RESULTS OF 1986 EXPLORATION ON THE RAM PROPERTY, MACGREGOR TOWNSHIP, ONTARIO FOR ESSO MINERALS CANADA

Janet E. Kerr
April, 1987
NTS 52A-10
File: 16.84.C300

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MAY 11 1987
MINING LANDS SECTION

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SUMMARY AND RECOMMENDATIONS

Results from the preliminary mapping are mixed. The property does contains anomalous gold values (up to .40 oz Au/T), but the extent of gold mineralization appears to be limited, with the best values occurring within massive arsenopyrite in silicified joints associated with a lamprophyre dike. Results from samples of the quarry float are lower grade (up to 0.08 oz Au/T), however the large (to 1m) sericitized-pyritized-silicified boulders are derived from a potentially wider and more uniformly mineralized zone. To properly assess this zone, sufficient water should be drained from the quarry to permit bedrock sampling and mapping. If sampling results are favourable, a grid should be cut, and the property mapped at 1:1000 scale.

The orientation survey using humus and B-horizon soils indicate B-horizon sampling is a useful exploration technique on this property. Samples with anomalous Au-As values were collected some 170m north of the quarry occurrence in an area of no known gold occurrences. Followup mapping and possibly stripping would be required to assess the potential of this zone.

Prior to conducting additional surface exploration, an agreement must be reached with the holders of the surface rights, whom are residents of West Germany.

INTRODUCTION

Preliminary geologic mapping and an orientation soil geochemical sampling survey on the Ram property, located northeast of Thunder Bay, was undertaken in September, 1986.

LOCATION AND ACCESS

The Ram property is located some 40km northeast of Thunder Bay, Ontario, in MacGregor Township. The property is cut by the Trans Canada Highway and the Canadian National Railway (see Figure 1).

LAND STATUS

Eight claims are presently held by Esso Resources Canada Limited, Esso Minerals Canada division. Claim names, staking and due dates are listed in Appendix 1. The claim locations are illustrated on Figure 2.

The surface rights for the property are held by various owners listed in Appendix 2. However, the majority of the ground is held by a syndicate of West Germans. Figure 3 is a plan of the property showing the various owners of surface rights.

PREVIOUS EXPLORATION

Previous exploration in the area has been mainly restricted to silver and amethyst. The silver occurs in Proterozoic quartz veins primarily near the Archean - Proterozoic unconformity and are often associated with diabase sills. The Ram property straddles this unconformity.

During a reconnaissance mapping program in the Thunder Bay area in the summer of 1986, EMC resampled two mineralized zones on the property where Scott (1986), reports assays up to 1.06 oz Au/Ton. The claim covering these zones was subsequently optioned from D. Thibault, and seven surrounding claims were staked.

There is abundant float of sericitized, silicified and pyritized rock on the western edge of the quarry on the property. Rock from the quarry was reportedly used for road-fill, however, John Scott (personal communication) believes it may originally have been a gold exploration pit which has been subsequently enlarged into a quarry.

GEOLOGY

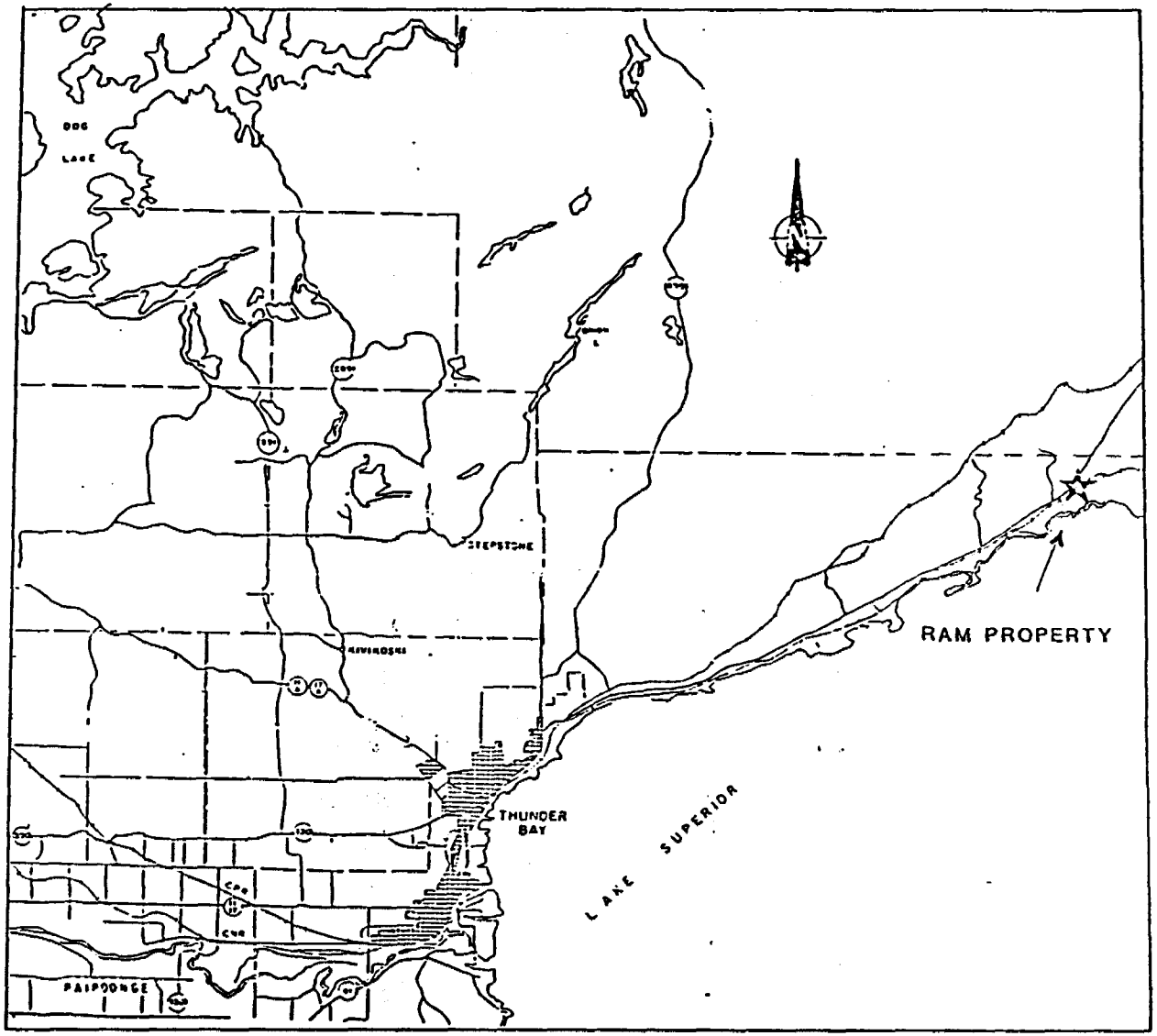
1) Regional Geology

MacGregor Township was mapped in 1984 and 1985 by Scott (1986), shown in Figure 4. The township is underlain by Archean and Proterozoic rocks.

The Archean rocks consist of two cycles of felsic to mafic metavolcanics, and associated metasediments from the Abitibi-Wawa Subprovince. Unconformably overlying this sequence are Proterozoic clastic and chemical sediments from the Animikie Group. The metavolcanics strike east, and generally face to the south. The foliation is parallel to the major units, and dips subvertically. The Proterozoic sequence is sub-horizontal to gently southerly dipping.

2) Property Geology

The mapping was divided into two sections: the areas of known gold mineralization (the quarry and highway outcrop) were mapped at 1:100 scale, and the remaining area was mapped with the aid of air photos at 1:15 840 scale.



ESSO MINERALS CANADA

PROSPECT: RAM PROPERTY

LOCATION MAP
RAM PROPERTY

ACCOUNT NO. | Dwg No. | FILE NO. | TORONTO

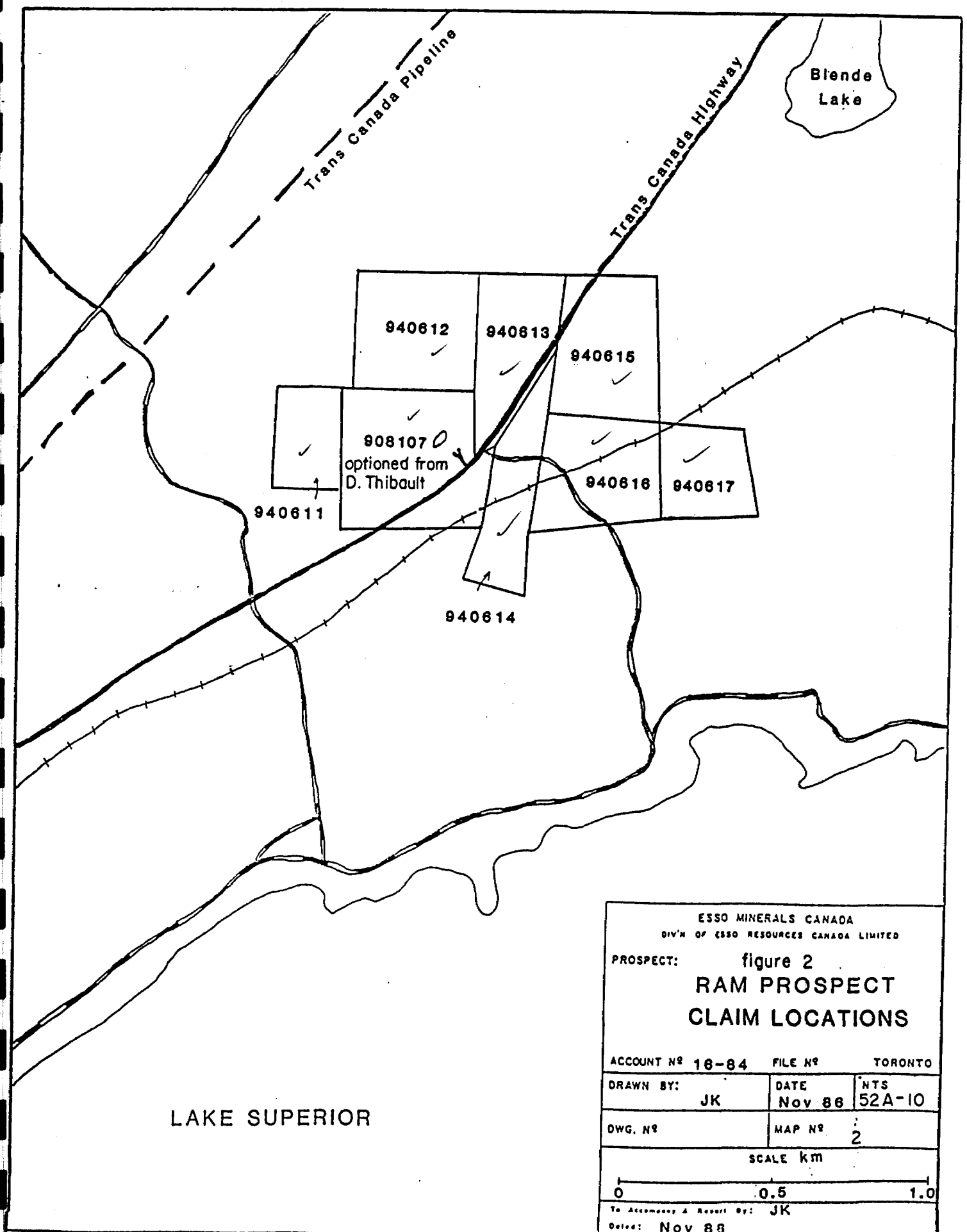
DRAWN BY: J Kerr | DATE: 29-Nov-87 | NTS: 52 A/10

DWG NO. | FIGURE NO.

SCALE 0 10Km

To accompany a Report by: J. Kerr

Date: March, 1987



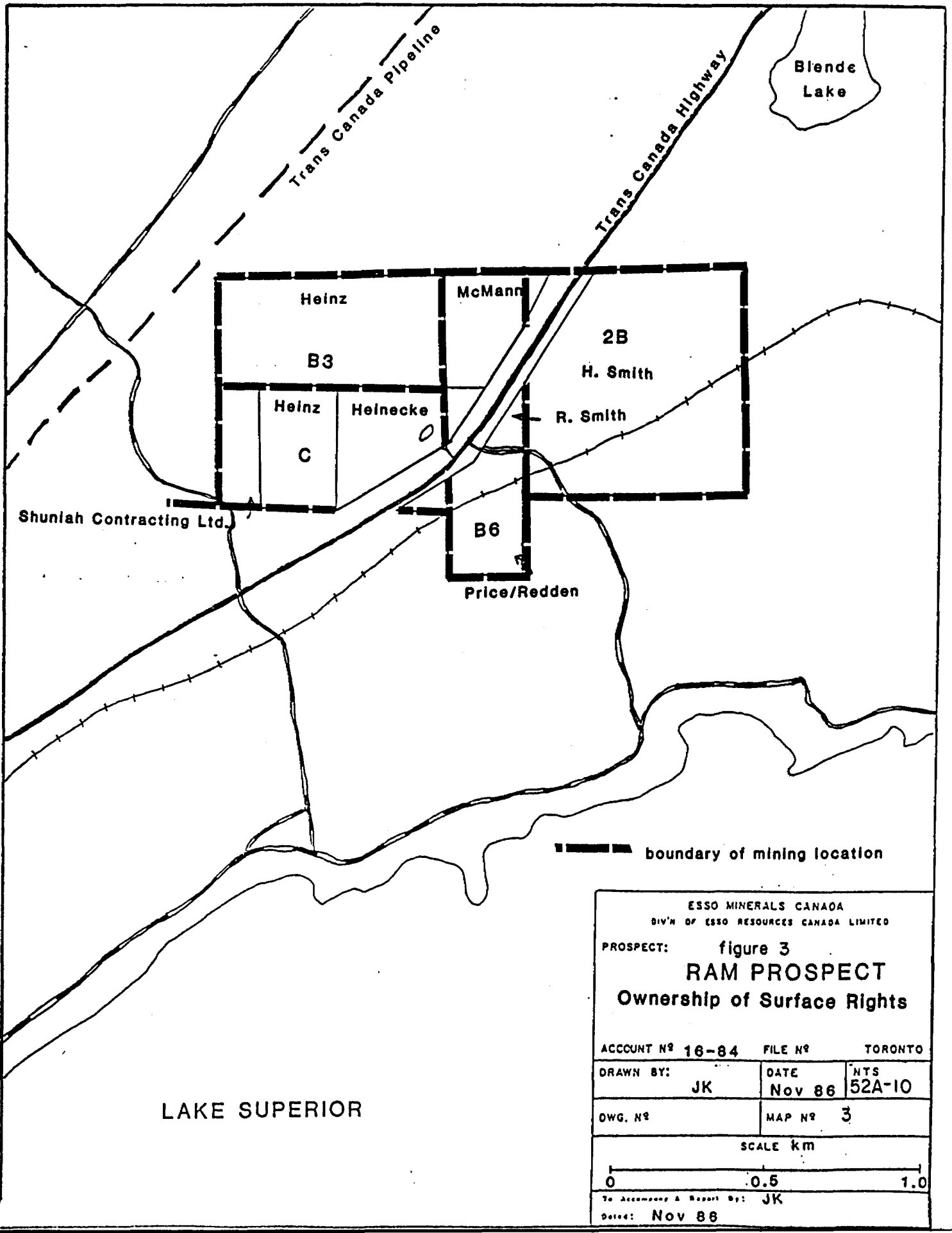
ESSO MINERALS CANADA
DIV'N OF ESSO RESOURCES CANADA LIMITED

PROSPECT: figure 2
RAM PROSPECT
CLAIM LOCATIONS

ACCOUNT Nº 16-84	FILE Nº	TORONTO
DRAWN BY: JK	DATE Nov 86	NTS 52A-10
DWG. Nº	MAP Nº 2	

SCALE km
0 0.5 1.0

To Accompany A Report By: JK
Dated: Nov 86



ESSO MINERALS CANADA
DIV'N OF ESSO RESOURCES CANADA LIMITED

PROSPECT: figure 3
RAM PROSPECT
Ownership of Surface Rights

ACCOUNT Nº 16-84	FILE Nº	TORONTO
DRAWN BY: JK	DATE Nov 86	NTS 52A-10
DWG. Nº	MAP Nº 3	

SCALE km
0 0.5 1.0

To Accompany A Report By: JK
Dated: Nov 86

a) Reconnaissance Scale

During the air photo mapping, all claim lines, roadsides, and the railway line were traversed, along with several traverses between claim lines. Outcrop exposure is generally poor an was further reduced by the large amount of leaves on the ground at the time of mapping.

The property is underlain by three major rock types: felsic to intermediate metavolcanic rocks and associated metasediments, gabbro and Proterozoic rocks (taconite and chert carbonate rocks) from the Gunflint Formation. Lamprophyre and granite dikes are rare. The property-scale geology map is shown in Figure 5.

The metavolcanic sequence, consisting of felsic to intermediate tuffs, reworked tuffs, lapilli tuffs and associated metasediments, weathers medium grey, and the fresh surface is light to medium grey. The rocks are generally very fine- to fine-grained, massive, and difficult to subdivide. Locally, the felsic tuffs contain up to 20% 1 to 5mm plagioclase phenocrysts. Bedding, visible in several locations, strikes at 355 degrees to 010 degrees, and dips approximately 20 degrees to the east. Jointing is common.

The gabbro has a dark green weathered and fresh surface, is non-magnetic, medium- to coarse-grained and contains up to 1% disseminated pyrite. Locally, the gabbro is weakly foliated.

Taconite and chert-carbonate rocks from the Gunflint Formation are flat lying, and highly weathered. The taconite has a very rusty weathered surface, and a medium green fresh surface. It is massive, medium-grained and highly magnetic. The chert-carbonate rocks weather purple to brown to rust red in colour. The colour of the fresh surface is purple or light grey. The rocks are fine- to medium-grained and locally have centimetric banding. The Proterozoic rocks are generally sub-outcropping, and occasionally brecciated.

The granite dikes are fine- to medium-grained, and have a light pink weathered and fresh surface.

The lamprophyre dikes weather rust, tan to dark greenish-grey and have a medium grey fresh surface. They are non-magnetic, contain up to 20% 0.1 to 0.5cm phlogopite phenocrysts and 1% pyrite. Both types of dikes have a variety of orientations.

The Archean-Proterozoic unconformity strikes northeast across the property with the Proterozoic sequence to the south, and the Archean sequence to the north. North of the unconformity (south of the highway) there are several 1 to 2m zones containing large, white glassy quartz veins which are interpretted as Proterozoic in age, and contain quartz crystals up to 3cm in length. These veins strike east-west.

b) Detailed Geology

The areas of known gold mineralization were mapped at 1:100 scale. The area is underlain by the felsic to intermediate metavolcanic sequence previously described, with few felsic and lamprophyre dikes. The detail Maps A,B and C are located in the pocket.

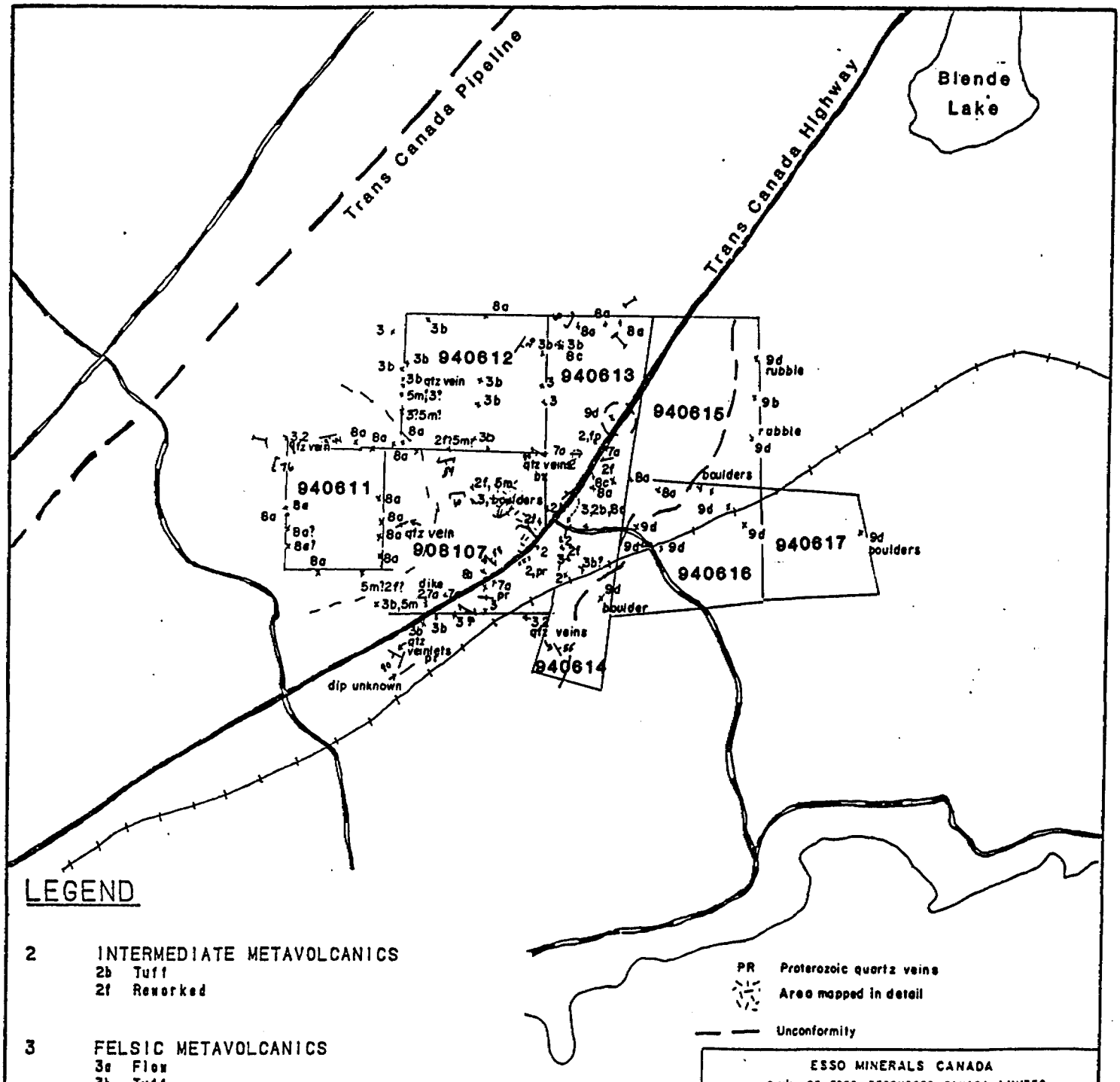
c) Style of Mineralization

The surface occurrences of the three known mineralized zones were mapped in detail at a scale of 1:100. Detailed descriptions of all grab samples from both the detail mapping program and the reconnaissance mapping program are given in Appendix 3, and the sample locations are plotted on Figure 14, and Maps A,B and C.

(i) Quarry (MAP A)

On the western bank of the quarry, some 30m north of the Trans-Canada highway, there is abundant mineralized float up to 1m in diameter. The float is rusty, sericitized, highly silicified felsic rock containing up to 25% fine- to coarse-grained pyrite, 5% fine- to coarse-grained arsenopyrite and 1% fine-grained chalcopyrite. The sulfides are associated with quartz and quartz-carbonate veins, disseminations throughout the rock, and fracture coatings. Samples from these boulders assayed up to 0.08 oz Au/T, but averaged 0.01 oz Au/T.

At the north end of the quarry, two 0.5 to 1.0cm zones of pyritized-silicified-sericitized rock outcrop. The zones weather rusty green-yellow and are discontinuous.



LEGEND

2 INTERMEDIATE METAVOLCANICS
- 2b Tuff
- 2f Reworked

3 FELSIC METAVOLCANICS
- 3a Flow
- 3b Tuff

5 METASEDIMENTS
- 5m Massive, Fine-grained

7 FELSIC INTRUSIVE ROCKS
- 7a Granite

8 MAFIC TO ULTRAMAFIC INTRUSIVE ROCKS
- 8a Gabbro
- 8c Lamprophyre

9 GUNFLINT FORMATION
- 9b Taconite, hematitic ironstone
- 9d Chert-carbonate rocks

ESSO MINERALS CANADA
DIV'N OF ESSO RESOURCES CANADA LIMITED

PROSPECT:

RAM PROSPECT
PROPERTY GEOLOGY MAP

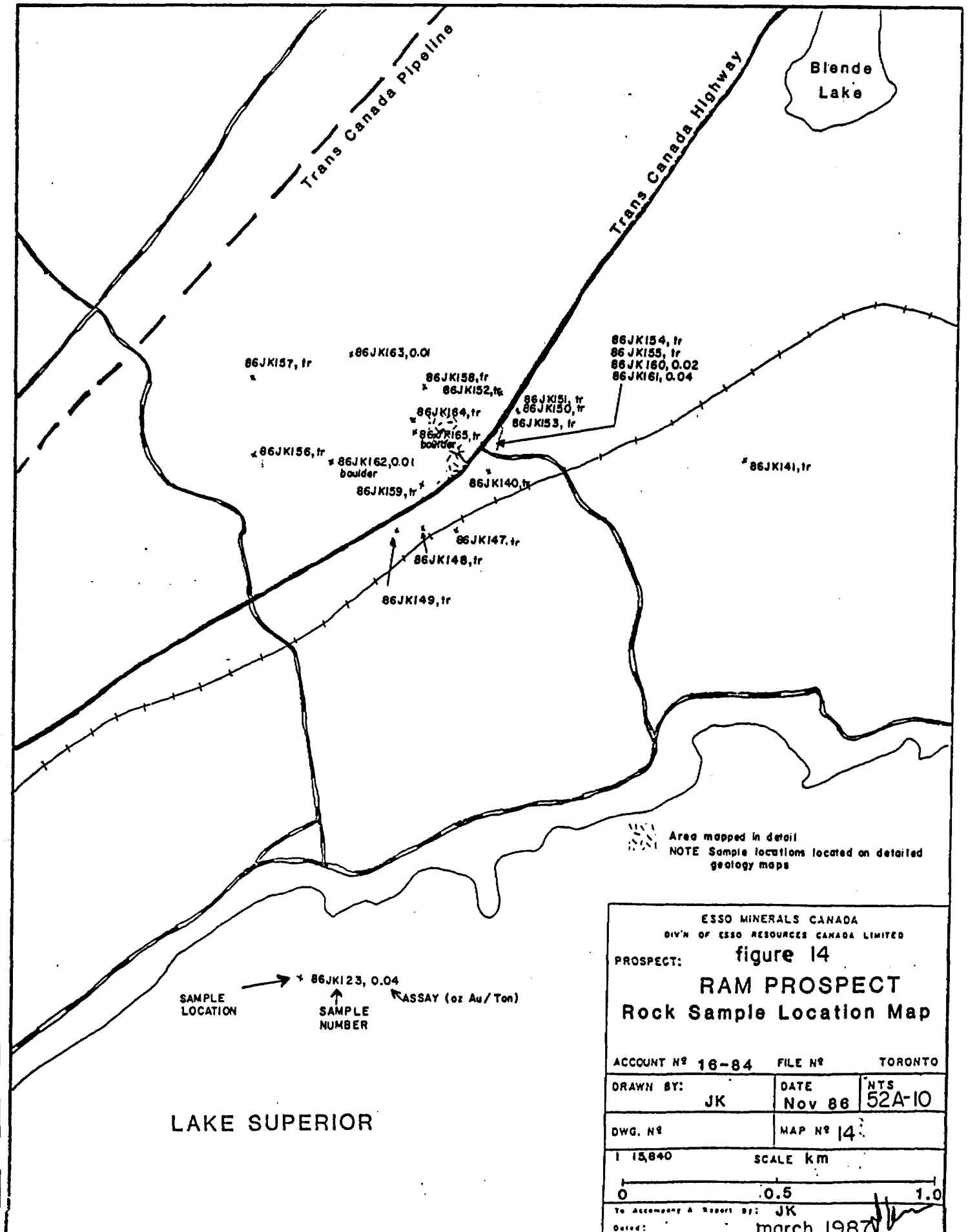
ACCOUNT Nº 16-84	FILE Nº	TORONTO
DRAWN BY: JK	DATE Nov 86	NTS
DWG. Nº	MAP Nº 5	

1:15,840 SCALE km

0 0.5 1.0

To Accompany A Report By: JK

Dated:



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DIV'N OF ESSO RESOURCES CANADA LIMITED

PROSPECT: figure 14

RAM PROSPECT
Rock Sample Location Map

ACCOUNT Nº 16-84	FILE Nº	TORONTO
DRAWN BY: JK	DATE Nov 86	NTS 52A-10
DWG. Nº	MAP Nº 14	
1 15,840	SCALE km	

0 .0.5 1.0

To Accompany A Report By: JK
Dated: march 1987

(ii) Driveway Zone (Map B)

Fifteen metres south of the quarry, a one metre wide pyritic zone oriented at 165/80 was located within an intermediate tuff. A grab sample assayed 0.02 oz Au/T. The zone, weathers an orange-tan colour and contains several small quartz veins and 3-5% pyrite. The rock surrounding the joints and veins in the zone appears bleached.

(iii) Highway Outcrop (Map C)

Several 5-50cm wide silicified and sericitized zones within joint sets at various orientations contain up to 10% pyrite, trace sphalerite and chalcopyrite, and locally massive arsenopyrite. The massive arsenopyrite occurs in one vein and is typically 3-8cm wide. Samples containing massive arsenopyrite assayed up to 0.40 oz Au/T. The zones are highly weathered and poorly defined. The highest assays are from the zone closest to a lamprophyre dike. On the south side of the highway, a sample containing 10% pyrite in a quartz vein also spatially related to a lamprophyre dike, assayed 0.04 oz Au/T. Several samples of quartz veins within a lamprophyre dike assayed trace Au/T.

SOIL SAMPLING: ORIENTATION SURVEY

1) Method

An orientation soil sampling survey was undertaken to identify areas of anomalous gold mineralization, and the ideal sample spacing, soil horizon, and elements to be analyzed. Thirty B-horizon soil samples and thirty-one humus samples from a one line orientation survey across the mineralized area were analyzed for gold and arsenic. Every fourth sample was analyzed for copper and zinc. The methods of analyses and detection limits are listed in Appendix 6.

The location of the orientation line is illustrated in Figure 9. The line was established (pace and compass) and the sample stations were flagged and labelled. Where possible, samples were taken every 10 metres.

The two showings (the quarry and the highway outcrop) occur between station 0+25N and the end of the orientation line at 0+80S. Cultural effects along the Trans Canada highway and the powerline to the south, precluded soil sampling south of the highway.

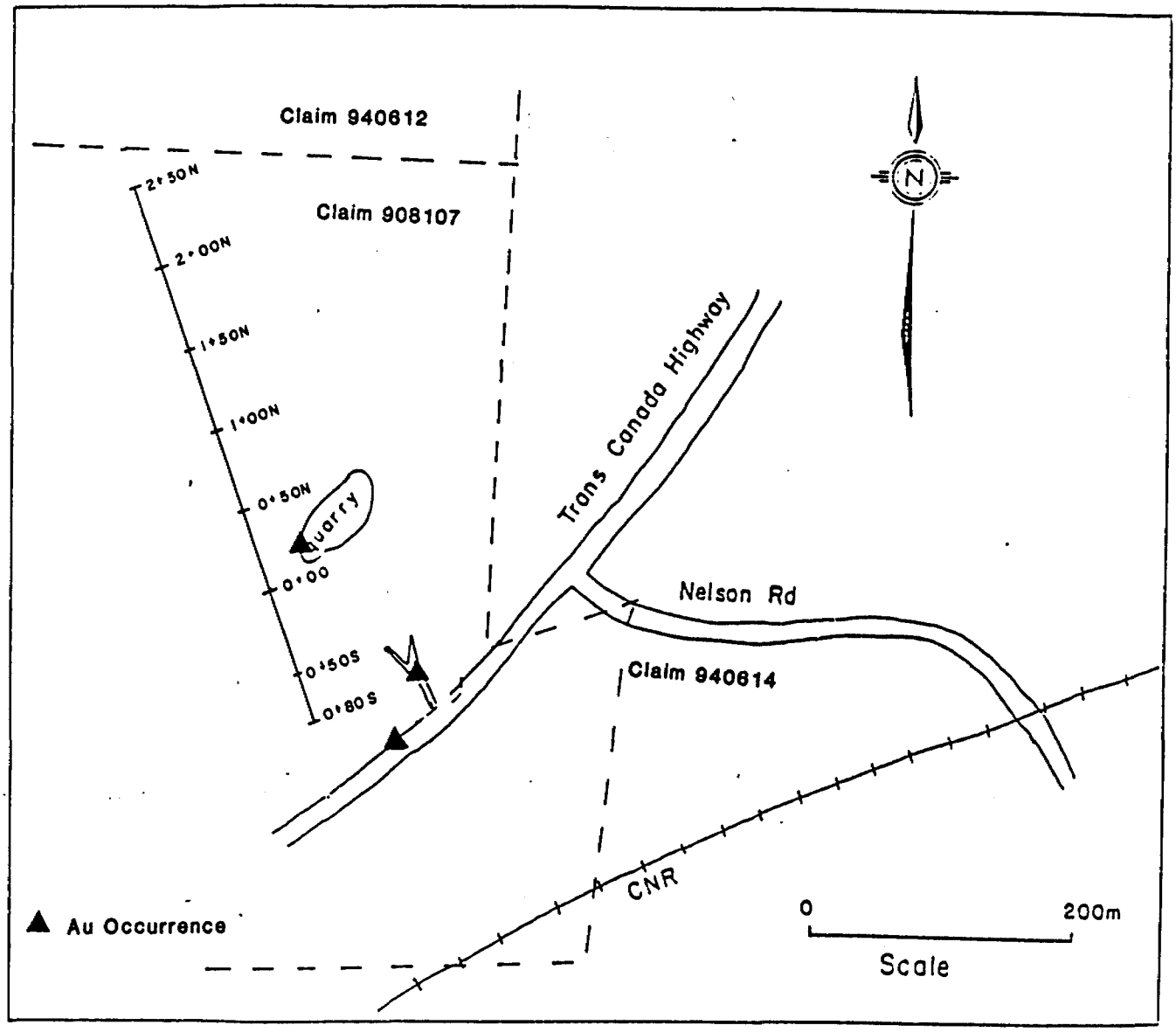


Figure 9 SOIL SAMPLE LOCATION MAP

FIGURE 10 Au Soil Sample Analyses Plot

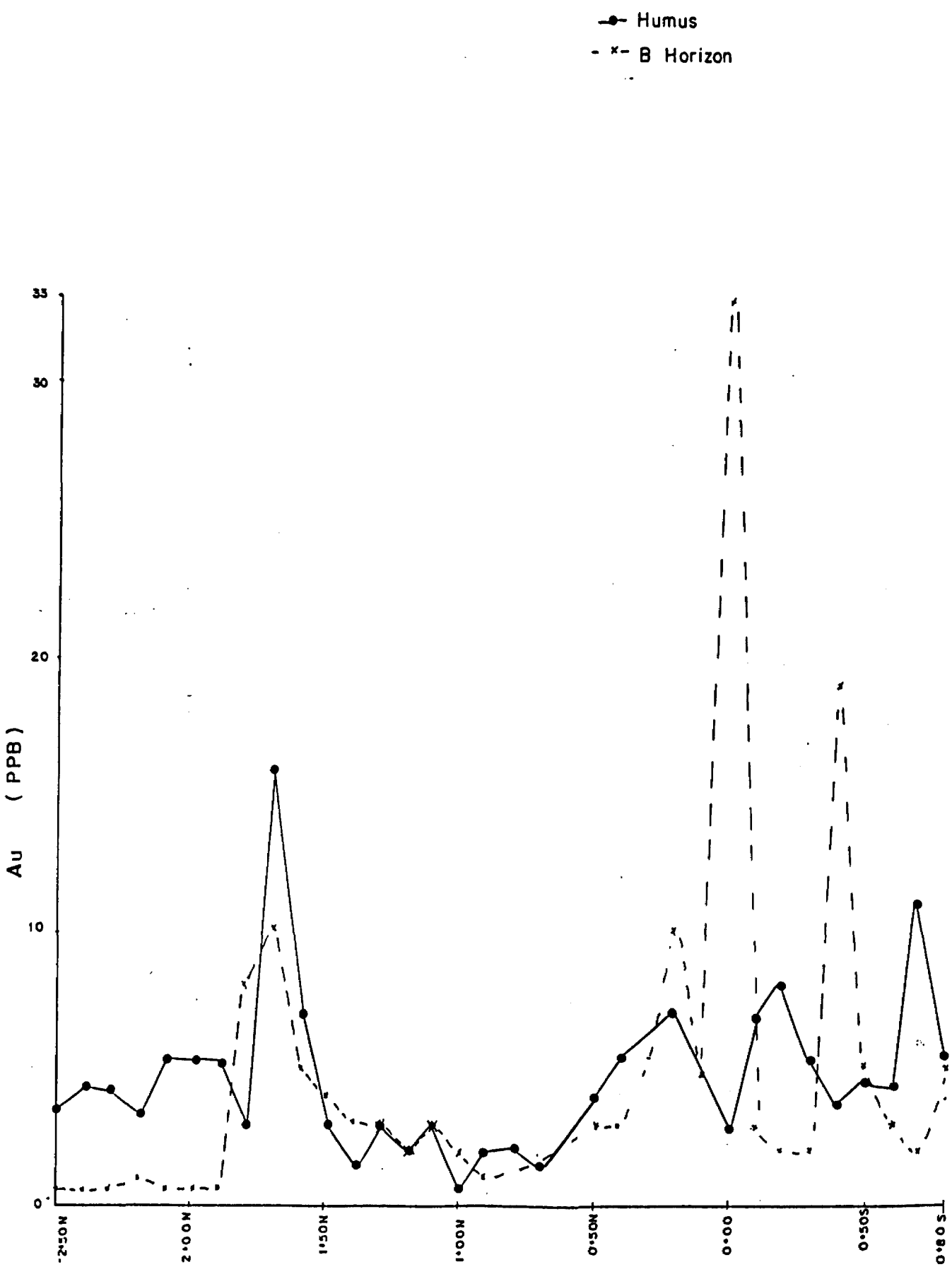


FIGURE 11 As Soil Sample Analyses Plot

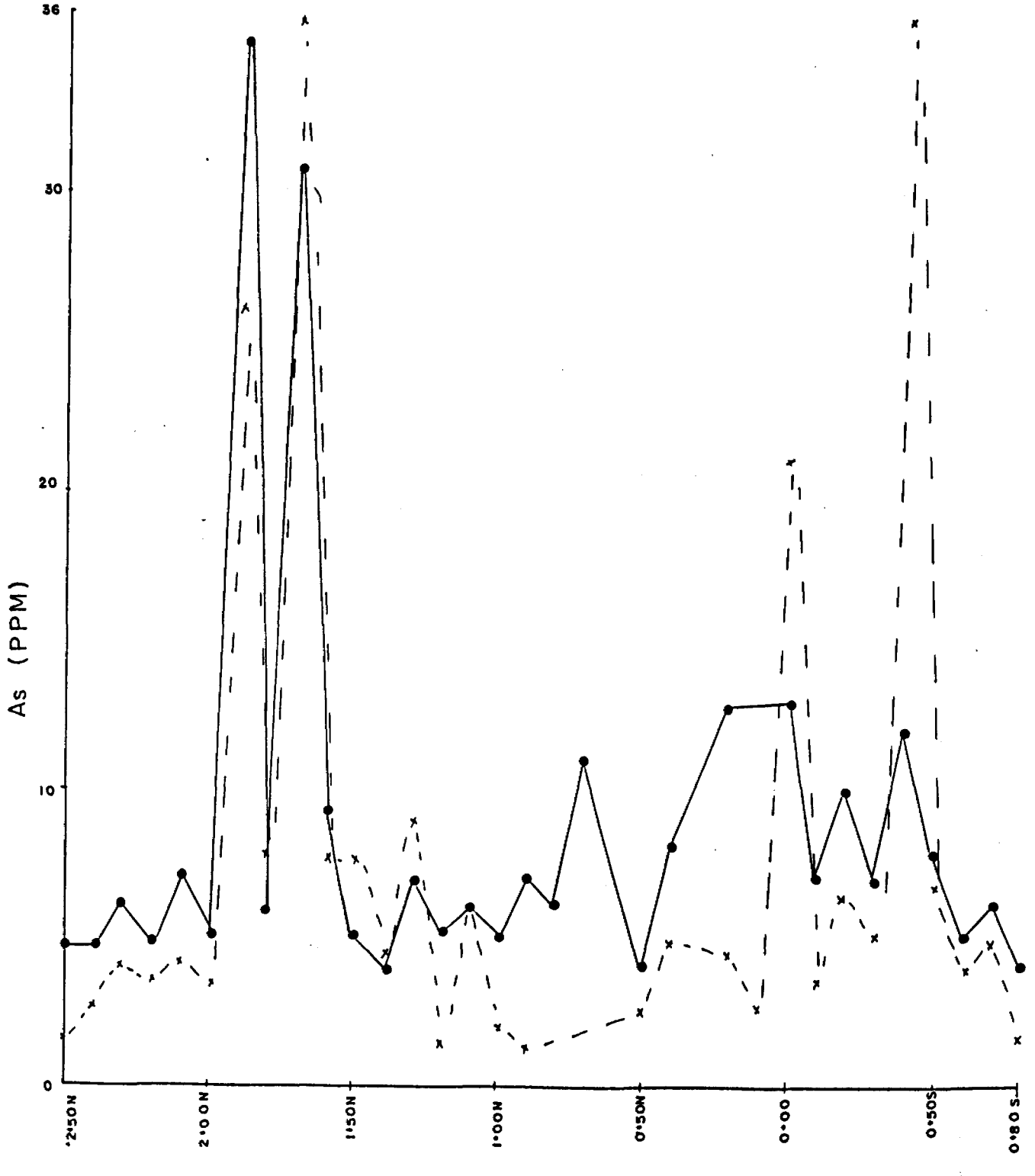


FIGURE 12 Zn Soil Sample Analyses Plot

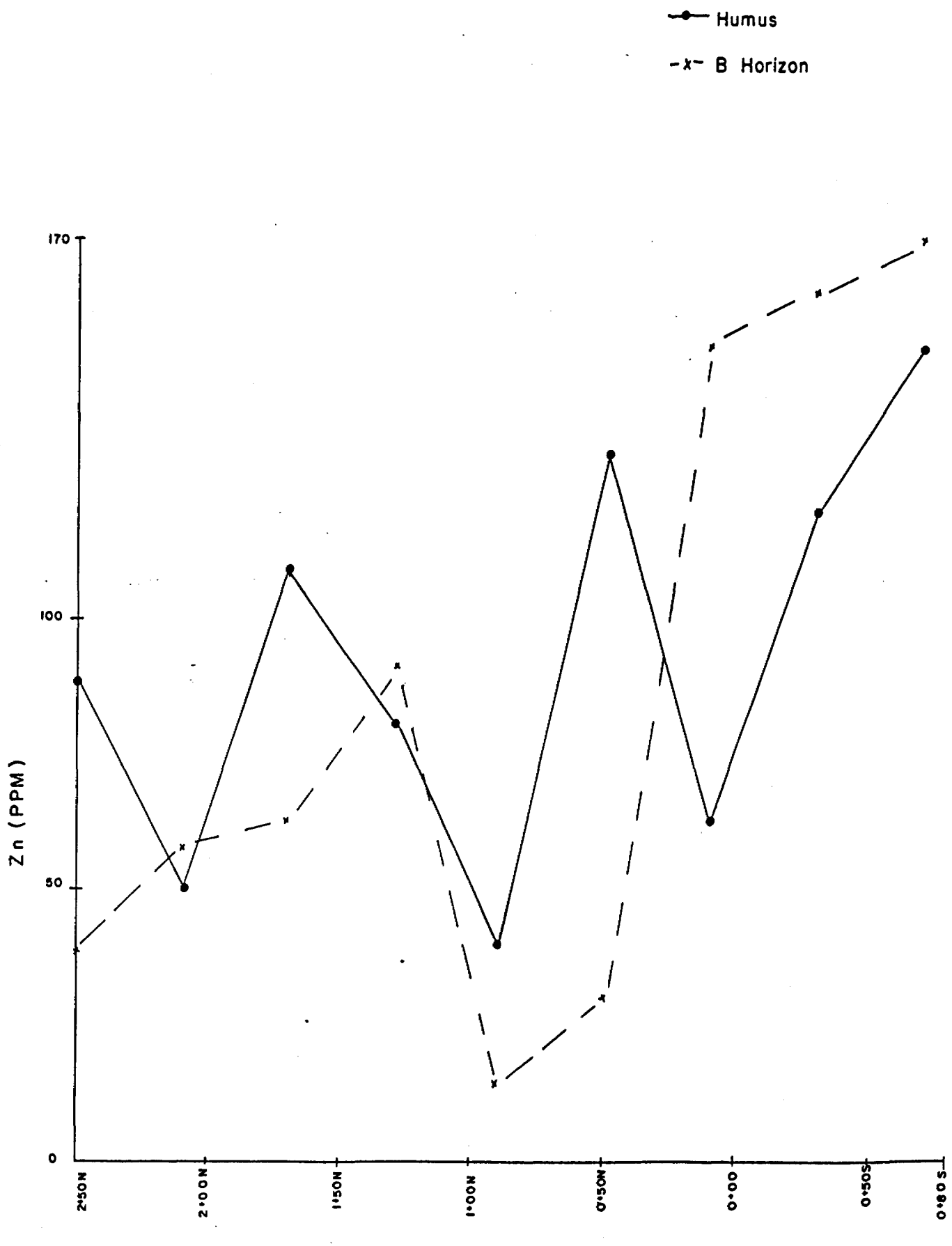
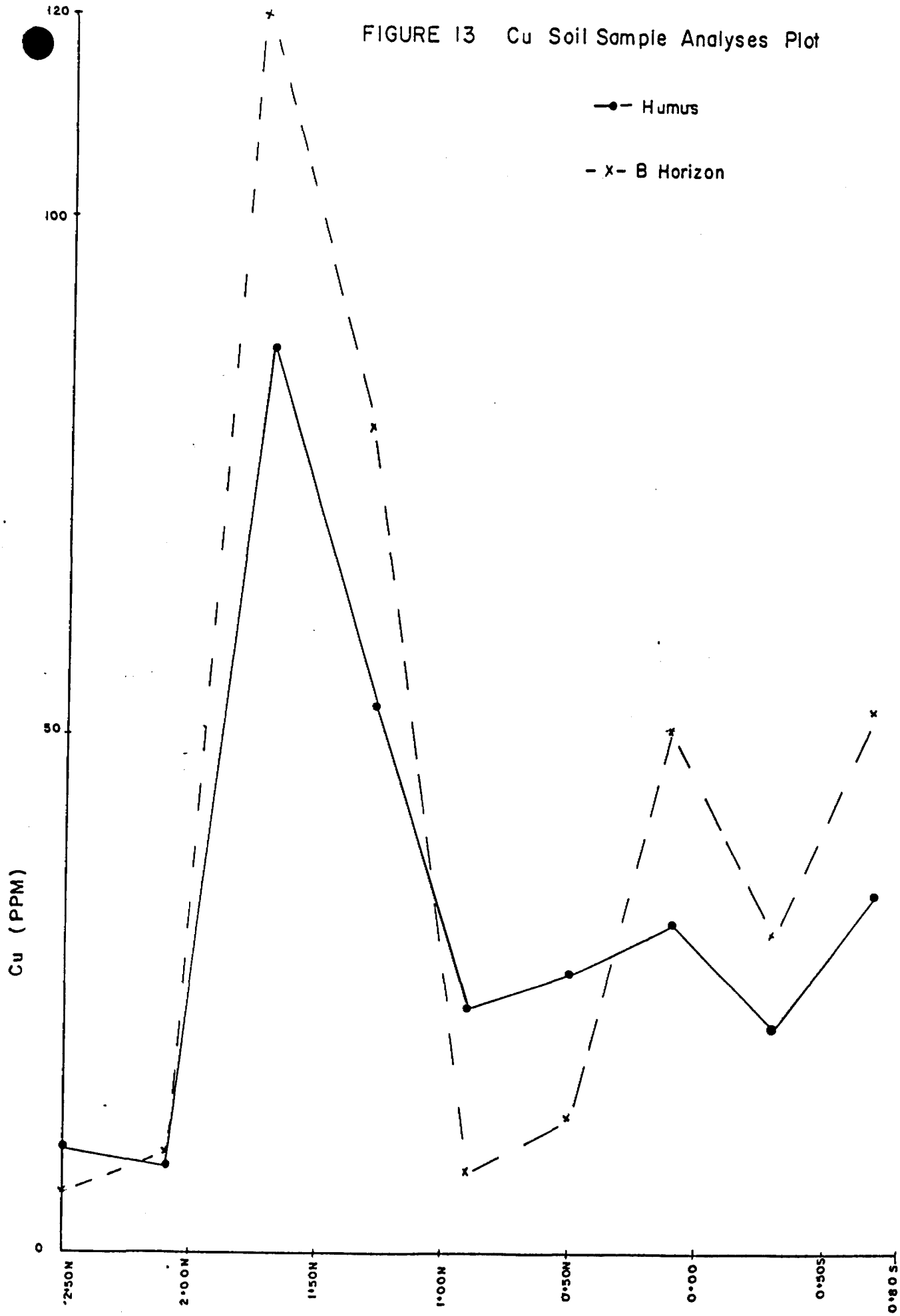


FIGURE 13 Cu Soil Sample Analyses Plot



2) Results

Descriptions of the soils sampled are listed in Appendix 5, and the analytical results are listed in Appendix 6. Figures 10 to 13 are graphs of the soil sample location versus the analysis for a specific element (Au, As, Zn and Cu respectively).

Anomalous gold and arsenic results from the B horizon soil samples (up to 33 ppb Au and 36 ppm As) are coincident with known gold mineralization on surface near 0+00. No bedrock mineralization is known to coincide with the anomaly at 1+70N. Gold and arsenic analyses for the humus samples were less predictable, and the results from the copper and zinc analyses are erratic. Therefore, should a soil survey be carried out on the property, the B horizon should be sampled and analyzed for gold and arsenic. Due to the sporadic distribution of the Au and As and the weak and limited nature of the anomalies, the sampling interval should be no more than 12.5 metres on lines a maximum of 100m apart.

Respectfully submitted,

Janet E. Kerr

April 20, 1987.

REFERENCES

Scott, J.F.
1986: Precambrian Geology of MacGregor Township, East Half, District of Thunder Bay; Ontario Geological Survey, Map P.2985 Geological Series-Preliminary Map, scale 1:15,840. Geology 1984, 1985.

APPENDIX 1 : LIST OF CLAIMS, EMC PROPERTY

CLAIM NO.	STAKING DATE	DUE DATE
940611	August 25, 1986	August 25, 1987
940612	August 25, 1986	August 25, 1987
940613	August 25, 1986	August 25, 1987
940614	August 25, 1986	August 25, 1987
940615	August 25, 1986	August 25, 1987
940616	August 25, 1986	August 25, 1987
940617	August 25, 1986	August 25, 1987
908614	Optioned from Mr. Doug Thibault	May 6, 1987

All claims are held by Esso Resources Canada Limited,
Esso Minerals Canada
120 Adelaide Street West
Toronto, Ontario
M5H 1S8

APPENDIX 2 : OWNERS OF SURFACE RIGHTS

Mining Location	Location	Plan No.	Registration No.	Ownership
2B	all	841	142685	Harry J. Smith 104 Hull Ave. Thunder Bay
B3	all	55R5779	261683	Heinz/Heineckel/ Weber/Willner/ Nienaber/Ruedebusch/ Bischowski
	Klopstockstr 41A 1000 Berlin 38, West Germany			Lawyer: Christie Kislock 263 Park St., Thunder Bay
B6	S. of Hwy	55R1840	266513	Robert+Carla Smith R.R. #13, Nelson Rd Thunder Bay, Ont.
	N. Section	55R2573	265879	Marlene M. McMann
	exact location unknown			William+Loretta Price
	exact location unknown			James+Diane Redden
	W. 4th, N. half	55R5779	262226	Shuniah Contracting Ltd., Thunder Bay
	N. half, middle	55R5779	262225	Heinz/Weber/Willner Address: see B3
	N. half E. Section	55R5779	262224	Heinecke/Nienaber/ Buedebusch/Bischowski Address: see B3

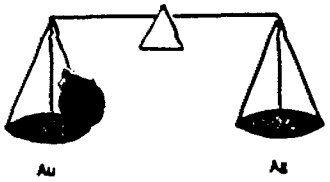
APPENDIX 3: ROCK SAMPLE DESCRIPTIONS

Sample No.	Location	Description	Assay (oz Au/Ton)
86RH704	See detailed	10% py, tr asp, 60 cm qtz vein	.06
86RH705	geology maps,	1% py ser felsic volc.	.02
86RH706	sample location map.	qtz vein ser. fel. volc 3% py, 2% sp, minor asp	.04
86RH707		fracture set over 1m, ser-py locally qtz veinlets	.04
86RH708		80cm sil. zone, dip 20, 3% py minor sph on fractures, locally coarse py, fault gouge	.01
86RH758	roadside o/c	1% py, sil. zone	.01
86RH759	roadside o/c	3m west of 86RH758, same zone	TR
86RH760		fine gr. massive asp in 10cm v.	.22
86RH761		wallrock to fracture at 86RH760	TR
86RH701B	quarry	5% py, 1% cp in qtz-carb vein	TR
86RH702B	quarry	10% dissem py in metagabbro	TR
86RH703B	railway	rusty tr py, qtz ser sch., qtz v	TR
86RH704B		fine gr. chert	TR
86RH705B		blue grey qtz, loc. slightly	TR
86JK100		qtz veinlets in sil-ser fel. rx	TR
86JK102		1% py, tr sph, int tuff, mafic frags	TR
86JK103		30% py, 1% cpy int. volc	TR
86JK104		sil volc.-10% py	TR
86JK105		1-5% py dissem. int. lapilli tuff	TR
86JK106		qtz veins-int. volc. rx, 3% py	TR
86JK107		sil zone-py filled fractures	TR
86JK108		5% po coarse gr., int. volc	TR
86JK109		qtz vein in granite, 1-5% py	TR
86JK110		boulder-qtz vein, 5% py	TR
86JK111		py coated fractures, int. tuff	TR
86JK112		qtz vein 1% py	TR
86JK113		sil zone-1% py, tr cpy	TR
86JK114		qtz vein 2% py	TR
86JK115		qtz vein 2% py	TR
86JK116		boulder-sil rx/qtz vein 8% py	TR
86JK117		boulder-15% py, 1% cpy sil, ser	TR
86JK118		boulder-sil, 10% py	TR
86JK119		boulder, qtz-ser sch. 10% pytasp	TR
86JK120		2% py, 5% asp, int. rx	TR
86JK121		3% diss. asp, 1% py int. rx	TR
86JK122		boulder-20% asp. 8% py, tr cpy silicified rock	.01
86JK123		boulder-25% py 10% asp, 2% cpy qtz breccia	.01
86JK124		qtz vein-no visible sulfides	TR
86JK125		5% py qtz vein, sil wallrx	TR
86JK126		1% asp, int. rx	TR
86JK127		5% py, v. fine gr. felsic rx	.02
86JK128		10% py	TR
86JK129		ser-sil felsic rx, 1% py	TR

...../2

Sample No.	Location	Description	Assay (oz Au/Ton)
86JK130	See detailed		TR
86JK131	geology maps,	5% py mafic-umafic rx	TR
86JK132	sample loca-	5-10% py, tr cpy, sil-ser felsic	TR
86JK133	tion map.	5% py, 2% galena, sil felsic rx	TR
86JK134		10% py, ser-sil felsic rx, minor qtz veining	TR
86JK135		sil-ser felsic rx, 5-10% py, loc massive asp, extremely rusty	.40
86JK136		boulders-qtz locally rusty	TR
86JK137			.01
86JK138		8% asp, 4% py, sil felsic rx	.01
86JK139		5-10% py, felsic rx	TR
86JK140		1% py, int. volc.	TR
86JK141		rusty boulder-no visible sulf.	TR
86JK147		boulder, 1% py, int. rx	TR
86JK148		10% py felsic volc.	TR
86JK149		very rusty, felsic volc.	TR
86JK150		2mm qtz vein, 15% py, granite	TR
86JK151		qtz+felsic rx breccia, rusty	TR
86JK152		sil, ser, rusty, fol. int rx	TR
86JK153		1/2 cm qtz vein	TR
86JK154		6 cm qtz vein, in lamp dike	TR
86JK155		8% py, sil rx, in joint	TR
86JK156		boulder, 10% py extremely rusty	TR
86JK157		2 1/2 cm qtz vein, loc. rusty	TR
86JK158		felsic volc. boulder, Fe carb	TR
86JK159		10% py, very siliceous	TR
86JK160		10% py qtz veinlets, sil. rx	0.02
86JK161		qtz veinlets, 10% py	0.04
86JK162		1% py, rusty fine gr. fel. vol.	0.01
86JK163		very rusty, fine gr. argillite	0.01
86JK164		qtz vein, 5% py	TR
86JK165		boulders, 5% py sil-ser fel. rx	TR

APPENDIX 4: ROCK SAMPLE ASSAY SHEETS



PAUL'S CUSTOM FIRE ASSAYING LTD.

PAUL OKANSKI, Assayer
Box 253, Cochenour, Ontario P0V 1L0

Phone: Bus. (807) 662-8171
Res. (807) 662-3361

Esso Minerals Canada Ltd.

ASSAY CERTIFICATE

Date: July 28-86

	Sample No.	Description	oz/ton Au	oz/ton Ag
1	RH-698	Ont. #84 (Rejects)	Trace	
2	99		"	
3	700		"	
4	01		"	
5	02		"	
6	03		"	
7	04		"	
8	05		"	
9	704	(Grabs)	.06	
10	05		.02	
11	06		.04	
12	07		.04	
13	08		.01	
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

Assayer: [signature]

PAUL'S CUSTOM FIRE ASSAYING LTD.

Au Ag

PAUL OKANSKI, Assayer
Box 253, Cochenour, Ontario P0V 1L0

Phone: Bus. (807) 662-8171
Res. (807) 662-3361

J/C Kaszycki
F.6 16.84.C4cc
Ram

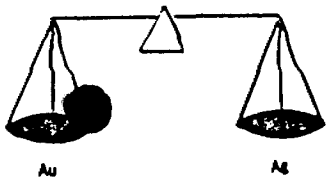
Esso Minerals

ASSAY CERTIFICATE

Date: Sept. 23-86

	Sample No.	Description	oz/ton Au	oz/ton Ag
1	JK-104	Cnt. #84	Trace	
2	05		"	
3	06		"	
4	07		"	
5	08		"	
6	09		"	
7	10		"	
8	11		"	
9	12		"	
10	13		"	
11	14		"	
12	15		"	
13	16		"	
14	17		"	
15	18		"	
16	19		"	
17	20		"	
18	21		"	
19	22		.01	
20	23		.01	
21	24		Trace	
22	25		"	
23	RH-746		"	
24				
25				

Assayer: Paul Okanski



PAUL'S CUSTOM FIRE ASSAYING LTD.

PAUL OKANSKI, Assayer
Box 253, Cochenour, Ontario P0V 1L0

Phone: Bus. (807) 662-8171
Res. (807) 662-3361

Feb 16-84 · C400
Ram

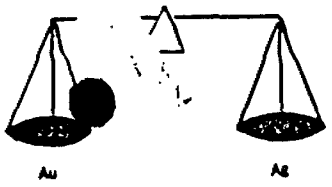
Esso Minerals Canada Ltd.

ASSAY CERTIFICATE

Date: Sept. 29-86

	Sample No.	Description	oz/ton Au	oz/ton Ag
	JK-100-86	Ont. #84	Trace	
2	102		"	
3	03		"	
	126		"	
5	27		.02	
	28		Trace	
7	29		.01	
	30		Trace	
	31		"	
10	32		"	
	33		"	
12	34		"	
	35		.40	
	36		Trace	
15	37		.01	
	38		.01	
17	39		Trace	
	40		"	
	41		"	
20				
22				
24				

Assayer: Paul Okanski



PAUL'S CUSTOM FIRE ASSAYING LTD.

PAUL OKANSKI, Assayer
Box 253, Cochenour, Ontario P0V 1L0

Phone: Bus. (807) 662-8171
Res. (807) 662-3361

Esso Minerals Canada Ltd.

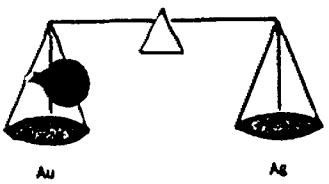
ASSAY CERTIFICATE

Date: Oct. 6-86

Sample No.	Description	oz/ton Au	oz/ton Ag
47	Kom		
48		"	
49		"	
50		"	
51		"	
52		"	
53		"	
54		"	
55		"	
56		"	
57		"	
58		"	
59		"	
60		.02	
61		.04	
62		.01	
63		.01	
64		Trace	
65		"	

Assayer: Paul Okanski

RH



PAUL'S CUSTOM FIRE ASSAYING LTD.

PAUL OKANSKI, Assayer
Box 253, Cochenour, Ontario P0V 1L0

Phone: Bus. (807) 662-8171
Res. (807) 662-3361

Esso Minerals Canada Ltd.

ASSAY CERTIFICATE

Date: Aug. 25-86

	Sample No.	Description	oz/ton Au	oz/ton Ag
1	RH-750	Ont. #84	.01	
2	59		Trace	
3	60-A		.22	
4	B		.22	
5	61		Trace	

ROCK SAMPLE RESULTS: J. SCOTT (1986)

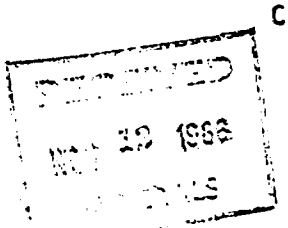
SAMPLE No	Au oz/t	Ag oz/t	Zn % / Pb %	As	
JFS 64-1	0.01	<0.10			QTZ VEINS AT QUARRY
JFS 64-2	0.02	<0.10			DUMP MATERIAL
JFS 64-4	0.01	0.27			QTZ VEIN N OF QUARRY
JFS 64-7	1.06	1.40	0.30 / 0.09	3.10%	S Shear, gossan HWY 11/17
JFS 64-8	0.53	0.55	2.36 / 0.08	3.00%	S. VEIN HWY 11/17
JFS 64-9	0.01	0.17	0.02 / 0.30	0.22%	S. VEIN HWY 11/17
85 BBH-1	0.18	0.32			GRAB SAMPLE HWY 11/17

APPENDIX 5: SOIL SAMPLE DESCRIPTIONS

LOCATION	SAMPLE NO.	DESCRIPTION
2+50N	86JK01	Sandy, thin humus layer
2+40N	86JK02	"
2+30N	86JK03	"
2+20N	86JK04	"
2+10N	86JK05	"
2+00N	86JK06	"
1+90N	86JK07	"
1+80N	86JK08	Black, burned wood
1+70N	86JK09	Poorly drained
1+60N	86JK10	"
1+50N	86JK11	"
1+40N	86JK12	"
1+30N	86JK13	"
1+20N	86JK14	"
1+10N	86JK15	"
1+00N	86JK16	Sandy
0+90N	86JK17	"
0+80N	86JK18	On edge of o/c, no B
0+70N	86JK19	"
0+60N	86JK20	On o/c no sample
0+50N	86JK21	Hollow between 2 o/c
0+40N	86JK22	"
0+30N	86JK23	On o/c, no sample
0+20N	86JK24	Beside o/c
0+10N	86JK25	Sandy soil, no humus
0+00	86JK26	Brown soil, little humus
0+10S	86JK27	"
0+20S	86JK28	"
0+30S	86JK29	"
0+40S	86JK30	Loamy, dark brown
0+50S	86JK31	"
0+60S	86JK32	"
0+70S	86JK33	"
0+80S	86JK34	"

APPENDIX 6: SOIL SAMPLE ASSAY SHEETS

CERTIFICATE OF ANALYSIS



TO: ESSO MINERALS (CANADA) LIMITED
ATTN: JANET KERR
P.O. BOX 4029, TERMINAL "A"
120 ADELAIDE STREET WEST, SUITE 1801
TORONTO, ONTARIO M5W 1K3

CUSTOMER NO. 213

DATE SUBMITTED
10-OCT-86

REPORT 29899

REF. FILE 25364-A5

30 SOILS, 31 HUMUS PROJ. 16-84

WERE ANALYSED AS FOLLOWS:

	METHOD	DETECTION LIMIT
AU PPB	FADCP	1.000
AU PPB	NA	1.000
CU PPM	DCP	0.500
ZN PPM	DCP	0.500
AS PPM	FAA	0.100
AS PPM	NA	1.000

X-RAY ASSAY LABORATORIES LIMITED

DATE 06-NOV-86

CERTIFIED BY .....

06-NOV-86 REPORT 29899 REF.FILE 25364-A5 PAGE 1 OF 2

SAMPLE	AU PPB	CU PPM	ZN PPM	AS PPM
86JK1B	<1	6.0	38.0	1.6
86JK2B	<1	--	--	2.6
86JK3B	<1	--	--	4.0
86JK4B	1	--	--	3.4
86JK5B	<1	9.5	58.0	4.0
86JK6B	<1	--	--	3.6
86JK7B	<1	--	--	26.0
86JK8B	8	--	--	7.8
86JK9B	10	120.	63.0	36.0
86JK10B	5	--	--	7.6
86JK11B	4	--	--	7.6
86JK12B	3	--	--	4.4
86JK13B	3	80.0	92.0	8.4
86JK14B	2	--	--	1.6
86JK15B	3	--	--	6.0
86JK16B	2	--	--	2.0
86JK17B	1	8.0	15.0	1.2
86JK21B	3	13.0	31.0	2.6
86JK22B	3	--	--	4.8
86JK24B	10	--	--	4.4
86JK25B	5	51.0	150.	2.8
86JK26B	33	--	--	21.0
86JK27B	3	--	--	3.6
86JK28B	2	--	--	6.4
86JK29B	2	31.0	160.	5.1
86JK30B	19	--	--	36.0
86JK31B	5	--	--	6.4
86JK32B	3	--	--	3.8
86JK33B	2	53.0	170.	4.8
86JK34B	5	--	--	1.8

06-NOV-86 REPORT 29899 REF.FILE 25364-A5 PAGE 2 OF 2

SAMPLE	AU PPB	CU PPM	ZN PPM	AS PPM
86JK1H	<4	10.0	88.0	5
86JK2H	<5	--	--	5
86JK3H	<5	--	--	6
86JK4H	<4	--	--	5
86JK5H	<6	9.0	51.0	7
86JK6H	<6	--	--	5
86JK7H	<6	--	--	35
86JK8H	3	--	--	6
86JK9H	16	88.0	110.	31
86JK10H	6	--	--	9
86JK11H	3	--	--	5
86JK12H	<2	--	--	4
86JK13H	3	52.0	82.0	7
86JK14H	2	--	--	5
86JK15H	3	--	--	6
86JK16H	<1	--	--	5
86JK17H	2	24.0	40.0	7
86JK18H	2	--	--	6
86JK19H	<2	--	--	11
86JK21H	4	27.0	130.	4
86JK22H	<6	--	--	8
86JK24H	7	32.0	63.0	13
86JK26H	3	--	--	13
86JK27H	7	--	--	7
86JK28H	8	--	--	10
86JK29H	<6	22.0	120.	7
86JK30H	4	--	--	12
86JK31H	<5	--	--	8
86JK32H	<5	--	--	5
86JK33H	11	35.0	150.	6
86JK34H	<6	--	--	4

APPENDIX 7: PERSONNEL/TIME WORKED

A) Personnel:

Mr. Randy Hall
325 Indian Grove
Toronto, Ontario
M6P 2H6

Ms. Janet Kerr
259 Kenilworth Ave.
Toronto, Ontario
M4L 3S9

B) Time Worked:

R. Hall : July 24, 26, 1986
August 21, 1986
September 10, 1986
October 7, 1986

J. Kerr : July 24, 1986
August 21, 1986
September 9-12, 14, 16, 18-26, 28-30, 1986
October 1-2, 7, 1986

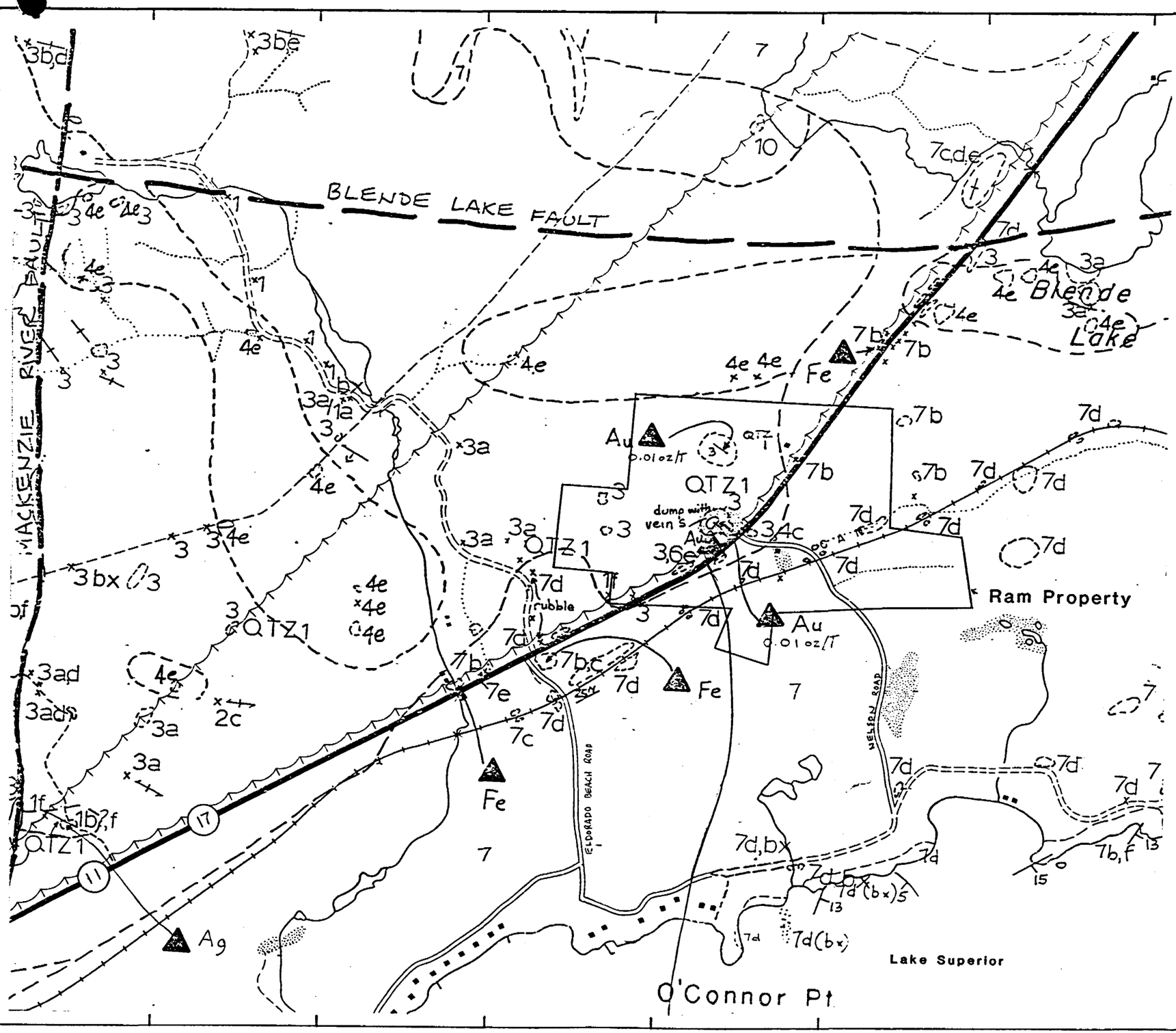
APPENDIX 8: QUALIFICATIONS OF AUTHOR

Janet E. Kerr attended Queen's University in Kingston, Ontario between 1981 and 1985, graduating with a BSc (Honours) degree in Geology. Ms Kerr has spent six months in coal exploration in British Columbia and two years in gold and base metal exploration in northwestern Ontario and southeastern Manitoba.

APPENDIX 9: EXPENDITURES

Assaying

Rock samples, for Au:	78 samples @ $8.50	=$ 663.00
Soil Sampling		=$ 698.60
	Total	$1361.60



LEGEND

1 INTERMEDIATE TO MAFIC METAVOLCANICS
- 1a Massive
- 1b Sheared
- 1f Amphibolite

2 FELSIC METAVOLCANICS
- 2c Pyroclastic

METASEDIMENTS
- 3a Massive
- 3b Bedded
- 3d Quartz-rich
- 3e Arenite
- 3f Wacke

4 MAFIC TO ULTRAMAFIC INTRUSIVE ROCKS
- 4c Lamprophyre
- 4e Porphyritic Gabbro

6 FELSIC INTRUSIVE ROCKS
- 6e Porphyritic

7 GUNFLINT FORMATION
- 7b Taconite, hematitic ironstone
- 7c Shale (Tuff-Argillite)
- 7d Chert-carbonate rocks
- 7e Lapillit Tuff
- 7f Algal Chert

FROM ODM MAP P.2985, SCOTT, 1985.

ESSO MINERALS CANADA
DIV'N OF ESSO RESOURCES CANADA LIMITED

PROSPECT: RAM PROPERTY

REGIONAL GEOLOGY MAP
RAM PROSPECT

ACCOUNT NR Ont 84	FILE NR	TORONTO
DRAWN BY: J Kerr	DATE: 20-Mar-87	NTS: 52 A/10
DNG NR	FIGURE NR 4	

SCALE 0 0.6km
1:15,840

To Accompany A Report By: J. Kerr
Dated: March, 1987

Log 11

XRAL

X-RAY ASSAY LABORATORIES INC.

1885 LESLIE STREET • DON MILLS ONTARIO M3B 3J4 • (416) 445-5755

CE TO:

ESSO MINERALS (CANADA) LIMITED
ATTN: JANET KERR
P.O. BOX 4029, TERMINAL "A"
120 ADELAIDE STREET WEST, SUITE 1801
TORONTO, ONTARIO M5W 1K3

COPY TO:

TTED TO.

ESSO MINERALS (CANADA) LIMITED
ATTN: JANET KERR
P.O. BOX 4029, TERMINAL "A"
120 ADELAIDE STREET WEST, SUITE 1801
TORONTO, ONTARIO M5W 1K3

CUSTOMER NO. 213

INVOICE NO.	INVOICE DATE	WORK ORDER NO.	DATE SUBMITTED
29899	06-NOV-86	25364	10-OCT-86

TERMS

TERMS NET 30 DAYS
1.5% PER MONTH INTEREST ON ACCOUNT OVER 30 DAYS

P.O. NO.	CLIENT PROJECT NO.		TYPE OF SAMPLES SUBMITTED
	16-84		HUMUS SOIL

PKGS	SHIPPED VIA	WAY BILL NO.	SHIPPED FROM
)OX	SMALL FRY	22465	

NOTE	DESCRIPTION/METHOD	XRAL CODE	UNIT COST	AMOUNT
18	CU, ZN, MIXED ACID DIGESTION	1, 7, 0, 0, 0, 0	3.30	59.40
30	AU, PPB	2, 10, 7, 0, 0, 0	6.50	195.00
30	AS, MIXED ACID DIG.	3, 8, 0, 0, 0, 0	4.50	135.00
31	AU, AS, BIOGEOCHEMISTRY, REGULAR DETECTION LIMIT	13, 2, 20, 0, 0, 0	8.00	248.00
30	SOIL, DRYING & SCREENING	99, 2, 0, 0, 0, 0	0.80	24.00
31	HUMUS, DRYING & BLENDING	99, 2, 0, 0, 0, 0	1.20	37.20

RECEIVED
NOV 12 1986
MINERALS

APPROVED FOR PAYMENT:
CHARGE TO:
1684(905)
02-0905-3142-M684
$698.60

FORWARDED TO COMPTROLLERS
NOV 17 1986

SUB-TOTAL $ 698.60

SHIPPING CHARGES	CUSTOMS BROKERAGE	TELEX	MINIMUM CHARGES
OTHER			SURCHARGE - RUSH SERVICE

SURCHARGES

IGINAL INVOICE

TOTAL INVOICE $ 698.60

CUSTOM FIRE ASSAYING LTD.
BOX 253
COCHENOUR, ONTARIO P0V 1L0

DATE July 28 19 86

NAME ESSO MINERALS CANADA

ADDRESS

SOLD BY	C.O.D.	CHARGE	ON ACCT.	ACCT. FWD.

1	12 SAMPLES FOR	104	00
2			
3			
4	OUT #84		
5			
6	[illegible] FOR PAYMENT		
7			
8	CHARGE TO:		
9	ONS 84-905		
10	02-0905-3142-17684		
11	104.00		
12	TAX		
30	SIGNATURE		

3SCA-2

CUSTOM FIRE ASSAYING LTD.
BOX 253
COCHENOUR, ONTARIO P0V 1L0

DATE SEPT. 23 19 84

NAME ESSO MINERALS (Can) LTD

ADDRESS

SOLD BY	C.O.D.	CHARGE	ON ACCT.	ACCT. FWD.

1	23 SAMPLES	184	00
2	FREIGHT	20	30
3		204	30
4	FORWARDED TO		
5			
6			
7			
8			
9			
10			
11	ONT-84-905		
12	02-0905-314 TAX 2	16	84
5	SIGNATURE $204.30		

RECEIVED
OCT 1984
MINERALS

OCT 3 1984

3SCA-2

CUSTOM FIRE ASSAYING LTD.
BOX 253
COCHENOUR, ONTARIO POV 1LO

DATE SEPT 29 1986

NAME ESSO MINERALS CAN.

ADDRESS

SOLD BY	C.O.D.	CHARGE	ON ACCT.	ACCT. FWD.

1	19 SAMP AU@8.00	152	00
2	FRIEGHT	15	15
3		167	15
4			
5			
6			
7			
8			
9			
10			
11			
12	TAX		
20	SIGNATURE		

OUT. 84 ERS
OCT 8 86
OCT 6 1986
MINERALS

APPROVED FOR PAYMENT
CHARGE TO:
ONT - 84 - 905
02 - 905 - 3172 - 1/684

$167.15

3SCA-2

CUSTOM FIRE ASSAYING LTD.
BOX 253
COCHENOUR, ONTARIO P0V 1L0

DATE OCT 6 19 86

NAME ESSO MINERALS CANADA LTD

ADDRESS

SOLD BY	C.O.D.	CHARGE	ON ACCT.	ACCT. FWD.

1	23 SAMPLES @ 8.00	184	00
2	FREIGHT	15	15
3		199	15
4			
5	OUT: #84		
6	RECEIVED		
7	OCT 16 1986		
8	02-0905-3142-9684		
9	APPROVED FOR PAYMENT	199	15
10			
11	CHARGE TO: ONT84		
12	TAX		
47	SIGNATURE		

3SCA-2

RECEIVED
NOV 12 1986

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

#171
2.16

52A10SW0005 2.10035 MACGREGOR

900

File: 908107

Mining Act — Do not use shaded areas below.

Type of Survey(s)	Township or Area
Geological	MacGregor Twp. G-672

Claim Holder(s)	Prospector's Licence No.
Esso Resources Canada Limited; Esso Minerals Canada	T872

Address: 120 Adelaide St. W., Suite 1812, Toronto, Ontario M5W 1K3

Survey Company	Date of Survey (from & to)	Total Miles of line Cut
Esso Minerals Canada	24 Day 07 Mo. 86 Yr. — 07 Day 10 Mo. 86 Yr.	

Name and Address of Author (of Geo-Technical report): Janet Kerr, 259 Kenilworth Ave., Toronto, Ont.

Credits Requested per Each Claim in Columns at right

		Days per Claim
Special Provisions For first survey: Enter 40 days. (This includes line cutting) For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	25.16
	Geochemical	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.		Days per Claim
	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
TB	908107	~~30.7~~ 5.5
	940611	~~30.7~~ 5.5
	940612	~~30.7~~ 5.5
	940613	~~30.7~~ 5.5
	940614	~~30.7~~ 5.5
	940615	~~30.7~~ 5.5
	940616	~~30.7~~ 5.5
	940617	~~30.7~~ 5.5

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED
MAY 11 1987
MINING LANDS SECTION

Expenditures (excludes power stripping)

Type of Work Performed: Assays

Performed on Claim(s): As above

Calculation of Expenditure Days Credits

Total Expenditures			=	Total Days Credits
$ 663.00	÷	15	=	44.2

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.

Total number of mining claims covered by this report of work: 8

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
44.2	April 29/87	Audrey M. Hayes
	Date Approved as Recorded	Branch Director

Date	Recorded Holder or Agent (Signature)
Apr. 28/87	Janet Kerr

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

Date Certified	Certified by (Signature)
April 29/87	

1362 (81/9)

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

#172
210035

Mining Act

Land Management

File: 908107

Instructions: – Please type or print.
– If number of mining claims traversed exceeds space on this form, attach a list.
Note: – 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(s): Geochemical

Township or Area: MacGregor Twp. G-672

Claim Holder(s): Esso Resources Canada Limited; c/o Esso Minerals Canada

Prospector's Licence No.: T872

Address: 120 Adelaide St. W., Suite 1812, Toronto, Ontario M5W 1K3

Survey Company: Esso Minerals Canada

Date of Survey (from & to): 28 09 86 02 10 86 (Day Mo. Yr. Day Mo. Yr.)

Total Miles of line Cut:

Name and Address of Author (of Geo-Technical report): Janet Kerr, 259 Kenilworth Ave., Toronto, Ont.

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	
	Geochemical	43-3/4

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
TB	908107	46.6			

RECEIVED
MAY 11 1987
MINING LANDS SECTION

THUNDER BAY MINING DIVISION
APR 29 1987
AM 7|8|9|10|11|12|1|2|3|4|5|6 PM

Expenditures (excludes power stripping)

Type of Work Performed: Chemical analyses

Performed on Claim(s): TB 908107

Calculation of Expenditure Days Credits

Total Expenditures $ 698.60 ÷ 15 = Total Days Credits 46.57

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.

Total number of mining claims covered by this report of work: 1

For Office Use Only

Total Days Cr. Recorded: 90.35

Date Recorded: April 29/87

Mining Recorder: [signature]

Date Approved as Recorded: 1987.10.28

Branch Director: for [signature]

R.M.

Date: Apr. 28/87

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:
Randy S. Hall, 325 Indian Grove
Toronto, Ontario M6P 2H6

Date Certified: Apr. 29/87

Certified by (Signature): [signature]

1362 (81/9)

Ministry of Northern Development and Mines

Ontario

Geophysical-Geological-Geochemical Technical Data Statement

File _____

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Geochemical (Soil)

Township or Area MacGregor Twp.

Claim Holder(s) Esso Resources Canada Limited

Esso Minerals Canada 120 Adelaide St. W. TORONTO

Survey Company Esso Minerals Canada

Author of Report JANET KERR

Address of Author 259 Kenilworth Ave, TORONTO

Covering Dates of Survey July 24 - October 10/86
(linecutting to office)

Total Miles of Line Cut 3

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
--Electromagnetic	
--Magnetometer	
--Radiometric	
--Other	
Geological	
Geochemical	

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

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

DATE: Apr 28/87 SIGNATURE: Janet Kerr
Author of Report or Agent

Res. Geol. _____ Qualifications this file

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
TB	908107

RECEIVED
MAY 11 1987
MINING LANDS SECTION

SUDBURY MINING DIVISION
RECORDED
APR 20 1987

TOTAL CLAIMS 1

If space insufficient, attach list

OFFICE USE ONLY

837 (85/12)

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS – If more than one survey, specify data for each type of survey

Number of Stations _____ Number of Readings _____

Station interval _____ Line spacing _____

Profile scale _____

Contour interval _____

MAGNETIC

Instrument _____

Accuracy – Scale constant _____

Diurnal correction method _____

Base Station check-in interval (hours) _____

Base Station location and value _____

_____

ELECTROMAGNETIC

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency _____
(specify V.L.F. station)

Parameters measured _____

GRAVITY

Instrument _____

Scale constant _____

Corrections made _____

_____

Base station value and location _____

_____

Elevation accuracy _____

INDUCED POLARIZATION RESISTIVITY

Instrument _____

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time _____ Frequency _____

– Off time _____ Range _____

– Delay time _____

– Integration time _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

_____

Corrections made _____

_____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

_____

Additional information (for understanding results) _____

_____

_____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

_____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken 8

Total Number of Samples 61

Type of Sample 31 Humus and 30 Soils
(Nature of Material)

Average Sample Weight 1 kilogram

Method of Collection

Soil Horizon Sampled B and humus

Horizon Development

Sample Depth 0 to 10cm

Terrain rolling hills

Drainage Development poorly drained

Estimated Range of Overburden Thickness 0-10m

SAMPLE PREPARATION
(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis

General

ANALYTICAL METHODS

Values expressed in: per cent ☐
p. p. m. ☒
p. p. b. ☒

(Cu), Pb, (Zn), Ni, Co, Ag, Mo, (As), (circle) (Au)

Others

Field Analysis (_____ tests)
Extraction Method
Analytical Method
Reagents Used

Field Laboratory Analysis
No. (_____ tests)
Extraction Method
Analytical Method
Reagents Used

Commercial Laboratory (_____ tests)
Name of Laboratory XRay Assay Labs
Extraction Method
Analytical Method DCP, AA, FADCP
Reagents Used

General Samples were dried, pulverized and analyzed using techniques listed on cover sheet to one gram and summarized above

Ministry of
Northern Development
and Mines

Ontario

Ministère du
Développement du Nord
et des Mines

October 26, 1987

Your File: 171
Our File: 2.10035

Mining Recorder
Ministry of Northern Development and Mines
435 James Street South
P.O. Box 5000
Thunder Bay, Ontario
P7C 5G6

Dear Sir:

RE: Notice of Intent dated September 22, 1987
Geological Survey and Data for Assaying
on Mining Claims TB-908107, et al, in MacGregor Township

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,

R.M. Charnesky (Mrs.)
Acting Manager
Mining Lands Section
Mineral Development and Lands Branch
Mines and Minerals Division

Whitney Block, Room 6610
Queen's Park
Toronto, Ontario
M7A 1W3

Telephone: (416) 965-4888

/pm RM:pl
Enclosure: Technical Assessment Work Credits

cc: Esso Resources Canada Limited
120 Adelaide St. W.
Suite 1812
Toronto, Ontario
M5W 1K3

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

Resident Geologist
Thunder Bay, Ontario

Ministry of Northern Development and Mines

Ontario

Technical Assessment
Work Credits

File 2.10035

Date September 22,1987

Mining Recorder's Report of Work No. 171

Recorded Holder: Esso Resources Canada Ltd.; Esso Minerals Canada

Township or Area: MacGregor

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	$663.00 spent on analyses of samples taken from mining claims: TB - 908107, 940611 - 614 inclusive, 940617
Electromagnetic _____ days	
Magnetometer _____ days	
Radiometric _____ days	
Induced polarization _____ days	
Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological _____ days	
Geochemical _____ days	44.2 assessment work days are allowed which may be grouped in accordance with Section 76(6) of the Mining Act.
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

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.

Ministry of Northern Development and Mines

Ontario

Technical Assessment Work Credits

File: 2.10035

Date: September 22, 1987

Mining Recorder's Report of Work No.: 171

Recorded Holder: Esso Resources Canada Ltd.; Esso Minerals Canada

Township or Area: MacGregor

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	TB 908107
Electromagnetic _____ days	
Magnetometer _____ days	
Radiometric _____ days	
Induced polarization _____ days	
Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological 25.16 days	
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

TB 940611 - 940617 inclusive

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.

0220 (85/12)

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

MRO - Mining Rights Only
SRO - Surface Rights Only
M + S - Mining and Surface Rights

Description	Order No.	Date	Disposition	File
®	W43/75	5/8/75	M+S	16832

LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT — SYMBOL

- PATENT, SURFACE & MINING RIGHTS
- " , SURFACE RIGHTS ONLY
- " , MINING RIGHTS ONLY
- LEASE, SURFACE & MINING RIGHTS
- " , SURFACE RIGHTS ONLY
- " , MINING RIGHTS ONLY
- LICENCE OF OCCUPATION
- ORDER-IN-COUNCIL
- RESERVATION
- CANCELLED
- SAND & GRAVEL

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC. 1.

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000
METRES 0 200 1000 (1 KM) 2000 (2 KM)

TOWNSHIP 2.10035

MACGREGOR

M.N.R. ADMINISTRATIVE DISTRICT
THUNDER BAY

MINING DIVISION
THUNDER BAY

LAND TITLES / REGISTRY DIVISION
THUNDER BAY

Ministry of Natural Resources — Ministry of Northern Development and Mines

Ontario

MAY 27, 1987

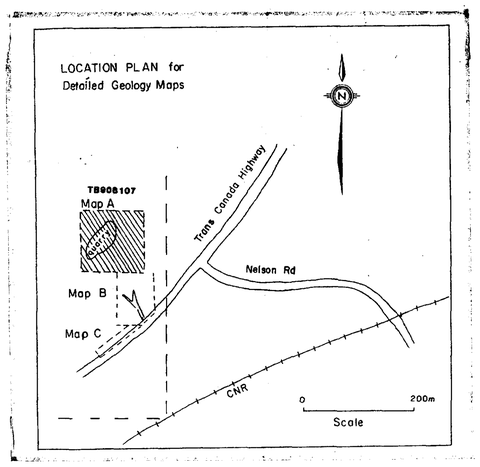
G-672

Date OCTOBER, 1986.

Number G-672

52A10SW0005 2.10035 MACGREGOR

LOCATION PLAN for
Detailed Geology Maps



QUARRY

Claim TB908107

LEGEND

2 Intermediate Metavolcanics
- 2b Tuff
- 2f Reworked

3 Felsic Metavolcanics
- 3a Flow
- 3b Tuff
- 3c Lapilli Tuff

7 Felsic Intrusive Rocks
- 7a Granite

8c Lamprophyre Dike

- Cliff
- Rusty
- Sericite - Silicified Zones with sulfides
- 85 I Joint (inclined, vertical)
- Joint surface coated with quartz crystals
- Breccia

86-JK-001 , 0.01
Rock Sample No. — Assay (oz Au / Ton)

210035

ESSO MINERALS CANADA

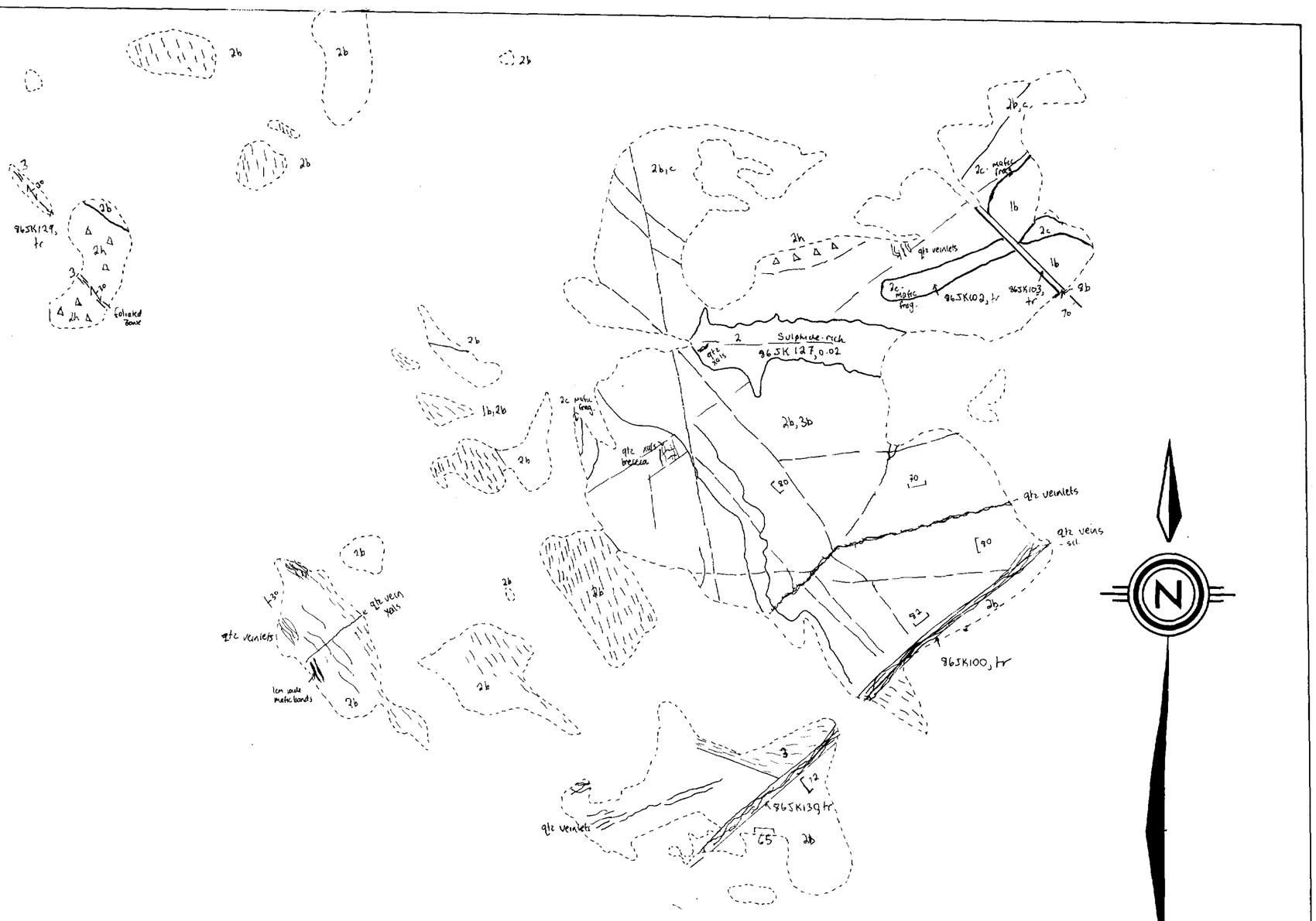
RAM PROPERTY

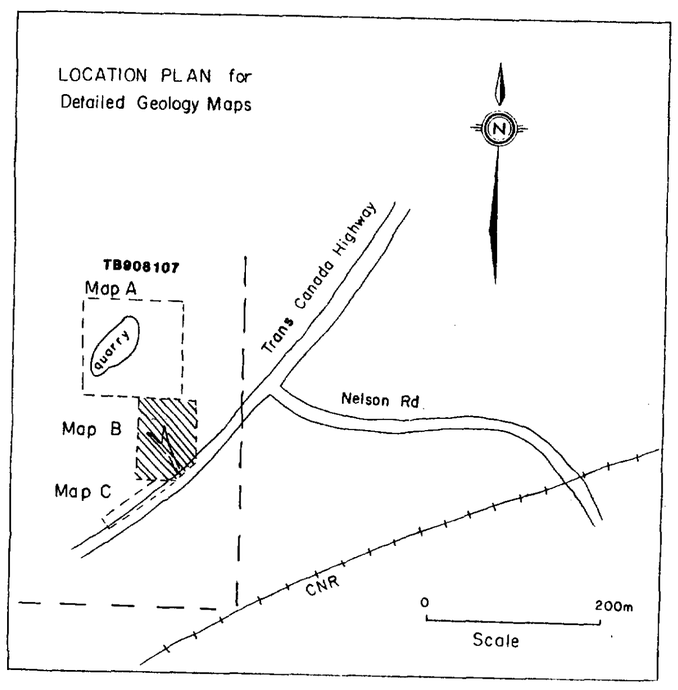
DETAILED GEOLOGY MAP A

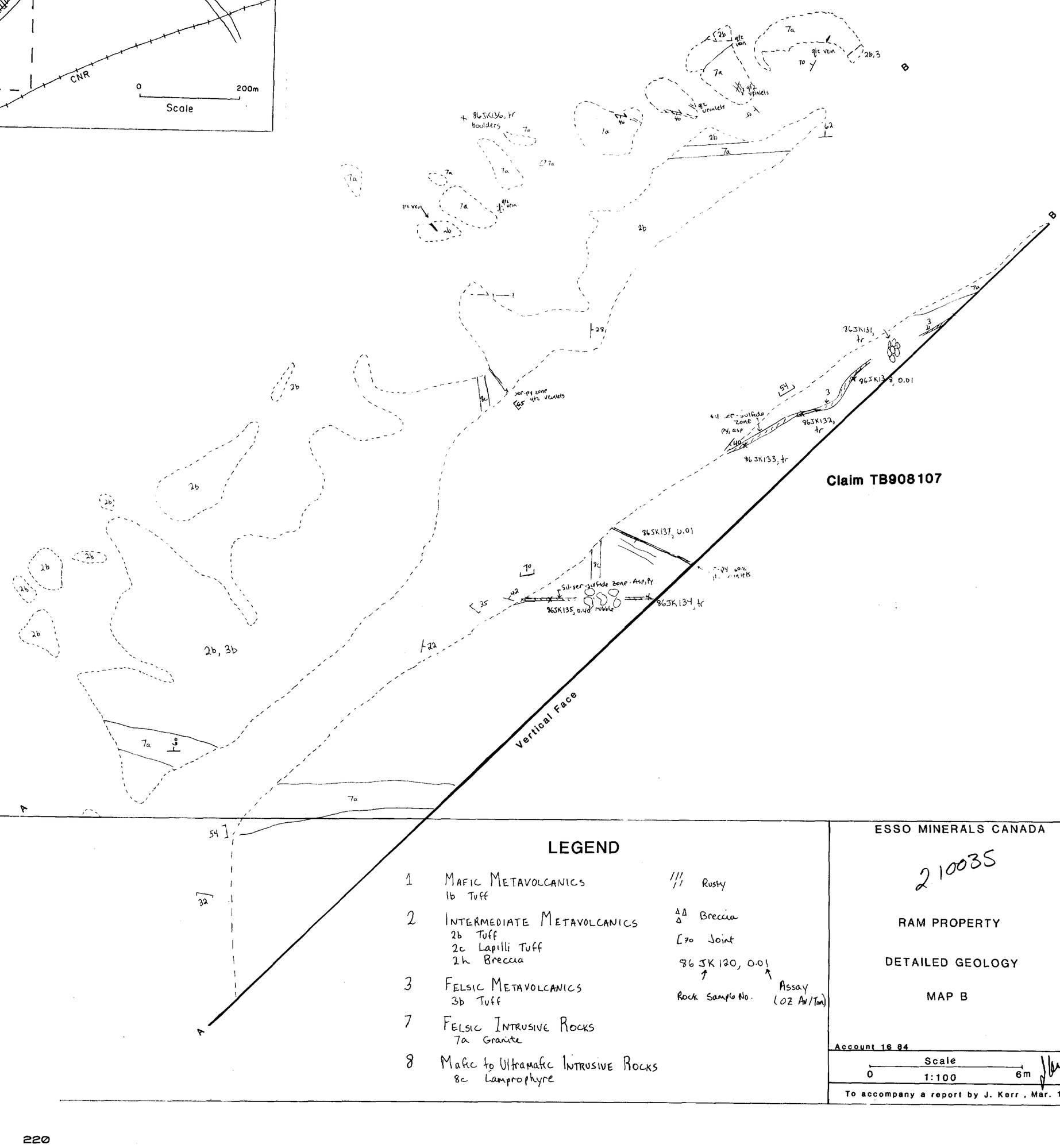
0 — 6m
SCALE 1:100

To accompany a report by J. Kerr, Mar., 1987

Account 16-84







LEGEND

1 MAFIC METAVOLCANICS
- 1b Tuff

2 INTERMEDIATE METAVOLCANICS
- 2b Tuff
- 2c Lapilli Tuff
- 2h Breccia

3 FELSIC METAVOLCANICS
- 3b Tuff

7 FELSIC INTRUSIVE ROCKS
- 7a Granite

8 Mafic to Ultramafic INTRUSIVE ROCKS
- 8c Lamprophyre

/// Rusty

Breccia

[70 Joint

86 JK 120, 0.01 — Rock Sample No. — Assay (OZ Au/Ton)

ESSO MINERALS CANADA

210035

RAM PROPERTY

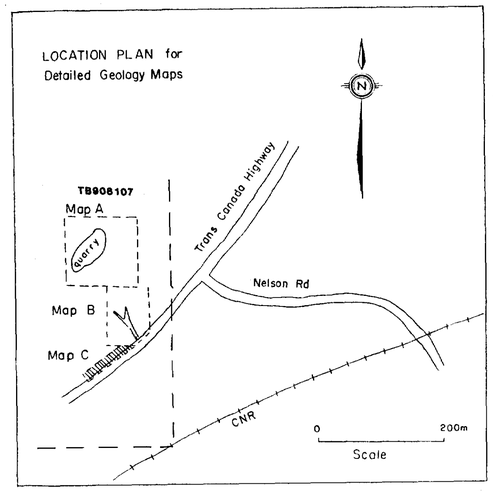
DETAILED GEOLOGY

MAP B

Account 16 84

Scale 0 1:100 6m

To accompany a report by J. Kerr, Mar. 1987



Claim TB908107

LEGEND

2 Intermediate Metavolcanics
- 2b Tuff

3 Felsic Metavolcanics
- 3b Tuff

7 Felsic Intrusive Rocks
- 7a Granite

8 Mafic to Ultramafic Intrusive Rocks
- 8c Lamprophyre

/// rusty

ΔΔ brecciated

[70 joint

86 JK10D, 0.01
↑ Rock sample No. ↑ Assay (oz Au/Ton)

2.10035

ESSO MINERALS CANADA

RAM PROPERTY

DETAILED GEOLOGY

MAP C

Account16 84

Scale 1:100

0 6m

To Accompany a report by J. Kerr, Mar. 1987