REPORT ON A GEOLOGICAL SURVEY

BART-4

PRICE 035-11

NTS: 42-A-3/6

AMAX MINERALS EXPLORATION

Timmins, Ontario
August, 1982

S. Davies

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SUMMARY

During July of 1982, a geological survey was conducted on four (4) claims in east central Bartlett township, District of Timiskaming, Ontario.

The property is underlain by intermediate to mafic volcanics in contact with a granitic intrusive.

The airborne electromagnetic anomalies were not explained by the geological survey.

It is recommended that detailed ground geophysics be conducted to delineate future diamond drill hole targets.

INTRODUCTION

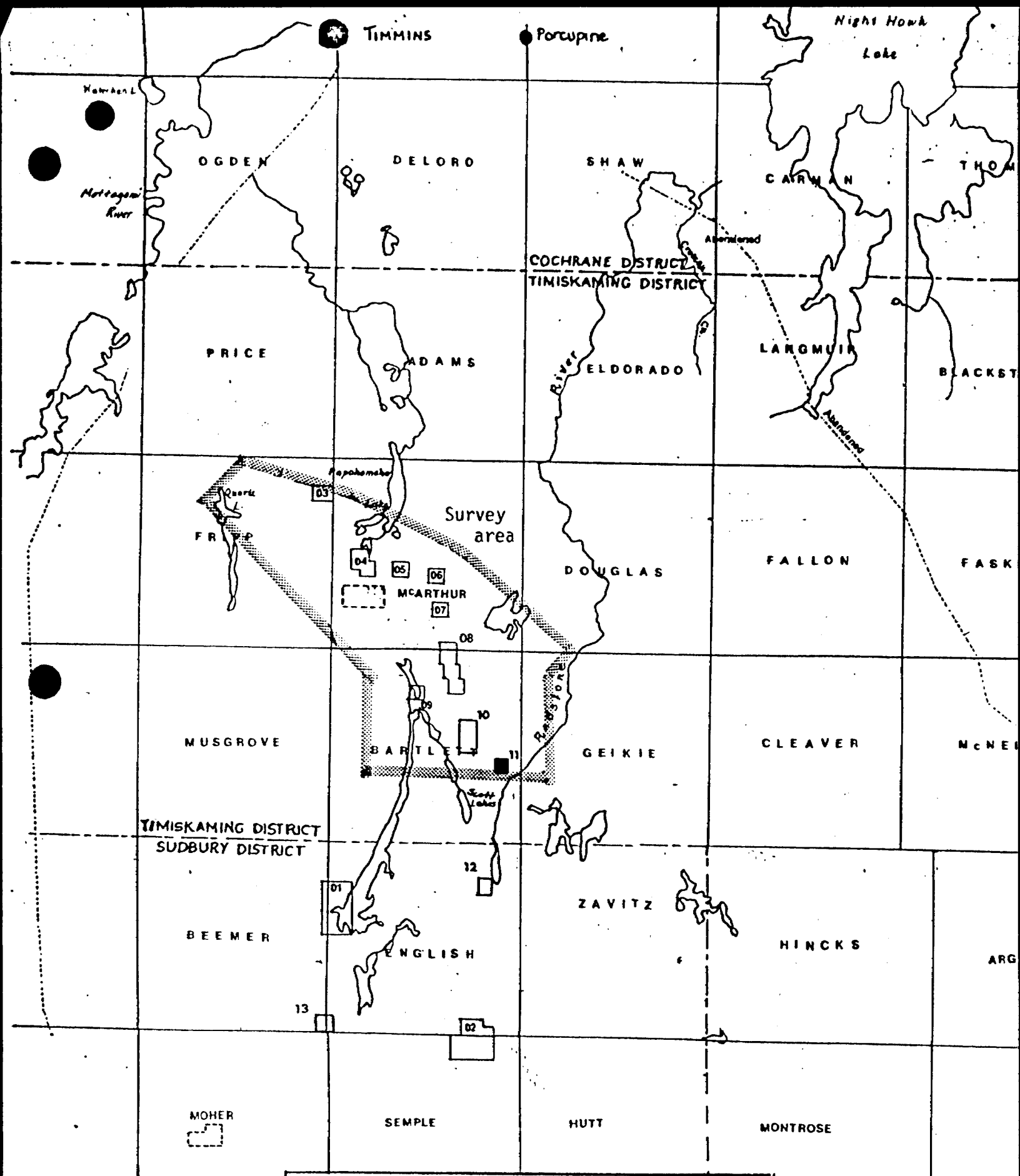
A detailed geological survey was carried out on a group of four (4) claims in Bartlett township during July of 1982. The claim numbers are P-618241-44 and are recorded in the name of Amax of Canada Limited.

The property covers three air electromagnetic anomalies uncovered during a helicopter-borne survey carried out by Amax in August of 1980. The anomalies trend approximately north-east through the centre of the claim group.

LOCATION AND ACCESS

The group of four claims is situated in east central Bartlett township in the District of Timiskaming, Ontario.

Property access was by helicopter which landed on a swamp, located northeast of the claims. A traverse of 350 metres on a bearing of 250^{o} was made to reach the property.



LOCATION SKETCH

Project 035-11, Bart-4

Scale: 1:250,000.

Scale 1:250,

TOPOGRAPHY AND RESOURCES

The relief on the property is quite low with swampy ground predominating over the entire claim group.

Vegetation consists of spruce, alders and lesser poplar and pine.

Water for diamond drilling is available from the swamp in the northern claims and from the Redstone River to the south of the property.

PREVIOUS WORK

From Assessment Files

A number of diamond drill holes were drilled in eastern Bartlett township by Queenston Gold Mines Limited and Payqueen Nickel Mines Limited, both during 1957. All holes encountered mafic to intermediate metavolcanics and granite but no mineralization was found.

Found in Field

One trench was found in andesite in claim P-618242.

SURVEY METHOD

The survey was performed by S. Davies, L. de St. Jorre, J. MacPherson and M. Villeneuve during July of 1982. Air photos at a scale of 1"=¼ mile and air photo blow-ups at a scale of 1:5,000 were used as control while mapping. Traverse lines were run using pace and compass at 125 metre intervals across the claims.

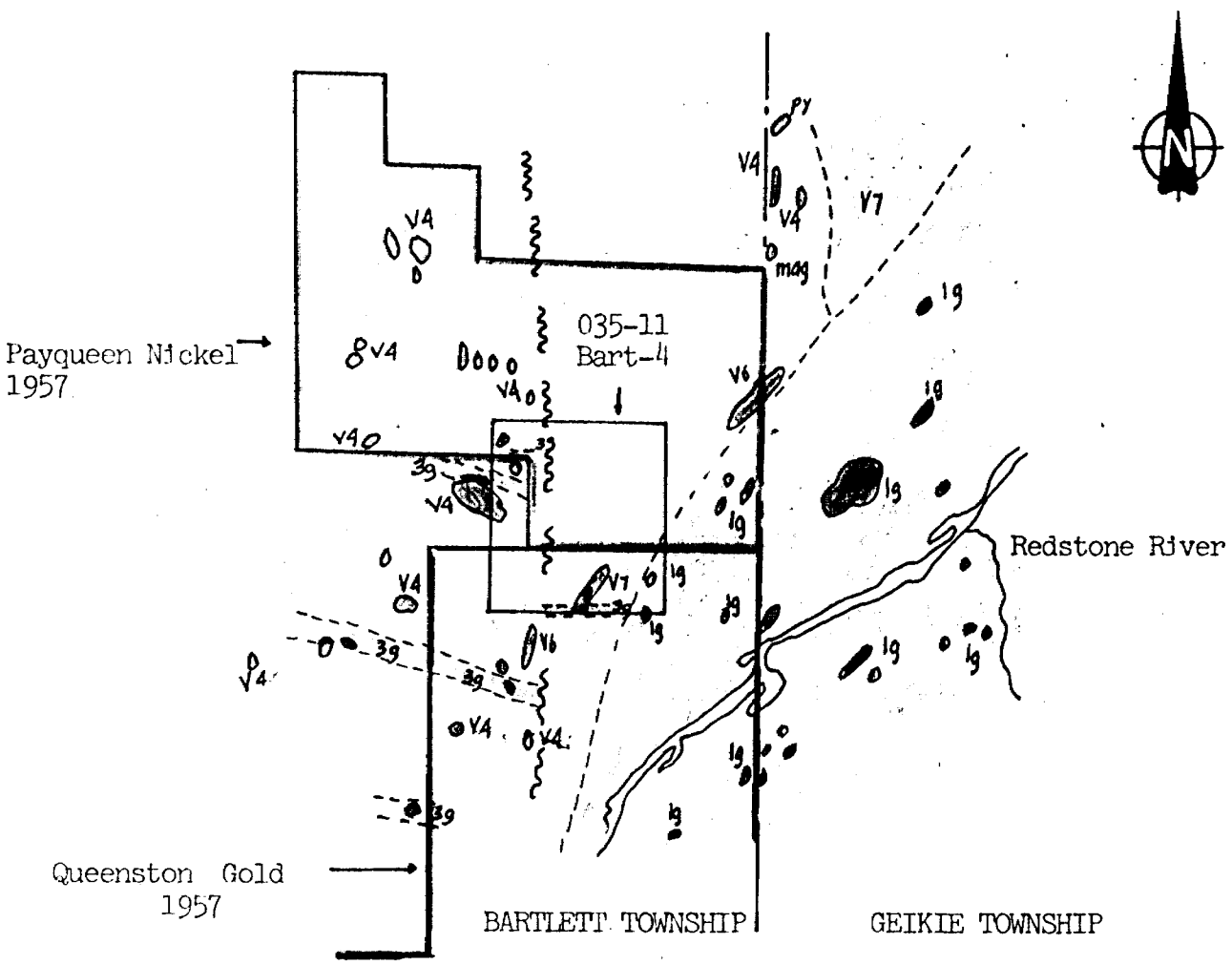
REGIONAL GEOLOGY

Early Precambrian (Archean) metavolcanic and plutonic rocks underlie most of the area.

Two cycles of volcanism are recognized, each consisting of a lower unit of ultramafic metavolcanics, an overlying unit of mafic metavolcanics and an upper unit of intermediate to felsic metavolcanics.

A pretectonic, layered gabbroic sill and minor felsic epizonal intrusions are largely confined to the lower sequence of metavolcanics.

Late tectonic stocks of granodiorite and monzonite were emplaced within the metavolcanic-metasedimentary succession. The lower sequence of mafic and ultramafic metavolcanics was intruded by a large complex granitic batholith composed of at least three separate intrusive phases.



LEGEND

V4	Dacite
V6	Andesite
V7	Basalt
lg	Granite
3g	Gabbro
	Outcrop
	Fault (inferred)
	Geological contact - observed
	- inferred
mag	Magnetite
py	Pyrite
	Township Line
	Payqueen Nickel Mines 1957
	- 2 holes drilled in Bartlett Twp.
	Queenston Gold Mines 1957
	- 1 hole drilled in NE Bartlett Twp.
	- 2 holes drilled adjacent Geikie Twp.

AMAX MINERALS EXPLORATION

PROJECT : Price (035)
GROUP : 035-11; Bart-4
TOWNSHIP: Bartlett
SURVEY : Compilation
DATE : August, 1982
SCALE : 1" = ½ mile

TABLE OF FORMATIONS

PHANEROZOIC

CENOZOIC

Quaternary - Pleistocene and recent

----------Unconformity----------

PRECAMBRIAN

LATE PRECAMBRIAN, MIDDLE PRECAMBRIAN - Olivine, quartz diabase

Huronian Supergroup

Cobalt Group

Gowganda Formation: Greywacke, arkose, conglomerate

----------Unconformity----------

EARLY PRECAMBRIAN (ARCHEAN)

Mafic Intrusive Rocks

Diabase

----------Intrusive Contact----------

Felsic Intrusive Rocks

----------Intrusive Contact----------

Metamorphosed Mafic and Ultramafic Rocks

Gabbro, serpentinized peridotite, quartz gabbro

----------Intrusive Contact----------

METAVOLCANICS AND METASEDIMENTS

Intermediate to Felsic Volcanics:

Tuff, breccia, massive to pillowed flows, interlayered siltstone, greywacke

Mafic Metavolcanics:

Massive and pillowed flows, tuff, volcanic breccia, pyroclastic rocks

Ultramafic Metavolcanics:

Serpentinized peridotite, spinifex texture flows, tuff, carbonatized peridotite

Diabase dykes are numerous and are not confined to a specific metavolcanic sequence.

The major structural features in the area consist of a domal structure in Geikie township that is flanked by large synclines to the north and south and numerous north-trending faults which are probably part of the Onaping Lineament.

PROPERTY GEOLOGY

The property 035-11 is situated on the southwest margin of a large granitic pluton which is in contact with the Upper Volcanic Formation of the Lower Volcanic Group.

Felsic to intermediate volcanics (dacite) and mafic volcanics (andesite and basalt) were found in the central portion of the claim group. More mafic volcanics (basalt and peridotite) were found in the southeast corner of claim P-618242. The rocks are poorly foliated and strike roughly north-east.

A granitic intrusive was also found in the southeast claim and is in contact with the mafic volcanics.

A quartz-feldspar porphyry was found striking approximately northeast through the west central portion of the property.

Mineralization (pyrite and chalcopyrite) was found in andesite near the contact of the granitic intrusion.

Nil to trace values of Au were found.

CONCLUSIONS AND RECOMMENDATIONS

The property is located on the contact between a granitic intrusion and intermediate to mafic volcanics. Minor mineralization (pyrite and chalcopyrite) was found in andesite in the vicinity of the contact. Nil to trace values of Au were returned.

The airborne electromagnetic anomalies were not explained by the geological survey.

It is recommended that detailed ground geophysics be conducted to outline future diamond drill targets.

Respectfully submitted,

S. Davies

Timmins, Ontario
August, 1982

S. Davies

BARTLETT TWP

GEIKIE TWP.

P-618244	P-618241
P-618243	P-618242

CLAIM SKETCH

Project 035-11

BART-4

Bartlett Township

Scale: 1" = ¼ mile

APPENDIX A

SCHEDULE OF CLAIMS

PROJECT Bart-4

Price, 035-11

Claim Group	Township	Number	Claim Numbers	Recording Date
035-11 Bart-4	Bartlett	4	P-618241	May 21, 1981
			P-618242	May 21, 1981
			P-618243	May 21, 1981
			P-618244	May 21, 1981

DECLARATION

I, Joseph A. MacPherson, of the City of Sudbury, in the Province of Ontario, with a mailing address of 255 Algonquin Blvd. West, Timmins, Ontario, do hereby declare:

1. I am a geologist employed by Amax of Canada Limited, with offices at 255 Algonquin Blvd. West, Timmins, Ontario.

2. I completed an honours B.Sc. programme (geology) in 1980 at Laurentian University in Sudbury, Ontario.

3. I did personally set forth the facts as outlined in this report and did conduct or supervise, or review, the work contained herein.

4. I do not have, nor do I expect to have, any interest in the properties held by Amax of Canada Limited.

Joseph A. MacPherson

Dated at Timmins, Ontario

Ministry of Natural Resources

Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

#370

035-11

The

Instructions: – Please type or print.
– If number of mining claims traverse exceeds space on this form, attach a lis
Note: – Only days credits calculated in th

900

Type of Survey(s)
Geological Survey

Claim Holder(s)
Amax of Canada Limited

Address
255 Algonquin Blvd. West, Timmins, Ontario. P4N 2R8

Survey Company
Amax Minerals Exploration

Date of Survey (from & to)
Day 07 Mo. 82 Yr. | Day | Mo. | Yr.

Total Miles of line Cut

Name and Address of Author (of Geo-Technical report)
Sandra Davies, 255 Algonquin Blvd. West, Timmins, Ontario. P4N 2R8

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	20
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
P	618241	20
	618242	20
	618243	20
	618244	20

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED
OCT 19 1982
MINING LANDS SECTION

PORCUPINE MINING DIVISION
RECEIVED
SEP 28 1982
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

RECORDED
SEP 28 1982
Receipt No. .....

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 15 = Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Total number of mining claims covered by this report of work. 4

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
80	Sept 28/82	
	Date Approved as Recorded 83.04.29	Branch Director

Date	Recorded Holder or Agent (Signature)
Sept. 22, 1982	Rosemary Miller

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying
J. MacPherson
255 Algonquin Blvd. West, Timmins, Ont. P4N 2R8

Date Certified Sept 26/82

Certified by (Signature)

Ministry of Natural Resources
Ontario

Geotechnical Report Approval

File 2.5173

Jan 27/83

Mining Lands Comments

- no qualifications

☐ To: Geophysics

Comments

☐ Approved ☐ Wish to see again with corrections	Date	Signature

☑ To: Geology - Expenditures M.R. Kustra

Comments

~~Report OK. Qualifications of author are not shown.~~ Qualifications shown are those of the supervisor.

☑ Approved ☐ Wish to see again with corrections	Date Mar 3/83	Signature C Kustra

☐ To: Geochemistry

Comments

PD

☐ Approved ☐ Wish to see again with corrections	Date	Signature

☐ To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1593 (81/10)

370

1982 11 22 2.5173

Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

We have received reports and maps for a Geological Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims P 618241 et al in the Township of Bartlett.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

DW:sc

cc: Amax of C ada Limited
Timmins, Ontario
Attn: Sandra Davies.

AMAX MINERALS EXPLORATION
(A Division of AMAX OF CANADA LIMITED)

255 Algonquin Blvd. West
Timmins, Ontario
P4N 2R8

Telephone: (705) 264-5247

November 4, 1982

Our File: 035-11

Mr. F. W. Matthews,
Ontario Ministry of Natural Resources,
W1617, Whitney Block,
Queen's Park,
Toronto, Ontario.
M7A 1W3

Dear Sir:

Re: Mining Claims P.618241 et al.,
Bartlett Township

Enclosed herewith please find two (2) copies of a report along with accompanying plan concerning a Geological Survey which was carried out over a total of four (4) contiguous mining claims located in Bartlett township, northeastern Ontario.

A Report of Work concerning this survey has been filed with Mr. William Good, Mining Recorder for the Porcupine Mining Division.

Thank you.

Yours truly,
AMAX OF CANADA LIMITED

Rosemary Tittley

Rosemary Tittley (Mrs.)
Land Recorder

Encs. 2

c.c. K. Clemiss/E. Barclay, Toronto

Ontario

Ministry of Natural Resources

File _____

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(s) Geological Survey

Township or Area Bartlett

Claim Holder(s) Amax of Canada Limited

Survey Company Amax Minerals Exploration

Author of Report Sandra Davies

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

Covering Dates of Survey July 1982
(linecutting to office)

Total Miles of Line Cut _____

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	
--Magnetometer	
--Radiometric	
--Other	
Geological	20
Geochemical	

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

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

DATE: Sept. 1, 1982 SIGNATURE: Sandra Davies
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
P	618241
P	618242
P	618243
P	618244

If space insufficient, attach list

TOTAL CLAIMS 4

OFFICE USE ONLY

837 (5/79)

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 _____

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 _____

_____

_____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

_____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

_____

Drainage Development _____

Estimated Range of Overburden Thickness _____

_____

_____

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

_____

_____

_____

General _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

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 (_____ tests)

Name of Laboratory _____

Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____

_____

_____

_____

_____

_____

_____

_____

_____