



42A04NW0031 2.4891 SEWELL

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REPORT ON
GROUND VLF AND GROUND MAGNETICS

SEWELL
FOLEYET, ONTARIO

BY
JOSE LUIS SEARA

GOLD FIELDS MINING CORPORATION
MISSISSAUGA, ONTARIO.

RECEIVED

JUN 25 1982

MINING LANDS SECTION

REPORT ON
GROUND VLF AND GROUND MAGNETICS

Sewell
Foleyet, Ontario

By
Jose Luis Seara

1. INTRODUCTION:

In March 1982 line cutting and ground geophysics were carried out by Gold Fields Canadian Mining Ltd. A total of 22.7 km of grid were cut and chained. Geophysical follow up consisted of 20.8 km of ground VLF data acquired on 20 lines, with station intervals of 25 m. Ground magnetics consisted of 22.7 km of magnetics data required on 20 lines at a station interval of 25m.

2. SURVEY LOCATION:

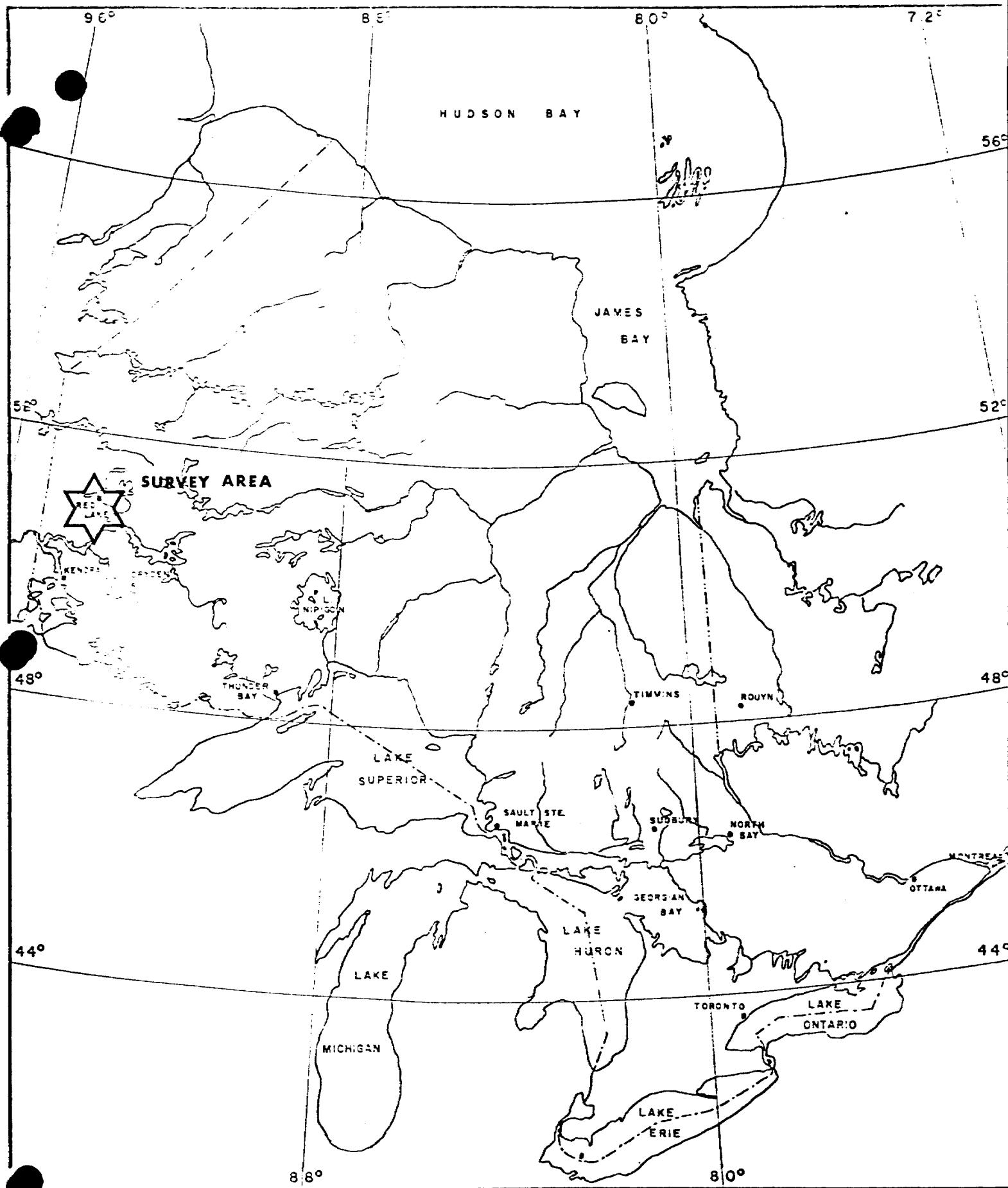
The survey location is located in the Foleyet region (Northeastern Ontario), about 60 miles from Timmins on Highway 101. The Kenogaming Forrestry Road is approx. 60 km from Foleyet. The dirt road is 6 km from Hwy. 101 on this road. The grid is 2 km down on this road.

3. DESCRIPTION OF GRID:

Main base line 0+00 was turned off Azimuth of 320 degrees from the number one (1) post of Claim KRL 393710. Chainage estimated as 11+00E. From this point on the base line 0+00, lines were turned off every 125 meters and chained at 25 meter intervals.

4. GEOLOGY:

The Sewell Township claim group is underlain by a NW-SE trending sequence of pillowed mafic volcanics and interbedded sediments. Locally the volcanics are sheared, extensively carbonated and silicified and intruded by quartz porphyry. A north-west trending fault crosses the property south-west of Sewell Lake.



Outline Map of ONTARIO

Scale : 1" \approx 125 Miles

LOCATION MAP

Figure 1

5. TOPOGRAPHY:

Flat partially forested area with scattered swamps throughout the grid.

6. SURVEY PERSONNEL:

Magnetics: Gayle Fox

VLF: Bryan Strapp, Dave Gliddon

7. GROUND MAGNETICS:

The measurement of earth's total field were taken with the EDA total field magnetometer Model PPM-300 providing a 0.1nT sensitivity. Diurnal change was monitored by a total field base station EDA Model PPM-400.

8. METHOD AND PROCEDURE:

8.1 Ground VLF:

The VLF method uses powerful radio transmitters that induce electric currents in conductive bodies. The direction of the flux of lines is horizontal and perpendicular to the VLF transmitter.

Since the geology of Otter Lake South strikes NW-SE, the Cutler, Maine station (NAA, 17.8 KHz) was selected to obtain the most adequate coupling.

Dip-angle and field strength readings were taken every 25 m., making a total of 834 readings.

8.2 Ground Magnetics:

Measurement of the total field were taken every 25 meters. All magnetometers used in the survey are programmable, automatically recording field readings, time of readings, line and station co-ordinates, a qualitative measurement of the gradient imposed on the sensor and signal strength or orientation of the sensor. Thus, the diurnal corrections are accomplished automatically by cable connecting each field unit in turn

to the base station recorder and activating a pre-programmed correction program.

The base station recorder will interpolate and apply the diurnal correction, subtract the reference field and pass the survey data to a DCU-400 printer.

Base Station was located on LO at 0+25N. Base station interval was 10 seconds, with a value of 59,070 gammas. (A total of 908 field stations were recorded).

9. DATA PRESENTATION:

9.1 Ground Magnetics:

Total field is presented on map MAG 1. (Scale 1:2500).

9.2 Ground VLF:

Two methods or presentation are utilized:

a) Profiles plots of true dip angle in degrees (1 cm = 10) together with the field strength in contour form. Presented on map VLF-1.

b) A contour plan section of the convolution of the Fraser Filter and the dip angle is presented in Map FF-1.

9.3 Interpretation overlay map INT-1.

10. RESULTS AND INTERPRETATION:

On the basis of the magnetic background several domains have been discriminated, see map number 4. Mainly mafic volcanics, felsic (or intermediate volcanics) and a intrusive diorite.

Three major faults have been depicted from the magnetics and the V.L.F. data. Some of the VLF anomalies coincide with the boundaries of the different domains. The other VLF lineations have been marked as shear zones.

In the northern mafic domain a very thin iron formation has been interpreted. Its horizon has been marked on the overlay. (Map Number 4). Potentially attractive areas for gold deposition are those areas in which the iron formation is traverse by a fault.

In the southern domain some showings of iron formations have been marked but they are less attractive.

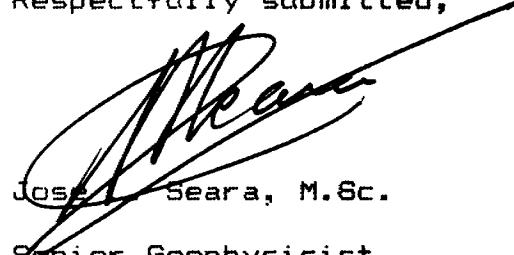
11. CONCLUSIONS AND RECOMMENDATIONS:

The magnetics and VLF survey have been able to delineate some clues about the geology of there claims.

Three major faults were located and its iterations with the iron formations are potentially attractive for gold.

It is recommended to carry out some detailed I.P. surveys over some of the areas mentioned above if soil geochemistry gives positive results.

Respectfully submitted,



José P. Seara, M.Sc.

Senior Geophysicist

GOLD FIELDS Mining Corporation



Ministry of Natural Resources

File _____

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL
TECHNICAL DATA STATEMENTTO 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 - VLF (Blue Monday)

Township or Area Sewell Township

Claim Holder(s) Gold Fields Resources Canada Ltd.

#335-230 Lakeshore Rd. East, Mississauga, L5G 1G8

Survey Company Gold Fields Resources

Author of Report Jose L. Seara

Address of Author #335-230 Lakeshore Rd. East

Covering Dates of Survey April 7 - June 1982

(linecutting to office)

Total Miles of Line Cut 22.7 Km

MINING CLAIMS TRAVERSED
List numerically

P 627001

(prefix)

(number)

627002

627003

393710

393711

393712

613349

613350

613351

613352

591427

591428

591429

SPECIAL PROVISIONS
CREDITS REQUESTEDENTER 40 days (includes
line cutting) for first
survey.ENTER 20 days for each
additional survey using
same grid.Geophysical DAYS
per claim

—Electromagnetic 20

—Magnetometer 40

—Radiometric

—Other

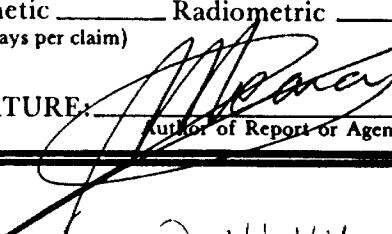
Geological

Geochemical

If space insufficient, attach list

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: June 23/82

SIGNATURE: 

Author of Report or Agent

Res. Geol. _____ Qualifications 24644

Previous Surveys

File No. Type Date Claim Holder

.....
.....
.....
.....
.....

TOTAL CLAIMS 13

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations	834	Number of Readings	VLF - 834 Mag - 908
Station interval	25 metres	Line spacing	125 metres
Profile scale	1"=20° (dip angle) 1"=100° (horizontal loop)		
Contour interval	100 gammas		

MAGNETIC

Instrument	Proton Precession Total Field		
Accuracy - Scale constant	.1 Nt		
Diurnal correction method	automatic programmable		
Base Station check-in interval (hours)	20 seconds		
Base Station location and value	0 00 at 0+25N		

ELECTROMAGNETIC

Instrument	Phoenix VLF - 2		
Coil configuration	N/A		
Coil separation	N/A		
Accuracy	± 1° (dip angle) 20°(horizontal field)		
Method:	<input checked="" type="checkbox"/> Fixed transmitter	<input type="checkbox"/> Shoot back	<input type="checkbox"/> In line
Frequency	17.6 Khz Cutler, Maine (specify V.L.F. station)		
Parameters measured	Horizontal Field Strength & Dip Angle		

GRAVITY

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

INDUCED POLARIZATION

RESISTIVITY

Instrument			
Method	<input type="checkbox"/> Time Domain	<input type="checkbox"/> 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 _____

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 _____

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

General _____

General _____



**Ministry of
Natural
Resources**

Geotechnical Report Approval

File 2.4891

Mining Lands Comments

To: Geophysics *Mr. Baelson*

Comments			
<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Wish to see again with corrections	Date <i>2/12/00</i>	Signature <i>[Signature]</i>

Approved Wish to see again with corrections

DATA

Signature

Date Clark 29/83 Signature R. Rhei

To: Geology - Expenditures

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

Approved Wish to see again with corrections

Date

Signature

To: Geochemistry

Comments			
<p style="text-align: center;">LD</p>			
<input type="checkbox"/> Approved	<input type="checkbox"/> Wish to see again with corrections	Date	Signature

Approved Wish to see again with corrections

Date

Signature

To: Mining Lands Section, Room 6462, Whitney Block.

(Tel: 5-1380)

1982 07 05

2.4891

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 393710 et al in the Township of Sewell.

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/sc

c.c. Gold Fields Resources Canada Limited
Mississauga, Ontario
Attn: Jose L. Seara.

GOLD FIELDS CANADIAN MINING, LTD.
A Consolidated Gold Fields Group Company

230 LAKESHORE ROAD EAST, SUITE 335
MISSISSAUGA, ONTARIO L5G 1G8
PHONE: (416) 271-0181
TELEX 06-960446

June 24, 1982

Mining Lands Section
Land Management Branch
Ministry of Natural Resources
Room 6450, Whitney Block
Queen's Park

Attention: Ms. J. Skura

Dear Madam

Enclosed is a report and map (in duplicate)
for a Geophysical (Electromagnetic - VLF and Mag-
netometer) survey covering 13 mining claims in
Sewell Township.

Yours very truly



(Mrs) Susan Hurst
Land Records Clerk
encl.

cc: W. Troup
R. Zimmerman
File: CA 5039

EM mag.

FILE no. 2.4891

P393710

✓

✓

12

✓

591427

✓

28

✓

29

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613349

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51

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627001

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003

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