REPORT

ON

GEOPHYSICAL SURVEYS

OF

SOUTH GROUP (9 CLAIMS)

HALLIDAY TOWNSHIP

TALISMAN MINES LIMITED

MONTREAL RIVER MINING DIVISION

ONTARIO

INTRODUCTION

Talisman Mines Limited have under their control nine (9) contiguous claims in Halliday Township on the north shore and on part of Washagami Lake. The claims are bounded on the west by Sothman Township.

During the month of October, 1967, magnetic and electromagnetic surveys were carried out on this group of claims on lines cut immediately prior to the surveys. The results of the surveys are reported herein.

PROPERTY LOCATION AND ACCESS

The mining property consists of nine (9) unpatented mining claims known more precisely as follows:

MR 45505	(1 claim)
MR 45547-45554 inclusive	(8 claims)
Total	9 claims (approx. 360 acres)

The claims are all located in the Montreal River Mining Division and are bounded on the west by Sothman Township and straddle the Grassy River where it flows north out of Washagami Lake.

Access to the property is by lumber roads then by boat across Washagami Lake about 44 miles south of Timmins or by chartered aircraft from South Porcupine.

GENERAL GEOLOGY

The rocks in the area are Keewatin type volcanics and sediments of pyroclastic origin. The volcanics are mainly rhyolite, rhyolite agglomerates, tuffs, greywacke and slate-like sediments, (see O.D.M. Map 35J). Rhyolite breccia and choritic rocks are reported to be present on the property according to personal communication with the prospector who staked the claims. Nickel-bearing basic rocks are known to exist in Sothman Township near Loonwing Lake to the southwest.

A study of aeromagnetic map #286G shows no magnetic features in the immediate area of the claims.

The general strike in the area is considered to be northwest.

GEOPHYSICAL SURVEYS

For the purpose of the surveys, two base lines were cut immediately prior to the surveys in a northwesterly direction. This was required because the property is traversed by the Grassy River. Cross lines were cut in a northeasterly direction from both base lines at 300-foot intervals and chained and picketed every 100 feet.

(i) Magnetometer Survey

A magnetometer survey was carried out with a Fluxgate Magnetometer M500 Serial No. 6517 (McPhar). Readings were taken at 100' intervals along the traversed lines, base and tie lines.

The magnetometer survey established the probable presence of a basic dyke running through the eastern portion of the property. The dyke is characterized by a maximum anomaly of approximately 400 gammas above background and this peak is located on the base line between lines 24W and 27W. The dyke is defined generally by an average magnetic contrast of about 200 gammas, striking northwest-southeast in spatial proximity to the base line. Where the magnetics delimit its occurrence near the grassy River, the dyke is coincident with the base line; its southeastern extension appears to swing approximately 200 feet to the northeast of the base line. Throughout the

length of its definition, the dyke appears to have a width of between 100 feet and 200 feet. Although readings could not be taken on lines 9W and 12W because of the presence of a small lake, line 6W and the eastern boundary of the claim group both display 100 gamma anomalies indicating its continuity beyond the lake to the southeast.

In a very definite way, the magnetic background of the property appears to vary. In the southeastern part of the group, the average magnetic level is about 550 gammas. To the northwest, approaching the Grassy River, the level appears to decrease to approximately 450 gammas, while to the northwest of the Grassy River, the magnetic background seems to be nearly 500 gammas. This variation undoubtedly reflects a corresponding complexity in the stratigraphic features of the underlying rocks and/or the broad pattern of the changing depth of overburden across the property. The variation, while pronounced, is below that level required by an interpreter to locate, with confidence on the accompanying plans the position of the stratigraphic horizons or to make any definitive statements regarding overburden depth.

(ii) Electromagnetic Survey

The electromagnetic survey was not instrumental in locating any important conductors. Two conductors designated by number on the accompanying plans have no economic significance.

Conductor No. 1 has been traced out for a length of 1,200 feet, in part coinciding with the magnetic anomaly discussed previously. From line 24W to line 30W, its strike direction diverges from that of the magnetic anomaly, so that on line 30W, its axis is some 400 feet to the northeast of the magnetic peak. On lines 18W and 21W, its axis is coincident with the centre-line of the magnetic feature. Poorly defined on all lines with 1,000 cps cross-overs, this conductor is pin-pointed with large angular deflections on lines 18W, 21W and 24W by the 5000 cps frequency. Comparison of the angles encountered in the two different frequencies, suggests that the causative source of this conductor is very poorly conductive material, such as found in wet shear zones or that due to conductive overburden. Sulphides would be a very unlikely cause.

Conductor No. 2 is fixed by cross-overs only on line 18E, although the large angles on line 15E indicate the possibility of a cross-over beyond the property to the northeast. This conductor does not appear to carry beyond the Grassy River to the southeast and because of the limited nature of its definition, no thorough discussion of its characteristics can be undertaken. The quality of the defining cross-overs would preclude any high priority further work on it, when it is considered that no appreciable magnetics are associated with it.

Several unnumbered indications of high frequency electro-magnetic conductors were uncovered in the survey. Without exception,

the magnitude of the defining angles is so small, that the existence of conductive material underlying them is questionable.

SUMMARY AND CONCLUSIONS

There are conductors outlined which are fairly good on the high frequency but poor on the low frequency and could possibly be caused by a very small amount of sulphides; however, unless some information on the area is known that may be of some help, no recommendations can be made to drill.

Respectfully submitted,

D. W. Sullivan, P. Eng.,
F.G.A.C.

November 13, 1967
Toronto, Ontario

APPENDIX

9 Claim Group - Halliday Township

Line cutting done between August 25th and September 7th, 1967 by A. Mitto, Box 62, Val d'Or, Quebec.

Mileage cut - 10.7

Magnetometer Survey carried out between September 16th and 23rd, 1967.

Mileage surveyed - 9.4 **No. of readings - 575**

Electromagnetic Survey carried out between September 21st and 23rd, 1967.

Mileage Surveyed - 8.2 **No. of readings - 411**

MR 45553 - 54 - 55 are 1/2 owned by water

∴ maximum credits for 9 claims x 60 = 540 days

9 + 1/2 540 = 51 days per claim

REPORT

ON

GEOPHYSICAL SURVEYS

OF

SOUTH GROUP (9 CLAIMS)

HALLIDAY TOWNSHIP

TALISMAN MINES LIMITED

MONTREAL RIVER MINING DIVISION

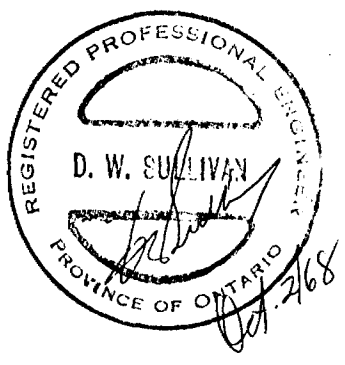
ONTARIO

INTRODUCTION

Talisman Mines Limited have under their control nine (9) contiguous claims in Halliday Township on the north shore and on part of Washagami Lake. The claims are bounded on the west by Sothman Township.

During the month of January, 1968, magnetic and electromagnetic surveys were carried out on this group of claims on lines laid out immediately prior to the surveys. The surveys were carried out on parts of claims covered by waters of the Grassy River and not reported in the geophysical coverage of the claims in my report of November 13, 1967.

The results of the geophysical surveys are reported herein.



PROPERTY LOCATION AND ACCESS

The mining property consists of nine (9) unpatented mining claims known more precisely as follows:

MR 45505	(1 claim)
MR 45547-45554 inclusive	(8 claims)
TOTAL	9 claims (approx. 360 acres)

The claims are all located in the Montreal River Mining Division and are bounded on the west by Sothman Township and straddle the Grassy River where it flows north out of Washagami Lake.

Access to the property is by lumber roads then by boat across Washagami Lake about 44 miles south of Timmins or by chartered aircraft from South Porcupine.

GENERAL GEOLOGY

The rocks in the area are Keewatin type volcanics and sediments of pyroclastic origin. The volcanics are mainly rhyolite, rhyolite agglomerates, tuffs, greywacke and slate-like sediments, (see O.D.M. Map 35J). Rhyolite breccia and chloritic rocks are reported to be present on the property according to personal communication with the prospector who staked the claims. Nickel-bearing basic rocks are known to exist in Sothman Township near Loonwing Lake to the southwest.

A study of aeromagnetic map # 286G shows no magnetic features in the immediate area of the claims.

GEOPHYSICAL SURVEYS

Base lines and cross lines from the October 1967 surveys were brushed out and additional lines were cut or picketed on the ice for detailed coverage since an electromagnetic anomaly was found on the northwest shore of the river in the northeast corner of claim MR45553. The additional lines were spaced at 100 foot intervals in the areas of interest.

The surveys were carried out between January 6th and 15th, 1968.

(i) Magnetometer Survey (5.2 miles)

The instrument used was a McPhar M 700 Fluxgate Serial No. 6731. Readings, in gammas, were taken at 50 foot intervals along the cross lines.

The survey outlined, in more detail, a magnetic trend in a northwesterly direction between the small circular lake on claims MR45548 and 45549 and the northwest shore and north boundary of the property. This anomaly in all probability is a diabase dyke and is characterized by a maximum anomaly of approximately 300 to 400 gammas above background with two peaks on lines 24W and between lines 16E and 20E. The trend is generally defined by the 600 gamma contour.

The balance of the area covered by this survey did not show any anomalous conditions which might allow for interpretation, along with previous data, of any stratigraphic horizons or to determine possible overburden thicknesses.

(ii) Electromagnetic Survey (5.8 miles)

The coverage of the claims was the same as for the magnetometer survey.

The instrument used was a Crone J.E.M., 480/1800 c.p.s. using a 300 foot coil separation and using the in-line method. Serial No. of the instrument was # 50-35-89.

The survey confirmed the presence of a relatively weak conductor in the extreme northeast corner of claim 45553 and extended the length of the Conductor by some 400 feet southeasterly under the waters of the river. The conductor lies between lines 16E and 22E approximately 17+00 feet north of the base line through claims 45552 and 45554.

The conductor throughout its length of 600 feet appears to lie on the southwest flank of the magnetic anomaly discussed previously which may have some importance, however, the defining angles are small and its importance is questionable.

No other conductors were found in the area covered.

SUMMARY AND CONCLUSIONS

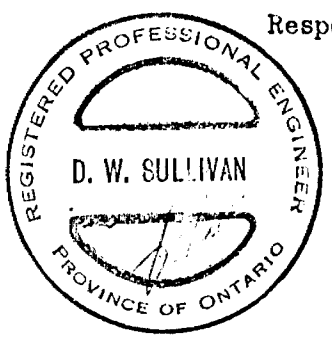
The magnetometer survey outlined in only slightly more detail a northwesterly trending anomaly in the north part of the group. This possibly indicates the presence of a diabase dyke. An E.M. conductor of moderate importance appears to lie on the south flank of the magnetic anomaly.

Relatively massive sulphides have been reported on contiguous claims to the north of the surveyed area and on this basis it is recommended that the E.M. conductor be drilled, especially since it is thought that overburden is quite deep in this area, based on a study of the E.M. data.

Respectfully submitted,

D.W. SULLIVAN, P.Eng.

October 2, 1968.



REPORT
ON THE
GEOPHYSICAL SURVEYS
NORTH GROUP (16 claims)
IN
HALLIDAY TOWNSHIP
TALISMAN MINES LIMITED
MONTREAL RIVER MINING DIVISION
ONTARIO

INTRODUCTION

Talisman Mines Limited have a group of 16 contiguous mining claims in Halliday Township north of Washagami Lake. The claims are bounded on the west by Sothman Township. It is in the Montreal River Mining Division.

During the month of October, 1967, magnetic and electromagnetic surveys were carried out on the group of claims. The results of the surveys are reported herein.

PROPERTY, LOCATION AND ACCESS

The property consists of sixteen (16) contiguous unpatented mining claims known more precisely as follows:

MR45506 - 45509 inclusive (4 claims)
MR45530 - 45541 " (12 claims)

TOTAL 16 claims (approx. 640 acres)

Access to the property is by bush lumber roads 44 miles south from Timmins thence by boat from Halliday on Washagami Lake and up the Grassy River to the southeast corner of the group. Chartered aircraft are available from South Porcupine 45 miles to the north of the property.

GENERAL GEOLOGY

The rocks in the area are Keewatin-type volcanics and sediments (O.D.M. Map 35j). The volcanics are mainly rhyolite, rhyolite agglomerates, tuffs, greywacke and slate-like sediments. The aeromagnetic map 286G shows a small magnetic feature in the west part of the claim group and it may be due to a slightly basic intrusive similar to the basic intrusives known to exist in Sothman Township to the west.

The strike of the rocks in the area are considered to be northwest and this would appear to be confirmed by the trend of the magnetic feature mentioned above and from the magnetic survey although sharp local changes in strike may be indicated from the geophysical surveys.

GEOPHYSICAL SURVEYS

Because of the northwest strike, a base line was run in

a northwest direction and northeast lines cut at 300-foot intervals and chained and picketed every 100 feet.

(i) Magnetic Survey

A magnetic survey was carried out using a Fluxgate Magnetometer M500, Serial No. 6517. Readings were taken at 100' intervals along the traverse lines, base lines and tie lines.

Generally speaking the magnetic anomalies are non-existent in the east half and the northwest quarter of the property. However, a large anomaly is present in the southwest quarter striking northwest. It extends from Line 27W to Line 51W. It appears to have its best magnitude over a width of about 500 feet where it crosses Lines 30W, 33W and 36W where readings from 4500 up to 9000 gammas were obtained. Areas of magnetic lows occur on the southwest flank of the magnetic anomalous zone.

This magnetic anomaly coincides reasonably well with the airborne anomaly shown on Aeromagnetic Map 286G.

This anomaly could indicate the presence of a basic intrusive, possibly peridotite, which are known to exist immediately to the west in Sothman Township which has nickel mineralization associated with it. Any electromagnetic conductors within or along the flanks of this magnetic anomaly must be considered worthy of testing by drilling.

(ii) Electromagnetic Survey

The survey was carried out using a McPhar vertical loop

dip-angle instrument, recording both low (1,000 cycles per second) and high frequencies (5,000 cycles per second). The results are presented in profile form on the accompanying map (Scale 1" = 200'). The E.M. unit was serial number 3-6512, RX = 3-6506.

The survey was carried out on all grid lines. When conductors were located, detail stations were taken. The results of the survey are shown on one plan on a scale of 1" = 200 feet and are discussed below.

It is to be noted that from Line 3W to 18W it was difficult to determine the exact trend of some strong conductors and several lines were run at right angles to the main grid. It can be seen that there are good drill targets present but further detailed work should be done prior to drilling.

Zone A

Zone A is indicated by a good conductor on lines 21W and 24W and is definitely worthy of drilling. The northwest extension of the conductor is somewhat questionable and requires further detail work. The best part of the zone may be faulted off between lines 18W and 21W. The conductor at 3 + 00S on line 15W and 2 + 00S on line 18W should be drilled. It is located a short distance off the northeast side of the large magnetic anomaly. A suggested hole would be at 3 + 50S on line 18W to the southeast.

Zone B

This conductor lies between lines 12W and 15W and parallel to them and is considered to be a good conductor and could be drilled with a hole collared at 6 + 00N on line 15W and drilled south.

There is no magnetic correlation in this zone.

Zone C

This conductor would appear to have good possibilities and could be drilled. If possible, some detailed surveying should be done prior to drilling. A suggested hole would be from a point 1 + 00E of 8 + 00S on line 15W and drilled southwest.

There is no magnetic correlation on this zone.

Zones D, E, F

These are rather indefinite but it is recommended that detailed E. M. be carried out on these zones.

Zone G

This zone occurs north of the base line on lines 33W, 36W, and 39W. It is considered to be a weak zone.

Zones H and I

These two conductors are considered poor from an electromagnetic point of view; however, they are located within the magnetic anomaly described earlier. The conductive zones appear to lie on the periphery of the magnetic zone and may represent zones of

disseminated sulphides associated with a possible ultrabasic intrusive. More geophysical work or even drilling would require additional support from geological evidence.

Zone J

Located on lines 42W, 45W and 48W with the best part of the conductor at 21 + 00 south on line 48W. This zone is associated with the magnetic anomaly and for this reason it is suggested that if possible, it should be checked with an I.P. survey at some time.

Line 39W (31 + 50S)

This cross-over is considered very good and occurs as a single reading near the property boundary and on the shore of a small lake. It is associated with a contact between a magnetic low and medium high within the large magnetic anomaly.

This single reading is considered very interesting and should be considered in future exploration plans and would be dependent upon the exploration results from the remainder of the property.

CONCLUSIONS AND RECOMMENDATIONS

There are at least three good conductive zones worthy of being tested by diamond drilling, namely Zones A, B, and C., even though there is no correlations with the magnetic survey in these areas.

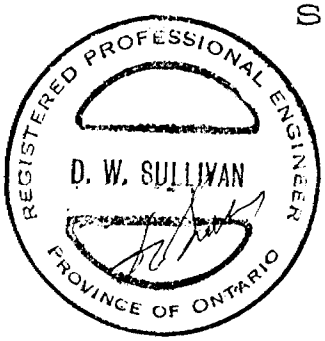
There are other zones in the south quarter of the property and in the area of the magnetic anomaly that require further electro-

magnetic detail.

It is recommended that the detailed ground electromagnetic work be done before drilling commences.

Respectfully submitted,

SCOPE MINING & EXPLORATION
CONSULTANTS LIMITED



D. W. Sullivan, P. Eng.,
F.G.A.C.

Dated at Toronto,
January 8, 1968

APPENDIX

Period the Geophysical Surveys were carried out:

(a) Magnetometer Survey: August 30th to September 15th, 1967.

Mileage surveyed - 16.8 NO. OF READINGS 1027

(b) Electromagnetic Survey: September 11th to 19th, 1967.

Mileage surveyed - 19.6 NO. OF READINGS 1024

Line cutting was done by A. Mitto of Val d'Or, Quebec, Box 62 between August 10th to 24th, 1967.

Mileage cut - 20.4

HALLIDAY

LARDER LAKE MINING DIVISION
DISTRICT OF SUDBURY

Scale - 40 Chains - 1 Inch

North Azt.

NOTE

400' Surface Rights Reservation around all Lakes and Rivers.

HUTT

SOTHMAN

MIDLOTHIAN

Halliday (WASHAGAMI L.)

Lake L.&F. Reserve

Grassy River

Relic Lake

Grassy

Dumbell Lake

Trans Line

5M. 4M 3M 2M 1M

1M. 2M 3M 4M 5M

83M 82M 81M 80M 79M 78.86

T9 29 38d 20 47 7M

83 54 23 88 7M

HALLIDAY

MONTREAL RIVER MINING DIVISION
DISTRICT OF SUDBURY

Scale - 40 Chains = 1 Inch

North Asst.

NOTE
400' Surface Rights Reservation around all Lakes and Rivers.

HUTT

SOTHMAN

MIDLOTHIAN

Halliday (WASHAGAMI L.)

Lake

Relic Lake

Grassy River

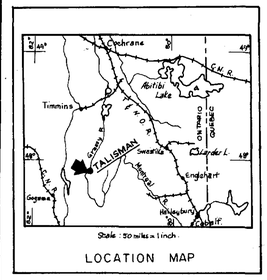
Grassy

Dumbell Lake

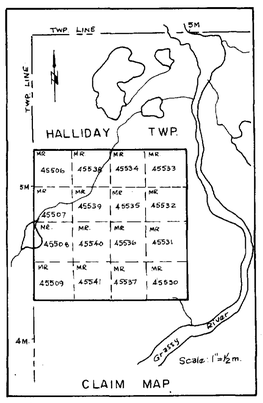
H.E.P.C. Transm. Line

5M. 4M. 3M. 2M. 1M.

83M 82M 81M 80M 79M 78.86



LOCATION MAP



CLAIM MAP

L-72W L-69W L-66W L-63W L-60W L-57W L-54W L-51W L-48W L-45W L-42W L-39W L-36W L-33W L-30W L-27W L-24W L-21W L-18W L-15W L-12W L-9W L-6W L-3W

45506 45538 45534 45533 45507 45539 45535 45532 45540 45536 45531 45509 45541 45537 45530

L.O.B.

BASE LINE

Lake

INSTRUMENT

MCPHAR M 500
Ser. No. 6517

No. of readings : 1027
Readings in gammas

REGISTERED PROFESSIONAL ENGINEER
D. W. SULLIVAN
PROVINCE OF ONTARIO

TALISMAN MINES LIMITED

HALLIDAY TOWNSHIP

MONTREAL RIVER MINING DIVISION

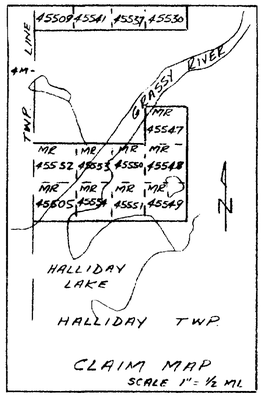
MAGNETOMETER SURVEY

SCALE: 1" = 200 feet

AUGUST - SEPTEMBER, 1967

63.2270 X

16



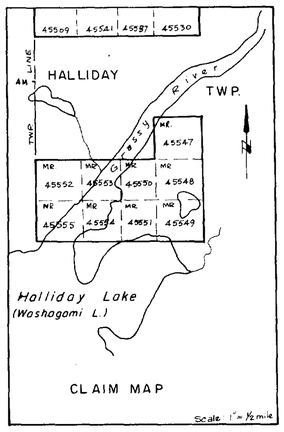
CLAIM MAP
SCALE 1" = ½ MI.

INSTRUMENT - McPHAR M700 FLUX GATE SER NO 6731
READINGS IN GAMMAS PLOTED RIGHT OF PICKET LINE
(600 / 500) CONTOUR INTERVAL 100 GAMMAS

TALISMAN MINES LIMITED
HALLIDAY TWP
MONTREAL RIVER MINING DIV.
MAGNETOMETER SURVEY
SCALE 1" = 200' SEPT. 1968

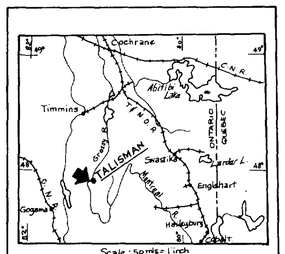
REGISTERED PROFESSIONAL ENGINEER
D. W. SULLIVAN
PROVINCE OF ONTARIO

63.2270



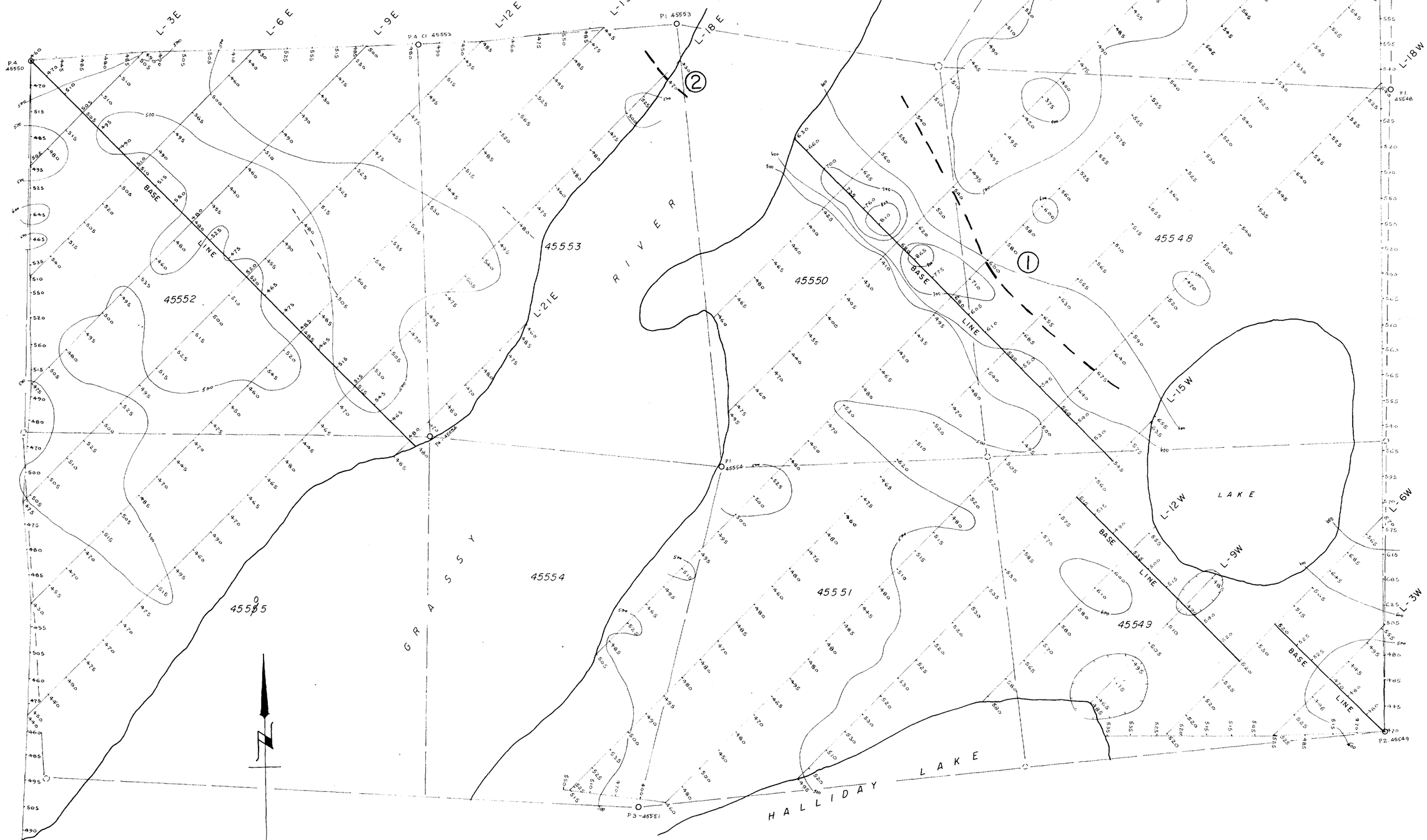
CLAIM MAP

Scale 1" = ½ mile



Scale : 50 miles 1 inch

LOCATION MAP



—— E.M. Conductor.

- - - - - E.M. Conductor. Indicated.

① Conductor No.

INSTRUMENT
McPHAR FLUXGATE M-500
Serial No. 6517

READINGS IN GAMMAS

No. of. readings : 575

63.2270

TALISMAN MINES LIMITED

HALLIDAY TOWNSHIP

MONTREAL RIVER MINING DIVISION

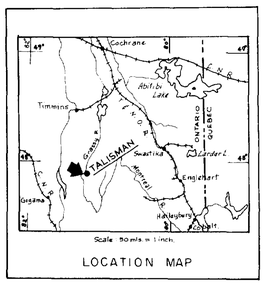
MAGNETOMETER SURVEY

SCALE : 1" = 200 feet

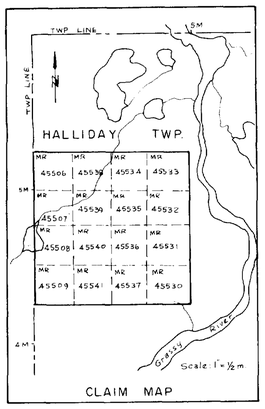
AUGUST - SEPTEMBER, 1967

REGISTERED PROFESSIONAL ENGINEER
D. W. SULLIVAN
PROVINCE OF ONTARIO

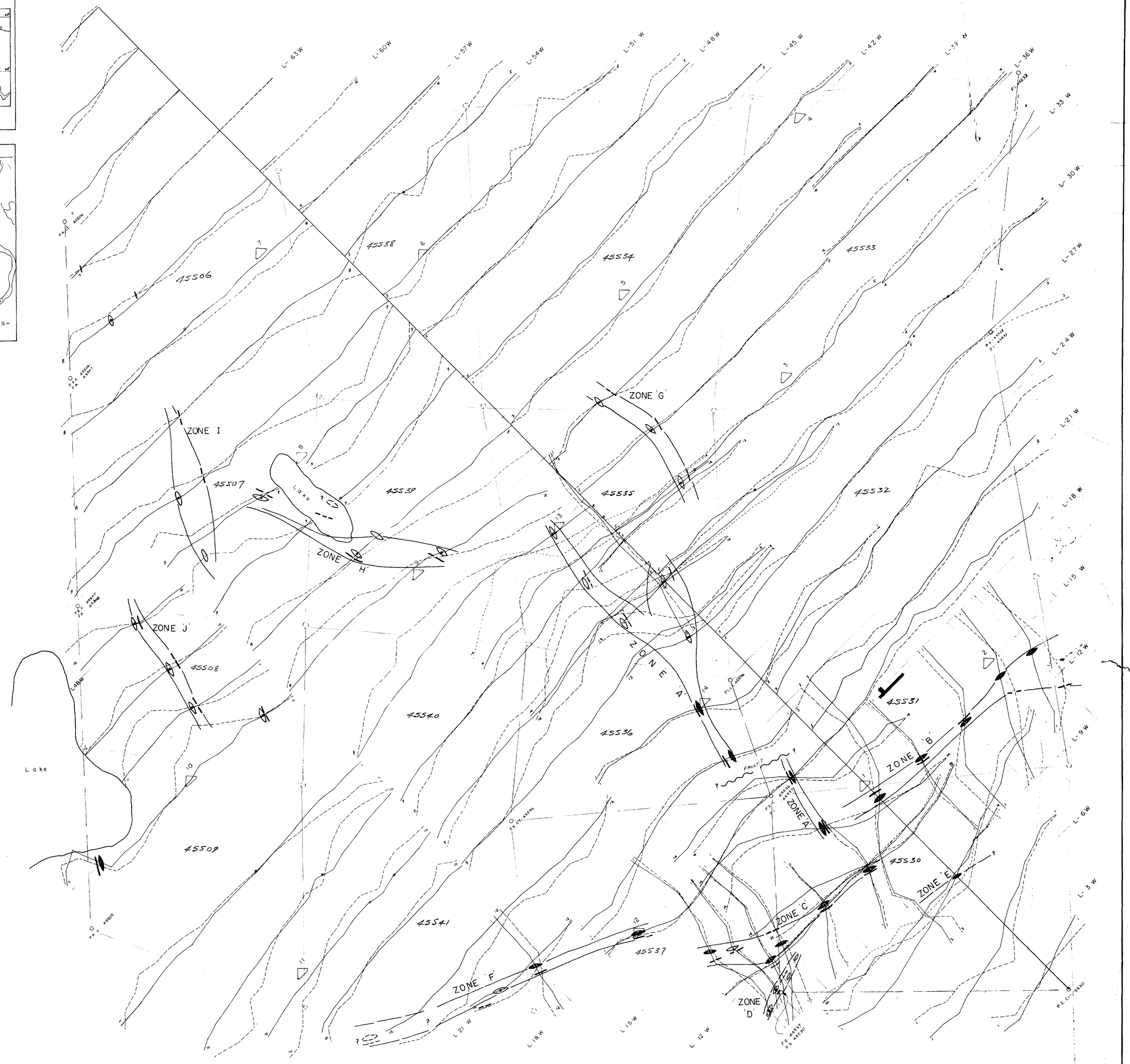
S.6.9



LOCATION MAP



CLAIM MAP



3△ TRANSMITTER LOCATIONS

PROFILE
- Vertical scale : 1" = 20°
- 1000 CPS. ——
- 5000 CPS. - - - - -

No. of readings 1024

1000 cps	5000 cps	
⬬	———	Conductor
⬭	- - -	Questionable Conductor
△		Transmitter location

INSTRUMENT

McPHAR VERTICAL LOOP Model SS15

1000 - 5000 c.p.s.

No. transmitter # 3-6512
receiver # 2-6504

TALISMAN MINES LIMITED

HALLIDAY TOWNSHIP

MONTREAL RIVER MINING DIVISION

ELECTROMAGNETIC SURVEY

SCALE : 1" = 200 feet

SEPTEMBER, 1967

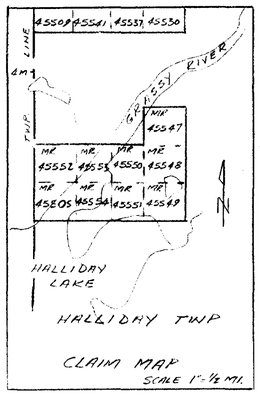
REGISTERED PROFESSIONAL ENGINEER
D. W. SULLIVAN
PROVINCE OF ONTARIO

41P14NE0104 63.2270 HALLIDAY

250

63.2270 11101

MCL-6 X



INSTRUMENT - CRONE J.E.M 430/1800 C.P.S WITH 300' COIL SER. # 50-35-89

HI. FREQ. READINGS PLOTTED RIGHT OF PICKET LINE
LO. FREQ READINGS PLOTTED LEFT OF PICKET LINE

▬ ▬ ELECTROMAGNETIC CONDUCTOR

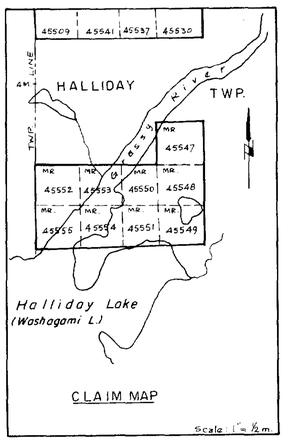
TALISMAN MINES LIMITED
HALLIDAY TWP.
MONTREAL RIVER MINING DIV.

ELECTROMAGNETIC SURVEY

SCALE 1"= 200' SEPT. 1968

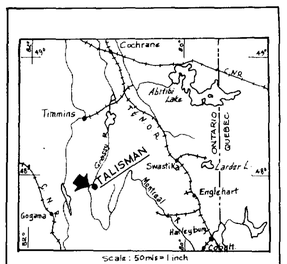
63.2270

REGISTERED PROFESSIONAL ENGINEER
D. W. CULLEN
PROVINCE OF ONTARIO



CLAIM MAP

Scale 1" = ½m



LOCATION MAP

L-30W
L-27W
L-24W
L-21W
L-18W
L-15W
L-12W
L-9W
L-6W
L-3W
L-3E
L-6E
L-9E
L-12E
L-15E
L-18E
L-21E
P.I. Cl. 45550
P.I. Cl. 45553
P.I. Cl. 45554
P.I. Cl. 45551
P.I. Cl. 45548
P.2 Cl. 45549
45547
45552
45553
45550
45548
45554
45555
45551
45549
Base Line
RIVER
GRASSY
LAKE
HALLIDAY LAKE
①
②

Vertical scale : 1" = 20°

2000 CPS. ————

5000 CPS. – – – – –

No. of readings. 411

E.M. Conductor.

E.M. Conductor Indicated.

① Conductor No.

INSTRUMENT

McPHAR VERTICAL LOOP Model S S 15

Serial Nos.

Transmitter 3-6512

Receiver 3-6506

TALISMAN MINES LIMITED

HALLIDAY TOWNSHIP

MONTREAL RIVER MINING DIVISION

ELECTROMAGNETIC SURVEY

SCALE : 1" = 200 feet

AUGUST - SEPTEMBER, 1967

REGISTERED PROFESSIONAL ENGINEER
D. W. SUTHERLAND
PROVINCE OF ONTARIO

41P14NE0184 63.2278 HALLIDAY

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S.G.-9

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