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**MINING LANDS SECTION**

**A REPORT ON MAGNETIC AND V.L.F.-EM  
SURVEYS ON THE PRICE TOWNSHIP PROPERTY OF  
ARGENTEX RESOURCE EXPLORATION CORPORATION**

April 19, 1982

G.M. Hogg & Associates Ltd.,  
28 Thompson Avenue,  
Toronto, Ontario M8Z 3T3



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SUMMARY

During July and August, 1981, Argentex Resource Exploration Corporation completed magnetic and VLF-EM geophysical surveying over part of their mining property located in Price and Fripp Townships, District of Cochrane, Ontario. The property consists of 45 contiguous, unpatented mining claims, 26 of which were covered by this geophysical survey,

During 1981 lead and zinc sulphide mineralization, associated with pyritic iron formation, was located in the property area. This mineralization, though locally fracture-controlled, appears to be of syngenetic origin. Argentex sampling in the prospect location indicated a 25 foot width of the mineralized zone to grade approximately 3 percent Zn, 1 percent Pb, 0.01 percent Cu, and 0.22 oz. Ag/ton. This location is geophysically anomalous, but more strongly anomalous conditions exist in the immediate vicinity and these are of unknown source.

Magnetic and VLF-EM surveying was completed over a 27.8 mile grid area, involving magnetic and VLF-EM readings on approximately 1,200 stations. This work indicates the area to be structurally complex, and to contain a number of strong conducting zones of good length with associated magnetic anomalies. Further evaluation of the property is warranted.

### INTRODUCTION

During the period July 20, 1981 to August 30, 1981, magnetic and V.L.F. electromagnetic surveys were completed over a group of twenty-six unpatented mining claims held by Argentex Resource Exploration Corporation. These claims lie in Price and Fripp Townships of the District of Cochrane, Ontario. Since most of the claims lie within Price Township, the property is referred to as the Price Township property. The general location of the claim group is shown in Figure 1.

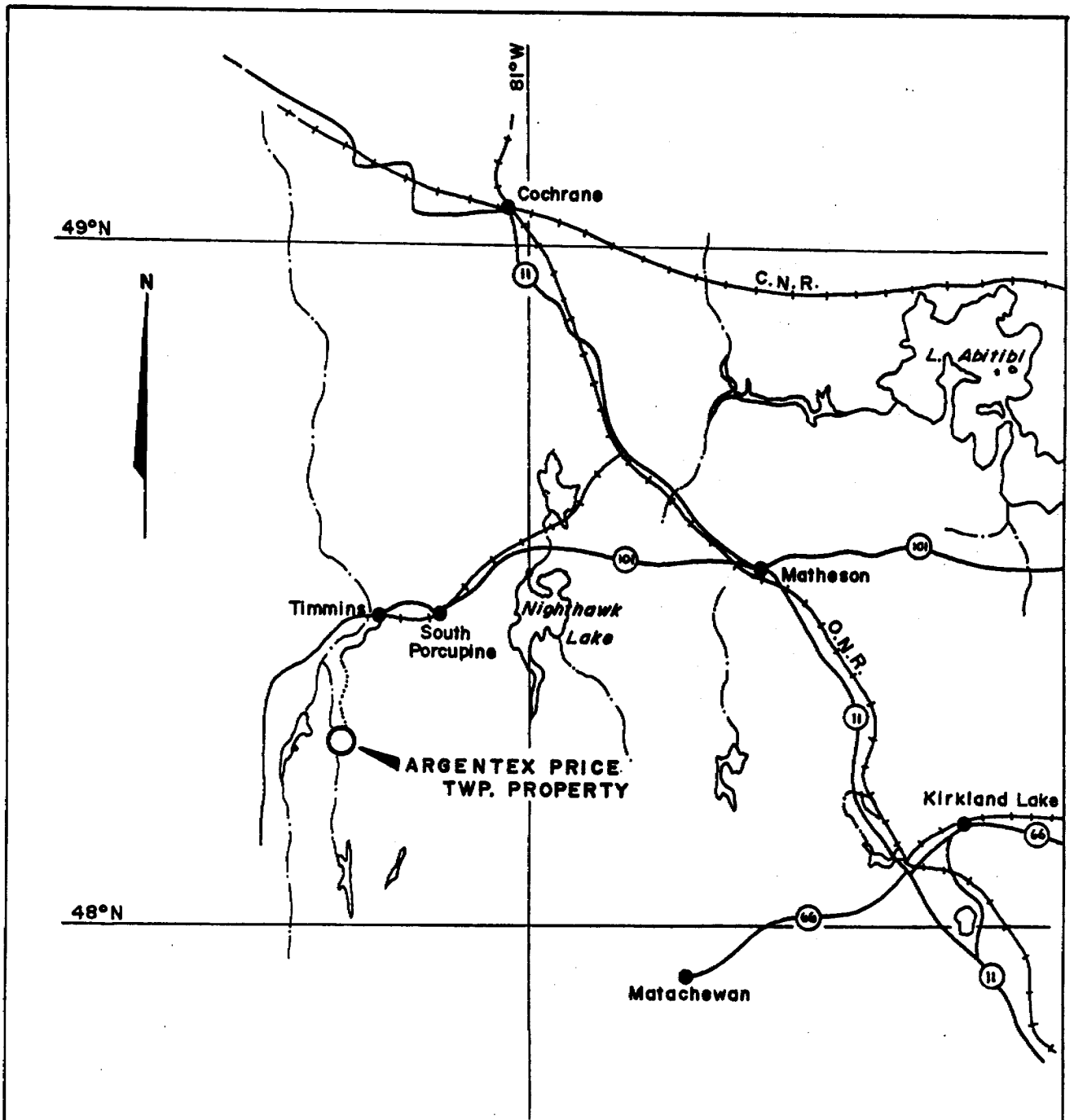
The property area is located approximately 15 miles south of the City of Timmins, and is accessible via six miles of bush road which extends south into Price Township from the gravel road between Timmins and Wawaitin Falls. This access road follows the east side of the Grassy River, and is suitable for the passage of four-wheel drive vehicles during summer months.

The area is well-wooded, and of low to moderate relief. The east bank of the Grassy River, which extends through the west part of the property is marked by a sharp rise of about 100 feet. An Ontario Hydro transmission line crosses the northern part of Price Township, and infrastructure suitable for mining operations exists in Timmins. Adequate supplies of water and timber for mining purposes are available in the property vicinity.

### LAND TENURE, OWNERSHIP

The Argentex property in Price and the extreme northern part of Fripp Townships includes a total of 45 contiguous, unpatented mining claims. Ownership is registered in the name of Argentex Resource Exploration Corporation, Suite 500, 67 Richmond Street West, Toronto, Ontario (M5H 1Z5).

Claim locations are shown in Figure 2. Also indicated in this plan are the claims on which geophysical surveys were completed during the past year, and to which this report is relevant.

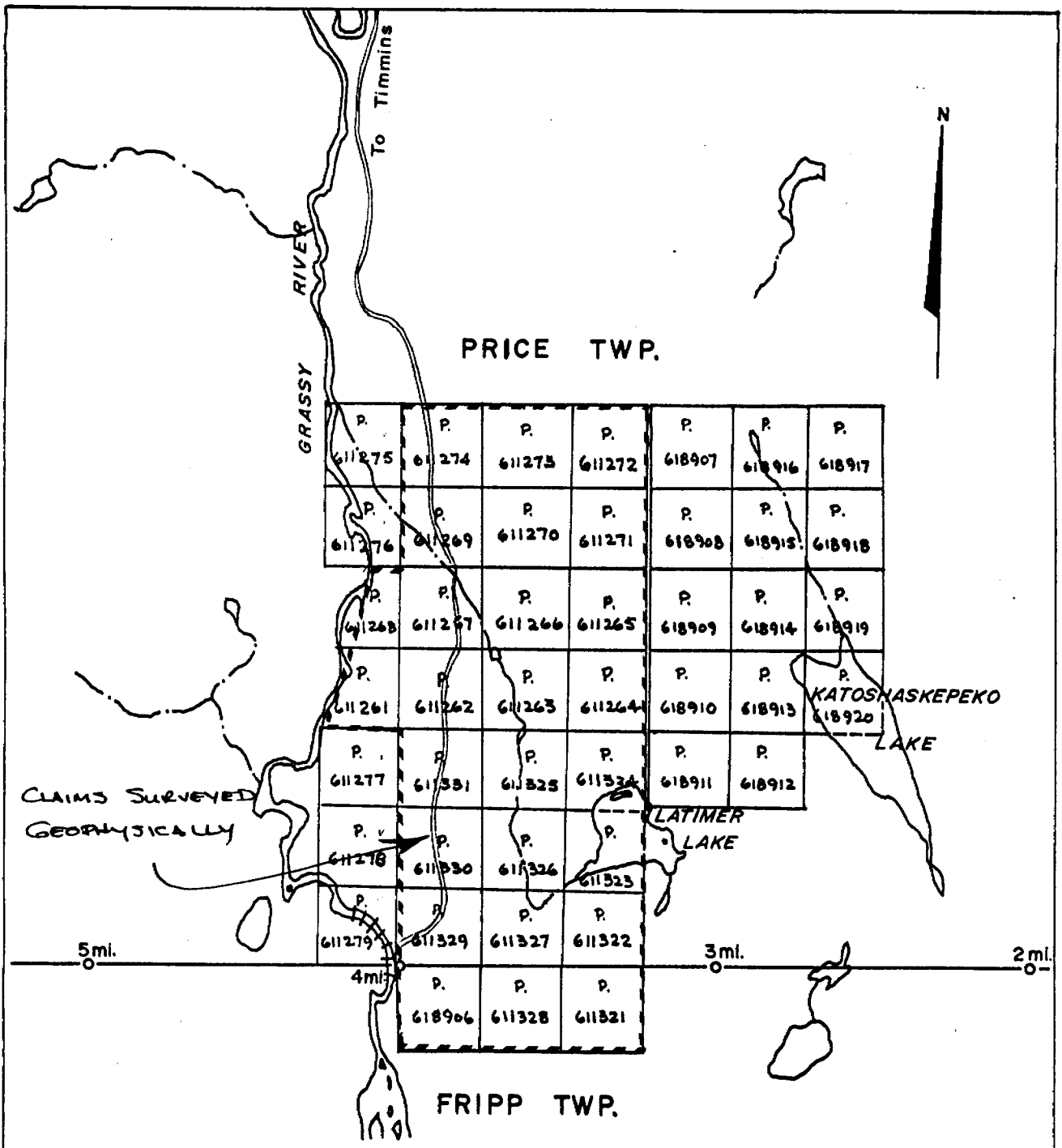


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LOCATION PLAN OF THE PRICE TWP. PROPERTY  
 OF ARGENTEX RESOURCE EXPLORATION CORP.,  
 DISTRICT OF COCHRANE, ONTARIO

SCALE: 1" = 16 mi.

FIGURE 1



G.M.HOGG & ASSOCIATES LTD.

CLAIM LOCATION PLAN OF THE PRICE TWP.  
PROPERTY OF ARGENTEX RESOURCE EXPL.  
CORP, DISTRICT OF COCHRANE, ONTARIO.

SCALE: 1" = 1/2mi.

FIGURE 2

These claims may be listed as follows:

<u>Claim No.</u>	<u>Township</u>
P. 611321	Fripp
P. 611322	Price
P. 611323	"
P. 611324	"
P. 611325	"
P. 611326	"
P. 611327	"
P. 611328	Fripp
P. 611329	Price
P. 611330	"
P. 611331	"
P. 611261	"
P. 611262	"
P. 611263	"
P. 611264	"
P. 611265	"
P. 611266	"
P. 611267	"
P. 611268	"
P. 611269	"
P. 611270	"
P. 611271	"
P. 611272	"
P. 611273	"
P. 611274	"
P. 618906	Fripp

Total: 26 mining claims (approx. 1,040 acres)

HISTORY OF PROPERTY:

The area was first prospected for gold in the early 1900's, and some trenching and pitting was completed on pyritic zones during ensuing years. Records of this early work are very poor, but some copper and gold values of interest were reported from within the present Argentex claim area. In 1960 O'Leary Malartic Mines Ltd. held claims in the area, and completed some self potential and electromagnetic surveying thereon. The results were inconclusive, and no discoveries of consequence resulted.

During 1981 Mr. H. Hanson prospected the area, and located some angular float containing heavy pyrite, sphalerite and galena in what is now the south-central part of the property. Subsequent prospecting and trenching located

an occurrence of mineralized iron formation, which may have been the source of the float, at about 6+00E on Line 16+00N of the present geophysical grid. The claim area as presently defined was then acquired by Argentex Resource Exploration Corporation, and linecutting and geophysical surveying undertaken during 1981.

#### GENERAL GEOLOGY

As shown in Figure 3, the Price Township area is wholly underlain by Archean rocks, lying to the south of the Porcupine-Destor "Break". The Argentex-Price property itself is situated on a metavolcanic-metasediment belt which extends in a northwesterly direction through McArthur, Fripp, Price and Thorneloe Townships. Granitic rocks in batholithic proportions occur to the northeast and southwest of this belt.

Within the property the metasedimentary units include iron formation, graywacke and argillites. Volcanic units include andesitic and felsic rocks, both as flows and fragmentals. Basic to ultrabasic rocks, granite and diabase exist as small intrusive masses within the metasediments and metavolcanics.












Faulting of a northern orientation is interpreted to exist in the area. Notably this includes a system paralleling the Grassy River, and another through Katoshaskepeko Lake, both passing through the Argentex property area. Ultrabasic material, believed in sill-like form, occurs associated with the Katoshaskepeko Lake fault zone.







Geological data is not plentiful on the area, the most recent published map sheet being O.D.M. Preliminary Map P. 941 (1974). Data thereon has been largely taken from the earlier O.D.M. Preliminary Map of Price Township, P.30 (1957). These maps indicate the property area to be underlain by a granitic mass along the west, and extending into the north central part of the claim area. It is intrusive into a metavolcanic/metasediment complex





**LEGEND**

-  16 Diabase: dikes.
-  10a Quartz porphyry, quartz-feldspar porphyry, feldspar porphyry, granophyre, felsited
-  10b Trondhjemite, granodiorite, quartz monzonite: simple batholiths and stocks
-  10c Trondhjemite, granodiorite, quartz monzonite, quartz diorite, apilite, pegmatite, migmatite: complex batholiths.
-  8 Gabbro, diorite, lamprophyre.
-  7 Peridotite, dunite, pyroxenite, serpentinite
-  6 Conglomerate, greywacke, siltstone, slate, argillite
-  5 Greywacke, siltstone, slate, argillite and minor pebble conglomerate
- FELSIC METAVOLCANICS**
-  2 Unsubdivided.
-  2a Pyroclastic rocks.
-  2b Flows.

- INTERMEDIATE AND MAFIC METAVOLCANICS**
-  1 Unsubdivided.
-  1a Intermediate flows.
-  1b Intermediate pyroclastic rocks.
-  1c Mafic flows and pyroclastic rocks.
-  IF Iron formation and ferruginous chert (occurs as a member of stratigraphic units 1, 2, 4, and 5).
-  Fault.

From O.D.M. Geol.  
Compilation Map  
No. 2205

**GENERAL GEOLOGY OF THE PRICE TOWNSHIP REGION**

SCALE: 1" = 4mi.

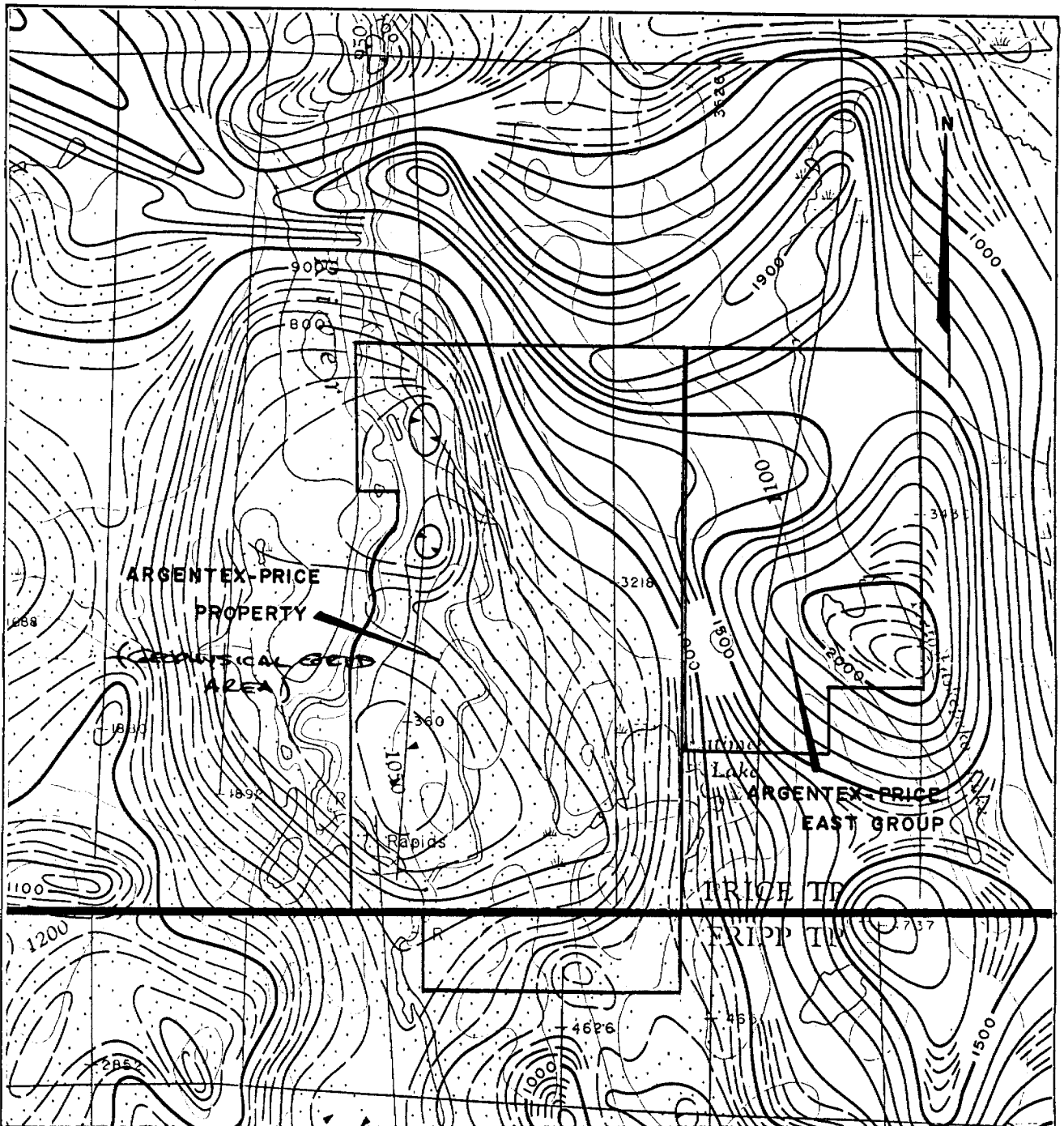
FIGURE 3

which includes iron formation, amphibolitic volcanics and possibly diorite, and lesser metasediments. The aeromagnetics of the property area, included herein as Figure 4, indicate the granitic intrusive as an elliptical mass as a "low" lying along the west side of the main claim area.

The iron formation of the property area is magnetite-rich, but also contains considerable pyrite. The pyritic mineralization appears closely associated with amphibolitic bands within the iron formation, probably representing a tuffaceous, sulphide-rich facies of the iron formation. Nowhere in the area does the iron formation appear sufficiently concentrated to be of potential importance as a source of iron ore. It appears that the earlier workers in the area were attracted by the strong pyritic mineralization, and sank a number of pits and trenches on such zones. There is reference to the occurrence of some chalcopyrite in these openings, and some gold, but the presence of galena and sphalerite mineralization is not mentioned.

The Argentex lead-zinc-silver prospect, discovered during 1981, is located at about 17+00N, 6+25E on the Argentex grid (see Figure 5). It consists of a twenty-five foot thickness of siliceous iron formation which is folded and fractured, and mineralized with disseminated pyrite, galena, sphalerite, minor chalcopyrite, and magnetite. Minor quartz veining and syenitic dikelets are present within the mineralized zone, but are of limited distribution. Much of the sulphide mineralization appears to be fracture-controlled, but this is thought to be a redistribution effect. The formational affinity of the pyrite mineralization, and the presence of nodular concentrations of sphalerite suggest that the mineralization may be of syngenetic origin.

Sampling of the zone has been completed, but because of the erratic nature of the mineralization the results may not be truly representative. Bulk sampling of the trench area will be required to establish assay values more accurately. Representative samples taken by Argentex across the 25 foot exposed zone averaged 3.21 percent Zn, 1.25 percent Pb, 0.01 percent Cu, and 0.22 oz. Ag/ton.



From Map 8453G, Dept. of Energy,  
Mines & Resources, Ottawa, 1970

- ISOMAGNETIC LINES (total field)
- 500 gammas .....
  - 100 gammas .....
  - 20 gammas .....
  - 10 gammas .....
  - Magnetic depression .....
  - Flight lines .....
  - Flight altitude 500 feet above ground level

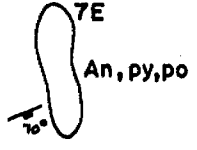
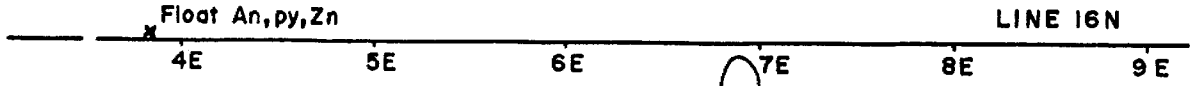
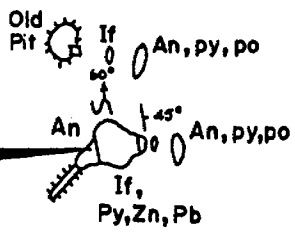
**AEROMAGNETIC PLAN OF THE  
PRICE TOWNSHIP PROPERTY AREA**

SCALE: 1" = 1/2 ml.

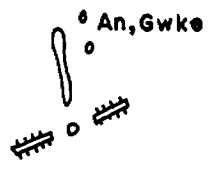
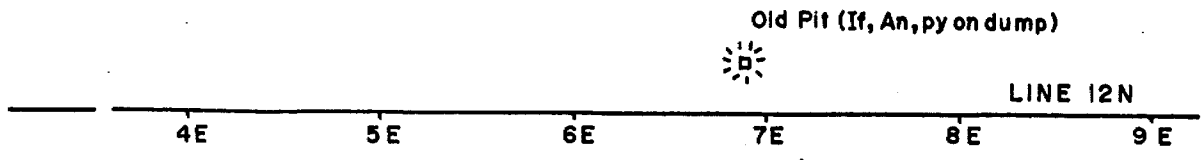
FIGURE 4



TRENCHED AND STRIPPED PROSPECT AREA



Low Ground



LEGEND

- An - Int. Volc. amphibolitic
- If - Iron Formation
- py - Dissem. Pyrite
- po - Dissem. Pyrrhotite
- Zn - Dissem. Sphalerite
- Pb - Dissem. Galena

G. M. HOGG & ASSOCIATES LTD.  
 GEOLOGICAL SKETCH OF THE  
 ARGENTEX-PRICE PROSPECT AREA

APPROX. SCALE: 1" = 100'      FIGURE 5

GEOPHYSICAL SURVEYS

As noted, the area has been surveyed by aerogeophysical methods on a reconnaissance basis. The results of this work (Map 8453G, Dept. of Energy Mines & Resources, Ottawa, 1970) are shown herein as Figure 4.

Attracted by pyritic mineralization, and reported gold and copper values, O'Leary Malartic Mines Ltd. performed a Self Potential geophysical survey, and limited Electromagnetic surveying over the property area during 1963-64. The results of this work were inconclusive, and no follow-up work was done.

During 1981, in view of the discovery of lead-zinc-silver mineralization on the property, Argentex Resource Exploration Corporation undertook to perform Magnetic and VLF-EM surveys over the main claim group. From July 20, 1981 to August 30, 1981, 27.8 miles of line were cut and surveyed geophysically by Argentex personnel under the supervision of Mr. G.C. Kasner.

The grid area consists of a 9,600 ft. base line (NS), from which east-west cross lines were cut at 400 foot intervals. Stations at 100 foot intervals were surveyed by magnetic and VLF-EM methods, with closure to 50 foot intervals in some anomalous areas.

A Geometric Proton Precession magnetometer was used for the magnetic surveying, with a base station located at 66+00N on the Base Line checked every four hours for diurnal variation during the survey period. No significant diurnal variation was noted however, and no correction was applied to the field readings.

A Phoenix VLF-2 electromagnetic unit was utilized in the VLF-EM survey, with degrees to null and field strength being recorded at each station. Readings using signals from Annapolis, Md. (21.4 kHz), and Cutler, Me. (17.8 kHz) were taken throughout, but only those derived from the Annapolis

source have been plotted on the accompanying plan (Map No. 1, in pocket).

In the course of this geophysical surveying approximately 1,170 VLF-EM readings were taken, and 1,200 magnetic readings, over the 27.8 mile grid.

#### RESULTS OF GEOPHYSICAL SURVEYS

##### MAGNETIC SURVEY:

The contoured results of the magnetic survey are shown on Map No. 2 (in pocket). Three main features may be noted, namely (1) the arcuate area of high magnetics at the north end of the Grid area; (2) the sinuous zone of high magnetics just east of the Base line from 0+00 to 48+00N; and (3) the persistent north-trending "low" which carries over almost the entire Grid area, and lies about 1,200 feet east of the base line.

If it is assumed that the more extensive areas of high magnetic readings are due to the presence of magnetite-rich beds within the iron formation sequence, and making allowances for magnetic irregularities caused by diabase dikes and granitic intrusive material, an extensive major fold structure can be interpreted covering most of the Grid area. It appears that the iron formation unit enters the northwest extremity of the Grid area on a northwest strike; swings to the west, and thence to the south in the vicinity of 10+00E on line 96+00N; extends in a southerly direction along the base line to the 0+00 point; and then swings to a northwesterly strike towards the Grassy River. The persistent "low" would thus define the axis of a large anticlinal fold, plunging about 60°N, and overturned to the west. Limited geological data on the property suggests that a nose of intrusive granite exists in the 52+00N to 80+00N area of the base line, disrupting the continuity of the iron formation in this area

The iron formation unit appears to consist of multiple oxide-rich bands, probably separated by pyritic amphibolite-rich material. In places two

main oxide-rich strata seem identifiable. Minor folding within the iron formation is intense.

Considering the fact that, as far as is known, galena, sphalerite and minor chalcopyrite mineralization is closely associated with the iron formation, its distribution is of very great significance in the exploration of the property. Interpretively, folded iron formation along the limbs of the postulated fold structure would appear to offer the best chance for the occurrence of strong sulphide concentration.

VLF-EM SURVEY:

The VLF-EM survey results (Annapolis, Md., signal) are plotted on Map No. 1 (in pocket). This survey method is a very sensitive one, often responding to overburden or groundwater conditions. However, it is also responsive to disseminations of conductive material in bedrock, such as pyrite or graphite. As such, and considering the nature of the mineralized material known to exist in the Argentex prospect area, the method is thought well-suited to the definition of sulphide-rich zones within the iron formation sequence.

In reference to Map No. 1, a conductive response is apparent in the Argentex prospect location (north of Line 16+00 N at approximately 6+50E). Multiple conductivity is indicated in the area, with the strongest response lying to the west of the prospect exposure. Coincident magnetic activity is strong in the prospect location, and in the immediate vicinity.

Numerous weak to moderate VLF-EM responses are indicated throughout the Grid area. However, the strongest and more continuous zones of conductivity are magnetic-associated, and follow in general the fold trace previously described. These include the very strong and essentially continuous conductor occurring immediately east of and along the base line over its entire length; the northwesterly-trending conductor lying just west of the base line from 8+00S to 16+00N; and the north to northwesterly-

trending conductive system running northward from Latimer Lake to the vicinity of 8+00E on Line 96+00N. Sulphide mineralization, mainly pyritic, associated with iron formation could well be the source of this conductivity, and its further evaluation is certainly warranted.

#### CONCLUSIONS

The south grid area (12+00S to 36+00N; 10+00E to 10+00W) is highly complex structurally, and is known to contain lead-zinc-silver mineralization in interesting amounts. Detailed geophysical surveying (magnetic, electromagnetic) on 200 foot line spacing should be completed in this area, and followed up by trenching and drilling as required. An east-west drill section across the prospect area could be undertaken immediately, but it would be best to wait until a complete geophysical picture is available.

Geochemical surveying (soil) is recommended for the balance of the grid area at this time. Active areas so defined should then be geophysically surveyed in detail, and tested by trenching or drilling as required.

The claim area to the east of the present grid is clearly geophysically active, and is geologically favourable for the occurrence of sulphide mineralization of the type noted in the Argentex prospect location. This area should be surveyed geophysically by magnetic and VLF-EM methods.

Respectfully Submitted,

  
G.M. Hogg, P. Eng.






CERTIFICATE OF QUALIFICATION

I, Glen M. Hogg, of the City of Toronto, County of York, in the Province of Ontario, Canada, do hereby certify that:

1. I am a Consulting Engineer, principal of the firm of G.M. Hogg & Associates Ltd., with an office located at 28 Thompson Avenue, Toronto, Ontario.
2. I am a member of the Association of Professional Engineers of Ontario, a registered Consulting Engineer with that organization, and designated as a Specialist in the Field of Geological Engineering, Classes of Exploration and Development, as per Regulation 59/73 of the Professional Engineers Act, R.S.O. 1970.
3. I am a graduate of Queen's University of Kingston, Ontario, having received the degree of Master of Science in Geological Sciences from the Faculty of Applied Science in 1952. I have since practised professionally in the field of mineral exploration and development.
4. I have knowledge of, and experience in the region in which the Argentex Price property is located.
5. In addition to my personal knowledge of the area, I have made use of the records of the Ministry of Natural Resources of Ontario, and Argentex Resource Exploration Corporation in the preparation of this report. I examined the property relevant to this study on August 26, 1981.
6. I have no interest, direct or indirect, in the property on which this report is written, nor do I expect to receive any.

Dated this 19 day of April, 1982

  
G.M. Hogg, P.Eng



APPENDIX I

Ontario Ministry of Natural Resources  
Technical Data Statement



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) Magnetic, V.L.F. Electromagnetic
Township or Area Price and Fripp Twps., Dist. of Cochrane
Claim Holder(s) Argentex Resource Exploration Corporation
Suite 500- 67 Richmond St. West, Toronto,
Survey Company Argentex Resource Expl. Corp. Ont.
Author of Report G.M. Hogg, P.Eng.
Address of Author 28 Thompson Ave., Toronto, Ont. M8Z 3T3
Covering Dates of Survey July 20, 1981 to August 30, 1981.
(linecutting to office)
Total Miles of Line Cut 27.8 miles

MINING CLAIMS TRAVERSED
List numerically

Table with 2 columns: Prefix (P.), Number (611321 to 611270). Includes a vertical note on the right: 'If space insufficient, attach list'.

SPECIAL PROVISIONS
CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.
ENTER 20 days for each additional survey using same grid.

Table with 2 columns: Method (Geophysical, Geological, Geochemical) and Days per claim (40, 20).

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

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

DATE: April 19, 1981 SIGNATURE: [Signature]
Author of Report or Agent

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

Previous Surveys

Table with 4 columns: File No., Type, Date, Claim Holder.

See Attached list for balance (5)

TOTAL CLAIMS 26

OFFICE USE ONLY

**GEOPHYSICAL TECHNICAL DATA**

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

Number of Stations 1,200 Number of Readings Mag. 1,200; VLF 1,170

Station interval 100 feet Line spacing 400 feet

Profile scale \_\_\_\_\_

Contour interval \_\_\_\_\_

**MAGNETIC**

Instrument Geometric Proton Precession Magnetometer

Accuracy – Scale constant 1 gamma

Diurnal correction method No significant change

Base Station check-in interval (hours) 4

Base Station location and value 66+00 N on Base Line. Value: 983 gammas

**ELECTROMAGNETIC**

Instrument Phoenix VLF-2 Unit

Coil configuration \_\_\_\_\_

Coil separation infinite

Accuracy + or - 1 degree

Method:  Fixed transmitter  Shoot back  In line  Parallel line

Frequency 21.4 kHz (Annapolis, Md.) ; also 17.8 kHz (Cutler, Me.)  
(specify V.L.F. station)

Parameters measured Orientation and magnitude of the major and minor axes of the ellipse of polarization.

**VITY**

Instrument \_\_\_\_\_

Scale constant \_\_\_\_\_

Corrections made \_\_\_\_\_

If space insufficient, attach list

**INDUCED POLARIZATION**

MINING CLAIMS TRAVERSED List numerically	Continued (prefix)	(number)																		
P.		611271																		
P.		611272																		
P.		611273																		
P.		611274																		
P.		618906																		

Electrode spacing \_\_\_\_\_

Type of electrode \_\_\_\_\_

APPENDIX II

Some Sources of Information  
on the Property

Listing of Sources of Information  
on the Price Township Area.

The Porcupine Gold Area; O.D.M. Vol. 33, Pt.2. A.G. Burrows, 1925

Geology of McArthur, Bartlett, Douglas and Geikie Townships,  
District of Timiskaming; O.D.M. Vol. 35, Pt.6. E.L. Bruce, 1926

Geology of Price Township; O.D.M. Prelim. Map P.30, 1957

Geology of Ogden, Deloro and Shaw Townships, District of  
Cochrane; OFR 5012. H.D. Carlson, 1967

Timmins-Kirkland Lake Compilation Sheet; O.D.M. Map 2205, 1973

Aeromagnetic Survey Sheet; Geol. Survey of Canada, Map 8453G, 1970

Timmins Area; O.D.M. Prelim. Map P.941, 1974

O'Leary Malartic Mines Ltd. Self Potential Survey, Report and Plan.  
O.D.M. Assessment Files, 1964.

Records of Argentex Resource Exploration Corp., 1981

APPENDIX III

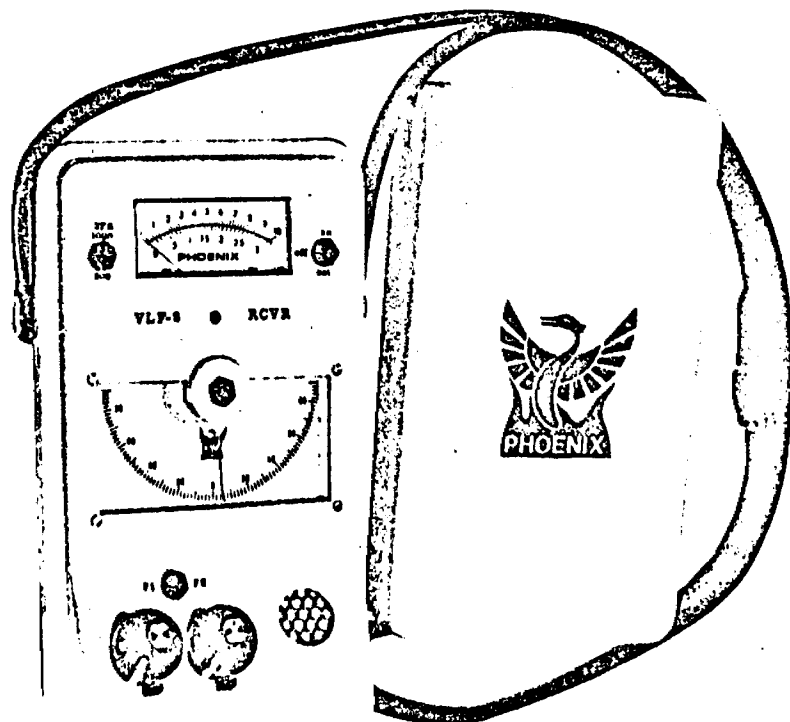
Specifications on Phoenix

VLF-2 Unit

# VLF-2

## Electromagnetic Unit

- Lightweight, low battery drain, rugged, simple to operate
- Two independent channels
- Each channel may select any station between 14.0 and 29.9 kHz
- Single crystal used for all frequencies
- Locking clinometer provides tilt-angle memory
- Superheterodyne detection and digital filtering provide extremely high selectivity and noise rejection



Military and time standard VLF transmitters are distributed over the world. These stations are used for geophysical EM surveying thus eliminating the need for a local transmitter and permitting one-man operation.

To ensure that a station excites the prospective conductor, two stations at approximately right angles are used during a survey (see data on back).

The choice of 160 frequencies in the range 14.0 to 29.9 kHz permits the use of a local EM transmitter when no suitable regular VLF station is available.



## PHOENIX GEOPHYSICS LIMITED

Geophysical Consulting and Contracting, Instrument Manufacture, Sale and Lease.

Head Office: 200 Yorkland Blvd. Willowdale, Ont., Canada M2J 1R5. Tel: (416) 493-6350  
310 - 885 Dunsmuir St. Vancouver, B.C., Canada V6C 1N5. Tel: (604) 684-2285  
4690 Ironton St. Denver, Colorado, U.S.A. 80239. Tel: (303) 373-0332



# Specifications

- Parameters Measured** : Orientation and magnitude of the major and minor axes of the ellipse of polarization.
- Frequency Selection, Front Panel** : Dual channel, front panel selectable (F1 or F2) each with independent precision 10-turn dial gain control.
- Frequency Selection, Internal** : F1 and F2 can be selected by internal switches within the range 14.0 to 29.9 kHz in 100 Hz increments.
- Detection And Filtering** : Superheterodyne detection and digital filtering provide a much narrower bandwidth and thus greater rejection of interfering stations and 60 cycle noise than conventional receivers.
- Meter Display** : 2 ranges: 0 to 300 or 0 to 1000. Background is typically set at 100. Meter is also used as dip angle null indicator and battery test.
- Audio** : Crystal speaker. 2500 Hz used as null indicator.
- Clinometer** :  $\pm 90^\circ$ ,  $+0.5^\circ$  resolution. Normal locking, push button release.
- Battery** : One standard 9v transistor radio battery. Average life expectancy - 1 to 3 months (battery drain is 3 mA)
- Temperature Range** :  $-40^\circ$  to  $+60^\circ$  C.
- Dimensions** : 8 x 22 x 14 cm (3 x 9 x 6 inches).
- Weight** : 850 grams (1.9 pounds).

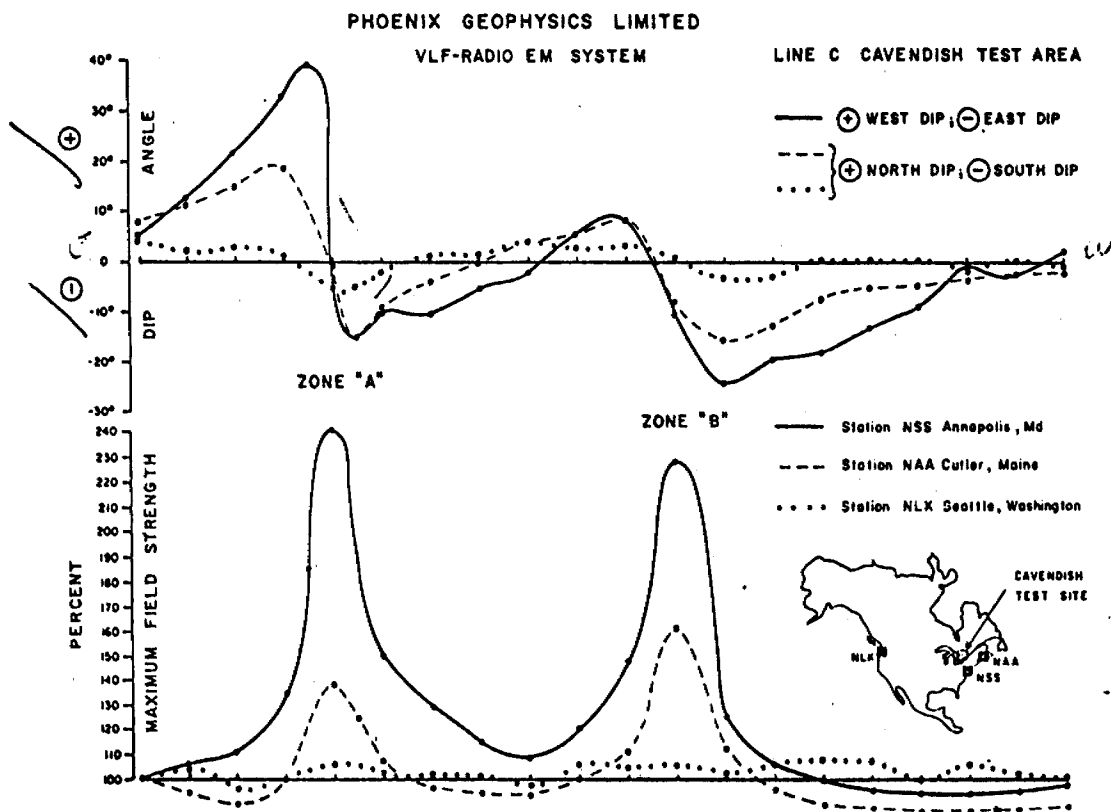
All of the established stations may be selected, or alternatively, a local VLF transmitter may be used which transmits at any frequency in the range 14.0 to 29.9 kHz.

VLF Station	Frequency (kHz)
Bordeaux, France	15.1
Odessa (Black Sea)	15.6
Rugby, U.K.	16.0
Moscow, U.S.S.R.	17.1
Yosamal, Japan	17.4
Hegaland, Norway	17.6
Cutler, Maine	17.8
Seattle, Washington	18.6
Malabar, Java	19.0
Oxford, U.K.	19.6
Paris, France	20.7
Annapolis, Maryland	21.4
Northwest Cape, Australia	22.3
Laulualei, Hawaii	23.4
Buenos Aires, Argentina	23.6
Rome, Italy	27.2

## Field Data

Results below illustrate the need for using two orthogonal stations when the strike of the prospective conductor is not well-known. The dip angle and amplitude data measured using station NLK in Seattle, Washington, show only a very weak anomaly associated with the two conductive sulphide zones at Cavendish, Ontario.

The results obtained using Cutler, Maine reveal a more prominent anomaly, but the best response was obtained using Annapolis, Maryland since the station lies almost due south and the transmitted electromagnetic field is thus maximum-coupled with the North-South trending conductors.





42A06SW0069 2.4709 FRIPP

900

102

1983 10 14

2,4709

Mr. William L. Good  
Mining Recorder  
Ministry of Natural Resources  
60 Wilson Avenue  
Timmins, Ontario  
P4N 2S7

Dear Sir:

RE: Geophysical (Electromagnetic and Magnetometer)  
survey on mining claims P 611321 et al in the  
Townships of Price and Fripp

---

The Geophysical (Electromagnetic and Magnetometer) survey  
assessment work credits as listed with my Notice of Intent  
dated August 25, 1983 have been approved as of the above  
date.

Please inform the recorded holder of these mining claims  
and so indicate on your records.

Yours very truly,

E.F. Anderson  
Director  
Land Management Branch

Whitney Block, Room 6643  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: (416)965-1380

D. Kinvig:mc

Encl.

cc: Argentex Resources Exploration Corp.  
Suite 500  
67 Richmond Street West  
Toronto, Ontario  
M5H 1Z5

cc: Resident Geologist  
Timmins, Ontario

Recorded Holder	ARGENTEX RESOURCES EXPLORATION CORPORATION
Township or Area	PRICE AND FRIP TOWNSHIPS

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical _____ days Electromagnetic _____ 40 days Magnetometer _____ 20 days Radiometric _____ days Induced polarization _____ days Other _____ days	P 611261 to 67 inclusive 611269 to 74 inclusive 611321-22 611324 to 31 inclusive 618906
Section 77 (19) See "Mining Claims Assessed" column	
Geological _____ days	
Geochemical _____ days	
Man days <input type="checkbox"/> Airborne <input type="checkbox"/> Special provision <input checked="" type="checkbox"/> Ground <input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Credits have been reduced because of partial coverage of claims.  <input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

<u>20 DAYS ELECTROMAGNETIC</u> <u>10 DAYS MAGNETOMETER</u>  P 611268 611323
--

No credits have been allowed for the following mining claims

<input type="checkbox"/> not sufficiently covered by the survey	<input type="checkbox"/> Insufficient technical data filed
---	--



**Action Memo**

Time 2:00 PM Date 7 9 83

To J. W. H.

From (Name and Title) Terry Bottrill \*

C.N. No. Area Code Telephone No. Ext. Message Taken By  
863-0168 27c

Phoned  Please Call  Will Call Back  Waiting in Person  Will Return  
 On  Returned  Your Call  Wishes Appointment  Was Here  
 Hold

- File
- Draft Reply For My Signature
- Provide More Details
- For Your Information
- Type Draft
- For Your Approval and Signature
- Keep Me Informed
- Per Discussion
- Type Final
- Circulate, Initial and Return
- Take Appropriate Action
- Per Your Request
- Make Copies
- Return With Comments
- Note and See Me
- Returned With Thanks
- Please Answer
- Investigate and Report
- Note and Return

Comments Ray \* Samim Canada  
Held final letter for  
2 more weeks.

Fred



Ministry of  
Natural  
Resources

Sept 30/83

~~Sept 16/83~~

Your file: 102

Our file: 2.4709

1983 08 25

Mr. William L. Good  
Mining Recorder  
Ministry of Natural Resources  
60 Wilson Avenue  
Timmins, Ontario  
P4N 2S7

Dear Sir:

Enclosed are two copies of a Notice of Intent with statements listing a reduced rate of assessment work credits to be allowed for a technical survey. Please forward one copy to the recorded holder of the claims and retain the other. In approximately fifteen days from the above date, a final letter of approval of these credits will be sent to you. On receipt of the approval letter, you may then change the work entries on the claim record sheets.

For further information, if required, please contact Mr. F.W. Matthews at 416/965-1380.

Yours very truly,

E.F. Anderson  
Director  
Land Management Branch

Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: 416/965-1316

*AK* D. Kinvig:mc

Encls:

cc: Argentex Resources Exploration Corp.  
Suite 500  
67 Richmond Street West  
Toronto, Ontario  
M5H 1Z5

cc: Mr. G.H. Ferguson  
Mining & Lands Commissioner  
845 Toronto, Ontario



Ministry of  
Natural  
Resources

Ontario

Notice of Intent  
for Technical Reports

1983 08 25

2.4709/102

An examination of your survey report indicates that the requirements of The Ontario Mining Act have not been fully met to warrant maximum assessment work credits. This notice is merely a warning that you will not be allowed the number of assessment work days credits that you expected and also that in approximately 15 days from the above date, the mining recorder will be authorized to change the entries on his record sheets to agree with the enclosed statement. Please note that until such time as the recorder actually changes the entry on the record sheet, the status of the claim remains unchanged.

If you are of the opinion that these changes by the mining recorder will jeopardize your claims, you may during the next fifteen days apply to the Mining and Lands Commissioner for an extension of time. Abstracts should be sent with your application.

If the reduced rate of credits does not jeopardize the status of the claims then you need not seek relief from the Mining and Lands Commissioner and this Notice of Intent may be disregarded.

If your survey was submitted and assessed under the "Special Provision-Performance and Coverage" method and you are of the opinion that a re-appraisal under the "Man-days" method would result in the approval of a greater number of days credit per claim, you may, within the said fifteen day period, submit assessment work breakdowns listing the employees names, addresses and the dates and hours they worked. The new work breakdowns should be submitted direct to the Lands Management Branch, Toronto. The report will be re-assessed and a new statement of credits based on actual days worked will be issued.



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

*Traps*

Instructions: - Please type or print.  
- If number of mining claims traversed exceeds space on this form, attach a list.  
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.  
- Do not use shaded areas below.

**The Mining Act**

Type of Survey(s) VLF + Mag Township or Area Parry + Fris  
 Claim Holder(s) Argentex Resources Exploration Corp. Prospector's Licence No. T 1092  
 Address Suite 500 67 Richmond St. W Toronto M5H 1Z5  
 Survey Company Argentex Personnel Date of Survey (from & to) 20 07 81 Total Miles of line Cut 27.8  
 Name and Address of Author (of Geo-Technical report) G. M. Hoggan 1550c LTD 28 Thompson Ave. Toronto Ont

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	<u>40</u>
	- Magnetometer	<u>20</u>
	- Radiometric	
	- Other	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Man Days Complete reverse side and enter total(s) here	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.	Geological	
	Geochemical	
	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Prefix	Mining Claim Number	Expend. Days Cr.
P	611321	60
	611322	60
	611323	60
	611324	60
	611325	60
	611326	60
	611327	60
	611328	60
	611329	60
	611330	60
	611331	60
	611261	60
	611262	60
	611263	60
	611264	60
	611265	60
	611266	60
	611267	60
	611268	60
	611269	60
	611270	60
	611271	60
	611272	60

**RECEIVED**  
APR 20 1982  
MINING LANDS SECTION

RECEIVED  
MAR 24 1982  
AM 7 18 19 10 11 12 1 12 13 14

PORCUPINE MINING DIVISION  
RECEIVED  
MAR 26 1982  
AM 7 18 19 10 11 12 1 12 13 14 15 16

Total number of mining claims covered by this report of work: 26

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s) **RECORDED**

MAR 31 1982

Calculation of Expenditures

Total Expenditures	Receipt No. ....	Total Days Credits
\$	+ 15	=

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.

Date May 15/82 Recorded Holder or Agent (Signature) [Signature]

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
1560	Mar. 31/82	[Signature]
	Date Approved as Recorded	Branch Director / Regional Mining Recorder

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 Bill Kasner Suite 500 67 Richmond St W. Toronto Ont

Date Certified May 15/82 Certified by (Signature) [Signature]



Mar 23rd

File 2.4709

Mining Lands Comments


To: Geophysics *Mr Barlow.*

Comments

<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Wish to see again with corrections	Date <i>July 26/83</i>	Signature <i>Douglas H. Piche</i>
--	---	------------------------	-----------------------------------

To: Geology - Expenditures

Comments

<input type="checkbox"/> Approved	<input type="checkbox"/> Wish to see again with corrections	Date	Signature
-----------------------------------	---	------	-----------

To: Geochemistry

Comments

<input type="checkbox"/> Approved	<input type="checkbox"/> Wish to see again with corrections	Date	Signature <i>L.D.</i>
-----------------------------------	---	------	-----------------------

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



# ARGENTEX RESOURCE EXPLORATION CORPORATION

HEAD OFFICE  
Ste. 500, 67 Richmond St. W.  
TORONTO, Ontario M5H 1Z5  
(416) 361-0737

EXECUTIVE OFFICE  
Ste. 908, 111 Richmond Street W.  
TORONTO, Ontario M5H 2G4  
(416) 947-1465/6

<b>RECEIVED</b> Land Management Branch	
CIRCULATE	<input type="checkbox"/>
COMMENTS PLEASE	<input type="checkbox"/>
BY	
MAR 23 1983	
E. F. ANDERSON	
J. R. MORTON	
J. C. SMITH	
G. SHERMAN	
J. M. SMITH	
RETURN TO R. 8450	

March 22, 1983

Mr. E.F. Anderson  
Director  
Land Management Branch  
Ministry of Natural Resources  
Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario

Dear Mr. Anderson:

Re: Your File Numbers 2.4707 and 2.4709

We enclose the VLF-EM plans and the geophysical (Electro-Magnetic and Magnetometer) survey which were forwarded by you to us in your letters of March 1, 1983.

We enclose a copy of a letter together with the enclosures from G.M. Hogg & Associates Ltd. pertaining to your request in the aforementioned letters.

If this submission should not be sufficient would you please let me know and I will make arrangements with Mr. Hogg to provide additional data.

Yours truly,  
ARGENTEX RESOURCE EXPLORATION CORPORATION



Per: George A. Duguay, C.G.A., A.C.I.S.

Encs.  
GAD:gnp

G. M. HOGG & ASSOCIATES LTD.

THOMPSON AVENUE,  
ONTO. CANADA M8Z 3T3

TELEPHONE:  
(416) 233-3255

March 10, 1983

Mr. George Duguay,  
Argentex Resource Exploration Corp.,  
908- 111 Richmond St. West,  
Toronto, Ontario  
M5H 2G4

**RECEIVED**

**MAR 23 1983**

**MINING LANDS SECTION**

Dear George,

I called Mr. Anderson of the MNR Land Management Branch regarding the request for profiles of the Teck and Price VLF-EM data. Mr. Anderson is away, but I spoke to Mr. Arthur Barr of that department.

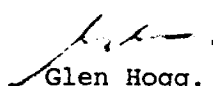
I asked him if a plan showing the actual VLF-EM values would be satisfactory - rather than plotting up profiles. He seemed to think this would be OK.

So, I have made copies of the plans of VLF-EM surveys on the two properties (3 copies of each are enclosed), including both the plot of the actual survey readings, and the plot of the filtered values. I suspect that only the latter was submitted to the reviewer in the first place, and they want a record of the actual readings.

I suggest that you send this material to the Ministry with explanation, and see what happens. It may be that someone is insisting on a regulatory detail which mentions "profiles". If they really do want profiles it is no great problem- just a drafting job.

I think the submission of these plans will solve the problem, but if not, give me a call.

Regards,

  
Glen Hogg.

1983 03 01

2.4709

Argentex Resources Exploration Corp.  
Ste. 500, 67 Richmond Street West  
Toronto, Ontario  
M5H 1Z5

Dear Sirs:

RE: Geophysical (Electromagnetic & Magnetometer)  
Survey submitted on Mining Claims P 611321  
et al in the Townships of Price & Fripp

---

Enclosed are the VLF-EM plans, in duplicate, for the  
above mentioned survey. Please have G.M. Hogg and  
Associates Limited profile these maps and return them  
to this office.

For further information, please contact Mr. F.W. Matthews  
at 416/965-1380.

Yours very truly,

E.F. Anderson  
Director  
Land Management Branch

Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario  
M7A 1W3

A. Barr:sc

Encls:

cc: Mining Recorder  
Timmins, Ontario

*Mr Hogg called  
march 9th will  
put the new data  
on the maps A.S.A.P.*



Mining Lands Comments


To: Geophysics *Mr. Barlow*

Comments

*- VLF map needs profing*

Approved     Wish to see again with corrections

Date: *Jan 3/82*    Signature: *[Signature]*

To: Geology - Expenditures

Comments

Approved     Wish to see again with corrections

Date:    Signature:

To: Geochemistry

Comments

*LD*

Approved     Wish to see again with corrections

Date:    Signature:

1982 04 22

2.4709

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

Dear Sir:

We have received reports and maps for a Geophysical (Electromagnetic and Magnetometer) Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims P 611321 et al, in the Townships of Price and Fripp.

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

Yours very truly,

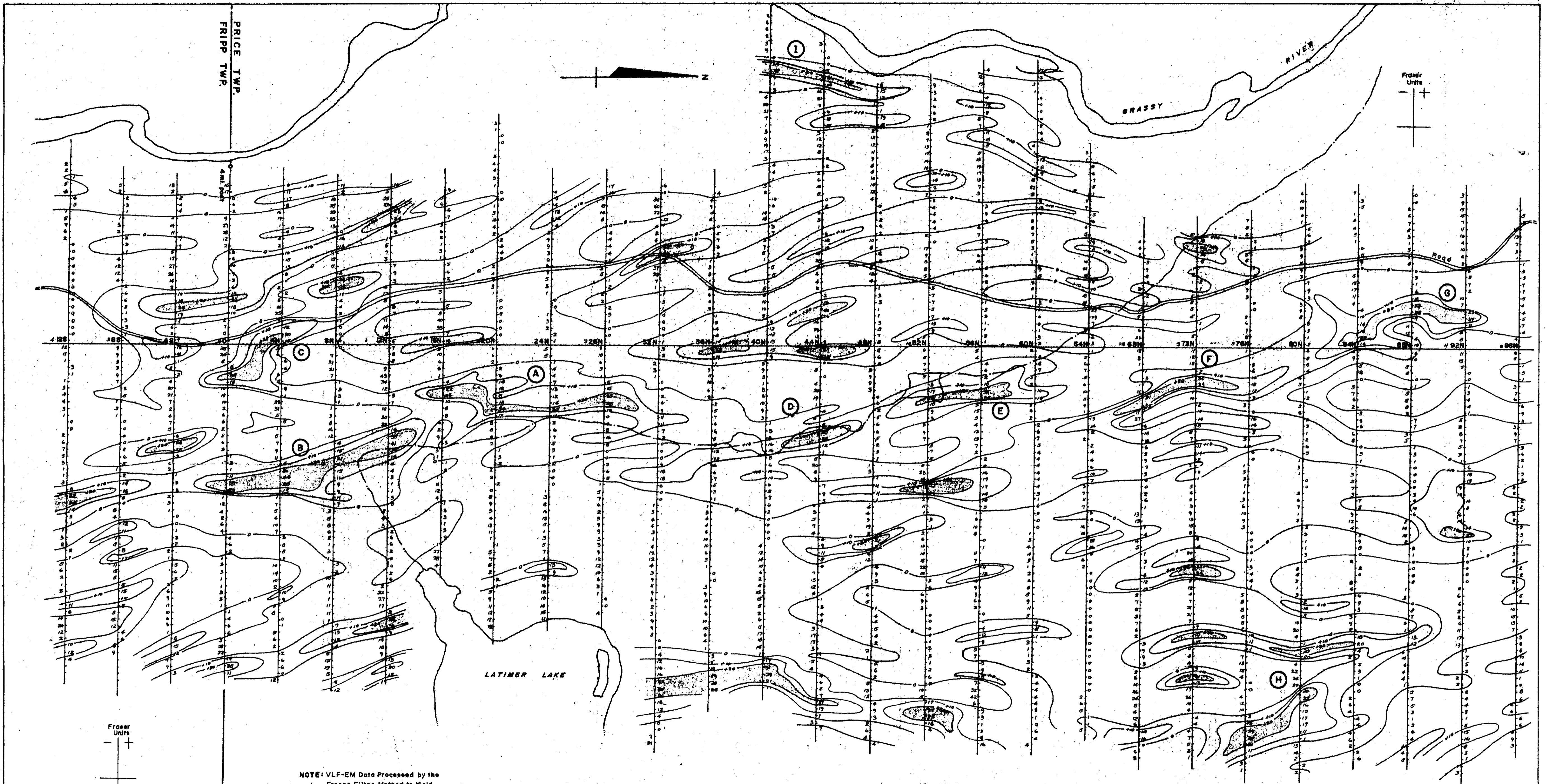
E.F. Anderson  
Director  
Land Management Branch

Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: 416/965-1316

J. Skura/amc

cc: Argentex Resource Exploration Corporation  
Toronto, Ontario

cc: G.M. Hogg & Associates Ltd.  
28 Thompson Avenue, Toronto, Ontario



PRICE TWP.  
FRIPP TWP.



Fraser Units  
+

NOTE: VLF-EM Data Processed by the Fraser Filter Method to Yield Contourable Values. Positive Values Only are Contoured, as shown on the Right (Grid North) of the Survey Line.

G.M. HOGG & ASSOCIATES LTD.

VLF-EM CONTOUR PLAN OF THE PRICE TOWNSHIP PROPERTY OF ARGENTEX RESOURCE EXPLORATION CORPORATION



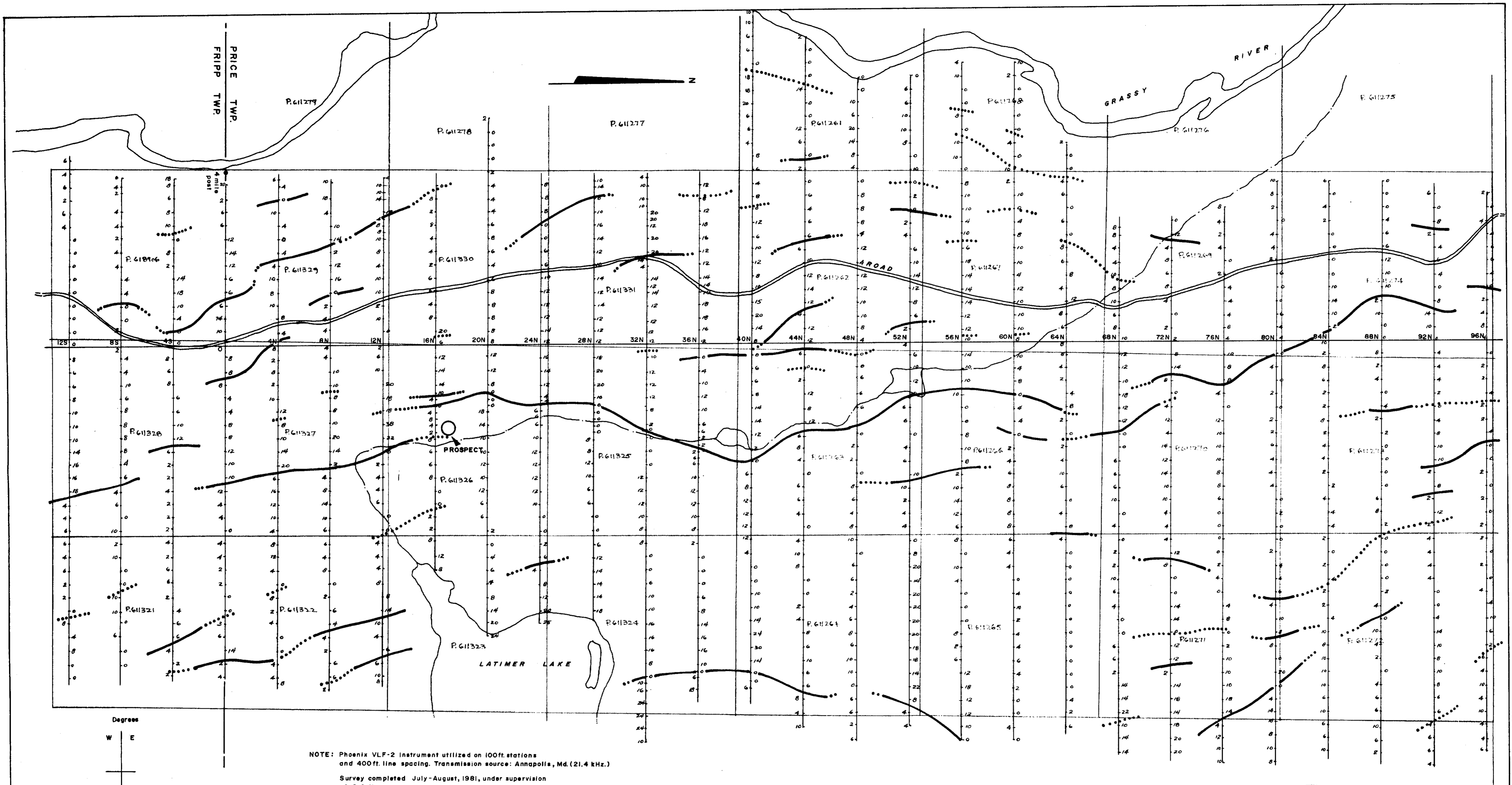
ARGENTEX - PRICE

Scale: 1" = 400'ft.

MAP NO. 3

24709





**VLF-EM PLAN OF THE PRICE TOWNSHIP PROPERTY  
OF ARGENTEX RESOURCE EXPLORATION CORP.**

Scale: 1" = 400 ft.



MAP NO. 1 24709

