JOUTEL RESOURCES LIMITED

REPORT ON THE MACASSA CREEK PROPERTY
MISHIBISHU LAKE AREA
SAULT STE. MARIE MINING DIVISION

W.J. McGuinty
December, 1985

TABLE OF CONTENTS

LIST OF FIGURES

SUMMARY AND RECOMMENDATIONS

Based on the reconnaissance geological and geophysical surveys performed on the Macassa Creek property to date, the areas of greatest potential for gold mineralization exist in the northern and southern volcanic belts.

Due to the limited nature of the 1985 program, the northern volcanic sequence was not fully evaluated, however, quartz tourmaline veining with low anomalous gold values have been found. These veins and other mineralized occurrences occur on properties east of the claim block.

Weak gold values as well as anomalous zinc values have been obtained from samples of graphitic rocks taken in the southern volcanic belt. These rocks appear to be fault related and have moderate to strong electromagnetic signatures.

A more detailed program of exploration is suggested for the Macassa Creek property. This program should consist of cutting control grids over the northern and southern volcanic belts, geological mapping, rock sampling, and a soil geochemical survey. A VLF-EM ground survey should also be carried out to identify conductive zones not delineated by the airborne survey.

1.0 INTRODUCTION

This report describes a reconnaissance program completed on the Macassa Creek property which is held 100% by Joutel Resources Ltd. of Suite 916, 111 Richmond Street West, Toronto, Ontario.

The reconnaissance work consisted of a ground follow-up and evaluation of anomalies obtained from an airborne geophysical survey conducted in the Spring of 1985. The work was performed in July, 1985.

For this program, a map scale of 1 inch to 500 feet was used to record geology and conductor locations. During the survey, 77 soil samples, 12 humus samples and 9 rock samples were taken and assayed for gold by Technical Services Laboratories of Mississauga, Ontario. One rock sample was also analyzed for silver, copper and zinc.

2.0 PROPERTY DESCRIPTION, LOCATION AND ACCESS

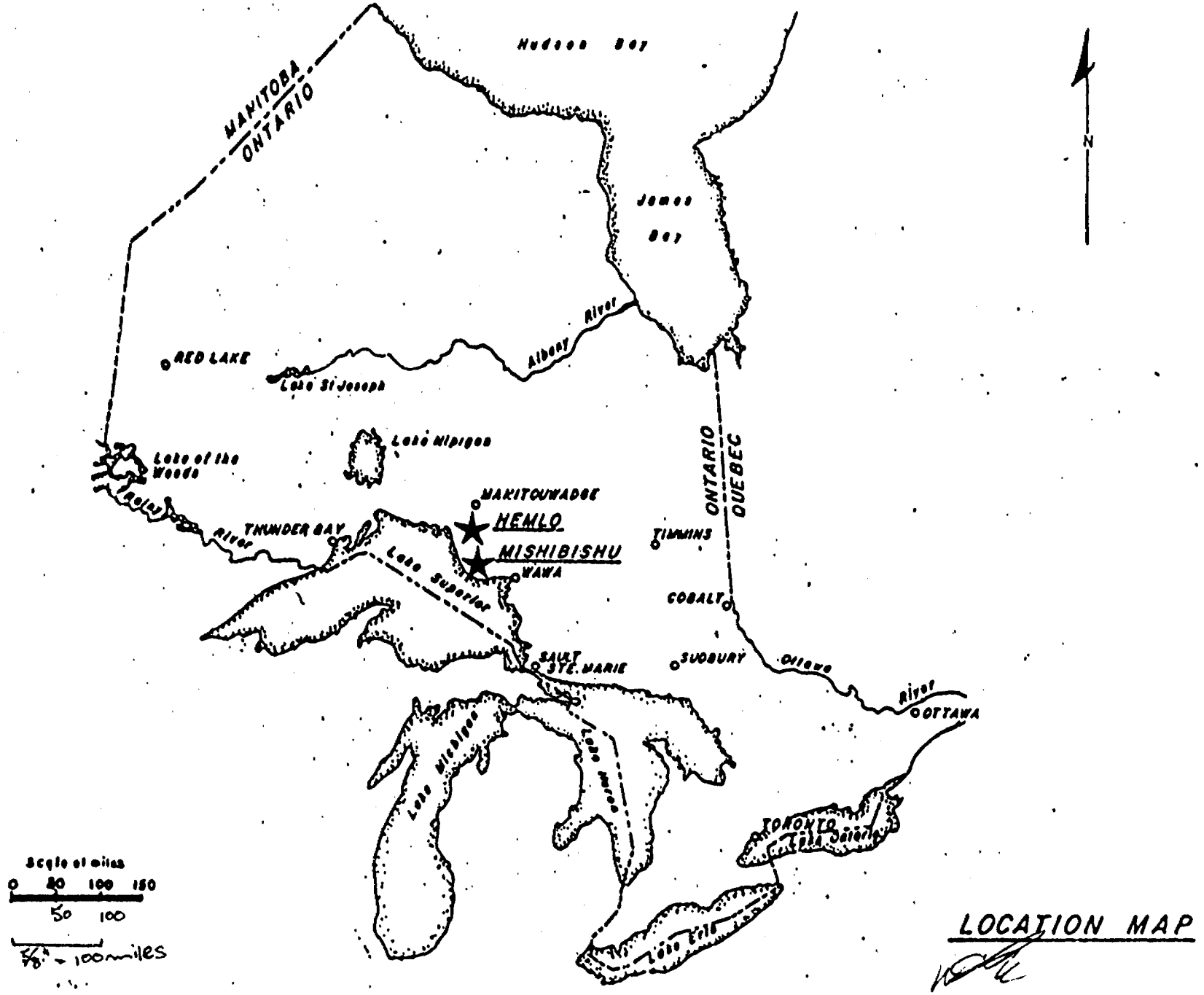
The Macassa Creek property contains 99 contiguous, unpatented mining claims located on the north limb of the Mishibishu Lake volcano-sedimentary belt.

The property is roughly thirty five miles west of Wawa, Ontario, forty five miles south of Hemlo, Ontario and 7.5 miles west of Mishibishu Lake.

There are no roads, trails, navigable rivers, power lines or large lakes on or near the property. Access is by helicopter only, from bases in Marathon or White River. Travel within the claim group is by foot or helicopter.

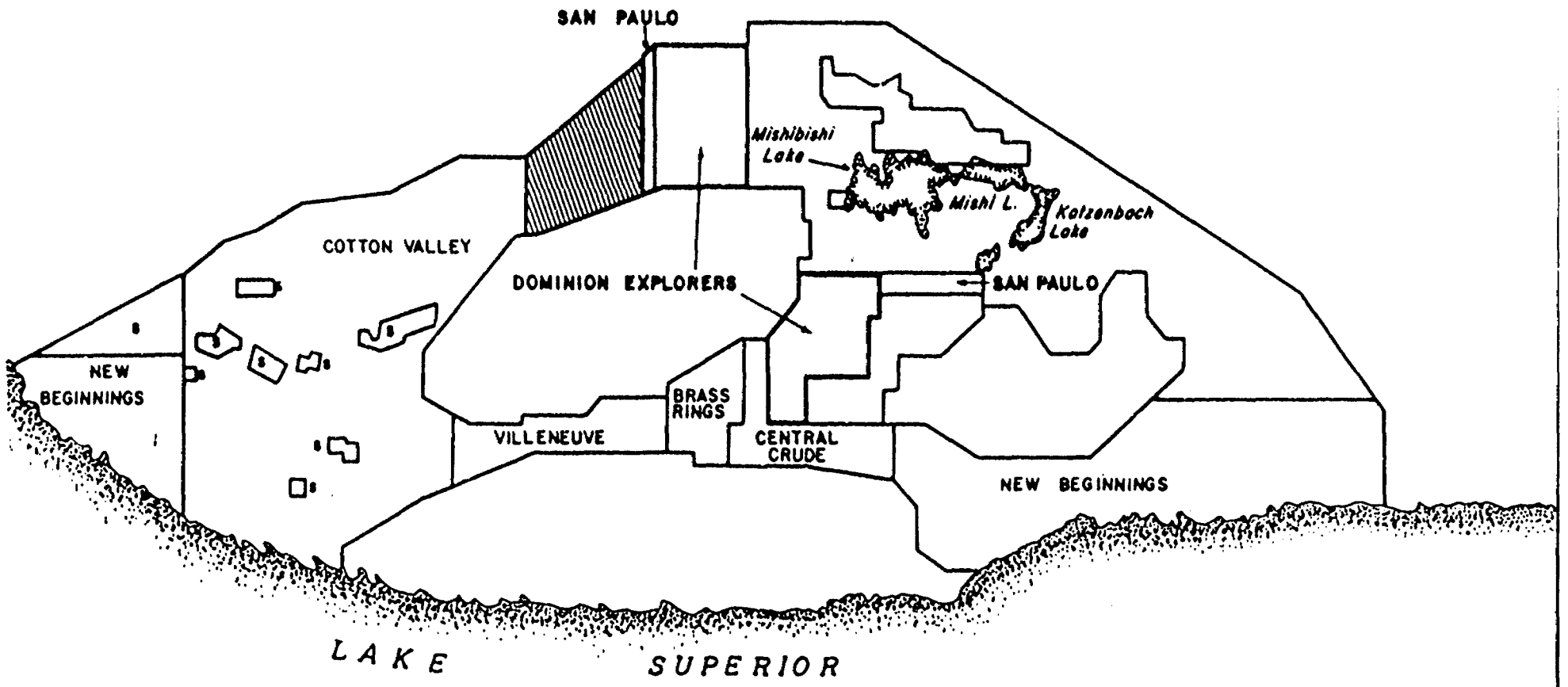
The claim numbers which comprise the property are listed below:

SSM 779314 to 779376 inclusive
SSM 809927 to 809962 inclusive



LOCATION MAP

Figure 1



JOUTEL RESOURCES LTD.

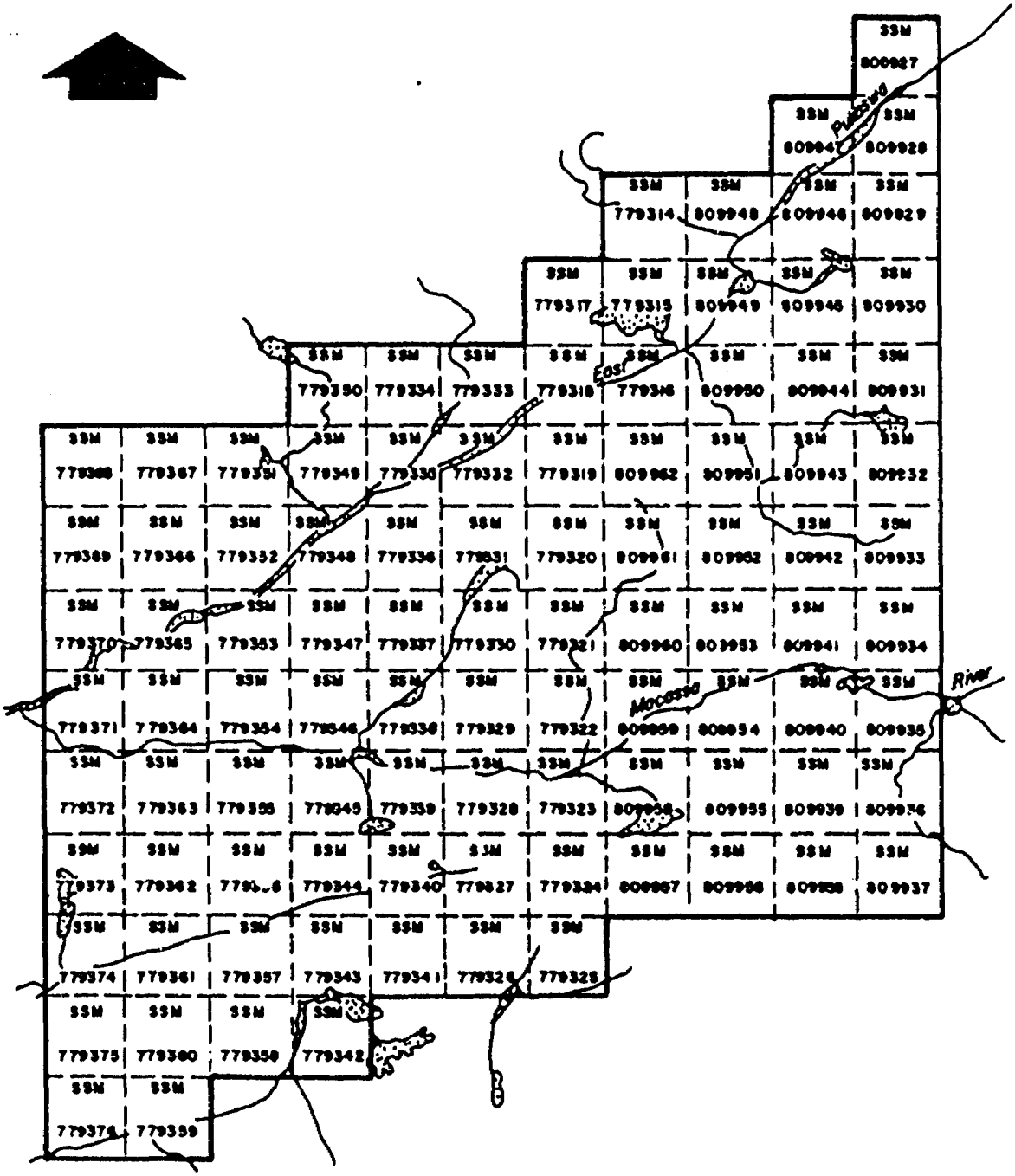
MISHIBISHU LAKE AREA

PROPERTY MAP

0 2 4 8

MILES

FIGURE 2



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DAVID LAKES AREA

SAULT STE. MARIE MINING DIVISION
DISTRICT OF THUNDER BAY

CLAIM MAP

0 1/4 1/2 1

½" = ¼ mile MILES

FIGURE 3

3.0 PHYSIOGRAPHY

The property is located in moderately rugged terrain. The northern boundary straddles the southwesterly flowing Pukaskwa River which has cut a steep ravine of approximately 150 feet in depth. Macassa Creek traverses the property from the southeast, joining the Pukaskwa near the northwest corner of the property. Sets of small ridges from 50 to 150 feet in elevation parallel the north and south boundaries, converging westward. The central portion of the property is generally flat and transected by fault related gullies. Small lakes, peat bogs and open swamps dot this area.

Forest species are primarily birch, white and black spruce, balsam and maple. Some stands of white pine are found on ridges. Underbrush is often very thick and is mainly alder and hazel.

Rock exposure is good and well distributed.

4.0 PREVIOUS EXPLORATION

Historically, the Mishibishu Lake greenstone belt has been inconsistently explored due to its limited accessibility. The entire belt was covered by an airborne electromagnetic survey by Asarco Exploration of Canada Ltd. and all identified conductors were field checked. Twelve conductors were trenched and four tested by drilling. The nearest work to the Macassa property was located 3 miles east and resulted in a drill intersection of 0.08 oz/ton over 2.9 feet. There is no evidence in the field or in the assessment records of any work being performed within the present boundaries of the property.

The most significant mineralization discovered to date in the Mishibishu Lake belt are four gold showings located north of Mishibishu Lake. These showings are currently being explored by Muscocho Explorations Ltd. Another gold showing was discovered on the south limb of the Mishibishu Lake belt in 1983 by Central Crude Ltd.

5.0 REGIONAL GEOLOGY

According to the Ontario Ministry of Natural Resources map 2332 (Bennett and Thurston, Geoscience Report 153), the Mishibishu Lake belt is approximately 10 miles thick and extends from the Superior shore at Dog Harbour in the east, over to the mouth of the Pukaskwa River in the west, a distance of about 35 miles. It is intruded by three major granitic stocks, which effectively separate the belt into north and south limbs. The Macassa Creek property traverses the north limb of the belt approximately five miles west of Mishibishu Lake.

The Mishibishu Lake belt is composed of a series of interbedded mafic and felsic volcanic rocks and associated sediments. Volcanogenic sediments occur much more frequently across the north limb of the belt. Magnetic and non-magnetic diabase dykes of considerable size, number and extent transect the belt in numerous directions.

6. GEOLOGICAL SURVEY

6.1 Property Geology

The Macassa Creek property straddles the north limb of the Mishibishu Lake volcano-sedimentary belt. The central portion of the claim block is underlain by a 4,000 foot thick sequence of sedimentary rocks trending ENE. This sequence is flanked to the north and south by belts of volcanic rocks.

The sedimentary sequence is comprised of thick boulder conglomerates interbedded with mature sandstones in the north and turbidite sequences in the south. These turbidites vary from fine sandstone to argillite in composition.

The contact with the southern volcanic belt is defined by the occurrence of a belt of fine to course grained felsic flows with interbeds of siltstone A thin unit of rhyolite is found at the southern contact of this sequence. The remainder of the southern volcanic belt is comprised of mafic tuffs with minor interbeds of mafic flow, felsic flow and felsic tuff.

The northern volcanic sequence consists mainly of mixed pyroclastic rocks which are interbedded on a scale of inches to several feet. Rocks vary from highly siliceous felsic tuffs to strongly chloritic mafic tuffs.

Diabase dykes occur across the property. These dykes are generally less than 15 feet thick and may be porphyritic. To date, most of the dykes found trend northwest.

The volcano-sedimentary belt is bounded to the north and south by granite intrusives. The northern granite contact is north of and parallel to the Pukaskwa River valley. The southern granite contact is straddled by the southern claim boundary. Property geology is shown on figure 4.

6.2 Lithologies

Mafic and Felsic Pyroclastic Rocks

Pyroclastic rocks of a wide compositional range occur on the property. In the northern volcanic belt, highly siliceous rhyolitic tuffs are found to be interbedded with chloritic mafic tuffs. Interlayer contacts are sharp and layers vary from several inches to several feet in thickness.

Pyroclastic rocks in the southern volcanic belt consist of thin to thick units of massive, weakly to strongly foliated mafic tuff. None of the rapid compositional changes characteristic of the northern volcanic sequence are seen here although discrete interbeds of felsic tuff are found.

Mafic and Felsic Flow Rocks

Felsic flow rocks are restricted to the southern volcanic belt. In this belt a sequence of white, leucocratic flows forms a major lithological unit approximately 1,700 feet thick. These flows vary from one to several feet in thickness and from fine to coarse grained. Coarse grained members display a granitic texture. These flows are composed predominantly of feldspar, are low in free quartz and have less than 1% dark minerals. The rock is very competent and forms low ridges where it is found.

Rhyolites are also found in the southern volcanic belt, mainly along the southern contact of the felsic flow sequence. They are generally pink in colour and display flow banding. Locally, the units have coarse grained cores. Pyrite in amounts ranging to 5% locally is a common constituent.

Mafic flow rocks are rare and can be found within the mafic tuffs in the southern volcanic belt. These flows are generally thin and vary from coarse to fine grained.

Sandstones

Sandstones are common throughout the central sedimentary belt. These rocks vary in composition from quartz rich to arkosic and in grain size from fine to coarse. Finer grained units are found as thin interbeds in the turbidite sequences while coarser units are interbedded with conglomerates.

Conglomerates

Boulder conglomerates are located in the northern portion of the sedimentary belt. Several sequences of conglomerate have been found which are one hundred feet or more in thickness. Clasts range in size from several inches to 1.5 feet in length and are generally well sorted and well rounded. Clasts are composed of felsic tuff and flow, quartz, granite and oxide iron formation.

Granite

Granite intrusives found on the north and south property boundaries were not examined due to their limited accessibility and lack of nearby geophysical targets. Mapping on adjacent properties suggests that the southern granite is a massive porphyritic granite while the granite to the north is a two phase intrusion of fine grained foliated granite rimming a massive intrusive of monzonite composition.

6.3 Structural Geology

The Mishibishu Lake area has been interpreted by Bennett and Thurston (1977) as a synclinal structure trending to the east. Mapping on the property supports this interpretation. The relationship between conglomerates and turbidite sequences in the central sedimentary belt suggests a eugeosynclinal

environment, deepening southward, which was subsequently folded. Graded bedding which might have been used as top indicators has been disrupted by subsidiary folding.

In the southern volcanic belt and the southern portion of the turbidite unit strikes vary from 50° to 100° astronomic but are generally in the range of 55° to 75°. Dips are on the order of 60° to 70° to the North.

Several major faults or lineaments cross the property. One pair of these features forms parallel gullies 2,500 feet apart which trend 070° and are traceable across the entire southern portion of the claim block. It is unclear whether these are structural or lithological since they parallel the regional foliation.

Another set of fault lineaments trends northwest across the property. Several of these faults have been identified in the field and have also been defined by the airborne survey. These are interpreted as radial faults related to the northern granite intrusion. Little displacement is associated with these faults.

7.0 MINERALIZATION

Nine rock samples were taken during the course of the program. Of these samples, two returned low anomalous gold values and one returned a low gold value and a very high zinc anomaly. From these samples, 3 types of mineralization have been defined to date: a) base and precious metals in graphitic horizons; b) gold in quartz-tourmaline veins; and (c) gold in pyrite and carbonate mineralized sediments.

(a) Base and Precious Metal Mineralization Graphitic Horizons:

Several graphitic conductors were identified by the reconnaissance VLF-EM surveys. Conductor C is the best exposed and a grab sample of the graphitic material returned 35 ppb Au, 1.43% zinc and 150 ppb copper. The graphitic horizon appears to be restricted in thickness and a significant width or extent may not be present. The graphitic unit is brecciated and composed of 75% black graphitic material, sphalerite, pyrite and finely crushed host rock which is a mixture of tuff and sediment.

(b) Quartz-Tourmaline Veins

These veins have been encountered in the northern pyroclastic sequence near the Pukaskwa River and are known to occur in this unit east of the property boundary. The veins are variable in width but are generally less than one foot and are composed of coarse grained grey white quartz and fine grained acicular black tourmaline. Tourmaline is found on contacts and in the veins in concentrations up to 5%. A sample of this type of mineralization containing 1% to 2% fine grained pyrite and some host rock returned a value of 40 ppb Au.

(c) Gold in Pyrite and Carbonate Altered Sediments

Weak gold mineralization was encountered in a chloritic silt unit within the conglomerates of the central sedimentary sequence. This unit is fine grained and mineralized with carbonate and 2 to 3% pyrite in conformable bands. The sample taken returned a value of 30 ppb Au. Evidence from adjacent properties suggest that gold enrichment of this type could be found throughout the conglomerates underlying this property.

8.0 RECONNAISSANCE GEOPHYSICAL SURVEY

A Geonics EM-16 VLF-EM unit was used in the field tc aid in the location of airborne electromagnetic anomalies identified earlier. Limited surveys were conducted across these conductive trends and the area traversed was mapped geologically.

These surveys consisted of north-south traverse lines run with pace and compass. The length and separation of these lines depended on the number of conductors expected and the continuity of the airborne anomalies. Seattle, Washington was the station used, readings were taken at 100 foot intervals and crossovers were located to within 2 to 3 feet. Both in-phase and quadrature were recorded. Six distinct conductors were identified during the course of the survey. A short summary of each conductor is found below. Conductor locations and survey lines are plotted on map 5.

Conductor A

This conductor is located on two lines, 4A and 4B. It is roughly 2,500 feet in length and trends ENE. On line 4A, the conductor is relatively weak and a thin graphitic horizon in tuffaceous rocks is found at the crossover. The crossover on line 4B is strong and is located in a broad peat and spruce bog. It is believed the greater response on this line is due to the effects of water.

Conductor B

This conductor has been traced by three survey lines over a length of 2,000 feet. This conductor is similar to Conductor A in its weak response and location in graphitic rocks. The host rock is an argillaceous siltstone sequence.

Conductor C

Conductor C is very strong and is found at two locations roughly 3,000 feet apart, giving an overall length of 6,000 feet. At the crossover on line 6A, a thin breccia zone filled with graphitic material is hosted by mixed sediments and tuffs.

On lines 5A and 5B to the east, the conductor is located in massive felsic flows with interbedded felsic tuffs. All three lines show a strong in-phase response and a reverse quadrature. The overall trend of the conductor is 070°.

Conductor D

This is a weak to moderate conductor approximately 2,500 feet in length and trending 070°. The conductor is not related to any topographic feature but is conformable to the regional strike. No further detail regarding this conductor was uncovered.

Conductor E

This is a moderate conductor roughly 2,000 feet long and has been located on four lines. The crossovers are found in low lying wet areas and the conductor is unexplained.

Conductor F

This is a strong unexplained conductor trending 080° over a length of 800 feet. The conductor traverses a low boggy area. Rock outcrops near the crossovers consist mainly of mafic tuffs.

9.0 GEOCHEMICAL SURVEY

During the course of the geophysical survey, soil samples were taken in proximity to crossovers detected by the VLF-EM unit. One sample was taken above the crossover and two others were taken at 50, 100 and 200 feet to the north and south. B horizon soils were taken where possible, A horizon or humus where the soil profile was not well developed. A total of 89 geochemical samples were taken and analyzed for gold by Technical Service Laboratories of Mississauga, Ontario. The results are plotted in a table form on figure 5.

Of 89 geochemical analyses, 3 samples returned anomalous values. One sample, located 100 feet downslope of conductor axis D on line 2A was analyzed at 15 ppb Au. Samples nearer the conductor axis assayed <5 ppb Au.

An anomalous values of 50 ppb Au was obtained over the axis of conductor B on line 1C. At this location, the host argillaceous siltstone is severely contorted and also has some graphitic mineralization. No other anomalous values were obtained from this conductor.

One other weak anomalous value of 15 ppb Au on line 7B is a humus sample from a low area 200 feet south of conductor F. The anomaly may not be related to the conductor, it may have been transported from elsewhere in the drainage area.

REFERENCES

Abolins , U., 1985: Report on the Macassa Creek property of Joutel Resources Limited, David Lakes Area, Sault Ste. Marie Mining Division, Ontario. Private company report.

Bennett, G, Thurston, P.C., 1977: Geology of the Pukaskwa River, University River Area, Districts of Algoma and Thunder Bay. Ministry of Natural Resources. Geoscience Report 153.

McGuinty, W.J., 1985: Report on the Macassa Creek property of the Wasabi-Chavin-O'Brien Joint Venture, Mishibishu Lake Area, Sault Ste. Marie Mining Division, Ontario. Private company report.

Terraquest Ltd., 1985: Report on an Airborne Magnetic and VLF-EM Survey, Pukaskwa River Area, Sault Ste. Marie Mining Division, Ontario.

All Authors, All Years: Ontario Ministry of Natural Resources, Divison of Mines Work Assessment Files.

STATEMENT OF QUALIFICATIONS

I, William J. McGuinty of Toronto, Ontario, do hereby certify that:

1. I am a geologist residing at 17 Sorauren Avenue, Toronto, Ontario, M6R 2C6.

2. I am a graduate of the University of Ottawa, Ontario (1983, B.Sc. [Honours]).

3. I have practised by profession for three years and supervised the work carried out in this report.

4. I do not directly or indirectly hold an interest in the property.

19/3/86

W.J. McGuinty, B.Sc.
Toronto, Ontario
February 28, 1986

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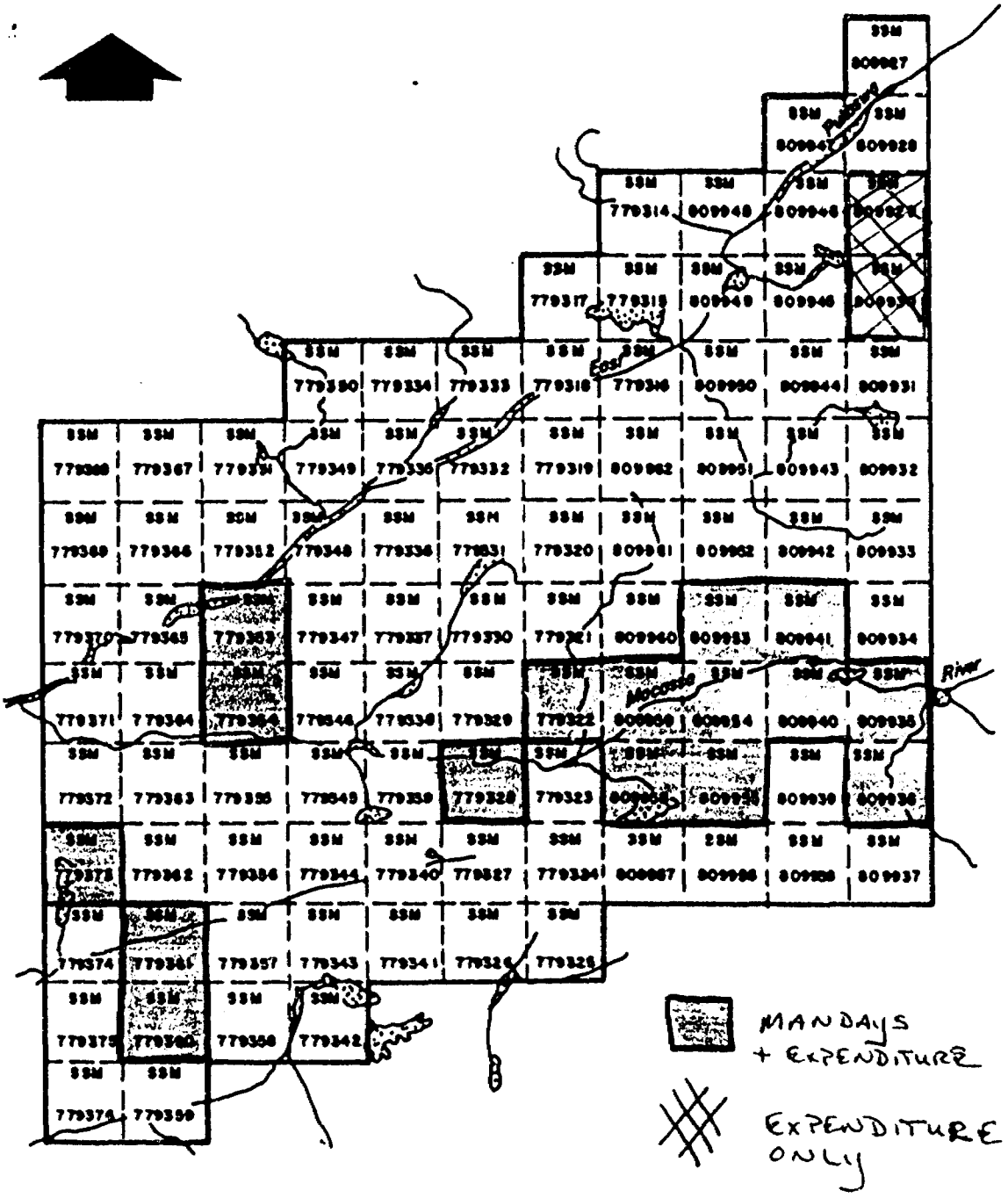
2.82 30



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DAVID LAKES AREA

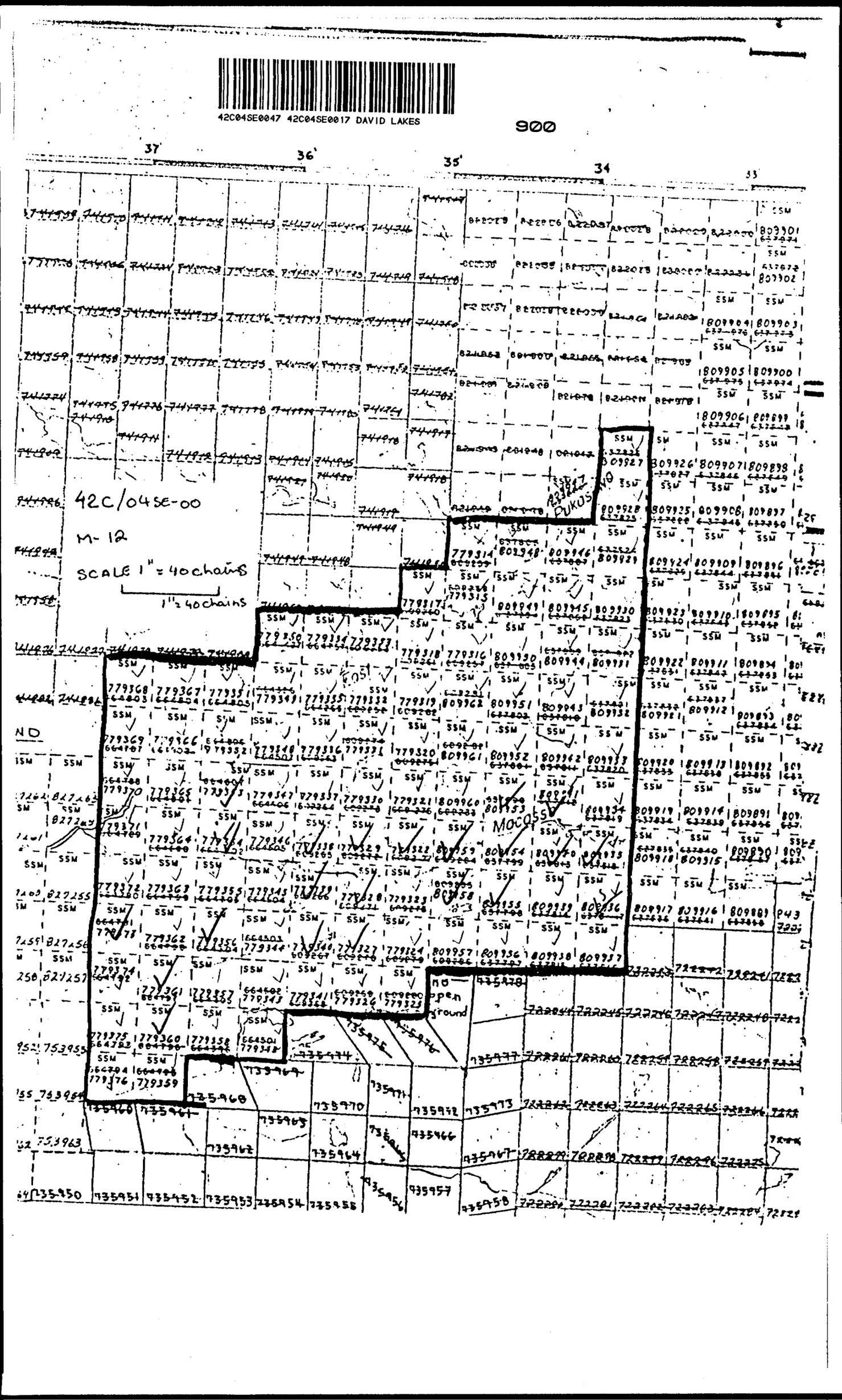
SAULT STE MARIE MINING DIVISION
DISTRICT OF THUNDER BAY

CLAIM MAP

0 1/4 1/2 1

½" = ¼ MILE MILES

27


42C04SE0047 42C04SE0017 DAVID LAKES
900
37
36
35
34
33
42C/04SE-00
M-12
SCALE 1" = 40 chains
1" = 40 chains
ND
no open ground

INVOICE NO. 29454

TECHNICAL SERVICE LABORATORIES

DIVISION OF BURGENER TECHNICAL ENTERPRISES LIMITED
1301 FEWSTER DR., MISSISSAUGA, ONTARIO L4W 1A2
TELEPHONE: (416) 625 1544

/ 29455 /

CHARGE TO
Durham Resources
916 - 111 Richmond St. W.
Toronto Ont.
M5H 2G4

DATE	REFERENCE NO.	YOUR ORDER NO.
Aug. 1/85	T1983	

SHIP TO /

TERMS: NET 30 DAYS

CODE	DESCRIPTION		UNIT PRICE	TOTAL
1.5	29	Det. of Au	7.00	203.00
2.5	29	Sample preparations	0.70	20.30
		TOTAL		223.30
		PAY THIS AMOUNT		223.30

AMOUNT APPLICABLE TO ASSESSMENT
9 SAMPLES @ 7.70 = 69.30

OK. [signature]
Durham

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DATE	REFERENCE NO.	YOUR ORDER NO.
Aug. 1/85	T1988	

SHIP TO /

TERMS: NET 30 DAYS

CODE	DESCRIPTION		UNIT PRICE	TOTAL
1.5	68	Det. of Au	7.00	476.00
2.5	68	Sample preparations	0.70	47.60
		TOTAL		523.60
		PAY THIS AMOUNT		523.60

AMOUNT APPLICABLE FOR ASSESSMENT
6 SAMPLES @ 7.70 = 46.20

OK. [signature]
Durham
[illegible]

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DURHAM RESOURCES
916 - 111 RICHMOND ST. W.
TORONTO ONT.
M5H 2G4

DATE	REFERENCE NO.	YOUR ORDER NO.
aUG. 1/85	t1990	

SHIP TO /

TERMS: NET 30 DAYS

CODE	DESCRIPTION		UNIT PRICE	TOTAL
1.5	10	DET. OF AU	7.00	70.00
2.5	10	SAMPLE PREPARATIONS	0.70	7.00
		total		77.00
		pay this amount		77.00

NOT APPLICABLE

OK [signature]
Durham

TECHNICAL SERVICE LABORATORIES
DIVISION OF SURGENER TECHNICAL ENTERPRISES LIMITED
1301 FEWSTER DR., MISSISSAUGA, ONTARIO L4W 1A2
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INVOICE NO. 29460

/ 29460

CHARGE TO
Durham Resources
916 - 111 Richmond St. W.
Toronto Ont.
M5H 2G4

DATE	REFERENCE NO.	YOUR ORDER NO.
Aug. 1/85	t1984	/

SHIP TO /

TERMS: NET 30 DAY

CODE		DESCRIPTION	UNIT PRICE	TOTAL
1.5	30	Det. of Au	7.00	210.00
3.5	1	Det. of Ag Cu & Zn	4.10	4.10
2.5	30	Sample preparations	3.00	90.00
1.5	1	Det. of Au by fire assay	7.50	7.50
		TOTAL		311.60
		AMOUNT APPLICABLE FOR ASSESSMENT PAY THIS AMOUNT		311.60

OK C.E.B.
Dunham
1985 Exploration

1 sample @ 14.10
1 sample @ 10.00
total 24.10

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TECHNICAL SERVICE LABORATORIES
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Toronto Ont.
M5H 2G4

DATE	REFERENCE NO.	YOUR ORDER NO.
Aug. 1/85	T1981	

SHIP TO /

TERMS: NET 30 DAY

CODE		DESCRIPTION	UNIT PRICE	TOTAL
1.5	101	Det. of Au	7.00	707.00
2.5	101	Sample preparations of soil	0.70	70.70
		TOTAL		777.70
		THE HARBINSON MINING & OIL GROUP AMOUNT		777.70

OK. C.E.B.
Dunham
1985 Exploration
NOT

THE HARBINSON MINING & OIL GROUP
Inv. No. 29458, 29460, 29462, 54
Amount 1913.20
Coding Explor. 1985 Dunham
Coded By
Verified By

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TECHNICAL SERVICE LABORATORIES
DIVISION OF DURGEMER TECHNICAL ENTERPRISES LIMITED
1301 FEWSTER DR., MISSISSAUGA, ONTARIO L4W 1A2
TELEPHONE: (416) 625-1544

INVOICE NO. 29472
A8229

CHARGE TO
Durham Resources
916 - 111 Richmond St. W.
Toronto, Ontario
M5H 2G4

DATE	REFERENCE NO.	YOUR ORDER NO.
Aug. 2/85	T-1982	

SHIP TO

TERMS: NET 30 DAYS

CODE	DESCRIPTION	UNIT PRICE	TOTAL
1.5	78 Det. of Au	7.00	$546.00
2.5	78 Sample Preparations	0.70	54.60
	Total		$600.60

OK. C.E. Page
Dunham
1985 Exploration
NOT APPLICABLE

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1301 FEWSTER DR., MISSISSAUGA, ONTARIO L4W 1A2
TELEPHONE: (416) 625-1544

INVOICE NO. 29500
A 8229

CHARGE TO
Durham Resources
916 - 111 Richmond St. W.
Toronto, Ont.
M5H 2G4

DATE	REFERENCE NO.	YOUR ORDER NO.
Aug. 7/85	T-2066	

SHIP TO

TERMS: NET 30 DAYS

CODE	DESCRIPTION	UNIT PRICE	TOTAL
1.5	15 det. of Au	7.00	105.00
1.5	1 det. of Au by fire assay	7.50	7.50
2.5	15 sample preparations	3.00	45.00
	AMOUNT APPLICABLE FOR ASSESSMENT		
	OK C.E. Page 7 samples @ 10.00 TOTAL		$157.50
	Dunham = 70.00		
	1985 Exploration		

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DURHAM RESOURCES INC.

918 - 111 RICHMOND STREET WEST, TORONTO, ONTARIO M5H 2G4

THE TORONTO-DOMINION BANK
111 RICHMOND ST. WEST
TORONTO, ONTARIO

DATE August 16, 1985

№ 0814

PAY

$ 4,605.85

TO THE ORDER OF

TECHNICAL SERVICE LABORATORIES
1301 Fewster Drive
Mississauga, Ontario
L4W 1A2

DURHAM RESOURCES INC.

AUTHORIZED SIGNATURE

AUTHORIZED SIGNATURE

OFFICE COPY
NOT NEGOTIABLE

DURHAM RESOURCES INC.
THE ABOVE CHEQUE IN FULL PAYMENT OF ITEMS HEREON

№ 0814

PARTICULARS		DISTRIBUTION	
Invoice # 29531, 29544, 29526, 29473 29500, [illegible], 29458, 29460 29452, 29463, 29454	$4,605 85	Explor: 1985 General	$4,605 85

CERTIFIED CORRECT _____ ACCOUNTANT

C.50 h.

TSL

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DIVISION OF BURGENER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DR., MISSISSAUGA, ONTARIO L4W 1A2
TELEPHONE: (416) 625-1544

INVOICE NO. 29531

/ / 29531

CHARGE TO
Durham Resources
~~916 - 111~~ Richmond St. W.
Toronto Ont.
M5H 2G4

DATE	REFERENCE NO.	YOUR ORDER NO.
Aug. 9/85	T2072	

SHIP TO /

TERMS: NET 30 DAYS

CODE		DESCRIPTION	UNIT PRICE	TOTAL
1.5	75	Det. of Au	7.00	525.00
2.5	75	Sample preparations	0.70	52.50
9.7	1	Collect charges	29.45	29.45
		TOTAL		606.95

THE HARBINSON MINING & OIL GROUP
Inv. No. 29531 & 29544
Amount PAY THIS AMOUNT 606.95
Coding Explor. 1985 Account
Coded By
Verified By

OK to Pay
Ruben
1985 Exploration

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AMOUNT APPLICABLE TO ASSESSMENT

74 samples @ 7.70 = 569.80

TEELA OFFLINE SERVICES
260 Richmond Street West, Toronto, Ontario M5V 1W5 (416) 591-8919
Division of Moore Corporation Limited

INVOICE NO. 3690 FOR PERIOD March 16-31/86

OUTEL

~~Durham Resources~~
111 Richmond Street, West
Suite 916
Toronto, Ontario
M5H 2G4

Attn: John Francis

Number of impressions	-150
Number of jobs submitted	-1
Printing Charges	4.50
Bindery	6.00
Other	-
9700 Programming	-
F.S.T.	.81
P.S.T.	.57
Shipping	4.00
TOTAL	$ 15.88

Net 30 DAYS
Overdue accounts are subject to 2% interest rate per month.

A handling charge of 50¢ has been ~~added to shipping charges~~

ok. s/c.
charge Jantel Res.

THE HARDINSON MINING & OIL GROUP
Inv. No. 3690
Amount 15.88
Coding Admin. General
Coded By
Verified By

MAPPING & ARTWORK SERVICES

M. J. JAMSHEDJI

Suite ~~1109~~ 1510
1900 Sheppard Avenue East,
Willowdale, Ontario
M2J 4T4

Telephone: (416) 497-9638

Joutel

TO: ~~Durham Resources Inc.~~
111 Richmond Street West
Suite 916
Toronto, Ontario
M5H 2G4

March 18, 1986

INVOICE NO. 86509

JOUTEL RESOURCES

Changes and additions to Macassa Creek Map, add Geology, Geochem and Traverses. 2 8½" x 11" Maps. 1 Claim Map.

Drafting and type	$418.25
Cronaflex	$ 17.10
Printing: Blackline copies: Labels	$144.22
	$579.57
7% P.S.T.	$ 40.57
TOTAL	$620.14

OK CE ... Joutel ... Data Project

... & OIL GROUP
Inv. No. 86509
Amount $620.14
Coding Expln: Misc.- Mapping
Coded By
Verified By

Rate for drafting
12.50/hr = 46.4 hrs
or approx 6 man days.

5

LES RESSOURCES JOUTEL LIMITEE/JOUTEL RESOURCES LIMITED

916 - 111 RICHMOND STREET WEST, TORONTO, ONTARIO M5H 2G4

№ 2656

IE TORONTO-DOMINION BANK
111 RICHMOND ST. WEST
TORONTO, ONTARIO

TE March 25, 1986

PAY $ 620.14

THE
DER
OF

M.J. JAMSHEDJI
MAPPING & ARTWORK SERVICES
Suite 1510, 1900 Sheppard Avenue East
Willowdale, Ontario M2J 4T4

LES RESSOURCES JOUTEL LIMITEE/
JOUTEL RESOURCES LIMITED

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TEL RESOURCES LIMITED
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№ 2656

PARTICULARS		DISTRIBUTION	
ice #86509	$620 14	Expln:Misc-Mapping	$620 14

CERTIFIED CORRECT ______ ACCOUNTANT

LES RESSOURCES JO..EL LIMITEE/JOUTEL RESOURC : LIMITED

916 - 111 RICHMOND STREET WEST, TORONTO, ONTARIO M5H 2G4

№ 2665

HE TORONTO-DOMINION BANK
111 RICHMOND ST. WEST
TORONTO, ONTARIO

ATE April 14, 1986

PAY $ 15.88

I THE
RDER
OF GEELA OFFLINE SERVICES
260 Richmond Street West
Toronto, Ontario
M5V1W5

LES RESSOURCES JOUTEL LIMITEE/
JOUTEL RESOURCES LIMITED

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ITEL RESOURCES LIMITED
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№ 2665

PARTICULARS		DISTRIBUTION	
voice #3690	$15 88	Admin:General	$15 88

RTIFIED CORRECT _____ ACCOUNTANT

C-68

Ontario Natural Resources

(Geophysical, Geological, Geochemical and Expenditures) #81-86 2.1388

Mining Act

Note. – If number of mining claims traversed exceeds space on this form, attach a list. – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns. – Do not use shaded areas below

Type of Survey: Reconnaissance Geological, Geochemical

Township or Area: David Lakes Plan M-7

Claim Holder(s): Joutel Resources Limited

Prospector's Licence No.: T1943

Address: 916, 111 Richmond Street West, Toronto, Ontario M5H 2G4

Survey Company: Durham Resources/O'Brien Energy

Date of Survey (from & to): 20 7 85 – 31 7 85 (Day Mo. Yr.)

Total Miles of line Cut: -

Name and Address of Author (of Geo-Technical report): W.J. McGuinty, 17 Sorauren Ave. Toronto, Ontario M6R 2C6

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid. Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Man Days		**Days per Claim**
Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	11.67
	Geochemical	
Airborne Credits		**Days per Claim**
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Expenditures (excludes power stripping)

Type of Work Performed: Report printing and Geochemical analysis, drafting

Performed on Claim(s):

Calculation of Expenditure Days Credits

Total Expenditures				Total Days Credits
$ 795.28	÷	15	=	53

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.

Mining Claims Traversed (List in numerical sequence)

Prefix	Number	Expend. Days Cr.
SSM	779322	.72
	779327	.72
	779328	.72
	779340	.72
	779353	.72
	779354	.72
	779360	.72
	779361	.72
	779373	.72
	809935	.72
	809936	.72
	809940	.72
	809941	.72
	809953	.72
	809954	.72
	809955	.72
	809958	.72
	809959	.72
	809929	20.0
	809930	20.0

SAULT STE. MARIE MINING DIV. RECEIVED 1986 7 8 9 10 11 12 1 2 3 4 5 6

S. S. MARIE MINING DIV. RECEIVED JUL 18 1986 AM PM 7 8 9 10 11 12 1 2 3 4 5 6

Total number of mining claims covered by this report of work: 20

For Office Use Only		
Total Days Cr. Recorded: 286.36	Date Recorded: July 18/86	Mining Recorder: [signature] St Jules
	Date Approved as Recorded: See Revised Statement	Branch Director

Date: July 4, 1986 — Recorded Holder or 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: W.J. McGuinty, 17 Sorauren Avenue, Toronto, Ontario M6R 2C6

Date Certified: July 4, 1986 — Certified by (Signature): [signature]

362 (81/9)

FILE to SSM 779322 ... SSM 7793[illegible] 36

Ministry of Northern Development and Mines

Ontario

Technical Assessment Work Credits

File: 2.9388

Date: September 19,1986

Mining Recorder's Report of Work No.: 81-86

Recorded Holder: JOUTEL RESOURCES LIMITED

Township or Area: DAVID LAKES AREA

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic _____ days	
Magnetometer _____ days	
Radiometric _____ days	
Induced polarization _____ days	
Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological 9,13 days	SSM 779322 779327 to 329 inclusive 779338 to 340 inclusive 779353-54-56-60-61-73 809935-36-40-41 809953 to 955 inclusive 809958-59
Geochemical _____ days	
Man days [X] Airborne [ ]	
Special provision [ ] Ground [X]	
[ ] Credits have been reduced because of partial coverage of claims.	
[X] Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

[X] not sufficiently covered by the survey [ ] insufficient technical data filed

SSM 809929-30

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geologocal - 40; Geochemical - 40; Section 77(19) - 60.

37

128 (85/12)

Ministry of Northern Development and Mines
Ontario

Technical Assessment Work Credits

File: 2.9388

Date: September 19,1986

Mining Recorder's Report of Work No.: 81-86

Recorded Holder: JOUTEL RESOURCES LIMITED

Township or Area: DAVID LAKES AREA

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic _____ days	$779.40 SPENT ON ASSAYING SAMPLES TAKEN FROM MINING CLAIMS:
Magnetometer _____ days	SSM 779353-54
Radiometric _____ days	809935-59
Induced polarization _____ days	
Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological _____ days	52 DAYS CREDIT ALLOWED WHICH MAY BE GROUPED IN ACCORDANCE WITH SECTION 76(6) OF THE MINING ACT R.SO. 1980.
Geochemical _____ days	
Man days ☐ Airborne ☐	
Special provision ☐ Ground ☐	
☐ Credits have been reduced because of partial coverage of claims.	
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

☐ not sufficiently covered by the survey ☐ insufficient technical data filed

EXPENDITURE CREDITS NOT ALLOWED FOR REPORT PRINTING AND DRAFTING.

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geologocal - 40; Geochemical - 40; Section 77(19) - 60.

Assessment Work Breakdown

Days are based on eight (8) hour Technical or Line-cutting days. Technical days include work performed by consultants, draftsmen, etc..

Type of Survey: Geological (Reconnaissance)

Technical Days				Technical Days Credits		Line-cutting Days		Total Credits		No. of Claims		Days per Claim
30.0	X	7	=	210	+	-	=	210	+	18	=	11.67

Type of Survey:

Technical Days				Technical Days Credits		Line-cutting Days		Total Credits		No. of Claims		Days per Claim
	X	7	=		+		=		+		=	

Type of Survey:

Technical Days				Technical Days Credits		Line-cutting Days		Total Credits		No. of Claims		Days per Claim
	X	7	=		+		=		+		=	

Type of Survey:

Technical Days				Technical Days Credits		Line-cutting Days		Total Credits		No. of Claims		Days per Claim
	X	7	=		+		=		+		=	

Joutel Resources
Macassa Creek Claim Block

SSM	779314	779349	809934
	779315	779350	809935
	779316	779351	809936
	779317	779352	809937
	779318	779353	809938
	779319	779354	809939
	779320	779355	809940
	779321	779356	809941
	779322	779357	809942
	779323	779358	809943
	779324	779359	809944
	779325	779360	809945
	779326	779361	809946
	779327	779362	809947
	779328	779363	809948
	779329	779364	809949
	779330	779365	809950
	779331	779366	809951
	779332	779367	809952
	779333	779368	809953
	779334	779369	809954
	779335	779370	809955
	779336	779371	809956
	779337	779372	809957
	779338	779373	809958
	779339	779374	809959
	779340	779375	809960
	779341	779376	809961
	779342	809927	809962
	779343	809928	
	779344	809929	
	779345	809930	
	779346	809931	
	779347	909932	
	779348	809933	

Joutel Resources Limited
Claims traversed on the
Macassa Creek Property during
1985 field season

SSM	779322
	779327
	779328
	779340
	779353
	779354
	779360
	779361
SSM	779373
SSM	809935
	809936
	809941
	809953
	809954
	809955
	809959

Total of 18 claims

October 17, 1986

Your File: 81-86
Our File: 2.9388

Mining Recorder
Ministry of Northern Development and Mines
875 Queen Street East
Box 669
Sault Ste. Marie, Ontario
P6A 2B3

Dear Madam:

RE: Notice of Intent dated September 19, 1986
Data for Assaying and Geological Survey on
Mining Claims SSM 779322, et al, in the
David Lakes Area

The assessment work credits, as listed with the above-mentioned Notice of Intent, have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours sincerely,

J.C. Smith, Supervisor
Mining Lands Section

Whitney Block, 6th Floor
Queen's Park
Toronto, Ontario
M7A 1W3

Telephone: (416) 965-4888

SH/mc
cc: Joutel Resources Limited
Suite 916
111 Richmond Street West
Toronto, Ontario
M5H 2G4

Resident Geologist
Sault Ste. Marie, Ontario

Encl.

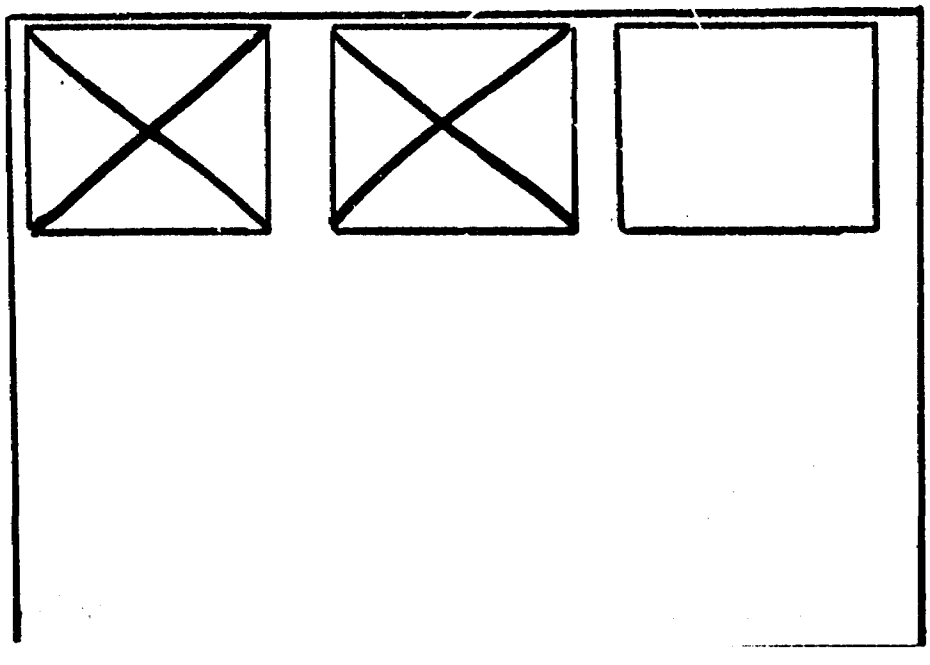
W.J. McGuinty
17 Sorauren Avenue
Toronto, Ontario
M6R 2C6

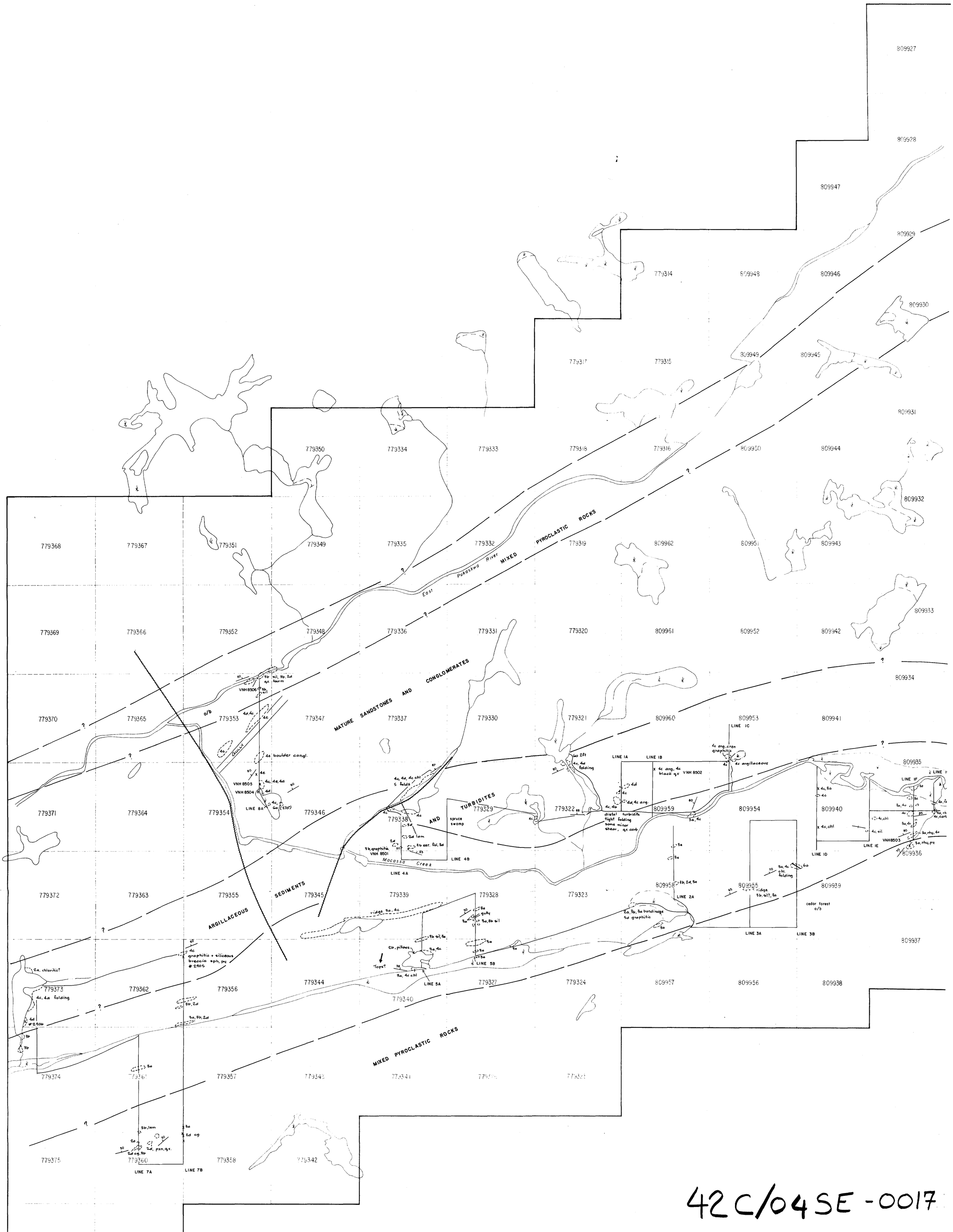
Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario

SEE ACCOMPANYING MAP(S) IDENTIFIED AS

42c/04SE-0017 #1-2

LOCATED IN THE MAP CHANNEL IN THE FOLLOWING SEQUENCE (x)





42C/04SE-0017

MAPPING AND ARTWORK SERVICES

SOIL GEOCHEMISTRY OF VLF-EM CONDUCTORS

CONDUCTOR AND LINE		Au (ppb)
Conductor A		
LINE 4A -	2 + 00N	< 5
	1 + 00N	< 5
	0 + 50N	< 5
	X.0	< 5
	0 + 50S	< 5
	1 + 00S	< 5
	2 + 00S	< 5
LINE 4B - Conductor not sampled, spruce bog		
Conductor B		
LINE 1A -	2 + 00N	< 5
	1 + 00N	< 5
	0 + 50N	< 5
	X.0	< 5
	0 + 50S	< 5
	1 + 00S	< 5
LINE 1C -	2 + 00N	< 5
	1 + 00N	< 5
	0 + 50N	< 5
	X.0	< 5
	0 + 50S	< 5
	1 + 00S	< 5
	2 + 00S	< 5
Conductor C		
LINE 6A - Conductor identified, no soils taken		
LINE 5A -	X.0	< 5
LINE 5B -	2 + 00N	< 5
	1 + 00N	< 5
	0 + 50N	< 5
	X.0	< 5
	0 + 60S	< 5
	1 + 20S	< 5

Conductor D

LINE 2A -	2 + 00N	< 5
	1 + 00N	< 5
	0 + 50N	< 5
	X.0	< 5
	0 + 50S	< 5
	1 + 00S	15
LINE 3A -	2 + 00N	< 5
	1 + 00N	< 5
	0 + 50N	< 5
	X.0 (south)	< 5
	0 + 50S	< 5
	1 + 00S	< 5
	2 + 00S	< 5
LINE 3B -	1 + 00N	< 5
	0 + 50N	< 5
	X.0	< 5
	0 + 50S	< 5
	1 + 00S	< 5
	1 + 75S	< 5

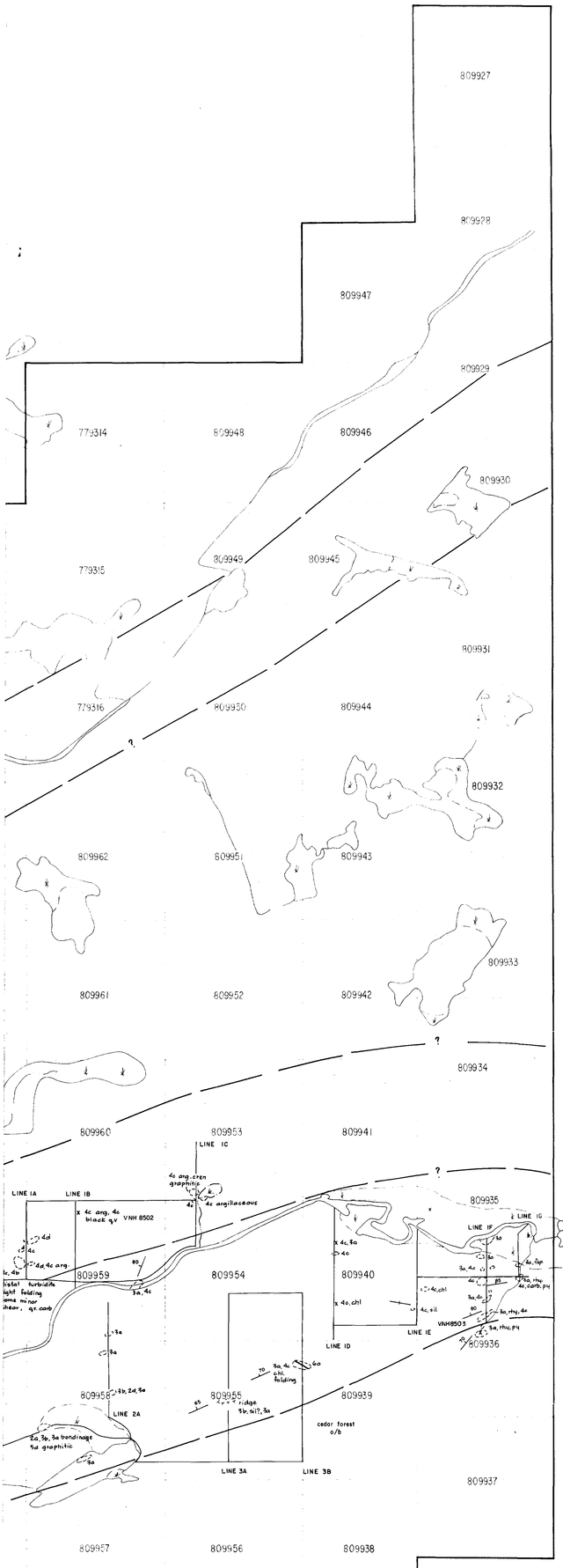
Conductor E

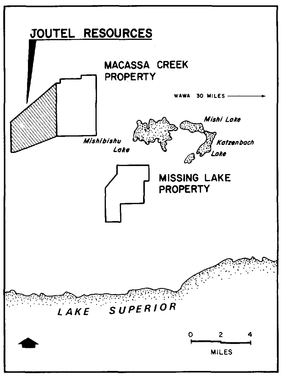
LINE 3B -	2 + 00N	< 5
	1 + 20N	< 5
	0 + 50N	< 5
	X.0 (north)	< 5
	0 + 50S	< 5
	1 + 00S	< 5
	1 + 50S	< 5
LINE 1D -	0 + 50N	< 5
	X.0	< 5
	0 + 50S	< 5
	1 + 00S	< 5
LINE 1E -	2 + 00N	< 5
	1 + 00N	< 5
	0 + 50N	< 5
	X.0	< 5
	0 + 50S	< 5
	1 + 00S	< 5
	2 + 00S	< 5
LINE 1F -	2 + 00N	< 5
	1 + 00N	< 5
	0 + 60N	< 5
	X.0	< 5
	0 + 50S	< 5
	1 + 00S	< 5
	1 + 50S	< 5
LINE 1G -	0 + 40N	< 5
	X.0	< 5
	0 + 50S	< 5
	1 + 00S	< 5

Conductor F

LINE 7A -	2 + 00N	< 5
	1 + 00N	< 5
	0 + 50N	< 5
	X.0	< 5
	0 + 50S	< 5
	1 + 00S	< 5
	2 + 00S	< 5
LINE 7B -	2 + 00N	< 5
	1 + 00N	< 5
	0 + 50N	< 5
	X.0	< 5
	0 + 50S	< 5
	1 + 00S	< 5
	2 + 00S	15

42C/04SE-0





LEGEND

TABLE OF LITHOLOGIES

GRANITIC ROCKS - EARLY PRECAMBRIAN

7	7a	Granite - trondjhemite
	7b	Granodiorite
	7c	Felsite dykes

INTRUSIVE - LATE PRECAMBRIAN

6a	6a	Diabase
6b	6b	Gabbro

CHEMICAL METASEDIMENTS

5	5a	Chert, oxide iron formation
	5b	Graphite schist
	5c	Sulphide iron formation
	5d	Chert
	5e	Carbonate facies iron formation

CLASTIC METASEDIMENTS

4	4a	Chloritic (chemical?) sediment
	4b	Argillite
	4c	Siltstone, chloritic siltstone
	4d	Sandstone, greywacke
	4e	Conglomerate

FELSIC TO INTERMEDIATE METAVOLCANICS

3a,f	3a	Felsic Flow
	3b	Tuff undifferentiated
3b,c,d,e	3c	Quartz eye tuff
	3d	Crystal tuff
	3e	Lapilli tuff and agglomerates
	3f	Sericite schist

MAFIC TO INTERMEDIATE METAVOLCANICS

2a,b,c	2a	Massive flows
	2b	Pillowed flows
	2c	Chlorite schist
2d,e,f	2d,distal	Tuff (undifferentiated); crystal tuff
	2e	Lapilli tuff
	2f	Agglomerate

ULTRAMAFIC FLOWS

1	1a	Massive flow

ABBREVIATIONS

Au	gold mineralization - 100 pph
Ag	silver mineralization - 0.5 oz ton
sph	sphalerite
gn	galena
bn	bournonite
py	pyrite
cpy	chalcopyrite
asp	arsenopyrite
po	pyrrhotite
ser	sericite
bio	biotite
sil	silicified
carb	carbonate
chl	chlorite, chloritic
gt	garnet
epi	epidote
ab	albite
act	actinolite
qv	quartz veining
tourm	tourmaline
sch	schistose
rxt	recrystallized
oren	crenulated
lam	laminated
fol	foliated
lin	lineated
inj	injection phase (granite)
pxn	acicular chlorite recrystallization pilotaxic texture
bx	breccia
fsp	feldspar
porph	porphyritic
qe	quartz eyes

SYMBOLS

- Fault
- Foliation; inclined, vertical
- Bedding; inclined, vertical, pillows
- Top indicator
- Large outcrop
- x Small outcrop
- Swamp; with boundaries
- o/b Over burden
- DDH Diamond drill hole vertical, inclined
- Anticlinal axis, synclinal axis
- Shear

ROCK SAMPLING

SAMPLE Nº	Au (ppb)	Ag (ppm)	Cu (ppm)	Zn (ppb)
VNH 8501	5			
VNH 8502	< 5			
VNH 8503	< 5			
VNH 8504	30			
VNH 8505	< 5			
VNH 8506	40			
2905	35	< 0.2	150	> 10,000
2906	10			
2909	100			

42C/04SE-0017#1

JOUTEL RESOURCES LIMITED

MISHIBISHU LAKE AREA
MACASSA CREEK PROPERTY

SAULT STE. MARIE MINING DIVISION

GEOLOGY AND TRAVERSE MAP

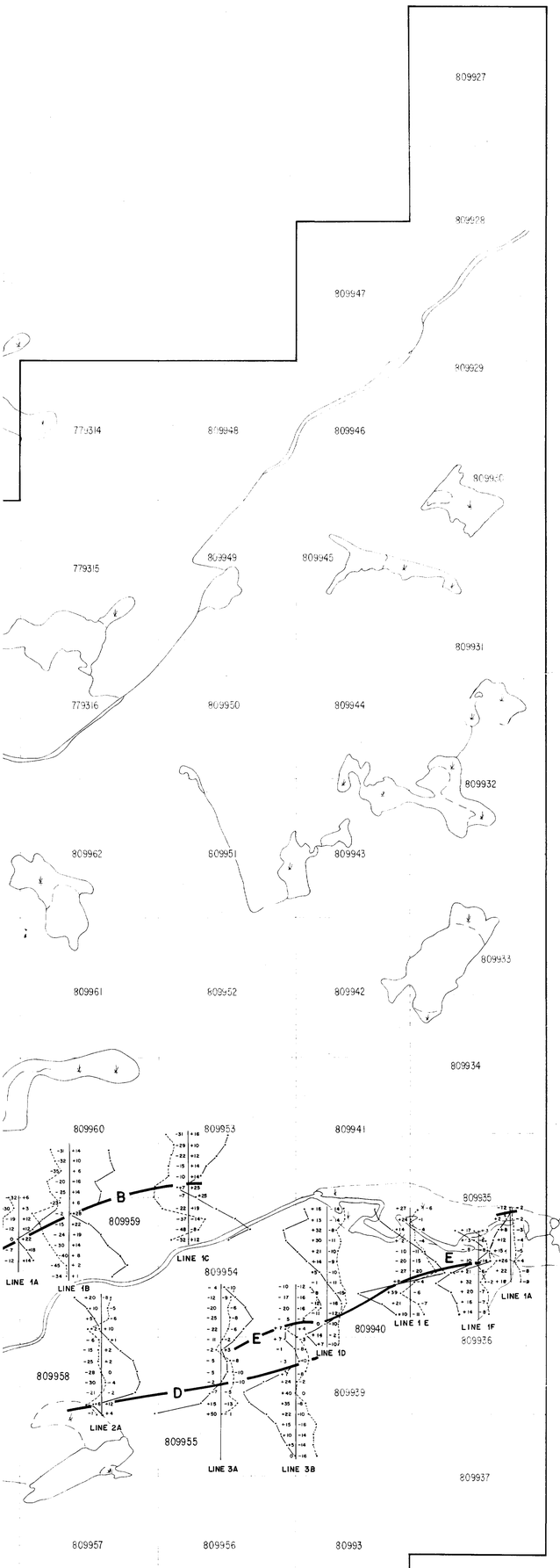
0 250 500 1000 1500 2000
FEET

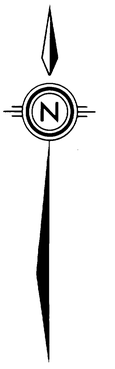
Toronto, Ontario

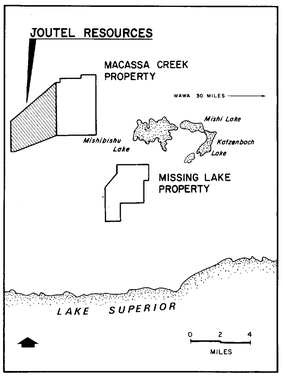
W. J. McGuinty
December, 1985

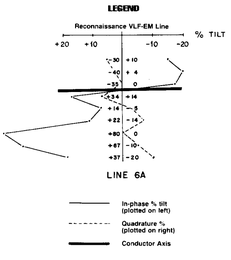
02/07/86

FIGURE 4









Conductor B

LINE 2A -

2 + 00N	< 5
1 + 00N	< 5
0 + 50N	< 5
X.O	< 5
0 + 50S	< 5
1 + 00S	15

LINE 3A -

2 + 00N	< 5
1 + 00N	< 5
0 + 50N	< 5
X.O (south)	< 5
0 + 50S	< 5
1 + 00S	< 5
2 + 00S	< 5

LINE 3B -

1 + 00N	< 5
0 + 50N	< 5
X.O	< 5
0 + 50S	< 5
1 + 00S	< 5
1 + 75S	< 5

Conductor E

LINE 3B -

2 + 00N	< 5
1 + 20N	< 5
0 + 50N	< 5
X.O (north)	< 5
0 + 50S	< 5
1 + 00S	< 5
1 + 50S	< 5

LINE 1D -

0 - 50N	< 5
X.O	< 5
0 + 50S	< 5
1 + 00S	< 5

LINE 1E -

2 + 00N	< 5
1 + 00N	< 5
0 + 50N	< 5
X.O	< 5
0 + 50S	< 5
1 + 00S	< 5
2 + 00S	< 5

LINE 1F -

2 + 00N	< 5
1 + 00N	< 5
0 + 60N	< 5
X.O	< 5
0 + 50S	< 5
1 + 00S	< 5
1 + 50S	< 5

LINE 1G -

0 + 40N	< 5
X.O	< 5
0 + 50S	< 5
1 + 00S	< 5

Conductor F

LINE 7A -

2 + 00N	< 5
1 + 00N	< 5
0 + 50N	< 5
X.O	< 5
0 + 50S	< 5
1 + 00S	< 5
2 + 00S	< 5

LINE 7B -

2 + 00N	< 5
1 + 00N	< 5
0 + 50N	< 5
X.O	< 5
0 + 50S	< 5
1 + 00S	< 5
2 + 00S	15

42C/04SE-0017#2

JOUTEL RESOURCES LIMITED

MISHIBISHU LAKE AREA
MACASSA CREEK PROPERTY

SAULT STE. MARIE MINING DIVISION

RECONNAISSANCE GEOPHYSICAL SURVEY (VLF-EM)

0 250 500 1000 1500 2000
FEET

Toronto, Ontario

W. J. McGuinty
December, 1985

02/04/86

FIGURE 5