



42A09NW0425 2.7303 COULSON

010

A REPORT ON MAGNETOMETER SURVEYING

on

THE DEVON PROPERTY  
of  
DALHOUSIE OIL CORP.

BEATTY AND COULSON TOWNSHIPS  
ONTARIO

Markham, Ontario  
August 15, 1983

L.G. Hobbs, P. Eng.

RECEIVED

OCT 12 1984

MINING LANDS SECTION

L. G. HOBBS, P. ENG.

A REPORT ON MAGNETOMETER SURVEYING  
on  
THE DEVON PROPERTY OF DALHOUSIE OIL CORP.

PROPERTY AND ACCESS

The property lies approximately 8 miles northeast of the town of Matheson, Ontario and consists of 13 claims in Beatty and Coulson townships in the Larder Lake mining division. The claims have been transferred to Dalhousie Oil Corporation and are numbered:

Beatty Twp.

L532228-231

Coulson Twp.

L532226-227

L532849-850, L532852

L618557-560

Access to the property is by secondary roads leading off Hwy. 101, east of Matheson. The Coulson tower road crosses the property.

GRID SYSTEM

The control grid was established with the base line running east-west along the Beatty/Coulson township line and cross lines at 200 ft. intervals and picketed at 100 ft. spacings. All the claims in the group except L532852 were covered by the grid. A total of 20 miles of cross lines and 6200 ft. of base line were cut and read.

MAGNETOMETER SURVEY

A GEM Systems GSMB total field proton magnetometer with a sensitivity of 1 to 2 gammas was used for the survey. Diurnal corrections were made by the time-linear method using a system of base stations along the base line. A total of approximately 1027 stations were read.

The data are presented on a contour map at a scale of 1 in. = 200 ft. which accompanies this report.

SURVEY RESULTS

1. Highly magnetic areas correspond to basic and ultrabasic rocks which are generally well exposed on the property. A complex of intrusive gabbro, peridotite, pyroxenite and various related rock types occupies most of the southern tier of claims and is well outlined by the survey. Peridotite outcrop areas in particular exhibit very high gradients and were largely impossible

to read, resulting in a H.G. (high gradient) designation. A remarkably straight east-west northern contact is indicated for this southern complex by the survey, the contact lying about 200 ft. south of and parallel to the base line. Irregularities in the pattern in this area, as for example on lines 42E and 54E are apparently due to crosscutting diabase dikes of lower magnetic intensity.

2. The magnetically indicated contact between volcanics and the ultrabasic intrusive referred to in section one appears to shift north approximately 300 ft. in the area of line 28E. Alignment with a possible magnetic termination at 30E,9S suggests a possible offsetting feature striking at 165 degrees, roughly parallel to the large diabase dike 1100 ft. to the east. Dextral offsetting along southeasterly striking faults is possibly indicated.

3. At least two major diabase dikes are known to cross the property in a 160 degree direction. Neither is traceable by its magnetic response.

4. A northern band of peridotite and pyroxenite accounts for the strong magnetic trace that passes through 40E,13N. It swings northerly along line 38E and then westward, its extension centering at 30E,17N. This suggests a fold or faulted offset, perhaps along the trend of the diabase dike that strikes at about 160 degrees and cuts just east of the 30E,17N location. VLF survey results suggest an offset here also.

It should be noted that although the magnetic pattern contoured for this band of peridotite strikes slightly south of west, the outcrop evidence shows a strike somewhat south of east. The two northern shafts, shown on the plan, appear to be on the same volcanic/ultrabasic contact.

5. Low magnetic response in the general area of 56E,8N is unexpected. Occurrence of a slightly magnetic rock which outcrops in the area and has been identified both in outcrop and in drill core as a fine grained peridotite suggest a stronger response.

6. Other isolated magnetic highs in the northeasterly part of the property, as at 58E,17N and 46E,18N are, as yet, unexplained. Their possible alignment in northeasterly strike directions suggests the possibility of Keweenawan diabase dikes.

7. The northwestern area of the property is magnetically relatively flat. Only basaltic volcanics are known to occur there.



Respectfully submitted,

*L.G. Hobbs*  
L.G. Hobbs, P. Eng.

APPENDIX

CERTIFICATE

I, L.G. Hobbs, do hereby certify:

That I graduated from the University of Toronto in 1958 with the degree of B.A.Sc. in engineering geology.

That I have practiced my profession since graduation.

That I maintain an office at Suite 4, 101 Amber St., Markham, Ont.

That the foregoing report is based on personal supervision of the work at the property and of the subsequent data treatment and presentation of the survey results contained herein.



L.G. Hobbs, P.Eng.

Dated at Markham, Ont.  
August 15, 1983



42A09NW0425 2.7303 COULSON

020

A REPORT ON VLF ELECTROMAGNETIC SURVEYING

on

THE DEVON PROPERTY  
of  
DALHOUSIE OIL CORP.

BEATTY AND COULSON TOWNSHIPS  
ONTARIO

Markham, Ontario  
August 15, 1983

L.G. Hobbs, P. Eng.

**RECEIVED**

OCT 12 1984

MINING LANDS SECTION

A REPORT ON VLF ELECTROMAGNETIC SURVEYING  
on  
THE DEVON PROPERTY OF DALHOUSIE OIL CORP.

PROPERTY AND ACCESS

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GRID SYSTEM

The control grid was established with the base line running east-west along the Beatty/Coulson township line and cross lines at 200 ft. intervals and picketed at 100 ft. spacings. All the claims in the group except L532852 were covered by the grid. A total of 20 miles of cross lines and 6200 ft. of base line were cut and read.

VLF ELECTROMAGNETIC SURVEY

A Geonics EM16 VLF (Very Low Frequency) receiver was used for the survey and tuned to Cutler Me. Readings of both in-phase and quadrature response were recorded at each station. Approximately 1030 stations were read.

The data, which was plotted and profiled at a horizontal scale of 1 in. = 200 ft., is presented on a map which accompanies this report. In addition, the in-phase readings were Fraser filtered and contoured. The Fraser map is also included.

SURVEY RESULTS

1. The strongest anomaly detected (Anomaly A) is centered at 40E, 55S. It strikes south of west and is about 800 ft. long in its strongest part. It has strong magnetic coincidence. In-phase dip angles reach as high as -108 and Fraser contours peak at 275. Quadrature readings are reverse to in-phase indicating sulphides

as a possible source. The anomaly is sharp, compact and apparently originates at relatively shallow depth. It lies in low ground immediately north of a gabbro outcrop.

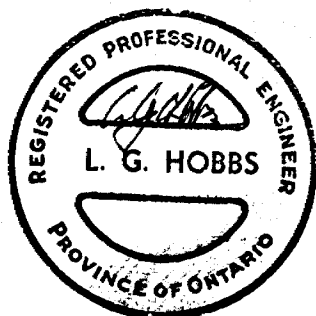
Because of the favourable appearance of the anomaly and its proximity to the old mine workings a diamond drill hole (DC821) was drilled at an azimuth of 180 degrees down line 38E to test it. The hole cut pyroxenite, gabbro and peridotite but nothing conductive that would explain the anomaly. The mine workings do not extend into the anomalous area. Interpretation of the profiles on line 36E and on line 30E (another on-strike, weaker anomaly) indicates a possible south dip although the dip on line 38E appears nearly vertical. It is, therefore, possible that the drill hole undercut a south dipping conductor. A second survey of the immediate anomalous area using a conventional cable EM unit should be considered. If it is then thought to be justified, a second short hole drilled south to north may be required.

2. Anomalies B (32E,18N to 38E,17N) and C (40E,14N) lie close together in the north central part of the survey area. Both lie on the north edge of strong east-west trending magnetic anomalies and both have fairly sharp, strong crossover patterns. Anomaly B, the larger of the two, shows Fraser values upto 133 and in-phase readings as high as -53 degrees. Quadrature readings show no reversal. The pattern of magnetic contours in the area suggests these anomalies may be faulted offsets of each other. Outcrop and drilling evidence shows that they probably lie on the north edges of peridotite bands. On both ends the anomalies appear to be cut off by major diabase dikes striking at approximately 160 degrees.

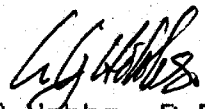
Drill hole DC825, drilled north along line 38E tested anomaly B. It cut 16 ft. of graphitic material near the north contact of an ultrabasic sequence with volcanics, thus explaining the anomaly. Anomaly C is assumed to be due to a similar rock sequence.

3. Numerous other anomalies occur, in most cases coinciding with overburdened areas between outcrops and showing no quadrature response that would indicate sulphides as a cause. Weak Fraser closures in the southeast part of the survey are on or near peridotite outcrops.

A known gossan zone which passes in an arc 1200 ft. long and just north of the main shaft (near 44E,B.L.), shows one weak response at 44E,1+50N on the Fraser map. The mineralization consists of spotty pyrrhotite and chalcopryrite concentrations in basaltic volcanics and probably does not have electrical continuity over enough strike length to form a good conductor.



Respectfully submitted,

  
L. G. Hobbs, P. Eng.

APPENDIX

CERTIFICATE

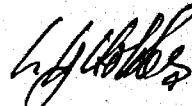
I, L.G. Hobbs, do hereby certify:

That I graduated from the University of Toronto in 1958 with the degree of B.A.Sc. in engineering geology.

That I have practiced my profession since graduation.

That I maintain an office at Suite 4, 101 Amber St., Markham, Ont.

That the foregoing report is based on personal supervision of the work at the property and of the subsequent data treatment and presentation of the survey results contained herein.



L.G. Hobbs, P.Eng.

Dated at Markham, Ont.  
August 15, 1983





md.19  
 900  
 #319

File # 532226

Claim Holder(s) **MAGNETOMETER & VLF ELECTROMAGNETIC BEATTY / COULSON**  
 Township of **COULSON**  
 Proprietor's Licence No. **T 1355**

Address **DALHOUSIE OIL CORP. Ltd**  
**604-5, 80 RICHMOND ST. W. TORONTO**  
 Survey Company **L.G. Hobbs**  
 Date of Survey (from & to) **4 83 31 10 83** Total Miles of line Cut **21**

Name and Address of Author of Geo Technical report:  
**L.G. Hobbs, 4-101 AMBER ST. MARKHAM ONT L3R 3B2**

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	40
	Magnetometer	20
	Radiometric	
	Other	
For each additional survey: using the same grid: Enter 20 days (for each)	Geological	
	Geochemical	
	Geophysical	
	Days per Claim	
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)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L	532226				
	532227				
	532228				
	532229				
	532230				
	532231				
	532849				
	532850				
	618557				
	618558				
	618559				
	618560				

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 AUG 24 1984  
 MINING LANDS SECTION  
 LARDER LAKE  
 RECEIVED  
 AUG 20 1984  
 AM 7 13 19 11 01 12 11 21 31 4 15 16 PM

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. **12**

For Office Use Only

Total Days Cr. Recorded **120** Date Recorded **AUG 20 1984** Mining Recorder **[Signature]**

Date Approved as Recorded **84.10.16** Branch Director **[Signature]**

Date **Aug 13/84** Recorder/Holder/Agent (Signature) **[Signature]**

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 **L.G. Hobbs, Suite 4, 101 Amber St. MARKHAM ONT L3R 3B2**

Date Certified **Aug 13/84** Certified by (Signature) **[Signature]**

Mining Lands Section

File No 2.7303

Control Sheet

TYPE OF SURVEY

- GEOPHYSICAL
- GEOLOGICAL
- GEOCHEMICAL
- EXPENDITURE

MINING LANDS COMMENTS:

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*Cap. L.D.*

*J. Hurst*  
Signature of Assessor

*84-10-15*  
Date

### 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 Magnetometer & VLF EM  
Township or Area BEATTY/COULSON TWP.  
Claim holder(s) DALHOUSIE OIL CORP.  
Author of Report G. L. HOBBS  
Address 4-101 AUNTER ST. MARCHMONT  
Covering Dates of Survey JUNE '83 - OCT '83  
(linecutting to office)  
Total Miles of Line cut 19.75 miles x-lin, 1.25 miles base

MINING CLAIMS TRAVERSED	
List numerically	
1	532216
1	532217
1	532218
1	532219
1	532220
1	532221
1	532222
1	532223
1	532224
1	532225
1	618557
1	618558
1	618559
1	618560
<b>RECEIVED</b>	
1984 12	
<b>MINING LANDS SECTION</b>	
<b>TOTAL CLAIMS</b> <u>12</u>	

<u>SPECIAL PROVISIONS</u> <u>CREDITS REQUESTED</u>	<u>DAYS</u> <u>per claim</u>
Geophysical	
- Electromagnetic	<u>40</u>
- Magnetometer	<u>20</u>
- Radiometric	
- Other	
Geological	
Geochemical	

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

DATE: Aug 6/84 SIGNATURE: G. L. Hobbs  
Author of Report or Agent

PROJECTS SECTION  
Res. Geol. \_\_\_\_\_ Qualifications 2,4358  
Previous Surveys \_\_\_\_\_

Checked by \_\_\_\_\_ date \_\_\_\_\_

GEOLOGICAL BRANCH \_\_\_\_\_

Approved by \_\_\_\_\_ date \_\_\_\_\_

GEOLOGICAL BRANCH \_\_\_\_\_

Approved by \_\_\_\_\_ date \_\_\_\_\_

OFFICE USE ONLY

If space insufficient, attach list

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

### GEOPHYSICAL TECHNICAL DATA

#### GROUND SURVEYS

Number of Stations 1050 ± Number of Readings 1050 ±  
Station interval 100'  
Line spacing 200'  
Profile scale or Contour intervals (VLF) (1 in 100 degrees) (15 number) (Map) 1000'  
(specify for each type of survey)

#### MAGNETIC

Instrument GEN 95M8 proton  
Accuracy - Scale constant 1-2 gamma  
Diurnal correction method Time / 1100 V  
Base station location Various shown on map

#### ELECTROMAGNETIC

Instrument EM 10 VLF  
Coil configuration Standard  
Coil separation \_\_\_\_\_  
Accuracy 1-2% dip angle  
Method:  Fixed transmitter  Shoot back  In line  Parallel line  
Frequency CUTLER  
(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 \_\_\_\_\_  
Time domain \_\_\_\_\_ Frequency domain \_\_\_\_\_  
Frequency \_\_\_\_\_ Range \_\_\_\_\_  
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 \_\_\_\_\_

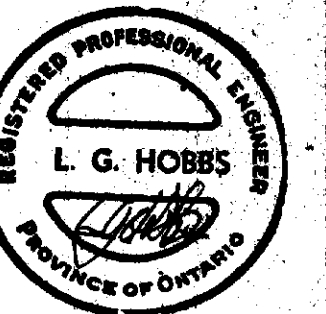
General \_\_\_\_\_

M EM

M EM

27303

53 2226	✓	✓		53 2849	✓	✓				
27	✓	✓		50	✓	✓				
28	✓	✓		61 8557	-	✓		3		
29	✓	✓		58	✓	✓				
30	✓	✓		59	✓	✓				
31	✓	HA		60	✓	✓				



CONTOUR LEGEND

- 200 + Degrees
- 100-200
- 75-100
- 50-75

LEGEND

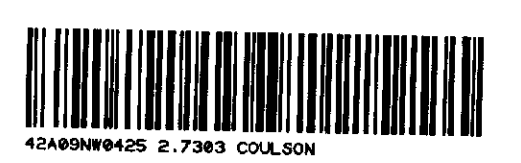
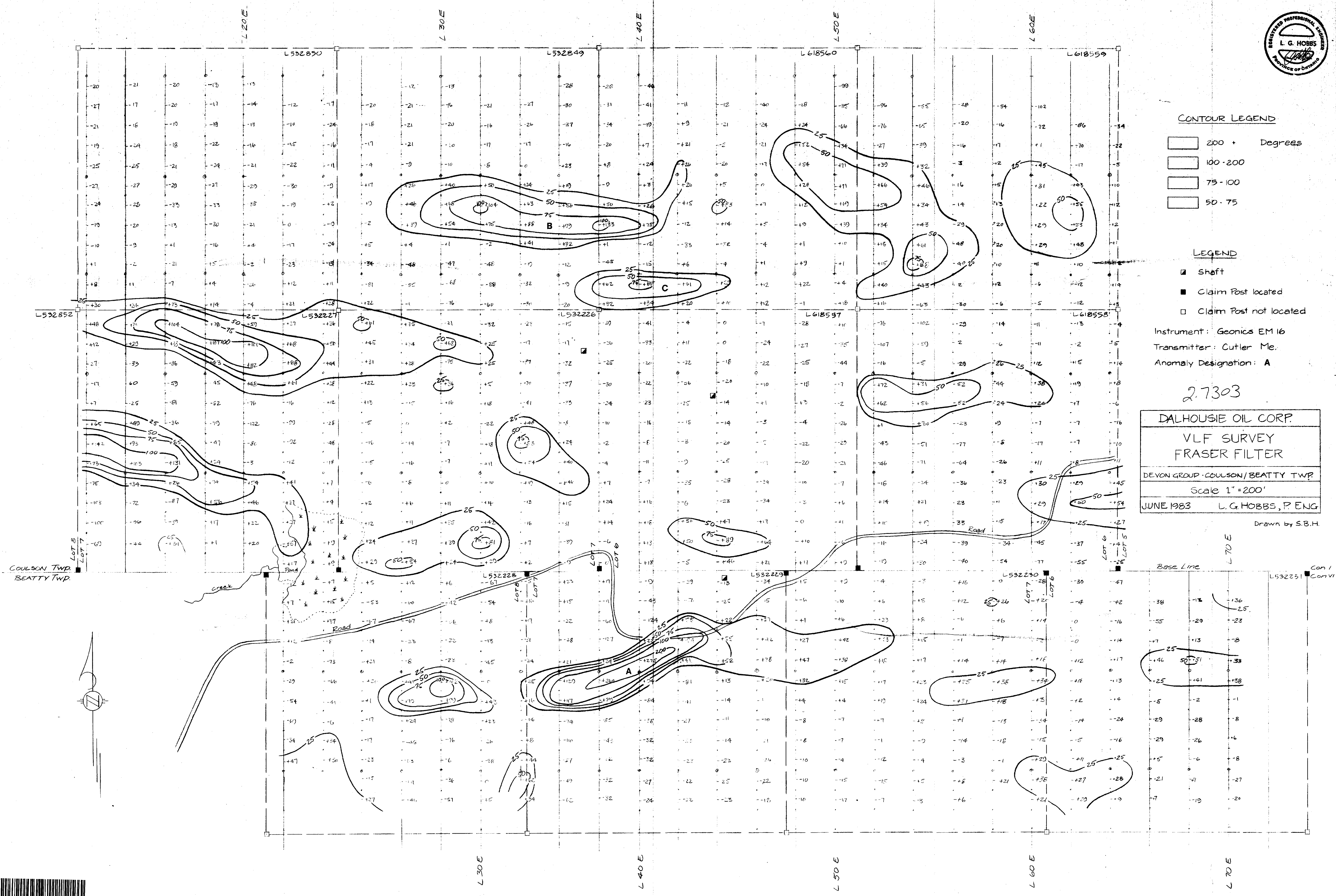
- Shaft
- Claim Post located
- Claim Post not located

Instrument: Geonics EM 16  
 Transmitter: Cutler Me.  
 Anomaly Designation: A

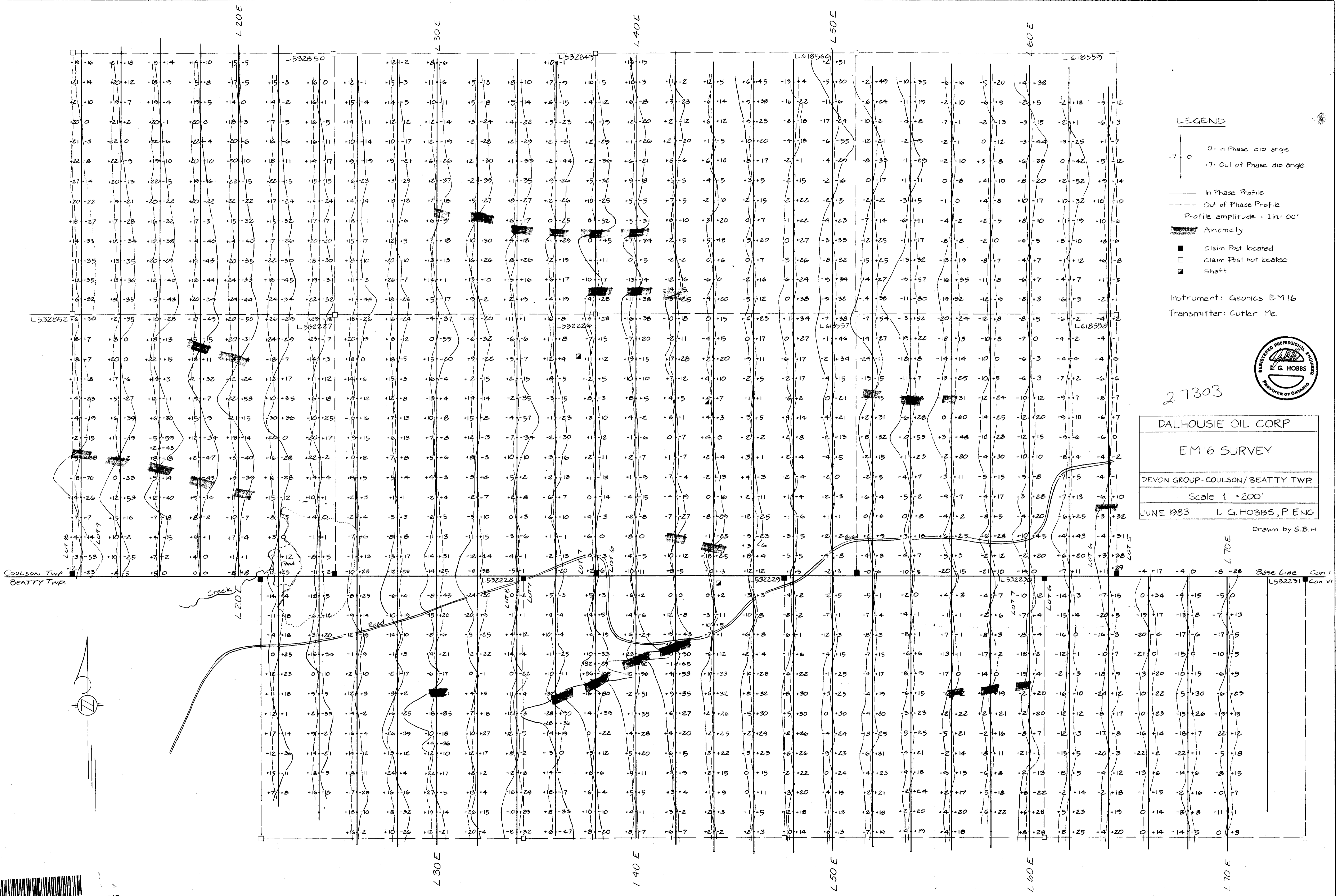
2.7303

DALHOUSIE OIL CORP.
VLF SURVEY
FRASER FILTER
DEVON GROUP-COULSON/BEATTY TWP
Scale 1" = 200'
JUNE 1983 L.G. HOBBS, P. ENG

Drawn by S.B.H.







**LEGEND**

0: In Phase dip angle  
 .7: Out of Phase dip angle

— In Phase Profile  
 - - - Out of Phase Profile  
 Profile amplitude: 1 in. = 100'

■ Anomaly

■ Claim Post located  
 □ Claim Post not located  
 ■ Shaft

Instrument: Geonics EM 16  
 Transmitter: Cutler Mc.



2.7303

**DALHOUSIE OIL CORP**

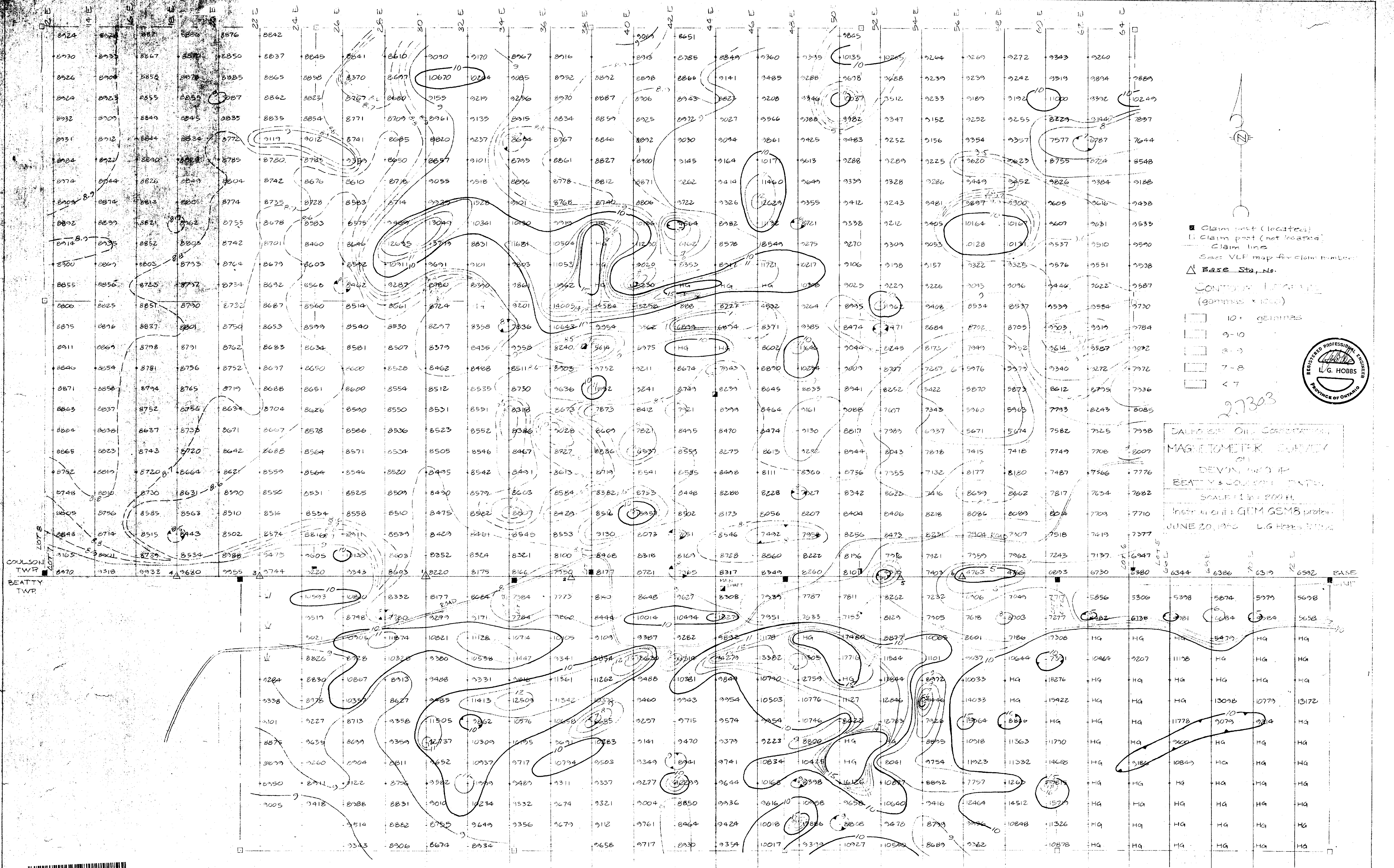
**EM 16 SURVEY**

DEVON GROUP-COULSON/BEATTY TWP.

Scale 1" = 200'

JUNE 1983 L. G. HOBBS, P. ENG.

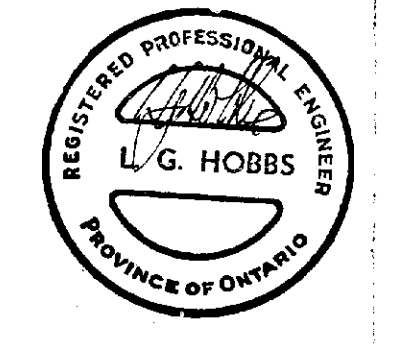
Drawn by S.B.H



■ Claim post (located)  
 □ Claim post (not located)  
 --- Claim line  
 See VLF map for claim numbers  
 ▲ Base Sta. No.

CONTINUOUS LINE  
 (gammas x 1000)

- 10+ gammas
- 9-10
- 8-9
- 7-8
- < 7



DALHOUSIE OIL CORPORATION  
 MAGNETOMETER SURVEY  
 BEATTY & COULSON TOWNSHIPS  
 SCALE 1 in = 200 ft.  
 Instrument: GEM GSM8 proton  
 JUNE 20, 1968 L.G. Hobbs

27303

