



42A05NE0346 2.388 CARSCALLEN

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Report On
Combined Magnetic Electromagnetic Survey
Carscallen Twp. Claim Group
Porcupine Mining Division, Ontario

January 10, 1969

J.E. Steers, FGAC., P.Eng.

INTRODUCTION

The property consists of 10 unpatented, contiguous mining claims registered in the name of Claw Lake Molybdenum Mines Ltd., Suite 405, 67 Yonge St., Toronto, Ont.

The claims are numbered P-98475 to 98484 inclusive.

LOCATION and ACCESS

The property is located in West-central Carscallen Twp., approximately 18 miles South 75° West of the Town of Timmins, Ont.

The property may be reached via Highway 101 from Timmins and then via the Mallette Lumber Co. access road.

During the summer the west boundary is accessible by car however, during winter the nearest usable road is approximately 0.4 miles west of the property.

GENERAL GEOLOGY

The rocks of the area are generally steeply dipping, easterly trending volcanic rocks of acidic to intermediate composition with intercalated bands of sulphide and/or oxide type iron formation. To the north is a large gabbroic intrusive mass and smaller bodies variously mapped as porphyry or granite. To the east a mass of extrusive material thought to be rhyolite occurs, portions of which are probably of pyroclastic origin.

PREVIOUS WORK

Carscallen Twp. has previously been extensively prospected for gold and several gold occurrences have been reported in the southeast portion of the area however no viable deposits have been located.

Ontario Department of Mines preliminary map No. P-23 is the most recent publication on the area.

Airborne magnetic and electromagnetic surveys hve been conducted over the property, one of which is filed with the Resident Geologist, Ontario Department of Mines, Timmins, Ont.

Lucky Strike Explorations Ltd. had a magnetic and electromagnetic survey carried out over the western portion of the property and subsequently drilled four holes totalling 1338 feet. One of the holes intersected massive pyrite and pyrrhotite over a core length of 117.5 feet.

INSTRUMENTS USED AND SURVEY METHOD

Magnetic and electromagnetic surveys were carried out over a grid system established between Nov. 5, 1968 and Dec. 15, 1969. North bearing lines were established at 200 foot intervals. 13.3 miles of line were established.

The electromagnetic survey was carried out with a Crone Radem "VLF" receiving unit utilizing Seattle Washington as the transmitting station. The inclination of the magnetic component of the resultant electromagnetic field was recorded at 100 foot intervals along picket lines. The results are plotted on the accompanying maps in profile form.

The magnetic survy was carried out with a Scintrex MF-1-100 fluxgate magnetometer. The vertical component of the earths magnetic field was measured at 100 foot intervals. All readings were reduced to a common base level and corrected for diurnal

variation. The value at each station is recorded on the accompanying plan.

SURVEY RESULTS

Six definite conductive zones were indicated as well as three possible conductive zones.

All definite conductive zones have direct magnetic correlation with peak intensities ranging from 2000 to 39,000 gammas.

Magnetic relief is high with maximum relief in excess of 46,000 gammas.

SUMMARY AND CONCLUSIONS

Two strong zones of anomalous conductivity were outlined on the property by a previous airborne electromagnetic survey.

One zone has been partially investigated by ground geophysical methods and diamond drilling.

Recent work has indicated the presence of several other zones of conductivity having direct magnetic correlation.

There is a strong possibility that at least 3 of these zones contain significant quantities of sulphide mineralization with some magnetite.

RECOMMENDATIONS

It is recommended that 3 diamond drill holes, outlined below,

be planned to test the anomalous areas previously mentioned.

It is also recommended that limited Crone JEM work be carried out on lines 44E, 40E, 36E, 18E, 4E, 2E, to establish dip and a conductivity-width product for the conductive zones. It is also recommended that the old drill sites be located and tied to the new grid system to aid in the correlation of recent work and previous drilling.

Recommended Diamond drill holes:

#1	Line 46E, 800N	-50° S	400ft.
#2	line 4E, 200N	-50 N	450'
#3	line 44E, 800S	-50 N	450'
			<hr/>
			1300 ft.

Respectfully submitted,

J.E. Steers, P.Eng.



ELECTROMAGNETIC SURVEY

The "Radem" unit is essentially a specially designed radio receiver which receives very low frequency radio signals from transmitters located at various points throughout the world.

The receiving unit is used to measure the direction of the magnetic component of the transmitted field.

The normal VLF magnetic field is horizontal, however, the field is distorted by the presence of a conductive body. The presence of a conductive body can, therefore, be determined by measuring the dip angle of the resultant field at regular intervals.

The instrument is so designed that when in the position of minimum coupling, the arrow on instrument points towards the conductive body. The axis of the body will be located at the zero or "cross-over" point between sets of dip angles which point towards the zero point.

The magnitude of the dip angle and the direction in which the arrow points are recorded at each field station.

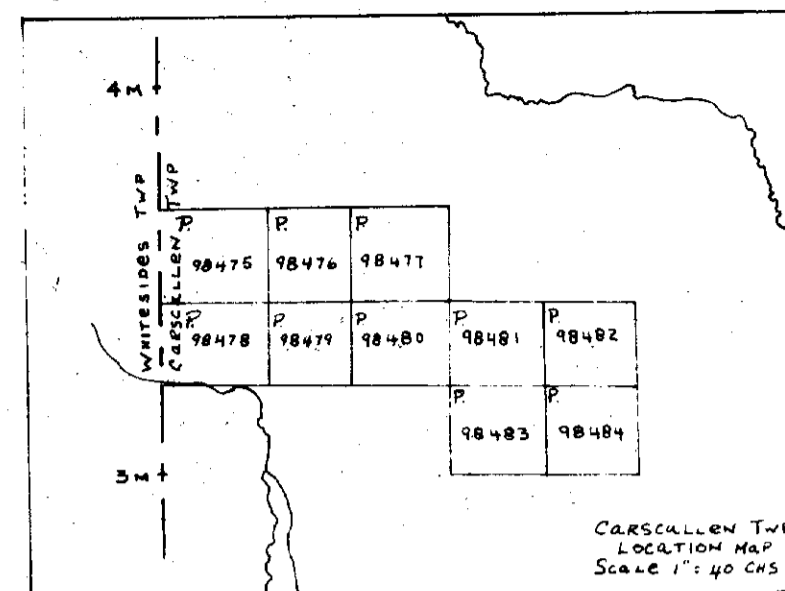
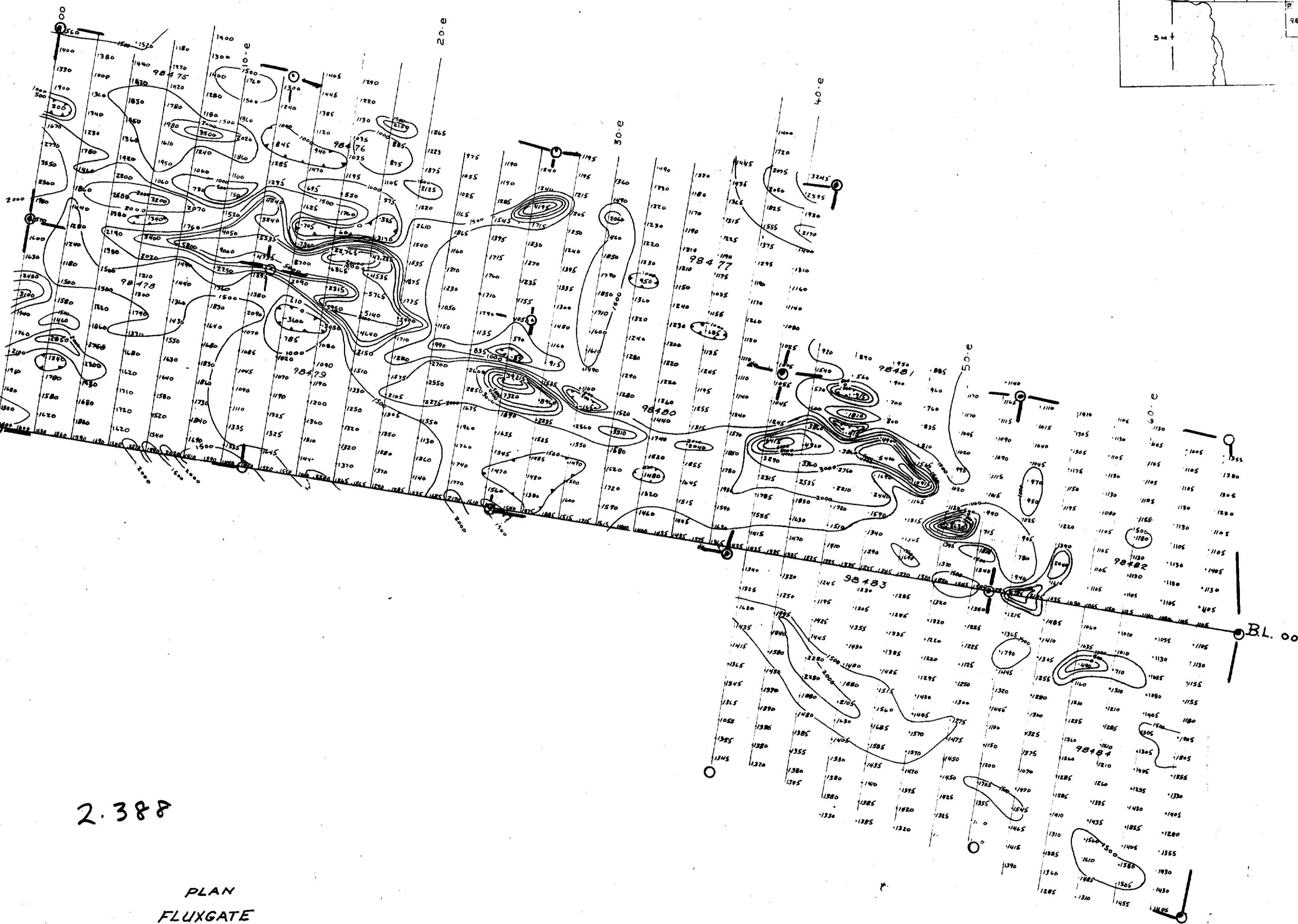
The direction of the magnetic component of the field from a VLF transmitting station is horizontal and perpendicular to the line between the operator and the transmitting station.

For best results, a station is selected so that the magnetic field is perpendicular to the suspected strike of possible conductive bodies.

The unit is turned on and the volume control knob adjusted so that the signal is clearly heard. The unit is then held in a horizontal position and rotated until an audio null is obtained. The unit is then aligned parallel to the field direction. The receiver is then rotated into the vertical position and rotated about a vertical axis until an audio null is heard. The dip angle is then noted as well as the direction in which the arrow points.

If, when reading a station to the south, a dip angle of 20 degrees is obtained and the arrow points to the east the conductor is located to the east.

Whitesides Twp
Carscallen Twp

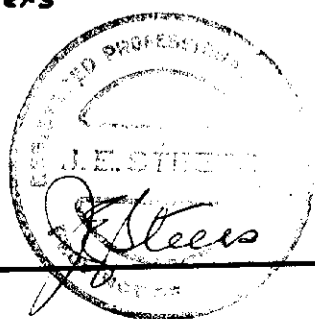


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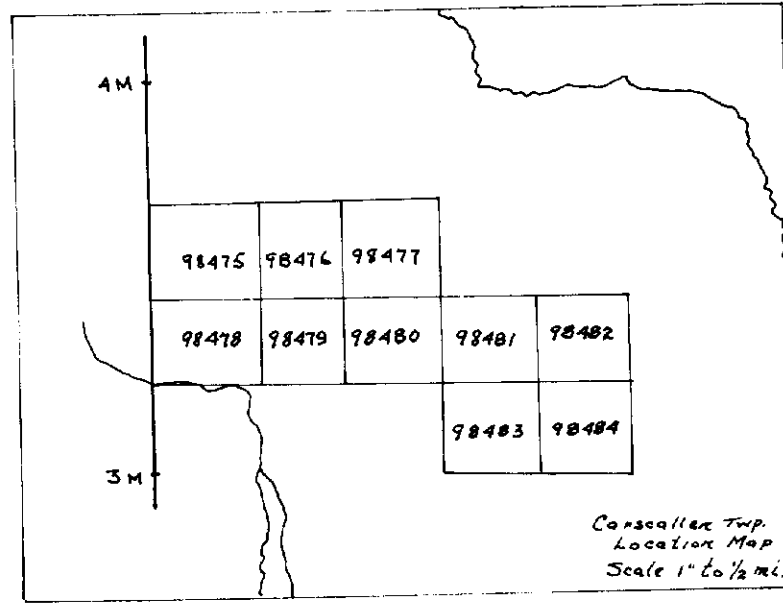
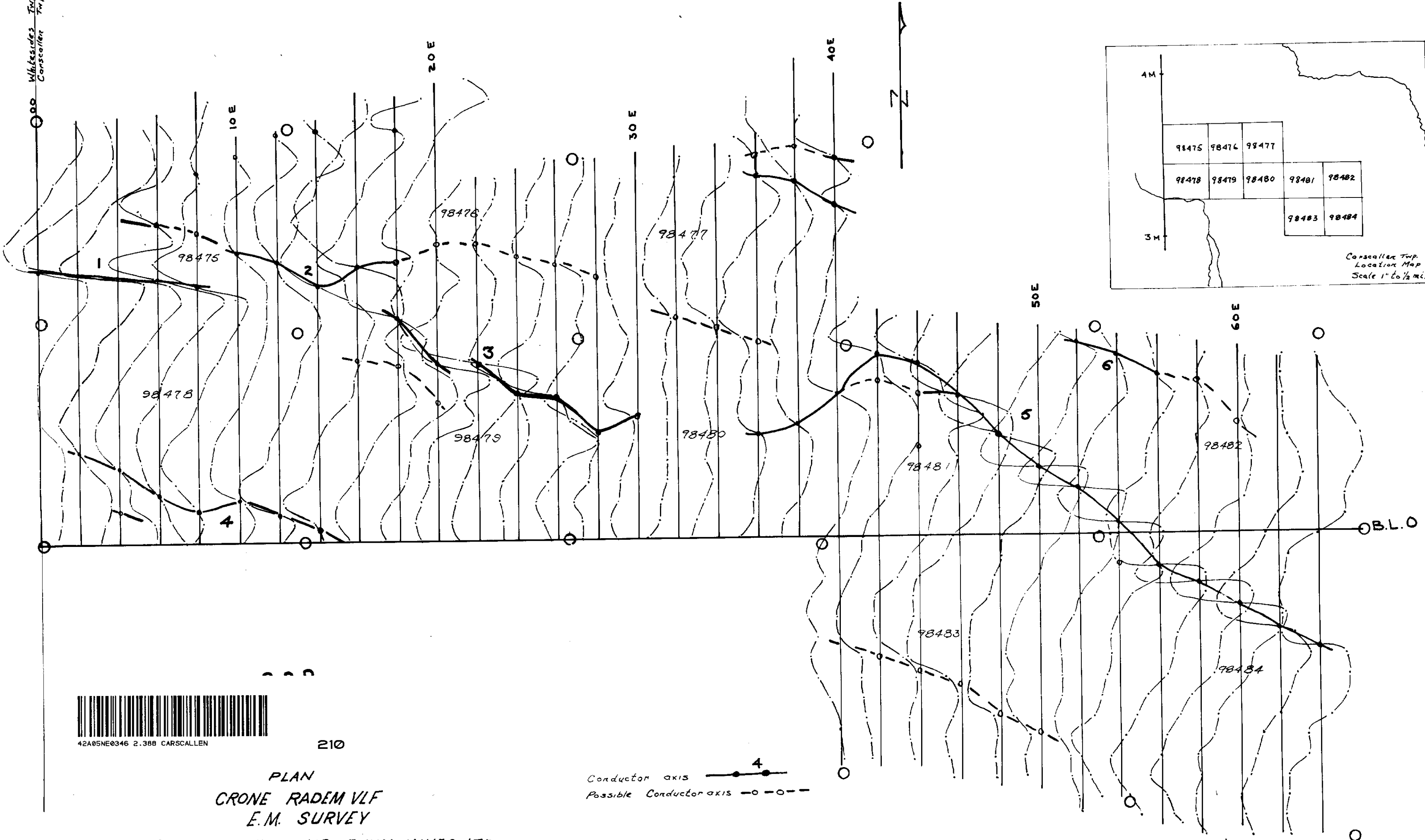
PLAN
FLUXGATE
MAGNETIC SURVEY
CLAW LAKE MOLYBDENUM MINES LTD.
CARSCALLEN TWP. ONT.

Plan Scale 1" = 20 400'
Contour Interval 500'

Survey by: J.E. Steers
Drawn: R.F.B.
Date: Jan 7 1969



Whitesides Twp
Carscallen



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PLAN
CRONE RADEM VLF
E.M. SURVEY
CLAW LAKE MOLYBDENUM MINES LTD.
CARSCALLEN TWP. ONT.

Conductor axis —●—●—
Possible Conductor axis —○—○—

Plan Scale 1" to 400'
Profile Scale 1" to 40'

Survey by: J.E. Steers
Drawn: A.F.B.
Date: Jan 8 1969

