



41P10SW0018 2.1558 TYRRELL

010

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SEP 3 1974

PROJECTS UNIT

Report of Geological and Geochemical
Surveys on The Juby
Property,

Tyrrell Township.
Ontario.

By

M. V. White

Getty Mines,
Toronto, Ontario.

July 25, 1974.

GEOLOGICAL REPORT ON THE JUBY PROPERTY

Introduction

The Gowganda-Shiningtree region has undergone extensive mineral exploration for gold and silver especially in the early part of this century. Occurrences at low grade gold are common in both McMurchy and Tyrrell townships. The most significant occurrence is in Tyrrell Township and it was developed and mined by Tyrinite Mines Ltd.

The Juby property located to the south of the Tyrinite property was acquired with the possibility in mind of a low grade large tonnage gold deposit which would be economic at current gold prices.

General Geology of the Region

The region is underlain by Archean mafic and felsic metavolcanics which are intruded by granite, granodioritic and dioritic stocks and more rarely serpentinized ultra-mafic plugs. Subvolcanic felsic to intermediate porphyry dikes genetically related to the intrusive stocks are also found. The above sequence is overlain by Timiskaming sedimentary rocks consisting of quartzites, arkoses, conglomerates

and argillites. Nippissing and Matachewan Diabase sills and dikes cross cut the entire sequence.

Structural Geology

Two periods of folding have been observed in the area, about North-South and East-West trending axes.

Economic Geology

Pyrite: Pyrite is common primarily occurring along shear zones and as disseminations in the felsic volcanic rocks. Pyrite may also be concentrated in the limited occurrences of banded iron formation where up to 10% has been reported.

Gold: Low grade gold occurrences are common, usually associated with pyrite in the felsic volcanics or granodiorite stocks. Gold occurs either in narrow quartz veins or shear zones infiltrated with quartz veinlets.

Silver: Silver is primarily found in the Timiskaming rocks associated with Nipissing diabase intrusions.

Copper: Several vein type occurrences of copper have been reported in the region, related to felsic volcanic rocks.

JUBY PROPERTY

Location

The Juby claims are located about 20 miles west of Gowganda and 3 miles south of highway 560 in Tyrrell Township, District of Timiskaming. The general location is shown on Fig. i.

Access

The property may be reached by the Welsh-Mac bush road which can be negotiated by a 4 wheel drive vehicle.

Previous Work

The property has previously been known as the Welsh or Welsh-Mac property. Several claims have undergone extensive trenching and prospecting.

Pertinent data includes a total of 5491 feet of diamond drilling, performed by Teck Hughes (1937) and Hollinger (1937). Numerous low gold assays were obtained.

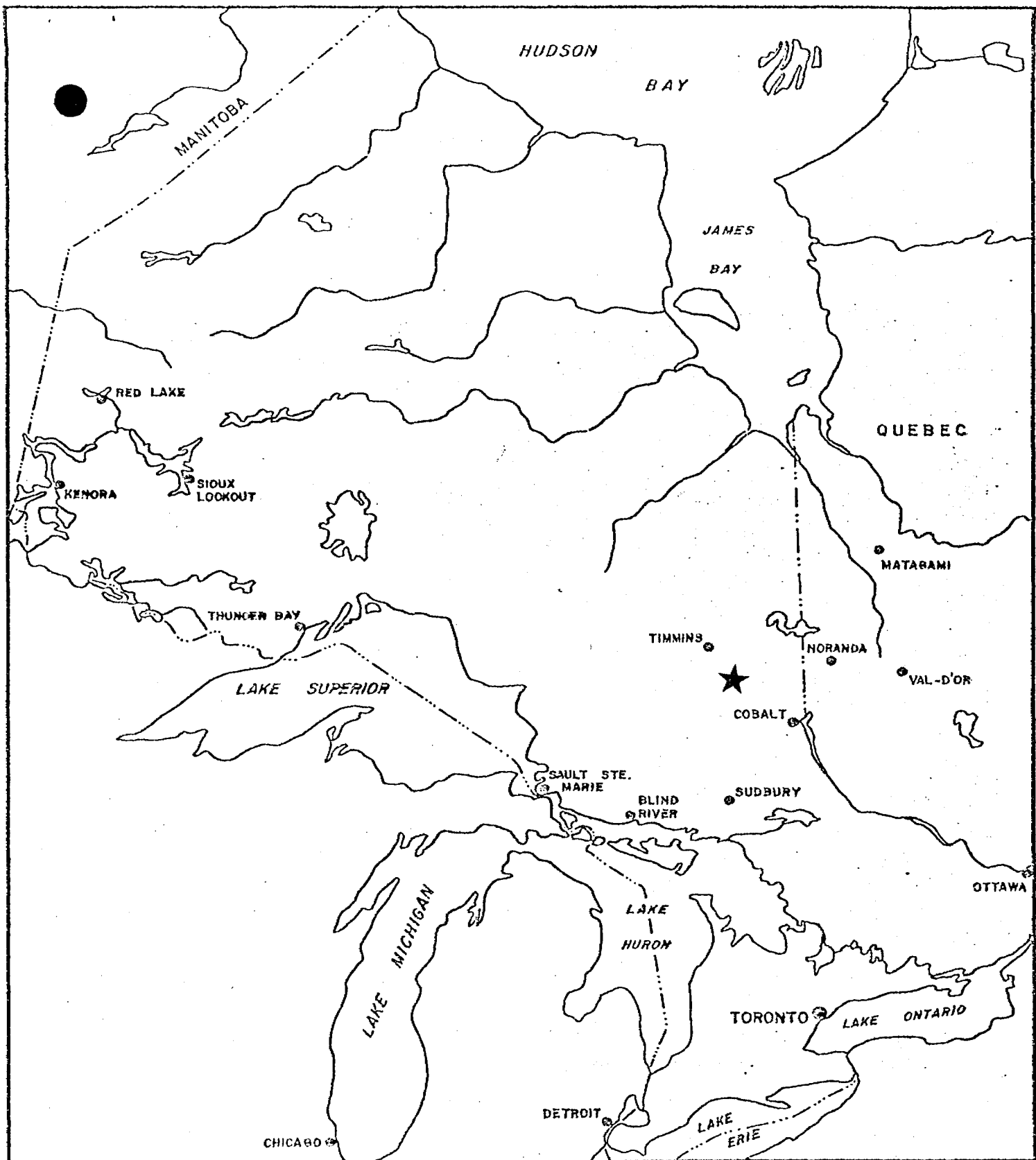
A limited EM, Magnetometer survey was carried out by M. Juby (1972). Limited geological mapping has also been done.

Reports of the above work are available in the Assessment Files - Kirkland Lake, Mines Branch, Department of Natural Resources.

Topography and Vegetation

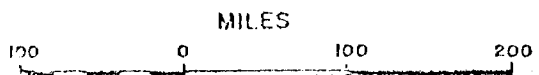
High outcroppings of felsic volcanics contrast with low rolling bush and swamp underlain by less persistent mafic volcanics and sediments.

Vegetation consists of spruce, pine, cedar, birch and low bush like swamp alders. Glacial till (eskers and moraine) covers much of the area.



Getty Mines, Limited

LOCATION MAP



Drawn:	Date: NOV, 1973	NTS: 42-C
Drawing:	File:	FIGURE - 1
Source:		

Geological Survey

Lines were cut over the property on 400' spacings along a centrally located base line. Geology was carried out over the entire property on a 1" = 400' scale (Fig. 1) and more detailed mapping of the old trench area (Claims 318348, 318351) was done on a 1" = 50' scale (Fig. 2).

The Juby property is underlain by mafic and felsic metavolcanics and meta-sedimentary rocks. Rarely sub volcanic porphyry dikes are observed. Diabase dikes and sills intruded the sequence.

Nippissing Diabase

Outcroppings of Nippissing Diabase are not extensive in the map area. One occurrence has been observed intruding sediments in the S. E. corner of the property.

The rock is a fine to medium grained greyish ophitic textured intermediate which weathers brownish-white. It is non-magnetic and relatively unaltered.

Matachewan Diabase:

Matachewan Diabase dikes are abundant and occur as narrow north to north-westerly trending units 20 to 100 feet wide. They are generally grey medium to coarse grained rocks which weather dark brown on the surface. Alteration is minor except along fractures where epidotization is common. The dikes are frequently magnetic.

Sedimentary Rocks

Sedimentary rocks consisting of arkoses, conglomerates and interbedded argillites occupy most of the southern half of the property. Sedimentary units follow a general east-west trend and contact felsic volcanic units to the north. The contact area is marked by bedded felsic tuffs interbedded with narrow argillite horizons (up to 6" in thickness). A narrow band of iron formation occurs just south of the stream (line 0-11+00S).

Arkoses and Conglomerates:

These rocks are only distinguished on the basis of grain size: The rocks are pink to grey medium to coarse grained and they consist of grains or pebbles of quartz and feldspar with finely disseminated pyrite. Red jasper grains and pebbles are common.

Argillites:

The argillites are fine grained finely laminated black rocks often having thin laminations of magnetite and pyrite. Grading into arkosic sediments is common.

Iron Formation:

Rarely interbedded with magnetic argillite horizons are alternating bands of orange-red jasper, up to several feet in thickness, and narrow magnetite bands.

Volcanic Rocks

Meta-volcanic rocks occupy the northern part of the property. Felsic volcanic rocks contact sedimentary rocks to the south. Felsic pyroclastics occupy a zone up to 50 feet wide in the immediate contact area. Felsic and intermediate pyroclastics are also found at the contact between felsic and mafic volcanics. (line 0-4E, 20+00N) and (line 4W, 12+00N).

Mafic Volcanic Rocks

The mafic volcanics are fine grained green grey to green black rocks with abundant chloritic and actinolitic alteration. The rocks weather

a greenish grey colour. Both blocky and pillowed lava flows are observed. Several major element compositions indicate these rocks are basaltic to andesitic.

A small lensoid pod of andesitic pyroclastics occurs along the contact of mafic and felsic volcanics (line 4W, 12N). It consists of andesite fragments of varying size in a chlorite-calcite matrix.

Structural Geology

Folding:

Minor folds in sediments (line 0, 11S), (line 3W-2S) suggest rocks within the claim groups have been folded around an east-west axis.

Two prominent foliations suggest two periods of deformation, one approximately east-west and another north-west to south-east.

Shearing along deformation planes is locally prominent with quartz-veinlet stockwork occasionally being evident.

Faulting:

Prominent east-west, north-south, and northeast-southwest trending faults are observed in the map area. Offset in most cases is indeterminate. However a 1200' northerly offset of the felsic mafic contact is observed in the north central part of the map area along a northerly trending diabase dike which is possibly an infilling of an earlier northerly trending structure.

Economic Geology:

Gold at present is the only mineral of economic interest on the property. Low grade gold values have been determined by previous trenching and diamond drilling on claims 345168, 318348 apparently related to shearing in massive and pyroclastic felsic volcanics. Pyrite is ubiquitous in the mineralized zone and quartz veining is common. The mineralized zone has not been adequately tested and hence may be more extensive. Pyrite and stockworks of quartz veining have also been observed in felsic volcanics to the north of the known mineralized zone. The possibilities of further occurrences of low grade gold in volcanics on the property are good.

Geochemical Survey:

A limited orientation geochemical survey was carried out in an area of known mineralization (claims 318348 and 345169) in order to determine the best method geochemical prospecting for the area. Further, more extensive geochemical prospecting is presently underway (100' spacing on line 400' apart).

Soil and rock chip samples were collected every 50' along lines 100' apart and analysed for Au, Cu and Sulphur. The results are presented in Figs: 3, 4, 5.

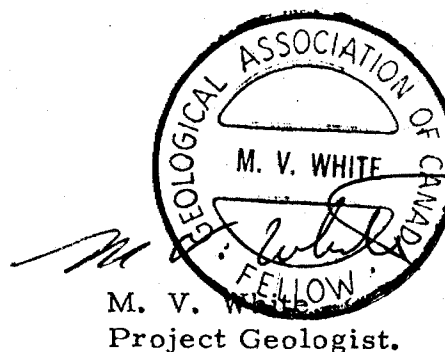
Results

Several good anomalies for gold and copper were obtained over the previously known mineralized zone. Good correlation exists between the sulphur and the Copper and Gold values and partial correlation is observed between Copper and Gold. Anomalous values cover a more extensive area than that which was previously tested by diamond drilling hence expanding the possibilities of a low grade economic gold deposit.

Conclusions and Recommendations

The property, especially the felsic volcanics, is potentially favourable for low grade gold. Preliminary geochemical work suggests the possibility of an expanded low grade gold deposit from that determined by previous exploratory work. Gold and pyrite mineralization are closely associated hence an I. P. geophysical survey is recommended prior to a diamond drilling program.

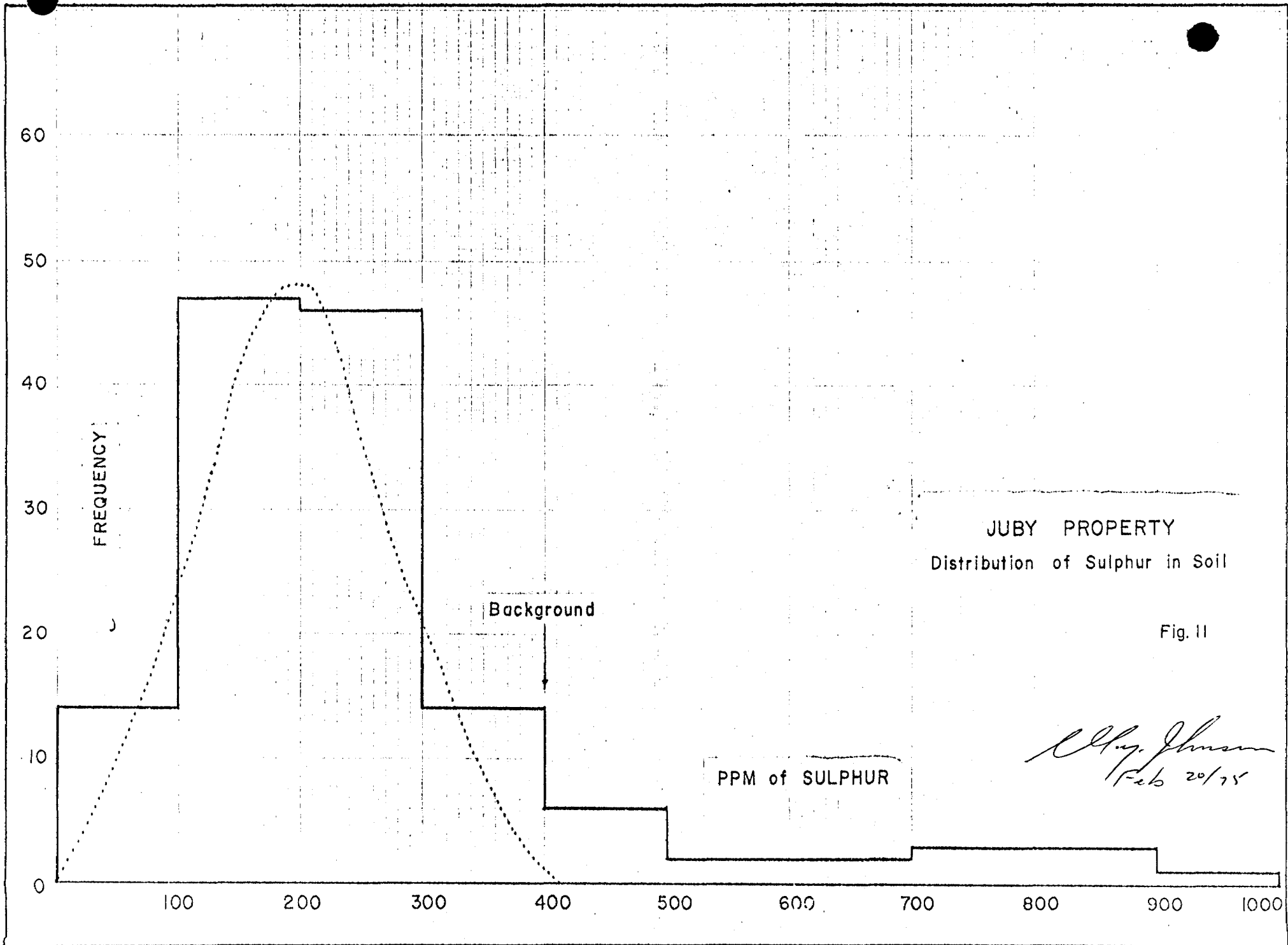
July 25, 1974.



M. V. White
Project Geologist.

Qualifications on
letter - 12/2/1975

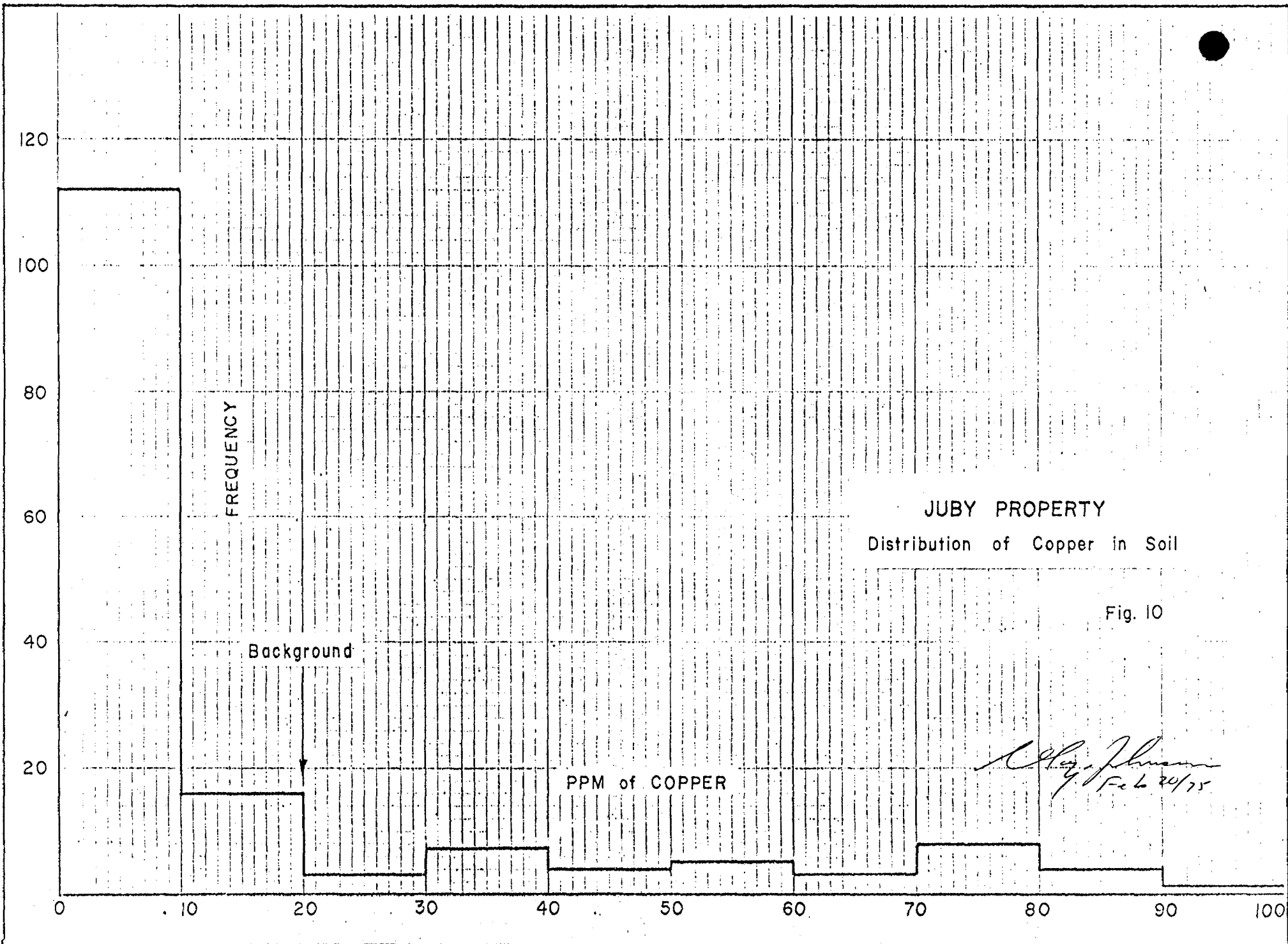
Mr. C. Gaye Johnson
has signed report
and maps for
Mr. White

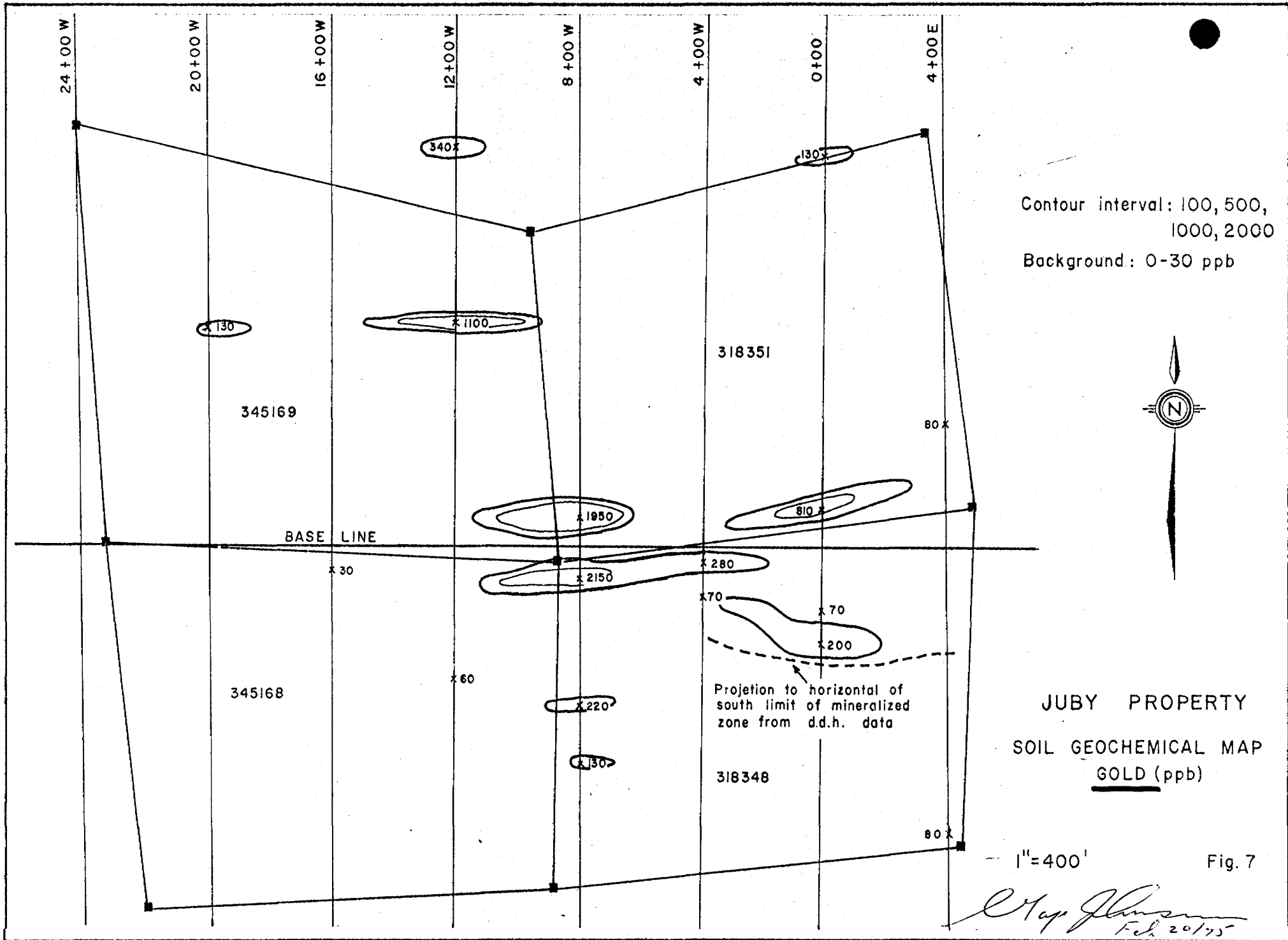


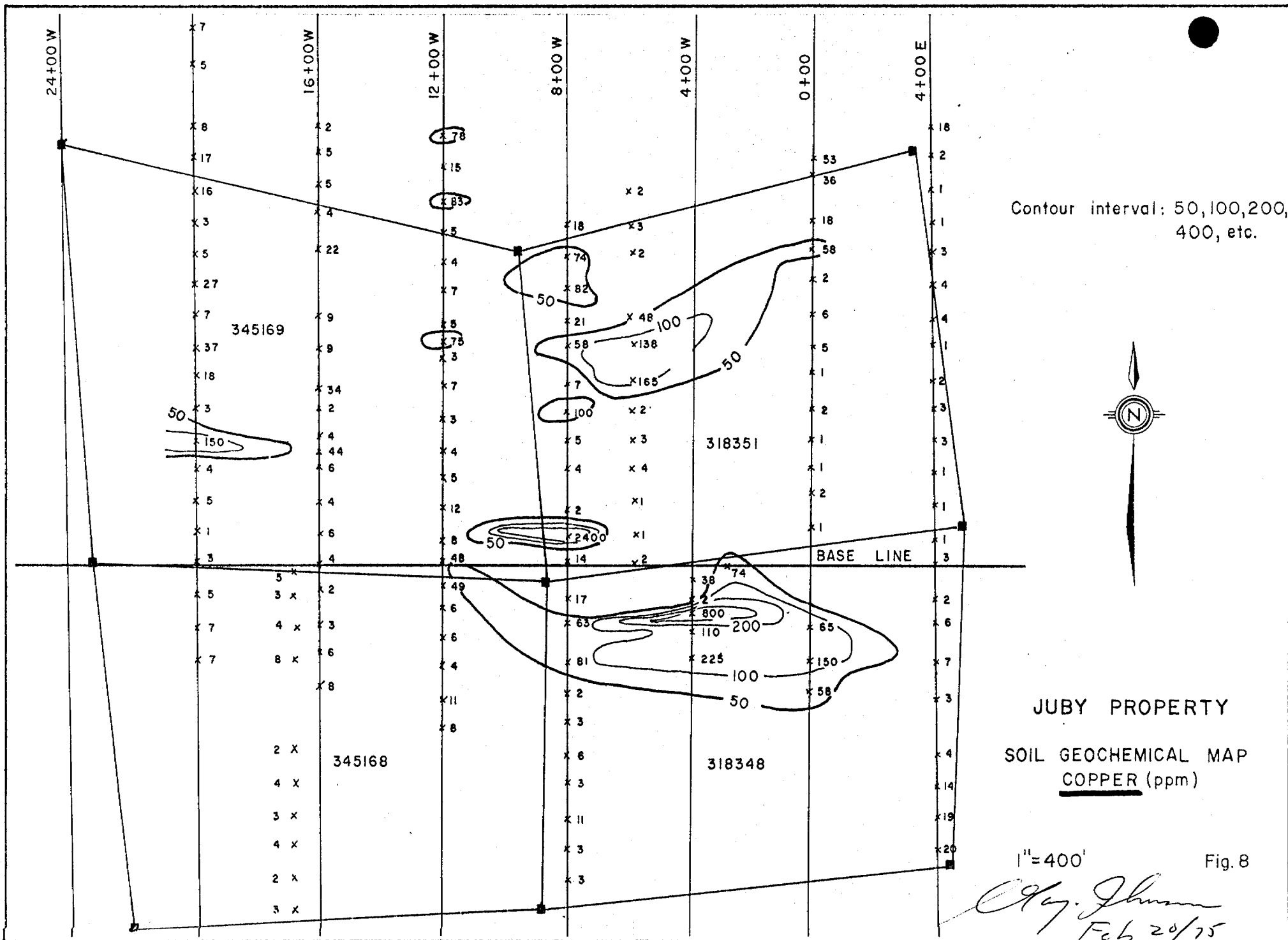
JUBY PROPERTY
Distribution of Sulphur in Soil

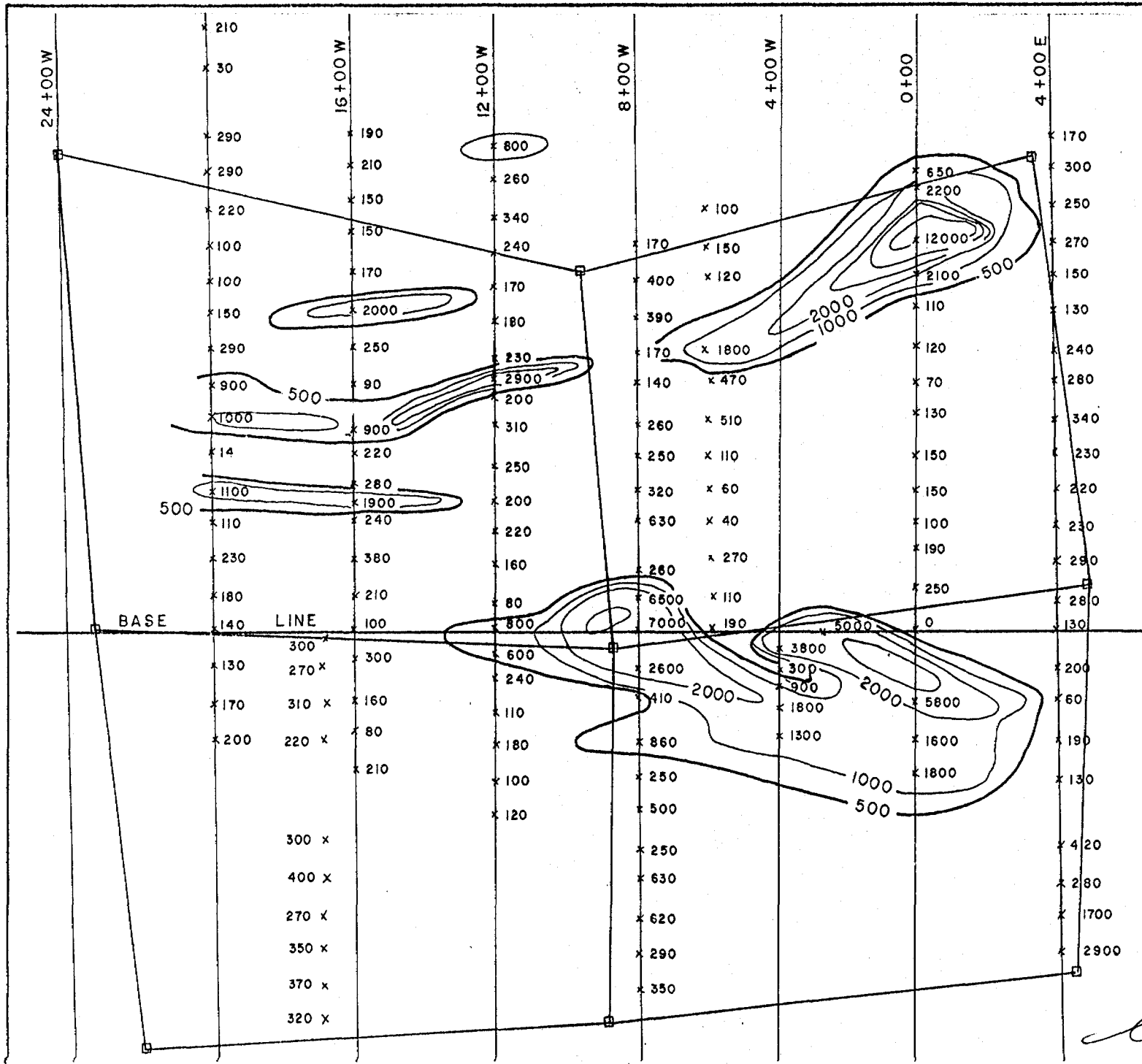
Fig. 11

Ally Johnson
Feb 20/75









Contour interval: 500, 1000
2000, etc.



JUBY PROPERTY
SOIL GEOCHEMICAL MAP
SULPHUR (ppm)

1" = 400'
W. H. Johnson
Feb 20/75

Fig. 9

GEOPHYSICAL - GEOLOGIC
TECHNICAL DATA



41P10SW0018 2.1558 TYRRELL

900

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 Geological
Township or Area Tyrell
Claim holder(s) Betty Mines Ltd.
Author of Report M. V. WHITE
Address #1, 245 BROOKE AVE. Toronto
Covering Dates of Survey July 3 - July 21
(linecutting to office)
Total Miles of Line cut 16

<u>SPECIAL PROVISIONS</u> <u>CREDITS REQUESTED</u>	<u>DAYS</u> <u>per claim</u>
ENTER 40 days (includes line cutting) for first survey.	Geophysical
ENTER 20 days for each additional survey using same grid.	-Electromagnetic _____
	-Magnetometer _____
	-Radiometric _____
	-Other _____
	Geological <u>22</u>
	Geochemical _____

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)
Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: July 23/74 SIGNATURE: M. V. White
Author of Report or Agent

PROJECTS SECTION
Res. Geol. _____ Qualifications Hil
Previous Surveys _____

Checked by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

GEOLOGICAL BRANCH _____
Approved by _____ date _____

<u>MINING CLAIMS TRAVERSED</u>	
<u>List numerically</u>	
<u>2</u> (prefix)	<u>373474</u> (number)
	<u>373475</u>
	<u>373661</u>
<u>1/3 not covered (swamp)</u>	<u>373662</u>
	<u>374546</u>
	<u>402825</u>
	<u>40826</u>
	<u>402827</u>
	<u>402828</u>
	<u>402829</u>
<u>418717 only</u>	<u>402830</u>
<u>partly traversed</u>	<u>402831</u>
<u>only 20 days</u>	<u>402832</u>
<u>geological credit</u>	<u>402833</u>
<u>all the rest are allowed 40 days</u>	<u>402834</u>
	<u>402835</u>
<u>1/3 not covered (water)</u>	<u>418712</u>
	<u>402836</u>
	<u>402837</u>
<u>1/3 not covered (swamp)</u>	<u>402838</u>
TOTAL CLAIMS <u>20</u>	

If space insufficient, attach list

OFFICE USE ONLY

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

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations _____ Number of Readings _____

Station interval _____

Line spacing _____

Profile scale or Contour intervals _____
(specify for each type of survey)

MAGNETIC

Instrument _____

Accuracy - Scale constant _____

Diurnal correction method _____

Base station location _____

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 _____

Time domain _____ Frequency domain _____

Frequency _____ Range _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

**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 Geological and Geochemical
 Township or Area Tyrell.
 Claim holder(s) Betty Mines Ltd.
 Author of Report M.V. WHITE
 Address #1, 245 BROOKE AVE. Toronto
 Covering Dates of Survey June 3 - July 21
 (linecutting to office)
 Total Miles of Line cut 16

MINING CLAIMS TRAVERSED	
List numerically	
(prefix)	(number)
L	345169
L	1/3 not covered 45168
L	1/3 318 348
L	318 351
Geochemical	
Area of claims not covered = 3/3	
4x20 = 80 ÷ (4 + 1/2)	
17.8 days per claim.	
L. 402836 to 38 inclusive not covered / No Credits	
G. Graye Johnson	
TOTAL CLAIMS <u>4</u>	

SPECIAL PROVISIONS CREDITS REQUESTED	Geophysical	DAYS per claim
ENTER 40 days (includes line cutting) for first survey.	-Electromagnetic _____	
ENTER 20 days for each additional survey using same grid.	-Magnetometer _____	
	-Radiometric _____	
	-Other _____	
	Geological <u>(40) int</u>	
	Geochemical <u>(20)</u>	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)
 Magnetometer _____ Electromagnetic _____ Radiometric _____
 (enter days per claim)
 DATE: July 23/74 SIGNATURE: M.V. White
 Author of Report or Agent

PROJECTS SECTION
 Res. Geol. _____ Qualifications Nil
 Previous Surveys 2.1076 E.M & Mag received linecutting credits 1972 for 318348-51 2.644 geological
 Checked by _____ date _____
GEOLOGICAL BRANCH
 Approved by _____ date _____
GEOLOGICAL BRANCH
 Approved by _____ date _____

OFFICE USE ONLY L. D

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 _____ Number of Readings _____

Station interval _____

Line spacing _____

Profile scale or Contour intervals _____
(specify for each type of survey)

MAGNETIC

Instrument _____

Accuracy - Scale constant _____

Diurnal correction method _____

Base station location _____

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 _____

Time domain _____ RESISTIVITY _____ Frequency domain _____

Frequency _____ Range _____

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 1-345160, 345168, 318351, 318348
SELF POTENTIAL

Total Number of Samples 245
 Type of Sample Soil and rock chips
(Nature of Material)
 Average Sample Weight 15 gms
 Method of Collection Soils - Grab hoe
Rocks - chips from fractures in outcrop
 Soil Horizon Sampled B
 Horizon Development Fair to good
 Sample Depth 6-16"
 Terrain Flat to hilly - outcrop and swamp
 Drainage Development Fair to poor
 Estimated Range of Overburden Thickness 5-50'

SAMPLE PREPARATION
(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis soil - 80 mesh
rocks - -100 mesh.

General Soil - screened to - 80 mesh
Rocks - pulverized to -100 mesh.

ANALYTICAL METHODS

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

Pb, Zn, Ni, Co, Ag, Mo, As, (circle) RADIOGRAPHIC

Others Cu, S,

Field Analysis (nil tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (OTHERS (SPECIFIC DRIFT WERE ROOMED))

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (134 tests)

Name of Laboratory X-Ray Laboratories

Extraction Method HNO₃ - HCl

Analytical Method Atomic Absorption, X-Ray Fluorescence

Reagents Used _____

General LABORATORY SURVEYS

Cu, assay flux - then dissolved in aqua-regia - solution analysed on A.A.

Cu - solution prepared with HCl and HNO₃ - analysed on A.A.

S - Boracic acid pellet - analysed by X-Ray Fluorescence.

Knight Twp. - M.228

THE TOWNSHIP OF
OF 2.1558
TYRRELL

DISTRICT OF
TIMISKAMING

LARDER LAKE
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

- PATENTED LAND Ⓟ
- CROWN LAND SALE C.S.
- LEASES Ⓛ
- 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 Ⓞ
- PATENTED FOR SURFACE RIGHTS ONLY Ⓞ

NOTES

400' Surface Rights Reservation along the shores of all lakes & rivers

MINING LANDS
 DATE OF ISSUE
SEP 17 1974
 MINISTRY
 OF NATURAL RESOURCES

Geological & Geochemical Surveys

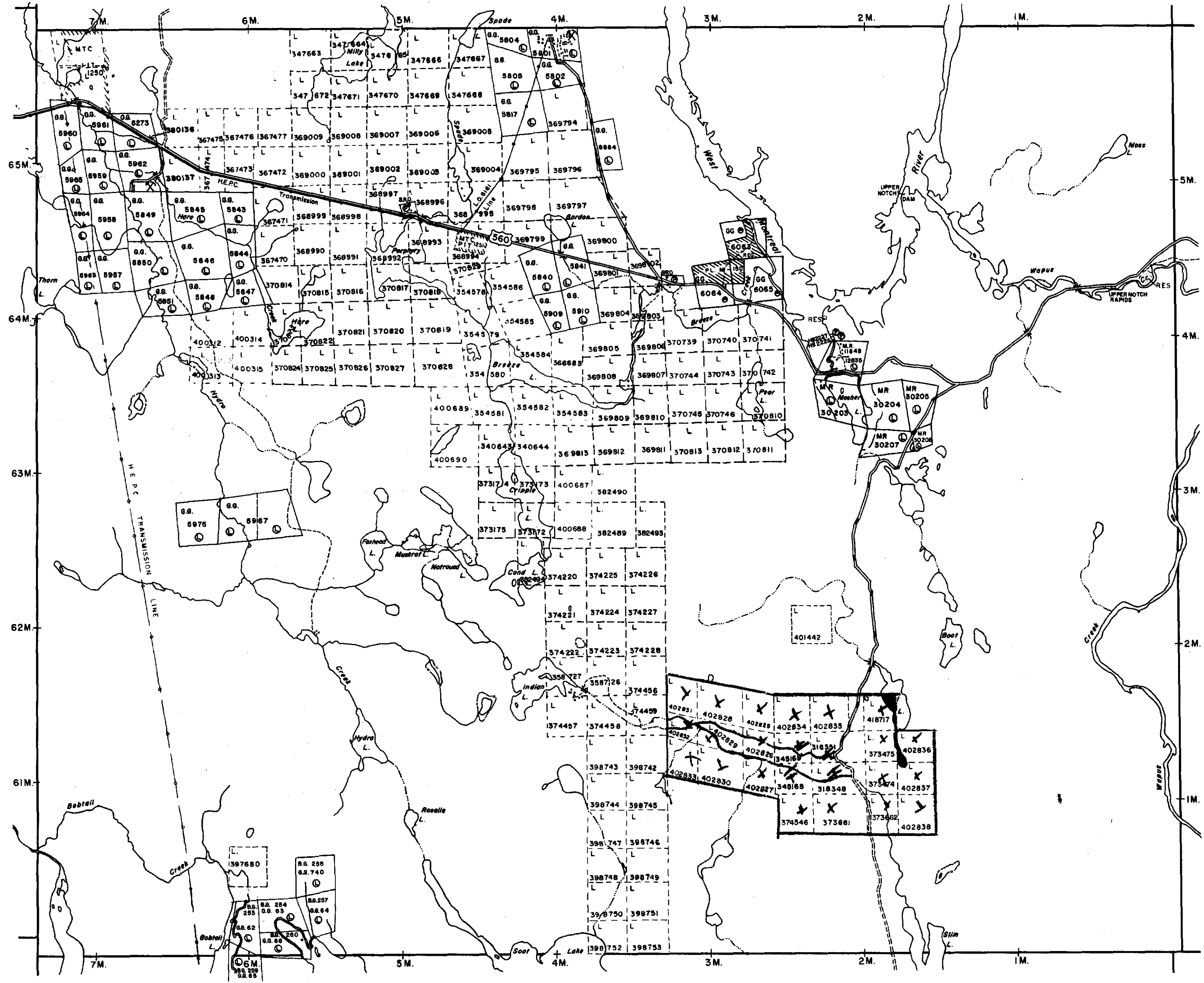
PLAN NO. - **M.253**

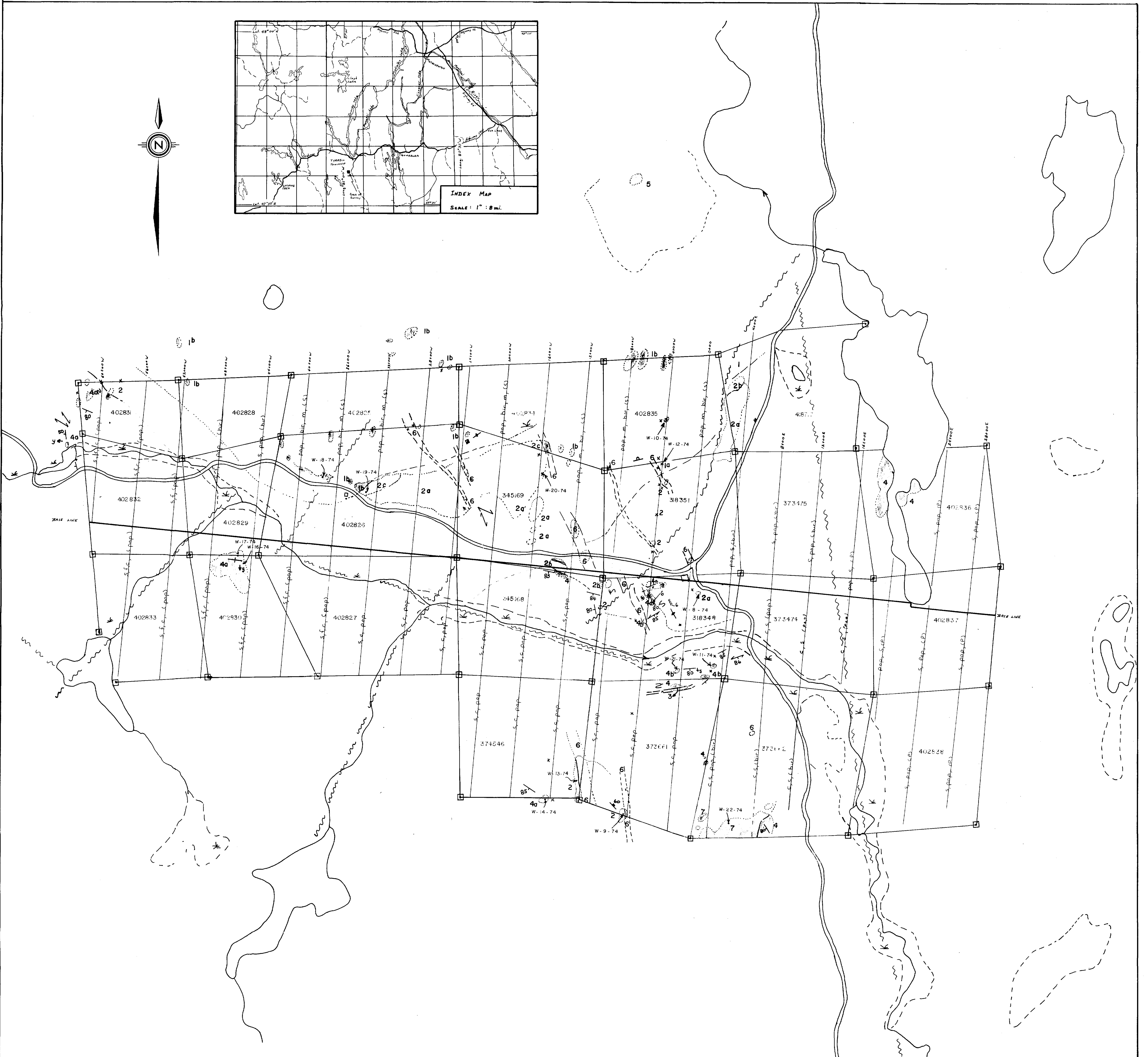
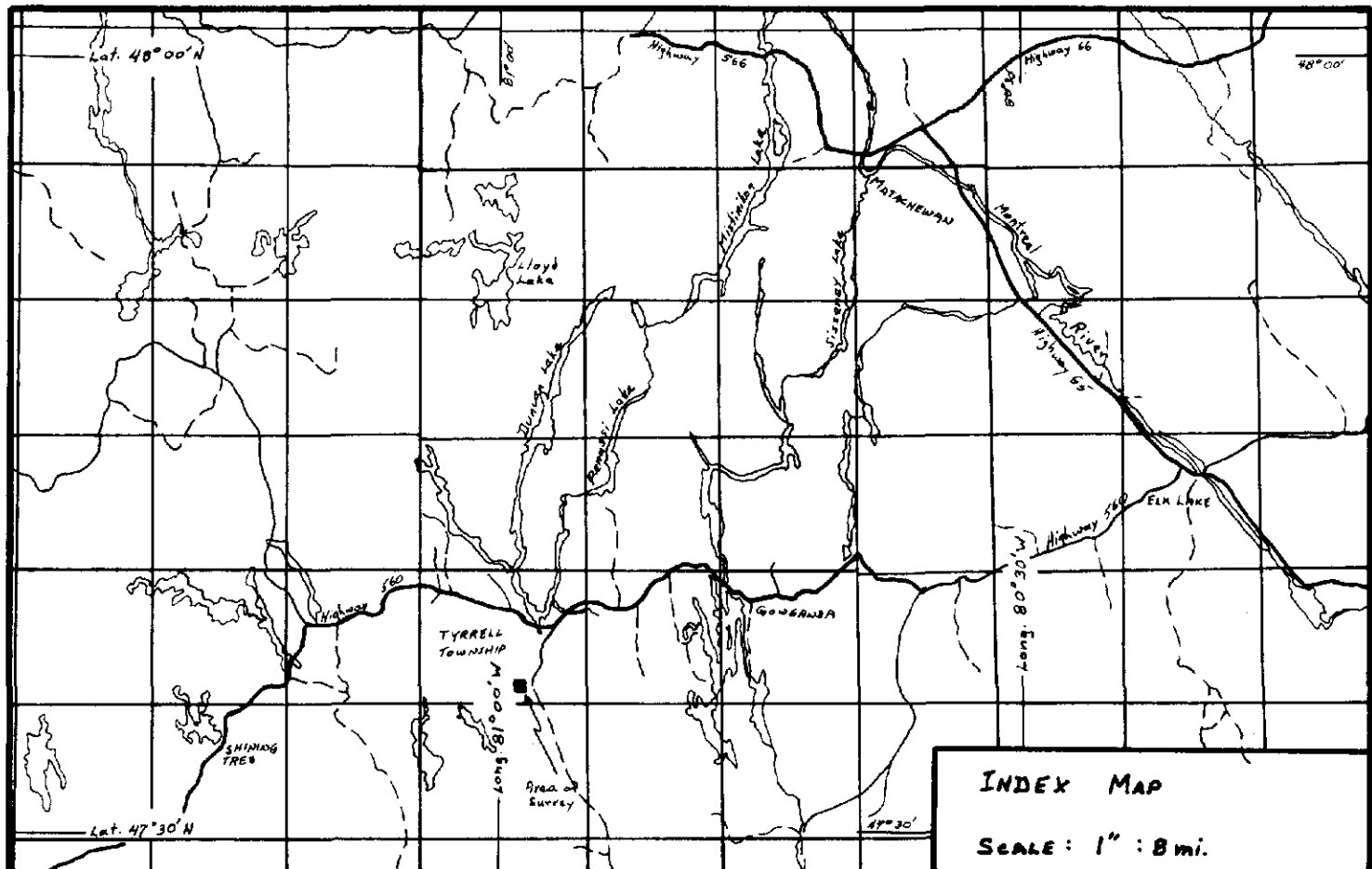
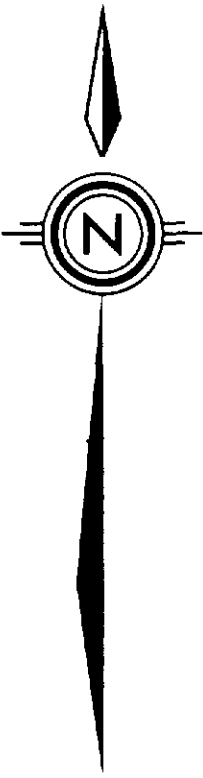
ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

Macmurchy Twp. - M.842

Milner Twp. - M.236

Leonard Twp. - M.232





- KEWEENAWAN**
- 7 DIAPHRISING DIABASE
- MATACHEWAN**
- 6 MATACHEWAN DIABASE
- HAILEBURIAN**
- 5 PERPENTOLITE
- TIMISKAMING**
- 4a QUARTZITE - ARKOSE CONGLOMERATE
 - 4b ANGILLITE

- KEEWATIN**
- 3 IRON FORMATION - Jasper - magnetite bands
 - 2c PORPHYRY - fine to very fine grained subvolcanic intrusive - abundant feldspar phenocrysts - quartz phenocrysts rare - coarse varieties resemble granite
 - 2b FELSIC VOLCANICS - Pyroclastic and tuffaceous
 - 2a FELSIC VOLCANICS - Massive varieties - aphanitic black to white porphyritic to non-porphyritic flows - feldspar and quartz phenocrysts in variable proportions
 - 1a MAFFIC VOLCANICS - Pyroclastic and tuffaceous varieties
 - 1b MAFIC VOLCANICS - Massive pillowed or blocky lava flows

- SYMBOLS**
- Bedding - horizontal, inclined, vertical
 - Foliation - horizontal, inclined, vertical
 - Flow feature - horizontal, inclined, vertical, etc.
 - Joint
 - Contact - defined, approximate, assumed
 - Minor fold - with plunge indicated
 - Fault
 - Bush-road
 - Swamp
 - Trench, addit
 - Trenching
 - Claim post
 - Outcrop
 - Sample location
- VEGETATION**
- s Spruce
 - b Birch
 - p Pine
 - m Maple
 - c Cedar
 - pop Poplar
 - ald Alder
 - () Subordinate vegetation

[Signature]

JUBY PROPERTY

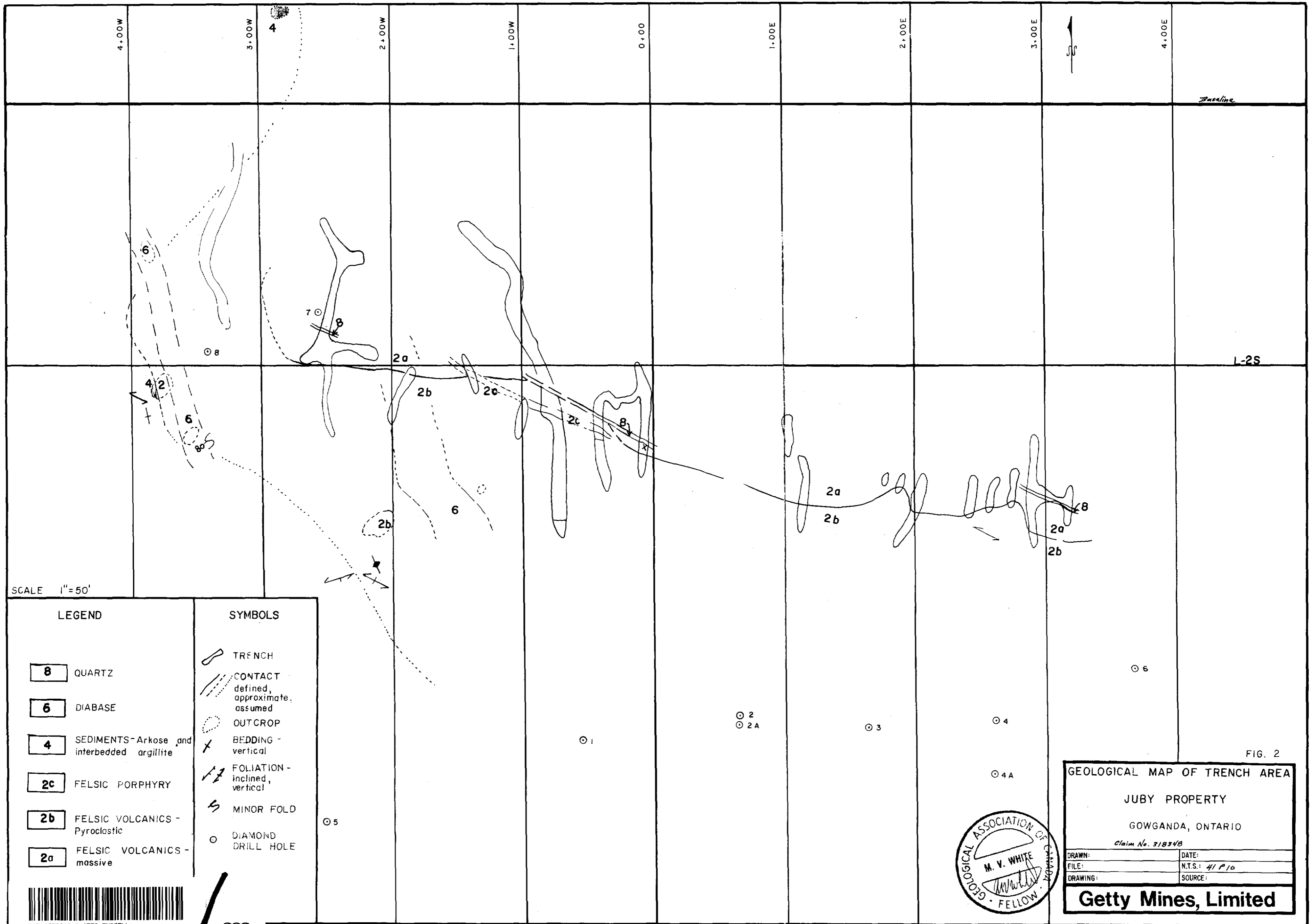
GEOLOGICAL MAP

GOWGANDA ONTARIO

SCALE 1" = 400'

DRAWN: [Blank]	DATE: Feb 12, 1978
FILE NO: W 2-1154	N.T.S.: 41 P 10
DRAWING: [Blank]	SOURCE: [Blank]

Getty Mines, Limited



SCALE 1" = 50'

LEGEND

- 8** QUARTZ
- 6** DIABASE
- 4** SEDIMENTS-Arkose and interbedded argillite
- 2c** FELSIC PORPHYRY
- 2b** FELSIC VOLCANICS - Pyroclastic
- 2a** FELSIC VOLCANICS - massive

SYMBOLS

- TRENCH
- CONTACT - defined, approximate, assumed
- OUTCROP
- BEDDING - vertical
- FOLIATION - inclined, vertical
- MINOR FOLD
- DIAMOND DRILL HOLE



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220

FIG. 2

GEOLOGICAL MAP OF TRENCH AREA

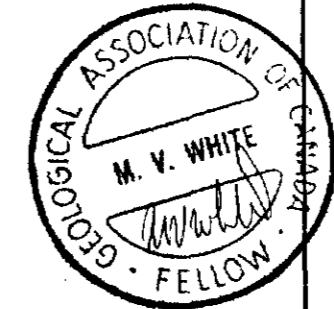
JUBY PROPERTY

GOWGANDA, ONTARIO

Claim No. 31834B

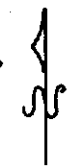
DRAWN:	DATE:
FILE:	N.T.S.: 41 P 10
DRAWING:	SOURCE:

Getty Mines, Limited



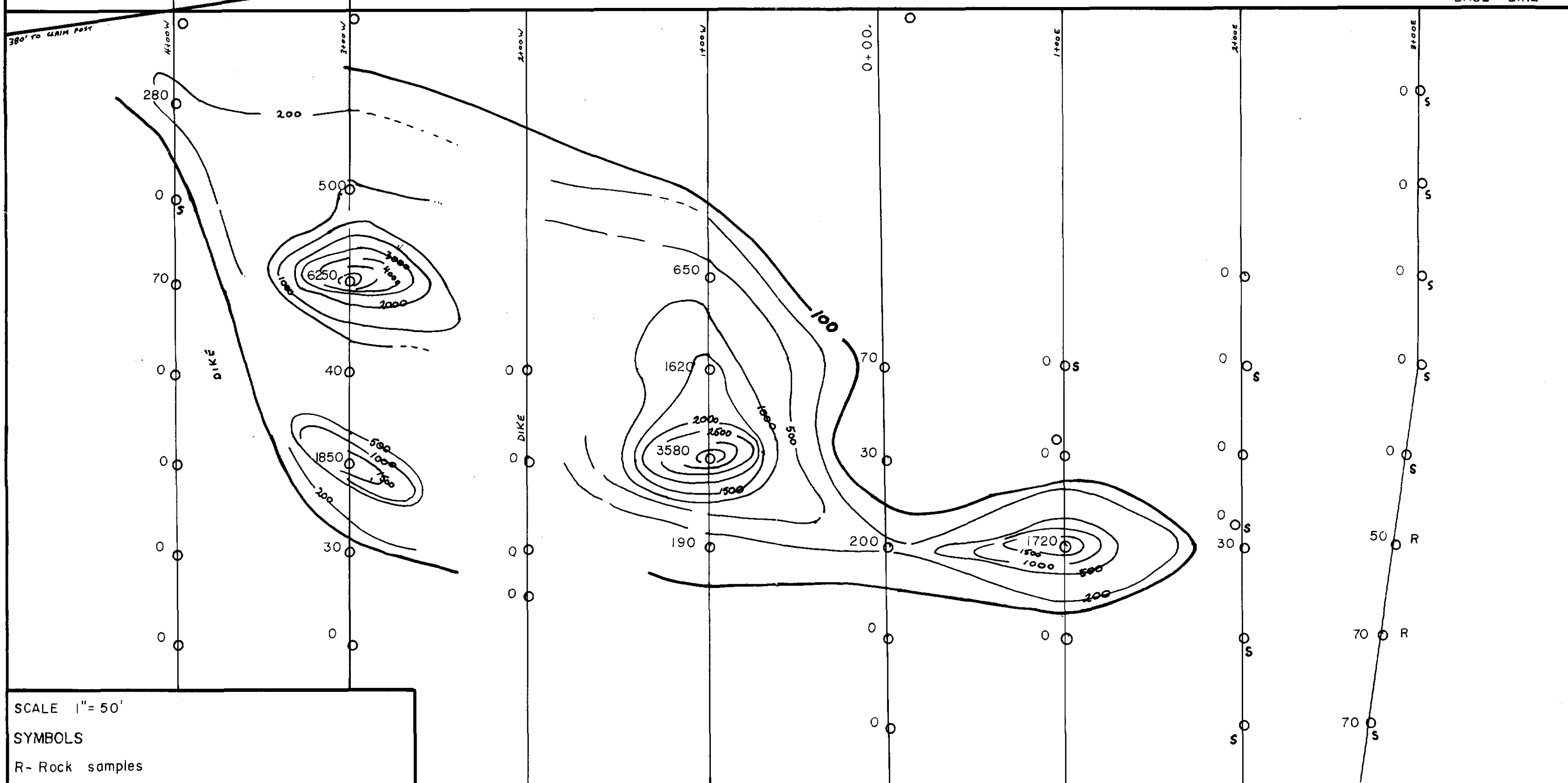
2.1558

CLAIM No. 318351
CLAIM No. 318348



340' TO CLAIM POST

BASE LINE



SCALE 1" = 50'

SYMBOLS

R- Rock samples

S- Soil samples

Contour interval as marked

Gold in ppb - all values for rock chips unless otherwise indicated



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FIG. 3

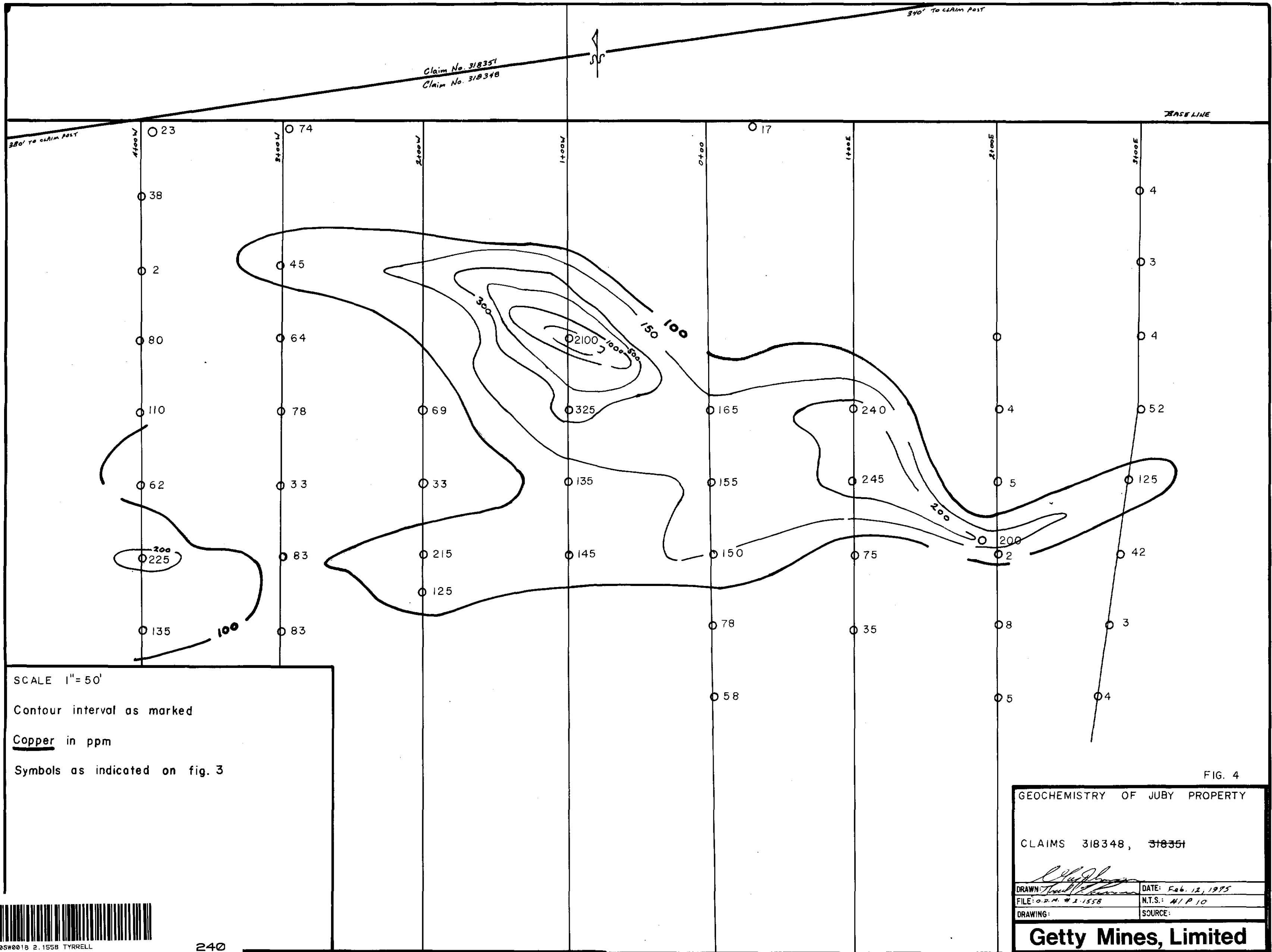
GEOCHEMISTRY OF JUBY PROPERTY

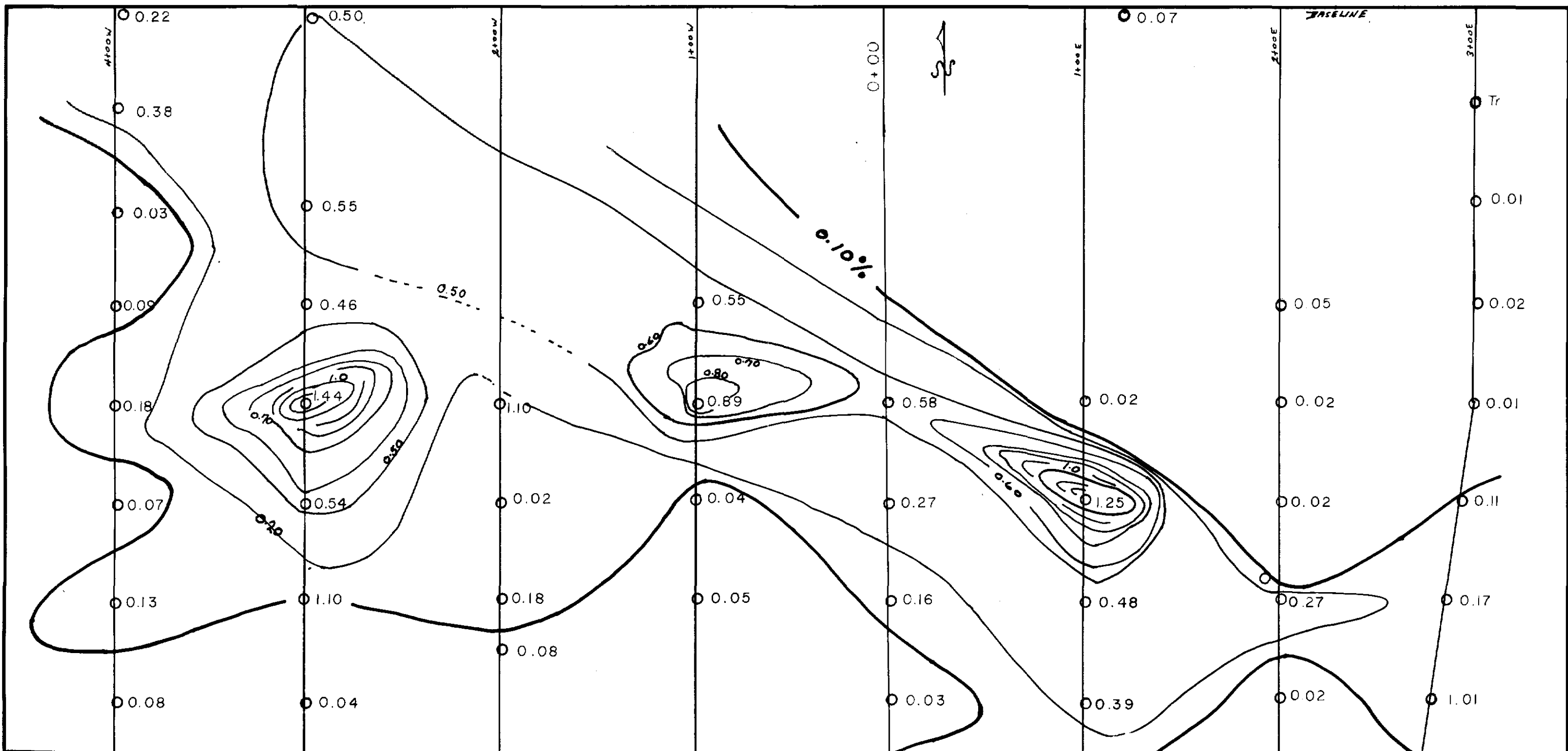
CLAIMS 318348, 318351

[Signature]

DRAWN: <i>[Signature]</i>	DATE: Feb. 12, 1975
FILE: O.D.M. # 24558	N.T.S.: N.P. 10
DRAWING:	SOURCE:

Getty Mines, Limited





SCALE 1" = 50'

Sulphur in %

Contour interval as marked (0.1 - 1.4 %)

Symbols as indicated on fig. 3



FIG. 5

Getty Mines, Limited

GEOCHEMISTRY OF JUBY PROPERTY

CLAIMS 318348, 318351

Drawn: *[Signature]* Date Feb. 12, 1975

Scale: N.T.S. : 41 P 10

Drawing: File: O.D.M. # 2.1558