INTRODUCTION

The following report outlines the geophysical survey carried out on claims T-61396, 61397 & 61398 Bloc 10 N. B. Part Gillies Limit.

After cutting lines in an East-West direction, and picketing at 100 ft. intervals, an E-M survey was carried out using a Ronka EM16 deep penetrating electromagnetic detector. Several interesting responses were detected.

LOCATION OF CLAIMS

The claims on which the survey was carried out are located in Gillies Limit. They are readily accessible from Highway 11 along a secondary road 2 miles in length, ending on the property.

Property Preparation

Line cutting began on April 28, 1969 and continued through until May 9, 1969. Lines were cut in an East-West direction from a baseline commencing at a Survey Post on the North Boundary of the property.

Spacing of the picket lines started from the North Boundary of the property at 200 foot intervals to and including the 2600 foot line, which was 40 feet north of the South Boundary of Claim 61398

METHOD AND THEORY OF THE INSTRUMENT

The Em Survey was carried out using a Ronka EM 16 deep penetrating electro-magnetic detector. The instrument is simply a sensitive receiver which picks up VLF transmitting stations operating for communications with submarines.

These stations have vertical antennas and as a result, transmit a concentric magnetic field around them. When these fields meet a conductive body, there is secondary fields in the ground created from these bodies. The EM 16 has a receiver covering the frequency band of the new VLF stations and with means of measuring the vertical field component.

The receiver has two inputs, with two receiving coils built into the instrument. One coil has normally vertical axis while the other is horizontal.

The signal from one of these coils(vertical axis) is first minimized by tilting the instrument. The tilt angle is calibrated into percentages. The remaining signal in this coil is finally balanced out by a measured percentage of a signal from the other coil, after being shifted by 90 degrees. This coil is normally parallel to the primary field.

Thus if the secondary signals are small, compared to the primary field,(horizontal primary field), the mechanical tilt-angle is an accurate measure of the vertical real component, and the compensation $\pi/2$ signal from the horizontal coil is a measure of the quadature vertical signal.

In phase and quadrature readings were taken at 100 ft. intervals over the picket lines and plotting was done using a horiz-

ontal scale of 1 inch per 100 feet and 1 inch per 40% on the vertical scale.

LENGTH OF PICKETED GRID LINES

Base Line		2640
0-0 Line	West	1835
	East	660
2S	-W	1880
	E	660
4S	-W	1920
	E	660
6S	-W	1885
	E	660
8S	-W	1885
	E	660
10S	-W	1850
	E	660
12S	-W	1415
	E	660
14S	-W	720
	E	660
16S	-W	700
	E	660
18S	-W	650
	E	660
20S	-W	600
	E	660
22S	-W	550
	E	660
24S	-W	505
		660
26S	-W	450
	E	660

28,725 feet (5.44 miles)

DECLARATION

I, Theodore D. Brown, hereby certify that I supervised this work and that report and maps are true in every respect.

Theodore D. Brown

Contractor

~~THE TOWNSHIP~~ CLAIM OF ~~MAP~~

GILLIES LIMIT

(NORTH PART)

DISTRICT OF TIMISKAMING

LARDER LAKE MINING DIVISION

SCALE: 1=INCH= 20 CHAINS

LEGEND

PATENTED LAND	(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	
KINGS HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	

NOTES

400' Surface Rights Reservation Around All Lakes And Rivers.

Mining Claims Accepted Subject To Sec 53 Of The Mining Act Excepting Claims Staked In Any Of The "A" Mining Locations

L.O. 7151 Covers Flooding Rights On Montreal River Lying Northerly Of And Upstream From The Dam At Hound Chute To Contour 910'. H.E.P.C. File: 1164 Vol. 2.

L.O. 7558 Covers Flooding Rights On Montreal River Upstream From The Upper Notch Power Site To Contour Elevation 785.5' H.E.P.C. File: 20994 Vol. 3.

This Twp. Lies Within The TIMAGAMI PROVINCIAL FOREST.

RESERVE FLOODING RIGHTS TO H.E.P.C. PROPOSED TO CONTOUR 905 G.S.C.

PLAN NO.- M.484

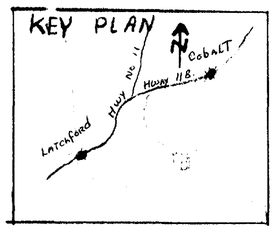
DEPARTMENT OF MINES
—ONTARIO—

C - 1242

NORTH

23597

KEY PLAN



[redacted]

SCALE :

1" = 100 FT.

1" ± 40%

All Readings taken Facing East.
Utilizing NSS Annapolis Md. Freq. 21.40 kHz
Radiated Power 85 KW.

DRAWN BY

INPHASE

QUADRATURE

POWER LINE