

GENERAL STATEMENT

Sixteen claims in central Eldorado Township held by Roy Draper have some untested potential for possible nickel mineralization associated with serpentized ultrabasic sills. Several sill-like masses of peridotite have been outlined as a result of geological and geophysical surveying. Exposures are generally not abundant but where outcrop does occur, grab samples over the exposed rock were taken for assay. In addition a few narrow bands of sulphides rich iron formation cutting felsic volcanic rock were sampled for gold and base metal content.

LOCATION AND ACCESS

The claims in the name of R. J. Draper, 156 Birch Street North, Timmins, are a contiguous block of sixteen claims numbered P99947 to P99962. They are located in the west central part of Eldorado Township, approximately 15 miles south of South Porcupine and are accessible by jeep on a bush road from the Buffalo Ankerite Property in Deloro Township.

PREVIOUS WORK

A general examination of the ground was made by Falconbridge and Mining Corporation. In 1968 a magnetometer and electromagnetic survey were carried out on the property on newly cut lines by the R. Draper interests, 26 Pine Street South, Timmins, Ontario. A Sharpe M.F.-1 fluxgate magnetometer

was used to read 50' stations on lines 400' apart. These lines were used to read the same stations with a Ronka EM 16 electromagnetic unit. In 1969, a Crone JEM electromagnetic survey was completed utilizing the same grid and 100' stations. In 1969 the Township containing the claims was mapped by the Ontario Department of Mines at a scale of 1" to ¼ mile (Eldorado Township, P.G.M. 572, by D. R. Pyke). Considerable detailed exploratory work including diamond drilling was done immediately east of the claim group by Mining Corporation.

#### PRESENT WORK

The picket line grid was used to tie in outcrops and for locational purposes. Mapping of geology was completed at 400' to 1" and a plan of the work was produced at 300' to 1". Samples for assay were collected over several of the sulphide rich iron showings and sampling of large sections of serpentinitized peridotite was completed. Large composite samples of the ultrabasic intrusive rocks were collected for partial chemical analysis.

#### GENERAL GEOLOGY

The area examined is underlain mainly by Archean volcanic rocks with several sills of peridotite all with a northwest trend. Some of the sill-like intrusions have been serpentinitized and in one exposure talc is a major constituent. Northeast trending Proterozoic diabase dykes are abundant and have in places hornfelsed enclosing rocks at the contact.

Large segments of the felsic volcanic rocks are agglomeratic. Several narrow bands of sulphide bearing iron formation occur in close association with felsic volcanic rocks and are conformable with the general trend. The volcanic rocks range in composition from basalts to rhyodacite. A large exposure of intrusive Archean granodiorite is present on the west boundary of the property.

Table of Lithologic Units

Pleistocene  
sand and clay  
unconformity

Proterozoic  
diabase dykes  
intrusive contact

Archean  
granodiorite intrusive  
intrusive contact

peridotite, ultramafic intrusives  
serpentinized, talcose, massive

rhyodacite, felsic volcanic rocks  
agglomeratic, massive

iron formation  
chert, magnetite, pyrite, pyrrhotite

basalt, mafic volcanic rocks  
massive, shistose

Rock is exposed over 5 per cent of the gridded area which is a flat clay covered plane with scattered stands of spruce and intervening expanses of alder covered muskeg with several low domal exposures of bedrock.

Mafic Volcanic Rock

Dark green fine grained extrusive andesite to basalt

outcrops sparingly on the southern half of the property. Minor volcanic textures, mainly flow lines and some vesicles are present. No pillowed structures were found and pyroclastic interbeds were not detected. A well developed foliation parallels flow lines and indicated the structural trend of flows. Slabs of chlorite schist derived from basic volcanic rock lie in a creek bed along a proposed fault on the southern portion of Line D just to the north of the largest continuous exposure of basalt on the property.

#### Iron Formation

Very thin multiple bands averaging 1 inch in width of magnetic green sulphide rich iron formation alternate with quartzitic and cherty bands of about equal width. This sedimentary accumulation occurs within felsic volcanic rocks and is contemporaneous in age. It is conformable to the foliation in the volcanic rocks. Dense dark green chloritic beds are highly magnetic and contain lenses of massive pyrite with some pyrrhotite. A consistently minute content of chalcopyrite is present with other sulphides. These small exposures of sulphide bearing rock are often heavily stained with limonite and the original nature of the rock is difficult to establish.

#### Felsic Volcanic Rock

These fine grained acid volcanic rocks designated rhyodacite are predominantly light grey in colour and vary over a wide range of textures from a massive featureless variety to

a light grey fragmental type composed of angular fragments with preferred orientation and set in a fine darker grey matrix. This rock resembles strongly a fragmental rock type associated with ore bearing horizons in the base metal mines west of Timmins. Exposures of these varied rock types have been delineated on the geological map.

#### Ultramafic Intrusive Rock

Dark green sills of ultrabasic rock intrude the rocks definitely recognized as volcanic in origin. Exposures of these rocks are not numerous because of their softness and generally erodable nature. They vary over a wide range in quantity of contained serpentine with some fairly hard and dense without the development of considerable serpentine. Some have a high serpentine content with hardness dependent on quantity developed. Some of the exposures are massive with blocky fracture while others are soft and schistose. In one exposure the ultrabasic rock has a high talc content and is bleached to light grey colour. Magnetic attraction is variable in intensity within these rocks and usually not great.

#### Granodiorite

The intrusive granodiorite of probably Algoman age invades all rocks except the diabase and is exposed in the southwest portion of the claim group. A large exposure of light pink medium grained and massive granitic intrusive is present at the south terminus of L20W. It contains considerable disseminated subhedral pyrite and where injected by a massive

quartz vein on the north rim of the exposure it was sampled for gold.

#### Diabase

The youngest rock in the map area is a typical medium grained grey diabase with fine grained dark coloured contacts where dykes invade enclosing rocks. Contacts of country rock are often hornfelsed and silicified to some degree. Some of the diabase especially in the southeastern portion of the claim group has the typical external appearance of the northeast trending olivine diabase dykes which are prominent constituents of the central portion of the Superior Province.

#### STRUCTURAL GEOLOGY

Deformed felsic and mafic volcanic rocks intruded by ultrabasic sills, Algoman granodiorite and by diabase dykes have been folded about easterly trending fold axes. Foliation in the volcanic rocks and narrow shear zones parallels the bedding evident in the Iron Formation. The relatively small area under discussion and paucity of outcrop preclude any major discussion of overall structure. The dominant direction of the foliation is azimuth  $290^{\circ}$  with dips every where to the south averaging  $45$  to  $55^{\circ}$  from the horizontal. Faults are abundant and their presence is substantiated by stream channels, narrow linear depressions, by the displacement of diabase dykes and from the contouring of closely spaced magnetometer and electromagnetic traversing. All detectable faults trend northwesterly with the major ones, an imbricate set trending a

few degrees west of north, along which the east side has moved southward. Evidence for this is found in the continuous displacement of diabase dykes.

#### ECONOMIC GEOLOGY

Thin bands of magnetic sulphide iron formation were the target of early gold seekers in the area and where they are exposed they have been trenched and pitted at some period in the last 60 years. From the contouring of magnetometer results, these bands, although largely covered, have fair persistence and can be traced over several hundred feet. Where the narrow bands have been displaced there is positive indication of faulting. These magnetic bands are excellent horizon markers within certain limits. Their general location is further delineated by the electromagnetic surveying. However, where sampled, the results were inconsequential. In 2 places only minor copper was detected with nil nickel values. At 3 localities samples yielded minor copper and trace gold.

Peridotite exposure is entirely concentrated in the northeast sector of the claim group except for one large exposure of talc schist derived from peridotite and lying to the north of the Redstone River between Lines 4 & 8 West. Sulphides were not noted in specimens of peridotite although these were not subjected to careful and continual scrutiny. Any results from the sampling of this material is not at present available.

CONCLUSIONS

Geophysical work on the picketed grid over the claims has indicated certain significant anomalous conditions. Magnetic traverses have traced several thin bands of Iron Formation and have indicated one which is entirely covered. These bands are assumed to lense out where not faulted off so that they cannot be traced continuously. The magnetic work however, has not traced out the ultrabasic sills to any degree due to the masking effect of intravening rocks of higher magnetic attraction than ultrabasics. Depth of burial also has a deleterious effect on the tracing of ultrabasic sills. The extrapolation under large areas of the ground with no exposure of the ultrabasic sills is strictly conjectural.

The Crone JEM traverses have indicated several anomalous zones, some with extreme tilt angles, along the strike of inferred Iron Formation. These seem to be due to a greater quantity of sulphides underlying certain locations and these should be considered for probing with a diamond drill especially where proximity to ultrabasic rock is inferred from a combination of geological and geophysical factors.

Respectfully submitted,

*W. Gilman*

W. Gilman,  
Geologist.

Timmins, Ontario,  
September 7, 1971.

*R. J. Bradshaw*

R. J. Bradshaw, P. Eng.,  
Geologist.



PERFORMANCE &



42A06SE0911 2.643 ELDORADO

900

ASSESSMENT WORK DETAILS

Township or Area Langmuir

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

Chief Line Cutter N.A.  
or Contractor Name  
Address

Party Chief Warren Gilman  
Name  
26 Pine St. S., Timmins, Ontario.  
Address

Consultant R. J. Bradshaw  
Name  
26 Pine St. S., Timmins, Ontario  
Address

COVERING DATES

Line Cutting \_\_\_\_\_

Field June 1 - 10, 1971  
Instrument work, geological mapping, sampling etc.

Office June 11 - 16, 1971

INSTRUMENT DATA

Make, Model and Type N.A.

Scale Constant or Sensitivity N.A.

*Or provide copy of instrument data from Manufacturer's brochure.*

Radiometric Background Count \_\_\_\_\_

Number of Stations Within Claim Group 750

Number of Readings Within Claim Group \_\_\_\_\_

Number of Miles of Line cut Within Claim Group 14.2

Number of Samples Collected Within Claim Group \_\_\_\_\_

CREDITS REQUESTED

20 DAYS  
per claim

40 DAYS Includes  
per claim (Line cutting)

Geological Survey

Geophysical Survey

Geochemical Survey

Show  
Check

DATE September 1, 1971

SIGNED R. J. Bradshaw

P99947
P99948
P99949
P99950
P99951
P99952
P99953
P99954
P99955
P99956
P99957
P99958
P99959
P99960
P99961
P99962
<b>RECEIVED</b>
<b>OCT 20 1971</b>
PROJECTS SECTION
TOTAL <u>16</u>

If space insufficient, attach list

Send in duplicate to:  
FRED W. MATTHEWS  
SUPERVISOR-PROJECTS SECTION  
DEPARTMENT OF MINES &  
NORTHERN AFFAIRS  
WHITNEY BLOCK  
QUEEN'S PARK  
TORONTO, ONTARIO

## SUBMISSION OF GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL SURVEYS

### AS ASSESSMENT WORK

In order to simplify the filing of geological, geochemical and ground geophysical surveys for assessment work, the Minister has approved the following procedure under Section 84 (8a) of the Ontario Mining Act. This special provision does not apply to airborne geophysical surveys.

If, in the opinion of the Minister, a ground geophysical survey meets the requirements prescribed for such a survey, including:

- (a) substantial and systematic coverage of each claim
- (b) line spacing not exceeding 400 foot intervals
- (c) stations not exceeding 100 foot intervals or
- (d) the average number of readings per claim not less than 40 readings

it will qualify for a credit of 40 assessment work days for each claim so covered. It will not be necessary for the applicant to furnish any data or breakdown concerning the persons employed in the survey except for the names and addresses of those in charge of the various phases (linecutting contractor, etc.). It will be assumed that the required number of man days were spent in producing the survey to qualify for the specified credit.

Each additional ground geophysical survey using the same grid system and otherwise meeting these requirements will qualify for an assessment work credit of 20 days.

A geological survey using the same grid system, and meeting the requirements for submission of geological surveys for maximum credits will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geological survey a credit of 40 days per claim will be allowed for the survey.

Similarly, a geochemical survey using the same grid system with the average number of collected samples per claim being not less than 40 samples, and meeting the requirements for the submission of geochemical surveys for maximum credits, will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geochemical survey a credit of 40 days per claim will be allowed for the survey.

Credits for partial coverage or for surveys not meeting requirements for full credit will be granted on a pro-rata basis.

If the credits are reduced for any reason, a fifteen day Notice of Intent will be issued. During this period, the applicant may apply to the Mining Commissioner for relief if his claims are jeopardized for lack of work or, if he wishes, may file with the Department, normal assessment work breakdowns listing the names of the employees and the dates of work. The survey would then be re-assessed to determine if higher credits may be allowed under the provisions of subsections 8 and 9 of section 84 of the Mining Act.

If new breakdowns are not submitted, the Performance and Coverage credits are confirmed to the Mining Recorder at the end of the fifteen days.









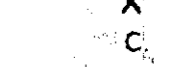






Shaw Twp. - M.311

THE TOWNSHIP OF  
OF  
**ELDORADO**  
*Claim Map*  
DISTRICT OF  
TIMISKAMING

PORCUPINE  
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 

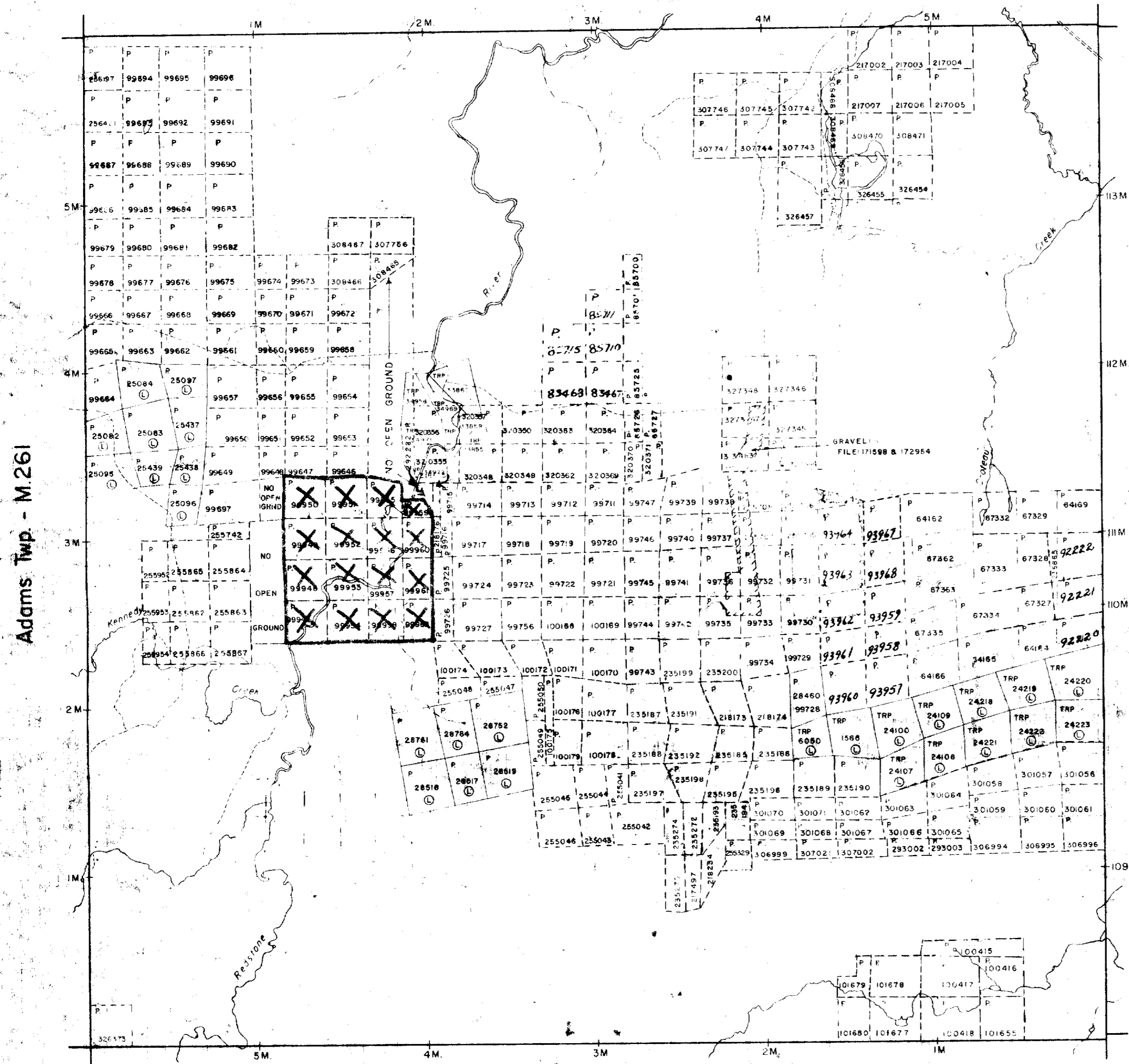
**NOTES**

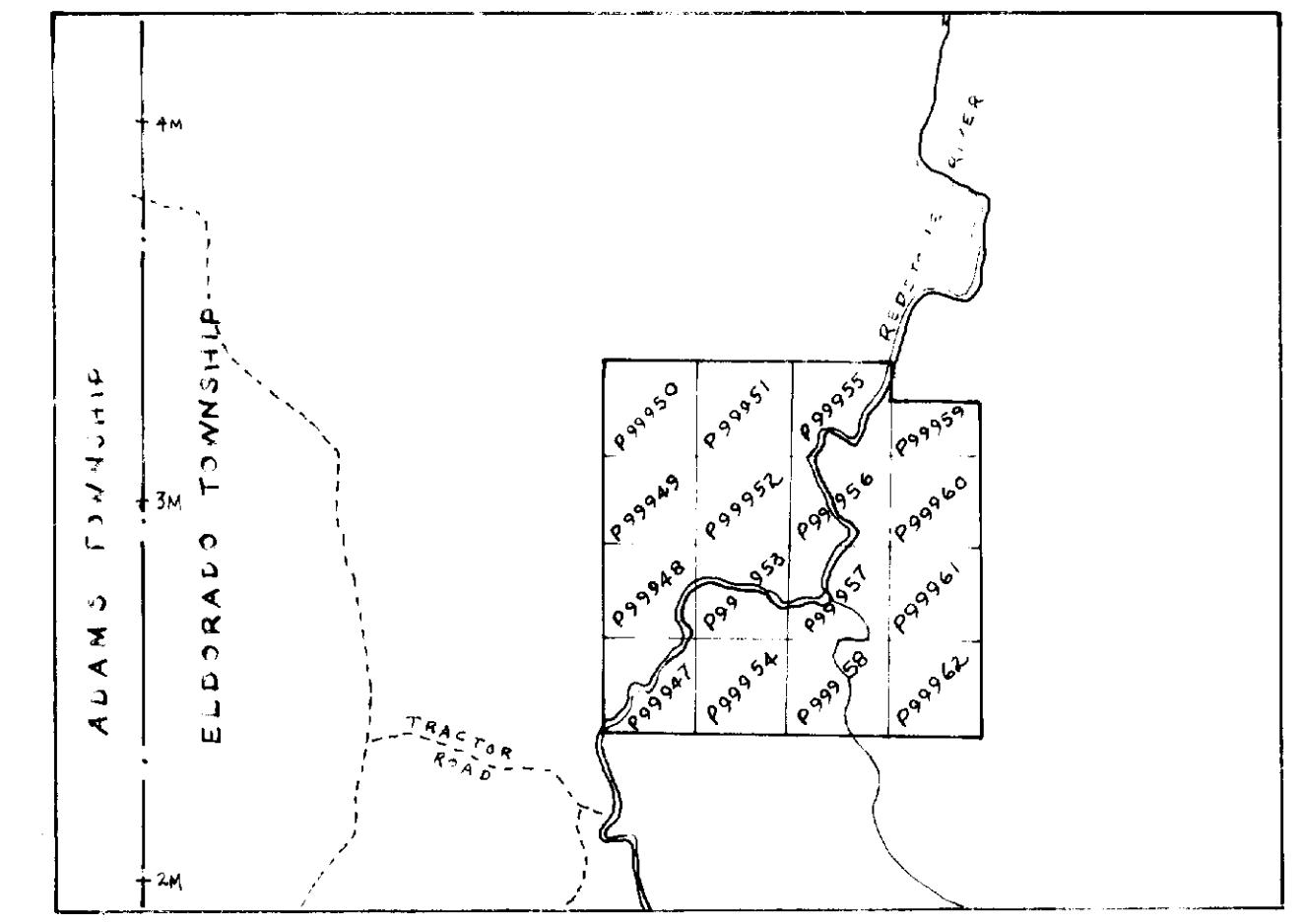
400' Surface Rights Reservation around all lakes and rivers.

DATE OF ISSUE  
OCT 2 1971  
ON...  
M...  
...

PLAN NO. **M.276**

**ONTARIO**  
**DEPARTMENT OF MINES**  
**AND NORTHERN AFFAIRS**



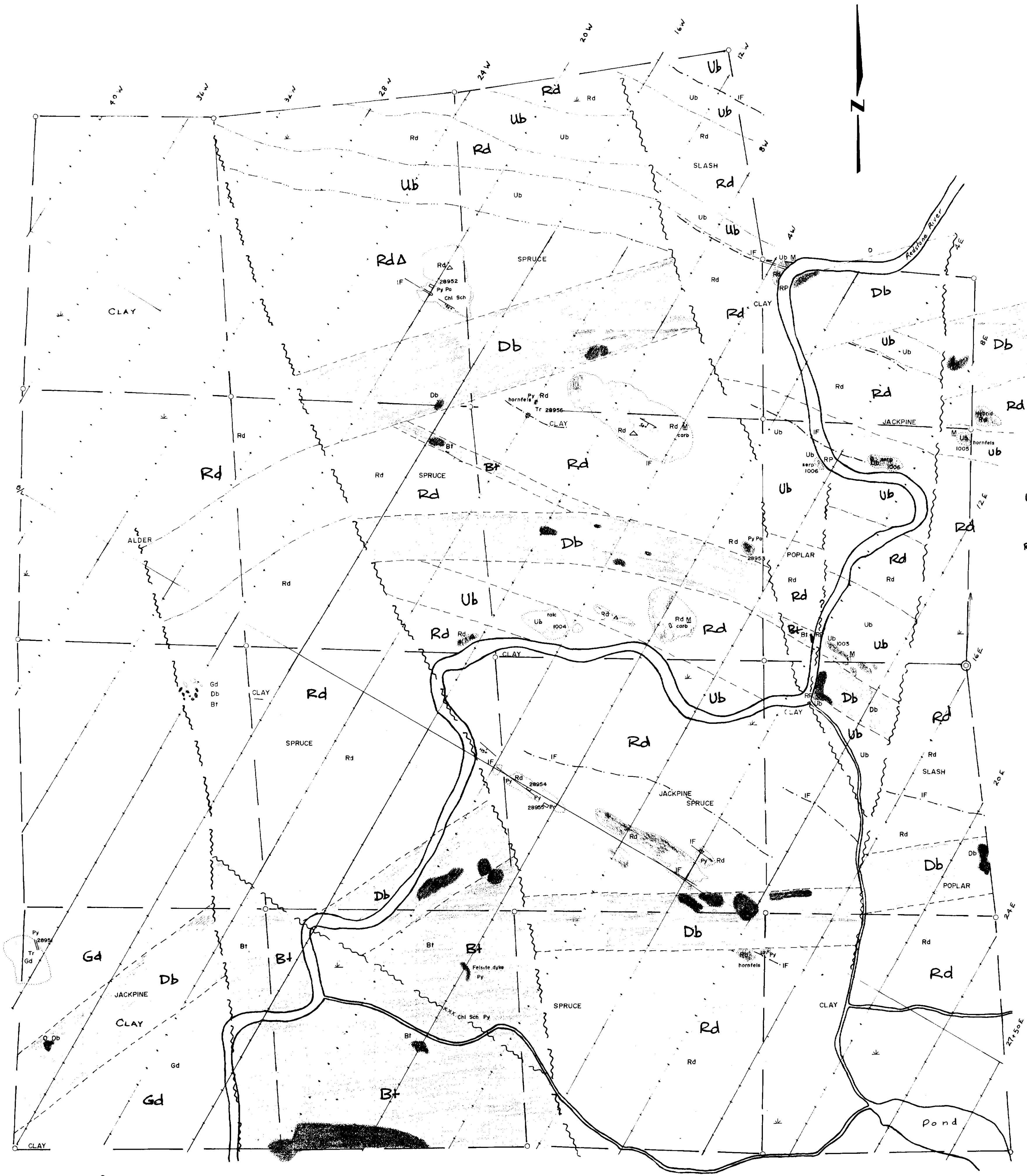


**LEGEND**

- Db Diabase (O-olivine)
- Gd Granodiorite
- IF Iron Formation
- Ub M Ultrabasic (massive)
- Ub Jb serp. " (serpentinized)
- Rd A Rhodacite (pyroclastics)
- Rd M Rhodacite (massive)
- Bt Basalt

**SYMBOLS**

- Strike & dip of bedding
- Strike & dip of foliation
- Fault
- Geological Contact (assumed)
- Outcrop
- xxx Inferred bedrock
- Pits
- Trench
- Sample Numbers
- Py Pyrite
- Pa Pyrrhotite
- Carb Carbonate
- Swamp
- RP Rapids
- Collar & azimuth D.D.H.
- Claim corner post
- Contact assumed from geophysical results
- Iron Formation inferred from magnetic data



**GEOLOGICAL SURVEY**  
ON THE  
**R. J. DRAPER PROPERTY**  
ELDRADO TOWNSHIP, ONTARIO  
BY  
**SHIELD GEOPHYSICS LIMITED**

2643

