



32E035W0300 63.5820 HEPBURN

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N.T.S.: - 32 E/4

RPT. NO. S-90-5

Latitude: 49 04

Longitude: 79 45

EXPLORATION REPORT
ON THE
LA REINE RIVER PROPERTY
HEPBURN TOWNSHIP
NONMETAL AREA
LARDER LAKE MINING DIVISION
ONTARIO
FOR
SEAL RIVER EXPLORATIONS LIMITED

F. J. SHARPLEY

JANUARY 1991

OP90-134
OP90-223
OP90-281



32E03SW0300 63.5820 HEPBURN

010C

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SUMMARY

The La Reine River Property consists of 64 contiguous, non-patented mining claims situated along the Casa Berardi-Normetal-Ligneris greenstone belt which forms part of the Abitibi Subprovince of the Archean Superior Province of the Precambrian Shield.

This greenstone belt is considered to be Hunter Mine Group (2708my) in age (OGS Map 2484) consisting of an assemblage of mafic to felsic metavolcanics, metasediments and igneous rocks which are bordered by granitic batholiths. Diabase dikes are interpreted to cross the area in a northeast direction.

The property was flown in March of 1988 by Aerodat Limited using their helicopter borne electromagnetic and magnetic system along lines at 100 metre intervals.

The 1990 winter exploration program consisted of 13.5 km of line cutting induced polarization and magnetometer surveys. The 1990 summer exploration program consisted of 13.5 km of geological survey and partial coverage with gold in humus geochemistry.

The La Reine River Property has four exploration targets as follows:

- 1) IP anomaly from line 25E to 30E between 0+50N and 3+00N.
- 2) IP anomaly from line 15E to 17E between 0+50S and 2+00S.

- 3) IP anomaly from line 15E to 30E between 5+00S and 7+00S.
- 4) Gold in humus geochemical anomaly from line 23+00E to 26+00E between 0+00 and 0+75N.

Diamond drill hole No. RR-90-1 collared on line 24E at 2+50N investigated the induced polarization anomaly on line 25E from 0+50N to 2+00N and partially investigated the gold in humus geochemical anomaly on line 24E at 0+25N. The IP anomaly is caused by a silicified shear zone (Hepburn Fault) with 1% disseminated pyrite in tholeiitic basalt. A total of 34 samples of split core from DDH RR-90-1 within the shear zone were analyzed for gold with negative results. The gold in humus anomaly on 24E at 0+00 to 0+75N is unexplained.

Gold in humus geochemistry partially investigated the IP anomaly from line 15E to 17E between 0+50S and 2+00S and the IP anomaly from line 15E to 30E between 5+00S and 7+00S with weakly anomalous but spotty gold values.

All the exploration targets on the La Reine River Property have been at least partially tested. No further exploration work is recommended at this time.

1.0 INTRODUCTION

Geological and geochemical surveys and one diamond drill hole has been completed during 1990 on the La Reine River Property in Hepburn Township, Ontario. The geological surveys were designed to evaluate the economic potential of the claim group. The geochemical surveys were designed to evaluate the economic potential of the induced polarization anomaly. One diamond drill hole tested the IP anomaly.

The 1990 exploration program was financed by Allen Amos, Leslie Blain and Fred Sharpley under the Ontario Prospector's Assistance Program (OPAP) and by Fred Sharpley in conjunction with the Ontario Mineral Incentive Program (OMIP).

2.0 PROPERTY

2.1 Claims

The La Reine River property consists of 64 contiguous, non-patented mining claims located in Hepburn Township in the Larder Lake Mining Division of Northeastern Ontario.

The claims appear on claim map M-500 and are shown on Figure 2 and numbered as follows:

L-954518 to L-954520 inclusive

L-954527 to L-954533 inclusive

L-954539 to L-954549 inclusive

L-954865

L-954868 to L-954874 inclusive

L-954878 to L-954880 inclusive

L-954886

L-1015828 to L-1015858 inclusive

The claims total 2560 acres or 1035 hectares and are registered in the name of Seal River Explorations Limited.

2.2 Location and Access

The property is located 103 kms (64 mi) east of Cochrane, Ontario in Hephurn Township: 24 kms (15 mi) north of Lake Abitibi and 3 kms (2 mi) west of the Ontario-Quebec border. The Cochrane-La Sarre Highway (Ontario 652 or Quebec 111) is an all weather highway and provides access to the central part of the property; a distance of 3.5 kms (2 mi) by four wheel drive from the main highway at mileage 111. The turn-off from the Patten River road (Mace Bay road) is at 7 kms where an old road extends to old Camp 24. The area is accessible by helicopter from La Sarre, a distance of 48 kms (30 mi) to the southeast. By road the property is 47 kms (29 mi) from Normetal or 68 kms (42 mi) from La Sarre.

.3 Topography

The topography on the property is gently rolling with outcrop knolls and sand, gravel forming ridges less than 15 m (50 ft). The outcrop areas form less than 1 percent of the area. The swamps form the 60 percent of the property. The forest cover is mainly spruce. The soil cover is mainly clay with local areas of sand, gravel and boulders between the swamps.

The area has been cut over by AP&P and is undergoing second growth.

There are a few small intermittent streams on the claim group. Water for drilling purposes is probably available from the small lakes and ponds on the property or from the La Reine River.

The climate is typical of northern Ontario with snow cover and cold weather from mid November until May.

3.0 EXPLORATION HISTORY

3.1 Regional History

The first geological observations were recorded in 1901 by Coulthard, Tanton 1919, Hopkins 1918, Knight 1919, Mawdsley 1930, Flaherty 1839 and Thompson 1937. Since the 1920's, prospectors and mining companies have shown great interest in the region chiefly because of the proximity to the Normetal mine which is 10 miles to the east of the La Reine River property. The Normetal produced 12 million tons grading 2.20 % Cu and 5.20 % Zn with 1.4 OPT Ag and 0.02 OPT Au (NM 1989). The mine is now shut down.

The area was mapped geologically by S.B. Lumbers of the O.G.S. (O.D.M. Geological Report No. 14; Map 2025; South Patten River Area) in 1963 on a scale of 1"=1/2 mile.

The area was mapped again in 1978 by G.W. Johns of the O.G.S. (Map 2453) on a scale of 1:100,000.

The airborne magnetic map 2366 G by the G.S.C.-O.D.M. covers the area.

The airborne magnetic and electromagnetic survey of the Detour-Burnt Bush-Abitibi Area was carried out by the Ontario Geological Survey in 1989.

.2 Property History

Canadian Superior Explorations Limited in 1966 carried out ground horizontal loop electromagnetic surveys over a grid on the northwest edge of the property and drilled nine diamond drill holes to test anomaly No. A-4 in Adair Township. The anomaly was caused by massive to disseminated pyrrhotite and pyrite in felsic tuffs.

Gold Hill Resources Inc. in 1984 explored the extension of Anomaly No. A-4 in Adair Township with two diamond drill holes.

Keldor Resources Inc. in 1987 drilled 27 reverse circulation holes east of the La Reine River property on strike in Hepburn Township adjacent to the Quebec border. Hole No. 42 on claim 906492 on the boundary of the La Reine River property returned an assay of 14045 ppb Au in a basal till sample containing three grains of gold. The drill hole is located adjacent to the volcanic-sedimentary contact. This sample did not have the delicate grains of gold but Hole Nos. 41 and 59 contained two and one delicate grains in basal till samples respectively adjacent to the volcanic-sedimentary contact.

In 1988 the Seal River Explorations Limited property was flown by

Aerodat Limited using a combined helicopter borne magnetic and electromagnetic and VLF survey using a three frequency E.M. system with lines spaced at 100 metre intervals.

The combined magnetic and electromagnetic survey of the Detour-Burnt Bush-Abitibi Area flown by the O.G.S. in 1989 with 200 metre lines covers the La Reine River property on Map 81228.

In January 1990 Remy Belanger carried out 13 km of induced polarization survey along the La Reine River. The writer carried out a magnetometer survey over the same grid in January 1990.

3.3 Recent Regional Activity

The Casa Berardi-Normetal greenstone belt has undergone extensive activity since 1984. The Golden Pond discoveries by Inco-Golden Knight in Casa Berardi Township started production in 1988 with reserves of 10 million tons grading 0.22 OPT Au (Canadian Mines Handbook - 1988-89).

The companies currently active in the Normetal area on the Ontario side are Noranda Explorations Limited, Cominco Limited, Rave Resources Inc. and Placer-Dome. In late 1990 Noranda drilled 4500 feet in nine holes.

Exploration Miniere Normetal Inc. is currently re-examining the Normetal property in Desmeulieres and Perron Townships for base metals. Geological Reserves are stated at 431,000 tons grading 12% Zn and 1 OPT Ag (Canadian Mines Handbook 1988-89). In 1990 the Normetal Property was optioned to Cominco Limited.

4.0 GEOLOGY

4.1 REGIONAL GEOLOGY

The La Reine River property lies along the Casa Berardi-Normetal-Liquer's greenstone belt which forms part of the Abitibi Subprovince, Superior Province of the Precambrian Shield.

The greenstone belts north of the Destor-Porcupine Fault are considered to be Hunter Mine Group, Cycle II; the Kidd Creek rhyolites are 2702 my. (OGS Map 2484 - Lithostratigraphic Map of the Abitibi Subprovince).

The Casa Berardi Fault extends through the northern part of the area. The Abitibi Fault extends through the southern part of the area. The Privat-Launay Fault extends through the Normetal area.

A swarm of northeastern trending diabase dikes extend through the Abitibi-Normetal area.

4.2 Property Geology

The La Reine River property lies near the southwestern boundary of the Casa Berardi-Normetal greenstone belt which forms a part of the Abitibi Subprovince, Superior Province of the Canadian Shield (Figure 3).

The La Reine River portion of the greenstone belt consists of an assemblage of mainly mafic with minor felsic metavolcanics, metasediments and igneous intrusive rocks which are bordered by granitic batholiths. The rocks strike southeast and dip steeply northeast in all parts of the area.

The La Reine River property is underlain by mafic metavolcanics in the central part of the property with minor felsic to intermediate tuffaceous rocks. The metasediments composed mainly of greywacke and calc-silicate rock predominate in the southern part of the property. The Patten River Pluton which is granodiorite in composition borders the northeast edge of the property.

A strike fault is interpreted to cross the central portion of the property.

Metamorphism of the flow rocks has produced fine to medium-grained amphibole-rich metavolcanics ranging in color from grey or pale green to dark greenish black metamorphosed basaltic and andesitic flows. Most of the flow rocks are foliated and exhibit volcanic structures recognized as massive, amygdaloidal, pillowed, diabasic or gabbroic, and porphyritic types (Lumbers 1963). Felsic metavolcanics consist of flow, tuff, lapilli-tuff, pyroclastic breccia, and tuff breccia.

5.0 MINERALIZATION

5.1 Regional Mineralization

Base metal mineralization at the Normetal mine is in a lenticular body of massive sulfides comprising mostly pyrite, chalcopyrite and sphalerite. The deposit is in a shear zone striking N 65 W and dipping 80 NW in felsic tuffs and agglomerates. It is cut by the north trending diabase dike. At the end of 1963, the production had reached 7,381,922 tons and the reserves were 1,552,922 tons grading 2.50% copper and 8.30% zinc. The shaft is down to a depth of 6,765 feet (QDNR SPECIAL PAPER 2).

Gold mineralization in the Casa Berardi area is stratabound associated with pyrite, arsenopyrite, quartz veining and sericite-carbonate alteration in a volcano-sedimentary environment (Descarreaux 1984).

Gold mineralization in the Ligneris area is stratabound associated with disseminated pyrite in a felsic volcanic environment.

5.2 Property Mineralization

Vary little outcrop has been observed on the property. The airborne geophysics indicates the rocks in the central portion of

the property have been depleted in iron probably due to the closeness of the granodiorite pluton.

6.0 CURRENT WORK CARRIED OUT

6.1 Geological Mapping

During the period from June 9-14,1990 the La Reine grid consisting of 13.5 line km was mapped geologically by the writer. The winter grid consists of picket lines spaced at 100 metre intervals with stations at 25 metre intervals.

The mapping consists of outlining the surface geology, topography, vegetation, soil cover, roads and claim posts. The outcrop areas outline the rock-type, structure, alteration and mineralization.

The geological mapping was plotted at a scale of 1:5000 and reduced to a scale of 1:10,000. (See Map No. S-90-5-02)

6.2 Soil Geochemistry

During the periods from September 13-19,1990 and from November 2-3,1990 168 humus soil samples were collected by Leslie Blain and the writer on the 13.5 km grid. (See Map S-90-5-03)

All the samples were assayed for gold by Techni-Lab Abitibi Inc. of Ste Germaine, PQ using the fire assay and atomic absorption method.

6.3 Diamond Drilling

During the period from December 10-20, 1990 Morissette Canada Inc. of Haileybury, Ontario drilled one diamond drill hole to test an induced polarization anomaly. The collar of the hole was located on line 24+00E at 2+50N with a dip of 45 degrees and an azimuth of 230 degrees.

A total of 40 split core samples were analyzed by Bell-White Laboratories Limited of Haileybury, Ontario using the fire assay and atomic absorption method.

7.0 RESULTS

7.1 Geological Mapping

A prominent ridge extends from line 25E to at least 30E at 2+00N with a difference of elevation of 20 metres. This outcrop ridge is composed of basalt flow, mafic tuff and feldspar porphyry. The south edge of the ridge is a fault scarp marking the Hepburn fault. (See Map No. S-90-5-04) This shear zone is also evident at 13+50E at 1+00S. (See Map No. S-90-5-02)

A shear zone is also noted at 16+50E at 10+50S. Outcrop on the grid is scarce. (See Map No. S-90-5-02)

7.2 Soil Geochemistry

A total 168 humus soil samples were analyzed for gold. The background is 2 ppb. The threshold for anomalous gold is 10 ppb. A total of 25 humus soil samples are anomalous for gold. A prominent gold in humus geochemical anomaly extends over a strike length of 300 metres from line 23E to 26E at 0+00 to 0+75N. The peak value is 12.5 times background or 25 ppb Au. Other anomalous values occur but are isolated.

.3 Diamond Drilling

Hole No. RR-90-1 collared on line 24E at 2+50N (See Section 24E-Map No. S-90-5-04) investigated the induced polarization anomaly on line 25E from 0+50N to 2+00N and partially explored the gold in humus geochemical anomaly (See Map No. S-90-5-3) on line 24E at 0+00. The IP anomaly is caused by a shear zone (Hepburn Fault - See Section 24E-Map No. S-90-5-04) with 1% disseminated pyrite. A total of 37 samples of split core from hole No. RR-90-1 within the shear zone had negative gold values. The gold in humus geochemical anomaly on 24E at 0+00 is unexplained.

7.0 CONCLUSIONS AND RECOMMENDATIONS

The La Reine River property has four exploration targets as follows:

- 1) IP anomaly from line 25E to 30E between 0+50N and 3+00N.
- 2) IP anomaly from line 15E to 17E between 0+50S and 2+00S.
- 3) IP anomaly from line 15E to 30E between 5+00S and 7+00S
- 4) Gold in humus geochemical anomaly from line 23+00E to 26+00E between 0+00 and 0+75N.

Hole No. RR-90-1 collared on line 24E at 2+50N investigated the induced polarization anomaly on line 25E from 0+50N to 2+00N and partially explored the gold in humus geochemical anomaly on line 24E at 0+25N. The IP anomaly is caused by a shear zone (Hepburn Fault) with 1% disseminated pyrite. A total of 34 samples of split core from diamond drill hole RR-90-1 within the shear zone were analyzed for gold with negative results. The gold in humus anomaly on 24E at 0+00 to 0+75N is unexplained.

Gold in humus geochemistry partially investigated the IP anomaly from line 15E to 17E between 0+50S and 2+00S with spotty, isolated results.

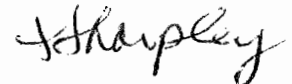
Gold in humus geochemistry partially investigated the IP anomaly from line 15E to 30E between 5+00S and 7+00S with weakly

anomalous but spotty gold values.

The gold in humus geochemical anomaly from line 23+00E to 26+00E between 0+00 and 0+75N was partially tested by DDH No. RR-90-1 with negative results.

All the exploration targets on the La Reine River Property have been at least partially tested. No further exploration work is recommended at this time.

Respectfully submitted,



F.J. Sharpley

Burlington Ontario

January 7, 1991



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Seal River Explorations Limited
- G.S.C. Q.D.M. (1959) Aeromagnetic Maps:
2366G, 5346G
- O.D.M. (1979) Kirkland Lake Data Series
Adair Township
Preliminary Map P.818
- O.D.M. (1972) Kirkland Lake Data Series
Hepburn Township
Preliminary Map P.783
- O.G.S. (1989) Geophysical/Geochemical Series
Detour-Burntbush-Abitibi Area
Airborne Electromagnetic Survey
Total Intensity Magnetic Survey

- Map 81228; N.T.S.: 32D/13 32E/4
- O.G.S.
(1966) Geological Compilation Series
Coral Rapids-Cochrane Sheet
Map 2161: 1"= 4 miles
- O.G.S.
(1979) Preliminary Map P.2243
Geological Series
Burntbush Lake-Detour Lake Area
(Southern Part); 1:50,000
- O.G.S.
(1984) Lithostratigraphic Map of the Abitibi
Subprovince; Map 2484
- (1984) Claim Map: M.500
Hepburn Township
1"= 1/2 mile
- O.G.S.
(1988) Assessment Work Data Files; Toronto
- Q.D.M.
(1965) Metallic Mineralization in Noranda, Mataqami,
Val D'or and Chibougamau Areas: No. 3;
1"= 4 miles
- (1986) Airphotos: 1:20,000
86-4901: 42-109..118
86-4902: 30-130..139
86-4903: 36-40...43
86-4904: 40-126..140

CERTIFICATE OF QUALIFICATION

I, Frederick James Sharpley of the City of Burlington, Province of Ontario, do hereby certify:

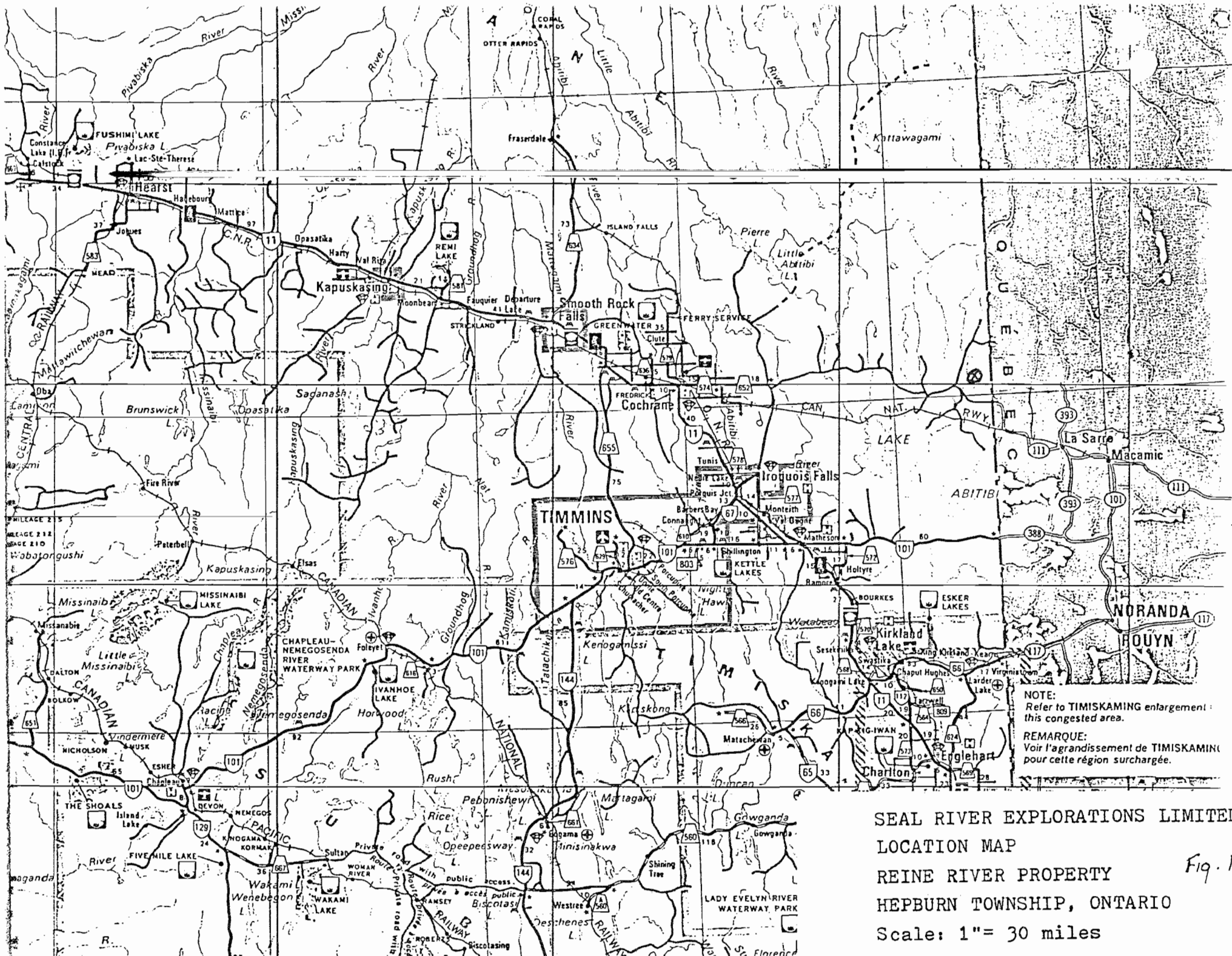
- 1) That I am a consulting geologist and reside at 2372 Sinclair Circle, Burlington, Ontario, L7P 3C3.
- 2) That I graduated from the University of Saskatchewan, Saskatoon, Saskatchewan, holding a degree of Bachelor of Arts, Geology (1959).
- 3) That I am a Fellow of the Geological Association of Canada.
- 4) That I have practised my profession as a mineral exploration geologist for a period of 31 years.
- 5) That I personally was involved with the technical supervision of the work and the report.
- 6) That I have a financial interest in the La Reine River Property.

Burlington Ontario.

January 7, 1991.

F.J. Sharpley

APPENDIX I:
LIST OF FIGURES

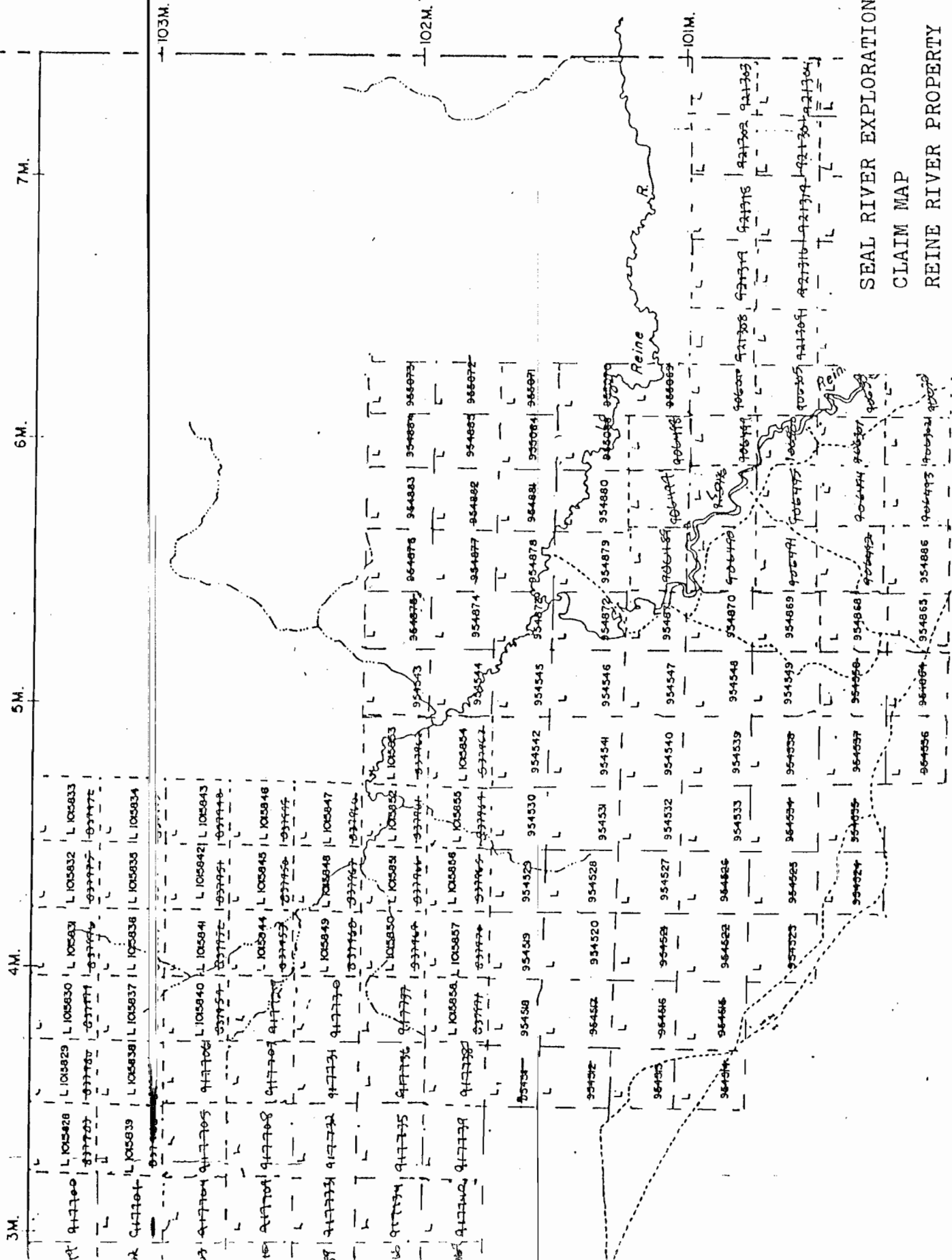


NOTE:
Refer to TIMISKAMING enlargement
in this congested area.

REMARQUE:
Voir l'agrandissement de TIMISKAMING
pour cette région surchargée.

SEAL RIVER EXPLORATIONS LIMITED
 LOCATION MAP
 REINE RIVER PROPERTY
 HEPBURN TOWNSHIP, ONTARIO
 Scale: 1" = 30 miles

Fig. 1.



SEAL RIVER EXPLORATIONS LIMITED
 CLAIM MAP
 REINE RIVER PROPERTY
 HEPBURN TOWNSHIP, ONTARIO
 Scale: 1" = 1/2 mile

Fig. 2

QUEBEC

ON

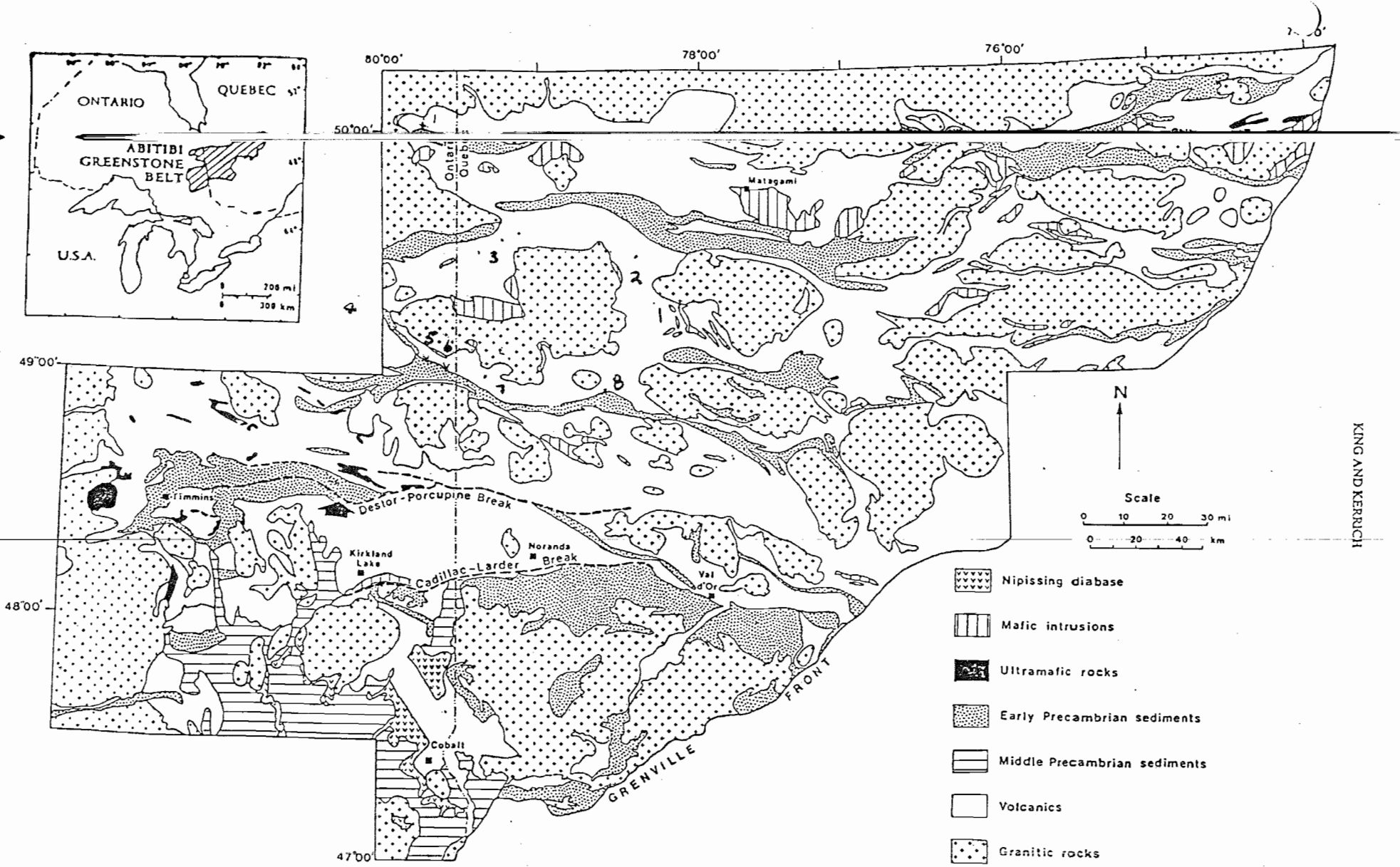
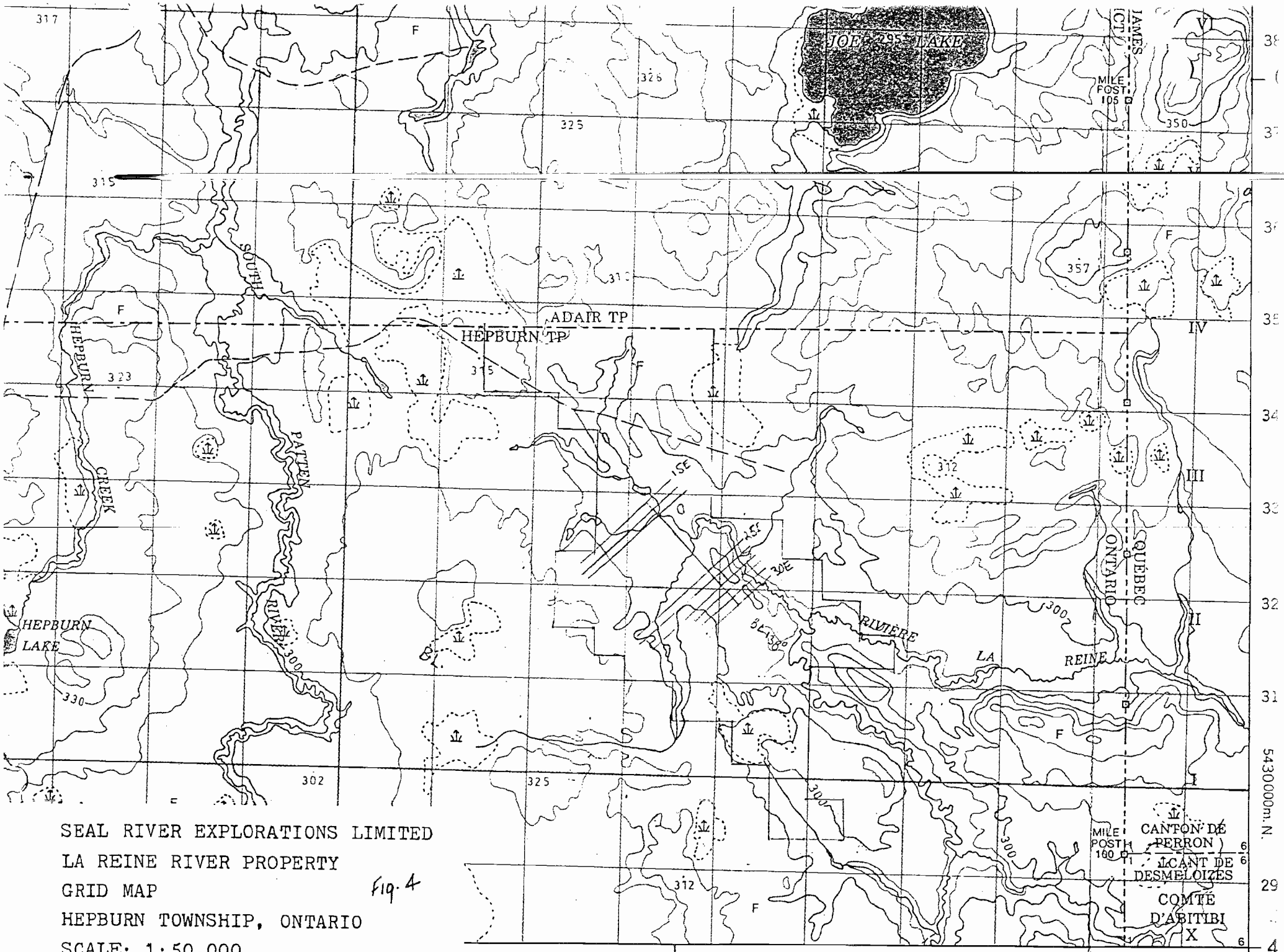


FIG. 1. Simplified geological map of the Timmins - Kirkland Lake area (modified after Jensen 1978, 1980), illustrating the Destor-Porcupine Fault, in Taylor Township (black arrow).

- 1- Detour
- 2- Agnico Eagle.
- 3- Casa Berardi
- 4- Mikwam River Property
- 5- Patten River Property
- 6- Reine River Property
- 7- Normetal



SEAL RIVER EXPLORATIONS LIMITED
 LA REINE RIVER PROPERTY
 GRID MAP
 HEPBURN TOWNSHIP, ONTARIO
 SCALE: 1:50,000

Fig. 4

MILE POST 105
 MILE POST 160
 CANTON DE PERRON
 CANTON DE DESMELOIZES
 COMTE D'ABITIBI

02 03 04 05 06 07 08 09 608000m. E.

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APPENDIX II:
LIST OF TABLES

TABLE NO. 1

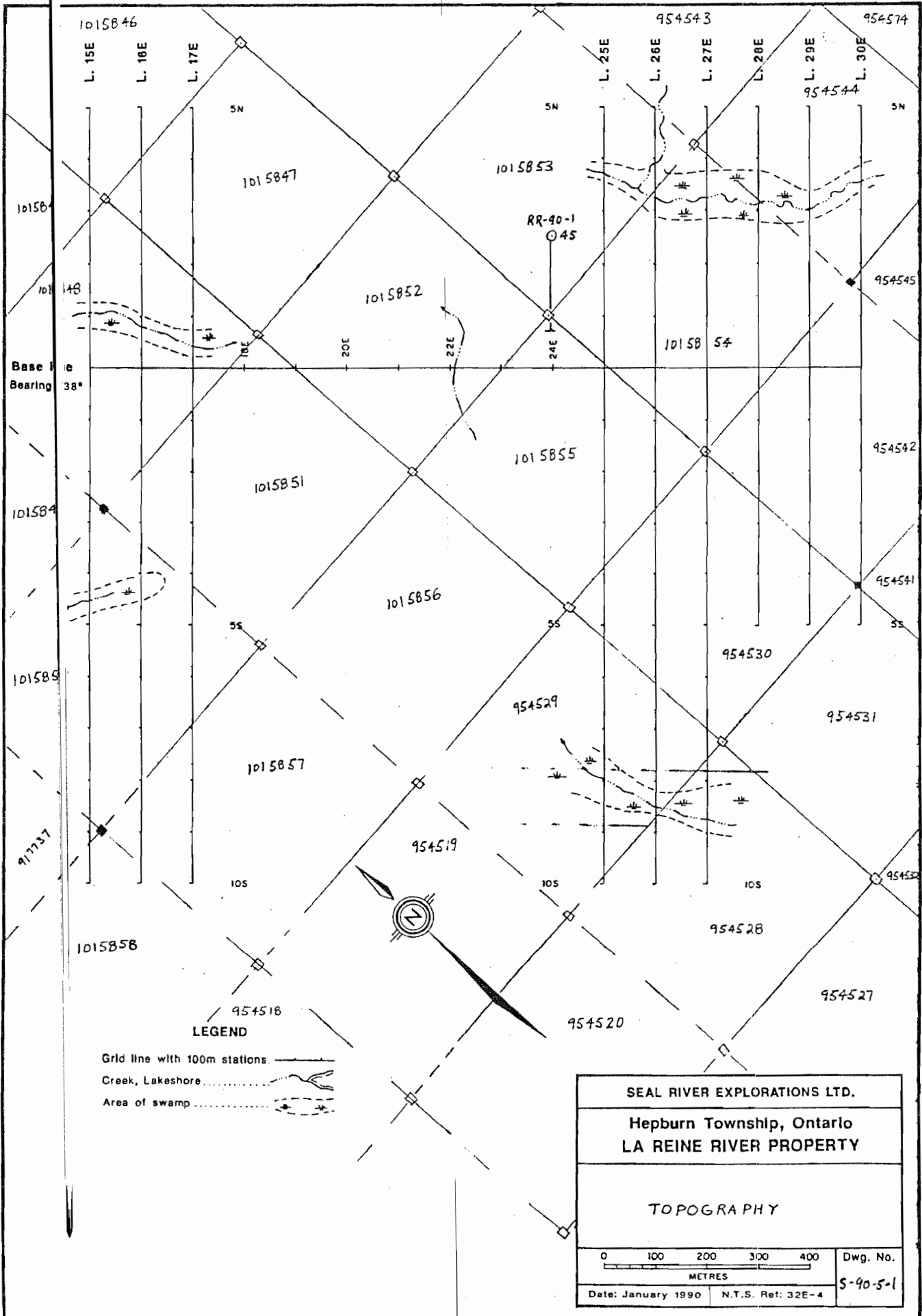
LA REINE RIVER

ROCK GEOCHEMISTRY

SPL. NO.	CO-ORDINATES	ANOMALY	ASSAYS PPM				REMARKS
			CU	ZN	PPB AU	PPM AS	
3 32887	27+00E-1+00N				6		Amph.Schist grab
4 32888	29+00E-2+50N				4		Sil.Schist grab; tr.py
1 32889	13+00E-2+00S				2		Qtz-Ser.Sch. grab
2 32890	13+00E-1+75S				3		Qtz.Ser.Sch. grab; 1/4"Q.V

APPENDIX III:

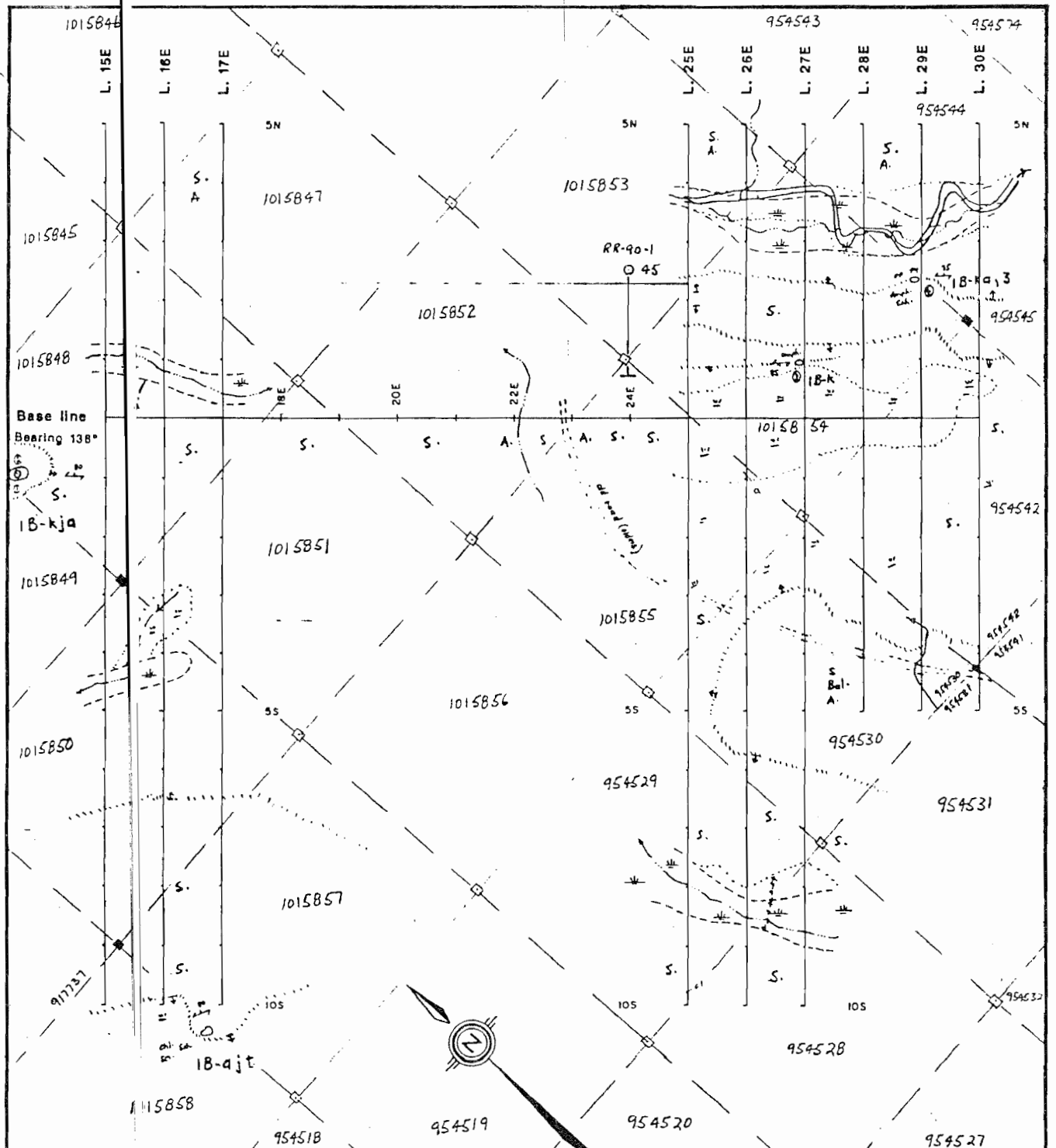
LIST MAPS



Base line
Bearing 38°

LEGEND
 Grid line with 100m stations
 Creek, Lakeshore
 Area of swamp

SEAL RIVER EXPLORATIONS LTD.	
Hepburn Township, Ontario LA REINE RIVER PROPERTY	
TOPOGRAPHY	
0 100 200 300 400 METRES	Dwg. No. S-90-5-1
Date: January 1990	N.T.S. Ref: 32E-4



LEGEND

Grid line with 100m stations

Creek, Lakeshore

Area of swamp

- LEGEND**
- 4 MAFIC INTRUSIVES
 - 3 FELSIC TO INTERMEDIATE INTRUSIVES
 - 2 METASEDIMENTS
 - 1 METAVOLCANICS
- A) Felsic to intermediate
 B) Mafic to intermediate
 C) GIORN FORMATION

- ab anorthite
- km kyanite
- mag magnetite
- py pyrite
- qtz quartz
- g garnet
- sch schistosity
- a sillified
- b brachioid
- c carbonized
- v verticillated
- am amphibolitized

- SYMBOLS**
- Claim post
 - Geological boundary - assumed
 - - - Fault - observed, assumed
 - Swamp
 - Topographic high
 - Track road
 - Tractor road
 - Schistosity
 - Bedding
 - Track
 - Tuffaceous - loaded

- A Alders
 - B Birch
 - C Cedar
 - E Elm
 - J.P. Jackpine
 - P Poplar
 - S Spruce
 - T Tamarack
 - BAL Barina m
- Sample location
 ○ Diamond Drill Hole

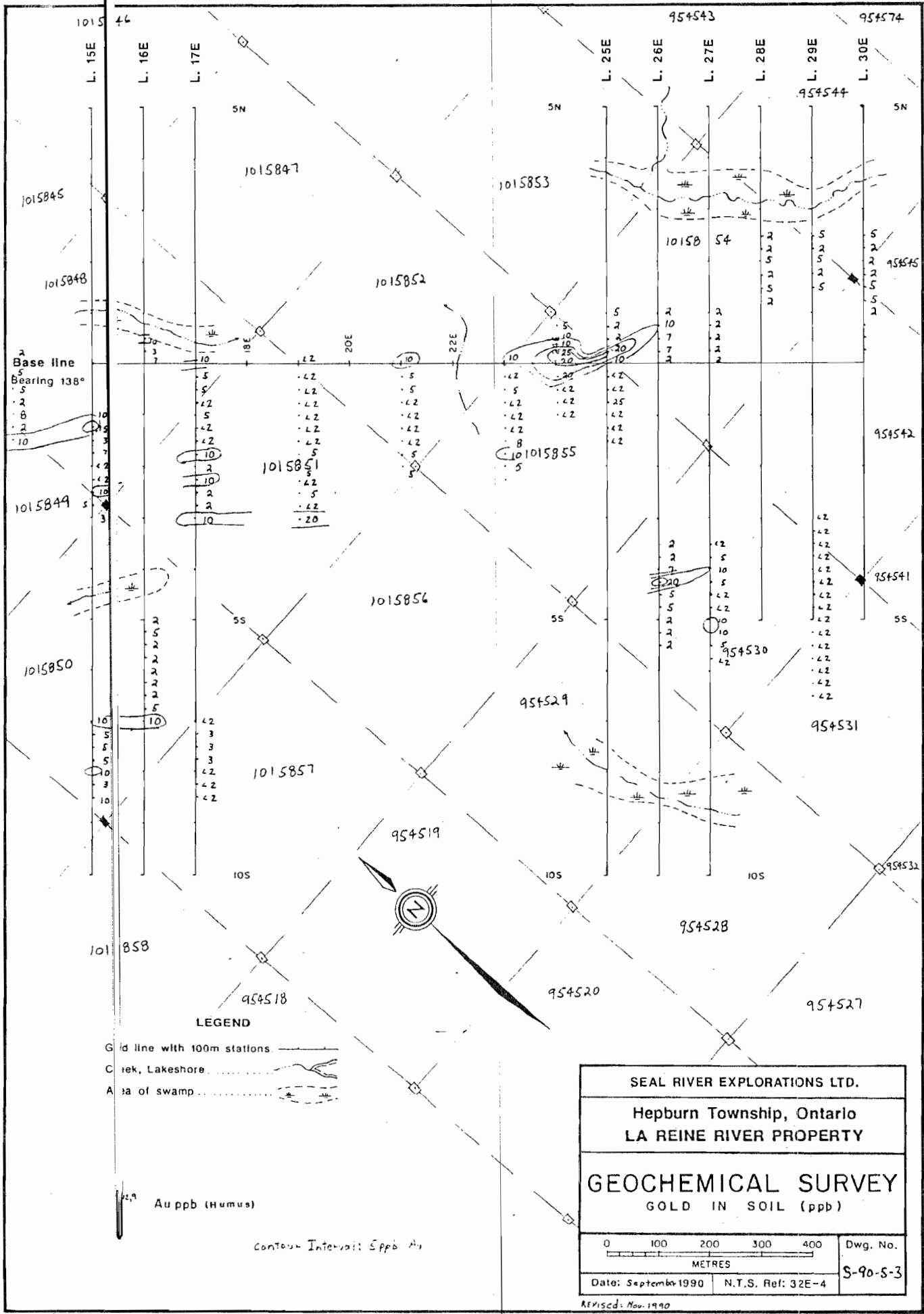
SEAL RIVER EXPLORATIONS LTD.

Hepburn Township, Ontario
 LA REINE RIVER PROPERTY

GEOLOGICAL MAP

0 100 200 300 400 METRES

Date: July 1990 N.T.S. Ref: 32E-4 Dwg. No. S-90-5-2



Base line
 Bearing 138°

LEGEND

- Grid line with 100m stations
- Creek, Lakeshore
- Area of swamp

Auppb (Humus)

Contour Interval: 5ppb Au

APPENDIX IV:
DIAMOND DRILL LOGS - HOLE NO. RR-90 1

METRES		DESCRIPTION	SAMPLE			ASSAYS	
FROM	TO		NO.	METRES		CU	AU
				FROM	TO	TOTAL	PPM %
27.68	8.50	MAFIC TUFF:	9751	27.68	28.59	.91	15
		as above: chert banding, moderately bleached; banding at 60 degrees to core axis.	9752	28.59	29.50	.91	14
		36.67-36.94 Feldspar Porphyry: as above.					
38.50	2.92	BASALT FLOW:					
		as above:					
		42.31-42.92 weak bleaching.					
42.92	6.78	FELDSPAR PORPHYRY:					
		as above: sharp contact at 60 degrees to core axis.					
45.78	4.24	BASALT FLOW:					
		as above:					
46.24	4.36	FELDSPAR PORPHYRY:					
		as above:					
46.36	4.48	BASALT FLOW:					
		as above:					
46.48	4.82	FELDSPAR PORPHYRY:					
		as above:					
46.82	4.15	BASALT FLOW:					
		as above:					
47.15	4.55	FELDSPAR PORPHYRY:					
		as above:					
47.55	47.91	BASALT FLOW:					
		dark grey to black, very fine-grained, weakly foliated at 60 degrees to core axis; fairly uniform.					

METRE		DESCRIPTION	SAMPLE			ASSAYS		
FROM	TO		NO.	%S	METRES	CU	AU	
FROM	TO			FROM	TO	TOTAL	PPM	%
47.91	8.89	FELDSPAR PORPHYRY: as above: sharp contact at 60 degrees to core axis.						
48.89	4.86	BASALT FLOW: as above.						
	53.49	1/2" quartz vein at 60 degrees to core axis.						
64.86	81.72	MAFIC TUFF: dark grey, fine-grained, weakly foliated and banded at 60 degrees to core axis; 10% white quartz-carbonate veining at 60 degrees to core axis; weak sericite alteration along slips at 60 degrees to core axis.						
	73.67	1/4" quartz vein at 60 degrees to core axis.						
	76.44	1/2" quartz vein at 60 degrees to						
	78.97-79.03	60% quartz veining at 60 degrees to core axis.						
	80.35-80.50	Feldspar Porphyry: as above:						
	82.20-82.45	white quartz vein at 60 degrees to core axis.						
87.72	118.72	BASALT FLOW: dark grey, very fine-grained, fairly massive, uniform;						
	90.62	1/2" quartz vein at 80 degrees to						
	98.30	1" quartz vein at 80 degrees to core axis.						
	101.56	1" sheared quartz-carbonate vein at 80 degrees to core axis.						
	111.34	white quartz-carbonate vein at 45						

METRE		DESCRIPTION	SAMPLE			ASSAYS				
FROM	TO		NO.	METRES		CU	AU			
			%S	FROM	TO	TOTAL	PPM	%	PPB	OZ/T
	115.95	1/2" quartz vein at 50 degrees to core axis.								
118.72	9.12	FELDSPAR PORPHYRY: as above: contact at 60 degrees to core axis.								
119.12	1.46	MAFIC TUFF: dark grey, very fine-grained, banded at 70 degrees to core axis; 10% white quartz-carbonate veining;								
	124.85-125.03	yellow-green, quartz-sericite alteration;								
	125.58-125.94	pale yellow-green, quartz-sericite alteration.								
	131.09-131.16	sheared strongly at 70 degrees to core axis.								
131.46	14.17	BASALT FLOW: as above: foliated weakly at 70 degrees to core axis.								
144.17	15.31	AMPHIBOLITE: dark green, medium to coarse-grained, foliated at 70 degrees to core axis.								
	144.17-158.31	amphibolitized; 1/10" amphibole; possibly amphibolite.								
158.31	175.60	SHEAR ZONE: ALTERATION ZONE: strongly sheared at 80 degrees to core axis.								
	158.31-159.29	weakly chloritized.	9753	158.31	158.29	.98			14	
	158.31	2" quartz vein at 45 degrees to core axis.								
	159.29-163.34	strongly chloritized, sheared at 80 degrees to core axis; 10% white quartz-carbonate veining at 80;	9754	159.29	160.20	.91			10	
			9755	160.20	161.12	.92			15	
			9756	161.12	162.03	.91			7	

METRES		DESCRIPTION	SAMPLE			ASSAYS		
FROM	TO		NO.	METRES		CU	AU	
				FROM	TO			
		1% disseminated pyrite; 10% disseminated illmenite? possibly arsenopyrite?	9757	2162.03	162.95	.92		7
			9758	2162.95	163.34	.39		3
	159.59-160.10	20% garnets						
	163.34-166.27	weakly chloritized, weak silicification; 1% pyrite; 10% illmenite? 5% fine-garnets	9759	1163.34	164.26	.92		15
			9760	1164.26	165.17	.91		9
			9761	1165.17	165.96	.79		21
			9762	1165.96	166.27	.31		14
	164.07-164.17	white quartz vein at 50 degrees to core axis.						
	164.29-164.71	20% white quartz veining at 60 degrees to core axis.						
	165.14	1/4" quartz veining at 60 degrees to core axis.						
	165.81	1" quartz vein at 70 degrees						
	165.99	1/4" quartz vein at 80.						
	166.09	1/4" quartz vein at 80.						
	166.27-167.67	moderately silicified, weakly chloritized; strongly sheared at 80 degrees to core axis; 1% pyrite; 5% fine garnets.	9763	1166.27	167.18	.91		5
			9764	1167.18	167.67	.49		7
	167.67-168.22	strongly chloritized, moderately silicified; strongly sheared at 80 degrees to core axis; 1% pyrite; 5% garnets.	9765	2167.67	168.22	.55		5
	168.22-171.08	weak to moderately silicified, chloritized; moderately to weakly sheared at 80 degrees to core axis; <1% disseminated pyrite.	9766	1168.22	169.13	.91		9
			9767	1169.13	170.05	.92		9
			9768	1170.05	171.08	1.03		10
	171.08-171.69	strongly chloritized, strongly sheared at 80 degrees to core axis; 10% fine garnets; 2% disseminated pyrite; 10% illmenite?	9769	2171.08	171.69	.61		3
	171.69-172.39	strongly silicified; strongly sheared at 80 degrees to core axis; 2% disseminated pyrite; 3% garnets;	9770	2171.69	172.39	.70		9

METRE		DESCRIPTION	SAMPLE			ASSAYS			
FROM	TO		NO.	%S	METRES	CU	AU		
					FROM	TO	TOTAL	PPM: %	PPB: OZ/T
195.68	211.87	SHEAR ZONE; ALTERATION ZONE:							
	195.68-200.41	moderately sheared and chloritized; at 80 degrees to core axis; weakly silicified; <1% disseminated pyrite; leucoxene(garnets) alteration.							
	200.41-201.23	weakly sheared at 80 degrees to core axis;							
	201.23-201.59	Feldspar Porphyry: as above: contact at 80 degrees.							
	201.59-204.83	weakly sheared basalt.							
	204.37-204.49	Feldspar Porphyry: as above: contact at 80 degrees.							
	204.80-204.83	Feldspar Porphyry: as above:							
	204.83-211.87	strongly sheared at 80 degrees; weak to moderately chloritized and silicified with leucoxene alteration; <1% disseminated pyrite.	9778	1	204.83	205.74	.91		15
			9779	1	205.74	206.65	.91		9
			9780	1	206.65	207.57	.92		7
			9781	1	207.57	208.48	.91		7
			9782	1	208.48	209.40	.92		7
			9783	1	209.40	210.31	.91		10
			9784	1	210.31	211.23	.92		14
	211.38-211.62	Feldspar Porphyry: as above: contact at 80 degrees.							
211.87	219.46	FELDSPAR PORPHYRY:							
		pale greenish-grey, fine-grained, massive, uniform; <1/10" white and pink feldspar phenocrysts; sharp contact at 80 degrees to core axis.							
	212.23-212.38	sheared basalt at 80 degrees.							
	214.03-214.12	sheared basalt at 80 degrees.							
	216.59-217.35	sheared basalt at 80 degrees.							
	216.59-216.74	3% disseminated pyrite.							

METRES		DESCRIPTION	SAMPLE			ASSAYS		
FROM	TO		NO.	%S	METRES	CU	AU	
FROM	TO			FROM	TO	TOTAL	PPM %	PPB/02/T
219.46	22.81	SHEAR ZONE: ALTERATION ZONE: silicified, sheared strongly at 80 degrees to core axis.						
	219.46-220.13	breccia zone; silicified.						
	220.07-220.43	strongly sheared at 80 degrees; 5-8% disseminated pyrite.	9785	5	219.46	220.43	.97	9
	221.50-221.77	Feldspar Porphyry:						
	221.77-222.81	sheared at 80 degrees; 20% quartz veining at 80 degrees; 3-5% disseminated pyrite.	9786	4	221.77	222.81	1.34	9
222.81	231.51	FELDSPAR PORPHYRY: as above; contact at 80 degrees to core axis.						
223.51	241.40	SILICIFIED BASALT: dark grey, very fine-grained, fairly massive, uniform, hard.						
	223.51-224.49	20% quartz veining at 80 degrees; 3-5% disseminated pyrite.	9787	4	223.51	224.49	.98	3
	223.81-223.88	Feldspar Porphyry: as above.						
	224.44-224.67	Feldspar Porphyry: as above; contact at 80 degrees.						
	224.67-224.91	1" quartz-carbonate vein with 5-10% disseminated pyrite.						
	224.91-225.09	Feldspar Porphyry: as above; contact at 80 degrees.						
	225.09-225.86	20% quartz veining at 80 degrees; 2-3% disseminated pyrite.	9788	3	225.09	225.86	.77	10
	226.56-227.38	Feldspar Porphyry: as above; contact at 80 degrees.						
	227.38-228.60	10% quartz veining; 2-3% disseminated pyrite.	9789	2	227.38	228.60	1.22	7

METRE		DESCRIPTION	SAMPLE			ASSAYS		
FROM	TO		NO.	%S	METRES	CU	AU	
FROM	TO		FROM	TO	TOTAL	PPM	%	
240.40	244.72	SILICIFIED BASALT: pale greenish-grey, very fine-grained, foliated at 80 degrees to core axis; 40% brecciated with pink and white quartz-carbonate veining;						
	245.52-245.88	Feldspar Porphyry: as above: contact at 80 degrees.						
	250.55-250.70	Feldspar Porphyry: as above: contact at 80 degrees.						
	251.16-251.37	Feldspar Porphyry: as above: contact at 80 degrees.						
	253.01-253.41	Feldspar Porphyry:						
	253.59-254.26	Feldspar Porphyry:						
254.72	256.31	FAULT BRECCIA: angular fragments cemented with quartz-carbonate.						
256.31		END OF HOLE						

APPENDIX V:
PROJECT EXPENDITURES

SUMMARY OF PROJECT EXPENDITURES

Project	Patten River		La Reine River	
	OPAP	OMIP	OPAP	OMIP
A. Alos	\$	\$	10000.00	\$
L. Bain			10000.00	
E. Colbert		7470.00		
F. Sharpley	4276.83		5723.17	6028.03
Sub-Total:	\$ 4276.83	\$ 7470.00	\$ 25723.17	6028.03
TOTAL OPAP:	\$ 30000.00			
TOTAL OMIP:	\$ 13498.03			
TOTAL:	\$ 43498.03			

La Reine River Property

Summary of Expenditures-F.J.Sharpley - May 22/1990 to July 31/90
 Geological Mapping - OPAP

1. Food: La Reine-06/11/90-groceries	\$	5.72
2. Rental: La Reine-06/12/90 4 wheeler+man @ \$175/day x3		525.00
Guy Frenette-geological mapping		
3. Accom: La Reine-Windsor Hotel:06/09/90-06/13/90		140.50
room & board-5 days		
4. Meal: New Liskeard-06/14/90-travel		5.61
5. Transportation: Burlington to La Reine:1126kmx\$0.30		337.80
F.Sharpley		
6. Fees: 06/09/90-06/14/90 mapping grids 6 days x \$100		600.00
F.Sharpley-geological mapping.		
7. Supplies: Rapid Reproductions-07/05/90-prints		3.68
8. Supplies: " " -07/06/90-prints		.88
9. Supplies: " " -07/06/90-prints		3.55
10. Assays: Bell-White-07/07/90-assay surface rock spls.		64.00
11. Supplies: Rapid Reproductions-07/10/90-prints		7.73
12. Fees: F.Sharpley-07/10/90-1 day @ \$100-plotting		100.00
geology maps		
Sub-Total:		----- \$ 1,794.47

Expenditures: F. Sharpley- September 10 to October 18/90
 Soil geochemistry - OPAP

13. Rental: La Reine-9/17/90: 4 wheeler/truck/man-1 day M. Moore-soil spl.	175.00
14. Rental: La Reine-9/14/90: 4 wheeler/truck/man Guy Frenette-soil sample	225.00
15. Room & Board-Windsor Hotel-La Reine-8 days 9/14/90-9/17/90	115.73
16. Transportation: Burl-La Reine:1211 km @ \$0.30 F.Sharpley	363.30
17. Fax: Burl-9/27/90-fax from assay office Techni-Lab	6.05
18. Supplies: Rapid-Burl: reductions:9/28/90	19.00
19. Fees: F.Sharpley:9/13/90-9/19/90: 5.5 days @ \$100 soil sampling	550.00
20. Assays: Techni-Lab: Ste Germaine PQ-assay soil spls. 9/21/90	710.00

- TOTAL:	\$2,164.08

Expenditures: F. Sharpley: November 1-4, 1990
Soil Geochemistry - OPAP

21. Contract: La Reine: 11/3/90: 1 day @ \$100 vehicle mileage @ \$0.30 x 230 km L. Blain-soil sample	\$ 169.00
22. Room & Board: La Reine: Windsor Hotel 11/1/90-11/4/90-3 days	106.50
23. Rental: La Reine: 4 wheeler/trailer/chain saw: 11/3/90 Guy Frenette-build bridge-soil spl.	80.00
24. Supplies: La Reine: 11/3/90: lumber for bridge to cross South Patten R. with TVR; Guy Frenette	79.00
25. Meal: Kirkland L.: 11/4/90: travel	* 4.54
26. Transportation: F. Sharpley: Burl.-LaReine: 11/1/90-11/4/90 1143 km @ \$0.30	342.90
27. Fees: F. Sharpley: 11/1/90-11/4/90: Geochem: 4 days @ \$100* soil spl.	400.00
28. Assays: Techni-Lab: Ste Germaine PQ: 11/13/90 assay soil samples	980.00
29. Supplies: Rapid: Burl: 10/19/90-reductions & prints	* 17.10
30. Supplies: Rapid: Burl: 10/17/90-prints	7.60
31. Supplies: Rapid: Burl: 10/19/90-prints	* 1.90
Sub-Total:	\$ 2,188.54

NOTE: (MIP EXPENDITURES - (-\$423.92) *

OMIP EXPENDITURES

Expenditures: F. Sharpley: December 3 to 7, 1990

Diamond Drilling:

32. Transportation: F. Sharpley: Burlington-LaReine: 12/3/90-12/7/90: 1666 km x \$0.30 diamond drilling,	499.80
33. Accom.: Haileybury Motel: 12/3/90- 1 nite	40.95
34. Meal: Haileybury: 12/3/90-travel	10.00
35. Room & Board: LaReine: Windsor Hotel: 12/4/90-12/7/90 F. Sharpley-DDH	128.45
36. Rental: LaReine: 12/6/90-ski-doo & driver Guy Frenette-check drill site	170.00
37. Fees: F. Sharpley: DDH: 5 days @ \$100 check drill sites for Morissette to make a bid on drilling.	500.00

December 9 to January 7, 1991

38. Transportation: Burlington to LaReine 12/9/90-12/20/90: 2461 km @ \$0.30 F. Sharpley	738.30
39. Supplies: New Liskeard: 12/10/90: propane-Husky	11.00
40. Supplies: LaReine: copies: 12/12/90-Guy Frenette	3.25
41. Supplies: LaReine: lumber for core rack Silvain Dore: 12/12/90	35.00
42. Supplies: Dupuy: hardware: Co-Op: 12/13/90 stove pipes for core shack	64.43
43. Contract: LaReine: prepare core shack: Paul Bellavance: 12/14/90	100.00
44. Rental: LaReine: garage & trailer: Guy Frenette: 12/14/90-12/21/90	150.00
45. Room & Board: LaReine: Windsor Hotel: 12/10/90-12/21/90 F. Sharpley: DDH's	455.00
46. Fees: F. Sharpley: 12 days x \$100 \ DDH 12/9/90-12/20/90 logging core-DDH's	1200.00
47. Assays: Bell-White: Haileybury: 12/14/90 assay 40 spls. RR-90-1	380.00
48. Fees: F. Sharpley: Report: 5 days @ \$100 LaReine River Property: 1/3/91-1/7/91	500.00
49. Contract: Morissette: Haileybury: 11/10/90-11/20/90	598.50

50. Supplies: MC Reproductions: 1/4/91: prints & reductions	19.43
Sub-Total:	\$ 5,604.11
TOTAL	\$11,751.20

Expenditures: A. Amos
OFAP

1. Transportation: A Amos: May 26-27, 1990 mileage: 400 km @ \$0.30	\$ 120.00
2. Supplies: Timmins: May 26, 1990 groceries	31.97
3. Fees: May 26-27, 1990 2 days at \$100	200.00
4. Contract: Morissette Canada Inc: Hole No. RR 90-1 DDH: 12/10/90-12/20/90	10,000.00
TOTAL:	<u>10,351.97</u>

Expenditures: L. Blain
Diamond Drilling: 12/17/90-12/20/90
OPAP

1. Transportation: Noranda to LaReine: 775 km @ \$0.30	232.50
Les Blain: core to K.L. core shack	
2. Fees: L. Blain: 12/17/90 12/20/90: 4 days @ \$100	400.00
splitting core: transport core to Kirkland Lake core shack	
3. Contract: Morissette Canada Inc: Haileybury: 12/10/90-12/20/90: Hole No. RR-90-1	9,367.50
TOTAL:	<u>\$10,000.00</u>