GEOCHEMICAL AND GRADIOMETER SURVEY REPORT

ON THE

PERRON PROPERTY

HARKER ELLIOTT GROUP 1

HARKER, ELLIOTT TOWNSHIPS
LARDER LAKE MINING DIVISION
DISTRICT OF COCHRANE, ONTARIO

FOR

JOHN E. PERRON

PERRONS' 83 LIMITED

NOVEMBER 11, 1983

MARY GREER
GEOLOGICAL TECHNICIAN

2.6067

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Date: October, 1983

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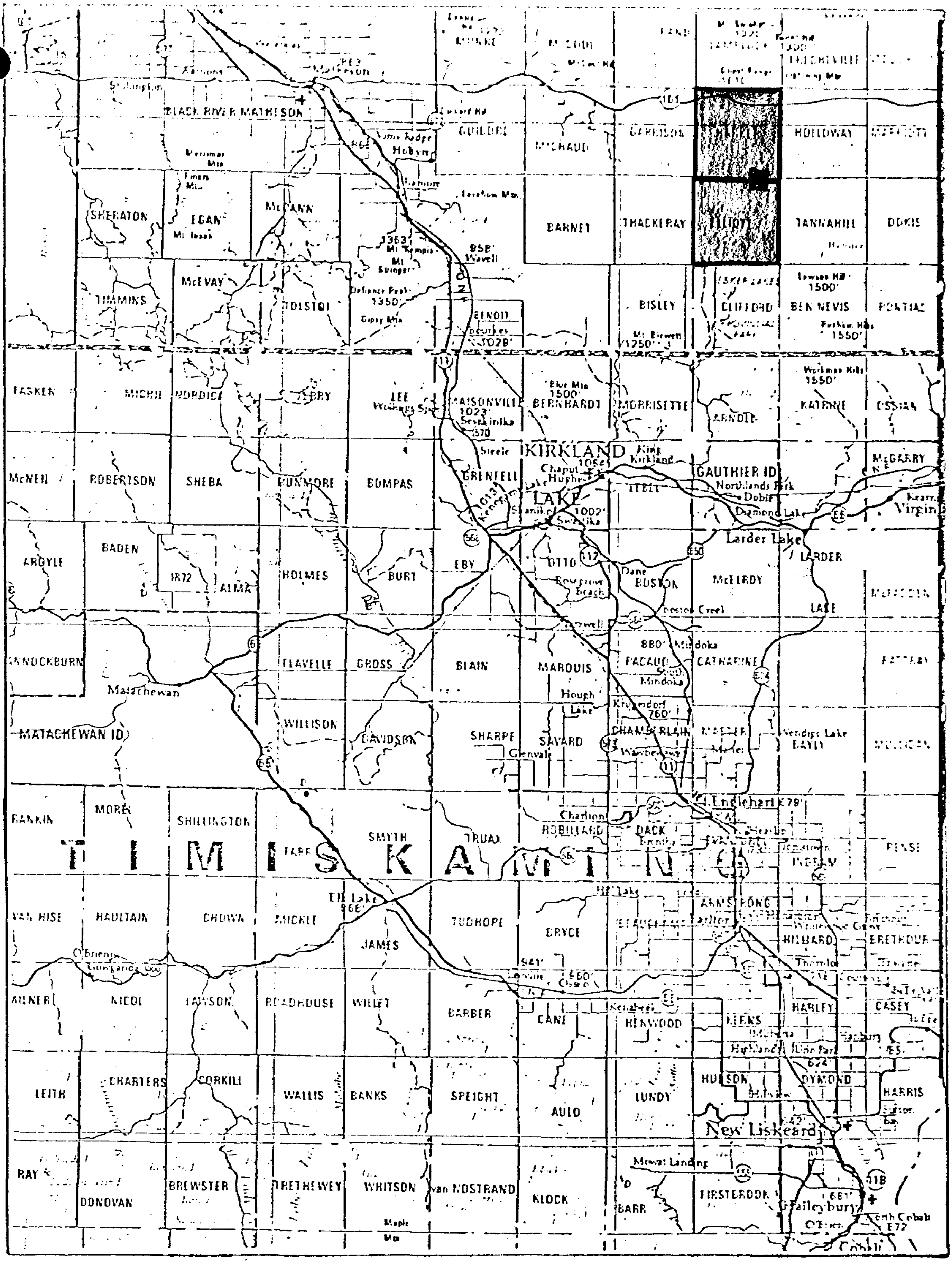
INTRODUCTION

The Harker-Elliott property was recorded by Alexander H. Perron during October, 1979, and a geophysical grid was established during the summer of 1981. From December 7-12, 1981, two geophysical surveys (electromagnetic and magnetic) were completed over the twelve (12) staked claims and half of the Iris Gold patent claims. In the summer of 1983 a geological survey was conducted over the same as the above mentioned surveys. (See Resident's Geologist Files, Kirkland Lake, Ontario).

In September, 1983, a geochemical and geophysical (gradiometer) survey was completed to further assist in the defining of an anomalous zone.

The geochemical survey was conducted by Mary Greer and Derrick Hall of MPH Consulting Limited, Toronto, Ontario. The gradiometer survey was conducted by Simon Bate of MPH Consulting Limited, Toronto, Ontario.

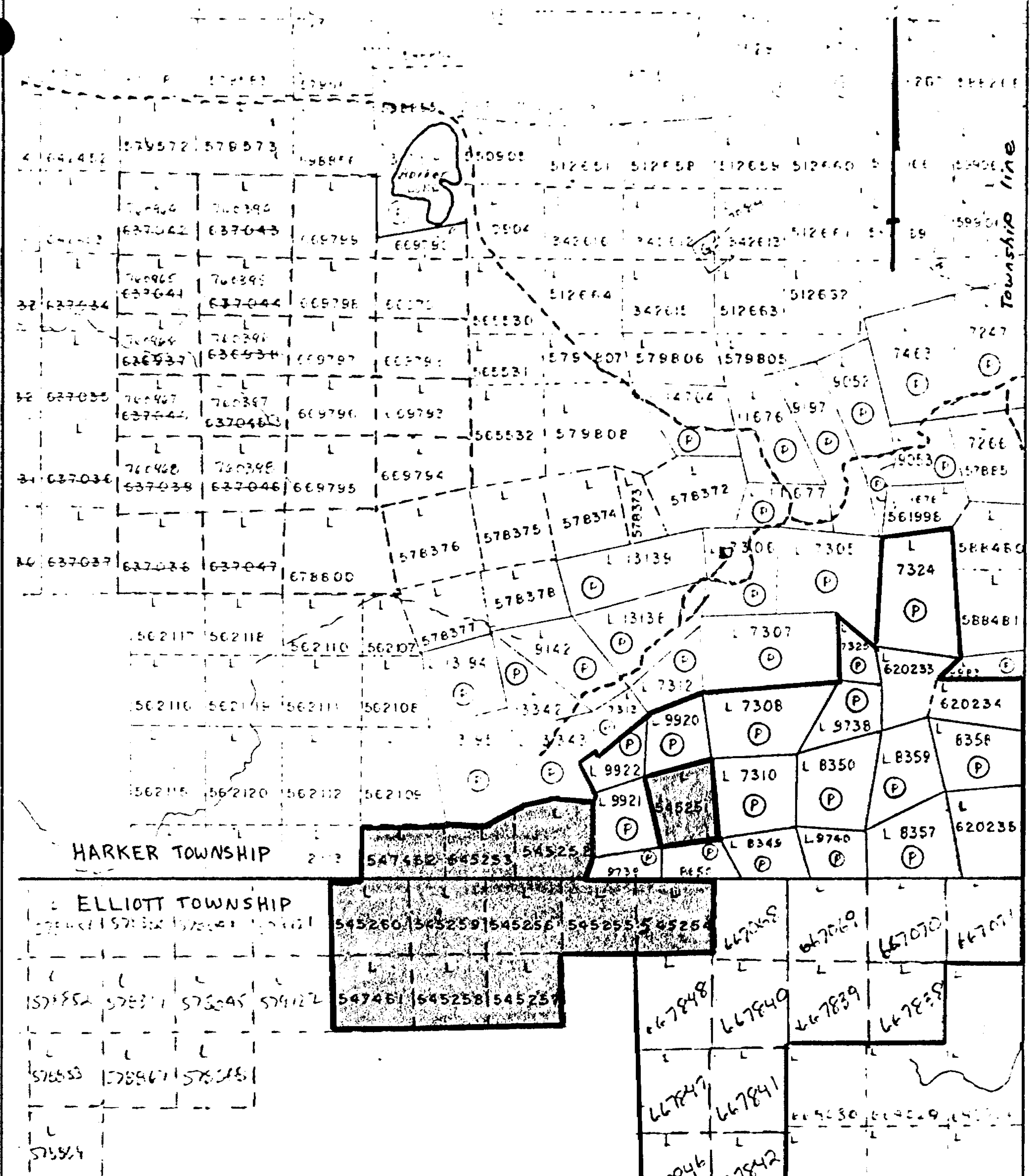
All drafting and interpretation was completed by Mary Greer.



Location Map (figure 1a)

Scale: 1:600,000

Miles 10 0 10 20



Taken from a September 1983, claim map

Location Map

(figure 1b)

Scale: 1inch to ½ mile

The purpose of this report is to briefly describe the results obtained in said surveys.

The anomalies detected therefrom are shown on the accompanying plan maps at a scale of one inch to 200 feet, that form an intergral part of this report.

PROPERTY DESCRIPTION

The Harker-Elliott Group 1 consists of a contiguous block of eleven (11) unpatented mining claims and one isolated unpatented mining claim for a total of twelve (12) claims. Eight (8) of the claims are found in Elliott township and the other claims mentioned are found in Harker township. (See Figure 1 b)

The claims are part of the Larder Lake Mining Division, District of Cochrane, Ontario, and are further described as follows:

Claim No.	No. of Claims	Township
L-545251 - 53 (inclusive)	3	Harker
L-547462	1	Harker
L-545254 - 60 (inclusive)	7	Elliott
L-547461	1	Elliott
Total Claims =	12	

Holder of the aforementioned twelve (12) claims has been attested to by John E. Perron, 103 Government Road, East, Kirkland Lake, Ontario, and was not independently ascertained by the writer.

LOCATION AND ACCESS

The Perron property is located in the southeastern-northeastern corner of Harker and Elliott townships, approximately at 48° 28' north latitude and 79° 46' west longitude, or twenty-five (25) miles north-northeast of the town of Kirkland Lake.

Access to Harker township can be gained via secondary forestry access roads extending south from highway 101 extending east approximately twenty-four (24) miles from the town of Matheson, Ontario. (See Figure 1 a)

PREVIOUS WORK

Three showings were discovered on the adjacent Perron patents (more specifically Iris Gold Mines). In the summer of 1947, surface work was carried out by R. Storen on the No. 1, 2 and 3 showings, involving surface pits , trenches and a small diamond drill program on the Number 1 vein (found on the eastern half of the property).

On patent claim L-8650 the Number 2 showing was explored by trenching two (2) pits and channel samples were taken from each pit. This showing is a narrow shear zone at the contact between a rhyolite flow and a fine grained basic lava.

The Number 3 showing; a quartz vein in pillow lava trending N 70° E; is found on claim L-5520 and this showing was trenched for 120 feet. This vein was reported to be a narrow quartz vein mineralized with pyrite, chalcopyrite and galena.

Some trenching and pitting was conducted on the Elliott claims L-545254, L-545255, L-545256 and L-545257, and some detailed geological mapping by R. Storen. The work was conducted on two veins, trending northeast-southwest.

SURVEY PROCEDURE

For the two surveys the previously established grid was used. The baseline is N 54° E and station 0 + 00 was established at the No. 3 corner of patent claim L-9739, along the township line.

A grid system of picket lines at 400 foot spacings with stations every 100 feet, was established at right angles to the base line.

For the geochemical survey humus samples were taken at each 100 foot station along the picket lines.

Readings were taken at 50 foot intervals along the picket lines for the gradiometer survey.

TOPOGRAPHY

The Harker-Elliott Group 1 is flat with very gently sloping hills, and in scattered areas, large outcrops give the ground a more rugged appearance. The average difference in elevation is approximately 40-60 feet.

The claims in Harker are open bush with light regeneration of poplar due to previous logging operations. Elliott township is covered with spruce, balsam fir and white birch. The ground is high enough to remain dry but some swampy sections can be found particularly in the Elliott claims and claim L-545252. A beaver pond is found on claim L-545258.

GENERAL GEOLOGY

O.D.M. Geological Map 1951-4 covering Harker township at a scale of one inch to 1000 feet, indicates that the bedrock is predominately mafic flows with 2 inner rhyolite flows and one diabase dyke and one small stock of course syenite.

The trend of the mafic flows appear to be northeast-southwest and the most common mafic flow is a diabasic flow with a flow breccia top. The tops of these flows are facing south.

The other mafic flows can be andesite, basalt, pillow lavas, diabasic lavas and some spherulitic lavas as well as some fragmented lavas and tuffs and chert. The shapes of the pillows indicate that the flows flow south.

The rhyolite flows range from 100 feet to 300 feet and strike N 75° E. They have steep dips and face south.

The Matachewan diabase dyke is quartz diabase, diabase, in composition and is the youngest of the rocks. The dyke trends north-south ranging from 30° - 45° east of north and the width of the dykes varies from 50 to 100 feet. Lamprophyre dykes are rare, but frequently found at flow contacts or in a flow brecciated top. There are scattered quartz veins throughout the property, some with sulphide mineralization.

According to O.D.M. Geological Map 2368, covering Elliott township, the main flows are pillowed mafic flows (with the pillows facing south), and a diabasic to gabbroic textured flows trending northeast-southwest.

Further research of Map No. 34 a Part of the Lightning River Area, by T. L. Gledhill, 1924, indicates that the N 75° E rhyolite flows of Harker township continues on into Elliott township, these flows are also mapped in R. Storen's detailed geological mapping of Goodfish Mines Limited.

ECONOMIC GEOLOGY

The neighbouring property to the north of Iris Gold is held by Harker Gold Mines and during the years 1924, 1925 and 1928, underground development of over 7,000 feet of drifting and cross-cutting was carried out on the number one vein.

The number one vein strikes N 58° E, dips 80° S and is roughly parallel to the surrounding basalt flows.

Exploration at that time was very active but due to poor accessability, interest was lost. Harker township has only been active in recent years due to improved access roads and a new interest in the Destor-

Porcupine Fault zone.

The gold deposits of the Harker area can be generalized in three ways; in sheared and fractured zones, in mineralized dykes; and in quartz veins, fillings and stock works.

The sheared and fractured zones are usually found in sediments, lavas and intrusives. The mineralization is usually pyrite and occasionally visible gold can be seen. The mineralized dykes can be carbonatized or silicified with or without quartz stringers. Some dyke types are lamprophyre, syenite porphyry and feldspar porphyry.

Many of the drill results and assays from the Iris Gold program are no longer available.

The gold assays from the number 2 showing are shown below.

Showing No. 2

	Width of Samples	Description	Assays
East Pit	8"	Quartz with 5% Pyrite	0.03 oz/ton
West Pit	7.5"	Quartz with 3% Pyrite	0.04 oz/ton

GEOCHEMICAL SURVEY

Geochemistry is the science of changes in the chemistry of the crust or overburden of the earth. The application of geochemical sampling is to outline anomalous areas of overburden which may have originated from local ore bodies.

Although great care was taken to obtain pure samples not contaminated by surrounding matter, it must be noted, due to economic factors, sampling and analytical techniques sacrifice precision for speed. Therefore isolated values can only be relevant if they are part of a population as numerous and homogeneous as possible.

Graphical representation (usually a histogram) is the method most commonly used to determine the frequency distribution of the data as well as the average value (background). From this, the degree of variation and the existance of one or more populations can be determined.

i) Sampling the Humus Level

The successful use of humus as a sample medium to detect auriferous bedrock in areas covered by 3 to 120 feet of glacial material has been documented. It was found that any anomalies found in the humus usually occurs directly over the gold bearing zone, their dispersion patterns are not effected by glacial movement.

The layer sampled is the partly decomposed plant debris, usually occurring as dark brown or black, humus-rich pads mixed with varying amounts of mineral matter.

The accumulation of gold in the humus horizon is further described by Lakin et al (1974)

> "......ample hydrogen cyanide is formed in the soil by hydrolysis of cyanogenic plants, animals and fungi to result in solution of gold in an oxygenated environment. The gold cyanide thus formed is absorbed by plants, but they do not use it as a nutrient. It is therefore found accumulating as a reject in the woody parts of a plant. The decomposition of plant debree results in the reduction of gold in the plant material and gold accumulation in the humus horizon of the soil."

ii) Sampling Methods

A small garden hoe was used to obtain the samples. Care was taken to keep the hoe clean so as not to contaminate each sample. Dead surface vegetation, (sticks, fallen leaves, etc.) was brushed away and a small hole was dug down to the mineral soil to determine depth of humus. The exposed humus horizon was categorized on a scale of 0 - 10 for percentage of decomposition and the colour noted. The slope of the topography and vegetation was recorded for further use in the interpretation of the assay results. The sample was bagged in a marked brown paper sample bag and hung up to dry.

The samples were then shipped to Nuclear Activation Services Limited, 1280 Main Street, West, Hamilton, Ontario. They were analyzed by nuclear atomic absorption and the values expressed in parts per billion.

iii) Presentation and Discussion of Field Results

The field data is presented on a map at a horizontal scale of one inch to 200 feet, drawing number 83-Geo.H-1 found in the back pocket of the report.

The geochemical data is illustrated as contoured data (contour interval 2 ppb). The data was plotted up on a histogram and a frequency curve drawn and the frequency was determined to be 11-12 ppb. Any gold values over 11-12 ppb. was considered to be possible anomalous and gold values over 12 ppb. was considered to be a probable gold anomaly. For the purpose of this discussion any contour interval above 10 ppb. was coloured to show more clearly the anomalous zones.

There are several small anomalous zones scattered over the grid. One major zone occurs on L 16+00 W 6+00 S. It has a higher intensity of 50 ppb.

iv) Conclusions and Recommendations

The scattered zones are wide spread and very small so it is difficult to report any concise conclusion. It should be noted that the zones follow the general strike of the underlying bedrock and may be some indication of auriferous bedrock rather than glacial transportation.

GRADIOMETER SURVEY

i) Instrumentation

The gradiometer measures the change in value of one variable with respect to another variable mainly vertical or horizontal distance, e.g., magnetic intensity, this is known as the gradient.

A gradiometer can be described as a differential magnetometer. This measures the amount of difference between two readings at different places. The different places refer to the spacing between the sensors which must be fixed, this shows the difference between a gradiometer and a differential magnetometer. As well as having the sensors fixed, the spacing must be small in relation to the distance to the sources whose gradients are to be measured. This difference in intensity is then divided by the distance between the fixed sensors. This is the gradient measured at the midpoint of the sensor spacing.

The positioning of the sensors as well as the magnetic cleanliness of the operator is very important. Care should also be taken to ensure no critical surface magnetic noise or the gradient anomalies will be strongly influenced.

The gradiometer can remove the regional magnetic gradient which is produced by the earth core and any anomalies found at depth, and will reveal the shallower anomalies which are the anomalies of major interest. The magnetic time variations and the effects of magnetic storms are removed when the gradient measurements are made very closely spaced and simultaneously, in relation to the source of magnetic storms and time variations.

Gradients can be used quantitatively in defining anomaly depth, magnetic movement, shape and location.

Gradient anomalies also resolve complex anomalies into their individual constituents by defining a total field anomaly. This is shown by a widely spread total field which has no distinct boundary to show the exact positioning of the anomaly. Whereas data from a vertical gradient, shows a distinct boundary and will give the exact location of the anomaly in question. This is illustrated by positive and negative values of the vertical gradient profile. A line drawn through the vertical maximum and minimum gradient values crosses the profile at the exact boundary of the anomaly.

When the data is contoured rather than profiled, the zero gradient value contour line represents the location of the anomaly in question.

The instrument used for this survey was a EDA-PPM-500 Vertical Gradiometer. This instrument has a sensitivity of $\pm$ 0.02 gammas. (See Appendix 2)

ii) Presentation and Discussion of Results

The field data is presented on a map at a horizontal scale of one inch to 200 feet, drawing number 83-Grad-1 found in a back pocket of the report.

The gradient data is illustrated as vertical gradient contours (contour interval 20 gammas) on a map of vertical gradient values recorded at each station.

There are three (3) parallel gradient anomalies striking northeast-southwest. These anomalies have an approximate width of 150 to 250 feet. One larger gradient anomaly occurs to the south, trending in the same direction, on Claim L-545254.

On claim L-545251 the two gradient anomalies appear to be a continuation of the two (2) parallel zones. The middle zone appears to pinch out on L 0+00 and L 4+00 E at 2+50 S.

The gradient anomalies also tend to lose their intensity from L 24+00 W to L 44+00 W.

iii) Conclusions and Recommendations

The gradiometer survey was performed to further delineate the ground magnetometer survey performed during December 1981. What appeared to be a very wide total field anomaly has now been separated into three (3) concise parts.

The gold bearing zones of Iris Gold Mines tend to follow the contacts of the different flows. Due to this survey these contacts have been further defined and should be examined in greater detail. It may be possible to find shear zones and gold bearing quartz veins along these contacts.

Respectfully submitted,

Mary Greer

Mary Greer
Geological Technician

CERTIFICATE

I, Mary Maureen Greer, of Lynden, Ontario, certify with respect to this Geophysical Report:-

1. That I am a Geophysical Technician and reside at 49 McKelvie Avenue, Kirkland Lake, Ontario.

2. That I graduated from Sir Sandford Fleming College at Lindsay, Ontario, in 1978, with a diploma as a Geological Technician.

3. That I was employed as a Geophysical Technician by H. E. Neal & Associates Ltd., of Suite 607, 55 Queen Street East, Toronto, Ontario, for eighteen months.

4. That I have been employed as a private Geological Consultant for the past two years.

5. That I have been practising my profession for a period of four years and I am qualified to write this report.

6. That I actively participated in the said survey.

November 11, 1983

Mary Greer

Mary Greer
Geological Technician

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- Plan of Goodfish Mining Company Limited. Lightning River Area showing Geology and Workings of North Portion. Drafted by R. Storen, Kirkland Lake, Ontario N. November, 1947

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- S. Breiner Applications Manual for Portable Magnetometers.

MPH

MPH Consulting Limited

141 Adelaide Street West
Toronto, Canada M5H 3L5

Invoice

Date	October 31, 1983
Your Reference	Harker-Perron
Our Project No.	C-612

Mr. Alexander H. Perron
103 Government Road East
Kirkland Lake, Ontario
P2N 1A9

Professional Services

Nuclear Activation Services R-7294	2,881.04
10% Admin.	300.59
TOTAL INVOICE	$3281.63

Terms: Payable on receipt
Interest will be charged on overdue accounts

Invoice No. 2327

OK

APPENDIX 1

PAGES 1 TO 8

SAMPLE		AU PPB
HP-83-1	L12E 9S	9
HP-83-2	10	7
HP-83-3	11	7
HP-83-4	12	10
HP-83-5	13	7
HP-83-6	14S	5
HP-83-7		3
HP-83-8		10.
HP-83-9		9
HP-83-10	L16E 4N	12
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HP-33-13	1N	7
HP-83-14	BL 16E	8
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HP-83-54	3	5
HP-83-55	2S	6

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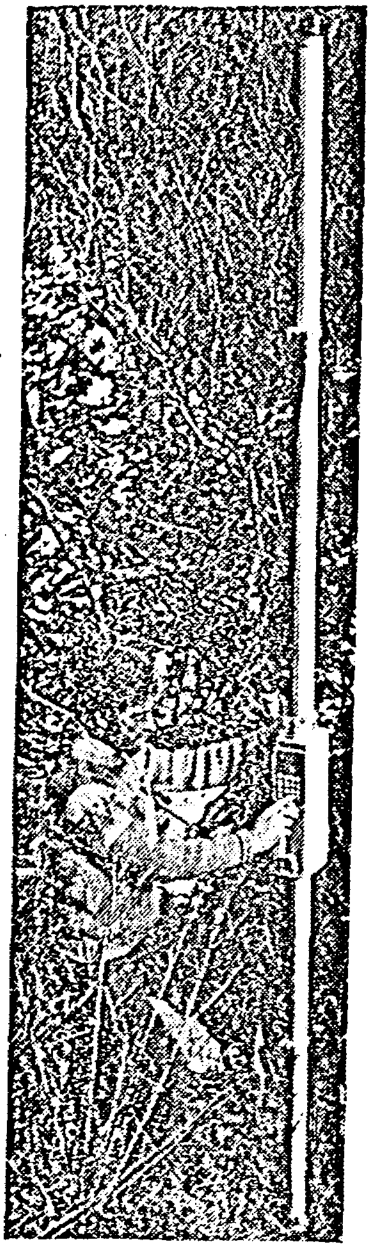
HP-83-587	8	3
HP-83-588	9	4
HP-83-589	10S	9
HP-83-590	L8W 8S	4
HP-83-591	7	6
HP-83-592	6	8
HP-83-593	5	10
HP-83-594	4	6
HP-83-595		8
HP-83-596	3	9
HP-83-597	2S	8
HP-83-598	1S	7
HP-83-599	BL 8W	10
HP-83-600	1N	12
HP-83-601	2	5
HP-83-602	3	4
HP-83-603	4	5
HP-83-604	5	5
HP-83-605	6	3
HP-83-606	7	3
HP-83-607	8	4
HP-83-608	9	4
HP-83-609	10	8
HP-83-610	11	4
HP-83-611	12	5
HP-83-612	13	1
HP-83-613	14	4
HP-83-614	15N	3
HP-83-615	16N	2
HP-83-616	L 12W BL 000	6
HP-83-617	1S	8
HP-83-618	2	8
HP-83-619	3	8
HP-83-620	4	8
HP-83-621	5	6
HP-83-622	6	6
HP-83-623	7	1
HP-83-624	8S	7
HP-83-625	L 12W 1N	3
HP-83-626	2N	4
HP-83-627	3	5
HP-83-628	4	2
HP-83-629	5	6
HP-83-630	6	2
HP-83-631	7	1
HP-83-632	8	7
HP-83-633	9	3
HP-83-634	10	1
HP-83-635	11	7
HP-83-636	12	4
HP-83-637	13	6
HP-83-638	14	3
HP-83-639	15N	8

SAMPLE		AU PPB
HP-83-640	L12W 16N	5
HP-83-641	17	9
HP-83-642	18	5
HP-83-643	19	5
HP-83-644	20N	7
HP-83-645	L24W 17N	5
HP-83-646	16	4
HP-83-647	15	7
HP-83-648	14	9
HP-83-649	13	2
HP-83-650	12	4
HP-83-651	11	5
HP-83-652	10	2
HP-83-653	9	4
HP-83-654	8	6
HP-83-655	7	10
HP-83-656	6N	<1
HP-83-657	5	13
HP-83-658	4	2
HP-83-659	3	3
HP-83-660	2	10
HP-83-661	1	7
HP-83-662	BL 24W	11
HP-83-663	1S	12
HP-83-664	2	6
HP-83-665	3	1
HP-83-666	4	3
HP-83-667	5	5
HP-83-668	6	9
HP-83-669	7	8
HP-83-670	8	5
HP-83-671	9	8
HP-83-672	10	7
HP-83-673	11	10
HP-83-674	12S	8
HP-83-675	L 28W 10S	11
HP-83-676	9	9
HP-83-677	8	5
HP-83-678	7	3
HP-83-679	6	7
HP-83-680	5	6
HP-83-681	4	2
HP-83-682	3	11
HP-83-683	2	5
HP-83-684	1S	5
HP-83-685	BL 28W	4
HP-83-686	1N	9
HP-83-687	2	16
HP-83-688	3	5
HP-83-689	4	6
HP-83-690	5	6
HP-83-691	6	7
HP-83-692	7	2
HP-83-693	8	7
HP-83-694	9	4
HP-83-695	10	2

NUCLEAR ACTIVATION SERVICES 26-OCT-83 REPORT 2015 REF. FILE 3158- PAGE

SAMPLE		AU PPB
HP-83-696	L 28 W 11N	2
HP-83-697	12	2
HP-83-698	13	<1
HP-83-699	14	2
HP-83-700	15	7
HP-83-701	16	5
HP-83-702	17	3
HP-83-703	18 N.	8

OMNIMAG PPM-500 Vertical Gradiometer



Description

The PPM-500 microprocessor-based vertical gradiometer provides the operator with an accurate means of measuring both the total field and the gradient of the total field. It reads and records the measurements of both sensors SIMULTANEOUSLY to calculate the true gradient measurement.

This simultaneous, and not sequential, measurement of both sensors totally removes the effect of diurnal variations and magnetic storm interferences from the data.

Features

In a typical gradient survey, the PPM-500 offers the operator:

- A visual readout and storage of the following information in an absolutely secure memory that prevents data loss or tampering:
  - the gradient of the total field
  - total magnetic field magnitude of upper sensor
  - time of measurement
  - grid coordinates
  - statistical error of total field reading
  - signal strength and decay rate measurement of both sensors
- A choice of three output modes:
  - to a DCU-200 magnetic cassette recorder
  - to a DCU-040 or DCU-400 thermal printer
  - to any RS-232C compatible microcomputer

Benefits

READS BOTH SENSORS SIMULTANEOUSLY

The PPM-500 Vertical Gradiometer reads both sensors simultaneously and not sequentially. The induced effects of diurnal variations and magnetic storms are both removed from the data.

IMPROVED DATA DURING MAGNETIC STORMS

Gradient surveys can be conducted during magnetic storms resulting in no lost survey time. The quality of the gradient data measured by the PPM-500 is enhanced further because both sensors are simultaneously read.

NO DIURNAL CORRECTIONS REQUIRED

The simultaneous polarization of both sensors cancels the effect of diurnal magnetic variations.

BETTER RESOLUTION OF TOTAL FIELD ANOMALIES

The PPM-500 more sharply defines the magnetic responses determined by total field data. Closely-spaced anomalies are individually delineated rather than being identified collectively under one broad magnetic response.

DIRECT DELINEATION OF VERTICAL CONTACTS

The PPM-500 identifies vertical contacts expressed at the zero line of gradient contour or profile values. It is an ideal contact mapping tool especially in vertical to near-vertical contact or fault zones. Vertical dyke-like bodies can also be mapped effectively.

ENHANCES NEAR SURFACE ANOMALIES

The PPM-500 emphasizes shallow, near-surface sources (higher frequency anomalies) relative to deeper responses (lower frequency). This provides an approximate "on-the-spot" depth estimate of the anomalous source.

AUTOMATICALLY REMOVES REGIONAL GRADIENT

The ability of the PPM-500 to differentiate between higher and lower frequency responses effectively removes background regional gradients from anomalous residual responses.

GRADIENT AND TOTAL FIELD READINGS STORED SIMULTANEOUSLY

The PPM-500's ability to simultaneously record in memory both the gradient and total field measurements as well as their respective statistical error enhances data interpretation. The use of both type of data offer the geophysicist unique alternatives in the interpretation of magnetic field data, ie. gradient vector diagrams. The total field data can also be automatically corrected with the PPM-375 Portable/Base Station or the PPM-400 Base Station Magnetometers

VARIOUS SENSOR CONFIGURATIONS

A choice of four sensors are presently available:

- an in-line gradiometer sensor as shown in the photograph,
- a remote gradiometer sensor,
- an in-line total field sensor,
- a remote total field sensor

PPM-350 features are also part of the PPM-500. Additional information can be obtained in the PPM-350 brochure.

Specifications

Dynamic Range	18,000 to 103,000 gammas
Capture Range	±25% relative to ambient field strength of last stored value
Tuning Method	Tuning value is calculated accurately utilizing a specially developed tuning algorithm.
Display Resolution	0.1 gamma
Processing Sensitivity	±0.02 gamma
Mathematical Truncation Error	±0.02 gamma
Statistical Error Resolution	0.01 gamma
Absolute Accuracy	±15 ppm at 23°C, 50 ppm over the operating temperature range
Memory Capacity	1140 readings standard, upgradeable to 2140 readings
Display	Custom-designed, ruggedized liquid crystal display with an operating temperature range from -40°C to +55°C. The display contains six numeric digits, decimal point, battery status monitor, signal decay rate and signal amplitude monitor and function descriptors. Upon exceeding 100,000 gammas, the display rolls over eliminating first significant digit.
Gradient Tolerance	5,000 gammas per meter (typical)
Test Mode	A) Diagnostic testing data and programmable memory B) Self test (hardware)
Sensors	Optimized miniature design. Magnetic cleanliness is consistent with the specified absolute accuracy.
Sensor Separation	1 meter standard. Sensors balanced to an accuracy of 0.5%
Environmental Range	-40°C to +55°C; 0-100% relative humidity; weatherproof
Power Supply	Non-magnetic rechargeable sealed lead-acid battery cartridge.
Battery Cartridge Life	2,000 to 5,000 readings, depending upon ambient temperature and rate of readings.
Weight and Dimensions	
Instrument Console	4.5kg, 41 x 11 x 15cm
Lead-Acid Battery	2.0kg, 9.5 x 11 x 13.5cm
Sensor	2.5kg, 5.6cm diameter x 230cm
System Complement	Instrument console; sensor, backpole, power supply and charger, harness assembly, operations manual.

```
PPM500 #230025 F=69
03/03 12:04:26
OP   #1
12:04:18 57387.4 .14   -100    50   88
            17.4
12:04:49 57389.7 .13   -100     0   99
            17.9
12:04:57 57399.5 .16   -100   -50   99
            18.1
12:05:05 57393.1 .19   -100  -100   88
            18.1
12:05:13 57387.3 .23   -100  -150   88
            18.2
12:05:33 57387.9 .14   -200  -175   99
            16.2
12:05:42 57391.6 .18   -200  -150   99
            16.6
12:05:49 57389.4 .14   -200  -100   88
            16.3
12:06:02 57392.1 .15   -200   -50   89
            16.7
12:06:10 57386.6 .16   -200    -0   69
            17.0
```

PPM-500 DATA BLOCK contains:

time of reading, total field reading, gradient measurement (directly beneath total field reading), statistical error, line & station number, normalized decay rate and amplitude of sensor signal.

E D A Instruments Inc.
1 Thorncliffe Park Drive
Toronto, Ontario
Canada M4H 1G9
Telex: 06 23222 EDA TOR
Cable: Instruments Toronto
(416) 425-7800

In U.S.A.
E D A Instruments Inc.
5151 Ward Road
Wheat Ridge, Colorado
U.S.A. 80033
Telex: 00 450681 DVR
(303) 422-9112

Lands Admin Branch

Nov 83 ~~Sept~~

#290

Ministry of Natural Resources
Ontario

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

(file L545252)

32D05NW0087 2.6067 ELLIOTT 900

ns traversed attach a list. ited in the y be entered ." columns. w.

Type of Survey(s): GEOCHEMICAL, GEOPHYSICAL	Township or Area: HARKER, ELLIOTT
Claim Holder(s): JOHN E. PERRON	Prospector's Licence No.: K 18983
Address: 103 Government Rd. E. Kirkland Lake, Ontario	
Survey Company: MPH CONSULTING LTD. TORONTO, ONT.	Date of Survey (from & to): 15 09 83 – 27 09 83 (Day Mo. Yr.)
Total Miles of line Cut: approx 9.0 miles	
Name and Address of Author (of Geo-Technical report): MARY GREER 49 McKELVIE AVE KIRKLAND LAKE, ONT. P2N 2K6	

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	20
Man Days		**Days per Claim**
Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other Gradiometer	20
	Geological	
	Geochemical	
Airborne Credits		**Days per Claim**
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

RECEIVED OCT 6 1983 MINING LANDS SECTION

Mining Claims Traversed (List in numerical sequence)

Prefix	Number	Expend. Days Cr.
L	547462	19.25
	547461	19.25
	545251	
	545252	19.25
	545253	19.25
	545254	19.25
	545255	19.25
	545256	19.25
	545257	19.25
	545258	19.25
	545259	19.25
	545260	19.25

SEP 28 1983

Expenditures (excludes power stripping)

Type of Work Performed: HUMUS SOIL SAMPLING.

Performed on Claim(s): L 545252 – 545260 (inclusive)
L 547461 – 547462

Calculation of Expenditure Days Credits

Total Expenditures: $3176.25 ÷ 15 = Total Days Credits: 211.75

Total number of mining claims covered by this report of work: 12

Instructions

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

For Office Use Only		
Total Days Cr. Recorded: 691.75	Date Recorded: SEP 28 1983	Mining Recorder
	Date Approved as Recorded: 84.3.13	Branch Director

Date: Sept. 27/83 Recorded Holder or Agent (Signature): Alexander H. Perron (agt)

Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying: MARY GREER 49 McKELVIE AVE KIRKLAND LAKE

Date Certified: Sept. 27/83 Certified by (Signature): Mary Greer

Ministry of Natural Resources

Ontario

File

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

**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; GEOPHYSICAL (GRADIOMETER)

Township or Area HARKER AND ELLIOTT TOWNSHIPS

Claim Holder(s) JOHN E. PERRON
103 GOVERNMENT RD.E., KIRKLAND LAKE, ONT.

Survey Company PERRONS' 83 LIMITED

Author of Report MARY GREER

Address of Author 49 MCKELVIE AVE., KIRKLAND LAKE, ONTARIO

Covering Dates of Survey SEPT. 1983 - NOVEMBER 22, 1983 (linecutting to office)

Total Miles of Line Cut 12.5 MILES (APPROX.)

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
--Electromagnetic	
–Magnetometer	
–Radiometric	
–Other	GRADIOMETER (20)
Geological	
Geochemical	20

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

Magnetometer ______ Electromagnetic ______ Radiometric ______
(enter days per claim)

DATE: Nov. 11/83 SIGNATURE: Mary Greer
Author of Report or Agent

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
L	545251
L	545252
L	545253
L	545254
L	545255
L	545256
L	545257
L	545258
L	545259
L	545260
L	547461
L	547462

If space insufficient, attach list

TOTAL CLAIMS 12

OFFICE USE ONLY

Res. Geol. ______ Qualifications 2.4529

Previous Surveys

File No.	Type	Date	Claim Holder

837 (5/79)

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 425 Number of Readings 800

Station interval 100' Line spacing 400'

Profile scale

Contour interval 20

MAGNETIC

Instrument EDA - PPM-500 VERTICAL GRADIOMETER

Accuracy – Scale constant

Diurnal correction method

Base Station check-in interval (hours)

Base Station location and value

ELECTROMAGNETIC

Instrument

Coil configuration

Coil separation

Accuracy

Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency (specify V.L.F. station)

Parameters measured

GRAVITY

Instrument

Scale constant

Corrections made

Base station value and location

Elevation accuracy

INDUCED POLARIZATION
RESISTIVITY

Instrument

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time Frequency

– Off time Range

– Delay time

– Integration time

Power

Electrode array

Electrode spacing

Type of electrode

SELF POTENTIAL

Instrument ________________________________ Range ______________

Survey Method ____

____

Corrections made ____

____

RADIOMETRIC

Instrument ____

Values measured ____

Energy windows (levels) ____

Height of instrument ____________________ Background Count ________

Size of detector ____

Overburden ____

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey ____

Instrument ____

Accuracy ____

Parameters measured ____

____

Additional information (for understanding results) _____________________

____

____

AIRBORNE SURVEYS

Type of survey(s) ____

Instrument(s) ____

(specify for each type of survey)

Accuracy ____

(specify for each type of survey)

Aircraft used ____

Sensor altitude ____

Navigation and flight path recovery method _____________________________

____

Aircraft altitude ______________________ Line Spacing ______________

Miles flown over total area ______________ Over claims only ___________

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken L-545251, L-545252, L-545253, L-545254, L-545255, L-545256, L-545257, L-545258, L-545259, L-545260, L-547461, L-547462

Total Number of Samples 399

Type of Sample HUMUS
(Nature of Material)

Average Sample Weight 16 OZS.

Method of Collection GRAB SAMPLE - USING SMALL GRUB HOE

Soil Horizon Sampled

Horizon Development

Sample Depth 1 1/2 - 4 INCHES

Terrain FLAT, SLOPING GENTLY, SOME AREAS OF ROUGH OUTCROP

Drainage Development FAIR

Estimated Range of Overburden Thickness 30 FEET

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis NONE

RADIATION

General 1. FIRST SAMPLE DRIED.
2. THEN GROUND IN BLENDER TO HOMOGENEOUS SAMPLE.
iii) FORMED TO A 28 gm. BRICKET, AND BATCH RADIATED AT 37 PER RADIATION, KEPT IN REACTOR FOR 1 WEEK, REMOVED AND COUNTED FOR GOLD PEAK AND COMPARED TO KNOWN STANDARDS.

ANALYTICAL METHODS

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

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

Others GOLD

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 NUCLEAR ACTIVATION SERVICES

Extraction Method NONE

Analytical Method NAA

Reagents Used NONE

General

Ministry of Natural Resources
Ontario

Geotechnical Report Approval

File: 2.6067

Feb. 14/84

Mining Lands Comments

☐ To: Geophysics

Comments

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☐ To: Geology - Expenditures

Comments

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☑ To: Geochemistry DR. FORTESCUE

Comments

L.D.

☑ Approved ☐ Wish to see again with corrections | Date: Feb 16th 1984 | Signature: J.A. [illegible]

☐ To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1593 (81/10)

Ontario Ministry of Natural Resources

Geotechnical Report Approval

File: 2.6067

Mining Lands Comments

Okay.

☑ To: Geophysics Mr. R. Barlow

Comments

☑ Approved ☐ Wish to see again with corrections | Date: Jan 13/84 | Signature: R Barlow

☐ To: Geology - Expenditures

Comments

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☑ To: Geochemistry Dr. Fortescue.

Comments

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☐ To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1593 (81/10)

290

1983 12 07

2.6067

Mr. George J. Koleszar
Mining Recorder
Ministry of Natural Resources
4 Government Road East
P.O. Box 984
Kirkland Lake, Ontario
P2N 1A2

Dear Sir:

We have received reports and maps for a Geophysical (Gradiometer) and Geochemical Survey submitted under Special Provisions (credit for Performance and Coverage) and data for soil sampling on mining claims L 545251 et al in the Townships of Harker and Elliott.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-1380

A. Barr:mc

cc: John E. Perron
103 Government Road East
Kirkland Lake, Ontario
P2N 1A9

cc: Mary Greer
49 McKelvie Avenue
Kirkland Lake, Ontario
P2N 2K6

49 McKelvie Avenue,
Kirkland Lake, Ontario
P2N 2K6

November 22, 1983 REGISTERED

Mr. Fred Matthews,
Lands Administration Branch,
Mining Lands Section,
Ministry of Natural Resources,
Room 6450, Whitney Block,
Queen's Park,
Toronto, Ontario
M7A 1W3

Dear Sir:

RE: Technical Report for
Harker and Elliott Townships
Larder Lake Mining Division

Enclosed herewith please find a duplicate copy of the following:

- Report dated November 11, 1983; by Mary Greer entitled:

  Geochemical and Gradiometer Survey Report
  on the Perron Property
  Harker-Elliott Group 1
  Harker and Elliott Townships
  Larder Lake Mining Division
  District of Cochrane, Ontario

I trust this is the information required to correspond with the Report of Work filed concerning the above noted townships.

Yours truly,

Mary Greer

Mary Greer,
Geological Technician

MG/p
Encl.1

49 McKelvie Avenue,
Kirkland Lake, Ontario
P2N 2K6

November 22, 1983 **REGISTERED**

Mr. Fred Matthews,
Lands Administration Branch,
Mining Lands Section,
Ministry of Natural Resources,
Room 6450, Whitney Block,
Queen's Park,
Toronto, Ontario
M7A IW3

Dear Sir:

RE: Technical Report for
Harker and Elliott Townships
Larder Lake Mining Division

Included in this report is a receipt for expenditures put out for geochemical analysis of humus samples taken on the Harker Elliott Group I project.

The samples were sent to Nuclear Activation Services, 1280 Main Street West, Hamilton, Ontario. A bill was then sent to MPH Consulting Ltd., 141 Adelaide Street West, Toronto, Ontario, and a total receipt for all costs, forwarded to Alexander H. Perron. I have omitted these other costs and I am submitting a final bill for your approval to give us the required number of days as requested in our Report of Work filed September 28, 1983. The total cost after all final costs tabulated is $3,281.63 for 399 humus samples taken.

I trust this is suitable to the requirements of the Mining Act, Section 8618.

Yours truly,

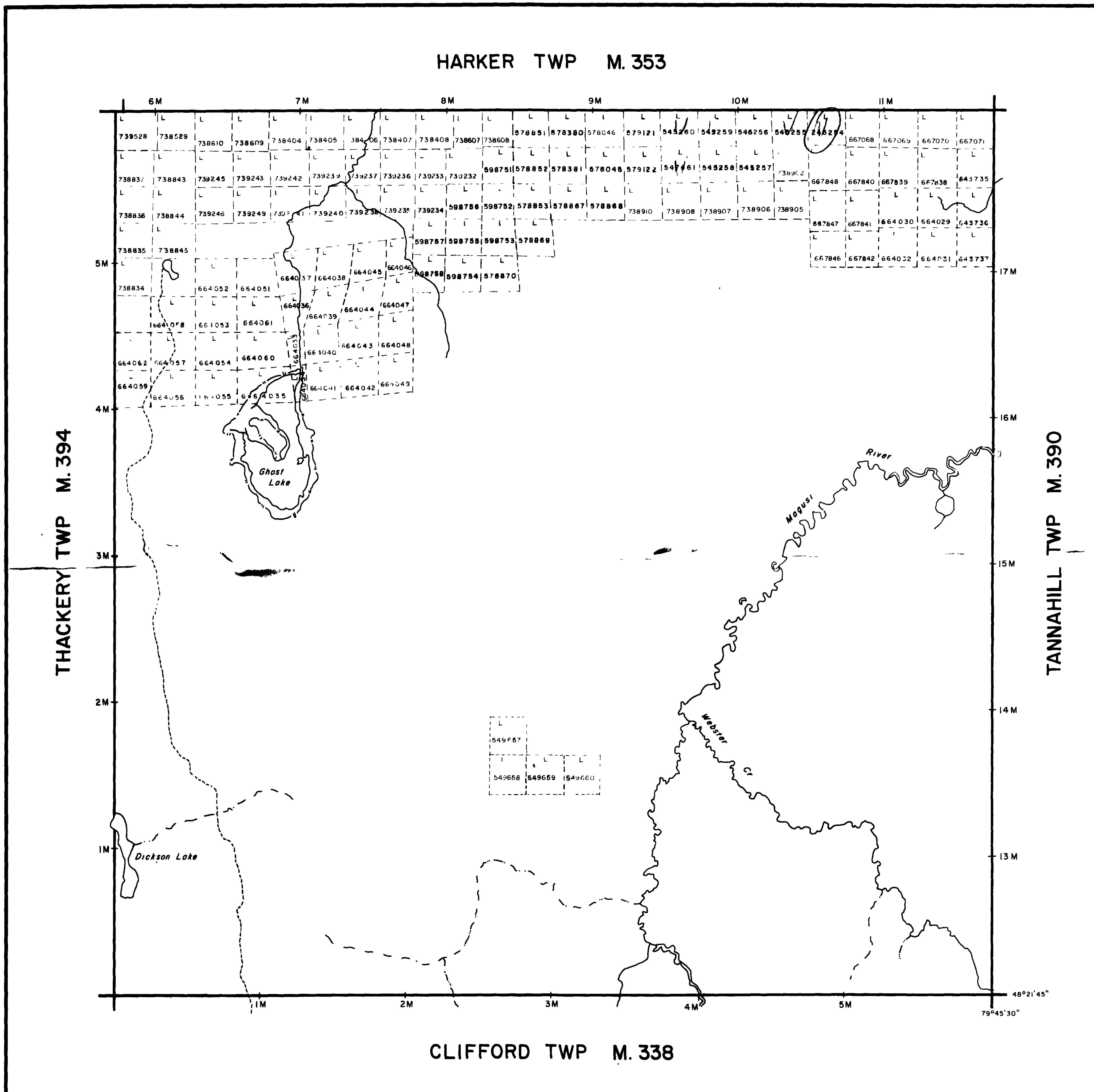
Mary Greer,
Geological Technician

MG/p
Encl.1

2.6067

	Gradiom.	Geochem.		Gradiom.	Geochem.
L- 545251	✓	✓	545257	✓	✓
52	✓	✓	58	✓	✓
53	✓	✓	59	✓	✓
54	✓	✓	545260	✓	✓
55	✓	✓	547461	✓	✓
545256	✓	✓	547462	✓	✓

D.K.



NOTES

400 surface rights reservation along the shores of all lakes and rivers

LEGEND

PATENTED LAND	Ⓟ or ●
PATENTED FOR SURFACE RIGHTS ONLY	◐*
LEASE	Ⓛ
LICENSE OF OCCUPATION	L.O.
CROWN LAND SALES	C.S.
LOCATED LAND	Loc.
CANCELLED	C.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
HIGHWAY & ROUTE NO.	17
ROADS	
TRAILS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	⚒

*used only with summer resort locations or when space is limited

TOWNSHIP OF

ELLIOTT

DISTRICT OF

COCHRANE

LARDER LAKE

MINING DIVISION

SCALE : 1 INCH 40 CHAINS (1/2 MILE)

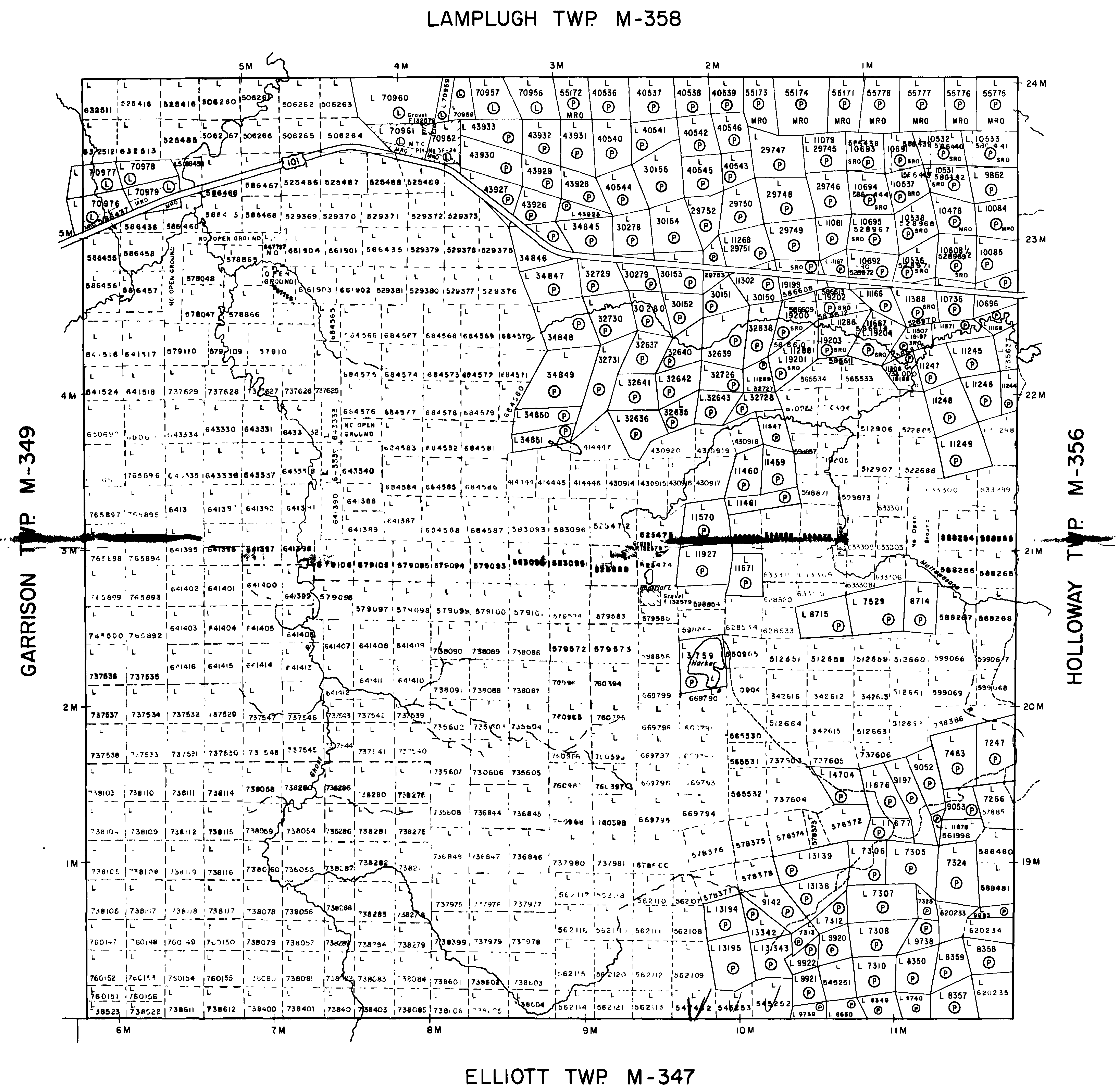
DR. JBK

DATE 20 Aug 71

PLAN NO. M. 347

MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH



THE TOWNSHIP OF HARKER

DISTRICT OF COCHRANE

LARDER LAKE MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

PATENTED LAND	● or (P)
CROWN LAND SALE	C.S
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	C
PATENTED S.R.O.	●

NOTES

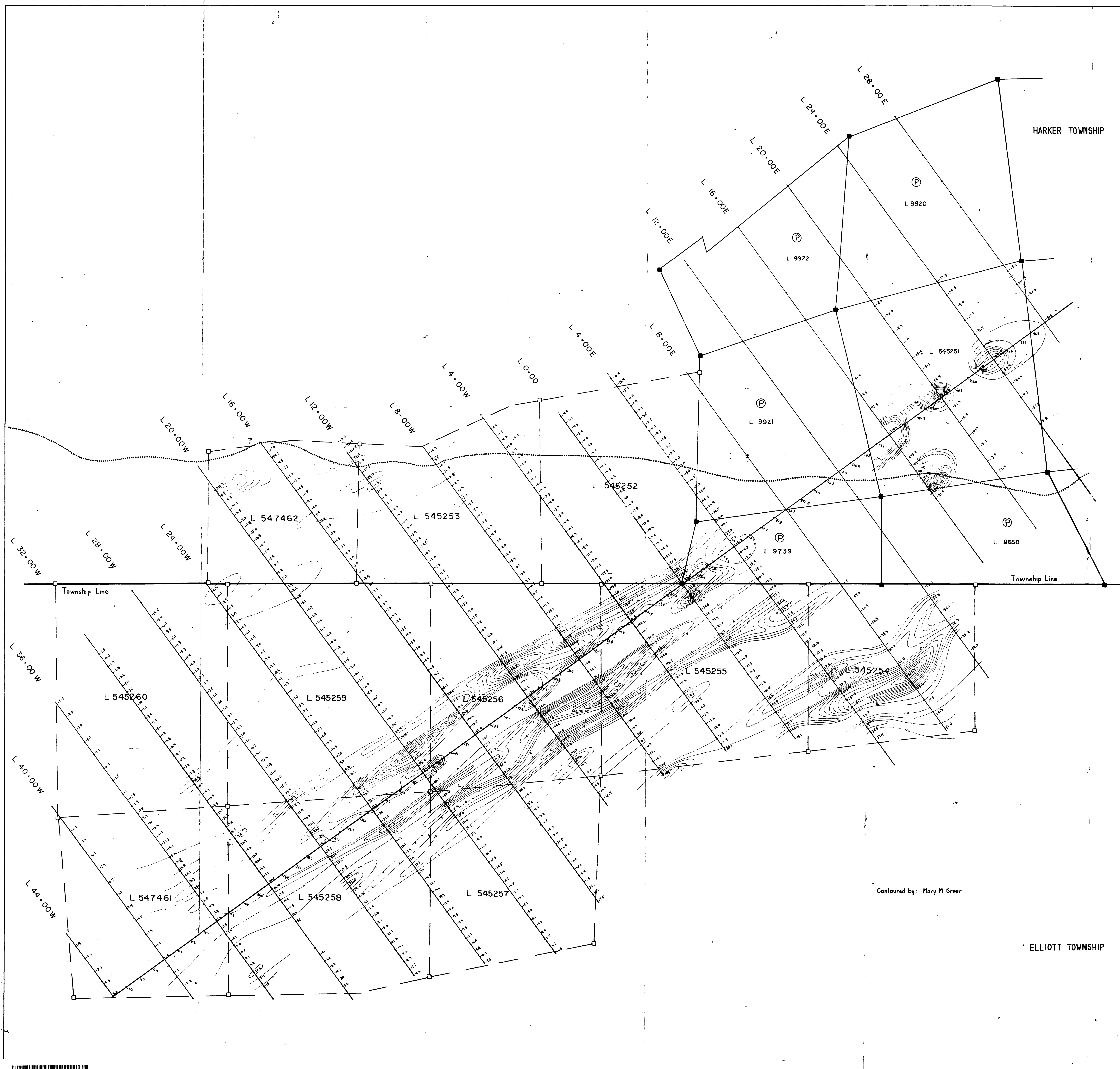
400' Surface Rights reservation along the shores of all lakes and rivers.

PLAN NO. M-353

ONTARIO

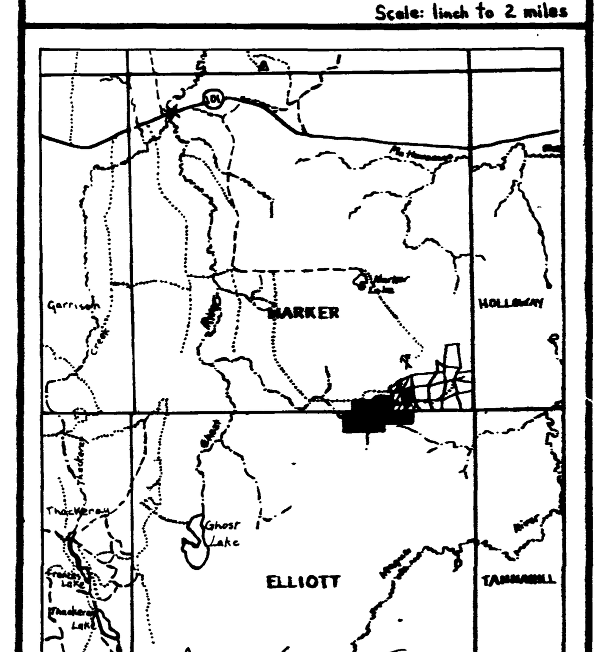
MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH



KEY MAP

Scale: 1 inch to 2 miles



HARKER - ELLIOTT GROUP I

GROUND GRADIOMETER SURVEY

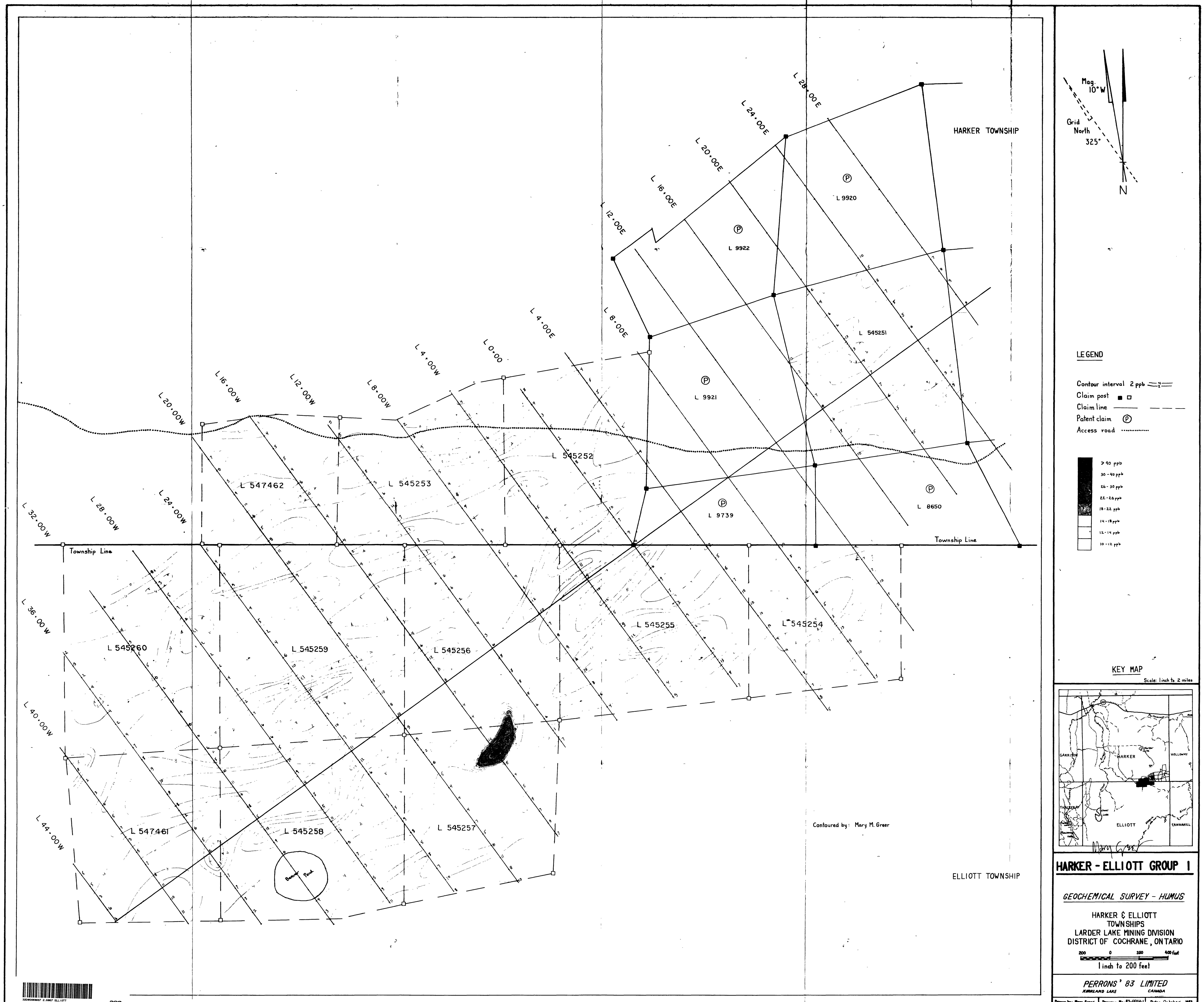
HARKER & ELLIOTT
TOWNSHIPS
LARDER LAKE MINING DIVISION
DISTRICT OF COCHRANE, ONTARIO

1 inch to 200 feet

PERRONS' 83 LIMITED
KIRKLAND LAKE

Drawn by Mary Greer | Drawing No.: 83-Grad-1 | October

26067



HARKER TOWNSHIP
ELLIOTT TOWNSHIP
Mag. 10° W
Grid North 325°
N
L 28+00E
L 24+00E
L 20+00E
L 16+00E
L 12+00E
L 8+00E
L 4+00E
L 0+00
L 4+00W
L 8+00W
L 12+00W
L 16+00W
L 20+00W
L 24+00W
L 28+00W
L 32+00W
L 36+00W
L 40+00W
L 44+00W
L 9920
L 9922
L 9921
L 9739
L 8650
L 545251
L 545252
L 545253
L 547462
L 545254
L 545255
L 545256
L 545259
L 545260
L 545257
L 545258
L 547461
Township Line
Beaver Pond
Contoured by: Mary M. Greer
LEGEND
Contour interval 2 ppb
Claim post
Claim line
Patent claim
Access road
> 40 ppb
30 - 40 ppb
26 - 30 ppb
22 - 26 ppb
18 - 22 ppb
14 - 18 ppb
12 - 14 ppb
10 - 12 ppb
KEY MAP
Scale: 1 inch to 2 miles
HARKER
HOLLOWAY
GARRISON
THACKERAY
ELLIOTT
TANNAHILL
Ghost Lake
HARKER - ELLIOTT GROUP I
GEOCHEMICAL SURVEY - HUMUS
HARKER & ELLIOTT TOWNSHIPS
LARDER LAKE MINING DIVISION
DISTRICT OF COCHRANE, ONTARIO
200 0 200 400 feet
1 inch to 200 feet
PERRONS' 83 LIMITED
KIRKLAND LAKE CANADA
Drawn by: Mary Greer
Drawing No.: 83-GEOH-1
Date: October 1983

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