GEOPHYSICAL SURVEY

SEMPLE TOWNSHIP

VERTICAL LOOP ELECTROMAGNETIC SURVEY

Toronto, Ontario.
July 5, 1972.

R. H. Clayton, M.Sc., P. Eng.
Watts, Griffis and McOuat Limited

LOCATION AND ACCESS

The claims are in ~~Sothman~~ Semple Township, on Map 42 A 3. They are about 35 miles west of Matachewan on the extension of Highway 588, which goes straight to the property. There is also access by road from Timmins and Gowganda.

PROPERTY HOLDER

The claims are held by R. H. Clayton, 608 - 45 Dunfield Avenue, Toronto 295, Ontario. Licence Number A 40701.

SUBMITTED PARTY

The work is submitted by Watts, Griffis and McOuat Limited, Consulting Engineers and Geologists, Suite 911, 159 Bay Street, Toronto 1, Ontario.

CLAIMS SURVEYED

The following eleven claims were surveyed, 318370, 328477-81 inclusive and 32483-86 inclusive, also 328490.

COVERING DATES

Covering dates, including linecutting, were December 13, 1971 - May 20, 1972.

PREVIOUS WORK

Geologic mapping and electromagnetic and magnetic surveys had been carried out over part of the area by Hollinger Consolidated Gold Mines Limited.

Eight drill holes are reported in the southeastern part of the claim group. These are all intersected volcanic rocks. Pyrite and graphite are reported in some of the holes, and there is one occurrence of chalcopyrite noted.

GEOLOGY

The rocks mapped by the Ontario Department of Mines and by Hollinger are volcanic rocks; andesites and rhyolites. There is one occurrence of gold in quartz veins.

WORK CARRIED OUT

Baselines were laid out at approximately 1,000-foot intervals N 45 E and picket lines were cut S 45 E at 400-foot intervals, with stations at 100-foot intervals. A vertical loop electromagnetic survey was carried out over the whole grid using a Scintrex S.E. 250 unit.

METHOD USED

The method used was a standard vertical loop survey with moving transmitter ("broadside" or "parallel").

A conductor is indicated by a change in the dip of the resultant field at the receiver from being in the opposite direction of the direction of travel of the receiver to a dip in the same direction as the direction of travel. This is known as a crossover. The dip angles are plotted as a distance above or below the line at each station. When the receiver operator is facing the transmitter dips to the left are plotted above the line, and to the right below the line. Thus, a true crossover indicating a conductor, goes from upper left to lower right. If the dip angle returns to zero, but does not change direction, or if it starts to increase in the same direction, the point is called an incipient crossover, and generally indicates a conductor.

A rough measure of conductivity is obtained by rating the amount of the minimum signal at what should theoretically be the null point when the coil is zero-coupled with the resultant field. This signal is proportional to the dip angle, and theoretically (but not in practice) is always zero when the dip angle is zero. It was not possible to rate the minimum over all of the claims because of a power line a few hundred feet east of the property.

Scale

1. Clear null.
2. Slight change in null.
3. Weak but definite minimum signal.
4. Definite minimum signal.
5. Very strong signal.
6. Minimum almost equal to maximum.

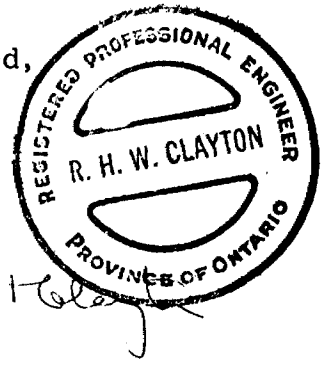
As a general rule any rating from 4 to 6 means that the anomaly is not caused by massive sulphides. A rating of 1 thoughout indicates possible orientation errors rather than a conductor.

RESULTS

A graphite-pyrite zone is shown on the Ontario Department of Mines' maps, trending southwest and then swinging west. An airborne survey had indicated a conductor well to the south of this pyrite-graphite zone as mapped at the western end. This ground survey indicated a continous zone with a southwest trend, which did not swing west as indicated on the O.D.M. maps.

The anomaly consists of multiple conductors which are hard to correlate. This is typical of graphitic conductors.

Respectfully submitted,



Toronto, Ontario.
July 5, 1972.

R. H. Clayton, M.Sc., P. Eng.
Watts, Griffis and McOuat Limited

G

900

File 2.934

RECEIVED

JUL 11 1972

PROJECTS SECTION

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 VERTICAL LOOP ELECTROMAGNETIC

Township or Area SEMPLE TOWNSHIP

Claim holder(s) R. H. CLAYTON, LICENCE A 40701

Author of Report R.H. CLAYTON, WATTS GRIFFIS & MCOUAT LTD

Address 911 - 159 BAY ST. TORONTO 1

Covering Dates of Survey Dec 13, 1971 - May 20, 1972
(linecutting to office)

Total Miles of Line cut 15.3

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 40
--Magnetometer
--Radiometric
--Other
Geological
Geochemical

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

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

DATE: July 3, 1972 SIGNATURE: R. H. Clayton
Author of Report or Agent

PROJECTS SECTION

Res. Geol. ____ Qualifications On this file

Previous Surveys [illegible]

Checked by ____ date ____

GEOLOGICAL BRANCH

Approved by ____ date ____

GEOLOGICAL BRANCH

Approved by ____ date ____

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
	318370
	328477
	328478
	328479
	328480
	328481
	328482
	328484
	328485
	328486
	328490

TOTAL CLAIMS 11

If space insufficient, attach list

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 705 Number of Readings 705

Station interval 100 ft.

Line spacing 400 ft

Profile scale or Contour intervals 1" = 40°

(specify for each type of survey)

MAGNETIC

Instrument

Accuracy - Scale constant

Diurnal correction method

Base station location

ELECTROMAGNETIC

Instrument ScinTrex S E 250

Coil configuration Vertical Loop

Coil separation 400 feet

Accuracy 1°

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

Frequency 1,000 cycles per second

(specify V.L.F. station)

Parameters measured dip angle

GRAVITY

Instrument

Scale constant

Corrections made

Base station value and location

Elevation accuracy

INDUCED POLARIZATION – RESISTIVITY

Instrument

Time domain Frequency domain

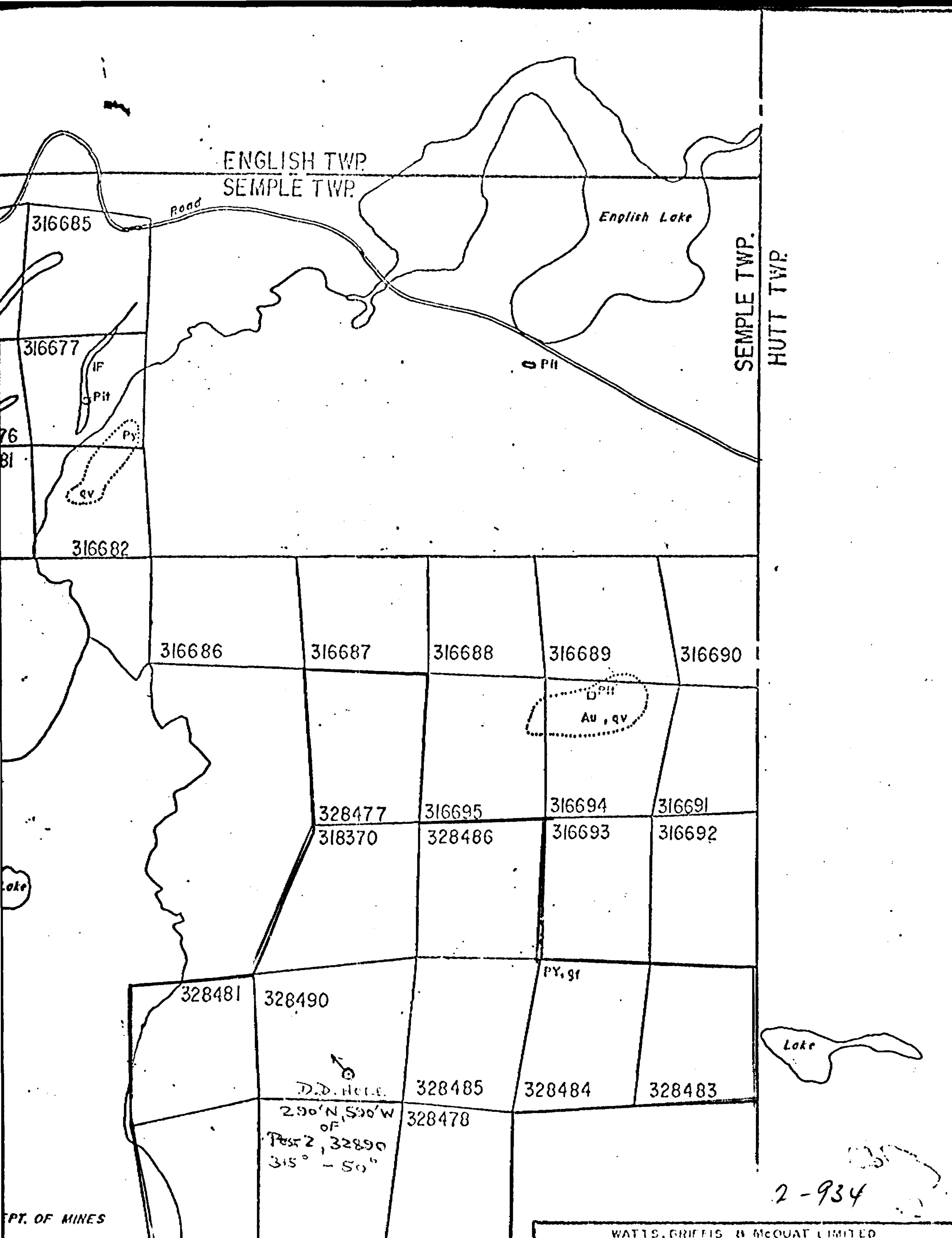
Frequency Range

Power

Electrode array

Electrode spacing

Type of electrode



WATTS, GRIFFIS & McOUAT LIMITED

DOWA MINING CO. LIMITED

MATACHEWAN PROJECT

NORTH-EAST SEMPLE

Scale 1" = 1320'

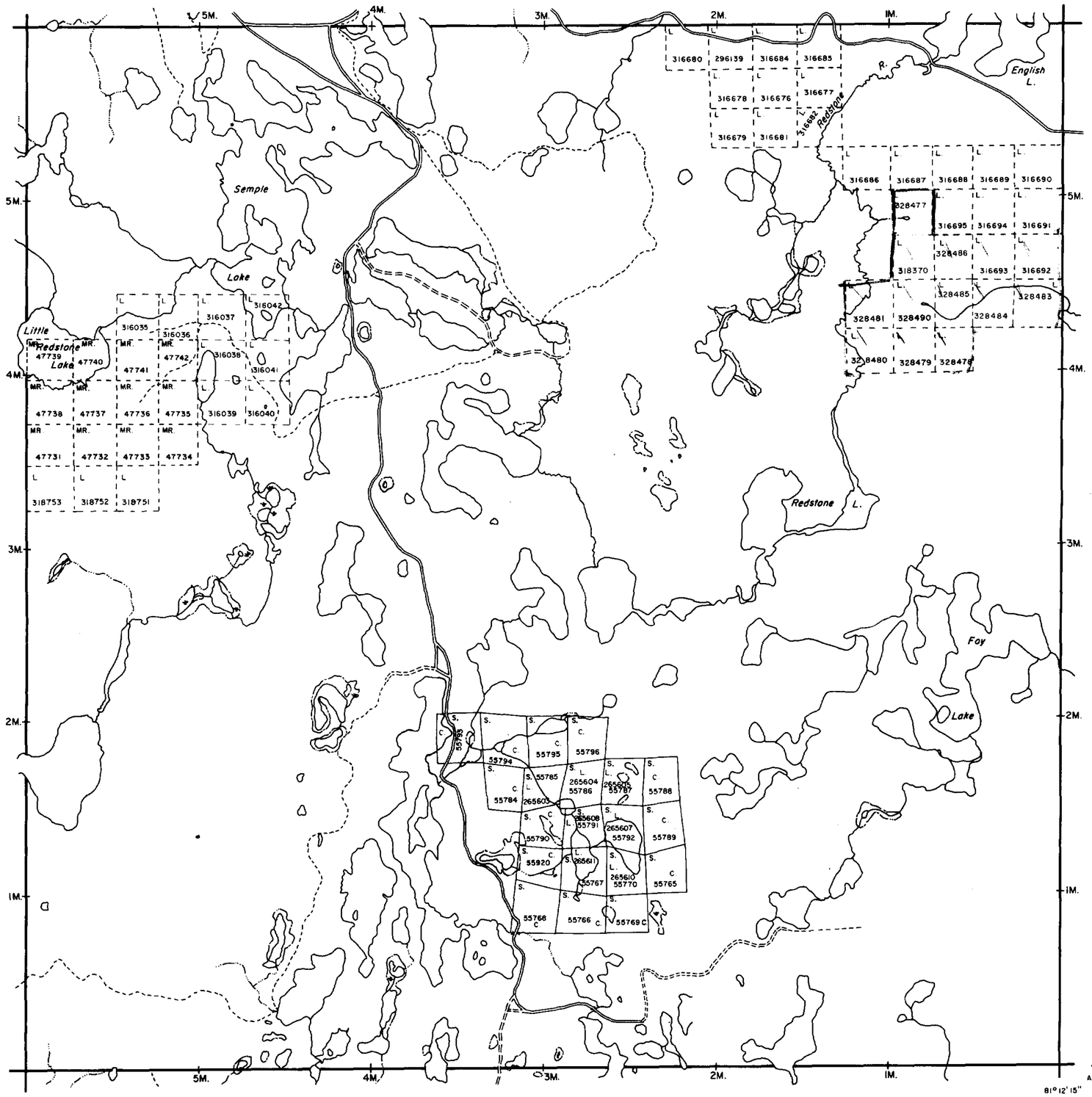
TORONTO, CANADA

ENGLISH TWP. M-787

MOHER TWP. M-868

HUTT TWP. M-943

SOTHMAN TWP. M-1121



NOTES

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

2.934

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

SEMPLE

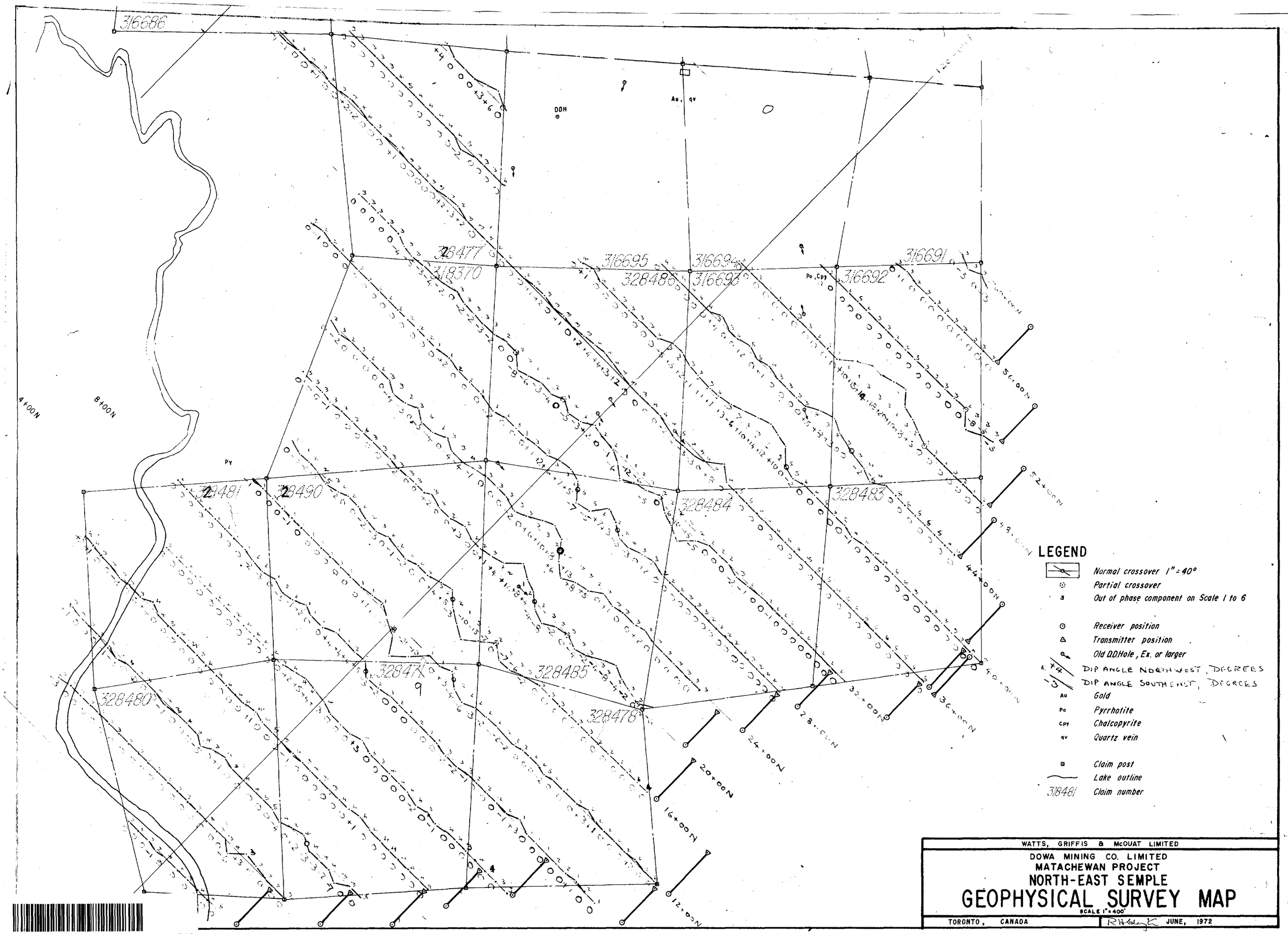
DISTRICT OF
SUDBURY

LARDER LAKE
MINING DIVISION

SCALE : 1 INCH · 40 CHAINS (1/2 MILE)

DR. R.W. NOBLE	PLAN NO. M-1100
DATE APR. 22, 71	

ONTARIO
DEPARTMENT OF MINES
AND NORTHERN AFFAIRS



WATTS, GRIFFIS & McOUAT LIMITED

DOWA MINING CO. LIMITED

MATACHEWAN PROJECT

NORTH-EAST SEMPLE

GEOPHYSICAL SURVEY MAP

SCALE 1" = 400'

TORONTO, CANADA — JUNE, 1972