



41P10SW0108 2.1393 LEONARD

010

GEOCHEMICAL SURVEY  
FOR  
UNITED REEF PETROLEUMS LIMITED  
LEONARD TOWNSHIP, ONTARIO

December 31, 1973

J. L. Tindale

### The Property

The property consists of 10 unpatented mining claims located in the southwestern portion of Leonard Township, District of Timiskaming, northern Ontario. The claims are numbered as follows:

<u>Claim No.</u>		<u>Date Recorded</u>	<u>In Good Standing To</u>
267270	(1)	Oct. 20, 1970	Oct. 20, 1974
369583-369591	(9)	May 22, 1973	May 22, 1974

### Access and Topography

Access to the property during the summer is provided by Highway No. 560 to the Otter Rapids hydro line west of Gowganda. A rough truck road south along the line for 12 miles and a walking trail of 3/4 mile to the east leads onto the property. An alternate route is via the Bay Lumber road southerly for 17.5 miles from Highway No. 560 west of Shining-tree Creek and then 4.4 miles north along the power line to the trail. This latter route is accessible by passenger car during the summer.

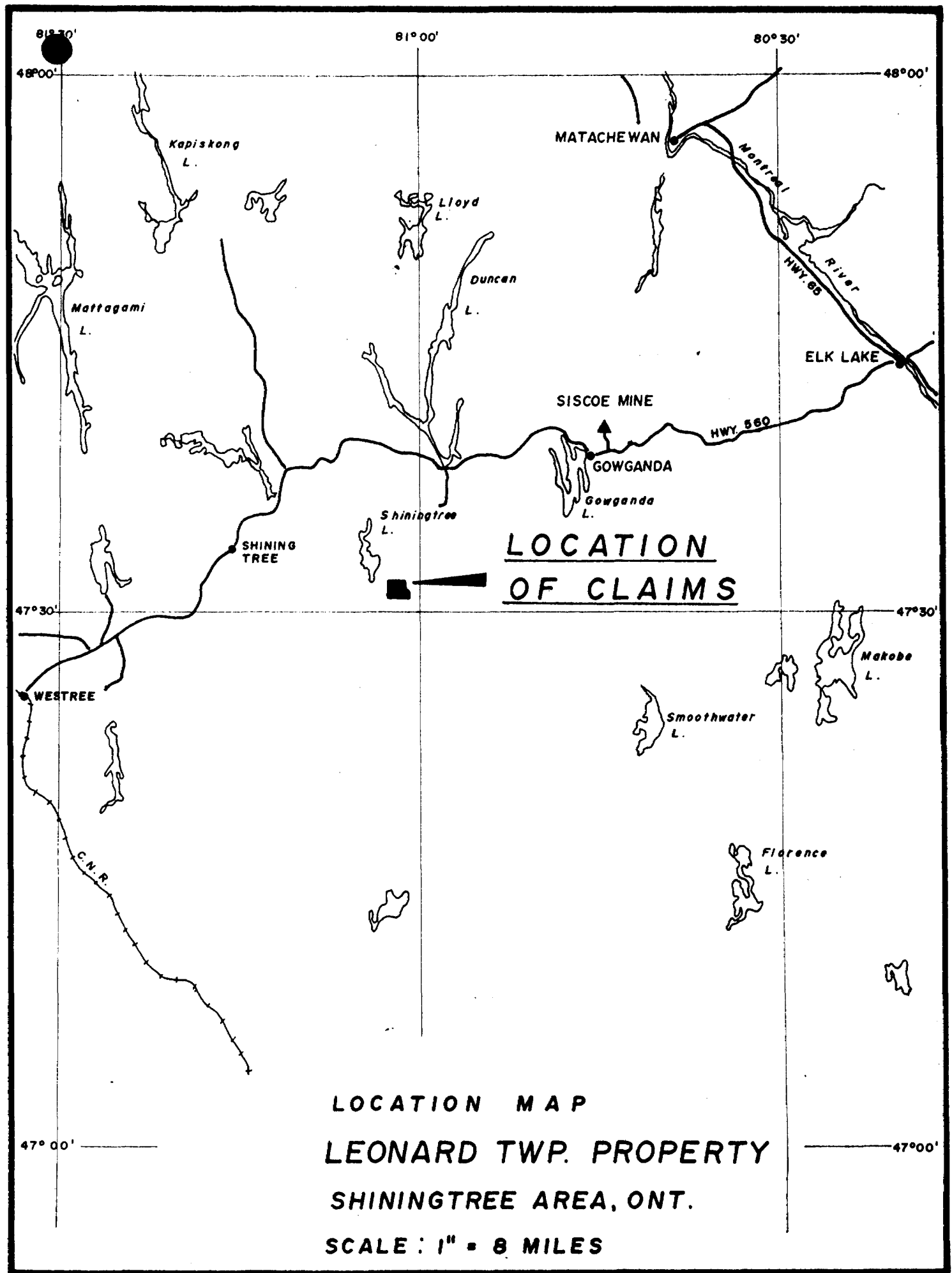
The claims are covered with second growth poplar, jack pine, and spruce with a shallow soil cover. Swamp covers about 1/4 of the claims.

### Geology

The property is underlain by Nipissing Diabase, which is also the host rock at the prolific Gowganda and Cobalt silver camps. The diabase occurs in the form of a sill forming a saucer shaped basin structure which appears to be elongated in a north-south direction. Underlying the diabase on the eastern side of the property is older mafic and felsic volcanic rocks of Keewatin age. A portion of the diabase sheet is overlain by cobalt sediments of Huronian age along the northern boundary.

### Mineralization

The main mineralized showing on the property is located on claim 267270 in a trench blasted into the diabase to a maximum depth of 8 feet and for a length of about 150 feet. A grey



LOCATION MAP  
 LEONARD TWP. PROPERTY  
 SHININGTREE AREA, ONT.  
 SCALE: 1" = 8 MILES

calcite vein averaging 1.5 inches wide and well mineralized with smaltite and coated with cobalt bloom is present on the trench walls and floor. Several smaller veins branch from this main leader along the length of the trench.

Four holes were drilled under this trench, using a small x-ray type drill, during the summer of 1971. A number of strong veins were encountered carrying cobalt and silver values. In every hole the main leader vein appeared stronger than on surface and in hole no. 3 attained a width of 5 inches. There is a definite suggestion from the drilling to date that the veins are improving in width in a vertical sense.

Hole 5 and 6 were drilled south of the main trench to test for parallel veining. Here again strong veins with visible cobalt mineralization were encountered. Hole 6 contained one of the most impressive veins found to date, being 6 inches wide with heavy cobalt mineralization.

A linecutting, geological mapping, and geochemical survey of property was proposed for 1973 to test for extensions of this zone.

#### Linecutting

A total of 5.3 miles of picket line were cut over a portion of the claim group during August 1973. A baseline 3,600 feet long was cut in a north and south direction. Lines were turned off at 200 foot intervals to the east and west.

#### Soil Sampling Program

Sampling was carried out between August 20 and August 25 and September 8 and 9, 1973. Samples were taken from the "B" horizon, a well developed rusty red layer usually found 5-6 inches below the surface and overlain by a one inch grey band of silty loam. This in turn was overlain by 5-6 inches of humus. Samples were taken at 50 foot intervals along the base line and for 300 feet to the east and west. A 100 foot sample interval was utilized along the east and west extension of the lines.

A total of 330 samples were analysed for cobalt and silver ppm content. A diabase ridge running north-south along the baseline presented base outcrop and hence no sampling over much of its area. Low swampy ground in other areas cancelled sample locations.

Samples were assayed at Technical Services Laboratories, 355 King Street West, Toronto. The hot nitric acid extraction process with determinations by atomic absorption was utilized.

Results of the Survey

The main area of interest on the property prior to the survey centered at 0+00 on the baseline. Survey results indicated that the area to the south of this may hold some promise. Of particular note are the high cobalt readings at line 4S on the baseline and 6S, 1+00E which ran 35 and 45 ppm respectively. Above normal silver assays on the west side of the diabase ridge on lines 4 and 8 south require further checking in this well overburdened area.

Check sampling of the anomolous areas at 50 foot spacing should be carried out during the next field season. Line 6S should be extended 800 feet to the west and sampled to test for extensions of values on lines 4 and 8S.

Respectfully submitted,

*J. L. Tindale*  
J. L. Tindale, P. Eng.



APPENDIX

Labour Distribution

Linecutting: R. Beadman, Gowganda, Ontario  
D. Bullock, Gowganda, Ontario  
W. Durling, Gowganda, Ontario  
M. Tindale, Toronto, Ontario

Soil Sampling: B. Wilson, Waubushene, Ontario - Aug. 20-25/73  
M. Tindale, Toronto, Ontario - Aug. 20-Sept. 2/73  
Sept. 8-9/73

Supervision: J. L. Tindale, Toronto, Ontario - Aug.-Sept./73

2.1393

RE: ADDITION TO REPORT BY J.L. TINDALE, DEC. 31, 1973 - GEOCHEMICAL SURVEY FOR UNITED REEF PETROLEUMS LTD., LEONARD TOWNSHIP, ONTARIO

CG-59

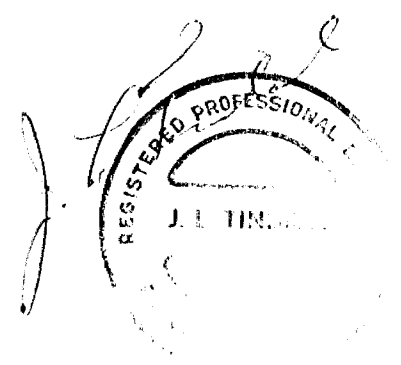
History of Exploration

The first staking in Leonard Township occurred in 1908 when prospectors from Gowganda located cobalt and silver mineralization in calcite veins within a diabase host rock of similar type to that found productive at Gowganda and Cobalt, Ontario. Heavy prospecting continued for a short period during which time several shallow prospect shafts were sunk and numerous trenches were dug. Mineralization was never located in sufficient quantities to warrant mining.

The current property originally belonged to the Saville Exploration Syndicate and a large trench present on claim 267270 is named for this group. Native silver and cobalt is present in this trench. West of this showing are a number of trenches on the former Turnball and Greave properties as referred to in O.D.M. Vol. 36, Pt. 2, Shiningtree Silver Area by G.B. Langford.

During the winter of 1956 the property was covered with an electromagnetic survey by Newnorth Gold Mines Ltd. Report of this survey by D. Salt is contained in assessment report no. 5631 on file with the O.D.M. The survey failed to disclose significant targets for exploration.

During the summer of 1971, x-ray drilling was carried out under the "Saville showing" as described under the section on Mineralization in the report.



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APR 10 1974

LANDS AND MINING

GEOPHYSICAL -- GEOLOGICAL  
TECHNICAL DATA



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900

TO BE ATTACHED AS AN APPENDIX  
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT  
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey GEOCHEMICAL  
Township or Area LEONARD TWP.  
Claim holder(s) UNITED REEF PETROLEUMS LIMITED  
Author of Report J. L. TINDALE  
Address 1601 - 8 KING ST. E., TORONTO, ONT.  
Covering Dates of Survey AUG. 20, 1973 - SEPT. 9, 1973  
(linecutting to office)  
Total Miles of Line cut 5.3 miles

MINING CLAIMS TRAVERSED	
List numerically	
L. 267270	✓
(prefix) L. 369583	(number) 1/2
L. 369584	1/2
L. 369587	not covered
L. 369588	1/2 NOT covered
L. 369591	✓
Area of claims NOT covered = 1 1/2 claims	
40 x 6 = 240 ÷ (6 + 1 1/2)	
32 days	
TOTAL CLAIMS <u>6</u>	

SPECIAL PROVISIONS  
CREDITS REQUESTED

DAYS  
per claim

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

- Geophysical
  - Electromagnetic \_\_\_\_\_
  - Magnetometer \_\_\_\_\_
  - Radiometric \_\_\_\_\_
  - Other \_\_\_\_\_
- Geological \_\_\_\_\_
- Geochemical 40

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

Magnetometer \_\_\_\_\_ Electromagnetic \_\_\_\_\_ Radiometric \_\_\_\_\_  
(enter days per claim)

DATE: DEC. 31, '73 SIGNATURE: J. L. Tindale  
Author of Report or Agent

PROJECTS SECTION

Res. Geol. \_\_\_\_\_ Qualifications 63.2846

Previous Surveys 63704 geophysical  
L.D.

Checked by \_\_\_\_\_ date \_\_\_\_\_

GEOLOGICAL BRANCH

Approved by \_\_\_\_\_ date \_\_\_\_\_

GEOLOGICAL BRANCH

Approved by \_\_\_\_\_ date \_\_\_\_\_

OFFICE USE ONLY

If space insufficient, attach list



GEOCHEMICAL SURVEY - PROCEDURE RECORD

Numbers of claims from which samples taken L. 267270, L. 369583, L. 369584  
L. 369586, L. 369587, L. 369588 & L. 369591

Total Number of Samples 330

Type of Sample Silty Loam  
(Nature of Material)

Average Sample Weight 1/4 lb.

Method of Collection shovel

Soil Horizon Sampled B

Horizon Development A, B, C

Sample Depth 8 - 10"

Terrain Flat rolling bush land.

Drainage Development Very dry - small west  
flowing.

Estimated Range of Overburden Thickness 0 - 30'

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

Mesh size of fraction used for analysis - 80 mesh

General Samples taken in brown paper  
sample envelopes, location and type  
of soil noted on bag. Sample sent to  
T.S.L. for drying, screening, seiving  
and final sample cut for analysis.

ANALYTICAL METHODS

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

Cu, Pb, Zn, Ni, Co, Ag, Mo, As, -(circle)

Others \_\_\_\_\_

Field Analysis (\_\_\_\_\_ tests)

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

Field Laboratory Analysis

No. (\_\_\_\_\_ tests)

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

Commercial Laboratory (\_\_\_\_\_ 660 tests)

Name of Laboratory T.S.L.

Extraction Method Hot Nitric

Analytical Method Atomic Absorption

Reagents Used \_\_\_\_\_

General \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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PROJECTS SECTION

SPECIAL PROVISION

ASSESSMENT WORK DETAILS

Type of Survey GEOCHEMICAL  
A separate form is required for each type of survey

Chief Line Cutter or Contractor R. BEADMAN, GOWANDA, ONT  
Name Address

Party Chief J. L. TINDALE 1601-8 KING ST. E., TORONTO, ONT.  
Name Address

Consultant \_\_\_\_\_  
Name Address

COVERING DATES Line Cutting AUG. 20 - 25, 1973  
GEOCHEMICAL  
Field Geology or Geophysics AUG 20 - SEPT 2, SEPT 8-9, 1973.  
Office DEC 31, 1973

INSTRUMENT DATA Make, Model and Type \_\_\_\_\_

Scale Constant or Sensitivity \_\_\_\_\_  
Or provide copy of instrument data from Manufacturer's brochure.

SAMPLES  
Total Number of Stations Within Claim Group 330 Number of Miles of Line cut Within Claim Group 5.3

ASSESSMENT WORK CREDITS REQUESTED GEOCHEMICAL  
Geological Survey 40 Days per Claim

Geophysical Survey \_\_\_\_\_ Days per Claim

MINING CLAIMS TRAVERSED  
L. 267270, 369583, 369584, 369587, 369588 & 369591

TOTAL 6

UNITED REEF PETROLEUMS LIMITED

DATE Jan. 15<sup>th</sup> 1974 SIGNED [Signature]

Special provision credits do not apply to Radiometric Surveys.

TYRRELL TWP. - M.253

THE TOWNSHIP OF











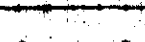
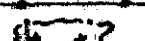



LEONARD

DISTRICT OF  
TIMISKAMING

LARDER LAKE  
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

- PATENTED LAND 
- CROWN LAND SALE 
- LEASES 
- LOCATED LAND 
- LICENSE OF OCCUPATION 
- MINING RIGHTS ONLY 
- SURFACE RIGHTS ONLY 
- ROADS 
- IMPROVED ROADS 
- KING'S HIGHWAYS 
- RAILWAYS 
- POWER LINES 
- MARSH OR MUSKEG 
- MINES 
- CANCELLED 

NOTES

400' surface rights reservation around all lakes and rivers.

- MINING LANDS -  
DATE OF ISSUE  
JAN 17 1974  
MINISTRY  
OF NATURAL RESOURCES

File-2.1393

PLAN NO. M.232

ONTARIO  
MINISTRY OF NATURAL RESOURCES  
SURVEYS AND MAPPING BRANCH

FAWCETT TWP. - M.803

LEITH TWP. - M.231

NORTH WILLIAMS TWP. - M.240



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47°29'30" (approx.)  
80°55'

