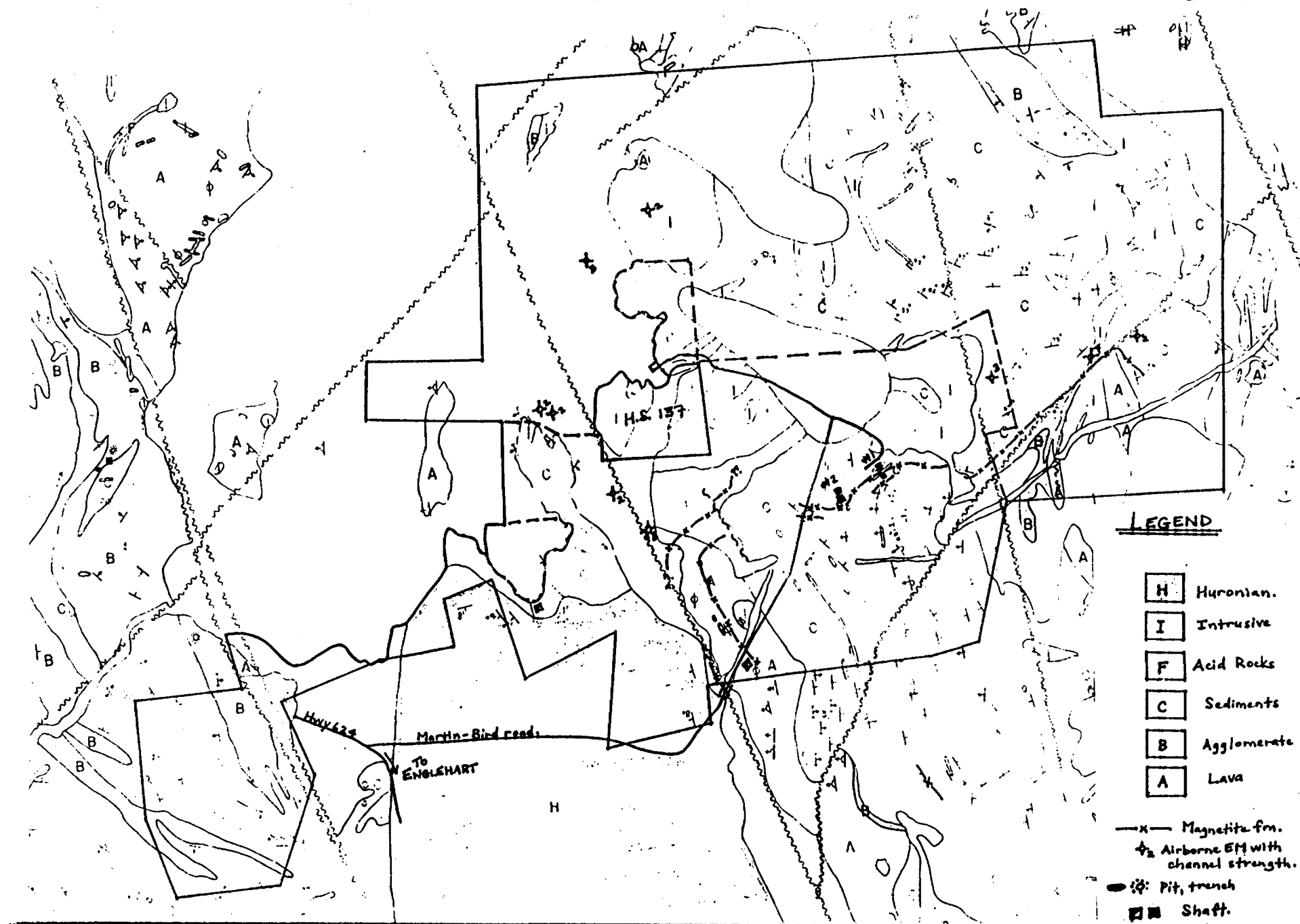
● SURFACE PROJECTION OF ANOMALOUS ZONE

DEFINITE ———  
PROBABLE ······  
POSSIBLE - - - - -

▼ NARROW SOURCE  
▽

NUMBER AT END OF ANOMALIES INDICATES SPREAD USED.





D. Economic Geology

Quartz veining is prominently developed in all rock types on the property and generally trends N-S to NE/SW. Vein fillings are usually of whitish bull quartz. Numerous observed examples of folded quartz stringers and veins are suggestive of at least two periods of vein formation. Minor sulphides of iron, copper, and zinc can, at times, be seen in the veins.

In several localities on the claim group evidence of old trenching was found. Usually these trenches were put down on heavily quartz veined or on sulphide-bearing rocks. No significant values were returned upon resampling of these trenches.

The most significant appearing target at present would have to be the base metal potential of the two graphitic/carbonaceous units as traced out by IP Anomalies I and IIa.

GRAB SAMPLING

During the course of the geological mapping and sampling program, a series of rock samples were taken for analysis. In total, 123 samples were selected and analyzed for gold and other elements as deemed warranted.

This sample suite was selected to test background unmineralized rock types and anomalous, interesting looking rocks mineralized with pyrite, showing marked alteration or a degree of quartz veining. Any anomalous looking float boulders were also sampled. Gold values were reported at the parts per billion level and base metals in parts per million.

Sample locations and analyses are shown on plan Kthu 3, and are also described in Appendix 1a and 3a.

Of the total 123 grabs taken, 97 returned nil gold while only 26 contained gold values which ranged from 3 to 48 ppb's. The high value of 48 ppb's was returned from sample 8720 located on the northern portion of Line 8 West.

Generally, the areas of low anomalous grab values also showed up anomalous on the basis of an earlier humus sampling program.

A clustering of six anomalous grabs on the eastern side of claim L 979429 appears to coincide with two humus geochem highs trending through this area.

Grab sample number 2651 ran 14 ppbs and appears to coincide with a 45 ppb humus geochem high.

Grab sample number 8768 ran 21 ppbs Au and appears to lie flanking a humus geochem gold high of 45 ppbs.

In the southwestern corner of claim L 955116, a clustering of low gold grabs (twelve in all) appear to flank magnetic highs, although there is no high humus geochem.

Only one sample was analyzed for base metals and returned only background levels.

Perhaps more intensive prospecting in these areas may be warranted.

#### DRILL CORE SAMPLING

At the commencement of the geological mapping program, nine diamond drill holes (4,049 feet) that had been drilled in 1980 and 1983 were reviewed to familiarize ourselves with the various rock types likely to be encountered on the claim group. From this review, 69 core samples were selected from 3 holes (LL-83-6, LL-83-8, and TS-80-Ex2) to test for gold and base metal values. These particular sections of the holes were deemed as insufficiently sampled, especially in terms of the base metals.

The results of the sampling are given in Appendices 2 and 3b.

The hole locations are indicated on plan Kthu-4.

Gold values are stated in parts per billion and base metal values in parts per million.

Only very low values in gold were returned. The highest value from sample 31955 ran 38 and 27 ppb's Au.

Copper values showed essentially background levels. Silver showed some enriched samples (2905, 31925) corresponding to lead-zinc highs, although generally it was fairly low level.

In terms of zinc, eleven samples showed values greater than 0.1% Zn with a high value of 0.76% Zn over 3.5 feet in hole TS-80-Ex2, and a 0.46% Zn over 5 feet in hole LL-83-8.

Lead value highs generally corresponded closely to those of zinc, in all eleven samples showed values greater than 0.1% Pb. The high Pb value was 0.37% over 4.4 feet in hole LL-83-8.

Sphalerite and galena were observed in a lot of the core that was sampled.

Graphitic-rich interbeds lying close to the sediment/volcanic interface would appear to be the source of many of the anomalous base metal values.

An intensely altered intrusive quartz monzonite (?) in hole LL-83-8 (133.6-148.3 feet) carries most of the higher lead values obtained.

These base metal anomalous zones should be re-evaluated in terms of volcanogenic massive sulphide models. (ie. what about the weak airborne on L6W/6S, and does a major fold nose exist further to the east under Larder Lake?)

### RECOMMENDATIONS

1. Magnetic and VLF-EM surveys could be contemplated at a different orientation, especially in areas where strike is running parallel to the lines (ie: on claim L 979429).
2. Max-min could be contemplated from L0 to L16W south of the baseline to try to pin down the airborne conductor on L6W/6S.
3. More detailed mapping should be done using this map as a base. It would be especially important to try to use marker units to trace out the structural picture.
4. Overburden trenching or outcrop stripping is recommended at the following locales:
  - i) L8W/24+00N - area of anomalous gold grab and humus sampling
  - ii) L0/8S south - Quartz veins and trenching
  - iii) SW ?????? - area of anomalous grabs
  - iv) L4W/15N north - IP and arsenic humus anomaly
5. The following diamond drilling is recommended:
  - i) L36W/5S - mag high; humus geochem (on patents)
  - ii) L0/4S, L6W/4S - under hole LL-83-8
  - iii) L26W/4N - (on patents)
  - iv) L6E/2N
6. It is recommended that the OGS be allowed access to do some geological studies on the Thunderwood Property, as they have recently requested.



## CONCLUSIONS

The geology of the property is highly complex with superimposed deformational events and an involved history of faulting. The lithological package on the property consists of ultramafic to basaltic komatiitic flows and flow breccias interlayered with turbiditic sedimentary rocks. Numerous small lamprophyre dykes are commonplace.

Outcrop evidence appears to indicate that an older NNW deformation fabric has been overprinted by a secondary deformation event with a fabric axis trending roughly NE. This second deformation produced the strong 055° schistosity, so much in evidence on the property, which was later filled by the lamprophyre intrusives and the Martin-Bird type quartz stringer and lode zones.

Mapping can often be quite difficult and time consuming as manual stripping and poor outcrop frequency often lead to misidentifying the NNW or 055° foliations as bedding. The transposition of bedding by axial planar cleavage can also be deceiving when dealing with spotty exposures. Mechanical stripping in a few key areas would be useful in this sort of terrain. Being able to trace out a few more marker units would also help resolve the structural picture. It is obvious that some tight fold noses, such as seen on the L2W/Baseline bulldozer clearing, have been missed during mapping and are crucial keys to the puzzle.

Two zones of graphitic-rich sediments (indicated by IP anomalous zone I and II), although not well exposed in outcrop, are noted in drill core and occur at the interface between sediments and volcanic rocks (mainly ultramafics). It has not been established whether the [north (II) and south (I)] anomalous IP zones could represent a folded or thrust repetition although at least one fold nose was noted nearby. These graphitic zones contain basemetal mineralization and should be evaluated on the basis of a volcanogenic massive sulphide model.

The types of gold targets that could be encountered in this terrain are as follows:

1. Martin-Bird type - Magnetite iron formation hosted quartz vein lodes
2. Kerr-Addison type - Pyritic/Albitite Flow ores
3. Kerr-Addison type - Green Carbonate/syenite dyke ores
4. Langmuir/Redstone type - Nickel/Precious metal sulphide ores

Work to date has failed to reveal any obvious areas of interest in terms of gold mineralization.

Although one of the prime objectives of this mapping program was to explore for the eastern extension of the Martin-Bird gold zone, this was not especially fruitful as it appears the magnetite iron formation has been fault offset. Originally, it was felt that the iron formation of the Martin-Bird zone experienced a facies change into IP anomalous zone II, however, more current thinking is leaning towards the idea of a fault offset to the zone (NNW trending fault). It is felt that a possible extension to the ironstone exists on the patents at L36W where a discrete magnetic high underlies the best gold humus anomaly on the property. The rocks seen on the NW claim appear to show the most similarities to the rocks in the Martin-Bird zone. A breccia zone identified just east of L8W shows many similarities to one seen close to the Number 1 shaft at the Martin-Bird zone.

Work is recommended to follow up these two areas of interest.

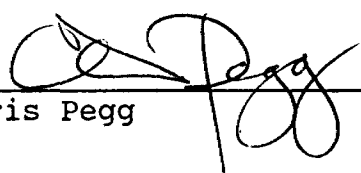
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CERTIFICATE OF QUALIFICATION

I, Chris Pegg of P.O. Box 59, 10 Beaver Drive, Chaput Hughes, Ontario, P0K 1A0, do hereby certify that:

1. I am a graduate of Queen's University, Kingston, Ontario and hold an Honours Bachelor of Science degree in geological sciences (1977).
2. I am a geologist employed by LAC Minerals Ltd. and have practised my profession continuously since graduation.
3. I personally supervised the fieldwork described herein.

  
Chris Pegg

SAMPLE NUMBER SERIES

A. Grab

2601 to 2659	59
8701 to 8749	49
8760 to 8774	<u>15</u>
	123 samples

B. Core

2901 to 2920	20
8750 to 8759	10
31759 to 31760	2
31919 to 31955	<u>37</u>
	69 samples

C. Whole Rock

8401 to 8440	40 samples
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**TABLES OF GRAB SAMPLE  
LOCATIONS AND DESCRIPTIONS**

SAMPLE NO.	SAMPLE LOCATION	DESCRIPTION
2601	L4W / 135N on line	Massive bedded Sandstone
2602	L4W / 150N 20 to 30 feet W of line	Composite of qtz stringers over 20 ft across schistosity
2603	L4W / 210N 20 feet W of line	Quartz stockwork & altered wallrock sandstone
2604	L4W / 330N 20 feet W of line	Syenite 1% pyrite
2605	L4W / 375N cliff outcrop on line	Composite of flat east dipping qtz-chlorite-hematite veinlets
2606	L4W / 925N 20 feet E of line	Quartz-chlorite veinlets & altered wallrock Sandstone 1% pyrite
- 2607	L4W / 1425 on line	Phyllitic schist
2608	L4W / 1435 on line	Feldspar porphyry fragment dominated agglomerate
2609	L4W / 1575N 20 feet W of line	Silicic agglomerate with trace fine pyrite
2610	50 feet E of L4W / 1765N on N c/m line	Silicic gritty agglomerate/conglomerate with trace fine pyrite
2611	L0 / 1435 on line	Very finely laminated mudstone with quartz veining (folded bedding)
2612	L0 / 1020 N 25 feet E of line	Green choncoidal fracturing chert
2613	L0 / 550 N 45 feet E of line	Syenite with 1% very fine pyrite
2614	L0 / 225N on line	Quartz veining in altered feldspar porphyry 1% pyrite; trace Cr mica
2615	L0 / 240N on line	Fine qtz veinlets in altered feldspathic sandstone trace pyrite
2616	L8W / 880N on line	Tuffaceous agglomerate
2617	L8W / 760N on line	Syenite (locally pyritic 2%)
2618	L8W / 540N on line	Contorted quartz stringers in contorted sediments
2619	L8W / 535N on line	Biotitic Lamprophyre
2620	L8W / 225N on line	Phyllitic Siltstone
2621	L8W / 115N on line	Siltstone 1% pyrite
2622	Base Line + 630W Cliff face	Siltstone o/c
2623	Base Line + 550W on line	Sandstone. Trace pyrite
2624	Base Line + 225 NE on line	Schisty sediment
2625	Base Line + 625 NE on line	Large milky quartz veinlet / Altered wallrock with pyrite

SAMPLE NO.	SAMPLE LOCATION	DESCRIPTION
2626	L8E / 130N 35 feet W of line	Quartz veined feldspar porphyry
2627	L8E / 210N 25 feet W of line	Buff massive sandstone
2628	L8E / 255N on line	Heavily Quartz veined buff sandstone unit
2629	L8E / 280N on line	Highly veined and altered sediment approaching feldspar porphyry appears
2630	L8E / 815N 15 feet E of line	Massive Sandstone
2631	L8E / 955 N on line	Well bedded silicic sediment
2632	EW c/m line - 70 feet to E of L8E EOL	Well bedded sandstone
2633	EW c/m line - between L4E & L8E	Syenite in small pit on N Boundary; 2% pyrite
2634	EW c/m line (just off L4E to E)	Syenite outcrop; qtz stringers
2635	L4E / 680N 50 feet E of line	Quartz vein & wallrock in syenite
2636	L4E / 670N 15 feet E of line	Syenite
2637	L4E / 410N 20 feet W of line in Clearing	1% pyrite in Syenite
2638	L4E / 350N 50 feet E of line in Clearing	Salmon pink feldspar porphyry or Sandstone; rusty 3% pyrite
2639	L2W / 030S on line	Quartz stringer & wallrock sediments; cutting banded sediments
2640	10 feet S of pin MB1 in large clearing	Green coarse clastic folded unit; trace pyrite
2641	L4W / 3S 20 feet S of picket in clearing	Quartz stringers in sediments
2642	L4W / 715S 10 feet W of line	Quartz stringers in sediments
2643	L4W / 750S 20 feet E of line	Quartz stringer zone in sediments
2644	L4W / 825S on line	Black carbonaceous mudstone on border of lamp dyke, trace pyrite
2645	L0 / 825S 45 feet W of line	Smoky quartz veinlets & wallrock
2646	L0 / 800S 20 feet W of line	Composite of smoky qtz stringers in sediments
2647	L0 / 825S 40 feet W of line	Carbonaceous shale
2648	L0 / 870S 10 feet W of line	Wallrock & Qtz stringers in sediments; trace pyrite
2649	L0 / 945S on line	Sediments outcrop
2650	L0 / 1210S 15 feet W of line	Diabase outcrop -Trace cpy, py and magnetite?
2651	L0/ 15S on line	Black smoky quartz and sediment wallrock



SAMPLE NO.	SAMPLE LOCATION	DESCRIPTION
2652	L4E / 1230S on line	Feldspathic wacke in contact with siltstone (minor qtz veinlets)
2653	L4E / 1170S 10 feet W of line	Shale inclusion rich sandstone
2654	L0 / 325S 20 feet E of line	Siltstone
2655	L4E / 500S 20 feet E of line	Cherty Graphitic tuff; 2% pyrite
2656	L4E / 100S 30 feet E of line	Buff cherty Sandstone; Trace pyrite
2657	L4E / 120S 10 feet E of line	Quartz-chlorite vein in siltstone
2658	L8E / 120S 20 feet W of line	Quartz fly rock from old trench
2659	Base Line + 720E 20 feet s of Baseline	Quartz stockwork and 2% coarse pyrite in syenite

SAMPLE NO.	SAMPLE LOCATION	DESCRIPTION
8701	L8W, 15+50S 200 feet W of line	Feldspar -rich Pebble conglomerate
8702	L8W, 12+90S 50 feet W of line	Talcose Mafic to Ultramafic Agglomerate
8703	L8W, 11+90S 100 feet W of line	U/M flow
8704	L8W, 12+30S 170 feet W of line	U/M flow
8705	L8W, 10+10S; 20 feet W of line	Mafic flow, flow Breccia
8706	L8W, 8+50S 50 feet W of line	Mafic flow, flow Breccia
8707	L8W, 7+40S, on line	Mafic flow, flow Breccia
8708	L8W, 7+20S 50 feet E of line	Syenite Intrusive
8709	L8W, 5+20S 50 feet W of line	Quartz pods in Sandstone
8710	L8W, 4+00S 30 feet E of line	Sandstone
8711	L8W, 3+80S on line	Sandstone Interlaminated with Siltstone
8712	L8W, 1+70S on line	Ultramafic Sediment
8713	L8W, 28+70N 20 feet E of line	Sandstone containing Specular Hematite. Trace Pyrite
8714	L8W, 27+90N on line	Sandstone containing trace pyrite
8715	L8W, 27+20N on line	Sandstone containing trace pyrite
8716	L8W, 25+90N on line	Sandstone
8717	L8W, 26+10N 140 feet E of line	Specular Hematite and Sodic feldspar vein
8718	L8W, 25+30N 180 feet E of line	Quartz-feldspar Vein
8719	L8W, 24+80N 60 feet W of line	Sandstone containg ptymatically folded quartz veins
8720	L8W, 24+10N on line	Sandstone
8721	L8W, 22+80N 20 feet E of line	Sandstone
8722	L8W, 21+70N on line	Sandstone containing Specular Hematite
8723	L8W, 20+65N on line	Diabase Intrusive
8724	L8W, 20+40N 10 feet W of line	Sandstone adjacent to Diabase (sampled as 8723)
8725	L12W, 8+90N on line	Sandstone

SAMPLE NO.	SAMPLE LOCATION	DESCRIPTION
8726	L12W, 8+30N 25 feet W of line	Pebbly Conglomerate --consisting of Mudstone
8727	L12W, 7+40N 150 feet E of line	Ladder-type quartz vein in Sandstone
8728	L12W, 5+70N 40 feet W of line	Barren Siltstone/Arkose
8729	L12W, 6+00N 130 feet W of line	quartz and Limonite in Siltstone
8730	L12W, 5+90N 160 feet W of line	Quartz Pods in Siltstone; oriented 320 degrees az.
8731	L16W, 7+25N 40 feet W of line	Quartz pods in Pebbly Sandstone
8732	L16W, 6+70N 10 feet E of line	Quartz vein oriented at 055 az
8733	L24W, 16+00S 150 feet E of line	Mafic Conglomerate
8734	L24W, 15+55S 10 feet E of line	Pebble conglomerate containing mafic clasts
8735	L24W, 15+30S 40 feet W of line	Syenite Intrusive containg specular Hematite
8736	L24W, 14+40S 260 feet E of line	Mafic Flow containing Calcite
8737	L24W, 13+60S 40 feet W of line	Mafic Flow breccia / Mafic Agglomerate
8738	L24W, 10+90S 30 feet E of line	Mafic Flow
8739	L24W, 11+00S 40 feet E of line	Mafic tuff containing calcite
8740	L24W, 9+00S 10 feet W of line	Mafic sediment / Grey Wacke
8741	L24W, 6+80S 220 feet E of line	Greywacke
8742	L24W. 5+20S 160 feet W of line	Mafic Sediment
8743	L24W, 4+25S 45 feet W of line	Huge Quartz Pod containing graphitic Fracture filling
8744	L24W, 3+70S 40 feet W of line	Quartz veinlet in Arkose
8745	L20W, 2+50S on line	Quartz vein in Siltstone
8746	L20W, 3+00S on line	Greywacke and Siltstone with quartz veining
8747	L20W, 12+40S on line	Mafic Conglomerate
8748	L16W, 8+60S 30 feet W of line	Limonitic Green Carbonate boulder
8749	BLO, 16+20W on line	Quartz vein in Greywacke

SAMPLE NO.	SAMPLE LOCATION	DESCRIPTION
8760	L12W, 1+40N 70 feet W of line	Mafic Flow Breccia
8761	L12W, 1+25N 100 feet E of line	Silicified Mafic Volcanics or Andesite adjacent to 8762
8762	L12W, 1+20N 90 feet E of line	Quartz vein hosted by 8761
8763	L12W, 15+40S on line	Flow top breccia
8764	L12W, 13+65S 20 feet W of line	Mafic fragmental; recrystallized
8765	L16W, 14+20S 70 feet E of line	Breccia containing green carbonate, quartz
8766	L12W, 8+10S 30 feet E of line	Flow top breccia
8767	L12W, 5+00S on line	Grits / Siltstone containing pyrite
8768	L12W, 2+70S 150 feet W of line	Ptygmatically folded quartz vein in Sediments
8769	L28W, 12+00S 70 feet W of line	Feldspar Porphyry
8770	L28W, 11+10S 40 feet W of line	Syenite Porphyry
8771	L28W, 12+10S on line	Greywacke
8772	L24W, 16+00S 130 feet E of line	Mafic Flow
8773	L24W, 9+10S 25 feet W of line	Mafic Tuff
8774	L16W, 9+00S 100 feet E of line	Boulder of Green Carbonate; Ankerite with Quartz Veining

DIAMOND DRILL HOLE LOGS WITH ASSAYS

DRILL HOLE NUMBER

TS - 80 - EX 2

COMPANY THUNDERWOOD EXPLORATION LIMITED

PROPERTY MARTIN BIRD

SHEET NUMBER 1

**DIAMOND DRILL RECORD**

HOLE NUMBER T.S. 80-Ex.2

TOTAL DEPTH ..... CO-ORDINATES COLLAR ..... DIP TESTS (TRUE DIPS) ..... PLOTTED ON PLANS .....  
 WORKING PLACE ..... LAT. N- ..... DEP. E- ..... AT ..... 0 ..... GEOLOGICAL 1"=20'  
 SECTION ..... TO COLLAR ..... AT ..... 0 .....  
 LOGGED BY Gordon Brethour BEARING South AT ..... 0 .....  
 DATE FINISHED ..... ANGLE -45° ..... DRILL 1"=20'

CORE FOOTAGE		DESCRIPTION	I SAMPLE NO.	FROM	TO	LENGTH	ASSAY QTY GOLD PER TON			II SAMPLE NO.	REM.
FROM	TO						I	II	IVE		
0.0	10.5	Casing.									
10.5	11.3	Greywacke or Tuff; grey-green, bedding 50° C.A., barren - minor py. banded near lower contact.	5265	10.5	11.3			.002			
11.3	14.5	Syenite? gray, slight sheared appearance, silicified, numerous cherty ribbons and fragments, minor py.	66	11.3	14.5			nil			
14.5	17.7	Agglomerate? gray. fragments, elongated, bedding 45° C.A., 2 1/2" irregular section of chert, qtz. & calcite.	67	14.5	17.7			.002 <sup>4</sup>			
17.7	36.7	Greywacke? grey-green, numerous injections of qtz. bedding contorted, minor py.	68	17.7	20.3			nil			
		20.3-24.0, minor -2X py.	71	25.5	28.2			nil			
		24.0-25.5, silicified greyish, numerous injections of qtz. 3X-5X, fine-med. py., speckled	72	28.2	28.4			nil			
		28.2-28.4 ankerite	73	28.4	28.7			.002			
		28.7-29.3 several injections of qtz. with few large blebs of chalcopyrite @ 29.0, @ 36.2, small bleb of chalcopyrite	74	28.7	29.3	0.6		.002			2.57
			75	29.3	30.3			nil			
			76	35.7	36.7			nil			
36.7	40.2	Tuff; abundant chertz banding, several small injections of qtz., few erratic blebs of chalcopyrite, minor py.	77	36.7	40.2						0.04
40.2	43.1	Greywacke? dark greyish, silicified, several injections of ankerite, qtz. & chert. 2X - 5X fine-med. py.	78	40.2	43.1			.002			

COMPANY \_\_\_\_\_

PROPERTY \_\_\_\_\_

SHEET NUMBER \_\_\_\_\_

**DIAMOND DRILL RECORD**

HOLE NUMBER T.S. 80-Ex. 2

TOTAL DEPTH \_\_\_\_\_ CO-ORDINATES COLLAR \_\_\_\_\_ DIP TESTS (TRUE DIPS) \_\_\_\_\_ PLOTTED ON PLANS \_\_\_\_\_  
 WORKING PLACE \_\_\_\_\_ LAT. N- \_\_\_\_\_ DEP. E- \_\_\_\_\_ AT \_\_\_\_\_ GEOLOGICAL 1"=20' \_\_\_\_\_  
 SECTION \_\_\_\_\_ TO COLLAR \_\_\_\_\_ AT \_\_\_\_\_  
 LOGGED BY \_\_\_\_\_ BEARING \_\_\_\_\_ AT \_\_\_\_\_  
 DATE FINISHED \_\_\_\_\_ ANGLE \_\_\_\_\_ DRILL 1"=20' \_\_\_\_\_

CORE FOOTAGE		DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAY OZ. Au (ppm)	GOLD PER TON Ag (ppm)	II SAMPLE NO.	REM.
FROM	TO									
43.1	50.2	Chlorite Zone; dark green-blackish, moderately-highly schistose minor - 3% py. in places, broken and blocky.	279 290 280	43.1 45.5'	44.1 49.0'	4.5'	Nil	0.1	6	175
50.2	55.5	Syenite; dark greyish, somewhat basic, minor -3% fine-med. py. in places	81	50.2	55.5		Nil			
55.5	63.9	Chlorite Zone; as above (43.1-50.2) lineation 45° C.A.	82	55.5	63.9		Nil	0.002		
63.9	72.0	Syenite? as above (50.2 - 55.5) 67.6 - 68.7, numerous injection of qtz., 5% med.-coarse py.	83 84 285	63.9 67.6 68.7	72.0 67.6 72.0		Nil			
72.0	79.3	Chlorite Zone; as above (43.1-50.2) lineation 45° C.A.	86 290 87	72.0 75 78.3	73.0 78.5	3.5'	3	0.1	1	121
79.3	83.7	Syenite; as above (50.2 - 55.5) 5% py.	88 89	79.3 82.2	82.2 83.7		Nil			
83.7	85.3	Chlorite Zone; as above (43.1 - 50.2)	90	83.7	85.3		Nil	0.002		
85.3	92.4	Syenite? as above (50.2 - 55.5)	91 92 93	85.3 86.7 91.0	86.7 91.0 92.4		Nil	0.002 0.005		
92.4	94.2	Chlorite Zone; as above (43.1 - 50.2) lineation 45° C.A.	94	92.4	94.2		Nil			
94.2	96.7	Syenite? as above (50.2 - 55.5)	95	94.2	96.7		Nil			

Ph(ppm) Zn(ppm)



COMPANY \_\_\_\_\_

PROPERTY \_\_\_\_\_

SHEET NUMBER 3

**DIAMOND DRILL RECORD**

HOLE NUMBER T.S. 80-Ex.2

TOTAL DEPTH \_\_\_\_\_ CO-ORDINATES COLLAR \_\_\_\_\_ DIP TESTS (TRUE DIPS) \_\_\_\_\_ PLOTTED ON PLANS \_\_\_\_\_  
 WORKING PLACE \_\_\_\_\_ LAT. N \_\_\_\_\_ DEP. E \_\_\_\_\_ AT \_\_\_\_\_ GEOLOGICAL 1"=20' \_\_\_\_\_  
 SECTION \_\_\_\_\_ TO COLLAR \_\_\_\_\_ AT \_\_\_\_\_ \_\_\_\_\_  
 LOGGED BY \_\_\_\_\_ BEARING \_\_\_\_\_ AT \_\_\_\_\_ \_\_\_\_\_  
 DATE FINISHED \_\_\_\_\_ ANGLE \_\_\_\_\_ DRILL 1"=20' \_\_\_\_\_

CORE FOOTAGE		DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAY OR Au (ppm)	GOLD PER TON Au (ppm)	Pb (ppm)	Zn (ppm)	SAMPLE NO.	REM.
FROM	TO											
96.7	97.7	Chlorite Zone; as above (43.1-50.2)	5296	96.7	97.7		nil					
97.7	99.8	Syenite? as above (43.1-50.2) with 6" inclusion of chloritic schist @ 98.7	97	97.7	99.8		nil					
99.8	101.3	Chlorite Zone as above (43.1- 50.2) 3% med.-coarse py.	98	99.8	101.3		nil					
101.3	102.7	Syenite? as above (50.2 - 55.5)	99	101.3	102.7		nil					
102.7	114.6	Chlorite Zone; as above (43.1 - 50.2), contorted, linsation irregular.	5300 5301	102.7 113.6	103.7 114.6		nil nil					
114.6	115.1	Syenite? as above (50.2 - 55.5)	02	114.6	115.1		.002					
115.1	127.0	Chlorite Zone; as above (43.1 - 50.2), linsation 45° C.A.	03 2903	115.1 123.5	116.1 125	1.5'	nil	0.1	3	68		
127.0	133.1	Tuff; chert banding, bedding 45° C.A.		125.0	127.0		Last Core					
133.1	143.4	Chlorite Zone; as above (43.1 - 50.2)	04	142.4	143.4		nil					
143.4	144.6	Syenite: as above (50.2 - 55.5) 5% py., traces of chalcopyrite.	05	143.4	144.6		nil					

COMPANY \_\_\_\_\_

PROPERTY \_\_\_\_\_

SHEET NUMBER \_\_\_\_\_

**DIAMOND DRILL RECORD**

HOLE NUMBER T.S. 80-Ex.2

TOTAL DEPTH ..... CO-ORDINATES COLLAR ..... DIP TESTS (TRUE DIPS) .....  
 WORKING PLACE ..... LAT. N- ..... DEP. E- ..... AT .....  
 SECTION ..... TO COLLAR ..... AT .....  
 LOGGED BY ..... BEARING ..... AT .....  
 DATE FINISHED ..... ANGLE .....  
 DRILL 1"=20'

PLOTTED ON PLANS .....  
 GEOLOGICAL 1"=20' .....

CORE FOOTAGE		DESCRIPTION	I SAMPLE NO.	FROM	TO	LENGTH	ASSAY OZ. Au (ppb)	GOLD PER TON AVE Ag (ppm)	II SAMPLE NO.	REM.
FROM	TO									
144.6	170.0	Chlorite Zone; as above (43.1 - 50.2)	5306	144.6	145.9		nil			
		@ 145.9, 5" inclusion of syenite? with 1" patch of py.	07	145.9	146.3		nil			
		146.3 - 147.7, light grey-green, carbonatized, abundance of dark elongated phenocrysts, barren.	08	146.3	147.7		nil			
		147.7 - 170.0, erratic small inclusions of syenite?								
170.0	173.4	Greywacke? grayish, few small injections of qtz. & calcite, barren								
		172.6 - 173.4, grey-light grey, abundant medium sized feldspar phenocrysts.								
173.4	179.2	Chlorite Zone; as above (43.1 - 50.2)								
179.2	180.2	Greywacke; grey-green-dark grey-green, speckled, barren, minor py.								
180.2	181.0	Lamprophyre Dyke;								
181.0	182.7	Greywacke? as above (179.2 - 180.2)	09	181.0	182.7		1 nil			
182.7	183.8	Basic Tuff; bedding 50° C.A., 2X - 3X py. traces of chalcopyrite.	10	182.7	183.8		.002			
185.8	187.3	Chlorite Zone; abundant carbonatization, barren-traces of py.	11	186.8	184.8		nil			
			2904	186.5	189.5	3.0'	Nil	0.4	676	806
			2905	189.5	193	3.5'	Nil	0.9	2590	756C
			2906	193	197	4.0'	10	0.2	561	156C

*DE 0002 EN*

COMPANY \_\_\_\_\_

PROPERTY \_\_\_\_\_

SHEET NUMBER 5**DIAMOND DRILL RECORD**HOLE NUMBER T.S. 80-Ex. 2TOTAL DEPTH .....  
WORKING PLACE .....  
SECTION .....  
LOGGED BY.....  
DATE FINISHED.....CO-ORDINATES COLLAR  
LAT. N- ..... DEP. E- .....  
TO COLLAR .....  
BEARING .....  
ANGLE .....DIP TESTS (TRUE DIPS):  
AT ..... °  
AT ..... °  
AT ..... °PLOTTED ON PLANS  
GEOLOGICAL 1"=20'  
.....  
DRILL 1"=20' .....

CORE FOOTAGE		DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAY OZ.		GOLD PER TON		II SAMPLE NO.	REMARKS
FROM	TO						I	II	AVE			
187.3	194.0	Graywacke? dark greyish, several small injections of qtz. & calcite, slightly speckled, barren to traces of py.										
194.0	198.2	Chlorite Zone; as above (43.1 - 50.2)	5312	197.2	198.2		0.002					CP. 12248
198.2	200.5	Graphite Zone; several small injections of qtz., 5X-7X py.	13	198.2	200.5		Ni					
200.5	210.3	Syenite? grey-grey-brown, med.-coarse grained appearance; few qtz. & calcite-filled fractures, minor py. 207.0-210.3, fine grained, basic traces of py.	14 15 16	200.5 205.5 207.0	205.5 207.0 210.3							
210.3	219.0	Acid Tuff; banded 45° C.A., barren-traces of py.	17 18	210.3 215.0	215.0 219.0							
219.0	224.9	Rhyolite? grey-buff, massive abundance of qtz. & cal. filled, hairline fractures, brecciated sections containing graphite, 3X py.	19 20	219.0 222.0	222.0 224.9							
224.9	226.0	Cherty-graphitic, tuff; banding 70° - 75° C.A.	5321	224.9	226.0							
226.0	229.1	Syenite: buff-greyish, altered, silicified, 5X-7X fine-med. py.	22	226.0	229.1							
229.1	230.6	Cherty graphitic tuff; as above (224.9 - 226.0)	23	229.1	230.6		Ni					



COMPANY \_\_\_\_\_

PROPERTY \_\_\_\_\_

SHEET NUMBER \_\_\_\_\_

**DIAMOND DRILL RECORD**

T.S. 80-Ex.2  
HOLE NUMBER \_\_\_\_\_

TOTAL DEPTH \_\_\_\_\_ CO-ORDINATES COLLAR \_\_\_\_\_ DIP TESTS (TRUE DIPS) \_\_\_\_\_ PLOTTED ON PLANS \_\_\_\_\_  
 WORKING PLACE \_\_\_\_\_ LAT. N- \_\_\_\_\_ DEP. E- \_\_\_\_\_ AT \_\_\_\_\_ ° GEOLOGICAL 1"=20' \_\_\_\_\_  
 SECTION \_\_\_\_\_ TO COLLAR \_\_\_\_\_ AT \_\_\_\_\_ ° \_\_\_\_\_  
 LOGGED BY \_\_\_\_\_ BEARING \_\_\_\_\_ AT \_\_\_\_\_ ° \_\_\_\_\_  
 DATE FINISHED \_\_\_\_\_ ANGLE \_\_\_\_\_ DRILL 1"=20' \_\_\_\_\_

CORE FOOTAGE FROM	TO	DESCRIPTION	I SAMPLE NO.	FROM	TO	LENGTH	ASSAY G24	GOLD PER TON	II SAMPLE NO.	REM
							Au (ppm)	Ag (ppm)		
265.5	277.0	Syenite? dark grey, basic, few small qtz. & cal. filled fractures, barren, minor py. 275.4 - 277.0, 3X - 5X py.	5324	274.4	275.4		Nil			
			25	275.4	277.0					
277.0	278.7	Lamprophyre Dyke? altered, carbonatized, abundance of dark lathlike phenocrysts, barren	26	277.0	278.2					
278.2	281.5	Graywacke? greyish, slightly tuffaceous, bedding @ 50°, barren, minor py.	2913	278	282	4.0	3	0.1	24	54
			2914	290.5	295.5	5'	Nil	0.1	182	162
			2915	295.5	300.5	5'	Nil	0.1	30	113
281.5	284.0	Syenite? grey-grey-brown, altered, brecciated backed, traces of py.								
284.0	287.0	Basic Tuff; bedding @ 75° C.A.								
287.0	300.8	Graywacke; greyish, tuffaceous appearance in places, barren-minor py. 296.2 - 300.8, dark green, chloritic, slight tuffaceous appearance, barren.								
300.8	303.5	Syenite? dark greyish, basic, traces of py. as anpva (265.5 - 275.4)	27	302.5	303.5					
303.5	308.8	Aplite Dyke? creamy grey - faintly pinkish, minor - 2X py. in places.	28	303.5	305.7					
			29	305.7	308.8					

*Polym Zhp*

COMPANY \_\_\_\_\_

PROPERTY \_\_\_\_\_

SHEET NUMBER 6**DIAMOND DRILL RECORD**HOLE NUMBER T.S. 80-Ex.2

TOTAL DEPTH ..... CO-ORDINATES COLLAR ..... DIP TESTS (TRUE DIPS) ..... PLOTTED ON PLANS .....  
 WORKING PLACE ..... LAT. N- ..... DEP. E- ..... AT ..... GEOLOGICAL 1"=20' .....  
 SECTION ..... TO COLLAR ..... AT .....  
 LOGGED BY ..... BEARING ..... AT .....  
 DATE FINISHED ..... ANGLE ..... DRILL 1"=20'

CORE FOOTAGE		DESCRIPTION	I SAMPLE NO.	FROM	TO	LENGTH	ASSAY OZs GOLD PER TON		II SAMPLE NO.	REM.
FROM	TO						AU (ppb)	AVE. Ag (ppm)		
308.8	322.0	Greywacke? grey-green, bedding faint, 65° C.A., 2X-3X py. 313.5 - 322.0, dark green, highly chloritic, andesitic appearance, barren.	5330	308.8	313.5					
			31	313.5	314.5					
322.0	324.0	Graphitic Tuff; minor py.								
324.0	329.2	Greywacke? as above (313.5 - 322.0)								
329.7	331.8	Lamprophyre Dyke? light creamy green, altered, carbonatised, barren	32	330.8	331.8					
331.8	335.8	Greywacke? abundant reddish brown alteration, minor -2X py.	33	331.8	335.8					
335.8	336.3	Basic intrusive? contact sharp.	34	335.8	336.8					
336.3	338.8	Lamprophyre Dyke;	2916	349.5	354.5	5'	Ni	02	65	181
338.8	340.1	Basic Tuff;								
340.1	352.1	Lamprophyre Dyke? as above (322.2 - 331.8)								
352.1	354.8	Basic Tuff; 1 1/2" section with 20% irregular qtz. @ upper contact,								

Fe (ppm) Zn (ppm)



DRILL HOLE NUMBER

LL - 83 - 6











**LONG LAC MINERAL EXPLORATION 1988**

Project \_\_\_\_\_  
 Canton \_\_\_\_\_  
 Twp \_\_\_\_\_  
 Lot \_\_\_\_\_  
 Rang(e) \_\_\_\_\_  
 Type de Forage \_\_\_\_\_  
 Drill Type \_\_\_\_\_  
 Contracteur \_\_\_\_\_  
 Contractor \_\_\_\_\_

**JOURNAL des SONDAGES  
 DIAMOND DRILL RECORD**

SECTION \_\_\_\_\_

Ligne / Line \_\_\_\_\_ St. \_\_\_\_\_  
 Lat. \_\_\_\_\_ Long. \_\_\_\_\_ Profondeur / Depth \_\_\_\_\_  
 Elevation \_\_\_\_\_ Plongée / Dip \_\_\_\_\_  
 Azimut(h) \_\_\_\_\_ Azimut(h) \_\_\_\_\_  
 Commence' le / Started \_\_\_\_\_ Termine' le / Finished \_\_\_\_\_


No LL-83-6  
 Feuille Sheet 4 de of 31  
 De / From \_\_\_\_\_ à / to \_\_\_\_\_  
 Profondeur Totale Total Depth \_\_\_\_\_  
 Par / By: \_\_\_\_\_  
 Date \_\_\_\_\_

De From	à To	GÉOLOGIE GEOLOGY	1.5 m.	5.0'	ÉCHANTILLON / SAMPLES				ANALYSES					
					N <sup>o</sup>	De/Fr.	à/To	Long.	Au	Zn				
33.6	50.3	Upper contact with talc-chlorite schist 25° to core axis at 33.6'/												
50.3	53.6	Pale-green-talc-chlorite -schist Same as above Chlorites line up at 25° to core axis. No pyrite.												
53.6	56.0	LAMP Dyke? Dark gray in color. No evidence of bedding. Very silicious. Minor amounts of pyrite - 1%. Mineral composition -bolite, calcite, quartz. Very massive.			2919	58.5	62.3	3.8'	Nil					
					2920	54.5	58.5	4.0'	Nil					
56.0	58.0	Pale-green-talc-chlorite-schist Same as above.												
58.0	84.9	Pale-gray-graywacke. From 58.0-59.6 sequence of finely laminated graywacke. Finer graywacke.			31656	62.3	68.0	5.7	Nil					
					31657	68.0	73.0	5.0	Nil					
					31658	73.0	78.0	5.0	Nil					





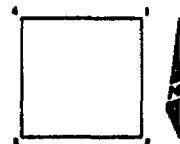
LONG LAC MINERAL EXPLORATION

Project \_\_\_\_\_  
 Canton \_\_\_\_\_  
 Twp \_\_\_\_\_  
 Lot \_\_\_\_\_  
 Range \_\_\_\_\_  
 Type de Forage \_\_\_\_\_  
 Drill Type \_\_\_\_\_  
 Contracteur \_\_\_\_\_  
 Contractor \_\_\_\_\_

JOURNAL des SONDAGES  
 DIAMOND DRILL RECORD

SECTION \_\_\_\_\_

Ligne / Line \_\_\_\_\_ St. \_\_\_\_\_  
 Lat. \_\_\_\_\_ Long. \_\_\_\_\_ Profondeur / Depth \_\_\_\_\_  
 Elevation \_\_\_\_\_ Plongée / Dip \_\_\_\_\_  
 Azimut(h) \_\_\_\_\_ Azimut(h) \_\_\_\_\_  
 Commence' le / Started \_\_\_\_\_ Termine' le / Finished \_\_\_\_\_



No LL-83-6  
 Feuille 7 de 31  
 Sheet of 31  
 De / From \_\_\_\_\_ à / to \_\_\_\_\_  
 Profondeur Totale \_\_\_\_\_  
 Total Depth \_\_\_\_\_  
 Par / By: \_\_\_\_\_  
 Date \_\_\_\_\_

De From	à To	GÉOLOGIE GEOLOGY	1.5m.	5.0'	ÉCHANTILLON / SAMPLES				ANALYSES					
					Nº	De/Fr.	à / To	Long.	Au	Zn				
58.9	84.9	There are some other 1-3mm thick quartz-calcite veinlets scattered throughout the complete section. Frequency of veins is 1 per 2 feet.												
84.9	89.2	Pale-dark-gray graywacke. From 84.9-87.5, the bedding in the graywacke is finely laminated in the order of 1-2mm thick. The color of the bds. are light gray to black in some places, an example would be at 87.5 where there are thinly laminated black-graphitic beds. At 85.8, the bedding is 25° to core axis. At 85.6 the sch. is 20° to core axis. At 85.5 is a thin talc-chloritic-schist unit. Pyrite is found along slips of the sch. direction and appears as a smear. Pyrite content 1%. 87.5-89.2, light-gray-graywacke. Bedding at 88' was 15° to core axis. At 89.0 the sch. was 55° to core axis. About 1% pyrite. Bd is finely laminated. This section is			31660	84.9	89.2	4.3	Nil					











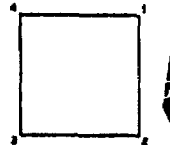
LONG LAC MINERAL EXPLORATION 1155

Projet \_\_\_\_\_  
 Project \_\_\_\_\_  
 Canton \_\_\_\_\_  
 Twp \_\_\_\_\_  
 Lot \_\_\_\_\_  
 Rang(e) \_\_\_\_\_  
 Type de Forage \_\_\_\_\_  
 Drill Type \_\_\_\_\_  
 Contracteur \_\_\_\_\_  
 Contractor \_\_\_\_\_

JOURNAL des SONDAGES  
 DIAMOND DRILL RECORD

SECTION \_\_\_\_\_

Ligne / Line \_\_\_\_\_ St. \_\_\_\_\_  
 Lat. \_\_\_\_\_ Long. \_\_\_\_\_ Profondeur / Depth \_\_\_\_\_  
 Elevation \_\_\_\_\_ Plongée / Dip \_\_\_\_\_  
 Azimut(h) \_\_\_\_\_ Azimut(h) \_\_\_\_\_  
 Commence' le / Started \_\_\_\_\_ Termine' le / Finished \_\_\_\_\_



N<sup>o</sup> LL-83-6

Feuille 11 de 31  
 Sheet 11 of 31  
 De / From \_\_\_\_\_ à / to \_\_\_\_\_  
 Profondeur Totale \_\_\_\_\_  
 Total Depth \_\_\_\_\_  
 Par / By: \_\_\_\_\_  
 Date \_\_\_\_\_

De From	à To	GÉOLOGIE GEOLOGY	1.5 m.	5.0'	ÉCHANTILLON / SAMPLES			ANALYSES							
					N <sup>o</sup>	De / Fr.	à / To	Long.	Au	Zn					
113.4	126.8	Gray-buff-brown-chert similar to the one at 89.2-90.9. This section overall contains 1-2% finely disseminated pyrite. Some chlorite occurs as specks throughout the unit 1mm grains and composes 15% of the unit. Some pyrite occurs in a more coarse form, for example, 115.9 along slicken-side with the pyrite being smeared. At 126.0 are a series of 1mm bands of chlorite 45° tp core axis. At 119.3 good example of chlorite slip with smeared pyrite.			31501	113.4	117.4	4.0	5						
					31502	117.4	122.4	5.0	5						
					31503	122.4	126.8	4.4	5						
126.8	148.2	Black-light-gray-interbedded argillite. From 126.8-128.8 composed of finely laminated argillite. The beds here are composed of black-graphite and siliceous rocks. 70% graphitic bd composed to 30% siliceous beds. The bedding is undeformed from 126.8 to 128.0. From 128.0-128.8 this bedding has undergone some deformation but has			31667	126.8	131.8	5.0	Nil	121					
					31668	131.8	136.8	5.0	Nil						
					31669	136.8	141.8	5.0	Nil						
					31670	141.8	148.2	6.4	Nil						





















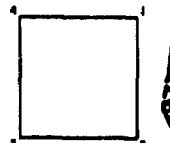
LONG LAC MINERAL EXPLORATION 135

Project \_\_\_\_\_  
 Canton \_\_\_\_\_  
 Twp \_\_\_\_\_  
 Lot \_\_\_\_\_  
 Rang(e) \_\_\_\_\_  
 Type de Forage \_\_\_\_\_  
 Drill Type \_\_\_\_\_  
 Contracteur \_\_\_\_\_  
 Contractor \_\_\_\_\_

JOURNAL des SONDAGES  
 DIAMOND DRILL RECORD

SECTION \_\_\_\_\_

Ligne / Line \_\_\_\_\_ St. \_\_\_\_\_  
 Lat. \_\_\_\_\_ Long. \_\_\_\_\_ Profondeur / Depth \_\_\_\_\_  
 Elevation \_\_\_\_\_ Plongée / Dip \_\_\_\_\_  
 Azimut(h) \_\_\_\_\_ Azimut(h) \_\_\_\_\_  
 Commence' le / Started \_\_\_\_\_ Termine' le / Finished \_\_\_\_\_



No LL-83-6

Feuille 21 de 31  
 Sheet \_\_\_\_\_ of \_\_\_\_\_  
 De / From \_\_\_\_\_ to \_\_\_\_\_  
 Profondeur Totale \_\_\_\_\_  
 Total Depth \_\_\_\_\_  
 Par / By \_\_\_\_\_  
 Date \_\_\_\_\_

De From	à To	GÉOLOGIE GEOLOGY	1.5m.	5.0'	ÉCHANTILLON / SAMPLES				ANALYSES						
					N°	De/Fr.	à/To	Long.	Au	Zn					
214.5	228.4	From 225.7-226.9 - lamp dyke with alt. graywacke to a talc-chlorite-schist unit. Coarse pyrite 3-4%. From 226.9-228.4-graphitic unit (metallic) composed of about 1-2% coarse pyrite blebs.													
228.4	230.1	Light-gray-coarse-grained-tuff (flow?). This unit is very massive, with no evidence of bedding. Some calcite-biotite-quartz-feldspar are some minerals identified. There is 1% pyrite with the pyrite in the form of blebs. Mineral lineament at 35° to core axis.			31683	228.4	230.1	1.7	Nil						
230.1	237.7	Buff brown-light-gray-chert unit. From 230.1-233.5 is light-gray chert with about 1% pyrite. There are some 1cm quartz veins carrying some pyrite. From 233.5-234.9, there is a metallic graphitic unit with coarse pyrite that look like leafs - less than 1% pyrite. Note: There are two fine chert fragments			31684	230.1	235.1	5.0	Nil						
					31685	235.1	237.7	2.6	Nil						



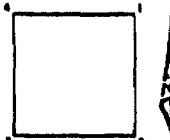
LONG LAC MINERAL EXPLORATION 115'

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Project \_\_\_\_\_  
Canton \_\_\_\_\_  
Twp \_\_\_\_\_  
Lot \_\_\_\_\_  
Rang(e) \_\_\_\_\_  
Type de Forage \_\_\_\_\_  
Drill Type \_\_\_\_\_  
Contracteur \_\_\_\_\_  
Contractor \_\_\_\_\_

SECTION \_\_\_\_\_  
Ligne / Line \_\_\_\_\_ St. \_\_\_\_\_  
Lat. \_\_\_\_\_ Long. \_\_\_\_\_ Profondeur / Depth \_\_\_\_\_  
Elevation \_\_\_\_\_ Plongée / Dip \_\_\_\_\_  
Azimut(h) \_\_\_\_\_ Azimut(h) \_\_\_\_\_  
Commence' le / Started \_\_\_\_\_ Termine' le / Finished \_\_\_\_\_



Feuille 23 de 31  
Sheet 23 of 31  
De / From \_\_\_\_\_ à / to \_\_\_\_\_  
Profondeur Totale \_\_\_\_\_  
Total Depth \_\_\_\_\_  
Par / By: \_\_\_\_\_  
Date \_\_\_\_\_

De From	à To	GÉOLOGIE GEOLOGY	1.5m.	5.0'	ÉCHANTILLON / SAMPLES				ANALYSES					
					N <sup>o</sup>	De/Fr.	à/To	Long.	Au	Zn				
242.3	245.4	Some of the pyrite is spherical and appears like pyrite suns. Most of the pyrite is rounded to sub-angular in form. There is light brown mineral, possibly sphalerite.												
245.4	253.4	Dark-green-(alt. graywacke) ultramafic unit. This unit contains chrome-mica alteration with quartz 2-3% which occurs as a stringer form. There is also some sphalerite which has oxidized to a brown colour. Some quartz and calcite veins are erratic stringers.  From 246-246.7-is small unit of metallic graphite with coarse pyrite 5-6% and sphalerite in the matrix. Upper contact is 40° to core axis at 245.4 and lower contact at 253.4 was 15° to core axis. Mineral lineament of 30° to core axis is evident throughout the complete section.			31688	245.4	250.4	5.0	Nil	1800				
					31689	250.4	253.4	3.0	Nil	5400				



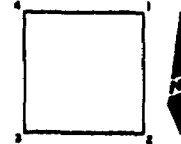
**LONG LAC MINERAL EXPLORATION**

Projet / Project \_\_\_\_\_  
 Canton \_\_\_\_\_  
 Twp \_\_\_\_\_  
 Lot \_\_\_\_\_  
 Rang(e) \_\_\_\_\_  
 Type de Forage / Drill Type \_\_\_\_\_  
 Contracteur / Contractor \_\_\_\_\_

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SECTION \_\_\_\_\_

Ligne / Line \_\_\_\_\_ St. \_\_\_\_\_  
 Lot \_\_\_\_\_ Long. \_\_\_\_\_ Profondeur / Depth \_\_\_\_\_  
 Elevation \_\_\_\_\_ Plongée / Dip \_\_\_\_\_  
 Azimut(h) \_\_\_\_\_ Azimut(h) \_\_\_\_\_  
 Commence' le / Started \_\_\_\_\_ Termine' le / Finished \_\_\_\_\_



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Feuille / Sheet 24 de / of 31  
 De / From \_\_\_\_\_ à / to \_\_\_\_\_  
 Profondeur Totale / Total Depth \_\_\_\_\_  
 Par / By: \_\_\_\_\_  
 Date \_\_\_\_\_

De / From	à / To	GÉOLOGIE / GEOLOGY	1.5m.	5.0'	ÉCHANTILLON / SAMPLES				ANALYSES					
					N <sup>o</sup>	De / Fr.	à / To	Long.	Au	Zn				
253.4	256	Pale-gray-andesite-similar to unit described at 237.7-242.3. No bedding is evident. This unit contains less amounts of chlorite than the above one. Less than 1% pyrite. (possible tuff?) flow?			31690	253.4	256.0	2.6	Nil	6500				
256.0	267.7	Highly chloritized alt. graywacke. 80% of this section is badly broken core. Possible fault gouge at 256.5, 2" wide. There is also a possible fault gouge at 259 to 260.2. The core is broken up too much to get fault direction. The fault gouge at 259-260.2 is composed of chloritic mud. From 260.2-263.5 core is badly broken up. Alt. graywacke by chloritization and gravitization. From 263.5-264.5 badly broken up core, possibly altered feldspar porphyry? From 267.5-268 massive pyrite section composed of 7% pyrite.			31691	256.0	261.0	5.0	Nil					
					31692	261.0	267.7	6.7	Nil					



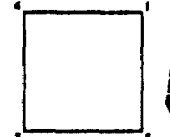
**LONG LAC MINERAL EXPLORATION**

Project \_\_\_\_\_  
 Canton \_\_\_\_\_  
 Twp \_\_\_\_\_  
 Lot \_\_\_\_\_  
 Rang(e) \_\_\_\_\_  
 Type de Forage \_\_\_\_\_  
 Drill Type \_\_\_\_\_  
 Contracteur \_\_\_\_\_  
 Contractor \_\_\_\_\_

**JOURNAL des SONDAGES  
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SECTION \_\_\_\_\_

Ligne / Line \_\_\_\_\_ St. \_\_\_\_\_  
 Lat. \_\_\_\_\_ Long. \_\_\_\_\_ Profondeur / Depth \_\_\_\_\_  
 Elevation \_\_\_\_\_ Plongée / Dip \_\_\_\_\_  
 Azimut(h) \_\_\_\_\_ Azimut(h) \_\_\_\_\_  
 Commence' le / Started \_\_\_\_\_ Termine' le / Finished \_\_\_\_\_



**N<sup>o</sup>** LL-83-6

Feuille 25 de 31  
 Sheet of  
 De / From \_\_\_\_\_ à / to \_\_\_\_\_  
 Profondeur Totale \_\_\_\_\_  
 Total Depth \_\_\_\_\_  
 Par / By: \_\_\_\_\_  
 Date \_\_\_\_\_

De From	à To	GÉOLOGIE GEOLOGY	1.5m.	5.0'	ÉCHANTILLON / SAMPLES				ANALYSES					
					N <sup>o</sup>	De/Fr.	à/To	Long.	Au	Zn				
267.7	269.0	Broken up core. Dark brown chert unit. This unit has 1-2% finely diss. pyrite.			31693	267.7	272.7	5.0	Nil					
269.0	275.7	Pale-gray-yellow-alt. graywacke to chert. Remnants of bedding that have been silicified at 267.7. Bedding was 50° to core axis. There is chloritization. Pyrite appears in two forms: (1) in small less than 1mm stringers parallel to bedding (2) coarse pyrite following bedding. Appears the more pyrite, the more chlorite. Approximately 1% pyrite in overall section. Irregular lower contact at 40° to core axis at 271.8. From 271.8-272.2, light gray andesite unit (tuff) no pyrite flow. From 272.2-273.9-lapilli tuff with large 2-3mm feldspar. No pyrite.			31694	272.7	275.7	5.0	Nil					

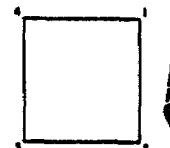
LONG LAC MINERAL EXPLORATION 175'

Project \_\_\_\_\_  
 Canton \_\_\_\_\_  
 Twp \_\_\_\_\_  
 Lot \_\_\_\_\_  
 Rang(e) \_\_\_\_\_  
 Type de Forage \_\_\_\_\_  
 Drill Type \_\_\_\_\_  
 Contracteur \_\_\_\_\_  
 Contractor \_\_\_\_\_

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 DIAMOND DRILL RECORD

SECTION \_\_\_\_\_

Ligne / Line \_\_\_\_\_ St. \_\_\_\_\_  
 Lat. \_\_\_\_\_ Long. \_\_\_\_\_ Profondeur / Depth \_\_\_\_\_  
 Elevation \_\_\_\_\_ Plongée / Dip \_\_\_\_\_  
 Azimut(h) \_\_\_\_\_ Azimut(h) \_\_\_\_\_  
 Commence' le / Started \_\_\_\_\_ Termine' le / Finished \_\_\_\_\_



N<sup>o</sup> LL-83-6

Feuille 26 de 31  
 Sheet \_\_\_\_\_ of \_\_\_\_\_  
 De / From \_\_\_\_\_ à / to \_\_\_\_\_  
 Profondeur Totale \_\_\_\_\_  
 Total Depth \_\_\_\_\_  
 Par / By: \_\_\_\_\_  
 Date \_\_\_\_\_

De From	à To	GÉOLOGIE GEOLOGY	1.5m.	5.0'	ÉCHANTILLON / SAMPLES				ANALYSES				
					N <sup>o</sup>	De/Fr.	à/To	Long.	Au	Zn			
269.0	275.7	From 273.9-275.5-all graywacke silification to chert 1% pyrite. Upper contact 35° to core axis.at 273.9. From 275.5-275.7-lapilli tuff (light gray flow) unit. Lower contact at 275.7 is 40° to core axis. No pyrite.											
275.7	284.3	Pale-green-yellow-alt. graywacke to chert by silicification. Bedding is not evident. Sericite and calcite alteration has occurred with no preferred orientation. Pyrite is finely diss. and follows the sericite and calcite alteration, and it is 1% From 280.5-284.3-very massive unit. Possible alt. graywacke silicified with no pyrite and no evidence of bedding.			31695	275.7	280.7	5.0	Nil				
					31696	280.7	284.3	3.6	Nil				
284.3	293.0	Dark gray-green-LAMP dyke composed of biotite, chlorite and calcite. The location of these minerals line up 37° to core axis. No pyrite is			31697	284.3	289.3	5.0	Nil				
					31698	289.3	293.0	3.7	Nil				

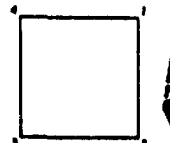
LONG LAC MINERAL EXPLORATION 1995

Projet \_\_\_\_\_  
 Canton \_\_\_\_\_  
 Twp \_\_\_\_\_  
 Lot \_\_\_\_\_  
 Rang(e) \_\_\_\_\_  
 Type de Forage \_\_\_\_\_  
 Drill Type \_\_\_\_\_  
 Contracteur \_\_\_\_\_  
 Contractor \_\_\_\_\_

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SECTION \_\_\_\_\_

Ligne / Line \_\_\_\_\_ St. \_\_\_\_\_  
 Lat. \_\_\_\_\_ Long. \_\_\_\_\_ Profondeur / Depth \_\_\_\_\_  
 Elevation \_\_\_\_\_ Plongée / Dip \_\_\_\_\_  
 Azimut(h) \_\_\_\_\_ Azimut(h) \_\_\_\_\_  
 Commence' le / Started \_\_\_\_\_ Termine' le / Finished \_\_\_\_\_



No LL-83-6

Feuille 27 de 31  
 Sheet 27 of 31  
 De / From \_\_\_\_\_ à / to \_\_\_\_\_  
 Profondeur Totale \_\_\_\_\_  
 Total Depth \_\_\_\_\_  
 Par / By \_\_\_\_\_  
 Date \_\_\_\_\_

De From	à To	GÉOLOGIE GEOLOGY	1.5 m.   5.0'	ÉCHANTILLON / SAMPLES				ANALYSES						
				N°	De / Fr.	à / To	Long.	Au	Zn					
293.0	302.0	Pale-green-gray fine grained ash tuff? Very massive with no remnants of bedding. The unit in places is very coarse-grained. In places it looks to be a LAMP. Calcite and chlorite make up part of the matrix. Less than 1% pyrite.		31699	293.0	298.0	5.0	Nil						
				31700	298.0	302.0	4.0	Nil						
302.0	308.5	Pale-green-cherty lapilli tuff. From 302.0-306.7-pale green lapilli tuff. Bedding is not observed. No pyrite. Minor calcite stringers. Appears tuff has been totally silicified. From 306.0-307.3-light-brown to that gradates into gray-black (graphitic?) chert unit. Upper contact is 25° to core axis. Lower contact 27° to core axis. This unit has less than 1% pyrite. Finely diss. bedding 15° to core axis. From 307.3-309.3, pale-green-cherty lapilli tuff, interbedded with chert beds up to 1-2cm thick and very irregular shaped beds. Chert composition is the same as the one in the above section. Less		31801	302.0	308.5	6.5	Nil						

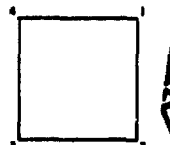
LONG LAC MINERAL EXPLORATION 1174

JOURNAL des SONDAGES  
DIAMOND DRILL RECORD

No LL-83-6

Projet \_\_\_\_\_  
Canton \_\_\_\_\_  
Twp \_\_\_\_\_  
Lot \_\_\_\_\_  
Rang(e) \_\_\_\_\_  
Type de Forage \_\_\_\_\_  
Drill Type \_\_\_\_\_  
Contracteur \_\_\_\_\_  
Contractor \_\_\_\_\_

Ligne / Line \_\_\_\_\_ St. \_\_\_\_\_  
Lat. \_\_\_\_\_ Long. \_\_\_\_\_ Profondeur / Depth \_\_\_\_\_  
Elevation \_\_\_\_\_ Plongée / Dip \_\_\_\_\_  
Azimut(h) \_\_\_\_\_ Azimut(h) \_\_\_\_\_  
Commence' le / Started \_\_\_\_\_ Termine' le / Finished \_\_\_\_\_



Feuille 28 de 31  
Sheet \_\_\_\_\_ of \_\_\_\_\_  
De / From \_\_\_\_\_ à / to \_\_\_\_\_  
Profondeur Totale \_\_\_\_\_  
Total Depth \_\_\_\_\_  
Par / By: \_\_\_\_\_  
Date \_\_\_\_\_

De From	à To	GÉOLOGIE GEOLOGY	1.5 m.	5.0'	ÉCHANTILLON / SAMPLES				ANALYSES				
					Nº	De/Fr.	à / To	Long.	Au				
308.5	316.0	Pale-green-gray-ash tuff? This tuff appears to be silicified very hard. Less than 1% pyrite. Erratic calcite stringers are found to be mostly in the pale-green sections. Very massive and coarse-grained. Alteration of sericite and chlorite on a small scale.			31802	308.5	313.5	5.0	Nil				
					31803	313.5	316.0	2.5	Nil				
316.0	318.4	LAMP dyke. Dark green-gray minerals. Composition, biotite, chlorite. 30° to core axis mineral lineation. No pyrite.			31804	316.0	318.4	2.4	Nil				
318.4	322.0	Pale-green-gray-cherty fine-grained tuff flow. Very massive, with calcite alteration in the form of stringers. Less than 1% pyrite. Pyrite cubes.			31805	318.4	322.0	3.6	Nil				
322.1	322.9	Buff brown chert unit. Upper contact 25° to core axis. Lower contact 45° to core axis. Upper contact sharp and the lower contact irregular. Bedding appears finely laminated 25° to core axis			31806	322.0	322.9	.9	Nil				

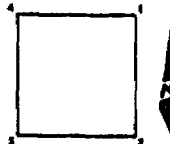
**JOURNAL des SONDAGES  
DIAMOND DRILL RECORD**

**LONG LAC MINERAL EXPLORATION**

Projet \_\_\_\_\_  
 Project \_\_\_\_\_  
 Canton \_\_\_\_\_  
 Twp \_\_\_\_\_  
 Lot \_\_\_\_\_  
 Rang(e) \_\_\_\_\_  
 Type de Forage \_\_\_\_\_  
 Drill Type \_\_\_\_\_  
 Contracteur \_\_\_\_\_  
 Contractor \_\_\_\_\_

Ligne / Line \_\_\_\_\_ St. \_\_\_\_\_  
 Lat. \_\_\_\_\_ Long. \_\_\_\_\_ Profondeur / Depth \_\_\_\_\_  
 Elelevation \_\_\_\_\_ Plongee / Dip \_\_\_\_\_  
 Azimut(h) \_\_\_\_\_ Azimut(h) \_\_\_\_\_  
 Commence' le / Started \_\_\_\_\_ Termine' le / Finished \_\_\_\_\_

SECTION \_\_\_\_\_



**N<sup>o</sup>** LL-83-6

Feuille 29 de 31  
 Sheet of

De / From \_\_\_\_\_ à / to \_\_\_\_\_

Profondeur Totale  
 Total Depth \_\_\_\_\_

Par / By \_\_\_\_\_

Date \_\_\_\_\_

De From	à To	GÉOLOGIE GEOLOGY	1.5m.   5.0'	ÉCHANTILLON / SAMPLES				ANALYSES						
				N <sup>o</sup>	De / Fr.	à / To	Long.	Au	Zn					
322.9	468.0	(Pale-green-gray (altered-tuff to) ultra-mafic unit candy-striped unit). This unit is altered by calcite, chlorite and silicification. There are within this unit, graphite units, interbedded in the ultra-mafic.		31807	322.9	327.9	5.0	Nil						
		From 346.2-347.2-graphite interbedded with the altered tuff.		31808	327.9	332.9	5.0	Nil	151					
		Less than 1% pyrite. Metallic graphite from 346.7 to 347.0. From 348.1-348.3, graphite with calcite beds finely laminated. Upper contact 25° to core axis. Lower contact 35° to core axis.		31809	332.9	337.9	5.0	Nil	58					
		From 349.2-350.3, graphite and calcite rich beds 20° to core axis. Some chlorite alteration. The beds are finely laminated 1-2mm thick. Graphite beds at 351.0, 351.4, and 352.0. These are interbedded with alt. beds 25° to core axis.		31810	337.9	342.9	5.0	Nil						
		From 320.1-421-pale-green-gray-interbedded altered graywacke. Interbeds are graphitic beds. Coarse-fine bedding altered.		31811	342.9	347.9	5.0	Nil						
				31812	347.9	352.9	5.0	Nil						
				31813	352.9	360.0	7.1	Nil	61					





DRILL HOLE NUMBER

LL - 83 - 8





# DRILL HOLE GEOLOGIC LOG

HOLE NUMBER LL-83-8  
PAGE No. 2 OF 9  
LOGGED BY \_\_\_\_\_  
DATE \_\_\_\_\_

PROJECT \_\_\_\_\_ TYPE OF HOLE D.D.H.  R.D.H.  P.D.H.  DATE \_\_\_\_\_

CORE	LEGEND		HOLE LOCATION WITH RESPECT TO CLAIMS	LOCATION		AZIM		DIP				
	FROM	TO		DESCRIPTION	NUMBER	FROM	TO	Feet	% Cu	% Cu O	% Mo	AU UZ/TON
	7.0	78.0	quartz calcite veinlets. Mineralization 7-68' less than 1% pyrite. 68-78' - minor amounts of pyrite - 1% pyrite along bedding plane. Lead and sphalerite is found in siliceous beds and cross-cutting veinlets. Sch. begins to occur at 72' - increase to about 1% at 76' and increases 2% at 77'. Subordinate lead with sphalerite.	8750	68.5	73	4.5	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
				ASSAY								
				8751	73	78	5.0	Nil	0.2	63	61	103
				8752	78	82	4.0	10/10	0.2	52	73	122
	78.0	82.0	Graphitic unit with up to 1-4% pyrite along bedding planes and in veinlets. Bedding is 60° to core axis at 81.0. Pyrite occurs as fibrous growth. Upper contact 60° to core axis. Lower contact along cleavage face 25° to core axis.									
	82.0	100.8	Ultramafic-siltstone-conglomerate-graphite. From 82-84'-ultramafic conglomerate. Bedding 35° to core axis. 84.0' clastes are oval-shaped and mostly composed of sericite and talc. Sizes of clastes 1mm-4cm. Very thin 1mm sphalerite and ankerite stringers at 83.5 - less than 1% pyrite. From 84.0-100.8-pale-grey-green ultramafic siltstone? with graphite interbeds at 88-89.1 and 94.0-94.8. These graphite beds 3-4% pyrite along bd. planes. At 91.0 bd. 70° to core axis. At 100.0'-55-60° to core axis. Cleavage 65-90° to core axis throughout section. Quartz-calcite veins - 70-90° to core axis. Freq. - 1/2 ft. At 85.0 - .3' quartz vein, and 95.0, .2' quartz vein. Contact of these quartz-calcite veins is irregular. Approx. 70° to core axis.	31920	82.0	87.0	5.0					Nil
				reassay								
				8753	87	92	5.0	3	0.3	77	828	4630
				8754	92	96.6	4.6	Nil	0.2	41	307	1450
				8755	96.6	101	4.5	Nil	0.4	76	215	553
				8756	101	106	5.0	Nil	0.3	69	256	615



LONG LAC MINERAL EXPLORATION LTD.  
146 Front St. W.  
Toronto, Ontario M5J 2L7

# DRILL HOLE GEOLOGIC LOG

HOLE NUMBER 11-B3-B  
PAGE No. 4 OF 9  
LOGGED BY \_\_\_\_\_  
DATE \_\_\_\_\_

PROJECT \_\_\_\_\_ TYPE OF HOLE D.D.H.  R.D.H.  P.D.H.  DATE \_\_\_\_\_

CORE		LEGEND		HOLE LOCATION WITH RESPECT TO CLAIMS		LOCATION _____ AZIM _____ DIP _____						
METRES	TO	FROM	TO	DESCRIPTION	NUMBER	FROM	TO	Feet	Ph	Zn	% Mo	Oz Au/Ton
		131.6	133.6	132.1 - possible sphalerite assoc. with pyrite. 132.0 - abundant pink-orange unknown mineral in irregular stringers in graphite - 1-2% pyrite throughout section bedded and along stringers (fibrous pyrite) - irregular contact of 70° to core axis.								
		133.6	148.3	Quartz-monzonite (?) creamy white or sandstone dyke(?). Medium to coarsely crystalline - porous - lots of small solution cavities. 70% quartz eyes, 30% matrix feldspar-quartz-clay. 1-2% galena (cubic) sphalerite. 1% pyrite.	31925	133.6	138.0	4.4	3.500	694		Nil
					31759	138	143	5				
					31760	143	148.3	5.3				
		148.3	161.0	Graphite rich sediment. Very finely laminated. 150.8 - bedding @ 60° to core axis. 158.7 - bedding 60° to core axis. Lower contact - 50° to core axis. 149.3-0.3' thick, light grey schst. 150.1 - irregular stringer pink-orange mineral assoc. with pyrite and galena crystals (also seam at 153.3). 1% pyrite occurring as fibrous grains and along bedding planes. Cleavage - 60° to core axis throughout section.	31926	148.3	153.3	5.0				.002
					31927	153.3	158.3	5.0				.002
					31928	158.3	161.0	2.7				Nil
					31925	reassay			Ag ppm	Pb ppm	Cu ppm	Zn ppm
					31759	reassay			Nil	0.6	37	3740 666
					31760	reassay			Nil	0.2	43	1630 124
					31926	reassay			Nil	0.4	49	2590 1450
					31927	reassay			3	0.4	17	2180 372
					31929	reassay			3	0.2	10	1430 351
		161.0	173.8	161-168.7 - pale to light green ultramafic altered sediments (talc-chlorite-schist) with small sections of graphite rich sediment. 164 - bedding 65° to core axis. At 164'-0.3' graphite rich sediment - lower contact of unit - 60° to core axis - less than 1% pyrite. Calcite stringers at various angles to core axis 1 per 2 ft. 168.7-173.8 - massive coarse grained pale grey siltstone.	31929	161.0	166.0	5.0				Nil
					31930	166.0	171.0	5.0				Nil
					31931	171.0	173.8	2.8				Nil
					31928	reassay			Ag ppm	Pb ppm	Cu ppm	Zn ppm
					31929	reassay			3/Nil	0.2	4	236 209
					31930	reassay			Nil	0.2	49	593 1070
					31931	reassay			Nil	0.1	81	19 66
									3	0.1	28	6 49.

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Toronto, Ontario M5J 2L7

# DRILL HOLE GEOLOGIC LOG

HOLE NUMBER 11-83-8  
PAGE No. 5 OF 9  
LOGGED BY \_\_\_\_\_  
DATE \_\_\_\_\_

PROJECT \_\_\_\_\_ TYPE OF HOLE D.D.H  R.D.H  P.D.H  DATE \_\_\_\_\_

METRES	CORE	LITHOLOGY	STRUCTURE	ALTERATION	MINERALIZATION	LEGEND		MUDS		AZ		CY		M		HOLE LOCATION WITH RESPECT TO CLAIMS	LOCATION _____ AZIM. _____ DIP _____											
						ARGL	argillite	MYDS	mudstone	AZ	azurite	CY	clay	M	molybdenite		LOC	COLLAR: LATITUDE _____ DEPARTURE _____	ELEVATION: COLLAR _____ BOTTOM _____	LENGTH: _____ RECOVERY _____ % CORE SIZE _____								
						BRXY	breccia	MYLN	mylonite	BL	bleached	EP	epidote	MG	magnetite		DX	diagenetic	OX	oxide zone	PY	pyrite	QZ	quartz	SE	serpentine	SH	shear
						GRW	grewacke	TEYL	tephrite	SO	sericite	HE	hematite	EA	epidote	EA	epidote	SE	serpentine	SH	shear	SL	siliceous	TA	talc	X	shattered rock	
						GOLG	gouge	SIL	sillstone	CA	calcite	KA	kaolinite	LA	laser	LA	laser	SE	serpentine	SH	shear	SL	siliceous	TA	talc	X	shattered rock	
						HORN	hornfels	CC	carbonate	CB	carbonate	LI	limonite	LI	limonite	SE	serpentine	SH	shear	SL	siliceous	TA	talc	X	shattered rock			
						PPBI	biotite porphyry	OVB	overburden	CC	chalcopyrite	LI	limonite	LI	limonite	SE	serpentine	SH	shear	SL	siliceous	TA	talc	X	shattered rock			
						PPB>	biotite hornblende porphyry	DYK	dyke	C	calcite	LI	limonite	LI	limonite	SE	serpentine	SH	shear	SL	siliceous	TA	talc	X	shattered rock			
						PPHO	hornblende porphyry			C	calcite	LI	limonite	LI	limonite	SE	serpentine	SH	shear	SL	siliceous	TA	talc	X	shattered rock			
						PPQB	quartz-biotite porphyry			CL	chlorite	MO	molybdenum	X	shattered rock													
TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE		SAMPLE			ASSAY																			
				NUMBER	FROM	TO	Feet	% Cu	% CrO	% Mo	Oz Au/ton																	
	173.8	178.0	Fine pink to buff brown quartz monzonite (similar to above unit of monzonite(?)) Less than 1% galena. Less than 1% pyrite - no sphalerite seen. Finer quartz eyes. Minor fine chlorite. The top of this section is darker in colour but with a sharp (55° to core axis) upper contact; lower contact gradational in colour and at 80° to core axis. Numerous hairline fractures in 2 directions to core axis. These are silica sealed, bleaching alteration peripheral to these fractures.																									
				31932	173.8	178.0	4.2				Nil																	
				31932	reassay			Agpp	Agppm	Cuppp	Pbppm	Znppm																
								Nil	0.1	8	16	27																
	178.0	182.4	Dark grey-green chlorite rich sediments. Very fine-grained massive unit - euhedral pyrite crystals (1%). Orange intrusion mineral occurs in stringers. Cleavage - 75° to core axis - irregular calcite veinlets at low angle to core axis. 180.8-181.8 - lamprophyre dyke. Lower contact - 70° to core axis. 2% euhedral fine pyrite.								Nil																	
				31933	178.0	183.0	5.0				Nil																	
				31933	reassay			Ag	Ag	Cu	Pb	Zn																
								Nil	0.1	7	2	87																
	182.4	192.0	Dark pale green highly chloritic talcy sediment. Bedding apparent in places appears highly contorted - not especially calcite rich. 189.6-190.3 - light grey feldspar porphyry unit (dyke?) Upper contact - 45° to core axis (sharp) Lower contact - 70° to core axis (irregular)								Nil																	
				31934	183.0	188.0	5.0				Nil																	
				31935	188.0	192.0	4.0				Nil																	
								Ag	Ag	Cu	Pb	Zn																
				31934	reassay			Nil	0.1	40	31	96																
				31935	reassay			Nil	0.1	24	287	259																
	192.0	203.0	Candy striped unit. Same as above unit but laminated with secondary (?) calcite. 197'-apparent bedding - 45° to core axis. 202'-bedding 40° to core axis.								Nil																	
				31936	192.0	197.0	5.0				Nil																	
				31937	197.0	203.0	6.0				Nil																	
								Ag	Ag	Cu	Pb	Zn																
				31936	reassay			Nil	0.2	53	286	663																

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Toronto, Ontario M5J 2L7

# DRILL HOLE GEOLOGIC LOG

HOLE NUMBER 11-83-8  
PAGE No. 6 OF 9  
LOGGED BY \_\_\_\_\_

PROJECT \_\_\_\_\_ TYPE OF HOLE  D.D.H.  R.D.H.  P.D.H.  DATE \_\_\_\_\_

METRES	LITHOLOGY	STRUCTURE	ALTERATION	MINERALIZATION	TO	LEGEND		DESCRIPTION	HOLE LOCATION WITH RESPECT TO CLAIMS	LOCATION		COLLAR: LATITUDE		ELEVATION: COLLAR		LENGTH: RECOVERY		PURPOSE:		DATE: STARTED			
						FROM	TO			AZIM.	DIP.	DEPARTURE	BOTTOM	% CORE SIZE	END	NUMBER	FROM	TO	Feet	% Cu	% Cu O	% Mo	0z Au/Ton
					192.0	203.0	ARGL argillite BRXY braccia GREY gneiss GOUO gouge HORN hornfels PPSI biotite porphyry PPHO hornblende porphyry PPOB quartz-biotite porphyry MUDS mudstone MYLM mylonite RHTL rhyolite SALT siltstone DVS overburden DYX dyke AZ arkose BL bleached SO siltstone CA calcite CB carbonate CC chalcocite CI quartzite CP chalcopyrite CL chlorite CY clay EP epidote GR graphite GY gypsum HE hematite KA kaolin KF klaprothite LJ limonite MC malachite MD mud seam MO molybdenum M molybdenite MG magnetite OX oxide zone PY pyrite QZ quartz SA saussurite SE serpentine SH shear SI siliceous TA talc X shattered rock																
					192.0	203.0		192.6-193.7 - ultramafic siliceous clast breccia . Clasts up to 2cm in size, and are highly fractured. 2% pyrite and minor sphalerite occurring in matrix and in fractures filled with calcite. Very little pyrite. 200.9-201.6 - section not calcite veined.															
					203.0	240.7		Ultramafic rich sediment with interbeds of pyrite rich siliceous clast breccia. 203-204.4 - fine-grained dark green siltstone - bedding - 40° to core axis (203.5) - 1-2% pyrite in stringers to bedding - lower contact 70° to core axis - finely laminated. Pyrite along calcite stringer - 74° - may have argillaceous interbeds. 204.4-206.9- breccia - 1% pyrite - mostly in the matrix adjacent to clasts - also pyrite in calcite stringers. Pyrite rich down to 206.6. Clasts of breccia are cherty, angular to sub-angular. 206.8 - clasts at 55° to core axis. 206.9-209.6 - fine grained dark green siltstone. Pyrite along bedding and in fractures. Bedding @ 40° to ca. Lower contact at 44° to core axis. 209.6-214.7 - breccia. As most breccias in this hole, it is matrix supported. Matrix - chlorite, calcite fragments - greyish, white, cherty subangular (5mm-4cm) pebbles - some sections predominately ultramafic clasts. Pyrite and calcite growths bordering chert clasts and also along fractures. 209.6-210.3 - little pyrite															
										31938	203.0	208.0	5.0							Nil			
										31939	208.0	213.0	5.0							Nil			
										31940	213.0	218.0	5.0							Nil			
										31941	218.0	223.0	5.0							Nil			
										31942	223.0	228.0	5.0							Nil			
										31943	228.0	233.0	5.0							Nil			
										31944	233.0	238.0	5.0							Nil			
										31945	238.0	240.1	2.1							Nil			
										31938	reassay				3	0.2	73	1	241				
										31939	reassay			10/10	0.2	84	16	209					
										31940	reassay			Nil	0.1	73	24	85					
										31941	reassay			Nil	0.1	66	25	151					
										31942	reassay			Nil	0.1	71	20	101					
										31943	reassay			Nil	0.1	75	14	58					
										31944	reassay			3	0.1	51	2	47					
										31945	reassay			Nil	0.1	35	1	79					

# DRILL HOLE GEOLOGIC LOG

HOLE NUMBER 11-83-B  
 PAGE No. 7 OF 9  
 LOGGED BY \_\_\_\_\_  
 DATE \_\_\_\_\_

PROJECT \_\_\_\_\_ TYPE OF HOLE  D.D.H.  R.D.H.  P.D.H.  DATE \_\_\_\_\_

CORE		LEGEND										HOLE LOCATION WITH RESPECT TO CLAIMS		LOCATION		AZIM.		DIP					
		FROM		TO		DESCRIPTION								VISUAL ESTIMATE		SAMPLE		ASSAY					
METRES	LITHOLOGY	STRUCTURE	ALTERATION	MINERALIZATION	TO	FROM	TO	DESCRIPTION	PC	MC	W	MP	NUMBER	FROM	TO	Feet	% Mt	% Cu	% Mo	Au	Oz/Ton		
					203.0	240.7	210.3-214.7	2% pyrite; minor pyrrhotite but basal unit more enriched. Pyrite - secondary - following 2-3mm thick calcite stringers, also present in the matrix - some needle form pyrite stringers rich in pyrite @ 80° to core axis. Lower contact @ 55° to core axis.						234.0	236.0	2.0	1.5						
							214.7-222.2	Pale-dark grey, medium to coarse grained siltstone. Indistinct bedding at 50° to core axis. Lower contact @ 60° to core axis. Fine calcite stringers at various angles to core; 1/2 ft. frequency.															
							221'-222.2	221'-pyrite rich stringer material - less than 1% pyrite, sometimes fibrous in appearance. Cleavage - 60-70° to core axis.															
							222.2-224.9	Ultramafic chert clast breccia - similar to previous breccia units - high magnetics from core logger indicates larger proportion of pyrrhotite (or mag.?). Bottom 0.5 ft. calcite alternating with chlorite beds (contorted).															
							224.9-240.7	Fine grained ultramafic siltstones (with subordinate ultramafic conglomerate). Talc-chlorite rich sediment - fairly massive in places; less than 1% pyrite. At 237.0 - fault; 55° to core axis. Bedding (230.5') - 50° to core axis.															
							231-232.3	diorite (?) dyke - upper contact - 30° to ca lower contact - 40° to ca.															
					240.7	248.3	Interbedded ultramafic sediments and grey feldspar porphyry units. Bedding of ultramafic sediments 65° to core axis at 242.5-243.5. Contacts with porphyry units sharp and at							31944	re assay				Nil	0.1	47	4	65
													31947	re assay				Nil	0.1	23	6	36	
													31946	240.8	245.8	5.0						Nil	
													31947	245.8	250.8	5.0						Nil	

Assay  
 Au ppm Ag ppm Cu ppm Pb ppm Zn ppm  
 31944 re assay Nil 0.1 47 4 65  
 31947 re assay Nil 0.1 23 6 36







**CERTIFICATE OF ANALYSIS**

**GRAB SAMPLES**



# Swastika Laboratories

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Page 1 of 2

## Geochemical Analysis Certificate

0W-1577-RG1

Company: LAC MINERALS LTD. EXPL. DIV.  
Project: TWD P.O.#Kthu  
Attn: CHRIS PEGG

Date: OCT-18-90  
Copy 1. 20 ADELAIDE ST.E.SUITE 1100,TORONTO

We hereby certify the following Geochemical Analysis of 53 CORE/GRAB samples submitted OCT-16-90 by CHRIS PEGG.

Sample Number	Au ppb	Cu ppm	Pb ppm	Zn ppm
2601	24			
2602	Nil			
2603	Nil			
2604	Nil			
2605	Nil			
2606	17/10			
2607	Nil			
2608	Nil			
2609	Nil			
2610	Nil			
2611	Nil			
2612	Nil			
2613	Nil			
2614	Nil			
2615	Nil			
2616	Nil/Nil			
2617	Nil			
2618	Nil			
2619	Nil			
2620	Nil			
2621	Nil			
2622	Nil			
2623	Nil			
2624	Nil			
2625	Nil			
2626	Nil			
2627	Nil			
2628	Nil			
2629	Nil			
2630	Nil			

Certified by

G. Lebel / Manager



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0W-1577-RG1


## Geochemical Analysis Certificate

Company: LAC MINERALS LTD. EXPL. DIV.  
Project: TWD P.O.#Kthu  
Attn: CHRIS PEGG

Date: OCT-18-90  
Copy 1. 20 ADELAIDE ST.E.SUITE 1100,TORONTO

We hereby certify the following Geochemical Analysis of 53 CORE/GRAB samples submitted OCT-16-90 by CHRIS PEGG.

Sample Number	Au ppb	Cu ppm	Pb ppm	Zn ppm
2631	Ni 1 / Ni 1			
2632	Ni 1			
2633	Ni 1			
2634	Ni 1			
2635	Ni 1			
2636	Ni 1			
2637	Ni 1			
2638	Ni 1			
2919	Ni 1			
2920	Ni 1			
8701	Ni 1			
8702	Ni 1			
8703	Ni 1			
8704	Ni 1			
8705	Ni 1			
8706	Ni 1			
8707	Ni 1 / 7			
8708	Ni 1			
8709	Ni 1			
8710	Ni 1			
8711	Ni 1			
8712	Ni 1			
8759	7	101	9	56

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## Geochemical Analysis Certificate

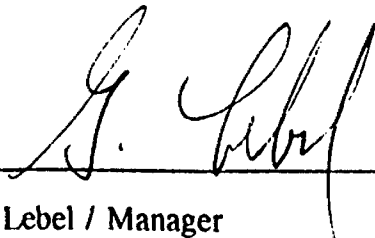
0W-1583-RG1

Company: LAC MINERALS LTD. EXPL. DIV  
Project: TWD P.O.#Kthu  
Attn: CHRIS PEGG

Date: OCT-19-90  
Copy 1. 20 Adelaide St. E. Toronto  
2. hold

We hereby certify the following Geochemical Analysis of 36 GRAB samples submitted OCT-17-90 by CHRIS PEGG.

Sample Number	Au ppb
2639	Nil
2640	Nil/Nil
2641	Nil
2642	Nil
2643	Nil
2644	Nil
2645	Nil
2646	Nil
2647	Nil
2648	Nil
2649	Nil
2650	Nil
2651	14
2652	17
2653	Nil/Nil
2654	Nil
8713	Nil
8714	Nil
8715	Nil
8716	Nil
8717	Nil
8718	10
8719	14
8720	48
8721	14
8722	10
8723	Nil
8724	14/17
8725	Nil
8726	Nil

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G. Lebel / Manager



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## Geochemical Analysis Certificate

0W-1583-RG1

Company: LAC MINERALS LTD. EXPL. DIV  
Project: TWD P.O.#Kthu  
Attn: CHRIS PEGG

Date: OCT-19-90  
Copy 1. 20 Adelaide St. E. Toronto  
2. hold

We hereby certify the following Geochemical Analysis of 36 GRAB samples submitted OCT-17-90 by CHRIS PEGG.

Sample Number	Au ppb
8727	Nil
8728	Nil
8729	Nil
8730	Nil
8731	17
8732	Nil

Certified by

G. Lebel / Manager



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Page 1 of 2

## Geochemical Analysis Certificate

0W-1633-RG1

Company: **LAC MINERALS LTD. EXPL. DIV.**  
 Project: **TWD P.O.# Kihu**  
 Attn: **CHRIS PEGG**

Date: OCT-29-90

Copy 1. STE 1100.20 ADELAIDE ST. E. TORONTO, ONT.  
 2. MSC 2T6  
 3. FAX TO 416-947-1257

We hereby certify the following Geochemical Analysis of 37 GRAB samples submitted OCT-23-90 by CHRIS PEGG.

Sample Number	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
2655	Nil	0.2	56	54	121
2656	Nil				
2657	Nil				
2658	Nil				
2659	Nil				
8733	10				
8734	Nil/Nil				
8735	7				
8736	Nil				
8737	Nil				
8738	14				
8739	14				
8740	7				
8741	3				
8742	Nil				
8743	10				
8744	10				
8745	Nil				
8746	10				
8747	Nil				
8748	Nil/Nil				
8749	Nil				
8760	Nil				
8761	Nil				
8762	7				
8763	Nil				
8764	Nil				
8765	Nil				
8766	Nil				
8767	Nil				

Certified by Donna Horvath



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OW-1633-RG1

## Geochemical Analysis Certificate

Company: LAC MINERALS LTD. EXPL. DIV.  
Project: TWD P.O.# Kthu  
Attn: CHRIS PEGG

Date: OCT-29-90  
Copy 1. STE 1100,20 ADELAIDE ST.E.TORONTO,ONT.  
2. MSC 2T6  
3. FAX TO 416-947-1257

We hereby certify the following Geochemical Analysis of 37 GRAB samples submitted OCT-23-90 by CHRIS PEGG.

Sample Number	Au pph	Ag ppm	Cu ppm	Pb ppm	Zn ppm
8768	21				
8769	3				
8770	Nil				
8771	10				
8772	3				
8773	Nil				
8774	24/14				

Certified by [Signature]



**CERTIFICATE OF ANALYSIS**  
**DIAMOND DRILL CORE SAMPLES**



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## Geochemical Analysis Certificate

0W-1414-RG1

Company: LAC MINERALS LTD. EXPL. DIV.  
Project: TWD  
Attn: CHRIS PEGG

Date: SEP-25-90  
Copy 1. 1100-20 ADELAIDE ST. E. TORONTO, M5C 2T6

We hereby certify the following Geochemical Analysis of 18 SPLIT CORE samples submitted SEP-20-90 by CHRIS PEGG.

Sample Number	Au ppb	Au check ppb	Ag ppm	Pb ppm	Zn ppm
2901	Nil		0.1	6	175
2902	3		0.1	1	121
2903	Nil		0.1	3	68
2904	Nil		0.4	676	806
2905	Nil		0.9	2590	7560
2906	10		0.2	561	1560
2907	Nil		0.2	147	697
2908	Nil		0.1	779	3480
2909	10	10	0.4	486	1670
2910	Nil		0.1	255	582
2911	Nil		0.3	1760	193
2912	Nil		0.2	1400	141
2913	3		0.1	24	54
2914	Nil		0.1	182	162
2915	Nil		0.1	30	113
2916	Nil		0.2	65	181
2917	Nil		0.1	74	211
2918	Nil	Nil	0.1	44	225

TS-80-Ex2

Certified by

G. Lebel / Manager



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## Geochemical Analysis Certificate

0W-1415-RG1

Company: LAC MINERALS LTD. EXPL. DIV.  
Project: TWD  
Attn: CHRIS PEGG

Date: SEP-25-90  
Copy 1. 1100-20 ADELAIDE ST.E. TORONTO M5C 2T6

We hereby certify the following Geochemical Analysis of 9 DRILL CORE samples submitted SEP-20-90 by CHRIS PEGG.

Sample Number	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
8750	Nil	0.2	63	61	103
8751	Nil	0.3	52	272	1900
8752	10/10	0.2	52	73	122
8753	Nil	0.3	53	1190	2230
8754	Nil	0.2	41	307	1450
8755	Nil	0.4	76	215	553
8756	Nil	0.3	69	256	615
8757	Nil	0.3	7	527	699
8758	Nil	0.2	11	632	941

LL-83-8

Certified by

G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705)642-3244

FAX (705)642-3300



# Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Established 1928

Page 1 of 2

## Geochemical Analysis Certificate

0W-1416-RG1

Company: LAC MINERALS LTD. EXPL. DIV.  
Project: TWD  
Attn: CHRIS PEGG

Date: SEP-25-90  
Copy 1. 1100-20 ADELAIDE ST. E. TORONTO, M5C 2T6

We hereby certify the following Geochemical Analysis of 39 PULP samples submitted SEP-20-90 by CHRIS PEGG.

Sample Number	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
31919	Nil	0.1	59	13	78
31920	3	0.3	77	828	4630
31921	Nil/Nil	0.1	12	528	1450
31922	7	0.1	6	68	410
31923	Nil	0.2	9	636	395
31924	Nil	0.1	8	409	553
31925	Nil	0.6	37	3740	666
31926	3	0.4	17	2180	372
31927	3	0.2	10	1430	351
31928	3/Nil	0.2	4	236	209
31929	Nil	0.2	49	593	1070
31930	Nil	0.1	81	19	66
31931	3	0.1	28	6	49
31932	Nil	0.1	8	16	27
31933	Nil	0.1	7	2	87
31934	Nil	0.1	40	31	96
31935	Nil	0.1	24	287	259
31936	Nil	0.2	53	286	663
31937	Nil	0.1	26	3	92
31938	3	0.2	73	1	241
31939	10/10	0.2	84	16	209
31940	Nil	0.1	73	24	85
31941	Nil	0.1	66	25	151
31942	Nil	0.1	71	20	101
31943	Nil	0.1	75	14	58
31944	3	0.1	51	2	47
31945	Nil	0.1	35	1	79
31946	Nil	0.1	47	4	65
31947	Nil	0.1	23	6	36
31948	Nil	0.1	21	8	17

LL-83-B

Certified by

G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705) 642-3244

FAX (705) 642-3300



Established 1928

# Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 2 of 2

## Geochemical Analysis Certificate

0W-1416-RG1

Company: LAC MINERALS LTD. EXPL. DIV.  
Project: TWD  
Attn: CHRIS PEGG

Date: SEP-25-90  
Copy 1. 1100-20 ADELAIDE ST. E. TORONTO, M5C 2T6

We hereby certify the following Geochemical Analysis of 39 PULP samples submitted SEP-20-90 by CHRIS PEGG.

Sample Number	Au pph	Ag ppm	Cu ppm	Pb ppm	Zn ppm
31949	Nil	0.1	69	6	577
31950	Nil	0.1	51	12	20
31951	Nil	0.1	39	3	73
31952	Nil	0.1	53	2	55
31953	Nil	0.1	64	1	48
31954	Nil	0.1	58	9	39
31955	38/27	0.1	98	23	46
31759	Nil	0.2	43	1630	124
31760	Nil	0.4	49	2590	1450

LL-83-8

Certified by \_\_\_\_\_

G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705) 642-3244

FAX (705) 642-3300



Established 1928

# Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Page 2 of 2

0W-1577-RG1

## Geochemical Analysis Certificate

Company: **LAC MINERALS LTD. EXPL. DIV.**  
Project: **TWD P.O.#Kthu**  
Attn: **CHRIS PEGG**

Date: **OCT-18-90**  
Copy 1. 20 ADELAIDE ST.E.SUITE 1100,TORONTO

We hereby certify the following Geochemical Analysis of 53 CORE/GRAB samples submitted OCT-16-90 by CHRIS PEGG.

Sample Number	Au ppb	Cu ppm	Pb ppm	Zn ppm
2631	Nil/Nil			
2632	Nil			
2633	Nil			
2634	Nil			
2635	Nil			
2636	Nil			
2637	Nil			
2638	Nil			
2919	Nil			
2920	Nil			LL-83-6
8701	Nil			
8702	Nil			
8703	Nil			
8704	Nil			
8705	Nil			
8706	Nil			
8707	Nil/7			
8708	Nil			
8709	Nil			
8710	Nil			
8711	Nil			
8712	Nil			
8759	7	101	9	36

Certified by

G. Lebel / Manager

RECEIPTS FOR ANALYTICAL WORK

GRAB SAMPLES

23440



**SWASTIKA LABORATORIES**

(A DIVISION OF ASSAYERS CORPORATION LIMITED)

P.O. BOX 10. SWASTIKA. ONTARIO. M0K 1T0  
 TELEPHONE (705) 642-3244 FAX (705) 642-3190

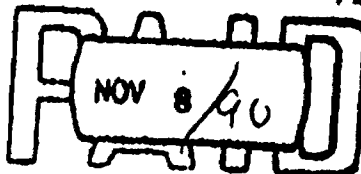
JOUR | DATE | ANNEE  
 18 | Oct | 1990

TRANSPORTEUR  
 SHIPPED VIA

VEHICULE  
 PERMIS

Lac Minerals Ltd  
 Suite 1100--20 Adelaide St. E.  
 Toronto, Ontario  
 M5C 2T6

1.5% LATE CHARGE OVER 30  
 DAYS (ANNUAL RATE 18%)

NO. D'EXEMPT. DE TAXE FED.	NO. D'EXEMPT. DE TAXE PROV.	VOTRE NO DE COMMANDE YOUR ORDER NO.	VOTRE NO DE COMMANDE OUR ORDER NO.	CONDITIONS NET 30 DAYS TERMS	REF. DES VENTES SALES REF.
FED LICENSE NO.	PROV. LICENSE NO.	TMD P.O. Okchu			MONTANA
QUANTITE QUANTITY	Description		CH. UNITAIRE UNIT PRICE	MONTANA	
53	Au assays		\$ 8.75	\$ 463.75	
1	Cu Pb Zn		11.50	11.50	
53	Sample Handling		3.00	159.00	
	Cert.#OW-1577-R61 Oct. 18, 1990				
36	Au assays		8.75	315.00	
36	Sample Handling		3.00	108.00	
	Cert.#OW-1583-R61 Oct. 19, 1990				
	SWASTIKA LABORATORIES  WITH THANKS PER <i>[Signature]</i>		Sub-total	1057.25	
			-10%.....	105.73	
			TOTAL	\$ 951.52	

FACTURE/INVOICE ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS  
 ESTABLISHED 1928

951.52  
 - 4207  
 -----  
 \$909.45

Grab Sampling charge

Core assay charge



23510



**SWASTIKA LABORATORIES**

(A DIVISION OF ASSAYERS CORPORATION LIMITED)

PO BOX 10, SWASTIKA, ONTARIO, CANADA M1X 1T0  
 TELEPHONE: (705) 642-3244 FAX: (705) 642-3300

JOUR 29 DAY  
 DATE MOIS Oct MONTH  
 ANNEE 1990 YEAR

TRANSPORTEUR

SHIPPED VIA

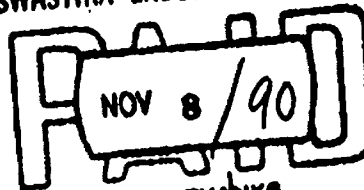
VENDEUR A  
 SOLD TO

Lac Minerals Ltd. (Exploration Division)  
 Suite 1100--20 Adelaide St. E.  
 Toronto, Ontario  
 M5C 2T6

1.5% LATE CHARGE OVER 30  
 DAYS (ANNUAL RATE 18%)

NO. D'EXEMPT. DE TAXE FED.		NO. D'EXEMPT. DE TAXE PROV.		VOTRE NO. DE COMMANDE	NOTRE NO. DE COMMANDE	CONDITIONS	REP. DES VENTES
				TMD P:O. Sktho		NET 30 DAYS	
FED. LICENCE NO.		PROV. LICENCE NO.		OUR ORDER NO.		TERMS	SALES REP.
QUANTITE	DESCRIPTION					UNIT PRICE	
37	Au assays					\$ 8.75	\$ 323.75
1	Ag Cu Pb Zn					15.00	15.00
37	Sample Handling					3.00	111.00
	Cert.#0w-1633-R61 Oct. 29, 1990						
						Sub-total..	449.7
						-10%.....	44.98
						TOTAL.....	\$ 404.7

SWASTIKA LABORATORIES



WITH THANKS  
 PER *[Signature]*

FACTURE/INVOICE ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS  
 ESTABLISHED 1928

909<sup>45</sup>  
 404<sup>77</sup>  
 \$1314<sup>22</sup>  
 Total grab sampling  
 charge.

RECEIPTS FOR ANALYTICAL WORK

DIAMOND DRILL CORE

23217



# SWASTIKA LABORATORIES

(A DIVISION OF ASSAYERS CORPORATION LIMITED)

PO BOX 10, SWASTIKA, ONTARIO L9K 1H0  
TELEPHONE (705) 642-3244 FAX (705) 642-3100

JOUR DATE  
26r Sept. 1990

TRANSPORTER  
SHIPPED VIA

SEND TO

Lac Minerals Ltd. (Exploration Division)  
1100--20 Adelaide St. E.  
Toronto, Ontario  
M5C 2T6

1.5% LATE CHARGE OVER 30  
DAYS (ANNUAL RATE 18%)

NO. D'EXEMPT DE TAXE FÉD.	NO. D'EXEMPT DE TAXE PROV.	VOTRE NO. DE COMMANDE	NÔTRE NO. DE COMMANDE	CONDITIONS	TAX DES VENTES
FED. LICENCE NO.	PROV. LICENCE NO.	YOUR ORDER NO.	OUR ORDER NO.	NET 30 DAYS	SALES TAX
DESCRIPTION					
9				\$ 8.75	\$ 78.75
9				15.00	135.00
9				3.00	27.00
Au assays Ag Cu Pb Zn PPM Sample Handling Cert.#0W-1415-R61 Sept. 25, 1990					
10				8.75	157.50
18				3.00	54.00
18				11.50	207.00
Au assays Sample Handling Ag Pb Zn Cert.#0W-1414-R61 sept. 25, 1990					
				Sub-total...	659.25
				WITH THANKS PER <i>D. Gardner</i> -10%.....	65.93
				TOTAL.....	\$ 593.32

SWASTIKA LABORATORIES  
OCT 25/90  
WITH THANKS  
PER *D. Gardner*

FACTURE/INVOICE ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS  
ESTABLISHED 1928

23218



### SWASTIKA LABORATORIES

(A DIVISION OF ASSAYERS CONSULTANTS LIMITED)

P.O. BOX 110, SWASTIKA, ONTARIO L9K 1T0  
TELEPHONE (705) 642-3244 FAX (705) 642-3300

FORM DATE ANNFP  
28v | Sept. | 1990

TRANSMITTED  
SHIPPED VIA

VERIFIED  
CERTIFIED

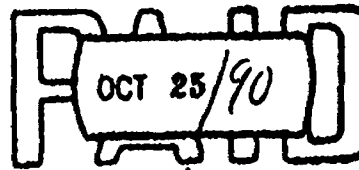
Lac Minerals Ltd (Exploration Division)  
1100--120 Adelaide St. E.  
Toronto, Ontario  
M5C 2T6

1.5% LATE CHARGE OVER 30  
DAYS (ANNUAL RATE 18%)

NO. D'EXEMPT. DE TAXE FRO	NO. D'EXEMPT. DE TAXE PROV	VOTRE NO. DE COMMANDE	NOTRE NO. DE COMMANDE	CONDITIONS NET 30 DAYS	TOUTES LES VENTES
FED. LICENCE NO.	PROV. LICENCE NO.	OUR ORDER NO.	OUR ORDER NO.	TERMS	CUSTOMER
39				\$ 0.75	\$ 341.25
39				15.00	525.00
				Sub-total....	926.25
				-10%.....	92.63
				TOTAL.....	\$ 833.62

Au assays on pulp  
By Cu Pb Zn  
Cert.#04-1416-RG1 Sept. 25, 1990

SWASTIKA LABORATORIES



WITH THANKS  
PER *[Signature]*

FACTURE/INVOICE ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS  
ESTABLISHED 1928



**REPORT OF WORK RECEIPTS**



Ministry of  
Northern Development  
and Mines

Ontario

**Report of Work**  
**Mining Act** (Expenditures, Subsection 77(19))

**Instructions**

- Please type or print.
- Refer to Subsection 77(19), the Mining Act for assessment work requirements and maximum credits allowed under this Subsection.
- Technical Reports, maps and proof of expenditures in duplicate should be submitted to Mining Lands Section, Mineral Development and Lands Branch.

Type of Work Performed <b>Grab Sampling Expenditure</b>	Mining Division <b>Larder Lake</b>	Township or Area <b>Hearst Twp</b>
Recorded Holder <b>LAC Minerals Ltd.,</b>	Prospector's Licence No. <b>T-664</b>	
Address <b>Ste 1100, 20 Adelaide St. E., Toronto, ONT</b>		Telephone No. <b>(416)-367-1031</b>
Work Performed By <b>LAC Minerals Ltd.</b>		
Name and Address of Author (of Submission) <b>CHRIS PEGG, P.O. Box 59, Chaput Hughes, ONT</b>		Date When Work was Performed From: <b>15 09 90</b> To: <b>18 10 90</b> Day Mo. Yr. Day Mo. Yr.

All the work was performed on Mining Claim(s): Indicate no. of days performed on each claim. *See Note No. 1 on reverse side											
Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days
<b>L979429</b>	<b>8.5</b>	<b>L955114</b>	<b>17</b>	<b>L955115</b>	<b>1.4</b>	<b>L955124</b>	<b>17.7</b>				
<b>L955125</b>	<b>14.2</b>	<b>L955126</b>	<b>2.1</b>								

<b>Instructions</b> Total days credits may be distributed at claim holder's choice. Enter number of days credits per claim in the expenditure days credit column (below).	Calculation of Expenditure Days Credits Total Expenditures $\$ 924 \frac{50}{XX}$		Total Days Credits $\div 15 = 61.63$	Total Number of Mining Claims Covered by this Report of Work $7$

Mining Claims (List in numerical sequence). If space is insufficient, attach schedules with required information

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L.	979429	31									
L.	955114	5									
L.	955115	5									
L.	955116	5									
L.	955124	5									
L.	955125	5									
L.	955126	5									

Total Number of Days Performed <b>61</b>	Total Number of Days Claimed <b>61</b>	Total Number of Days to be Claimed at a Future Date <b>0</b>
---	---	---

**Certification of Beneficial Interest** \*See Note No. 2 on reverse side

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

Date: **Oct 22/90** Recorded Holder or Agent (Signature): *[Signature]*

**Certification Verifying Report of Work**

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

Name and Address of Person Certifying  
**Chris PEGG, P.O. Box 59, Chaput Hughes, ONT POK1A0**

Telephone No. **(705)-567-3662** Date **Oct 22 1990** Certified By (Signature) *[Signature]*

Received at **MINING DIVISION**

**For Office Use Only**

Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded	Provincial Manager, Mining Lands

30 OCT 22 AM 9 47  
**RECEIVED**



**Instructions**

- Please type or print.
- Refer to Subsection 77(19), the Mining Act for assessment work requirements and maximum credits allowed under this Subsection.
- Technical Reports, maps and proof of expenditures in duplicate should be submitted to Mining Lands Section, Mineral Development and Lands Branch.

**Report of Work**  
(Expenditures, Subsection 77(19))

Type of Work Performed <b>Grab Sampling Expenditure</b>	Mining Division <b>Larder Lake</b>	Township or Area <b>Hearst Twp</b>
Recorded Holder <b>LAC Minerals Ltd.</b>	Prospector's Licence No. <b>T-664</b>	
Address <b>Ste 1100, 20 Adelaide St. E., Toronto, ONT.</b>		Telephone No. <b>(416)-367-1031</b>
Work Performed By <b>LAC Minerals Ltd.</b>		
Name and Address of Author (of Submission) <b>Chris PEGG, Box 59, Chaput Hughes, ONT P0K 1A0.</b>		Date When Work was Performed From: <b>15 09 90</b> To: <b>18 10 90</b> Day Mo. Yr. Day Mo.

All the work was performed on Mining Claim(s): Indicate no. of days performed on each claim. *See Note No. 1 on reverse side		Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days
		<b>L 955116</b>	<b>10</b>	<b>L 955115</b>	<b>10</b>	<b>L 979429</b>	<b>6</b>		
Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days
Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days

<b>Instructions</b> Total days credits may be distributed at claim holder's choice. Enter number of days credits per claim in the expenditure days credit column (below).	Calculation of Expenditure Days Credits Total Expenditures: <b>\$ 389<sup>72</sup></b> ÷ <b>15</b> = <b>25<sup>98</sup></b>		Total Days Credits Covered by this Report of Work <b>3</b>

Mining Claims (List in numerical sequence). If space is insufficient, attach schedules with required information

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
<b>L</b>	<b>979429</b>	<b>26</b>									

Total Number of Days Performed <b>26</b>	Total Number of Days Claimed <b>26</b>	Total Number of Days to be Claimed at a Future Date <b>0</b>
---	---	---

Certification of Beneficial Interest \*See Note No. 2 on reverse side

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

Date: **Dec 14/90** Recorded Holder or Agent (Signature): *[Signature]*

Certification Verifying Report of Work

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

Name and Address of Person Certifying  
**Chris Pegg, Box 59, Chaput Hughes, Ontario, P0K 1A0.**

Telephone No.: **(705)-567-3662** Date: **Dec 14/90** Certified By (Signature): *[Signature]*

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
Date Approved as Recorded	Provincial Manager, Mining Lands	

Received Stamp: *[Signature]*



- Instructions**
- Please type or print.
  - Refer to Subsection 77(19), the Mining Act for assessment work requirements and maximum credits allowed under this Subsection.
  - Technical Reports, maps and proof of expenditures in duplicate should be submitted to Mining Lands Section, Mineral Development and Lands Branch.

**Report of Work**  
**Mining Act** (Expenditures, Subsection 77(19))

Type of Work Performed <b>Core Assaying Expenditure</b>	Mining Division <b>Larder Lake</b>	Township or Area <b>Hearst Twp</b>
Recorded Holder <b>LAC Minerals Ltd.</b>	Prospector's Licence No. <b>T-664</b>	
Address <b>Ste 1100, 20 Adelaide St. E., Toronto, ONT</b>		Telephone No. <b>(416)-367-1031</b>
Work Performed By <b>LAC Minerals Ltd.</b>		
Name and Address of Author (of Submission) <b>Chris Pegg, Box 59, Chaput Hughes, ONT POK 1A0</b>		Date When Work was Performed From Day   Mo.   Yr. To Day   Mo.   Yr. <b>15 09 90 To 18 10 90</b>

All the work was performed on Mining Claim(s): Indicate no. of days performed on each claim. *See Note No. 1 on reverse side											
Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days

<b>Instructions</b> Total days credits may be distributed at claim holder's choice. Enter number of days credits per claim in the expenditure days credit column (below).	Calculation of Expenditure Days Credits Total Expenditures <b>\$ 1426<del>94</del></b>		Total Days Credits <b>15</b>	=	<b>95<del>3</del></b>	Total Number of Mining Claims Covered by this Report of Work <b>7</b>

Mining Claims (List in numerical sequence). If space is insufficient, attach schedules with required information

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L	979429	5									
L	955114	15									
L	955115	15									
L	955116	15									
L	955124	15									
L	955125	15									
L	955126	15									

Total Number of Days Performed <b>95</b>	Total Number of Days Claimed <b>95</b>	Total Number of Days to be Claimed at a Future Date <b>0</b>
---	---	---

Certification of Beneficial Interest \* See Note No. 2 on reverse side

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

Date: **Oct 22/90** Recorded Holder or Agent (Signature): *[Signature]*

Certification Verifying Report of Work

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

Name and Address of Person Certifying  
**Chris PEGG, P. O. Box 59, Chaput Hughes, ONT**

Telephone No.  
**(705)-567-3662**

Date  
**Oct 22 1990**

Certified By (Signature)  
*[Signature]*

Received Stamp: **MINING DIVISION**

**30 OCT 22 AM 9 47**

**RECEIVED**

Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded	Provincial Manager, Mining Lands



**Instructions**

- Please type or print.
- Refer to Subsection 77(19), the Mining Act for assessment work requirements and maximum credits allowed under this Subsection.
- Technical Reports, maps and proof of expenditures in duplicate should be submitted to Mining Lands Section, Mineral Development and Lands Branch.

**Report of Work**  
(Expenditures, Subsection 77(19))

Type of Work Performed <b>Core Assaying Expenditure</b>	Mining Division <b>Larder Lake</b>	Township or Area <b>Hearst Twp</b>
Recorded Holder <b>LAC Minerals Ltd.</b>	Prospector's Licence No. <b>T-664</b>	
Address <b>Ste 1100, 20 Adelaide St E., Toronto, ONT.</b>		Telephone No. <b>(416)-367-1031</b>
Work Performed By <b>LAC Minerals Ltd.</b>		
Name and Address of Author (of Submission) <b>Chris PEGG, Box 59, Chaput Hughes, ONT P0K1A0</b>		Date When Work was Performed From: <b>15 09 90</b> To: <b>18 10 90</b>

All the work was performed on Mining Claim(s): Indicate no. of days performed on each claim. *See Note No. 1 on reverse side									
Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days

<b>Instructions</b> Total days credits may be distributed at claim holder's choice. Enter number of days credits per claim in the expenditure days credit column (below).	Calculation of Expenditure Days Credits Total Expenditures <b>\$ 4207</b>		Total Days Credits <b>2.8</b>	Total Number of Mining Claims Covered by this Report of Work <b>1</b>
	$\div 15 =$			

Mining Claims (List in numerical sequence). If space is insufficient, attach schedules with required information

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L	955125	2.8									

Total Number of Days Performed <b>2.8</b>	Total Number of Days Claimed <b>2.8</b>	Total Number of Days to be Claimed at a Future Date <b>0</b>
--	--	---

Certification of Beneficial Interest \*See Note No. 2 on reverse side

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

Date: **Dec 14 / 90** Recorded Holder or Agent (Signature): *[Signature]*

Certification Verifying Report of Work

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

Name and Address of Person Certifying  
**Chris Pegg, Box 59, Chaput Hughes, ONT P0K1A0**

Telephone No. **(705)-567-3662** Date **Dec 14 / 90** Certified By (Signature): *[Signature]*

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
Date Approved as Recorded	Provincial Manager, Mining Lands	

Received Stamp

**TECHNICAL DATA STATEMENTS**



File \_\_\_\_\_

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

Type of Survey(s) Geochemical Expenditure - Grab Sampling  
Township or Area Hearst Twp  
Claim Holder(s) LAC Minerals Ltd.  
T-664.  
Survey Company LAC Minerals Ltd.  
Author of Report Chris PEGG  
Address of Author Box 59, Chaput Hughes, ONT. POK 1A0  
Covering Dates of Survey Sept 15/90 to Oct 18/90.  
(linecutting to office)  
Total Miles of Line Cut 8.2 miles.

**MINING CLAIMS TRAVERSED**  
List numerically

- L 979429  
(prefix) (number)
- L 955114
- L 955115
- L 955116
- L 955124
- L 955125
- L 955126

If space insufficient, attach list

<u>SPECIAL PROVISIONS</u> <u>CREDITS REQUESTED</u>	<u>DAYS</u> <u>per claim</u>
ENTER 40 days (includes line cutting) for first survey.	Geophysical -Electromagnetic _____ -Magnetometer _____ -Radiometric _____
ENTER 20 days for each additional survey using same grid.	-Other _____ Geological _____ Geochemical _____

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer \_\_\_\_\_ Electromagnetic \_\_\_\_\_ Radiometric \_\_\_\_\_  
(enter days per claim)

DATE: Oct 20/90 SIGNATURE: [Signature]  
Author of Report or Agent

Res. Geol. \_\_\_\_\_ Qualifications \_\_\_\_\_

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 7

GEOCHEMICAL SURVEY - PROCEDURE RECORD

Numbers of claims from which samples taken L 979429, L 955114, L 955115,  
L 955116, L 955124, L 955125, L 955126.

Total Number of Samples 123

Type of Sample Grab - rock  
(Nature of Material)

Average Sample Weight 5 lbs

Method of Collection hammering edge  
off of outcrop or float.

Soil Horizon Sampled N/A.

Horizon Development N/A.

Sample Depth N/A.

Terrain "

Drainage Development "

Estimated Range of Overburden Thickness "

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis \_\_\_\_\_

General \_\_\_\_\_

golds analysed using a  
1/2 assay ton, fire  
assay method with  
an Atomic Absorption  
finish (for weighing).

ANALYTICAL METHODS

Values expressed in: per cent   
p. p. m.   
p. p. b.

(Cu) (Pb), (Zn), Ni, Co, (Ag) Mo, As, -(circle)

Others Au in ppbs

Field Analysis (\_\_\_\_\_ tests)

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

Field Laboratory Analysis

No. (\_\_\_\_\_ tests)

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

Commercial Laboratory (\_\_\_\_\_ tests)

Name of Laboratory Swastika Labs

Extraction Method aqua regia

Analytical Method FA-AA / AA

Reagents Used \_\_\_\_\_

General \_\_\_\_\_

basemetals analyzed  
using the atomic  
absorption procedure.



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

Type of Survey(s) Geochemical Expenditure - Core Analyses.
Township or Area Hearst Twp
Claim Holder(s) LAC Minerals Ltd T-664
Survey Company LAC Minerals Ltd
Author of Report Chris Pegg
Address of Author Box 59, Chaput Hughes, ONT L1A0
Covering Dates of Survey Sept 15/90 to Oct 18/90
Total Miles of Line Cut 8.2 miles

MINING CLAIMS TRAVERSED
List numerically

L. 955 115
L. 955 116
L. 955 125

SPECIAL PROVISIONS
CREDITS REQUESTED

DAYS per claim

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

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

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer Electromagnetic Radiometric
(enter days per claim)

DATE: Oct 20/90 SIGNATURE: [Signature]
Author of Report or Agent

Res. Geol. Qualifications

Previous Surveys

Table with 4 columns: File No., Type, Date, Claim Holder

TOTAL CLAIMS 3

If space insufficient, attach list

GEOCHEMICAL SURVEY - PROCEDURE RECORD

Numbers of claims from which samples taken L. 955115, L. 955116,  
L. 955125.

Total Number of Samples 69

Type of Sample Sawn/split BQ core (a pulps of same)

(Nature of Material)

Average Sample Weight 1 lb.

Method of Collection from archived  
core specimens.

Soil Horizon Sampled \_\_\_\_\_

Horizon Development \_\_\_\_\_

Sample Depth \_\_\_\_\_

Terrain \_\_\_\_\_

Drainage Development \_\_\_\_\_

Estimated Range of Overburden Thickness \_\_\_\_\_

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis \_\_\_\_\_

General \_\_\_\_\_

golds analysed using a  
1/2 assay ton, fire assay  
method with an  
Atomic Absorption finish  
(for weighing).

ANALYTICAL METHODS

Values expressed in: per cent   
p. p. m.   
p. p. b.

Cu, Pb, Zn, Ni, Co, Ag, Mo, As, (circle)

Others Au in ppbs.

Field Analysis (\_\_\_\_\_ tests)

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

Field Laboratory Analysis

No. (\_\_\_\_\_ tests)

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

Commercial Laboratory (\_\_\_\_\_ tests)

Name of Laboratory Swastika Labs.

Extraction Method agua regia.

Analytical Method FA-AA / AA.

Reagents Used \_\_\_\_\_

General \_\_\_\_\_

base metals analyzed  
using the atomic  
absorption procedure.



Report of Work (Expenditures, Subsection 77(19))

Type of Work Performed: **Grab Sampling Expenditure** Mining Division: **Larder Lake** Township or Area: **Hearst Twp**  
 Recorded Holder: **LAC Minerals Ltd.** Prospector's Licence No.: **T-664**  
 Address: **Ste 1100, 20 Adelaide St. E., Toronto, ONT** Telephone No.: **(416)-367-1031**  
 Work Performed By: **LAC Minerals Ltd.**  
 Name and Address of Author (of Submission): **Chris PEGG, P.O. Box 59, Chaput Hughes, ONT POK1A0** Date When Work was Performed: **15 09 90 To 18 10 90**

All the work was performed on Mining Claim(s). Indicate no. of days performed on each claim. *See Note No. 1 on reverse side				Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days
				L979429	8.5	L955114	17	L955115	1.4	L955124	17.7
Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days
L955125	14.2	L955126	2.1								

Instructions: Total days credits may be distributed at claim holder's choice. Enter number of days credits per claim in the expenditure days credit column (below).

Calculation of Expenditure Days Credits: Total Expenditures \$ **924.50** ÷ 15 = Total Days Credits **61.63**

Total Number of Mining Claims Covered by this Report of Work: **7**

Mining Claims (List in numerical sequence). If space is insufficient, attach schedules with required information

Prefix	Mining Claim Number	Expend. Days Cr.	Prefix	Mining Claim Number	Expend. Days Cr.	Prefix	Mining Claim Number	Expend. Days Cr.	Prefix	Mining Claim Number	Expend. Days Cr.
L.	979429	31									
L.	955114	5									
L.	955115	5									
L.	955116	5									
L.	955124	5									
L.	955125	5									
L.	955126	5									

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NOV 06 1990  
MINING LANDS SECTION

Total Number of Days Performed: **61** Total Number of Days Claimed: **61** Total Number of Days to be Claimed at a Future Date: **0**

Certification of Beneficial Interest \*See Note No. 2 on reverse side

I hereby certify that, at the time the work was performed, the claims covered in this report of work were recorded in the current recorded holder's name or held under a beneficial interest by the current recorded holder. Date: **Oct 22/90** Recorded Holder or Agent (Signature): **Chris Pegg**

Certification Verifying Report of Work

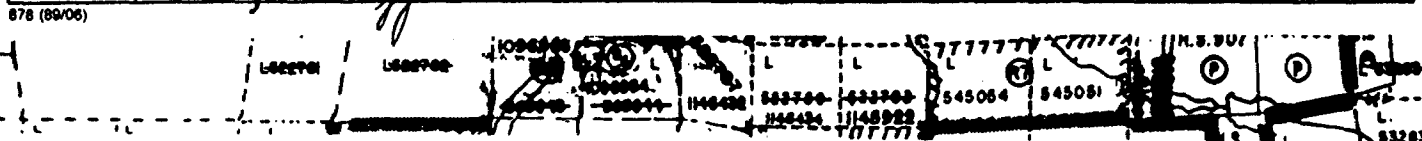
I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Address of Person Certifying: **Chris PEGG, P.O. Box 59, Chaput Hughes, ONT POK1A0** Telephone No.: **(705)-567-3662** Date: **Oct 22 1990** Certified By (Signature): **Chris Pegg**

For Office Use Only

Total Days Cr. Recorded: **61** Date Recorded: **Oct 22/90** Mining Recorder: **[Signature]** Date Approved as Recorded: **Feb 21, 1991** Provincial Manager, Mining Lands: **[Signature]**

30 OCT 22 AM 9 47  
RECEIVED





Nov 22  
Dec 21

**Report of Work**  
(Expenditures, Subsection 77(19)) **2.13785**

Type of Work Performed: **Core Assaying Expenditure** Mining Division: **Larder Lake** Township of Area: **Hearst Twp**  
 Recorded Holder: **LAC Minerals Ltd.** Prospector's Licence No.: **T-664**  
 Address: **Ste 1100, 20 Adelaide St. E., Toronto, ONT** Telephone No.: **(416)-367-1031**  
 Work Performed By: **LAC Minerals Ltd.**  
 Name and Address of Author (of Submission): **Chris Pegg, Box 59, Chaput Hughes, ONT POK 1A0** Date When Work was Performed: **15 09 90** to **18 10 90**

Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days
L 955115	35	L 955116	35	L 955125	25						

**Instructions**  
Total days credits may be distributed at claim holder's choice. Enter number of days credits per claim in the expenditure days credit column (below).

Calculation of Expenditure Days Credits  
 Total Expenditures: **\$ 1426<sup>94</sup>** ÷ 15 = **95<sup>13</sup>**  
 Total Number of Mining Claims Covered by this Report of Work: **7**

Mining Claims (List in numerical sequence). If space is insufficient, attach schedules with required information

Mining Claim	Expend. Days Cr.	Mining Claim	Expend. Days Cr.	Mining Claim	Expend. Days Cr.	Mining Claim	Expend. Days Cr.
L 979429	5						
L 955114	15						
L 955115	15						
L 955116	15						
L 955124	15						
L 955125	15						
L 955126	15						

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NOV 06 1990  
MINING LANDS SECTION

Total Number of Days Performed: **95** Total Number of Days Claimed: **95** Total Number of Days to be Claimed at a Future Date: **0**

Certification of Beneficial Interest \*See Note No. 2 on reverse side  
 I hereby certify that, at the time the work was performed, the claims covered in this report of work were recorded in the current recorded holder's name or held under a beneficial interest by the current recorded holder. Date: **Oct 22/90** Recorded Holder or Agent (Signature): *[Signature]*

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

Name and Address of Person Certifying: **Chris PEGG, P. O. Box 59, Chaput Hughes, ONT**  
 POK 1A0 Telephone No.: **(705)-567-3662** Date: **Oct 22/90** Certified by (Signature): *[Signature]*

**For Office Use Only**

Total Days Cr. Recorded: **95** Date Recorded: **Oct 22/90** Mining Recorder: *[Signature]*  
 Date Approved as Recorded: **Feb. 21/91** Provincial Manager, Mining Lands: *[Signature]*

Received Stamp: **MINING DIVISION** Date: **30 OCT 22 AM 9 47**

RECEIVED



DOCUMENT No. 9008-00746

Instructions  
 - Please type or print.  
 - Refer to Subsection 77(19), the Mining Act for assessment work requirements and maximum credits allowed under this Subsection.  
 - Technical Reports, maps and proof of expenditures in duplicate should be submitted to Mining Lands Section, Mineral Development and Lands Branch.

Report of Work (Expenditures, Subsection 77(19))  
 Mining Act

Type of Work Performed <b>Core Assaying Expenditure</b>	Mining Division <b>Larder Lake</b>	Township or Area <b>Hearst Twp</b>
Recorded Holder <b>LAC Minerals Ltd.</b>	Prospector's Licence No. <b>T-664</b>	
Address <b>Ste 1100, 20 Adelaide St E., Toronto, ONT.</b>		Telephone No. <b>(416)-367-1031</b>
Work Performed By <b>LAC Minerals Ltd.</b>		
Name and Address of Author (of Submission) <b>Chris PEGG, Box 59, Chaput Hughes, ONT P0K1A0</b>		Date When Work was Performed From: <b>15 09 90</b> To: <b>18 10 90</b> Day Mo. Yr. Day Mo. Yr.

All the work was performed on Mining Claim(s): Indicate no. of days performed on each claim. *See Note No. 1 on reverse side				Mining Claim No. of Days <b>L955125 2.8</b>	Mining Claim No. of Days	Mining Claim No. of Days	Mining Claim No. of Days	Mining Claim No. of Days	Mining Claim No. of Days	Mining Claim No. of Days	
Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days
Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days

Instructions Total days credits may be distributed at claim holder's choice. Enter number of days credits per claim in the expenditure days credit column (below).	Calculation of Expenditure Days Credits		Total Days Credits	Total Number of Mining Claims Covered by this Report of Work
	Total Expenditures \$ <b>4207</b>	+ 15	= <b>2.8</b>	<b>1</b>

Mining Claims (List in numerical sequence). If space is insufficient, attach schedules with required information

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
<b>L</b>	<b>955125</b>	<b>2.8</b>									

RECEIVED  
 FEB 12 1991  
 MINING LANDS SECTION

Total Number of Days Performed <b>2.8</b>	Total Number of Days Claimed <b>2.8</b>	Total Number of Days to be Claimed at a Future Date <b>0</b>
--	--	---

Certification of Beneficial Interest \*See Note No. 2 on reverse side

I hereby certify that, at the time the work was performed, the claims covered in this report of work were recorded in the current recorded holder's name or held under a beneficial interest by the current recorded holder.	Date <b>Dec 14/90</b>	Recorded Holder or Agent (Signature) <i>[Signature]</i>
--	--------------------------	--

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.		
Name and Address of Person Certifying <b>Chris Pegg, Box 59, Chaput Hughes, ONT P0K1A0</b>		
Telephone No. <b>(705)-567-3662</b>	Date <b>Dec 14/90</b>	Certified By (Signature) <i>[Signature]</i>

For Office Use Only

Total Days Cr. Recorded <b>2.8</b>	Date Recorded <b>Dec 14/90</b>	Mining Recorder <i>[Signature]</i>
	Date Approved as Recorded <b>February 21/91</b>	Principal Manager, Mining Lands <i>[Signature]</i>

Received Stamp <b>RECEIVED LARDER LAKE MINING DIVISION DEC 19 1990 TIME 12:20pm</b>
--

**Instructions**  
 • Please type or print.  
 • Refer to Subsection 77(10), the Mining Act for assessment work requirements and maximum credits allowed under this Subsection.  
 • Technical Reports, maps and proof of expenditures in duplicate should be submitted to Mining Lands Section, Mineral Development and Lands Branch.

**Mining Act**  
**Report of Work**  
 (Expenditures, Subsection 77(19))

Type of Work Performed <b>Grab Sampling Expenditure</b>	Mining Division <b>Larder Lake</b>	Township or Area <b>Heerst Twp</b>
Recorded Holder <b>LAC Minerals Ltd. 2.13785</b>	Prospector's Licence No. <b>T-664</b>	
Address <b>Ste 1100, 20 Adelaide St. E., Toronto, ONT.</b>		Telephone No. <b>(416)-367-1031</b>
Work Performed By <b>LAC Minerals Ltd.</b>		
Name and Address of Author (of Submission) <b>Chris PEGG, Box 59, Chaput Hughes, ONT POK 1A0.</b>		Date When Work was Performed From: <b>15</b> Day, <b>09</b> Mo., <b>90</b> Yr. To: <b>18</b> Day, <b>10</b> Mo., <b>90</b> Yr.

All the work was performed on Mining Claim(s): Indicate no. of days performed on each claim. *See Note No. 1 on reverse side		Mining Claim <b>L 955116</b>	No. of Days <b>10</b>	Mining Claim <b>L 955115</b>	No. of Days <b>10</b>	Mining Claim <b>L 979429</b>	No. of Days <b>6</b>	Mining Claim	No. of Days	Mining Claim	No. of Days
Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days
Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days

<b>Instructions</b> Total days credits may be distributed at claim holder's choice. Enter number of days credits per claim in the expenditure days credit column (below).	<b>Calculation of Expenditure Days Credits</b>		<b>Total Number of Mining Claims Covered by this Report of Work</b> <b>3</b>
	Total Expenditures <b>\$ 389<sup>72</sup></b>	<b>+ 15 = 25<sup>98</sup></b>	

**Mining Claims (List in numerical sequence). If space is insufficient, attach schedules with required information**

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
<b>L</b>	<b>979429</b>	<b>26</b>									
		<b>24</b>									
	<i>None but 60 days maximum</i>										

**RECEIVED**  
**FEB 12 1991**  
**MINING LANDS SECTION**

Total Number of Days Performed <b>26</b>	Total Number of Days Claimed <b>26 24</b>	Total Number of Days to be Claimed at a Future Date <b>0 2</b>
---	--	---

**Certification of Beneficial Interest \*See Note No. 2 on reverse side**

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

Date: **Dec 14/90** Recorded Holder or Agent (Signature): *[Signature]*

**Certification Verifying Report of Work**

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

Name and Address of Person Certifying:  
**Chris Pegg, Box 59, Chaput Hughes, Ontario, POK 1A0.**

Telephone No.: **(705)-567-3662** Date: **Dec 14/90** Certified By (Signature): *[Signature]*

**Office Use Only**

Total Days Cr. Recorded <b>24</b> <b>26</b>	Date Recorded <b>Dec 19/90</b>	Mining Recorder <i>[Signature]</i>
Date Approved as Recorded <b>February 21/91</b>	Provincial Manager, Mining Lands <i>[Signature]</i>	

Received Stamp: **RECEIVED LARDER LAKE MINING DIVISION DEC 19 1990 TIME 12:20pm**



Ontario

Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des Mines

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

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

Your File: W. 9008.00745  
Our File: 2.13785

March 21, 1991

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

Dear Sir/Madam:

RE: Notice of Intent dated February 21, 1991 for Geochemical  
Survey on mining claims L. 955114 et al in Hearst Township.

-----

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

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

Yours sincerely,

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

LJ/jl  
Encl:

cc: Lac Minerals Ltd.  
TORONTO, Ontario

Resident Geologist  
Kirkland Lake, Ontario

**Recorded Holder**  
 Lac Minerals Ltd.

**Township or Area**  
 Hearst Township

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
<b>Geophysical</b> Electromagnetic _____ days Magnetometer _____ days Radiometric _____ days Induced polarization _____ days Other _____ days	L 955114-116 incl. 955124-126 incl. 979429
<b>Section 77 (19)</b> See "Mining Claims Assessed" column	
<b>Geological</b> _____ days	
<b>Geochemical</b> 12.7 _____ days	
Man days <input type="checkbox"/> Airborne <input type="checkbox"/>	
<b>Special provision</b> <input checked="" type="checkbox"/> Ground <input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Credits have been reduced because of partial coverage of claims.	
<input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	

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

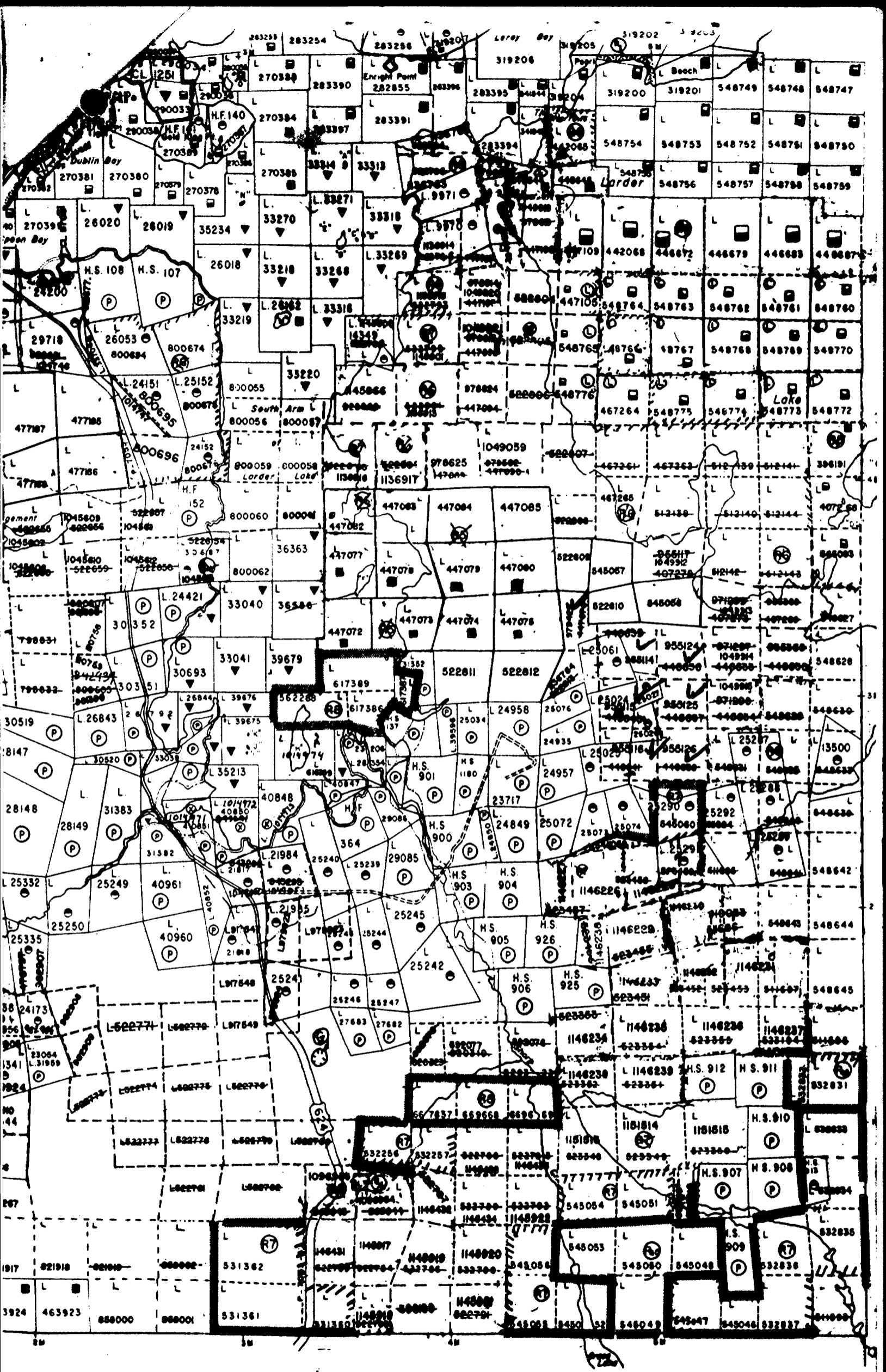
[Empty box for special credits]

**No credits have been allowed for the following mining claims**

not sufficiently covered by the survey                       insufficient technical data filed

[Empty box for no credits]

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

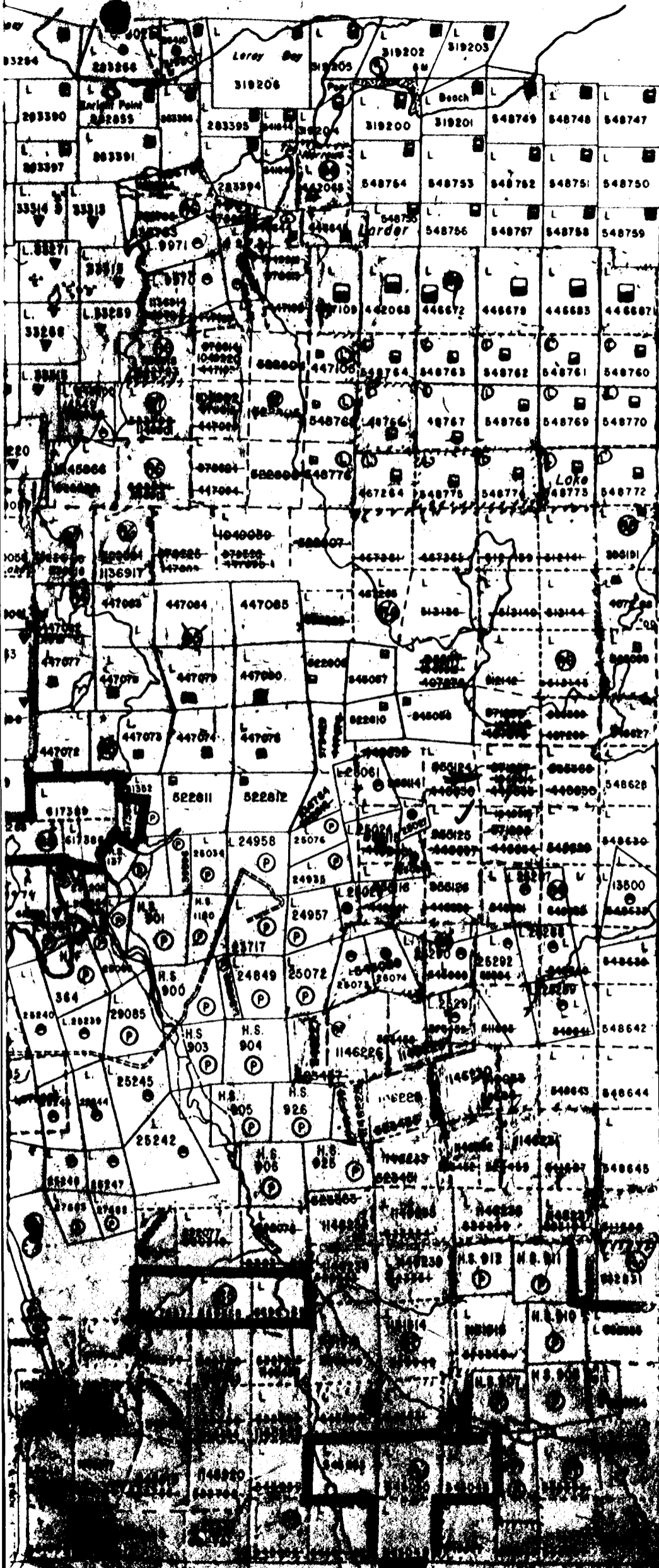


SKEAD TWP.





M.L.



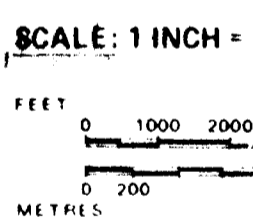
McFADDEN TWP.

HIGHWAY AND ROAD  
 OTHER ROADS  
 TRAILS  
 SURVEYED LINES:  
 TOWNSHIPS, BAS  
 LOTS, MINING CL  
 UNSURVEYED LINE  
 LOT LINES  
 PARCEL BOUNDA  
 MINING CLAIMS  
 RAILWAY AND RIG  
 UTILITY LINES  
 NON-PERENNIAL ST  
 FLOODING OR FLOC  
 SUBDIVISION OR CO  
 RESERVATIONS  
 ORIGINAL SHOREL  
 (MARSH OR MUSKEG  
 MINES  
 TRAVERSE MONUM

### DISPOSITIO

TYPE OF DOCUM  
 PATENT, SURFACE  
 " , SURFACE  
 " , MINING RI  
 LEASE, SURFACE &  
 " , SURFACE RI  
 " , MINING RIG  
 LICENCE OF OCCUP  
 ORDER-IN-COUNCIL  
 RESERVATION  
 CANCELLED  
 SAND & GRAVEL

NOTE: MINING RIGHTS  
 1913, VESTED  
 LANDS ACT, R

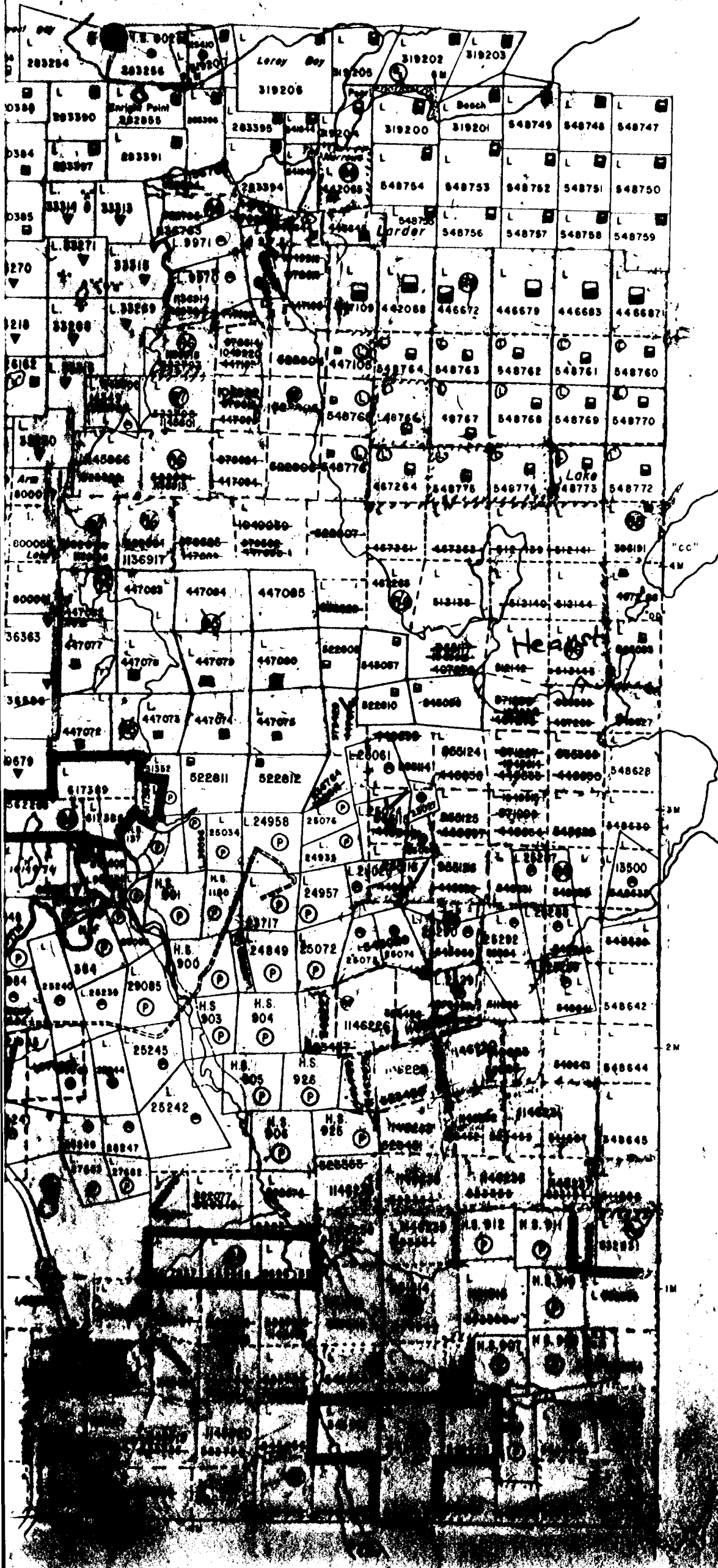


*Replaced*

TOWNSHIP  
**HEARS**  
 M.N.R. ADMINIST  
**KIRKLAN**  
 MINING DIVISI  
**LARDER**  
 LAND TITLES / R  
**TIMISKA**



M.L.



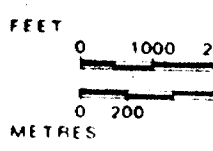
MCFADDEN TWP.

HIGHWAY AND  
OTHER ROADS  
TRAILS  
SURVEYED LIN  
TOWNSHIPS,  
LOTS, MININ  
UNSURVEYED  
LOT LINES  
PARCEL BOU  
MINING CLA  
RAILWAY AND  
UTILITY LINES  
NON-PERENNIA  
FLOODING OR  
SUBDIVISION O  
RESERVATIONS  
ORIGINAL SHOR  
(MARSH OR MUS  
MINES  
TRAVERSE MON

**DISPOSIT**

TYPE OF DOC  
PATENT, SURFA  
" SURFA  
" MINING  
LEASE, SURFA  
" SURFACE  
" MINING  
LICENCE OF OCC  
ORDER-IN-COUN  
RESERVATION  
CANCELLED  
SAND & GRAVEL  
NOTE: MINING RIG  
1913, VEST  
LANDS ACT

SCALE: 1 INCH



*Replaced*

TOWNSHIP  
**HEAR**  
M.N.R. ADMINI  
**KIRKLAN**  
MINING DIVIS  
**LARDEI**  
LAND TITLES /  
ONARIO



REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

- M.R.O. - MINING RIGHTS ONLY
- O-L-90 - SURFACE RIGHTS ONLY
- M+S - MINING AND SURFACE RIGHTS

- | Description | Order No.  | Date             | Disposition   | File |
|-------------|--|------------------|---|------|
| 11          | SURFACE RIGHTS WITHDRAWN FROM STAKING SECTION 36/80          | ORDER NO. W15/80 |   |      |
| 12          | SURFACE & MINING RIGHTS WITHDRAWN FROM STAKING SECTION 36/80 | ORDER NO. W65/84 | O-L-90 OR OPENS W65/84  |      |
| 13          | MINING RIGHTS WITHDRAWN FROM STAKING SECTION 36/80           | ORDER NO. W9/85  | O-L-10-89 OPENS PART OF W9/85   |      |
| 14          | SURFACE & MINING RIGHTS WITHDRAWN FROM STAKING SECTION 36/80 | ORDER NO. W17/85 | O-32/89 OPENS W 37/85   |      |
| 15          | SURFACE & MINING RIGHTS WITHDRAWN FROM STAKING SECTION 36/80 | ORDER NO. W36/85 | O-22/83 OPENS W 36/85   |      |
| 16          | SURFACE & MINING RIGHTS WITHDRAWN FROM STAKING SECTION 36/80 | ORDER NO. W30/85 | O-L-8-90 OPENS PART OF W30/85<br>O-24/88 OPENS PART OF W30/85<br>O-25/85 OPENS PART OF W30/85<br>O-26/85 OPENS PART OF W30/85<br>O-63/87 OPENS PART OF W30/85<br>O-47/87 OPENS PART OF W30/85<br>O-L-10-88 OPENS PART OF W30/85 |      |
| 17          | SURFACE & MINING RIGHTS WITHDRAWN FROM STAKING SECTION 36/80 | ORDER NO. W7/86  | O-74/88 OPENS PART OF W7/86<br>O-80/87 OPENS PART OF W7/86<br>O-10/88 OPENS PART OF W7/86<br>O-16/88 OPENS PART OF W7/86<br>O-17/88 OPENS PART OF W7/86<br>O-18-90 OPENS PART OF W7/86<br>O-19-90 OPENS PART OF W7/86           |      |
| 18          | SURFACE & MINING RIGHTS WITHDRAWN FROM STAKING SECTION 36/80 | ORDER NO. W9/86  | O-84/87 OPENS PART OF W9/86<br>O-23/88 OPENS PART OF W9/86<br>O-L-7-90 OPENS PART OF W9/86<br>O-L-10-90 OPENS PART OF W9/86   |      |
| 19          | SURFACE & MINING RIGHTS WITHDRAWN FROM STAKING SECTION 36/80 | ORDER NO. W61/86 | O-L-7-90 OPENS PART OF W61/86   |      |
| 20          | SURFACE & MINING RIGHTS WITHDRAWN FROM STAKING SECTION 36/80 | ORDER NO. W50/86 | O-8/88 OPENS PART OF W50/86<br>O-30/87 OPENS PART OF W50/86<br>O-42-90 OPENS PART OF W50/86<br>O-L-10-90 OPENS PART OF W50/86   |      |

**TOWNSHIP SUBJECT TO FORESTRY OPERATIONS**

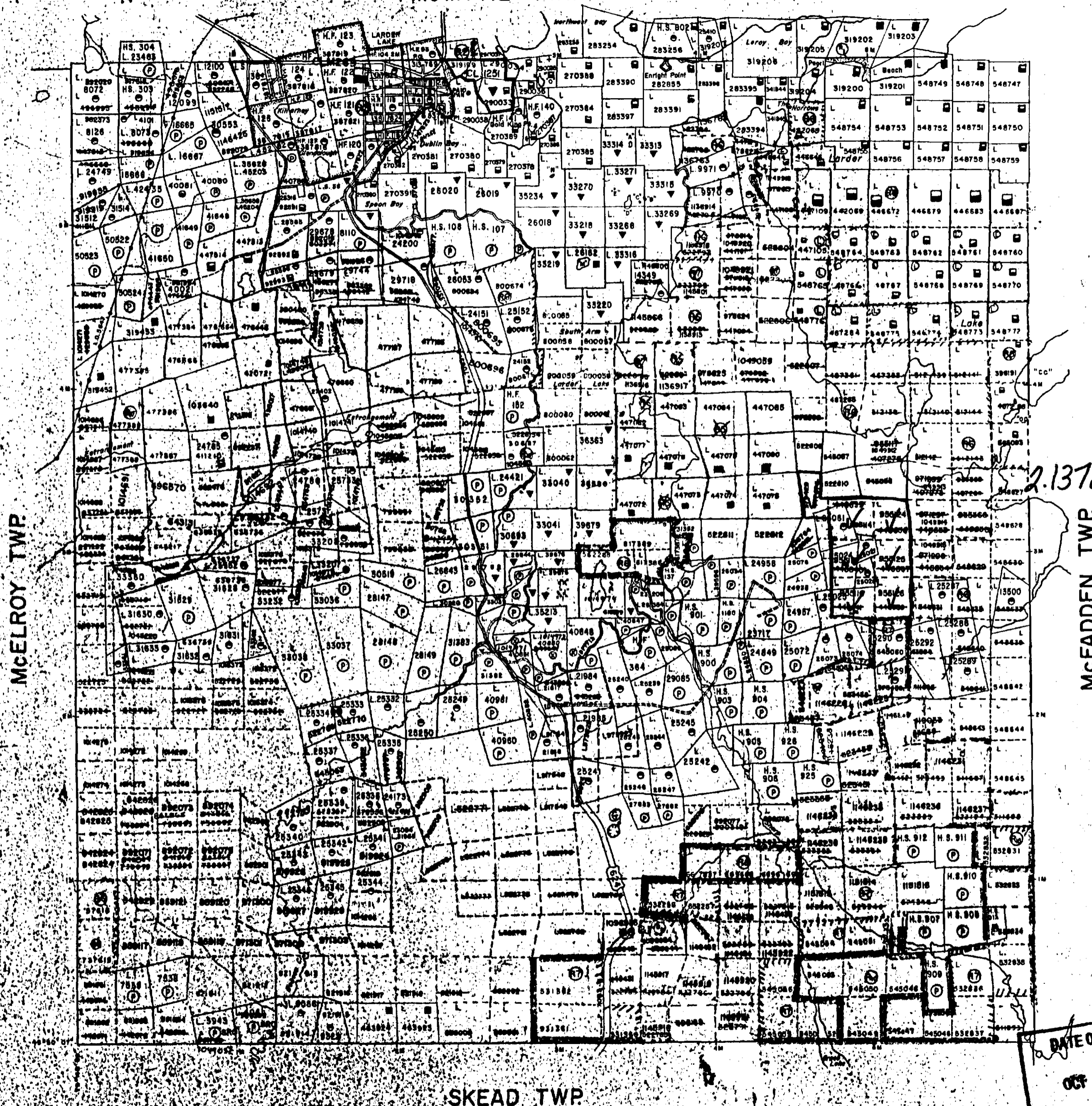
Township of Hearst lies entirely within the jurisdiction of the Township of Larder Lake.



32045E0126 2.13785 HEARST

200

McVITTIE TWP.



LEGEND

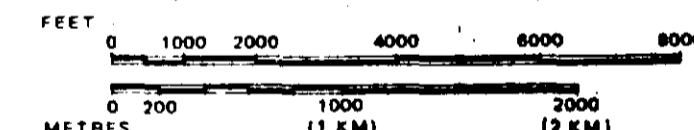
- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING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

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	
" SURFACE RIGHTS ONLY	
" MINING RIGHTS ONLY	
LEASE, SURFACE & MINING RIGHTS	
" SURFACE RIGHTS ONLY	
" MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	
ORDER-IN-COUNCIL	
RESERVATION	
CANCELLED	
SAND & GRAVEL	

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

SCALE: 1 INCH = 40 CHAINS



Replaced on Aug 19, 1987

TOWNSHIP  
**HEARST**  
M.N.R. ADMINISTRATIVE DISTRICT  
KIRKLAND LAKE  
MINING DIVISION  
LARDER LAKE  
LAND TITLES / REGISTRY DIVISION  
TIMISKAMING

DATE OF ISSUE  
OCT 30 1980  
LARDER LAKE  
MINING RECORDERS OFFICE

Ministry of Natural Resources  
Land Management Branch  
Ontario

FEBRUARY, 1985

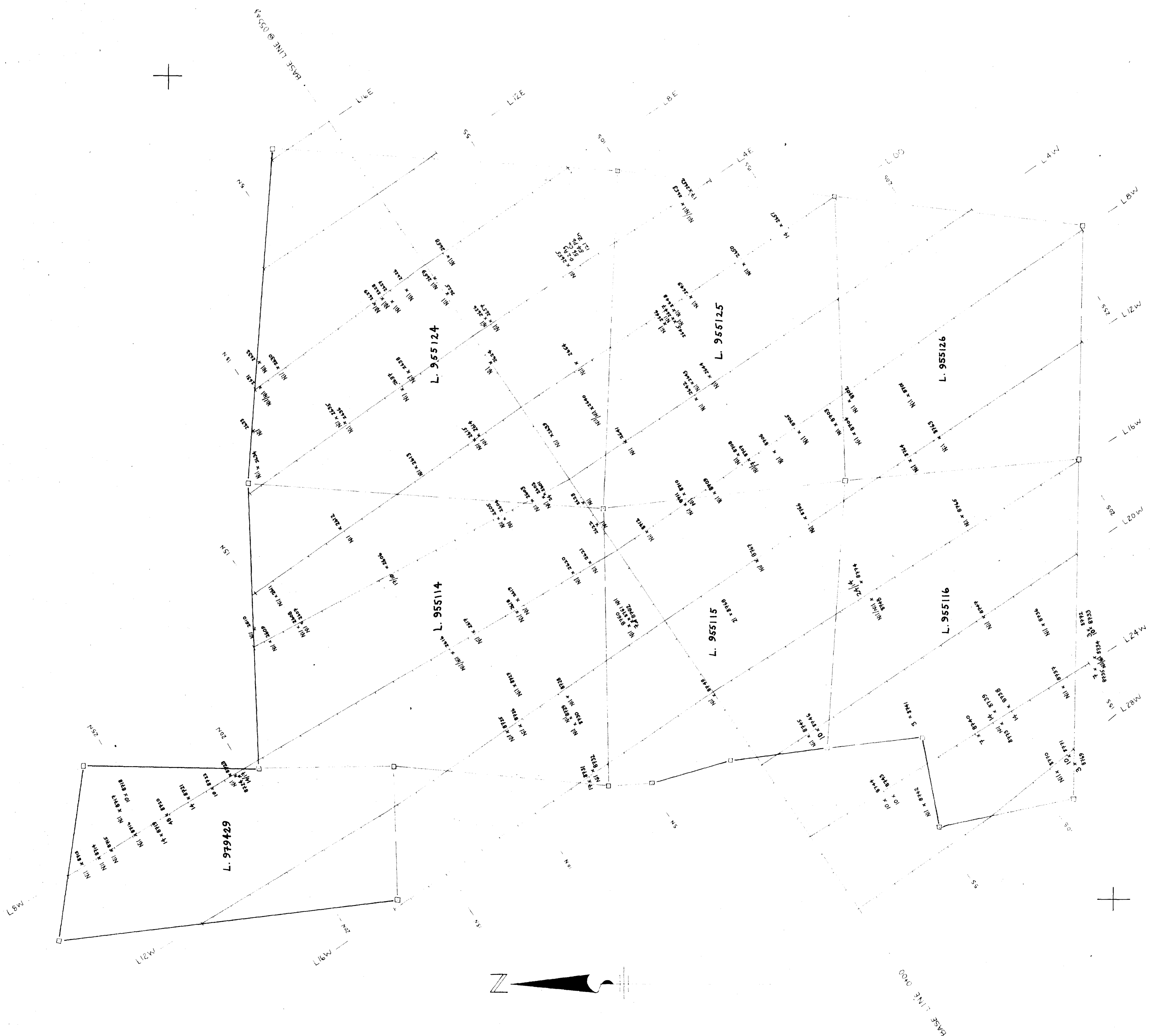
Number  
**G-3213**

SKOAD TWP.

NOTICE OF FORESTRY ACTIVITY

THE TOWNSHIP AREA FALLS WITHIN THE

LAND MANAGEMENT PLAN



**Legend**  
 X - sample location site  
 2624 - sample tag number  
 48 X - gold value in ppbs  
 029 - barometric value in ftmas.  
 (sample 2625)

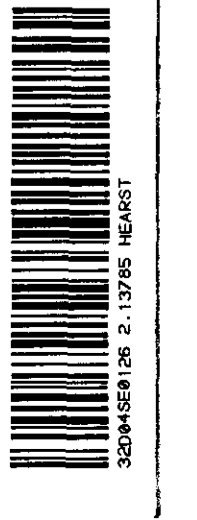
2 13785

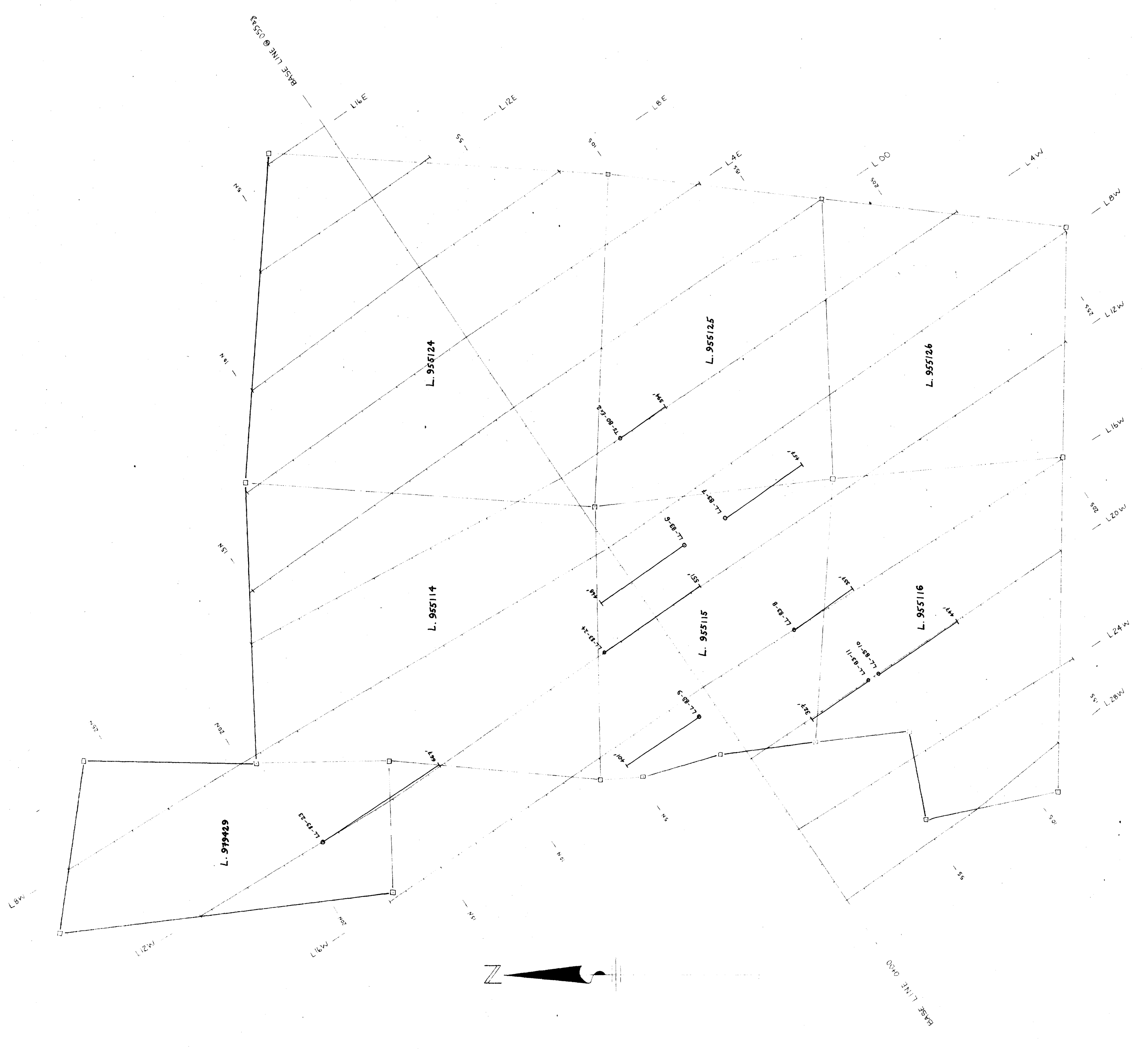
**LAC MINERALS LTD.**  
 Thunderwood Property  
 Liberty Township Ontario  
 kthru 3

**Grab Sample Locations**

DATE: Oct 19/90  
 REVISION: [unclear]  
 APPROVED BY: [unclear]

1:2400





Base & Previous Metal Analyses - 1990 - Core Samples  
 LL-83-6  
 TS-80-Ex2  
 LL-83-6

Whole Rock Analyses - 1990 - Core Samples  
 LL-83-6  
 LL-83-7  
 LL-83-8  
 LL-83-9  
 LL-83-10  
 LL-83-11  
 LL-83-23  
 LL-83-24  
 TS-80-Ex2

213785

**LAC MINERALS LTD**  
**Thunderwood Property**  
 Hearst Township, Ontario

**Drill Hole Location Plan**  
 Kfhu 4

DATE: Oct 19/90  
 REVISION: By: *[Signature]* APPPROVED: *[Signature]*

1:2400

