



42H08NW0025 63.2248 TWEED

010

PROPERTY

The property consists of a contiguous group of eighteen claims in Tweed Township, Larder Lake Mining Division and are numbered as follows:

- L99474 - L99478 inclusive
- L99496 - L99504 "
- L99524 - L99527 "

LOCATION

The property is located in the southeast quarter of the Township of Tweed. The south boundary of the group is two and one quarter miles (approximately) north of the south boundary of Tweed Township and the east boundary of the group is approximately one and three quarter miles west of the east boundary of the Township. The main Floodwood River flows across the north east corner of the property and roughly flows west along the north boundary of the property before emptying into Baker Lake.

ACCESS

Local and/or private logging roads extend from Cochrane north into Potter and Heighton Townships as do others east and then north into Clive Township. These roads however end at points 17 1/2, 16, and 37 miles respectively from the property location. In the meantime access for immediate exploration purposes would appear to be via bush plane from Timmins or other convenient points.



TOPOGRAPHY

The area is characterized by low relief as is typical of the Precambrian Shield Area in general. A few outstanding hills are the result of the basic intrusive, resilient to weathering, that rise a few hundred feet above the surrounding peneplane. Gravel ridges and eskers give additional minor relief. The streams are generally slow running and carry brown swampy water.

RESOURCES

Water supplies, from the many small lakes and ponds, would appear to be reasonably abundant for any process and domestic purposes. As noted above this may be mostly of the swampy variety carrying vegetable matter.

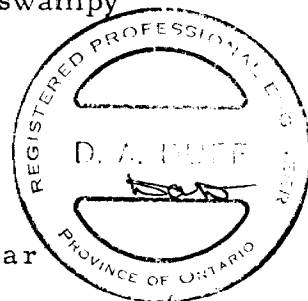
Timber and wood products are readily available in the Cochrane-Timmins Area.

Hydro Electric Power would be available from points on the Ontario Hydro Grid in the general area.

Transportation via Highway No 11, Canadian National Railways or Ontario Northland Railway to Cochrane is available. Existing local roads reach to within 16 miles of the property location. Air Canada serves the Timmins Area from which point bush planes operate to convenient landing lakes.

HISTORY

The area had received only desultory attention from prospectors and geologists prior to the advent of airborne geophysics. This is understandable in view of the paucity of outcrop even on stream beds and lake



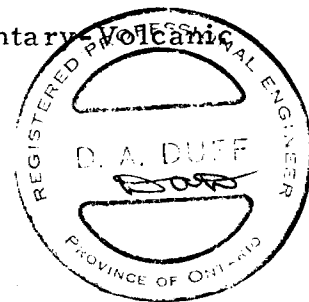
shores. Some exploratory investigation took place in the early 30's via the Cyril Knight Prospecting Organization. Geological reconnaissance was done in 1934 by Robert Thomson for the Ontario Department of Mines. Conwest Exploration Company is reported to have carried out both airborne and ground geophysical work in this general area in 1959, followed by check diamond drilling which encountered some sulphide mineralization. More recently this area has been covered by airborne magnetic survey under government auspices as well as airborne and ground geophysical exploration by the Texas Gulf Sulphur Company. This latter company is currently reported to be carrying out an extensive diamond drilling program on their various claim groups.

PREVIOUS WORK

There is no evidence of previous work on the claims included in the property under review. Preliminary geological Map P. 373 of the Ontario Department of Mines shows a number of diamond drill holes as having been drilled in the general area underlain by Precambrian Volcanics and Sediments. Further diamond drilling is said to be in progress at a number of locations in recent months.

GENERAL GEOLOGY

As shown on the most recent geological map of the area a wide band of Precambrian Sediments and Volcanics noses around an intrusive granitic core centered in Tomlinson Township. The nose of the Sedimentary



Series extends well into Tweed and Bragg Townships with the north limb extending east to the Quebec boundary and the south limb roughly southeast again to the Quebec boundary. Surrounding this nose structure is granitic rocks similar to the core material. To the north the rock is overlain by deposits of pleistocene clay, gravel etc.

The area of interest for investigation and exploration is the Sedimentary Volcanic Structure.

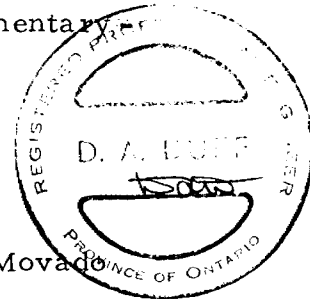
AIRBORNE MAGNETIC RESULTS

As shown by the accompanying magnetic sketch, the property of Movado Mining Company Limited is located on one end of a large strong airborne magnetic anomaly. This magnetic trends east-west along the southern portion of the claim group with lines of intensity ranging from 59,600 - 60,300 within the claim group.

A second strong magnetic anomaly is located north of the property with a north-south trend. This latter impinges on the north claim boundary at an intensity of 59,600-59,700. The Combination of these two suggests possibilities of an intriguing situation - within the claim group.

MAGNETOMETER SURVEY

A magnetic survey using a Sharpe MF1 Fluxgate Magnetometer was conducted on north-south lines spaced at 300 foot intervals with stations established every 100 feet along the lines. The usual corrections for instrument drift and diurnal variations were applied and readings reported to the nearest 5 gammas. The results of the magnetic survey are discussed in the following



paragraphs and are shown on the 1" = 200 foot scale map attached to this report. Technical details of the instrument used can be found in Appendix "A".



RESULTS OF MAGNETOMETER SURVEY

Only one area within the property boundaries exhibited any marked increase in magnetic intensity. This anomolus area, extending from the central portion of the east boundary to a point north of the baseline on line 18+00E actually includes seven individual anomolies.

Area 1 - enters from the east boundary on line 57+00E, and extends West to well beyond line 54+00E. Its apparent width at the boundary is 500 feet straddling the base line, the highest reading is 2200 gammas.

Area 2 - extends from the east boundary north of the baseline westward to beyond line 39+00E. The highest reading is 1800 gammas.

Area 3 - lies north of area 2 on line 39+00E. The high reading is 1100 gammas.

Area 4- with a length of over 600 feet extends over line 27+00E and 24+00E. Some 800' north of the baseline and the high reading is 1850 gammas.

Area 5 - is located on line 27+00E from 200 to 600 feet north of the baseline and has a high reading of 1355 gammas.

Area 6 - is located on line 21+00E from 400 to 650 feet north of the baseline. The high reading is 1750 gammas.

Area 7 - is located on line 21+00E 200 feet north of the baseline and has a high reading of 1100 gammas.

The normal background reading for the property would appear to be approximately 500 gammas. The northern portion of the property shows readings in the 350 to 500 gammas range.

The survey lines extend somewhat south of the properties actual south boundary and the readings indicate an extensive area of high magnetic intensity paralleling the south boundary from east to west. This coincides with airborne indications as previously published.

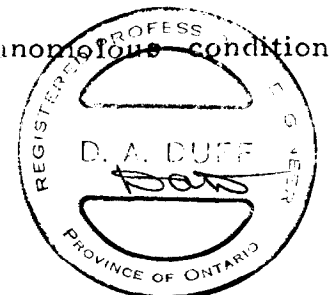
The magnetic results confirm the general east-west trend of the rock structure in this locality and would suggest that there may be some concentration of magnetic minerals in the section north of the baseline extending from the east boundary to line 21+00E. This anomolus area warrants further investigation.

ELECTROMAGNETIC SURVEY

An electromagnetic survey using a Ronca 16 unit was carried out on the same north-south lines as in the magnetic coverage. Readings were again taken at 100 foot intervals along the lines. Both in-phase and-out-of phase readings were taken. The results of the survey will be discussed in the following paragraphs and are shown on the 1 inch to 200 foot scale map accompanying this report. Technical details of the instrument used will be found in Appendix "B" and "C" of this report.

ELECTROMAGNETIC RESULTS

From a study of the electromagnetic profiles there appears to be a lack of typical textbook crossovers which might confirm clear cut anomolous conditions.



This condition may be understandable in view of the entire lack of rock outcrop and the suggestion that the overburden in this area may be relatively deep. There are however, irregularly mild crossovers which roughly coincide with the previously outlined magnetometer anomalies north of the baseline and extending from the east boundary west to Line 21+00E. These can be enumerated as follows:-

Line 21+00E	-	400 feet North of baseline	
Line 27+00E	-	300	"
Line 30+00E	-	200	"
Line 39+00E	-	375	"
Line 39+00E	-	650	"
Line 54+00E	-	500	"



Several other anomalous indications which coincide with magnetic highs occur near the east boundary along the Floodwood River and may be the result of wet clay deposits.

CONCLUSIONS

The magnetic contours indicate an area of readings ranging from two to five times background at and north of the baseline in the east half of the property.

The electromagnetic results provide a number of relatively weak crossovers both in the area of higher magnetic reading and elsewhere.

In view, of the evidence which suggests a relatively fair blanket of overburden together with the fact that the chief economic constituent anticipated in the general area is zinc mineralization strong magnetic and electromagnetic reactions would not necessarily be forthcoming.

As a result and considering the coincidence of magnetic and electromagnetic anomalies, several cross-sectional diamond drill holes would appear to be in

order, as a means of investigating the potential of the property.

RECOMMENDATIONS

In order to investigate a representative anomolous situation as described above, a minimum of 1,000 feet of diamond drilling is recommended at two locations. This will require one drill hole on line 21+00E to cross-section the high magnetic area and one or possibly two holes on line 39+00E. The initial drill hole should be on line 39+00E with subsequent locations dependent on overburden conditions experienced in the first hole.

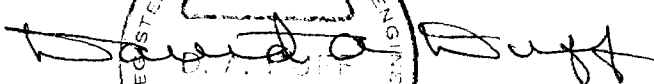
ESTIMATED COST

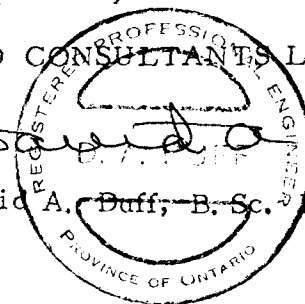
This preliminary program is estimated to cost approximately as follows:-

Diamond Drilling (1,000' @ \$10.00)	\$ 10,000.00
Transportation (included in price)	
Engineering and Supervision	2,000.00
Contingencies	1,000.00
	<hr/>
	\$ 13,000.00

Respectfully submitted

GHD CONSULTANTS LIMITED


David A. Duff; B.Sc. P. Eng.



ACKNOWLEDGEMENTS

Ontario Department of Mines; Canadian Geological Survey
Aeromagnetic Maps 2357, 2340, 2338, 2356, 2358, 2366, 2367, 2368.

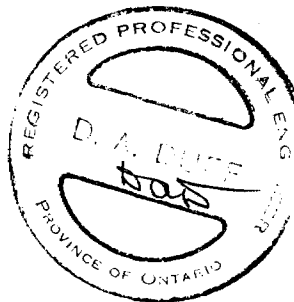
Ontario Department of Mines preliminary Geological Map No. P373

Ontario Department of Mines, Forty-Fifth annual report
Vol. XLV, Part VI 1936
Geology of Burntbust River Area
by
Robert Thomson

Ontario Department of Mines, Geological Reports #8 and #14
by
S. B. Lumbers

Report on property January 30th 1967 GHD Consultants Limited

Field reports and maps - Staff



APPENDIX "A"

VERTICAL INTENSITY FLUXGATE MAGNETOMETER MF-1
SPECIFICATIONS

Model MF-1 Standard surveying and prospecting magnetometer
with self-levelling sensor.

Ranges: Plus or minus -
1,000 gammas f. sc. Sensitivity: 20 gammas per div
3,000 " 50 "
10,000 " 200 "
30,000 " 500 "
100,000 " 2000 "

Meter: Taut-band suspension, 1,000 gamma scale: 1 7/8" long 50 div.
3,000 " " 1 11/16" long 60 div.

Accuracy: 1,000 to 10,000 gamma ranges $\pm 0.5\%$ of full scale
30,000 to 100,000 gamma ranges $\pm 1\%$ of full scale

Operating Temperature: - 40° C to 40°
- 40° F to 100° F

Temperature Stability: Less than 2 gammas per °C (1 gamma/° F)

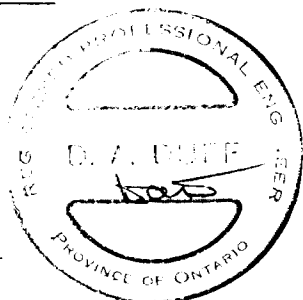
Bucking Adjustments: 10,000 to 75,000 gammas by 9 steps of
approximately 8,000 gammas and fine
control by 10-turn potentiometer. Con-
vertible for Southern hemisphere or
 $\pm 30,000$ gammas equatorial.

Batteries: 12 x 1. 5V - flashlight batteries ("C" cell type)
(AC Power supply available)

Consumption: 50 milliamperes

Dimensions: Instrument: 6 1/2" x 3 1/2" x 12 1/2" -
165 x 90 x 320 mm
Battery Pack: 4" x 2" x 7" -- 100 x 50 x
180 mm
Shipping Container: 10" dia. x 16" -
255 mm dia. x 410 mm

Weights: Instrument: 5 lbs. 12 oz. - 1.6 kg.
Battery Pack: 2 lbs. 4 oz. - 1 kg.
Shipping: 13 lbs.



PRINCIPLE OF OPERATION

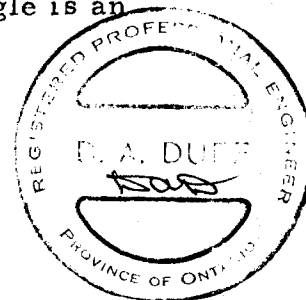
The VLF-transmitting stations operating for communications with submarines have a vertical antenna. The antenna current is thus vertical, creating a concentric horizontal magnetic field around them. When these magnetic fields meet conductive bodies in the ground, there will be secondary fields radiating from these bodies. This equipment measures the vertical components of these secondary fields.

The EM 16 is simply a sensitive receiver covering the frequency band of the new VLF-transmitting stations, with means of measuring the vertical field components.

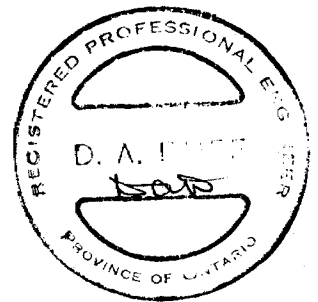
The receiver has two inputs, with two receiving coils built into the instrument. One coil has normally vertical axis and the other is horizontal.

The signal from one of the coils (vertical axis) is first minimized by tilting the instrument. The tilt-angle is calibrated in 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° . This coil is normally parallel to the primary field.

Thus, if the secondary signals are small compared to the primary horizontal 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 quadrature vertical signal.

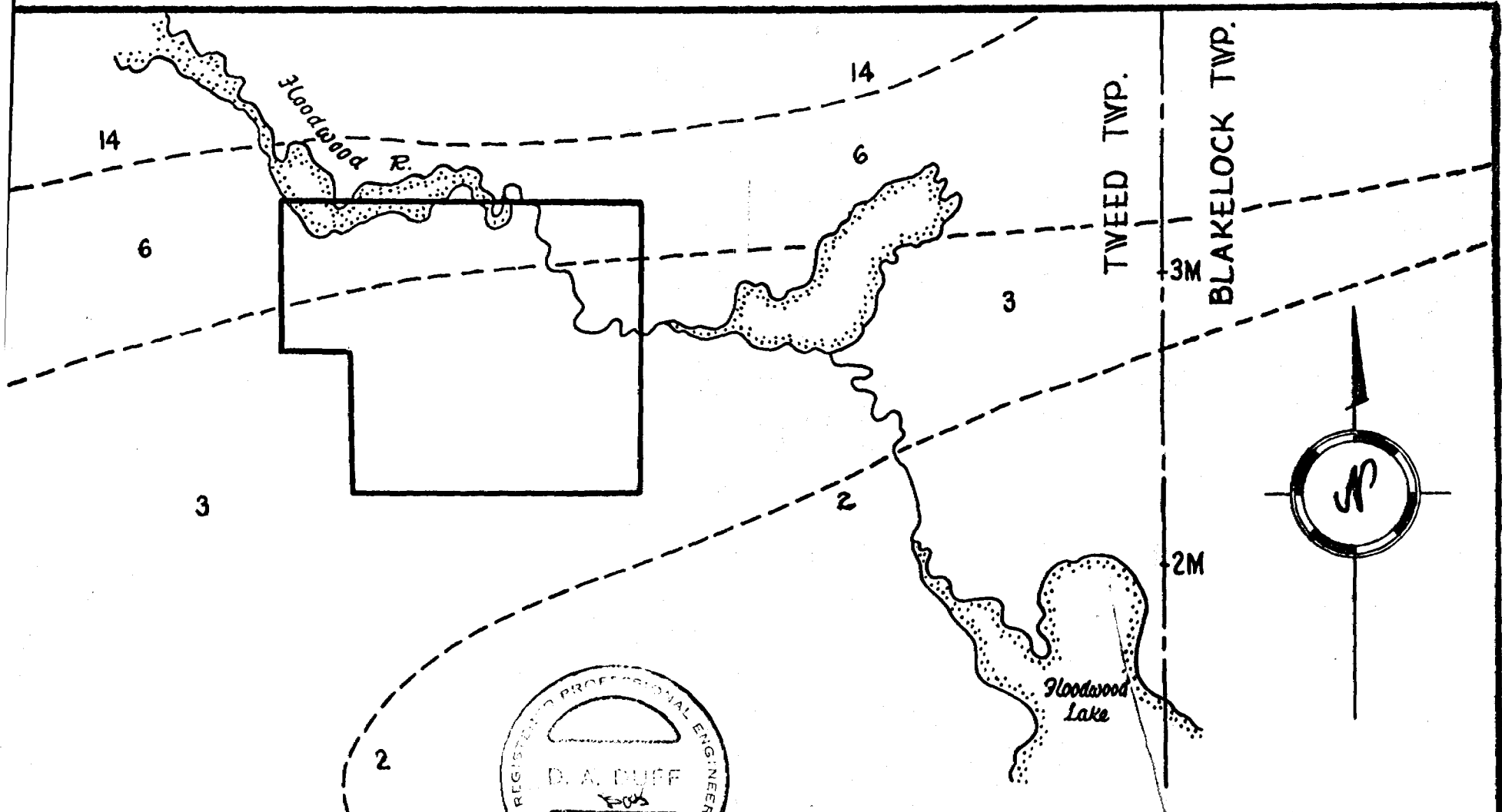


APPENDIX "C"

SPECIFICATIONS

Type	EM 16
Designer	Vaino Ronka
Manufacturer	Geonics Limited
Primary Field	Horizontal from any selected VLF transmitting station.
Station Selection	By plug-in units. Two stations selected by a switch on front panel.
Measured Field	Vertical field, in-phase and quadrature components.
Accuracy of Readings	+ - 1% resolution.
Range of Measurements	In-phase \pm 150% or 90 ^o , quadrature \pm 40%
Output Readout	Null-detection by an earphone, real and quadrature components from mechanical dials.
Batteries	6, size AA penlight cells. Life about 200 hours
Size	16 x 5.5 x 3.5 in. (42 x 14 x 12 cm).
Accessories	1 earphone and cord 1 carrying bag 1 set of batteries 1 manual of operation 3 plug-in units for station selection - additional units available.





- 2 Felsic & Inter Metavolcanics
- 3 Metasedimentary rocks
- 6 Felsic Intrusive rocks
- 14 Pleistocene & Recent

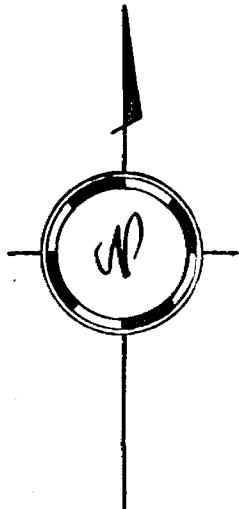


Geological map

MOVADO MINING COMPANY LIMITED

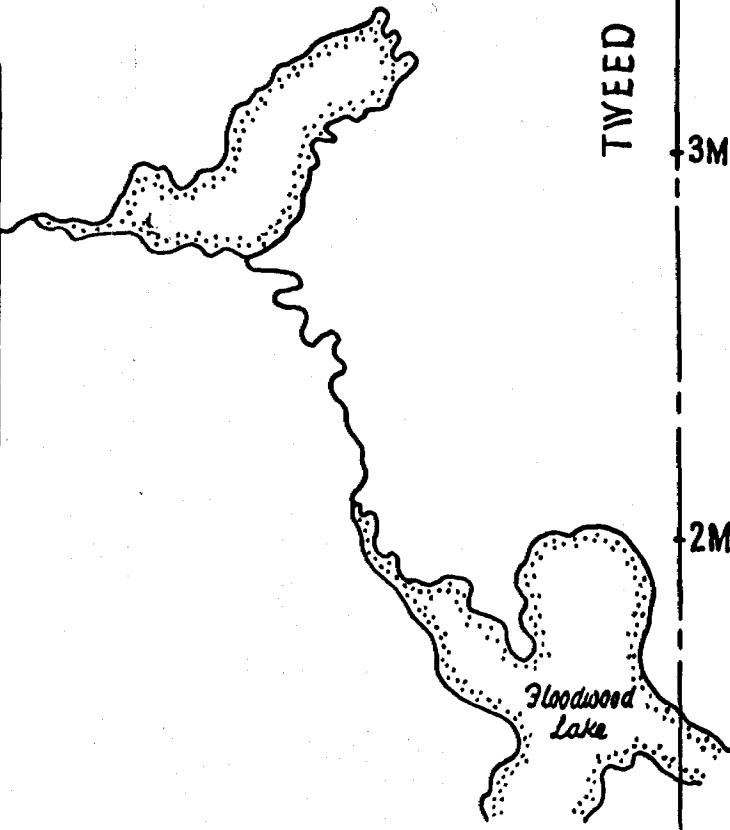
BURNT BUSH RIVER AREA - DIST. OF COCHRANE
ONTARIO

SCALE: 1 IN TO 1/2 MI.



Floodwood R.

99478	99477	99476	99475	99474
99496	99497	99498	99499	99500
99504	99503	99502	99501	
99524	99525	99526	99527	



TWEED TWP.

BLAKELOCK TWP.

3M

2M

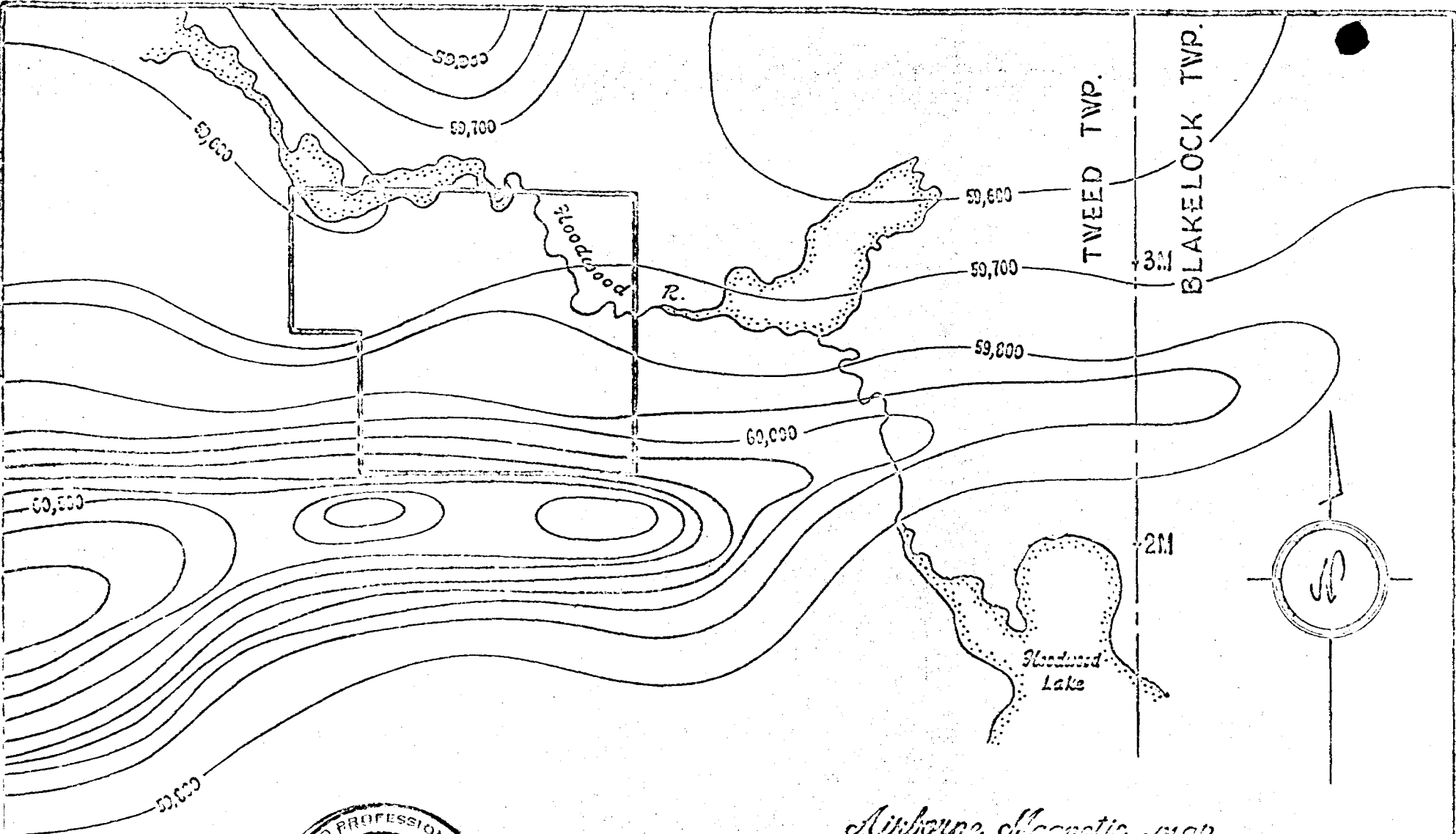


Claims location map

MOVADO MINING COMPANY LIMITED

BURNT BUSH RIVER AREA - DIST. OF COCHRANE
ONTARIO

SCALE: 1 IN TO 1/2 MI.



Airborne Magnetic map

MOVADO MINING COMPANY LIMITED

BURNT BUSH RIVER AREA - DIST. OF COCHRANE
ONTARIO

SCALE: 1 IN TO 1/2 MI.

DATE OF ISSUE
 JAN 16 1968
 ONTARIO DEPT. OF MINES

TWEED

LARDER LAKE MINING DIVISION

DISTRICT OF COCHRANE

Scale - 40 Chains = 1 Inch

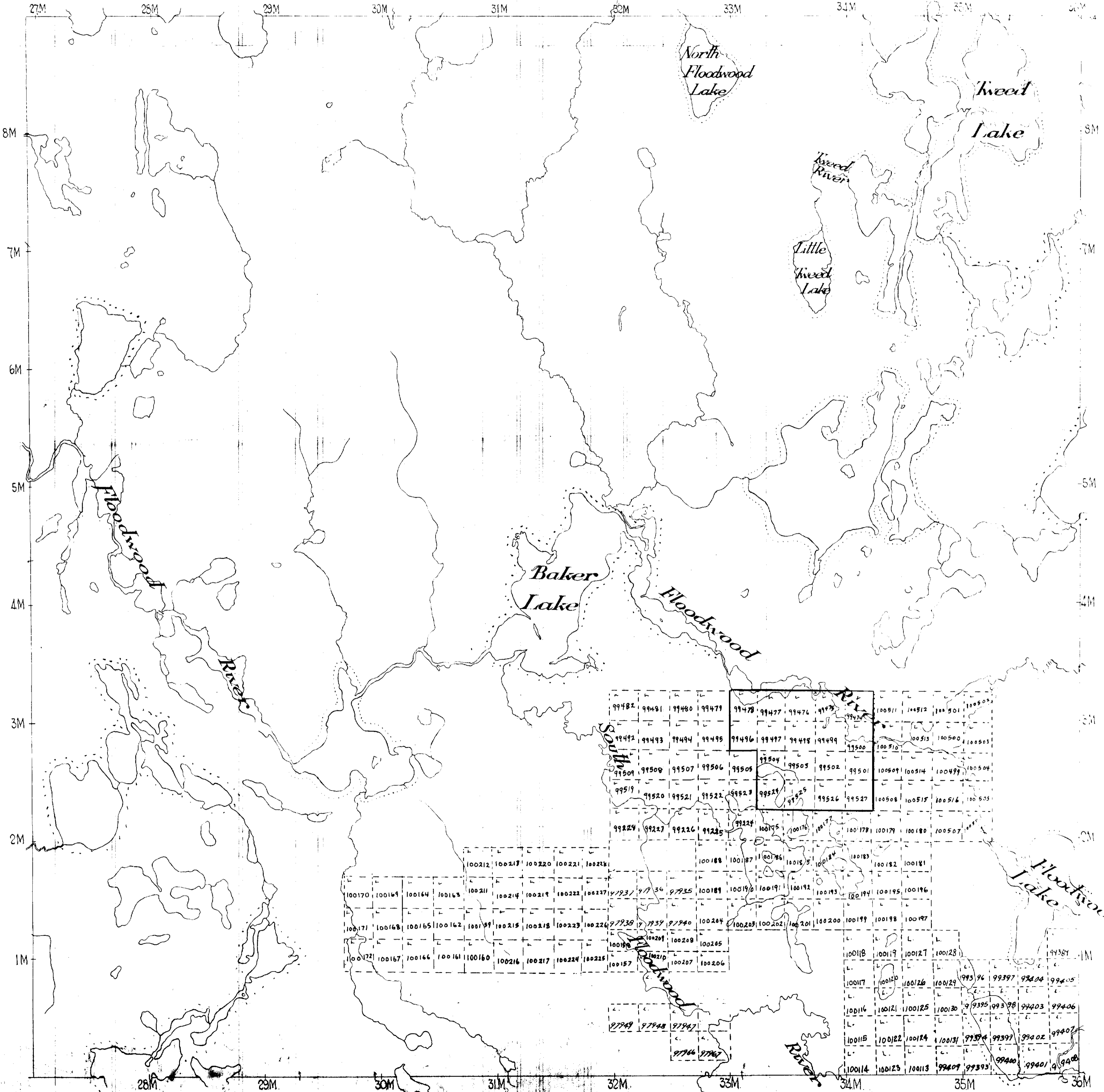
ONT. DEPT. OF MINES
 MINING LANDS BR.
 THIS MAP FOR CHECKING
 PURPOSES ONLY - MUST
 NOT BE SOLD.

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

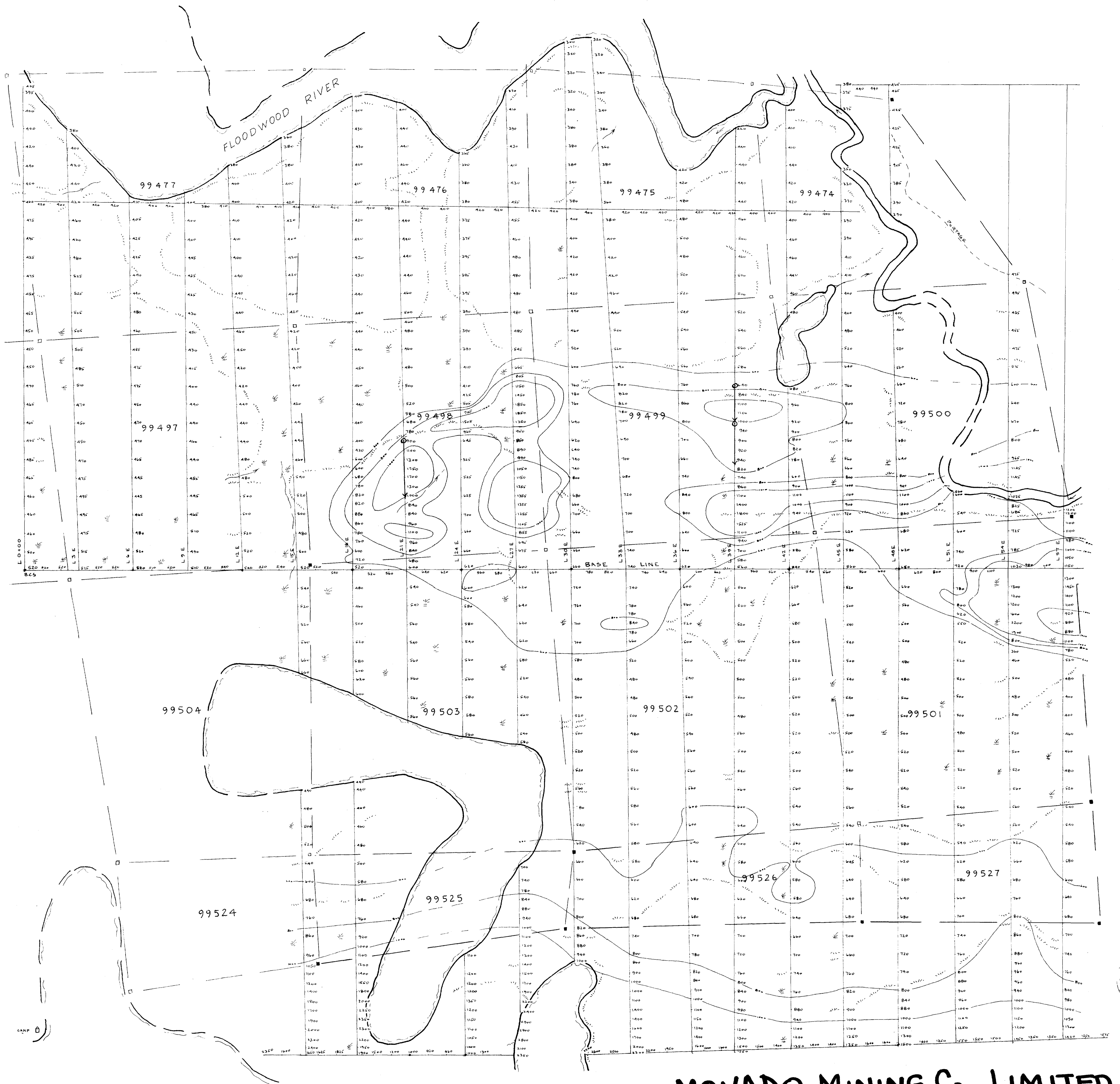
North Arrow

McQUIBBAN

BLAKELOCK



424864825 63 2248 TWEED



- 540 MAGNETIC READING IN GAMMAS
- CONTROL STATION
- OUTLINE OF HIGHER GROUND
- SWAMPY GROUND
- LOCATED CLAIM POST

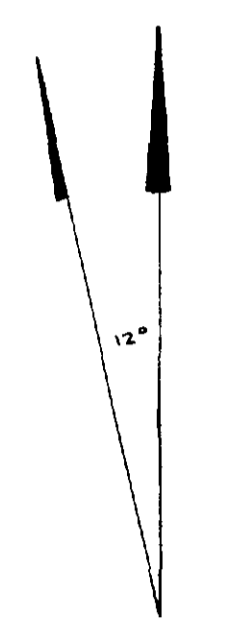
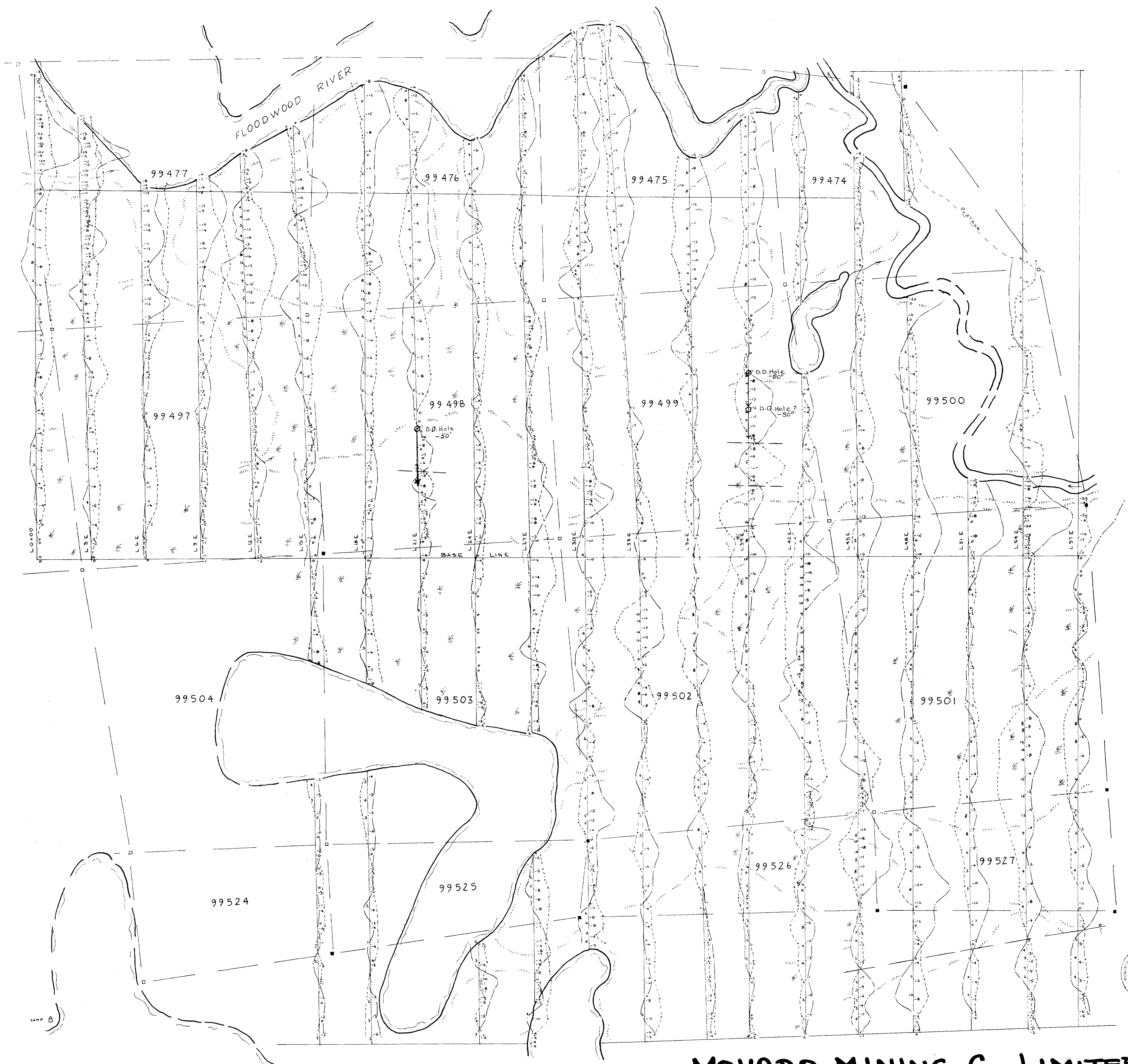
- 0 - 400
- 400 - 800
- 800 - 1000
- 1000 - +

MOVADO MINING Co. LIMITED
TWEED TOWNSHIP PROPERTY
MAGNETOMETER SURVEY
 By
G.H.D. CONSULTANTS LIMITED

63.2248

Scale - 1" = 200'





MOVADO MINING Co. LIMITED
TWEED TOWNSHIP PROPERTY
ELECTRO MAGNETIC SURVEY
 By
G.H.D. CONSULTANTS LIMITED

63-2248

Scale - 1" = 200'

- NORTH DIPS, (-), EAST OF LINE, IN %
- QUADRATURE, (-) EAST OF LINE
- SCALE OF PROFILES: 1" = 20'
- OUTLINING OF HIGHER GROUND
- SWAMPY GROUND
- LOCATED CLAIM POST
- VECTOR AXIS

