WEIR MOUNTAIN REPORT NO. 8 GEOPHYSICS CLAIMS ENG 1-3, CY 1-8, CY-9, CY-10 RECORD NOS. 221-231, 479, 1124

WEIR MOUNTAIN AREA 59°39'N, 132°59'W NTS 104N/10W ATLIN MINING DISTRICT

OWNER: NORANDA MINES LIMITED OPERATOR: MATTAGAMI LAKE EXPLORATION LIMITED AUTHOR: W. MERCER DATE: SEPTEMBER 1980





TABLE OF CONTENTS

Chapter One:	Introduction	1
1-1 1-2 1-3 1-4 1-5 1-6	Property and Ownership Location and Access Physiography Climate History Summary of Work	1 1 4 4 5
Chapter Two:	Survey Methods	7
2-1 2-2 2-3 2-4	Geonics EM31 Geonics VLF EM 16R Magnetometer Crone Shootback EM	7 9 11 11
Chapter Three	: Results	13
3-1 3-2	Introduction ENG-1, 2 and 3 Claims 3-2-1 EM31 3-2-2 EM16 (VLF) 3-2-3 Magnetometer 3-2-4 Crone Shootback	13 13 13 14 14
3-3	CY-6 Claim 3-3-1 EM31 3-3-2 EM16 (VLF) and EM16R 3-3-3 Magnetometer	14 14 15
3-4	CY-7/8 Claims 3-4-1 EM16 (VLF) and EM16R 3-4-2 Magnetometer	15 15 15
3-5	Cynthia Lake Grid, CY-1/10 Claims 3-5-1 EM16 (VLF) and EM16R	16 16
3-6	Blue Sky Grid, CY-3 3-6-1 EM31 3-6-2 EM16 (VLF) and EM16R 3-6-3 Magnetometer	16 16 17 17
Chapter Four:	Conclusions and Recommendations	18
Certificate:	W. Mercer	19
Appendix One:	Statement of Costs .	20

Page

2 3

LIST OF FIGURES

-

Figure 1: Location Map Figure 2: Claim Map

.

GEOPHYSICAL MAPS (IN POCKETS)

- Map 1: EM31, ENG-1, 2, 3 Claims
- Map 2: EM16, ENG-1, 2, 3 Claims
- Map 3: Magnetometer, ENG-1, 2, 3 Claims
- Map 4: Crone Shootback, 390 Hz, ENG-1, 2, 3 Claims
- Map 5: Crone Shootback, 5010 Hz, ENG-1, 2, 3 Claims
- Map 6: EM31, CY-6 Claim
- Map 7: EM16 (VLF), CY-6 Claim
- Map 8: EM16 (VLF), CY-6 Claim, Extension East
- Map 9: EM16R, CY-6 Claim
- Map 9a: EM16R, CY-6 Claim, Extension East
- Map 10: Magnetometer, CY-6 Claim
- Map 11: Magnetometer, CY-6 Claim, Extension East
- Map 12: EM16 (VLF), CY-7/8 Claims
- Map 13: EM16R, CY-7/8 Claims
- Map 14: Magnetometer, CY-7/8 Claims
- Map 15: EM16 (VLF), CY-1 Claim
- Map 16: EM16R, CY-1 Claim
- Map 17: Magnetometer Survey, CY-1 Claim
- Map 18: EM31, Blue Sky Grid, CY-3
- Map 19: EM16 (VLF), Blue Sky Grid, CY-3
- Map 20: EM16R, Blue Sky Grid, CY-3
- Map 21: Magnetometer, Blue Sky Grid, CY-3
- Map 22: Compilation of Anomalies

Chapter One: Introduction

1-1 Property and Ownership

Noranda Mines Limited is the owner of mineral claims ENG 1-3, CY 1-10, record numbers 221-231, 479 and 1124 respectively.

The claims cover 207 units or about 5,174 hectares.

1-2 Location and Access

The claims are located in the Weir Mountain area, northern British Columbia, NTS 104N (Figures 1 and 2). The property lies about 41 km northeast of the community of Atlin and its geographical co-ordinates are 59°39'N and 132°59'W.

There are no roads to the property. Access is via helicopter from Atlin. A gravel road connects Atlin with the west shore of Surprise Lake, 22 km west of Weir Mountain.

1-3 Physiography

The area is mountainous, with gently sloping, vegetation covered, southeast flanks and precipitous cliffs on the northwest flanks. Recent glaciation has left wide U-shaped valleys as well as cirques and hanging valleys. The elevation is 1,000 to over 2,000m above sea level.

Vegetation is dense, short, willow bush up to 1,300m. Above this elevation, there is very immature alpine-type soil, 10 to 50 cm thick. Vegetation here constitutes grass and lichens. Valley bottoms are covered by extensive fluvial and moraine deposits.





1-4 Climate

The CY and ENG claims are almost completely free of snow from early July to the end of August although many cornices persist for much of the summer.

The area is characterized by strong winds, generally from the southwest. Summer temperatures average +4°C and snow storms are common during the summer months, especially June and August.

1-5 History

During July 1977, eleven claims (187 units) were staked in the Weir Mountain area for Mattagami Lake Mines Limited to cover a radioactive area discovered by a regional helicopter-borne radiometric survey in 1977. One additional claim (CY-9, 8 units) was staked in 1978 and another (CY-10, 12 units) was staked in 1980.

Geochemical sampling, radon detection in water and soil and radiometric surveys were carried out to cover most of the CY claims in 1977, (Weir Mountain Report No. 2, F. Morra).

Detailed geochemical and geophysical surveys (magnetometer, RADEM, VLF, I.P., Radiometric) were completed during the summer of 1978, predominantly on the CY-3, CY-4 and CY-6 claims. The results of this work are presented in Weir Reports, Numbers 3 and 4, the CEM Report, Weir Mountain (T. Gledhill and D. Sutherland, 1978) and the I.P. Report (Phoenix Geophysics).

This work helped delineate the source of some of the geochemical anomalies, namely two uranium anomalies and several sphalerite and magnetite occurrences. During the first part of the 1979 program (June and July) work was concentrated on the CY-3, CY-6 to CY-9, and ENG-1 to ENG-3 claims. This included geological mapping, prospecting, magnetometer, radiometric and radon in soil surveys.

No primary uranium mineralization was discovered, however following encouraging results for other metals obtained during the June-July 1979 period of work, exploration was renewed in August and September. A base camp was established at the mouth of Caribou Creek. Further geophysics, geochemistry and trenching was done (J. Biczok, Weir Mountain Report No. 6, April 1980).

1-6 Summary of Work

During the summer of 1980 the following work was performed on the property:

- Geophysical surveys including airborne EM and magnetometer and ground surveys utilizing Geonics EM31, Geonics VLFEM16R, McPhar fluxgate magnetometer, Crone Radem and Crone Shootback EM.
- 2) Geochemical surveys including soil and stream sediment sampling.
- 3) Limited trenching.
- 4) Diamond drilling using a BBS-1 drill and AQ core, for a total of 1,926 metres. Drilling was performed by Morrisette Diamond Drilling of Haileybury, Ontario.

Mattagami personnel involved in the work were as follows:

Paul Nielson	Exploration Geologist
Lloyd Alterton	Geophysical Supervisor
George Doucet	Camp expeditor, trenching and assistance
	with geophysics and drilling
Jim Thorpe	Junior Assistant
Victor Nishi	Junior Assistant
Kevin Tomlinson	Junior Assistant

This report is concerned with the geophysical surveys. Lloyd Alterton supervised this work throughout the programme.

The geophysics performed is as follows:

Claim	EM31	EM16	EM16R	Crone	Magnetometer
ENG-1	1.45 Km	1.45		0.30	1.50
ENG-2	8.85	8.85		5.80	8.90
ENG-3		3.75		2.25	3.70
CY-1		3.85	3.85		4.80
CY-2					
CY-3	4.00	7.20	2.40		8.05
CY-4					
CY-5		0.50	0.50		0.50
CY-6	20.70	12.30	12.05		21.00
CY-7		8.80	8.80		8.05
CY-8		6.00	4.50		0.70
CY-9					
CY-10		1.90	1.90	~	2.30

Chapter Two: Survey Methods

2-1 Geonics EM31

Pioneered by Geonics Limited, the EM31 measures the electrical conductivity of the ground without physical contact. Very samll currents induced in the earth from a magnetic dipole transmitter* produce a weak secondary magnetic field which, under certain conditions fulfilled in the EM31 is linearly related to the ground conductivity. The EM31 compares the weak secondary field with the primary field, using advanced circuit techniques to produce an entirely self-contained instrument which is direct reading in terrain conductivity.

Unlike plane wave systems the depth of penetration is determined by the intercoil spacing (in this case 12 feet) and is independent of terrain conductivity. The EM31 has been designed for engineering geophysics⁻ the effective depth of investigation is six metres, although under favorable conditions (searching for a conductive medium beneath a resistive layer) this figure will be substantially exceeded as shown in the "two layer" curves supplied with each instrument.

For storage, or carrying to the survey site, the instrument breaks down into a compact package which is easily extended on-site to perform the survey. Terrain conductivity measurement is carried out by walking over the ground and either continously noting the meter output or recording the output at fixed station intervals.

It is well known that the absolute value of terrain conductivity (or resistivity) is seldom diagnostic; great reliance is always placed on the spatial variation of resistivity for survey interpretation. A faster survey technique produces, for the same expenditure, either more detailed surveys or surveys over larger areas, thus greatly increasing survey interpretability. The facility for continuous observation of terrain conductivity permits the operator to examine anomalous regions immediately, to whatever detail is required.

Terrain conductivity can be measured to much higher resolution than is achieved with probes; the repeatability of 2% over typical ground allows the detection and accurate mapping of areas of very low conductivity contrast, again at high speed. The instrument is almost completely insensitive to orientation with respect to the ground; a small correction factor can be applied to the readins to correct for different operator heights. Rotation of the instrument of each survey station quickly allows determination of the local uniformity of the ground. Current injection problems in hgih resistivity areas are avoided, although instrumental accuracy is reduced at low conductivity due to the extremely small nature of the induced eddy currents. Completely self-contained, the instrument can be used at any time, anywhere in the world. Conservative design and excellent noise rejection permit use except under conditions of very intense local thunder storm activity in regions of low conductivity.

The EM31 has been used successfully for:

- detecting, delineating, and extending the boundaries of gravel deposits.
- detecting and delineating regions of high ice content in shallow permafrost.
- determining the thickness of the active layer i.e. the depth to permafrost.

- 4) locating buried river valleys infilled with glacial till.
- 5) delineating conductive regions due to groundwater pollution.
- 6) determing depth to bedrock through muskeg.

In this case the instrument is used to detect narrow, near vertical bodies of base metal mineralization surrounded by highly resistive alaskite.

2-2 Geonics VLF EM16R

The VLF EM16R is a conventional VLF EM receiver with an attachment added to enable direct reading of the apparent resistivity of the ground in ohm-meters. This requires only the non-critical insertion of two ground probes 10 meters apart.

The depth to which the field is penetrating is proportional to the so called skin depth which is a function of the apparent resistivity.

When layering is present the apparent resistivity depends on the resistivity and thickness of the top layer and the resistivity of the second layer.

In general the rock beneath overburden will be of much higher resistivity and if the overburden is less than a skin depth thick, the phase and apparent resistivity will indicate the overburden conductivity and thickness quite well. The phase between Ex and Hy is nominally 45° and generally decreases if there is a second layer of higher resistivity, and increases over a more conductive second layer.



The EM16R attachment comprises a pair of ground electrodes with internal preamps, which are pushed into the ground, 10 meters apart in the direction of the station to receive the electric field, a case attachment to the EM16, containing electronic circuits and controls to amplify and phase shift the electric field signal, and the EM16 unit itself, of which the reference coil is maximum coupled to the magnetic field. The EM16 null detection circuitry is employed.

EM16R measures the ration and phase between the horizontal magnetic field and the horizontal electric field components of the plane wave which is radiated from a selected one of the number of powerful VLF stations located around the world.

Operation is based on the principle of the RADIOHM patent of Becker and Collett of the Geological Survey of Canada.

2-3 Magnetometer

The instrument utilized was a McPhar M700 fluxgate magnetometer. For a base station an identical machine was attached to a chart recorder in camp to record diurnal variations.

Readings were taken facing north at 25m intervals at waist height, except when anomalies were encountered. In this case more frequent readings were taken.

2-4 Crone Shootback EM

In very hilly terrain it is difficult to maintain correct alignment of the transmitter and receiver coild during a horizontal loop EM survey and as a result false dip angles are often obtained. The shootback method, developed by Crone Geophysics, was intended to overcome this problem.

The field procedure is similar to using a conventional portable transmitter except that the coils are convertible to be transmitters or receivers. The spacing is usually 50m or 100m. Standard frequencies used are 390, 1,830 and 5,010 Hz.

When coil 1 transmits, coil 2 is rotated about a horizontal axis normal to the traverse line to obtain a minimum. Then a second reading is taken for the same station with transmitter and receiver interchanged.

In homogeneous ground the difference between the two tilt angles will be zero. This will be true regardless of the relative elevations of the two coils. However, with a conductor present, the secondary field will affect the tilt angles at the two receiver positions in the opposite sense. Usually two frequencies are utilized, 390 and 1,830 or 390 and 5,010 Hz. A positive resultant is obtained over a conductor that is near surface. A dipping sheet, near-surface, results in an asymmetric profile which is positive over the upper end and crosses zero to a negative maximum downdip. Flat lying conductors produce a negative anomaly symmetric about the midpoint.

Chapter Three: Results

3-1 Introduction

Results will be covered by area, as follows:

- ENG 1, 2, 3 claims, so called Galena Creek and Feather Creek grids.
- 2) CY-6 claim, so called main grid, east part.
- 3) CY-7/8, so called main grid, west part.
- 4) CY-1 claim, Cynthia Lake Grid
- 5) CY-3 claim, Blue Sky Grid

3-2 ENG-1, 2 and 3 Claims

3-2-1 EM31

Four main anomalies have been outlined on the map (Map 1):

ANOMALY R: has good strike length and strong response on line

9500NE. Anomalies R_1 and R_2 may be branches off this one, and are relatively weak.

ANOMALY N: 600m of strike length and strong response on line 9900NE.

ANOMALY P: 300m of strike and weak.

ANOMALY Q: 400m of strike and weak.

Trenches have exposed weak galena mineralization on anomalies R and Q on lines 9000 and 9100NE respectively. Anomalies N and P cross Galena Creek close to occurrences of boulders mineralized with galena and sphalerite.

3-2-2 EM16 (VLF)

Crossovers (Map 2) were obtained corresonding to anomaly R in the EM31 survey and a new anomaly, T, on the Feather Creek Grid at eg. 11000NE, 7100NW. The significance of the latter is not clear.

3-2-3 Magnetometer (Map 3)

On the ENG-2 claim a magnetic anomaly is present at the easterly continuation of anomaly P (EM31) especially at 9500NE, 5625NW. This may indicate a lateral change in mineralogy along a near vertical vein.

On the Feather Creek Grid, at 11200NE, 6550NW a spot high, anomaly S, was obtained.

3-2-4 Crone Shootback

Values of less than $\pm 10^{\circ}$ were not considered significant. Thus only one anomaly is picked out (Maps 4 and 5). This corresponds to EM31 anomaly N on 9800NE, 5725NW having vlaues of $\pm 12^{\circ}$ (390 Hz) and $\pm 10^{\circ}$ (5,010 Hz).

3-3 CY-6 Claim

3-3-1 EM31

Numerous anomalies were obtained in this area (Map 6). In the south part of the area (south of line 10000NW) two main anomalies are visible, anomaly E, which is strong and has been trenched and drilled, and anomaly J, also strong. These have strikes of 500m and 300m respectively.

The center part (lines 10000NW to 10500NW) has swarms of short anomalies over 800m x 300m. One dominant trend has been picked out as anomaly G. In the north two long anomalies, C and H, and one small one, A, have been found. Anomaly C is associated with a train of magnetite-sphaleritechlorite boulders. Anomaly A is near a tiny pos of sphalerite and galena mineralization.

3-3-2 EM16 (VLF) and EM16R

One crossover was outlined that is clearly associated with the upslope edge of anomaly C (Map 7). No crossovers were obtained in the extension of the grid to the east (Map 8).

Map 9 shows the EM16R data that shows a weak condition with the EM31 data. There are differences partly due to the difference in penetration of the instruments.

3-3-3 Magnetometer

All EM31 anomalies have corresponding, but less continuous, magnetic anomalies (Map 10). This presumably relates to the fact that the mineralization in this area is almost invariably related to magnetite whereas in Galena Creek it is not.

The magnetic data also suggests that the E and F anomalies may be one and the same.

Magnetic data to the east (Map 11) shows weak discontinuous anomalies on 10800NE, 9850NW and 9600NW and on 11700NE, 10300NW.

3-4 CY-7/8 Claims

3-4-1 EM16 (VLF) and 16R

One distinct line of crossovers, probably anomaly F, occurs in the eastern part of the area (Map 12). Two crossovers, uncorrelated with other information occur in the west area, 8350 and 8400NE, near 10+100NW.

Map 13 shows a number of zones of low resistivity. The VLF crossovers on the west side of the area show a good correlation with a zone of low resistivity with a similar N-S strike. Anomaly F does not show a good correlation with low resistivity. Note that a detailed VLF EM16R survey over known mineralization at Anomaly F in fact, did show a resistivity low. However, the survey shown in Map 13 was not sufficiently detailed to pick this up.

3-4-2 Magnetometer

One through-going magnetic anomaly is present and is marked as anomaly F (Map 14). It appears to be the continuation, or close to, that zone. Spot anomalies are present in the north part of the area.

3-5 Cynthia Lake Grid, CY-1 Claim

3-5-1 EM16 (VLF) and EM16R

Two distinct anomalies are present as crossovers, designated on Map 15 as CL-1 and CL-2. EM16R data (Map 16) correlates roughly with these zones indicating areas of low resistance, around 450 ohms. The strike lengths, so far are 1000m (CL-1) and 300m (CL-2).

3-6 Blue Sky Grid, CY-3 Claim

3-6-1 EM31

Two main anomalies are present (Map 17): ANOMALY K, strike length 700m, running north ANOMALY L, strike length 500m, running northeast

These two anomalies appear to coalesce. Three short one-line anomalies are also present.

3-6-2 EM16 (VLF) and EM16R

Two isolated crossovers were obtained on anomaly L (Map 18). EM16R data extends anomalies K and L to the east for 500m as resistivity lows (Map 19).

3-6-3 Magnetometer

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Spot anomalies were obtained, two of which correspond to spot (oneline) EM31 anomalies (Map 20).

Chapter Four: Conclusions and Recommendations

A large number of geophysical anomalies have been outlined by electromagnetic, resistivity and magnetic surveys. The most important of these are:

- 1) Two anomalies on Blue Sky Grid (K and L)
- 2) Five anomlies on CY-6 Claim (C, G, H, E and J)
- 3) One anomaly on CY-7/8 (F)
- 4) Two anomalies on ENG-2 (R and N)
- 5) Two anomalies on Cynthia Lake Grid (CL-1, CL-2)

Recommendations are as follows:

- Correlation of geochemical results with geophysical anomalies to ascertain which are associated with geochemical highs.
- Relate geophysical data to actual geology and mineralization in diamond drill holes.

CERTIFICATE

I, William Mercer, of the City of Edmonton, Province of Alberta, do hereby certify that:

- 1. I am a geologist residing at 6814 110 Street, Edmonton.
- I am a graduate of Edinburgh University, Scotland, with a
 B.Sc. Hons (1968) in geology and McMaster University, Ontario, with a Ph.D. (1975) in geology.
- 3. I have been practicing my profession since 1974 and am at present Regional Manager for Mattagami Lake Exploration Limited in Edmonton.
- 4. I am a fellow of the Geological Association of Canada and a member of the Society of Economic Geologists and the Canadian Institute of Mining and Metallurgy.
- 5. I supervised the work that is described in this report.

Dacember 31st 1980 Dated: W. MEE W. Mercer,

APPENDIX ONE: STATEMENT OF COSTS

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WEIR MOUNTAIN 1980

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STATEMENT OF GEOPHYSICAL AND GEOCHEMICAL COSTS

CAMP COSTS (Per Manday)

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Telephone	\$ 1,930.83
Camp Installations	5,999.24
Camp Supplies	17,655.20
Miscellaneous Supplies	6,701.82
Freight	1,303.90
Vehicle Rental	
Passenger Van 2-1/3 mo. x \$ 690.00 = \$ 1,610.00	
Panel Van 1/3 mo. x \$ 575.00 ≖ 210.83	
Panel Van ½ x 3-1/3 mo. x \$ 575.00 = 967.92	
Panel Van (1) - Repairs 267.50	
Panel Van (2) - Repairs276.27	
	3,332.52
Vehicle Operation	5,508.88
Radiophones	
2 SBX radios x 4 months x \$ 150.00/month	1,200.00
	\$ 43,632.39 + 942 mandays = \$ 46.32
Helicopter	
214½ hours x \$ 305.00/hour	\$ 65,346.25 + 542 mandays = <u>\$ 120.57</u>
	\$ 166.89/manday

CAMP COSTS	Days to	July 26, 1980	Days after	July 26, 1980
General	80	\$ 13,351.20	64	\$ 10,680.96
Linecutting	67	11,181.63	24	4,005.36
Core Splitting	14	2,336.46	2	333.78
Geology	10	1,668.90	ø	
Engineering	33	5,507.37	. 7	1,168.23
C.E.M.	32	5,340.48	ø	
Magnetometer	21	3,504.69	. 4	667.56
EM16/16R	24	4,005.36	32	5,340.48
Trenching	20	3,337.80	ø	
Geochemistry	43	7,176.27	14	2,336.46
EM31	33	5,507.37	1	166.89
Prospecting	6	1,001.34	ø	
Technical Studies	ø			1,835.79
TOTAL	383	\$ 63,918.87	159	\$ 26,535.51

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SALARIES (Up to July 26, 1980)*					23				
Employee	Per day*	Line Cutting	Core Splitting	Geology	Engineering	C.E.M.	Magnetometer	EM16	Trenching
G. Doucet	\$ 85.32	511.92	853.20						
P. Nielson	93.49	560.94		93.49	2,898.19	1,308.86			1,109.16
L. Alterton	71.06	355.30		71.06		284.24	994.84	142.12	
J. Biczok	81.80			409.00	163.60				
V. Nishi	41.14	740.52	82.28	123.42		164.56	41.14	82.28	
J. Thorpe	41.14	534.82	82.28			205.70	123.42	411.40	
K. Tomlinson	38.56	462.72				192.80	77.12	347.04	
A. Doucet	51.84	362.88					51.84	51.84	362.88
TOTAL		3,529.10	1,017.76	696.97	2,898.19	2,156.16	1,288.36	1,034.68	1,472.04
Employee	Per day*	Geochemistry	EM31	Prospecting	Technical Studies	General			
G. Doucet	\$ 85.32			255.96		2,047.68	-		
P. Neilson	93.49	186.98				186.98			
L. Alterton	71.05	284.24	426.36			1,065.90			
J. Biczok	81.80	245.40		163.60		245.40			
V. Nishi	41.14	329.12	329.12			370.26			
J. Thorpe	41.14	329.12	205.70			287.98			
K. Tomlinson	38.56	347.04	154.24	38.56		539.84			
A. Doucet	51.84	466.56	518.40			311.04			
TOTAL		2,188.46	1,633.82	458.12		5,055.08			

*Salary includes daily pay, bush bonus and payroll burden

SALARIES (After July 26, 1980)

En	nployee	Per day*	General	Line Cutting	Core Splitting	Engineering	Magnetometer	EM16	Geochemistry	EM31
G.	Doucet	\$ 85.32	1,535.76	426.60	170.64	85.32	85.32			
Ρ.	Nielson	93.49				467.45				
L.	Alterton	71.06	994.84	71.60		71.06	213.18	284.24	71.06	71.06
۷.	Nishi	41.14	452.54	287.98				246.84	165.56	
J.	Thorpe	41.14	287.98	41.14				493.68	123.42	
Κ.	Tomlinson	38.56	77.12	192.80				115.68	77.12	
A.	Doucet	51.84	622.08	259.20				362.88	207.36	
			3,970.32	1,278.78	170.64	623.83	298.50	1,503.32	643.52	71.06

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Employee		Per Day*	Technical Studies		
G.	Doucet	\$ 85.32	85.32		
Ρ.	Nielson	93.49			
L.	Alterton	71.06	213.18		
۷.	Nishi	41.14			
J.	Thorpe	41.14	205.70		
к.	Tomlinson	38.56	77.12		
A.	Doucet	51.84			
т0	TAL		581.32		
			-		

* Salary includes daily pay, bush bonus and payroll burden

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GRID LOCATION (Cost per km)

	Pri	ior to July 26, 1980	After July 20	5, 1980	
Camp Costs		\$ 11,181.63	\$ 4.	,005.36	
Salaries		3,529.10	1.	,278.78	
TOTAL COST		\$ 14,710.73	\$ 5,	,284.14	
TOTAL Km		36.56km		13.14km	
Claim	No. of km	Cost	No. of km	Cost	Total Cost
CY- 1			4.70	1,890.86	1,890.86
CY- 3	8.55	3,439.75			3,439.75
CY- 5			0.45	181.04	181.04
CY- 6	15.60	6,276.04			6,276.04
CY- 7	2.06	828.76	5.69	2,289.14	3,117.90
CY-10			2.30	925.31	925.31
ENG-1	0.60	241.39			241.39
ENG-2	4.15	1,669.59			1,669.59
ENG-3	5.60	2,252.94			2,252.94
			<u> </u>		

Cost per km = \$ 402.31

KM OF GEOPHY	SICS PER CLAIM					
Claim	Technique	'Magnetometer	EM16	EM16R	. EM31	C.E.M.
CY- 1		4.80	3.85	3.85		
CY- 2				+		
CY- 3		8.05	7.20	2.40	4.00	
CY- 4						
CY- 5		0.50	0.50	0.50		
CY- 6		21.00	12.30	12.05	20.70	
CY- 7		8.05	8.80	8.80		`
CY- 8		0.70	6.00	4.50		
CY- 9						
CY-10		2.30	1.90	1.90		
ENG-1		1.50	1.45		1.45	0.30
ENG-2	•	8.90	8.85		8.85	5.80
ENG-3		3.70	3.75			2.25
TOTAL		59.50	54.60	35.10	35.00	8.35

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GENERAL COSTS

General costs cover camp costs, etc. for rain days, expediting days and travel days. These have been divided up according to mandays of work on each work type.

Work Type	Mandays before July 26, 198	D Mandays after July 26, 1980	Cost/km	Total
Engineering .	33	7	n/a	2,369.60
C.E.M.	32	Ø	227.22	1,895.68
Magnetometer	21	4	24.91	1,481.00
EM16/16R	24	32	37.01	3,317.44
Trenching	20	Ø	n/1	1.184.80
Geochemistry	43	14	1.66/sample	3,376.68
EM31	33	1	57.60	2,014.16
Drilling	224	70	n/a	17,416.56
Total General Co	ost = \$ 33,057.56		-	
Total Mandays	= 558			

Total Mandays = 558 Cost per manday = \$59.24

GEOPHYSICAL COST PER KILOMETRE

Technique	Camp Cost	Salaries	Instrument Rental	General Cost	Kilometres	Cost/km
Magnetometer	\$ 4,172.25	\$ 1,586.86	\$ 1,993.50	\$ 1,481.00	59.50	\$ 155.20
EM16	4,672.92	1,269.00	ø	3,317.44	54.60	169.49
EM16R	4,672.92	1,269.00	ø	3,317.44	35.10	169.49
EM31	5,674.26	1,704.88	1,396.00	2,014.16	35.00	308.32
C.E.M.	5,340.48	2,156.16	1,020.00	1,895.68	8.35	1,247.18

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Magnetometer Rental

One McPhar M700 Base Station @ \$ 12.15/day One McPhar M700 @ <u>\$ 10.00/day</u> TOTAL 90 days x \$ 22.15/day = \$ 1,993.50

Geonics EM31 Rental

0ne	month	from	Geocon,	Calgary	/@	\$ 500.00	
0ne	month	from	GeoAnaly	/tical,	Calgary	 896.00	
							\$ 1,396.00

Crone Shootback EM

1½ Units 1 month @ \$ 1,020.00/month = \$ 1,020.00

WEIR MOUNTAIN G	EOPHYSICAL COSTS,	1980				2	6
Claim	Technique	Magnetometer 155.20/km	EM16 169.49/km	EM16R 169.49/km	EM31 308.32/km	C.E.M. 1,247.18/km	Total
CY- 1		744.96	652.54	652.54			2,050.04
CY- 2							
CY- 3		1,249.36	1,220.33	406.78	1,233.28		4,109.75
CY- 4		`					
CY- 5		77.60	84.75	84.75			247.10
CY- 6		3,259.20	2,084.73	2,042.35	6,382.22		13,768.50
CY- 7		1,249.36	1,491.51	1,491.51			4,232.38
CY- 8		108.64	1,016.94	949.14			2,074.72
CY- 9							
CY-10		356.96	322.03	322.03			1,001.02
ENG-1		232.80	245.76		447.06	374.15	1,299.77
ENG-2		1,381.28	1,499.99		2,728.63	7,233.64	12,843.54
ENG-3		574.24	635.59			2,806.16	4,015.99
TOTAL		9,234.40	9,254.17	5,949.10	10,791.19	10,413.95	45,642.81

WEIR MOUNTAIN GEOCHEMICAL COSTS, 1980

Claim	No. of Samples	Sample Analysis G	ieneral and Camp Co	st Total Cost	
CY- 1	105	1,065.45	812.70	1,878.15	ι.
CY- 2					
CY- 3					
CY- 4	116	1,212.20	897.84	2,110.04	
CY- 5	10	104.50	77.40	181.90	
CY- 6	603	6,054.15	4,667.22	10,721.37	
CY- 7	447	4,282.95	3,459.78	7,742.73	
CY- 8	226	2,007.70	1,749.24	3,756.94	
CY- 9					
CY-10	53	553.85	410.22	964.07	
ENG-1	44	459.80	340.56	800.36	
ENG-2	282	2,946.90	2,182.68	5,129.58	
ENG-3	143	1,494.35	1,106.82	2,601.17	
, TOTAL	2,029	20,181.85	15,704.46	35,886.31	
Collect	ion Cost				
		Before July 26, 19	80 After	July 26, 1980	
Camp Co	sts	7,176.27	2	2,336.46	
Salarie	s	2,188.46	-	643.52	
		9,364.73	+ 2	2,979.98 = \$ 12	2,344.25 + 2,029 samples = \$ 6.08/sample

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<u>General Cost</u>

TOTAL GENERAL AND COLLECTION COST

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\$ 7.74/sample

1.66/sample

DISTRIBUTION OF COSTS OF GEOPHYSICS AND GEOCHEMISTRY BY CLAIM AND DATE

		Prior to	July 26, 1980	After July	26, 1980	Total Costs
CLAIM	Amount Applied	Costs	Note	Costs	Note	
CY- 1	3,000.00*1	1,890.86	Grid Location Only	4,582.69	All geophysics and geochemistry	6,473.55
CY- 2						
CY- 3	6,400.00	8,204.00	All geophysics			8,204.00
CY- 4				2,110.04	All geochemistry	2,110.04
CY- 5	*1	1,264.54	All incurred costs			1,264.54
CY- 6	25,000.00	30,558.83	All costs except	4,127.08	EM16/16R surveys	34,685.91
CY- 7	1,000.00	3,117.90	Grid Location	12,629.61	All geophysics and geochemistry	15,747.51
CY- 8				6,486.16	All incurred costs	6,486.16
CY- 9						
CY-10		925.31	Grid Location	2,619.59	All costs except grid location	3,544.90
ENG-1	20,000.00*²	2,712.76	All incurred costs	245.76	EM16	2,958.52
ENG-2	*2	22,062.72	except EM16	1,499.99	EM16	23,562.71
ENG-3	8,500.00	9,524.60	All incurred costs			9,524.60

*¹ With CY-5

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*² With ENG-2



LEGEND VERTICAL SCALE : 1 cm = ·25 millimhos/metre STRONG CONDUCTOR: 🗢 MODERATE CONDUCTOR : 👄 WEAK CONDUCTOR : 🔿 CONDUCTOR TRACE : _____ MINERAL RESOURCES BRANCH TOCL

ASSESSMENT REPORT MATTAGAMI LAKE EXPLORATION LIMITED.

WESTERN FIELD OFFICE EDMONTON, ALBERTA. WEIR MOUNTAIN PROJECT SOUTH PART. ENG-1, ENG-2, ENG-3 MAP I EM-31 SURVEY

DRAWN BY: D.R.BULL OPERATOR : L. ALTERTON. DATE : AUGUST 1980 DATE: JULY 1980) 25 50 75 100 200 metres

7,200 NW

7,100 NW

7,000 NW

6,900 NW

6,800 NW

6,700 NW

6,600 NW

6,500 NW

6,400 NW

6,300 NW

6,200 NW



5,700 NW

15,300 NW

<u>6,200 NW</u> 6,100 NW 6,000 NW

5,900 NW

5,800 NW

5,600 NW

<u>5,500 NW</u> 5,400 NW 15.0 ASO 470 470 460

- ·

<NG 3

7,100 NW

7,200 NW

7,000 NW

6,900 NW

<u>6,800 NW</u>

6,700 NW

6,600 NW

6,500 NW

6,400 NW

6,300 NW

6,200 NW

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LEGEND VERTICAL SCALE : Icm = 5 degrees C.E.M. CONDUCTOR :-O-O-O-O-EM-31 CONDUCTOR : -----

MATTAGAMI LAKE EXPLORATION LIMITED. WESTERN FIELD OFFICE EDMONTON, ALBERTA. WEIR MOUNTAIN PROJECT

SOUTH PART. ENG-1, ENG-2, ENG-3 MAP 4 CEM SURVEY 390 Hz.

DRAWN BY: D.R.BULL. OPERATOR: L.ALTERTON. DATE : AUGUST 1980 DATE: JUNE 1980 200 metres

LEGEND VERTICAL SCALE: 1cm = 5 degrees EM-3I CONDUCTOR : -----MINERAL RESOURCES BRANCH MATTAGAMI LAKE EXPLORATION LIMITED. WESTERN FIELD OFFICE EDMONTON, ALBERTA. WEIR MOUNTAIN PROJECT SOUTH PART. ENG-1, ENG-2, ENG-3 MAP 5 CEM SURVEY 5010 Hz. DRAWN BY: D.R. BULL. OPERATOR : L. ALTERTON. DATE : AUGUST 1980 DATE: JUNE 1980 200 metres 75 100

7,200 NW

7,100 NW

7,000 NW

6,900 NW

<u>6,800 NW</u>

6,700 NW

6,600 NW

<u>6,500 NW</u>

6,400 NW

6,300 NW

6,200 NW

ENG

LEGEND VERTICAL SCALE : Icm = 20° STATION USED : CUTLER MAINE FACING DIRECTION: 180° IN PHASE OUT OF PHASE +8 +4 +5 +9 1 +7 -+ CROSSOVER -6 + -7 1 -9

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MN OOI'II	II,000NW	MN 006'01	IO,800 NW	<u>10,700 NW</u>	IO,600NW	IO,500NW	
		TIE LINE 10,000	NE -+				-++
		L 9,90	00 NE	• • • • • • • • • • • • • • • • • • • •	++		- - - -
L 9,800 NE ←	--		••••••	~··+++++		·····	-++
L 9,700 NE ++-							- 20 : + + 6 · ·
L 9,600 NE -++							1 1 1 L2 -
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							-20
	MN 000'11	MN 006'01	10,800 NW	NNOOT OI	10,600 NW	IO,500NW	
							-

LEGEND IN PHASE OUT OF PHASE MINERAL RESOURCES BRANCH SESSMENT REPORT VERTICAL SCALE : STATION USED CUTLER, MAINE FACING DIRECTION: 180° MATTAGAMI LAKE EXPLORATION LIMITED. WESTERN FIELD OFFICE EDMONTON, ALBERTA. WEIR MOUNTAIN PROJECT NORTH WEST PART. CY-7, CY-8 CLAIMS MAP 12 EM-16 VLF SURVEY. DRAWN BY: D.R.BULL.

DATE: SEPTEMBER 1980

200 metres

LOCATION MAP

N N	т М М	4 2 M	R S	В 2 9	∠ NE
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-460	480	470	470	550	+
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460	480	-500	470	- 500	
480	470	510	470	490	+
	480	540 520	670		
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× 500	100				
- 500	- 460	- 490	490	- 500	+
570	470	500	4,90	- 510	ļ
		520	470		
510	470	520	+ 460	+ 490	†
-5∞	460	- 500	470	- 480	ł
- 500	4.80	510	470	- 510	ļ
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470	-480	490	+490	500	ļ
450	4 8 0	460	480	- 500	+
470	470	460	480	500	l
				MINERAL F ASSES Block NO PPP	RESOURCES BRANCH SMENT REPORT BBBBB
LEGEND ITS : GAMMAS G. CONTOUR: C	- 500		AT TAGAMI LAK WESTE EDMC	KE EXPLOR TRN FIELD ON DNTON, ALBE	ATION LIMITED
-31 CONDUCTOR:		В	WEIR MOU LUE SKY GRÍD MAGNE	(NEW GRID) MAP 21 TOMETER SU	CY-3 CLAIM

