REPORT ON
GEOPHYSICAL SURVEYS
AND
TRENCHING
OSSIAN TOWNSHIP PROPERTY
FOR
FIRESPUR EXPLORATIONS LTD.

Toronto, Ont.
Sept. 4, 1985

Robert L. V. Ekstrom
B.A.Sc. P. Eng.

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SUMMARY

Linecutting, geophysical surveys and trenching were carried out on the Firespur Explorations Limited (c/o John Tokarsky, 8th floor, 88 University Ave., Toronto) property in Ossian Twp., Ont. during July, 1985. The property consists of seven unpatented claims lying five miles northeast of Virginiatown (24 miles east of Kirkland Lake) and accessible by road.

Exploration has been going on in the area since the early 1900's and the showing on the property near Glover Lake was discovered in 1933. Samples taken during the early work gave assays of 0.05 - 0.42 oz. Au/ton. Silt samples taken over the showings were reported to be 0.01 to 0.03 oz. Au/ton. Extensive trenching was done in the southeast part of the group but no data have been located concerning this work.

The group is underlain by Archian massive and pillowed volcanic rocks of basic to intermediate composition. Strikes are ENE and dips are steep. Some feldspar porphyry dykes have been discovered.

Magnetometer and VLF-EM surveys were carried out on the newly cut grid of picket lines.

Two main magnetic anomalies were located which parallel the general rock trend. One of the anomalies gives evidence of the offset of a NNW trending fault passing through Gardner Lake. The anomalies are on more magnetic bands of volcanics.

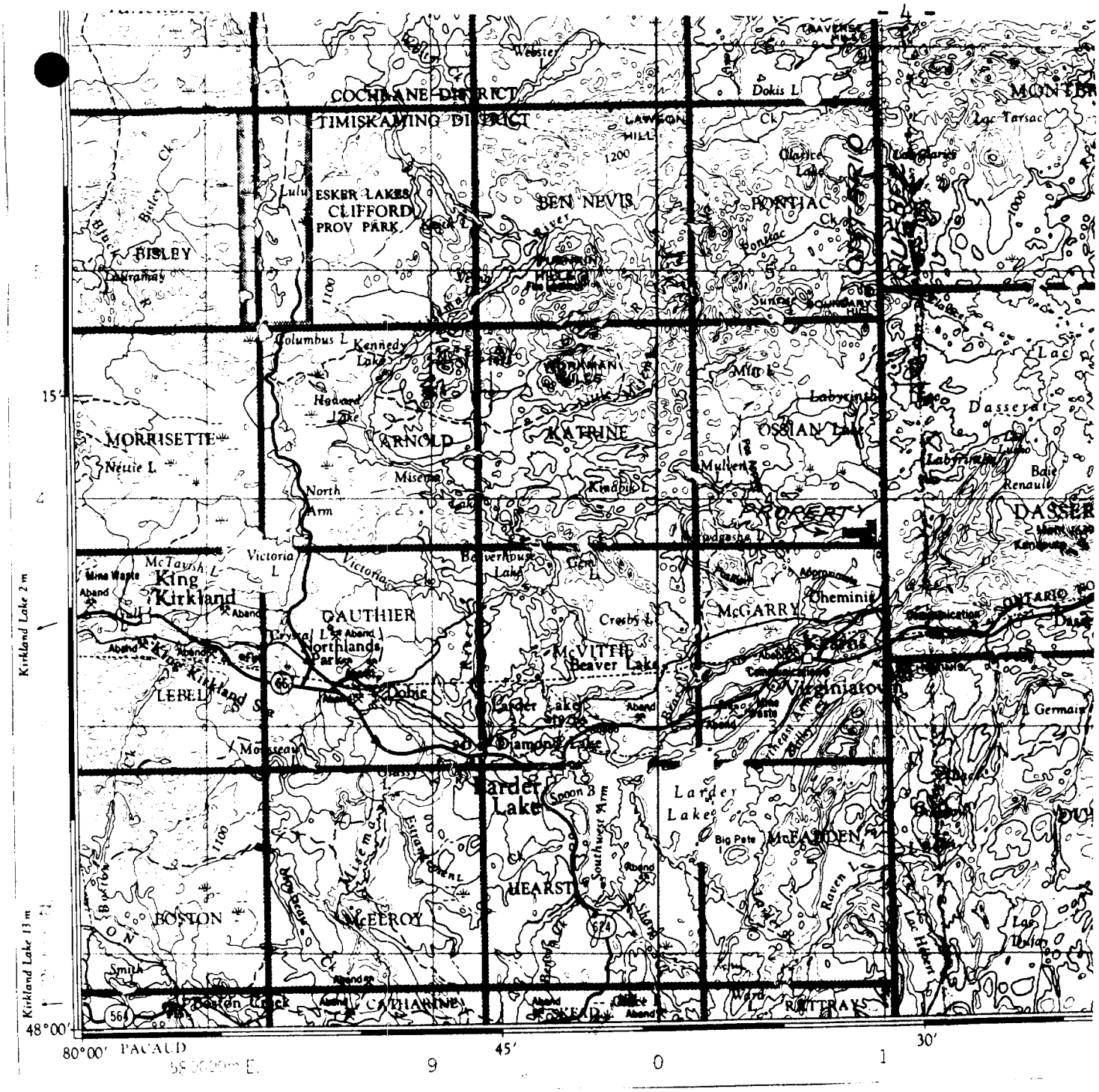
Seven VLF-EM conductors were located. Three of these are probably soil conductors and soil has influenced the profiles on the west ends of two others. The four conductors thought to be caused by bedrock conditions are weak and may be caused by shears or very weakly conductive sulphide zones. All the conductors are covered by overburden or water.

Trenching was carried out at the original Glover Lake showing and other locations. Sixteen rock samples and one silt sample were taken. Fire assays on the rock samples returned values of less than 0.01 oz. Au/ton. Geochemical analysis of the silt sample gave 18 ppb in gold. The results on the samples from the trench at Glover Lake did not confirm the better results of the original work.

PROPERTY, LOCATION AND ACCESS

The Firespur Explorations Limited property consists of seven unpatented mining claims (L807415 - 807421, incl.) in the southeast corner of Ossian Township, Larder Lake Mining division, northeastern Ontario. The property is five miles north northeast of Virginiatown (the location of the Kerr Addison gold mine) and twenty-four miles east of Kirkland Lake close to the Ontario-Quebec border.

The property is readily accessible by motor vehicle from Highway 66 using the gravel all-weather road to Cheminis and Labyrinth Lake. A driveable bush road branches west to the property some two miles north of Cheminis.



Canadian Oresearch Inc.

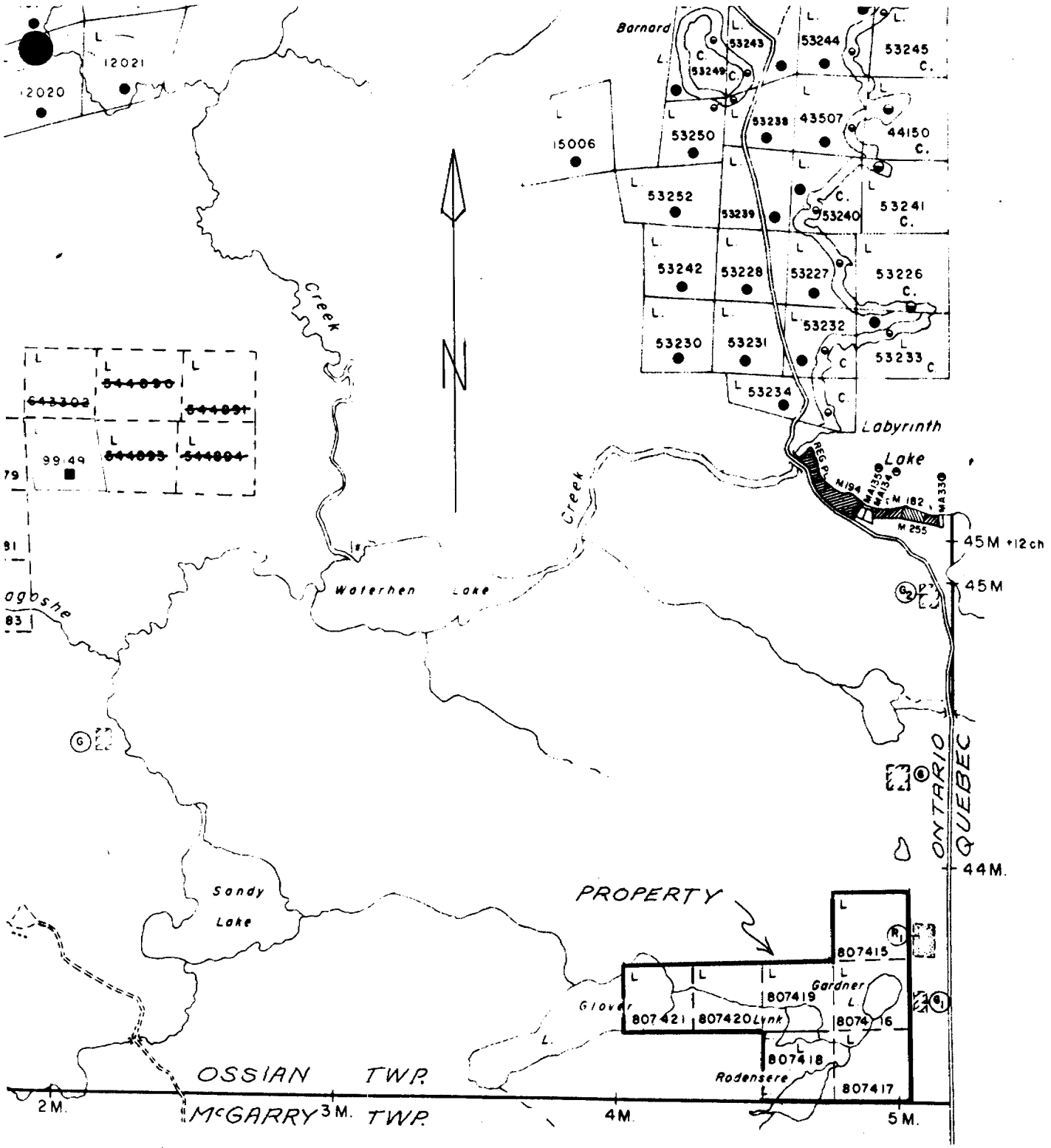
FIRESPUR EXPLORATIONS LTD.

PROPERTY LOCATION MAP

OSSIAN TWP., ONT.

Scale

0 5 10 mi.



Canadian Orescarch Inc.

FIRESPUR EXPLORATIONS LTD.

CLAIM LOCATION MAP

OSSIAN TWP., ONT.

Scale: 2 in. = 1 mi.

ENVIRONMENT

The topography in the claim group is relatively flat with a maximum relief of seventy-five feet. Soils appear to be clay, silt and sand from west to east with a north-south esker crossing the east end of the claims. Two small (10-20 acre) lakes lie within the claims and parts of two others enter the west and south boundaries. Alder swamps join three of the lakes. Gardner Lake, on the side of the esker in the eastern part of the group, has no surface exit and is probably a kettle.

Timbering has been done on parts of the area and scarification and reforestration with spruce and jack pine has been done. The remainder of the area is forested with spruce and jackpine with some birch and poplar. Some soft maple trees were seen on the eastern sand ridge.

Several outcrop ridges were noted but overburden, swamp and lake areas are extensive and outcrop exposure is estimated at less than one percent.

HISTORY

The first geological mapping in Ossian Township was reported by W. J. Wilson in 1901. Major prospecting followed with a report of work at Ossian Gold Mines Limited (in the north-central part of the township) as early as 1926.

The showing at Glover Lake on the west end of the current claim group was discovered in 1933 and subsequent work by Norontic Gold Mines Limited located extensions and adjacent veins up to 4000 feet east of the discovery. None of the eastern trenches were seen in the current work. It

is believed that the trenches were destroyed by the scarification carried out to facilitate reforestration.

Evidence of extensive trenching were seen on claim L807418. The work follows a feldspar porphyry dyke cutting basalt. Minor pyrite and irregular small quartz veins were seen. No reports of this work have been located.

GEOLOGY AND MINERAL DEPOSITS

The claim group is shown to be underlain (ODM Map 2236) by Archean basic and intermediate volcanic rocks. Massive and pillowed basalt, andesite and dacite are noted. Gabbroic flows were seen west of Link Lake. Strikes are ENE and dips are steep.

Reports on the work by Norontic Mines indicated the presence of quartz veins with gold at Glover Lake and in the showings to the east. Assays reported ranged from 0.05 to 0.42 oz. Au/ton.

Gold has been detected in the sands, silts and gravels in the Twp. and samples of silt from the Norontic showings assayed from 0.01 to 0.03 oz. Au/ton.

WORK DONE

A grid of lines was cut using an east-west base line and north-south cross-lines at 400-foot intervals except on claim L807415 where three lines were cut at 300-foot intervals. Pickets were placed at 100-foot intervals along all lines.

Magnetometer and electromagnetic surveys were carried out on the grid lines.

Trenching was carried out on the original showing at Glover Lake and stripping and trenching was done some 1700 feet east of Glover Lake in the possible Norontic number two vein area. Sixteen rock samples and one silt sample were taken.

MAGNETOMETER SURVEY

The magnetometer survey was completed using a McPhar GP-81 Proton Magnetometer. The instrument is equipped with a staff-mounted sensor-head, has a sensitivity of one gamma, an accuracy of ±10 gammas and direct LCD read-out of the total magnetic field. Base stations were tied-in at convenient locations along the grid and loop-traverses were completed with base station tie-ins at less than one hour and a half intervals. Readings were taken at 100 foot intervals with interim readings at anomalous gradients. Magnetic variation was very flat during the survey with a maximum correction of eleven gammas.

Corrected readings were plotted at 1" = 200' and contoured at 100 gamma intervals. An attempt to draw 50 gamma contours did not enhance the interpretive quality of the map.

The survey located two northeast trending anomalies. The more northerly extends from the west side of Link Lake towards the north end of Gardner Lake and continuing east from the east side of Gardner Lake.

The second lies north of Rodensere Lake in the area of old trenches previously noted.

ELECTROMAGNETIC SURVEY

The electromagnetic survey was carried out using a

Crone Radem VLF EM receiver. Dip angles were taken while receiving Cutler, Maine transmitting at 24.0 K Hz. Readings were taken at 100' intervals. The readings were plotted on the 1" = 200' map and profiled at 1" = 20°.

Seven conductor axes have been interpreted. Conductor A and C are on swamps and the lines running into lakes show anomalous build-ups. Both conductors E and F have increased amplitude near their west ends near swamps or lakes. Anomaly E lies on the flank of a magnetic anomaly.

TRENCHING

Trenching was carried out at the old showing at Glover Lake and trenching and stripping at the No. 2 vein location east of Glover Lake at 1700E, 2505; 1710E, 1105; and 1750E, 0655. Chip samples were taken. The Glover Lake trench proved to be very difficult to re-open. The silt had refilled the original trench and due to water content, during the present work, the silt flowed back into the trench while the work was in progress.

Grab samples were taken at some of the trenches located north of Rodensere Lake.

The following is a list of samples taken:

Sample No.	Location	Remarks
A924	Glover Lake *24.5-26.0S	Qtz. veins in andesite, Minor py.
A925	" 23.0-24.5S	Massive, jointed andesite

* Samples at Glover Lake are measured from zero at the north end of trench. Trench 0.0' is at Grid 050W, 050S.

0-7.0S - massive, glaciated volcanics, never sampled or blasted.

26-43.5 - Massive intermediate volcanics.

Sample No.	Location		Remarks
A926	Glover Lake	17.5-23.0S	Massive intermediate volcanic. Two small white quartz veins at 18.0S
A927	"	15.0-17.5S	Massive mfg andesite
A928	"	11.0-15.0S	Massive fg andesite. Two small qtz. veins
A929	"	7.0-11.0S	Massive fg andesite
A930	"	50.0-53.0S	vfg intermediate volc. Qtz. vein zone 50.5-51.4 Minor py
A931	"	43.0-46.0S	vfg interm. volc., fractured, qtz. lenses, py blebs, chloritic slips.
A932	"	46.0-50.0S	massive fg int. volc., minor py specks.
A933	"	58.0-63.0S	Fg andesite, minor qtz veinlets. 1" qtz-carb vein at 62.0S
A-935	"	18.0S	Silt from undisturbed wall of trench.
A934	1750E, 065S		Channel across 2.0' N-S Two 6" cataclastic qtz veins with wallrock frags. Schistose chloritic and silcified wallrocks. Minor py.
A936	1710E, 110S		Channel across 210' Two 3" qtz. veins and altered wallrocks minor py.
A-940	1700E, 250S		Channel across 2.0' Irregular qtz veins to 2" in altered volc.
A937	Rodensere L.	2800E, 1600S	Grab, minor qtz, py. Alt. basic volc.,epidote
A938	"	2400E, 1615S	Grab, Feldspar porphyry, diss. py cubes, minor white qtz vns.
A939	"	2330E, 1670S	Grab. As above.

The samples were assayed at the Geoscience Laboratories of the MNR. All of the rock samples returned assays (five samples) of less than 0.01 oz. Au/ton. The single silt sample (A935) was geochemically assayed and returned 18 parts per billion of Au (equivalent to 0.00052 oz. Au/ton).

CONCLUSIONS

The magnetic anomaly extending NE from the west side of Link Lake is probably on a more magnetic phase of the observed gabbroic flow. The apparent offset at Gardner Lake is probably caused by the NNE trending fault shown on the ODM Map 2296.

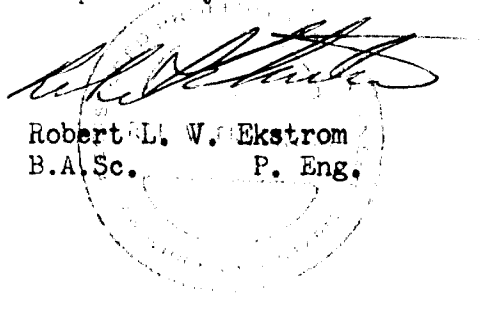
The anomaly north of Rodensere Lake may be on the more basic basalts observed in the trenches or increased magnetite as a result of alteration along the porphyry dyke.

Electromagnetic anomalies A and C and the anomalous build-up on the lines terminating at lakes are probably due to conductive wet soils in swamps and lake bottoms. Conductive soils similarly increase the amplitude at the west ends of anomalies E and F. The long south dip build-up to the north of anomaly D prbably indicates a buried clay conductor.

Anomalies B, E, F and G are weak but probably are true bedrock conductors. Anomaly E lies on the flank and parallel to a magnetic anomaly and may be formational in nature. The conductors may be wet shears or very weakly conductive sulphides. All the conductors are in covered areas.

The sample analyses were low and did not confirm any of the better original assays.

Respectfully submitted



Toronto, Ont.
Sept. 4, 1985

Robert L. W. Ekstrom
B.A.Sc. P. Eng.

REFERENCES

J. B. Currie -- Ossian Twp, Dept of Mines & Tech. Surv. GSC Paper 50-6, Ottawa 1950

L. S. Jensen -- Geology of Pontiac & Ossian Twps ODM Geol. report 125, 1975

E. W. Middleton - Through Norontque with a Kodak, Oct. 1933

Norontic Gold Mines - various reports, letters, newspaper items, etc.

MAPS

2296 - accompanying GR 125

P150 - Preliminary Geological 1" = 2 mi.

P630 - Ossian Twp. 1" = 1/4 mi.

P2490 - Sand & Gravel Resources 1:50,000

47G - Airborne Magnetometer 1:50,000

Ministry of Natural Resources
Ontario Geological Survey
77 Grenville Street
11th Floor
Toronto, Ontario
M5S 1B3
Telephone 965-1337

Geoscience Laboratories Report

Issued to:

R. EKSTROM
1 ROLPH ROAD
TORONTO, ONTARIO M4G 3M3

SAMPLE	GOLD OZ./TON	SILVER OZ./TON
A924	<0.01	
925	<0.01	
926	<0.01	
927	<0.01	
928	<0.01	
929	<0.01	
930	<0.01	
931	<0.01	
932	<0.01	
933	<0.01	
934	<0.01	
936	<0.01	
937	<0.01	
938	<0.01	
939	<0.01	
940	<0.01	

FEES RECEIVED: 16 comps. Card #3554

CHRIS RIDDIH, CHIEF ANALYST

SEPTEMBER 4,1985

Ministry of Natural Resources
Ontario
Ontario Geological Survey
77 Grenville Street
11th Floor
Toronto, Ontario
M5S 1B3
Telephone 965-1337

Geoscience Laboratories Report

Issued to:

R. EKSTROM
1 ROLPH ROAD
TORONTO, ONTARIO M4G 3M3

C 23721

SAMPLE # A935

Gold (Au) 18 ppb

FEES RECEIVED: 1 Comp. Land # 3554

CHRIS RIDDLE, CHIEF ANALYST

SEPTEMBER 4, 1985

Ministry of Natural Resources
Ontario

Work Permit

Distribution Part 1 – Permittee
2 – File
3 – Field Office
4 – Other

Under **The Forest Fires Prevention Act** and the regulations, and subject to the limitations thereof and subject also to the terms and conditions herein, this permit is issued to:

Name of Permittee: Canadian Oresearch Inc.

Post Office Address: 1 Rolph Rd.
Toronto, Ontario, M4G 3M3

To conduct an operation from the 19th day of July, 1985 to and including the 17th day of August, 1985, on the following work permit area:

Ossian Township
(shown on attached map)

For the purpose of mining operations (2employees)

Subject to the following conditions

1. The Permittee shall keep this permit or a true copy thereof on the work permit area.
2. The person in charge of the operation conducted under this permit shall produce and show this permit or the true copy kept on the work permit area to any officer whenever requested by the officer.
3. Other conditions:

Under the Forest Fire Prevention Act and your Application for Work Permit, your operation requires fire equipment as follows: 1 shovel and 1 axe.

Please note: Fire equipment must be located within 500 feet of mechanical equipment and workers on job site.

All buildings must be removed on termination of work. Upon abandonment, work area to be cleaned up in a manner satisfactory to this Ministry.

Work Permit No. KM -- 159

Place of Issue	Date of Issue	Signature of Issuing Officer
Swastika, Ontario	July 19, 1985	

Important

Separate authority must be obtained before cutting any timber and before doing any burning.

This permit does not authorize the permittee to carry on operations on privately held land, as such authority can be given only by the owner of the land.

199 (2/77)

Ministry of Natural Resources
Ontario

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

Mining Act

32D04NE0008 2.8426 OSSIAN

900

Claim L 807415 85

#229 2811

Do not use shaded areas below.

Type of Survey(s)
MAGNETOMETER & ELECTROMAGNETIC

Township or Area
OSSIAN TWP

Claim Holder(s)
FIRESPUR EXPLORATIONS LIMITED

Prospector's Licence No.
T 1901

Address
c/o J. Tokarsky, 8th Floor, 88 University Ave., Toronto, Ont.

Survey Company
Canadian Oresearch Inc

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

Total Miles of line Cut

Name and Address of Author (of Geo-Technical report)
Robert Ekstrom, 1 Rolph Rd, Toronto, Ont M4G 3M3

Credits Requested per Each Claim in Columns at right

Special Provisions

For first survey:
Enter 40 days. (This includes line cutting)

For each additional survey using the same grid:
Enter 20 days (for each)

	Days per Claim
Geophysical	
- Electromagnetic	20
- Magnetometer	40
- Radiometric	
- Other	
Geological	
Geochemical	

Man Days

Complete reverse side and enter total(s) here

	Days per Claim
Geophysical	
- Electromagnetic	
- Magnetometer	
- Radiometric	
- Other	
Geological	
Geochemical	

Airborne Credits

Note: Special provisions credits do not apply to Airborne Surveys.

	Days per Claim
Electromagnetic	
Magnetometer	
Radiometric	

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 discretion. Enter number of days credits per claim selected in columns at right.

Date: Sept 4/85

Recorded Holder or Agent (Signature)

Mining Claims Traversed (List in numerical sequence)

Prefix	Mining Claim Number	Expend. Days Cr.
L	807415	
	807416	
	807417	
	807418	
	807419	
	807420	
	807421	

Prefix	Mining Claim Number	Expend. Days Cr.

Total number of mining claims covered by this report of work: 7

For Office Use Only

Total Days Cr. Recorded: 420

Date Recorded: SEP 11 1985

Mining Recorder: Acting

Date Approved as Recorded: 85.10.1

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
ROBERT L. V. EKSTROM, 1 ROLPH RD., TORONTO
ONTARIO M4G 3M3

Date Certified: Sept 4/85

Certified by (Signature)

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) MAGNETOMETER & ELECTROMAGNETIC

Township or Area OSSIAN TWP.

Claim Holder(s) FIRESPUR EXPLORATIONS LIMITED

Survey Company CANADIAN ORESEARCH INC.

Author of Report ROBERT G.V. EKSTROM

Address of Author 1 ROLPH RD, TORONTO, ONT

Covering Dates of Survey JULY 17 - AUG 2, 1985 (linecutting to office)

Total Miles of Line Cut 6.430 miles

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	20
--Magnetometer	40
--Radiometric	
--Other	
Geological	
Geochemical	

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

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

DATE: Sept 4/85 SIGNATURE: _____
Author of Report or Agent

Res. Geol. _____ Qualifications 2.737

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
L	807415
L	807416
L	807417
L	807418
L	807419
L	807420
L	807421

If space insufficient, attach list

RECEIVED
SEP 09 1985
MINING LANDS SECTION

TOTAL CLAIMS 7

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 394 Number of Readings MAG - 44 EM - 292

Station interval 100' Line spacing 400' & 300'

Profile scale EM 1" = 20'

Contour interval MAG 100 gammas

MAGNETIC

Instrument McPHAR GP-81 PROTON MAGNETOMETER

Accuracy - Scale constant 1 gamma LCD Display, ± 10 gammas

Diurnal correction method Loop traverses tied to base stations

Base Station check-in interval (hours) Less than 1 hr 30 min.

Base Station location and value L 32+00 E, 4+00 S

Total field 58,941 gammas

ELECTROMAGNETIC

Instrument CRONE RADEM VLF-EM

Coil configuration —

Coil separation —

Accuracy 2°/scale div., ± ½°

Method: ☒ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency 24.0 KHz, CUTLER, MAINE
(specify V.L.F. station)

Parameters measured DIP ANGLE

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

September 17, 1985 File: 2.8426

Mining Recorder
Ministry of Natural Resources
4 Government Road East
Kirkland Lake, Ontario
P2N 1A2

Dear Sir:

We received reports and maps on September 9, 1985 for Geophysical (Magnetometer and Electromagnetic) Surveys submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims L 807415 to 21 inclusive in Ossian Township.

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

We do not have a copy of the report of work which is normally filed with your office prior to the submission of this technical data. Please forward a copy as soon as possible.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-4888

A. Barr:mc

cc: Firespur Exploration Limited
c/o J. Tokarsky
8th Floor, 88 University Avenue
Toronto, Ontario
M5J 1T6

Mining Lands Section

File No 2.8426

Control Sheet

TYPE OF SURVEY ___V___ GEOPHYSICAL

_____ GEOLOGICAL

_____ GEOCHEMICAL

_____ EXPENDITURE

MINING LANDS COMMENTS:

<Ossian>

LD.

_____

Signature of Assessor

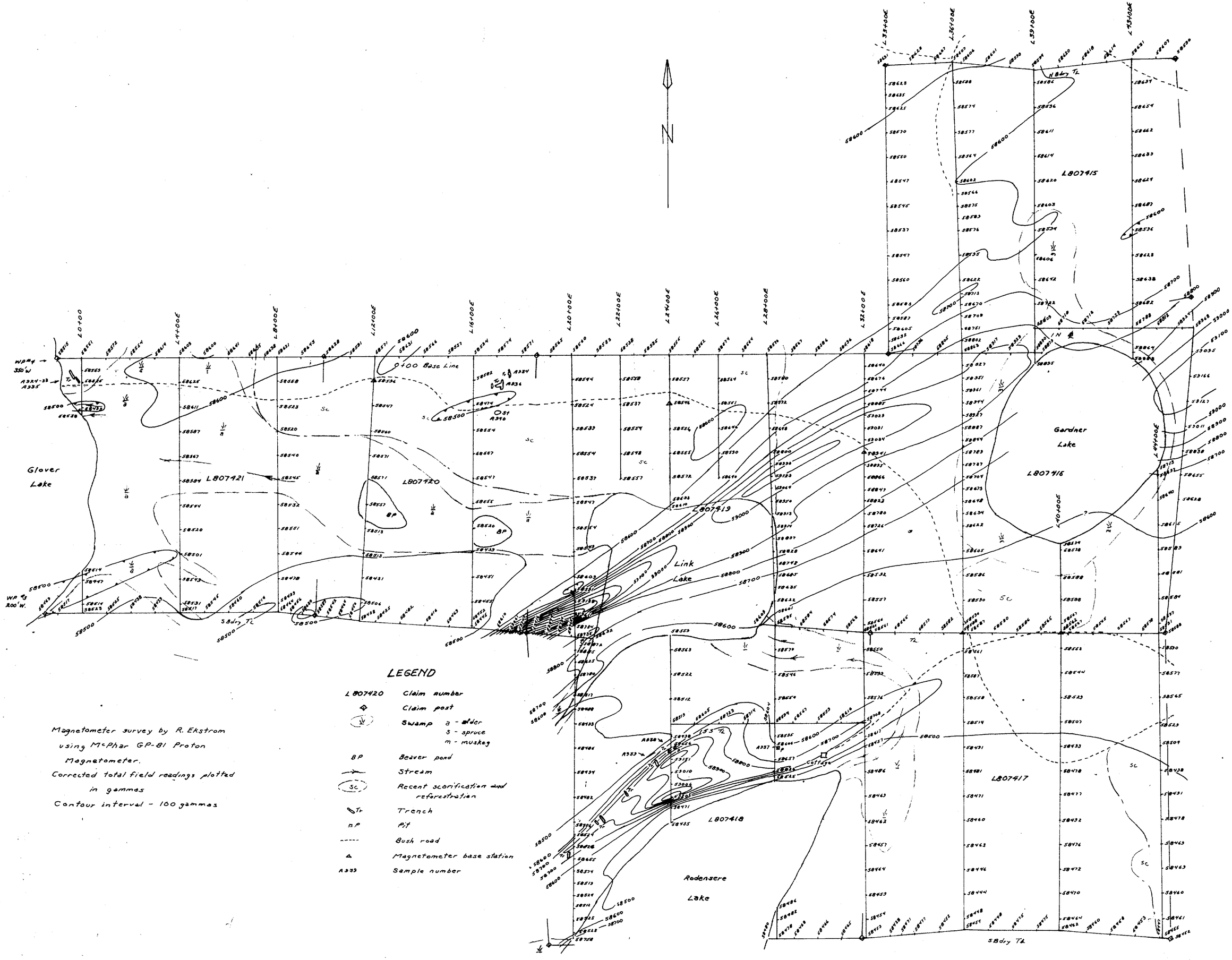
_____

Date

2.8426

	Y.M.	Neg.
L-80-19 K		✓
K		1/4
11		✓
18		1/4
19		1/4
20		✓
80-1431		~✓

D.K.



LEGEND

L807420	Claim number
◇	Claim post
	Swamp a - alder, s - spruce, m - muskeg
BP	Beaver pond
	Stream
Sc	Recent scorification and reforestration
Tr	Trench
Pit	Pit
	Bush road
△	Magnetometer base station
A933	Sample number

Magnetometer survey by R. Ekstrom using McPhar GP-81 Proton Magnetometer.
Corrected total field readings plotted in gammas
Contour interval - 100 gammas

Canadian Oresearch Inc.
FIRESPUR EXPLORATIONS LTD.
Ossian Twp. Property

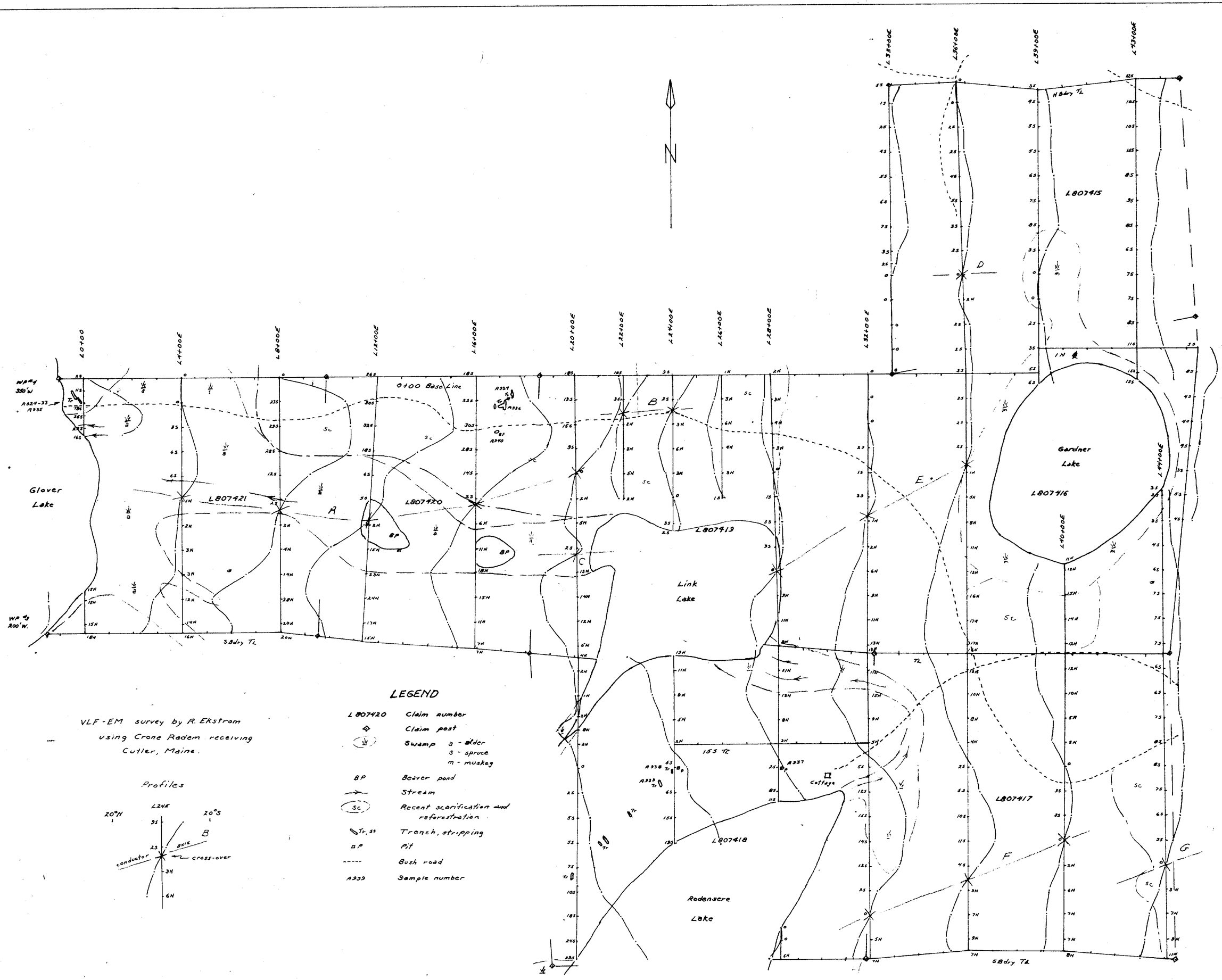
MAGNETOMETER SURVEY MAP

Scale
0 200' 400' 600'

R. Ekstrom Aug., 1985.

200

2.8426



VLF-EM survey by R. Ekstrom using Crone Radem receiving Cutler, Maine.

Profiles

LEGEND

L807420	Claim number
	Claim post
	Swamp a - alder, s - spruce, m - muskeg
BP	Beaver pond
	Stream
Sc	Recent scarification and reforestration
Tr, St	Trench, stripping
P	Pit
-----	Bush road
A939	Sample number

Canadian Oresearch Inc

FIRESPUR EXPLORATIONS LTD

Ossian Twp Property

ELECTROMAGNETIC SURVEY MAP

Scale 0 200' 400' 600'

R. Ekstrom Aug., 1985

2.8426