

2.3148



31E13SW0002 2.3148 LOUNT

010

REPORT
ON
AIRBORNE RADIOMETRIC AND MAGNETOMETER SURVEY
JACK McVITTIE CLAIM GROUP
LOUNT AND McKELLAR TOWNSHIPS
EASTERN ONTARIO
BY
E. J. BLANCHARD

RECEIVED
DEC 03 1979
MINING LANDS SECTION

INTRODUCTION

An Airborne Magnetometer and Radiometric Survey was flown over the J.P. McVittie Claim Groups. The program was carried out as a research project to determine if a detailed ground magnetometer survey would have direct significance in establishing what amount of impurities, such as granitic inclusions or magnetite disseminations, may exist within the deposits of high calcium limestone existing on these claim groups. The magnetometer survey was of primary importance; the radiometric survey was done simultaneously on the chance of finding radioactivity along the limestone contacts.

The objective of the program is to help delineate areas of limestone free of impurities. The entire program is based on an effort to establish these deposits that will be used for lime dusting of lakes that have been made acidic from acid rain fall out.

THE CALCITE PROPERTIES

The properties are located in Lount Twp., lot 26 and 27, Concession 1, and McKellar Twp. lot 7, Concessions 9 and 10. Lount Twp. claim numbers are 471 418 471 419 471 420 471 421 and 471 422.

McKellar Twp. claim numbers are 471 413
471 414 and 471 415.

GEOLOGY

The economic area consists of beds of crystalline calcium carbonate in the Tectonic Breccia developed in the limestone stone beds.

The wall rocks and general geology is part of the Grenville made up of hornblende gneisses, biotite gneisses and occasional pigmatite stringers, as well as amphibolite. In many instances high grade magnetite is associated with the limestones. This is reported in the ODM report "Geology of Lount Twp." and shows up well on the regional aeromagnetic map, Lount sheet. The frequency of iron associated with the limestones, was the objective of the airborne magnetometer survey.

PAST HISTORY

McKellar Twp.: Geological mapping and 1875' of diamond drilling in 1974 by Burcal Mines Ltd. This drilling proved up a deposit of limestone to a depth of 200' containing 6.5 million tons of 90.8 CaCO_3 .

.../4

Lount Twp.: Diamond drilling by Consolidated Faraday Mines in 1974 in limestone. No records of results available.

INSTRUMENTS USED

The instrument used was a Scintrex GIS-2 Gamma Ray Integrating Spectrometer, serial number 801128, threshold control energy discrimination setting of 0.9. The instrument constant was 2 counts per second. The Sensor Probe used was a type ASP-5, serial number 805113, which contains a 5" x 4" NAI TI crystal. The ASP-5 is connected to an amplifier and to a continuous recorder, making a permanent profile graph of the traverse, which is then automatically plotted on graph paper. This recorder is an Easterline Angus, Type AW-1400 Ohms.

Also used was a Barringer Research Airborne Magnetometer, Model AM 123 B1, Serial number 6591 with Sensel and Hewitt-Packard Model 7155 Continuous Strip Recorder. The Airborne Magnetometer Sensor is Toroidal 104 Series, non-directional and noise cancelling.

THE SURVEY

The survey consisted of flight lines South to North for

.../5

each line. This was done to utilize complete topographical control. Flying altitude was 250'; a total of 90 miles of continuous magnetometer and Gamma Ray Spectrometer were flown in the area, with 2.5 miles flown over claims 471 413 471 414 and 471 415 (McKellar Twp.) and 3.8 miles flown over claims 471 418 471 419 471 120 471 121 and 471 122 (Lount Twp.)

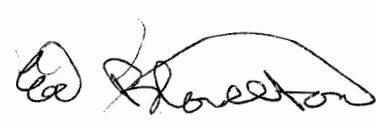
Control of direction was by Auto Pilot, Gyro Compass and numerous topographical features.

Results are plotted on attached maps at a scale of 1" = 660'. Aircraft was a Cessna 130 (CF-PKL).

RESULTS OF SURVEY

The objective was to ascertain which of the numerous limestone occurrences in Lount and McKellar Townships would be free of magnetite iron impurities. The two areas flown are well known to the writer and become part of a geologic research that will be used for additional work to be carried out in several adjoining townships. It is concluded that the low magnetic readings over the limestone deposits will be an aid to eliminating the limestone occurrences containing magnetite. No radiometric area of interest was found from

radiometric survey





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) Airborne Magnetometer
Township or Area Lount and McKellar Twps.
Claim Holder(s) J.P. McVittie
Survey Company Erana Mines Limited
Author of Report Edward J. Blanchard
Address of Author 106 Fielding Rd. Copper Cliff Ont.
Covering Dates of Survey September 1979
Total Miles of Line Cut

MINING CLAIMS TRAVERSED
List numerically

Table with columns for (prefix) and (number). Lists claims for LOUNT TOWNSHIP (471-471) and MCKELLAR TOWNSHIP (471-471) with checkmarks.

If space insufficient, attach list

SPECIAL PROVISIONS CREDITS REQUESTED table with columns for Geophysical, Geological, Geochemical and DAYS per claim.

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

Magnetometer 63 Electromagnetic Radiometric
(enter days per claim)

DATE: Nov 29/79 SIGNATURE: [Signature]
Author of Report or Agent

Res. Geol. L.D. Qualifications 2.2306

Previous Surveys

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

OFFICE USE ONLY

TOTAL CLAIMS 8

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) Airborne Magnetometer

Instrument(s) Airborne Magnetometer (Barringer Research model 123 ser # 6591)

Accuracy + _____ (specify for each type of survey) with noise-cancelling and
- 10% of ambient field _____ non-directional 7155 continuous
(specify for each type of survey) strip recorder

Aircraft used Cessna 180 (CF-PKL)

Sensor altitude 200'

Navigation and flight path recovery method Gyroscope - topographical control - auto pilot

Aircraft altitude 250' Line Spacing 1/8 mile

Miles flown over total area 90 Over claims only 6.3

$6.3 \times 40 = 25.2 \div 8 = 3.15$



**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) Airborne Radiometric

Township or Area Lount and McKellar Twps.

Claim Holder(s) J. P. McVittie

Survey Company Erana Mines Limited

Author of Report Edward J. Blanchard

Address of Author 106 Fielding Rd. Copper Cliff Ont.

Covering Dates of Survey September 1979
(linecutting to office)

Total Miles of Line Cut _____

<u>SPECIAL PROVISIONS CREDITS REQUESTED</u>	Geophysical	DAYS per claim
ENTER 40 days (includes line cutting) for first survey.	-Electromagnetic _____	
	-Magnetometer _____	
	-Radiometric _____	
ENTER 20 days for each additional survey using same grid.	-Other _____	
	Geological _____	
	Geochemical _____	

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

Magnetometer _____ Electromagnetic _____ Radiometric 63
(enter days per claim)

DATE: Nov. 29/79 SIGNATURE: *Ed Blanchard*
Author of Report or Agent

Res. Geol. _____ Qualifications 2.2305

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED	
List numerically	
(prefix)	(number)
LOUNT TOWNSHIP	
471	418 ✓
471	419 ✓
471	420 ✓
471	421 ✓
471	422 ✓
McKELLAR TOWNSHIP	
471	413 ✓
471	414 ✓
471	415 ✓
TOTAL CLAIMS <u>8</u>	

If space insufficient, attach list

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) Airborne Radiometric

Instrument(s) GIS-2 Gamma Ray Spectrometer with ASP-5 sensor - continuous strip

(specify for each type of survey)

recording - 2 cps

Accuracy _____

(specify for each type of survey)

Aircraft used Cessna 180 (CF-PKL)

Sensor altitude 200'

Navigation and flight path recovery method Gyroscope - topographical control - auto pilot

Aircraft altitude 250' Line Spacing 1/8 mile

Miles flown over total area 90 Over claims only 6.3

6.3 x 40 = 25.2