GEOCHEMISTRY AND GEOPHYSICS REPORT

RED, RED 2, CODE CLAIMS

RECORD NUMBERS 315; 448; 30316-28, 55646, 57203-11, 87258-62, 92721-22

OMINECA MINING DIVISION

NTS 93L/3

127°00'W, 54°08'N

Owner: Vital Mines Ltd.

Operator: Mattagami Lake Exploration Limited

Authors: W. Mercer and D. Sutherland

JUNE 1980

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SUMMARY

The geology of the area, as described by Biczok (1980),"has the oldest formation in the area as the Maestrichtian-Eocene Ootsa Lake Group, a series of predominantly subaerial, porphyritic andesite and minor felsic tuff. In the northeast corner of the RED claim this is apparently intruded by a "rhyolite dome", mapped by the GSC as part of the older Jurassic Telkwa formation. However, this is considered to be an intrusive by both this author and J. Sullivan and therefore probably belongs to the Ootsa Lake Group.

The Ootsa Lake Group is followed by the Oligocene-Miocene, Buck Creek Volcanics, a series of magnetite rich andesites, basaltic andesite and minor interbedded, freshwater(?) sediments.

No major faults were identified in this area although several are indicated on the GSC map of the area. No trace of mineralization was discovered in situ and no obvious reason for the geochemical anomalies was observed. Several of the geophysical anomalies were found to be related to magnetic flows or wet, swamply ground.

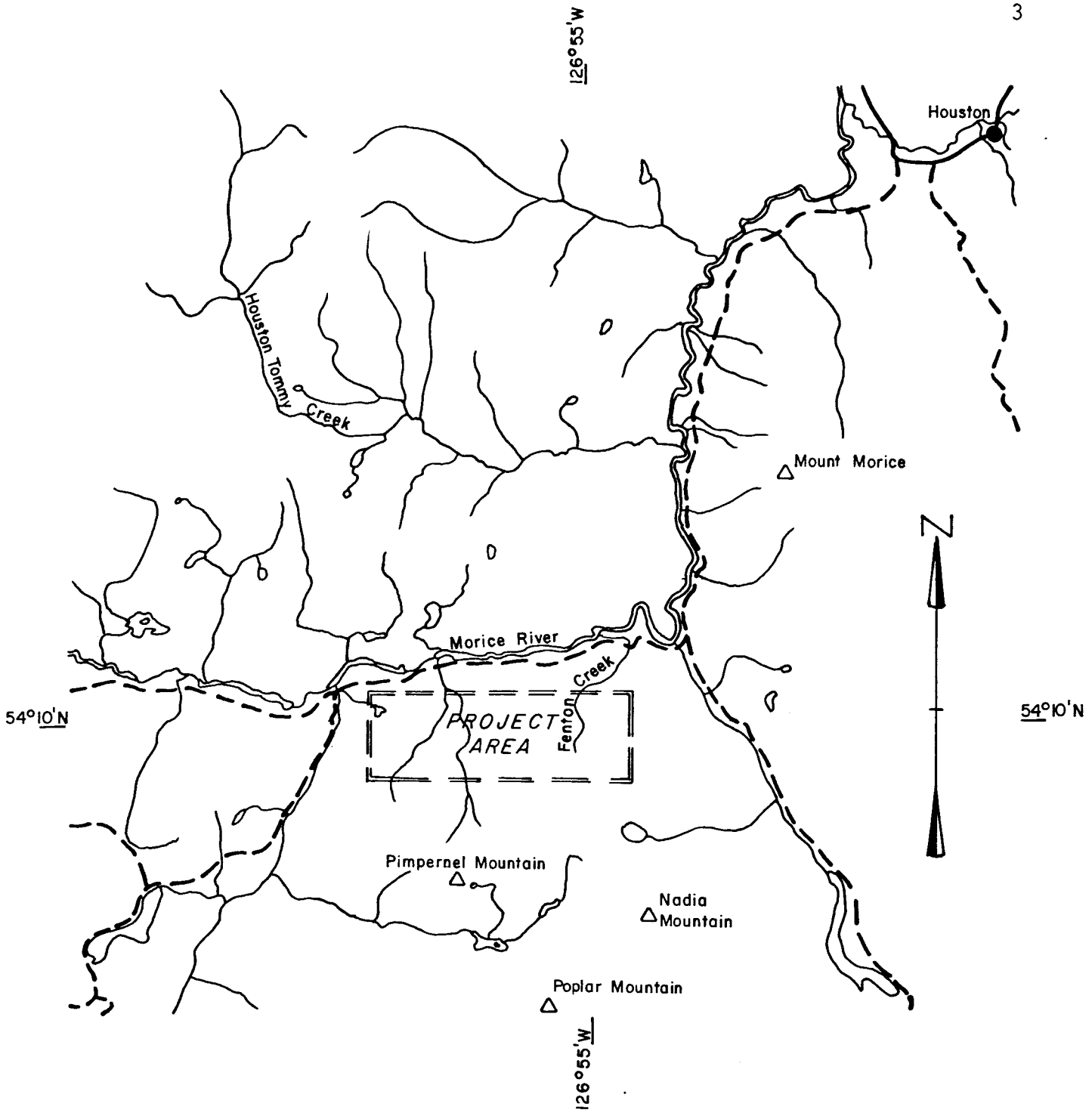
The most critical area, in regard to potential mineralization is the "rhyolite dome". Future work should include detailed geological mapping, geochemical and geophysical surveys of this area."

This report describes the results of geophysical and geochemical surveys performed during May and June, 1980.

LOCATION AND ACCESS

The claims are located 37 km southwest of Houston, B.C. Access is via a good gravel road from Houston, along the Morice River to mile 26 (sign posted). A logging road leads south from mile 26, past a small lake locally called Frypan Lake, for 9 km onto the property.

Some of the area near the property has been logged out and access is relatively good. Average altitude is about 900 m above sea level.



LEGEND

PAVED ROAD

GRAVEL ROAD

TOWN

MOUNTAIN SUMMIT

MATTAGAMI LAKE EXPLORATION LIMITED

HOUSTON PROJECT

FIGURE 1

LOCATION & ACCESS MAP

Scale of Kilometres

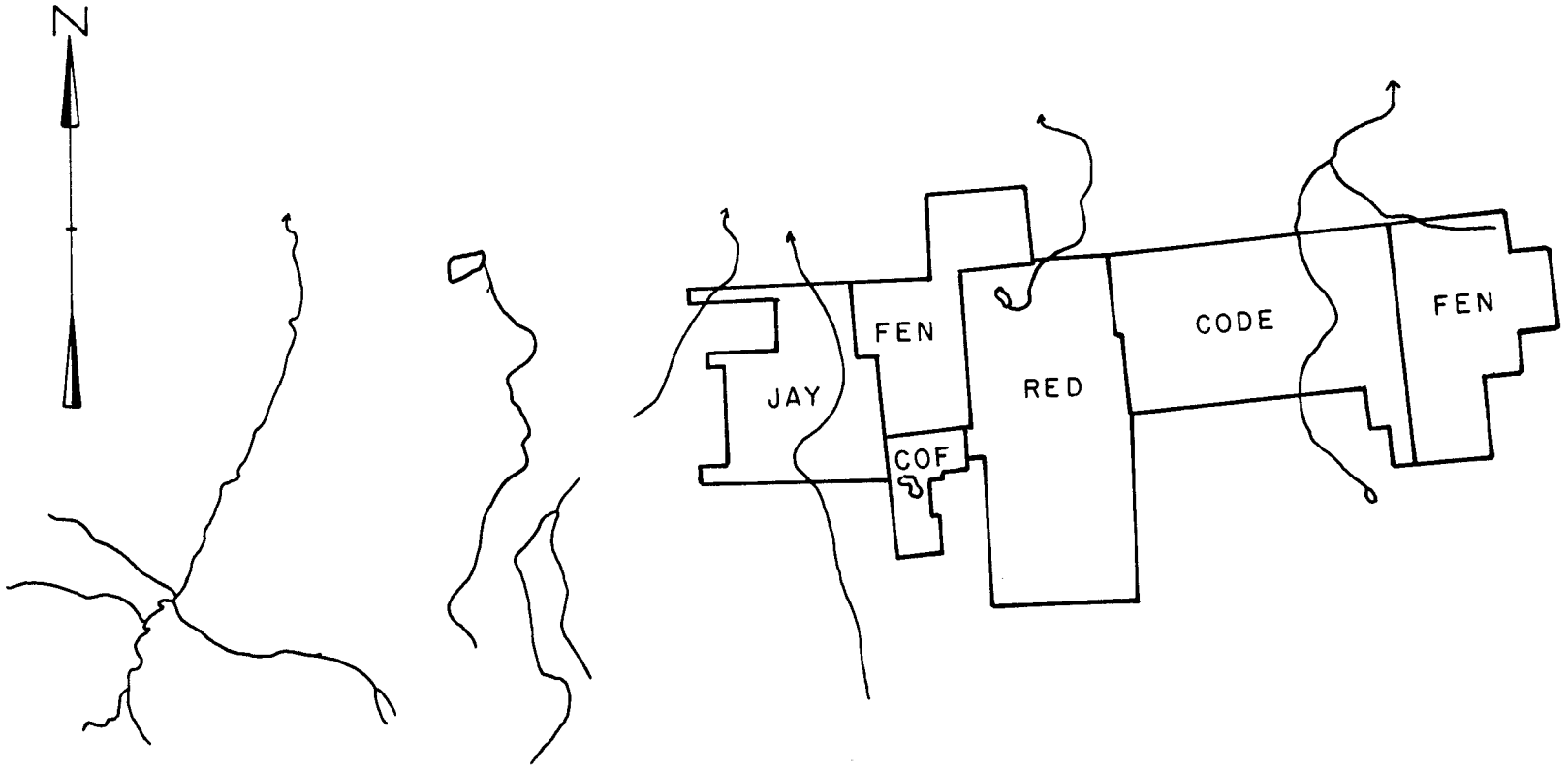
5 0 5 10

DRB 1/80

PROPERTY DEFINITION (Figures 2 and 3)

The property consisted of three claims optioned from Vital Mines Ltd. These are the RED claim of 16 units, RED 2 claim of 9 units and the JAY 2 claim of 20 units. Work was also carried out on the adjacent claims optioned from Anaconda consisting of the following claims, totalling 74 units:

FEN	181-196, 207-217, 223-233, 237, 253
COF	8- 11
CODE	3- 15, 21- 30, 40- 44, 204, 205



MATTAGAMI LAKE EXPLORATION LIMITED

FIGURE 2

HOUSTON PROJECT.

CLAIM MAP

NTS: 93L3E, 93L2W

CREW PERSONNEL

Work was performed from May 12th until June 3rd, 1980 on the property by the following personnel:

D. MacFarlane	Party Chief
C. Stewart	Senior Assisstant
L. Alterton	Geophysicist
L. Walton	Junior
E. Burwash	Junior
J. Meyer	Junior
L. Kovac	Senior Assisstant
K. Tomlinson	Junior
A. Lane	Junior
J. Thorpe	Junior
S. Wiecek	Junior

WORK PERFORMED

The following work was done during May, 1980:

1) Line cutting, 13.60 km
2) Geochemical soil sampling, 1,223 samples
3) Geonics EM16R, 12.9 km
4) Crone Radem, 11 km
5) Crone Shootback EM, 11.5 km

GRID LOCATIONS

Work being done at present is based on two grids (Figure 3):

1) JAY claim grid based on the JAY 2 claim

2) RED claim grid based on the RED 2 claim

The JAY claim grid covers the JAY claim and parts of COF 9, 10, FEN 225, 226, 229, 233, 232, 230. The RED claim grid originally covered the RED 2 claim and has been extended to the north to cover the FEN 189-196 and the the east to cover the CODE 3-14, 21-23, 26, 27, 40-44, 204 and 205.

GEOCHEMISTRY

Introduction

Soil samples were collected from A and B-horizona using a shovel. They were dried in camp and then shipped to Noranda Exploration Company Limited laboratory in Vancouver. The samples were analyzed for Cu, Pb, Zn and Ag by atomic absorption following perchloric-nitric decomposition at reflux temperature.

Results

The geochemical results are plotted on Figures 4 and 5. The results show three main anomalous areas:

1) RED claim grid, lines 11N to 14N, from 950E to 350E with Zn frequently above 1,000 ppm and Pb above 100 ppm. This is discussed below as "Mineral Hill anomaly".
2) RED claim grid, lines 5N to 11N, 700E to 500W has Ag anomalies up to 11 ppm, Zn mainly between 500 and 1,100 and Pb frequently over 100 ppm. This is duscussed as the CODE 4/7 anomaly.
3) On CODE 13, an anomalous line, 14N, 800 to 1100E. This is mainly a Zn-Pb anomaly with less Ag.

The Mineral Hill anomaly is a coherent area that shows up as extremely high values of Zn and Pb in humus samples. The anomaly appears to be cut off to the east by a NNE trending line from Line 12N, 400W to Line 15N, 200W, giving a length of 200 m.

The CODE 4/7 anomaly shows no definite pattern but contains the highest silver values in a line running ESE from Line 11N, 200W to Line 8N, 700W. This is a distance of 1000 m.

GEOPHYSICS

Radem VLF

Readings were taken with a Crone Radem VLF Electromagnetic unit at 25 m intervals. Readings recorded were signal strength and dip angle for Cutler, Maine, on some lines and Seattle on others.

Crone Shootback EM

The instrument used is the unit manufactured by Crone Geophysics. It was used as a horizontal shootback system to minimize the effects of steep topography. A coil separation of 50 m was used on all lines except Line 10N, 0 to 1000E, a separation of 100 m was applied. Two frequencies, 390 hz and 5010 hz were read. A 25 m reading interval was utilized.

Geonics EM16R

The Geonics EM16R is an adaption of the Geonics EM16 VLF electromagnetic unit that gives a direct reading of the apparent resistivity of the ground in ohm meters, requiring only the insertion of two ground probes 10 meters apart.

DISCUSSION OF RESULTS

Radem VLF Survey

N-S lines Cutler, Maine

Only one crossover was found in the survey (Figure 6). It lies near 2N on line 2E. There is a small increase in field strength that confirms this weak conductor (Figure 7).

E-W lines Seattle, Washington

There is an indication of a good conductor near 2E on 6N that may correlate with the response near 1E on line 0 to form a throughgoing zone. This has been designated Zone A.

There is also a weak response near 8E on 10N that is uncorrelated.

Crone Shootback EM (Figures 8, 9, 10)

E-W lines

Three conductors were encountered by the survey which have been designated Zones B, C and D.

ZONE B

A NNE conductor extends from 10N to 13N in the vicinity of 5E at 5010 Hz. At 390 Hz, the response is reduced but confirms the conductor on 10N and 11N. On 11N, the conductor displays moderate conductivity and is a first priority target.

ZONES C & D

These two zones flank Zone B but have a SE strike. Both are strong at 5010 Hz but much weaker at 390 Hz. Both are moderate conductors

with the best results on line 12N. These weaker zones are of secondary importance at present.

N-S lines

The N-S survey encountered 3 conductor indications: near 1N on 2W, 5N on 0 and 8N on 0 at 5010 Hz. However, none of these were confirmed at 390 Hz and consequently they indicate poor conductivity and probably overburden. No further work can be recommended on these weak responses at present.

EM16R Survey (Figure 11)

N-S surveying using Cutler, Maine, was used for the south part of the grid. A resistivity high was outlined that is centred near 1N on 4E and extends weakly to 2E. However, no significant lows are evident.

E-W surveying was carried out on the majority of the grid using Seattle, Washington. Significant highs centred near 6E on 7N and 9E on 11N are indicated by the data. A low on 10N, 350E to 650E appears to coincide with Zone B.

However, there is no confirmation of conductive zones A, C or D in the results.

Summary and Recommendations

Zone A has been interpreted from the VLF survey, but was not confirmed by the shootback survey and is considered to be of secondary importance.

Zone B is a moderate conductor picked up by the 5010 Hz shootback survey and partly confirmed at 390 Hz. This is a first priority zone worthy of immediate detailing and drilling.

Zones C and D are weaker shootback anomalies that are of minor importance at present.

No confirmation of the conductive zones, except Zone B, were obtained with the EM16R.

SUMMARY AND RECOMMENDATIONS

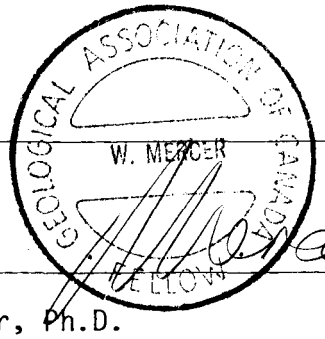
1. Three areas of geochemical anomalies have been outlined.
2. Electromagnetic surveying has detected four zones, one from VLF (Zone A) and three from Crone Shootback (Zones B, C, and D).
3. Zone B coincides with high Pb, Zn and Ag geochemistry and a low in the EM16R survey.

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.
2. 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.

Dated: 18 August 1980



W. Mercer, Ph.D.

CERTIFICATE

I, Don Benjamin Sutherland, of the City of Toronto, Province of Ontario, do hereby certify that:

1. I am a geophysicist residing at 975 Mount Pleasant Road, Toronto, Ontario.
2. I am a graduate of the University of Toronto, with a B.A. Degree (1952) in Physics and Geology and an M.A. Degree (1953) in Physics.
3. I am a member of the Society of Exploration Geophysicists and the European Association of Exploration Geophysicists.
4. I am a Professional Geophysicist and Consultant registered in the Province of Ontario.
5. I have no direct or indirect interest, nor do I expect to receive any directly or indirectly in the property or securities of Mattagami Lake Exploration Limited.
6. The statements made in this report are based on a study of published geological literature and unpublished private reports.
7. Permission is granted to use in whole or in part for assessment and qualification requirements but not for advertising purposes.

Dated at Toronto

This 30th day of July, 1980

REGISTERED PROFESSIONAL ENGINEER
D. B. SUTHERLAND
PROVINCE OF ONTARIO

Don B. Sutherland, B.A. M.A., P.Eng.

STATEMENT OF COSTS: May 11 - June 8, 1980

Salaries:

J. Helsen	2,125/month
D. MacFarlane	1,530/month
E. Burwash	1,000/month
L. Kovac	1,180/month
A. Lane	920/month
J. Meyer	1,110/month
L. Walton	880/month
C. Stewart	1,300/month
J. Thorpe	880/month
L. Alterton	1,520/month
K. Tomlinson	825/month
S. Wiecek	880/month

Vehicle Rental:

4 x 4 Pickup	$ 25.48/day for 28 days =	$ 688.06
Van	$ 18.13/day for 18 days =	326.33
TOTAL		$ 1,014.39

Linecutting:

Contractor Fees	
$ 300/mile x miles =	$ 2,679.70
Travel	20.00
Helicopter Charter	
$ 305/hour x 2.1 hours PLUS	
Fuel (22.5 x 1.50)/hour =	713.00
TOTAL	$ 3,412.70

13.6 km at $ 250.93/km

Crone Shootback EM (25 mandays):

Wages (Average $ 75.67/manday)	$ 1,891.68
Travel	244.01
CEM equipment rental	
(½ month at $ 645/month)	322.50
Equipment Operation	8.70
Vehicle Rental	228.47
Vehicle Operation	49.94
Camp Operation	202.22
TOTAL	$ 2,947.52

11.9 km at $ 247.69/km

Radem VLF (18 mandays):

Wages (Average $ 56.75/manday)	$ 1,021.41
Travel	140.33
Vehicle Rental	164.49
Vehicle Operation	47.57
Camp Operation	205.90
TOTAL	$ 1,579.70

9.95 km at $ 158.76/km

EM16R, RESISTIVITY (27 mandays):

Wages (Average $ 56.74/manday)	$ 1,532.08
Travel	210.50
Vehicle Rental	246.74
Vehicle Operation	71.32
Camp Operation	308.83
	$ 2,369.47

12.9 km at $ 183.68/km

Soil Sampling (41 mandays):

Wages (Average $ 124.02/manday)	$ 5,084.80
Travel	460.08
Vehicle Rental	374.69
Vehicle Operations	159.70
Camp Costs	1,202.82
TOTAL	$ 7,281.09

771 sample sites at $ 9.44/site
Analysis, 4 elements (Cu, Pb, Zn, Ag) at $ 3.05/sample

Miscellaneous Costs:

General Supervision in field	$ 99.59
Drafting	584.13
Report Writing	667.02
Postage and Freight	157.98
Telephone	39.40
TOTAL	$ 1,548.12

RED 2 Claim:	Linecutting	Ø	
	CEM	0.4 km x $ 247.69	$ 99.08
	Radem	0.2 km x $ 158.76	31.75
	EM16R	0.1 km x $ 183.68	18.37
	Soil Sampling	Ø	
	Misc. Costs	(apportioned)	267.93
	TOTAL		$ 417.13
RED Claim:	Linecutting		$ 426.58
	CEM	1.5 km x $ 247.69	371.54
	Radem	0.5 km x $ 158.76	79.38
	EM16R	0.5 km x $ 183.68	91.84
	Soil Sampling		6,173.27
	(463 B-horizon x $ 12.49		
	128 A-horizon x $ 3.05)		
	Misc. Costs	(apportioned)	476.34
	TOTAL		$ 7,618.95
CODE 44 Group:	Linecutting		$ 426.58
	CEM	1.0 km x $ 247.69	247.69
	Radem	Ø	
	EM16R	1.0 km x $ 183.68	183.68
	Soil Sampling		1,332.80
	(105 B-horizon x $ 12.49		
	7 A-horizon x $ 3.05)		
	Misc. Costs	(apportioned)	89.31
	TOTAL		$ 2,280.06
FEN 189 Group:	Linecutting	Ø	
	CEM	Ø	
	Radem	Ø	
	EM16R	Ø	
	Soil Sampling		$ 736.91
	(59 B-horizon x $ 12.49		
	Ø A-horizon x $ 3.05)		
	Misc. Costs	(apportioned)	238.16
	TOTAL		$ 975.07
FEN 223 Group:	Soil Sampling		$ 1,373.90
	(110 B-horizon x $ 12.49		
	Ø A-horizon x $ 3.05)		
	Misc. Costs	(apportioned)	357.24
	TOTAL		$ 1,731.14
COF 8,9,10,11:	Soil Sampling		$ 424.66
	(34 B-horizon x $ 12.49		
	Ø A-horizon x $ 3.05)		
	Misc. Costs	(apportioned)	119.08
	TOTAL		$ 543.74

APPENDIX ONE

ANALYTICAL PROCEDURES

Noranda Exploration Company, Limited
(no personal liability)
P.O. Box 2380,
Vancouver, B.C.
V6B 3L5
noranda

1050 Davie Street
Phone (604) 684-9246
Telex 04-51331

Effective June 1980

VANCOUVER GEOCHEMICAL LABORATORY

Schedule of Services and Fees

Elemental Analyses of Sediments, Soils and Rocks.

Perchloric - Nitric decomposition by A.A.

Element		Detection Limit	Price
Cadmium	Cd	0.2 PPM	1st. Element - $1.25 each additional $0.60. Soils and Sediments analyses on minus 80 mesh portion - no preparation charges.
Chromium	Cr	2	
Cobalt	Co	1	
Copper	Cu	1	
Iron	Fe	2	Rock Geochem preparation $1.25.
Lead	Pb	1	
Manganese	Mn	2	Background correction applied when necessary.
Molybdenum	Mo	1	
Nickel	Ni	1	
Silver	Ag	0.1	
Vanadium	V	10	
Zinc	Zn	1	

Elements requiring individual decomposition and specific techniques.

Antimony	Sb	1 PPM	Each Element $2.50
Arsenic	As	1	
Bismuth	Bi	1	
Fluorine	F	10	
Gold	Au	0.01 (10PPB)	
Mercury	Hg	0.005 (5PPB)	
Selenium	Se	1	
Tellerium	Te	0.1	
Tin	Sn	1	
Tungsten	W	2	
Uranium	U	0.1	

It should be noted that geochemical techniques are used for trace analysis. For samples with visibly high concentrations (%) of elements, assaying should be requested.

Total dissolution with hydrofluoric - perchloric - nitric acid.

Barium	Ba	Trace or	1st. element $2.50
Calcium	Ca	percent level	each additional $0.60
Magnesium	Mg		
Potassium	K		
Rubidium	Rb		
Sodium	Na		
Strontium	Sr		

Whole rock analysis with lithium metaborate fusion.

SiO_2, Al_2O_3, Fe_2O_3, CaO, MgO, K_2O, Na_2O, MnO, Cr_2O_3, SrO, & P_2O_5:
1st. element - $5.00, each additional element $1.50

Miscellaneous Services

Assaying services are available:

Ag, Au, Co, Cu, Mo, Ni, Pb, Zn		$5.00 per element
Conductivity (waters) umho. cm^{-1}		$1.00 per sample
Hydro-chemical analysis:		
Direct aspiration		$0.60 per element
Solvent Extraction (APDC)		$1.25 per element
Field indicator for Zinc		$10.00 per litre
Loss on Ignition	550°C ca.4 h.	$2.00 per sample
pH		$1.00 per sample

Partial extractions, ie. 0.5M HCl, EDTA, Sulphide selective and others are available on request.

All other analyses not listed, eg. semi-quantitative spectrographic, plasma emission and neutron activation analysis can be done locally at commercial laboratories.

Methodology of the Geochemcal Laboratory

Physical methods of sample treatment.
Rock and core samples involve crushing and pulverizing with a rotary plate or a ring and puck pulverizer, whichever is appropriate. Subsequently, the -200 mesh sample is rolled to insure uniformity.

For sediment and soil samples, these are dryed at ca.80°C for 24 to 48 hours.

The samples are then sieved to -80 mesh with nylon screen; the +80 mesh (reject) material is discarded.

The panned - heavy mineral samples are analyzed as received without further sample preparation, except where the material is too coarse; this material is passed through a -40 mesh screen.

Perchloric - nitric acid decomposition ($HClO_4$-HNO_3)

The analysis of soil, sediment and rock geochem to determine the lighter transition elements, is carried out by decomposition with a perchloric plus nitric acid mixture. The procedure for preparing geological samples for trace analysis by atomic absorption is as follows:

Weigh 0.400g of sample and digest with 4ml perchloric acid (70%) plus nitric acid (4+1) for 4 hours at reflux temperature.

After digestion, each sample is diluted to 10ml with water. This solution is used for the determination of Cd, Cr, Co, Cu, Fe, Pb, Mn, Mo, Ni, Ag, V and Zn with a Varian AA - 475 complete with background correction.

Complete dissolution of such elements as Cr, Fe, Mn and V is not always achieved, and may be of little significance for geochemical exploration purposes.

A brief description of elements requiring specific techniques

Determination of mercury and the elements that form volatile hydrides ie. As, Bi, Sb, Se and Te are carried out with a hydride vapour generation accessary (Varian M-65). The hydride is formed by sodium borohydride reaction with an acidified solution of the sample. This enables measurement of trace quantities by atomic absorption.

Fluorine: 0.25g sample is sintered with sodium carbonate-potassium nitrate flux and dissolved in water. The fluoride content is compared to standards on a specific ion electrode meter. (U.S. G.S. Paper 700-C)

Gold: 10.0g sample is digested with aqua regia. Gold is extracted into MIBK from the aqueous HCl solution. Atomic absorption is used to determine gold, and a sensitivity of 10ppb is attained. (At. Absorpt. Newsl. 6, 126, 1979)

Tin: 0.5g sample is heated with ammonium iodide: tin present as cassiterite is converted into stannic iodide, which sublimates. The sublimate is dissolved in 1M HCl. A pink tin complex is formed with gallein. This allows colorimetric comparison with standards to determine tin to as low as 2ppm. (R.E. Stanton 1962).

Tungsten: 1.0g sample is sintered with carbonate flux and is leached with water. The leachate is treated with KSCN. This forms a yellow tungsten thio-cyanate which is extracted into tri-n-butyl phosphate. This permits colorimetric comparison with a standard series to ca. 4ppm (F.N. Ward 1963)

Uranium: Sample digestion will depend on the extraction requested, however, if not specified, an aliquot is taken from the perchloric-nitric decomposition. The aliquot is taken diluted with water and buffer, and the luminescence of the uranyl ion is quantitatively measured on the UA-3 (Scintrex). Sensitivity of 0.1ppm in geological samples is easily obtained.

Hydrofluoric - perchloric - nitric decomposition (HF/HCl_4-HNO_3)

The analysis of silcate rock for major elements, ie. alkaline and earth alkaline metals, is performed by decomposition with hydrofluoric - perloric - nitric acid, with subsequent removal of the fluoride ion. Total dissolution of the major constituents is accomplished and this method is suitable for determination of Na, K, Mg, Ca, Mn, Fe, Rb, Sr, and Ba. Silicon is not determined since it volatilizes during dissolution.

This method is not intended to replace the elaborate fusion techniques (eg. $LiBO_2$ fusion) for major oxide analysis, and should be used as a supplementary method for geochemical exploration where quick results are necessary. (Anal. Chim. Acta 32, 1, 1965)

Whole roch analysis employing lithiumborate fusion.

A atomic absorption procedure is used for the analysis of rock to determine Si, Al, Fe, Mg, Ca, K, Na, Mn, Cr, Sr, and Ti. The method employs a lithium metaborate ($LiBO_2$) fusion and dissolution in diluted nitric acid. This is recommended for whole rock analysis of rocks and core of widely ranging major element composition. (Atomic Absorpt. Newsl. 2, 25, 1969).

The lab intends to implement the Bernas Type teflon - lined bomb for decomposition of ores and minerals at a later date.

The lab will continue the policy that after operating costs of the lab have been covered, any surplus will be rebated on a pro-rated basis.

There is considerable difference of opinion regarding what geochemical methods to use in exploration. Since there is no universally suitable method for any geochem analysis which is mainly due to varying sample material, in order to maintain quality control and consistent data, it is important to request the same decomposition and analytical methods, when various labs are contracted.

For further information please contact the Noranda Vancouver Laboratory at the following number: (604) 684-9246 E.J. van Leeuwen

Fen 189 | Fen 191 | Fen 193 | Fen 195 | L 28N | 126° 57' W | L 26N | L 24N

Fen 190 | Fen 192 | Fen 194 | Fen 196 | L 22N

Code 44 | Code 43 | Code 42 | Code 41 | Code 40 | L 20N | Code 23 | Code 25 | L 18N

L 2000N | L 1900N | Fen 232 | Fen 230 | L 18N | Fen 228 | Fen 231 FR | Red 2 | Red 2 | Red 2 | Red 2 | Fen 237 | Code 15 | Code 14 | Code 13 | Code 12 | Code 11 | L 16N | Code 22 | Code 24

L 1700N | L 16N | L 1500N | Jay 2 | Jay 2 | Jay 2 | Fen 233 | Fen 229 | Jay 2 | Fen 227 | L 14N | Code 21 | L 14N

L 12N | Red 2 | Red 2 | Red 2 | Red 2 | Code 6 | Code 7 | Code 8 | Code 9 | Code 10 | Code 30 FR | Code 27

Jay 2 | Jay 2 | Jay 2 | JAY CLAIMS GRID | Fen 226 | Fen 224 | Fen 253 | L 10N | Jay 2 | RED CLAIMS GRID | L 10N

L 8N | Fen 225 | Fen 223 | Code 5 | Code 4 | Code 3 | Code 205 | Code 204 | L 7N | Code 26 | 54° 10' N

54° 10' N | L 800N | L 700N | L 6N | Red 2 | Red 2 | Red 2 | Red 2 | TIE LINE 500 E | THE LINE 2000 E

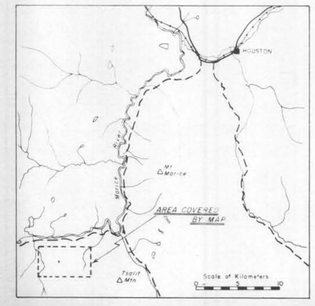
Jay 2 | Jay 2 | Jay 2 | L 600N | Jay 2 | Jay 2 | Cof 9 | L 4N | Cof 8 | 000E

L 400N | BASE LINE 2000 E | Red 2 | Red 2 | Red 2 | Red 2 | Cof 11 FR | L 1N | Fen 188

Jay 2 | Jay 2 | Jay 2 | Cof 10 | Jay 2 | L 00N | LCP | 126° 57' W | TIE LINE 1000N

Red | Red | Red | L 2W | L 3S | BASE LINE '00' | L 2E | L 4E | L 6E

Red | Red | Red



8354

MATTAGAMI LAKE EXPLORATION LIMITED.
WESTERN FIELD OFFICE
EDMONTON, ALBERTA

HOUSTON PROJECT
FIGURE 3
CLAIM & LINE GRID COMPILATION

DRAWN BY D.R. BULL
DATE JULY 1980

SCALE OF METRES 0 100 200 300 400 500


8354
MATTAGAMI LAKE EXPLORATION LIMITED.
WESTERN FIELD OFFICE
EDMONTON, ALBERTA
HOUSTON PROJECT
FIGURE 4
SOIL GEOCHEMISTRY. 'B' HORIZON
Cu., Zn., Pb., Ag. (ppm)
SURVEY DATES: MAY-JUNE 1980
DRAWN BY: D.R. BULL.
DATE JULY 1980
SCALE OF METRES
0 100 200 300 400 500
N
L 20N
L 19N
L 18N
L 17N
L 16N
L 15N
L 14N
L 12N
L 10N
L 8N
L 7N
L 6N
L 4N
BL 2000E
BASE LINE '00'
126° 57' W
54° 10' N
2500'
2600'
2700'
2800'
2900'
3000'
3100'
3200'
3300'
3400'
3500'
HOUSTON
AREA COVERED BY MAP
Scale of Kilometers

MATTAGAMI LAKE EXPLORATION LIMITED.

WESTERN FIELD OFFICE

EDMONTON, ALBERTA

HOUSTON PROJECT

FIGURE 5

SOIL GEOCHEMISTRY. 'A' HORIZON.

Cu., Zn., Pb., Ag. (ppm)

SURVEY DATES: MAY-JUNE 1980

DRAWN BY: D.R. BULL.

DATE JULY 1980

SCALE OF METRES

0 100 200 300 400 500


MATTAGAMI LAKE EXPLORATION LIMITED.
WESTERN FIELD OFFICE
EDMONTON, ALBERTA.
HOUSTON PROJECT.
FIGURE 6
RADEM SURVEY (DIP ANGLE)
OPERATORS: A. LANE, J. MEYER.
DRAWN BY: D.R. BULL.
DATE: MAY-JUNE 1980
DATE: JULY 1980
SCALE OF METRES
0 100 200 300 400 500
Stations used: Seattle, Washington.
Facing south, toward station.
Cutler, Maine.
Facing toward station.
Vertical scale: 1cm : 10°
Conductor
8354
126°57'W
54°10'N
TIE LINE 1000E
TIE LINE 2000E
TIE LINE 500E
BASE LINE 0+00
ZONE 'A'
L 20N
L 18N
L 16N
L 14N
L 12N
L 10N
L 8N
L 6N
L 4N
L 1N
(Seattle)
(Cutler)
Fenton Creek
2600'
2700'
2800'
2900'
3000'
3100'
3200'
3300'
3400'
3500'
HOUSTON
AREA COVERED BY MAP
Mt. Morice
Scale of Kilometers

126° 57' W

TIE LINE 1000E

L 20N

L 18N

L 16N

L 14N

L 12N

L 10N

L 8N

L 6N

L 4N

L 2N

BASE LINE 100S

TIE LINE 500E

TIE LINE 2000E

54° 10' N

N

26° E

MAGNETIC NORTH

2600'

2700'

2800'

2900'

3000'

3100'

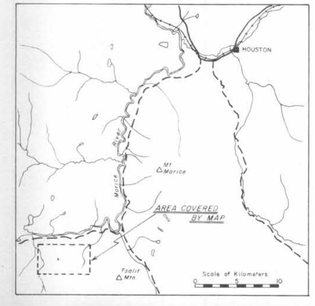
3200'

3300'

3400'

3500'

Fisher Creek



8354

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WESTERN FIELD OFFICE

EDMONTON, ALBERTA

HOUSTON PROJECT.

FIGURE 7

RADEM SURVEY (FIELD STRENGTH)

OPERATORS: A. LANE, J. MEYER. DRAWN BY: D.R. BULL.

DATE: MAY - JUNE 1980 DATE: JULY 1980

SCALE OF METRES 100 200 300 400 500

126° 57' W

TIE LINE 1000 E

L 20 N

L 18 N

L 16 N

L 14 N

L 12 N

L 10 N

L 8 N

L 6 N

L 4 N

L 2 N

TIE LINE 500 E

54° 10' N

N

26° E

MAGNETIC NORTH

2600'

2700'

2800'

2900'

3000'

3100'

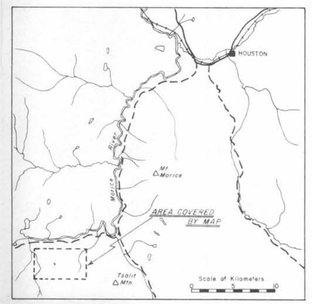
3200'

3300'

3400'

3500'

Fork Creek



8354

Frequency : 390 Hz.
Coil separation : 50 metres

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FIGURE 8
CRONE SHOOTBACK HORIZONTAL E.M. SURVEY.
(FIELD STRENGTH)

OPERATOR : L. ALTERTON. DRAWN BY : D.R. BULL.
DATES : MAY- JUNE 1980 DATE : JULY 1980

SCALE OF METRES
100 200 300 400 500

N

26° E
MAGNETIC NORTH

126° 57' W

TIE LINE 1000 E

TIE LINE 500 E

TIE LINE 2000 E

L 20 N

L 18 N

L 16 N

L 14 N

L 12 N

L 10 N

L 8 N

L 6 N

L 4 N

L 1 N

ZONE 'D'

ZONE 'C'

ZONE 'B'

54° 10' N

2600'

2700'

2800'

2900'

3000'

3100'

3200'

3300'

3400'

3500'

Fenton Creek

HOUSTON

Mt Marice

Marice

AREA COVERED BY MAP

Trail's Mtn

Scale of Kilometers

8354

Frequency: 390 Hz.
Coil Separation: 50 metres
& 100metres on L10000N only **
Vertical Scale: 1cm = 10°

** Coil separation 50metres:
Coil separation 100metres:
Conductor:

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FIGURE 9
CRONE SHOOTBACK HORIZONTAL E.M. SURVEY.
DIP ANGLE

OPERATORS: L. ALTERTON, J. THORPE.
DRAWN BY: D.R. BULL.
DATES: MAY - JUNE 1980
DATE: JULY 1980

SCALE OF METRES
0 100 200 300 400 500

126° 57' W

TIE LINE 1000E

TIE LINE 500E

TIE LINE 2000E

L 20 N

L 18 N

L 16 N

L 14 N

L 12 N

L 10 N

L 8 N

L 6 N

L 4 N

L 1 N

ZONE 'D'

ZONE 'B'

ZONE 'C'

54° 10' N

N

26° E MAGNETIC NORTH

2600'

2700'

2800'

2900'

3000'

3100'

3200'

3300'

3400'

3500'

Fenton Creek

Frequency : 5010 Hz.
Coil separation 50 metres & 100 metres on L 100N only **
Vertical scale : 1cm : 10°
Coil separation 50 metres :
Coil separation 100 metres :
Conductor :

HOUSTON

Mt. D'Morice

Morice River

AREA COVERED BY MAP

Taylor Mtn

Scale of Kilometers

8354

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EDMONTON, ALBERTA

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FIGURE 10
CRONE SHOOTBACK HORIZONTAL E.M. SURVEY
(DIP ANGLE)

OPERATORS : L. Alterton, C. Stewart.
DRAWN BY : D.R. BULL.
DATES : MAY - JUNE 1980
DATE JULY 1980

SCALE OF METRES
0 100 200 300 400 500

126° 57' W

TIE LINE 1000E

L 20N

L 18N

L 16N

L 14N

L 12N

L 10N

L 8N

L 6N

L 4N

L 2N

L 0N

54° 10' N

2600'

2700'

2800'

2900'

3000'

3100'

3200'

3300'

3400'

3500'

Fenton Creek

MAGNETIC NORTH 26° E

ZONE 'D'

ZONE 'B'

ZONE 'C'

ZONE 'A'

TIE LINE 500E

TIE LINE 2000E

(Cutler)

(Seattle)

Stations used: Cutler, Maine L1000N to L1800N
Facing West, away from station.
Seattle, Washington
L 0 0 N, L600N to L900N
Facing North, away from station.

CONDUCTOR: ·—·—·—·—·

Reversed Phase Angle

HOUSTON

Mt DeMorice

Morice

AREA COVERED BY MAP

Tahtsa Mts.

Scale of Kilometers 0 5 10

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

8354

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WESTERN FIELD OFFICE
EDMONTON, ALBERTA

HOUSTON PROJECT
FIGURE 11
EM-16-R SURVEY (RESISTIVITY)

OPERATORS: L. KOVAK, A. LANE.
DRAWN BY: D.R. BULL.
DATES: MAY- JUNE 1980
DATE: JULY 1980

SCALE OF METRES
0 100 200 300 400 500