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MINING LANDS SECTION

REPORT ON A GEOLOGICAL SURVEY

DELORO

OGDEN-2

PROJECT 1043-02

NTS: 42-A-6

AMAX MINERALS EXPLORATION

Timmins, Ontario

Timmins, Ontario  
February 26, 1981

J. MacPherson  
Geologist

## SUMMARY

During August and September, 1980, a geological survey was performed on a group of eight (8) claims in the west central part of Ogden township, District of Cochrane, Ontario.

The property appears to be underlain by sediments, with no economic mineralization present in them.

The horizontal loop survey carried out by Amax in early 1980 outlined the presence of a conductor which was not explained by the geology survey due to lack of outcrop exposure.

A hole was then drilled on the conductor and graphite in argillite was encountered, explaining the conductor.

It is recommended that no further work be done on the claims.

## INTRODUCTION

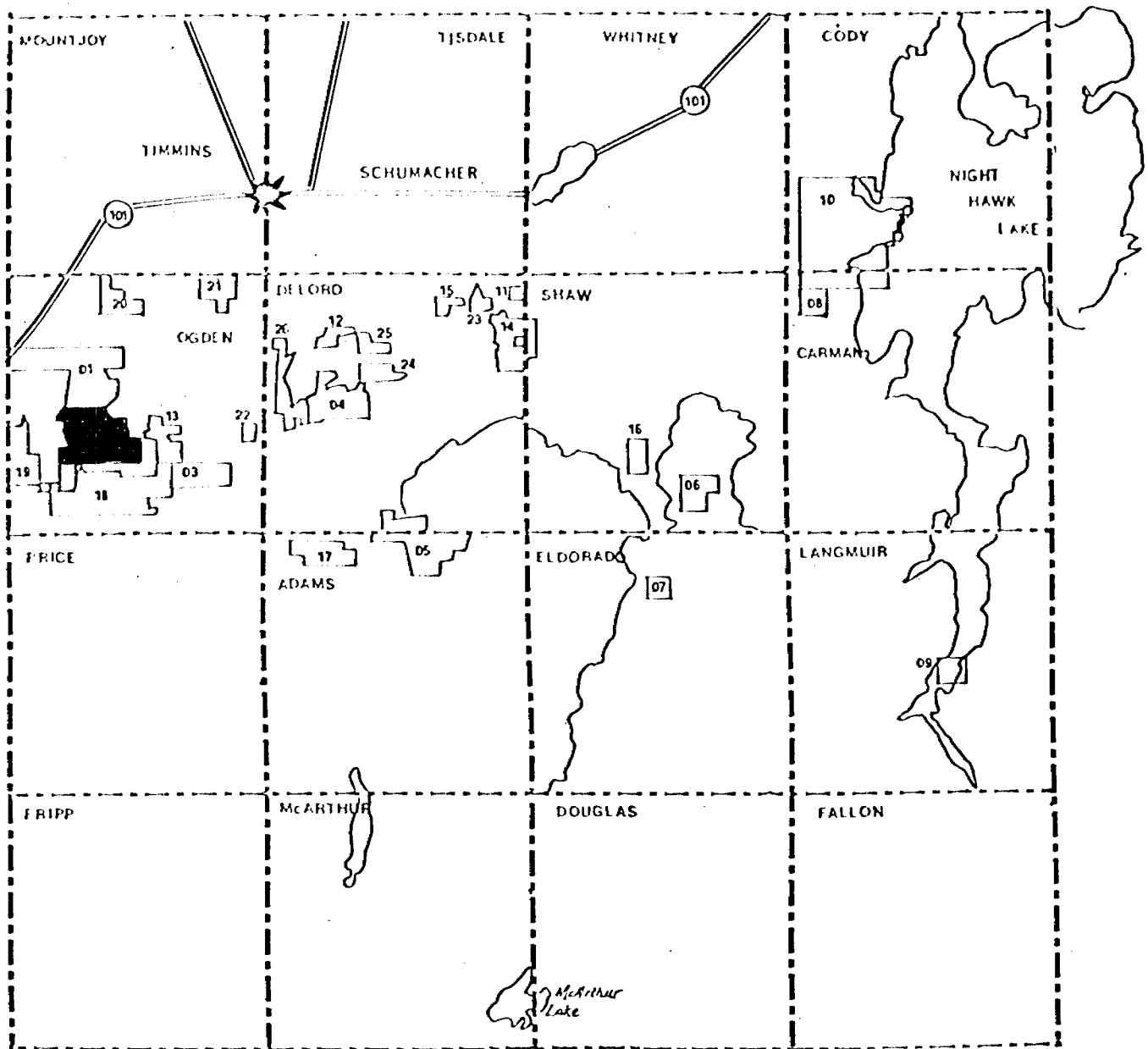
A geological survey was carried out on a group of eight (8) claims in Ogden township during late August and early September of 1980. The claims are recorded in the name of Amax of Canada Limited.

These claims cover several air electromagnetic anomalies uncovered during a helicopter survey by Amax in the fall of 1979.

Detail ground geophysical surveys consisting of magnetometer and horizontal loop (high and low frequency) were carried out during the early part of 1980.

## LOCATION AND ACCESS

The group of eight (8) claims surveyed is part of a larger group of twenty-seven (27) claims situated in the west central part of Ogden township in the District of Cochrane, Ontario.

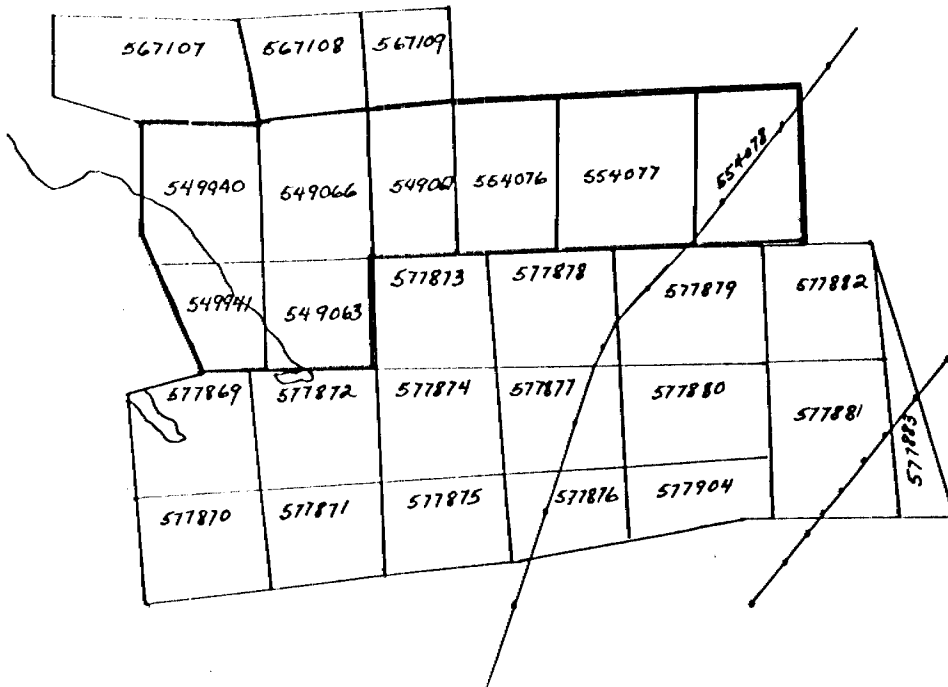


LOCATION SKETCH

1043-02, Ogden-2  
Ogden Township

Scale: 1"=4miles

OGDEN TWP.



— Area of survey

CLAIM SKETCH  
1043-02, Ogden-2  
Scale: 1:30,000

Access to the property is possible by a combination of gravel and bush roads. A good gravel road leads south from Timmins to the power station at Wawaitan Falls. Approximately eight (8) miles south along this road, a bush road leads east to the property, a distance of approximately 4900 feet. A short pace and compass traverse of 500 feet at azimuth  $45^{\circ}$  is then necessary to reach the grid.

#### TOPOGRAPHY AND RESOURCES

The relief on the property is very low. It is underlain mainly by clay and some sand. Black spruce and some birch are found on the more sandy areas; these are scarce. The property is mainly marshy, with scattered black spruce and alders, quite thick in places.

Water sources are from ground seeps or slight depressions in the marshy areas, forming small ponds.

#### PREVIOUS WORK

##### In the Field:

Evidence of previous drilling was found in the field. These areas are shown on the accompanying geological map. Casing was found at both these sites, but no core.

##### From Assessment Files:

Most of the conductors in the immediate area have been drilled at one time or another, although in some cases records were not kept and assays were not performed. It was on this basis that the decision was made to drill the conductor.

#### SURVEY METHOD

The survey was performed by J. MacPherson and P. DeGagne in late August and early September 1980. Air photos at a scale of 1:30,000 and the Amax detail geophysical grid were used as control. Off the grid traverse lines were run using pace and compass at 400 foot intervals across the remaining claims.

#### GENERAL GEOLOGY

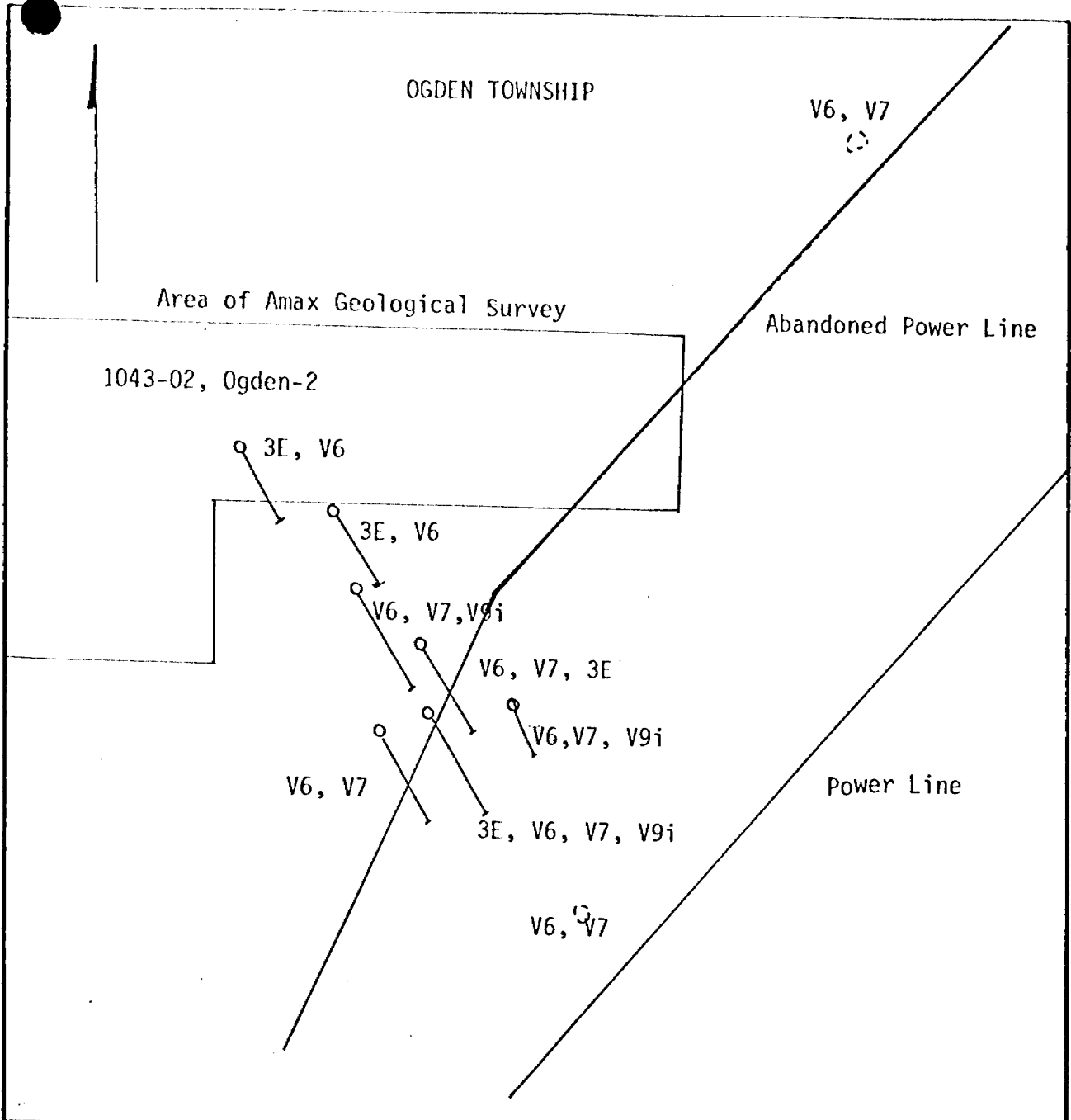
The volcanic rocks of the Timmins area consist of the older Deloro Group and the younger overlying Tisdale Group.

The Deloro Group is confined to a large domal structure centred in Shaw township. It grades from andesite to basalt flows in the lower portion to dacite and rhyolite pyroclastics near the top. A major change in volcanism marks the beginning of the Tisdale Group, the Lower Volcanic Formation of which is marked by serpentinized ultramafic flows.

The Destor-Porcupine Fault is the major structural feature in the area, along with the Porcupine Syncline to the north and the Shaw Dome to the south.

#### PROPERTY GEOLOGY



The geology was unknown due to a lack of outcrop during the geological survey. The conductor on the grid was drilled by Amax after the geology survey and from this a portion of the geology is known. The rock units encountered in the hole were all sediments, and consisted of interbedded cherty sediments, sediment breccia, greywacke and argillite with graphite (the conductor).



LEGEND

- V6      Andesite
- V7      Basalt
- V9i     Intermediate tuff
- 3E      Peridotite

SYMBOLS

-       Outcrop boundary
-       Drill hole

AMAX OF CANADA LIMITED

- Project Name : DELORO
- Group Name    : 1043-02, Ogden-2
- Township      : Ogden
- N.T.S.         : 42/A/6
- Survey         : Compilation
- Date            : February 1981
- Scale          : 1:15,000

TABLE OF FORMATIONS

CENZOIC

Quaternary

Recent

Swamp and stream deposits

Pleistocene

Till, clay, sand, gravel

Unconformity

PRECAMBRIAN

Mafic Intrusive Rocks

Olivine diabase, quartz diabase

Intrusive Contact

Huronian Supergroup

Gowganda Formation, Cobalt Group

Arkose, wacke, argillite, conglomerate

Unconformity

ARCHEAN

Mafic Intrusive Rocks

Diabase

Intrusive Contact

Felsic Intrusive Rocks

Quartz feldspar porphyry, granite, diorite, granodiorite

Metamorphosed Mafic Intrusive Rocks

Gabbro, quartz gabbro

Intrusive and Gradational Contact



Metamorphosed Ultramafic Intrusive Rocks

Serpentinized diorite, peridotite

Intrusive Contact

## METAVOLCANICS AND METASEDIMENTS

### Metasediments

Conglomerate, lithic wacke, iron formation

### Metavolcanics

Felsic Calc Alkalic metavolcanics

Massive, fine-grained flows, tuff, lapilli tuff, breccia

Mafic Calc-alkalic metavolcanics

Massive, fine-grained flows, pillowed flows, tuff, lapilli tuff and breccia, sheared, carbonated pyroclastics

Tholeiitic Metavolcanics

Massive to medium grained flows, pillowed flows and flow breccia, minor tuff, lapilli tuff and breccia

Komatiitic Metavolcanics

Peridotite, olivine spinifex, carbonate and talc alteration

CONCLUSIONS AND RECOMMENDATIONS

The geophysical conductor was explained by the presence of graphite in argillite, found by drilling.

It is recommended that there be no further work done on these claims.

Respectfully Submitted,

*J. A. MacPherson*

J. MacPherson  
Geologist

Timmins, Ontario  
February 1981



GEOPH



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AR 2.5.1981

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.

MINING CLAIMS TRAVELED

Type of Survey(s) Geological

Township or Area Ogden

Claim Holder(s) Amax of Canada Limited

Survey Company Amax Minerals Exploration

Author of Report J. MacPherson

Address of Author 255 Algonquin Blvd. W., Timmins, Ont.

Covering Dates of Survey August - September 1980
(linecutting to office)

Total Miles of Line Cut

MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)

P 549940

P 549941

P 549063

P 549066

P 549067

P 554076

P 554077

P 554078

If space insufficient, attach list

SPECIAL PROVISIONS
CREDITS REQUESTED

DAYS
per claim

Geophysical

--Electromagnetic

--Magnetometer

--Radiometric

--Other

Geological 20

Geochemical

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

ENTER 20 days for each
additional survey using
same grid.

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

Magnetometer Electromagnetic Radiometric
(enter days per claim)

DATE: March 13, 1981 SIGNATURE J. A. MacPherson
Author of Report or Agent

Res. Geol. Qualifications

Previous Surveys

File No. Type Date Claim Holder

Table with 4 columns: File No., Type, Date, Claim Holder. Contains handwritten 'L.D.' in the Claim Holder column.

TOTAL CLAIMS 8

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS - If more than one survey, specify data for each type of survey

Number of Stations \_\_\_\_\_ Number of Readings \_\_\_\_\_
Station interval \_\_\_\_\_ Line spacing \_\_\_\_\_
Profile scale \_\_\_\_\_
Contour interval \_\_\_\_\_

MAGNETIC

Instrument \_\_\_\_\_
Accuracy -- Scale constant \_\_\_\_\_
Diurnal correction method \_\_\_\_\_
Base Station check-in interval (hours) \_\_\_\_\_
Base Station location and value \_\_\_\_\_

ELECTROMAGNETIC

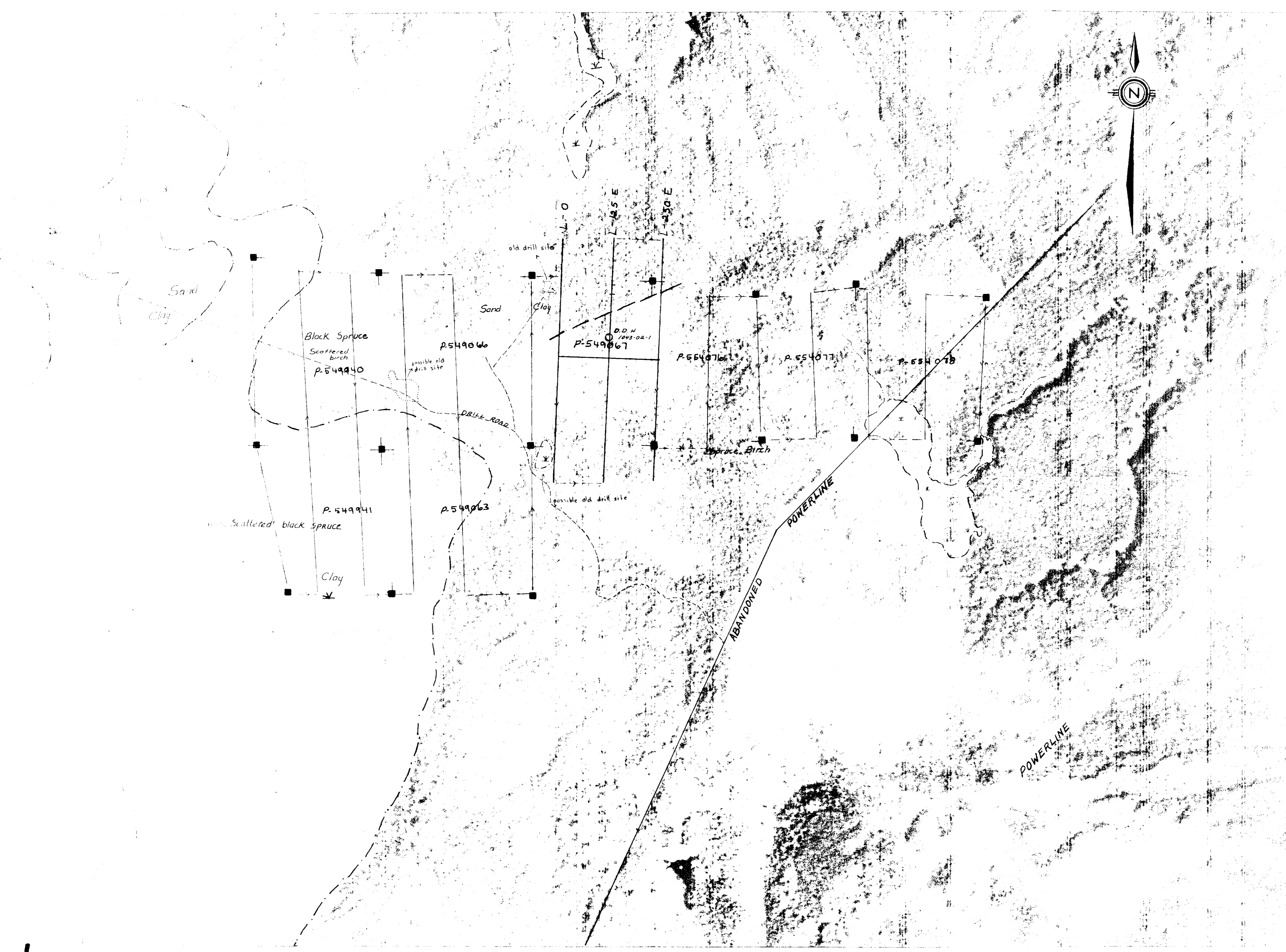
Instrument \_\_\_\_\_
Coil configuration \_\_\_\_\_
Coil separation \_\_\_\_\_
Accuracy \_\_\_\_\_
Method:  Fixed transmitter  Shoot back  In line  Parallel line
Frequency \_\_\_\_\_ (specify V.L.F. station)
Parameters measured \_\_\_\_\_

GRAVITY

Instrument \_\_\_\_\_
Scale constant \_\_\_\_\_
Corrections made \_\_\_\_\_
Base station value and location \_\_\_\_\_
Elevation accuracy \_\_\_\_\_

INDUCED POLARIZATION RESISTIVITY

Instrument \_\_\_\_\_
Method  Time Domain  Frequency Domain
Parameters -- On time \_\_\_\_\_ Frequency \_\_\_\_\_
-- Off time \_\_\_\_\_ Range \_\_\_\_\_
-- Delay time \_\_\_\_\_
-- Integration time \_\_\_\_\_
Power \_\_\_\_\_
Electrode array \_\_\_\_\_
Electrode spacing \_\_\_\_\_
Type of electrode \_\_\_\_\_



NOTE: NO GEOLOGY FOUND

100	CLAY
200	CLAY
300	CLAY
400	CLAY
500	CLAY
600	CLAY
700	CLAY
800	CLAY
900	CLAY
1000	CLAY
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1200	CLAY
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9200	CLAY
9300	CLAY
9400	CLAY
9500	CLAY
9600	CLAY
9700	CLAY
9800	CLAY
9900	CLAY
10000	CLAY

AMAX MINERAL CORPORATION  
 11100 DEER CREEK ROAD  
 DENVER, CO 80231  
**OGDEN-2, 1043-02**  
 DELORO PROJECT  
 OGDEN TOWNSHIP, CO  
 SCALE 1:5000

NOT TO SCALE  
 10 AUGUST 1988  
 BY: *[Signature]*

