



52C11NE0059 2.12082 WATTEN

010

SUMMARY REPORT
on the
GEOLOGY AND GEOCHEMISTRY
of the
REEF POINT CLAIM BLOCK
RICE BAY PROJECT

NTS 52 C-11

RECEIVED

APR - 3 1989

MINING LANDS SECTION

D. Hodges
Falconbridge Limited
1989



52C1NE0059 2.12082 WATTEN

010C

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i SUMMARY AND CONCLUSIONS

This report summarizes the results of a geological check-mapping and lithogeochemical sampling program carried out on the Reef Point claims, near Rainy Lake, Northwestern Ontario between August 31 and September 2, 1988.

The purpose of the investigation was to:

- 1) complete lithogeochemical sampling and check-mapping to confirm the nature of rocks identified in 1986 and to test for the presence of hydrothermal alteration;
- 2) follow up reported anomalous zinc values; and
- 3) test for the presence of gold.

The work confirms that the property is underlain by mainly mafic metavolcanic rocks, and minor chert and ironstone. The volcanic rocks are relatively unaltered, with no significant parameters reflecting hydrothermal alteration related to volcanic associated massive sulphide deposits. Gold analyses returned <1 ppb except WAO4052 (32 ppb) and 4053 (6 ppb). The anomalous zinc value of 8910 ppm reported in 1986 was not duplicated.

It is concluded that this property has limited potential aside from the one short-strike length EM conductor identified with HLEM.

ii RECOMMENDATIONS

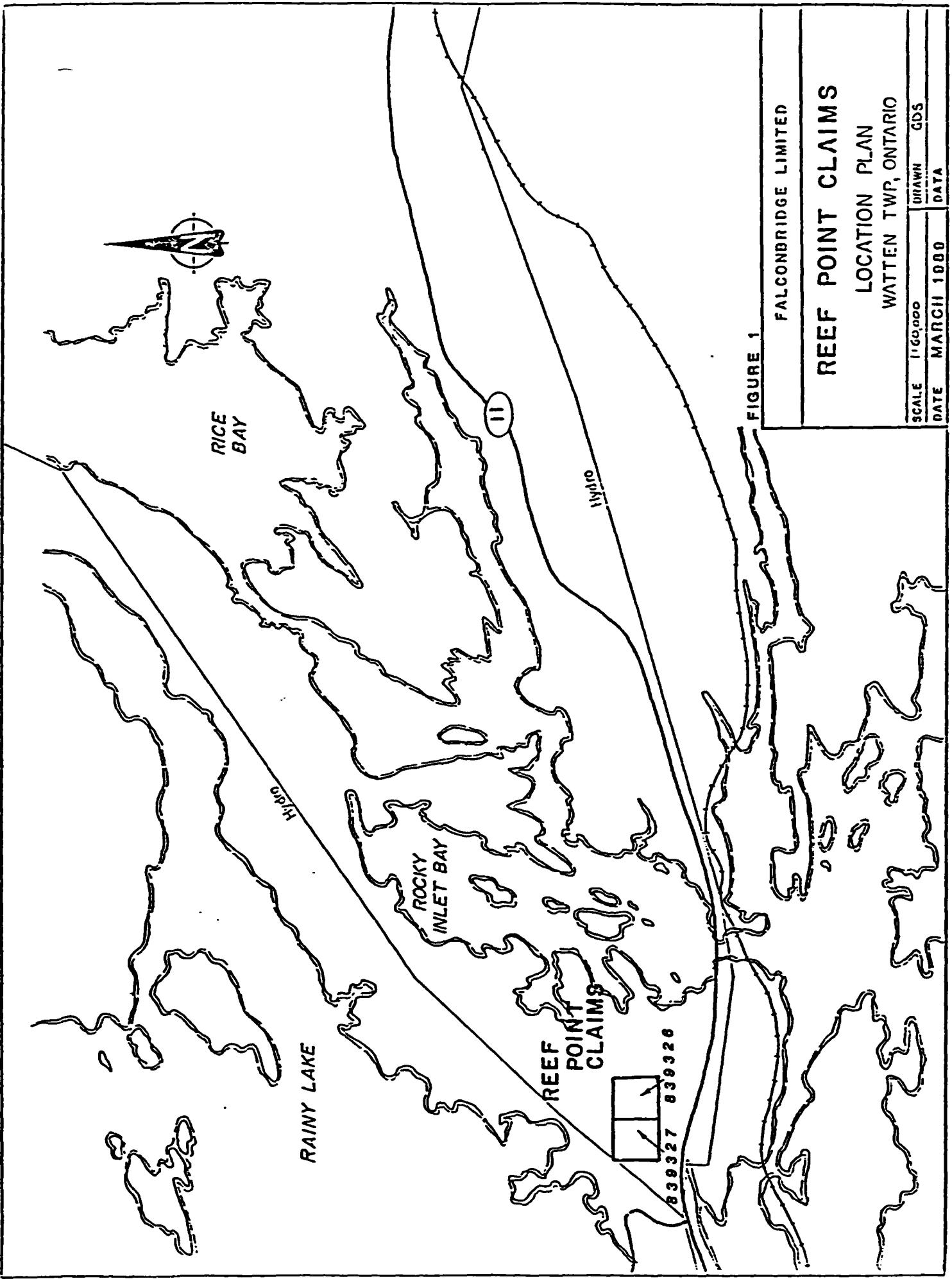
In light of the negligible results obtained on this property, it is recommended that we reduce our ground position on this claim block. A single short-strike-length HLEM target is untested and therefore it is recommended this work be completed prior to full abandonment of the property. Claims K824705, 839324 should be abandoned, claims K839326 and 839327 should be retained.

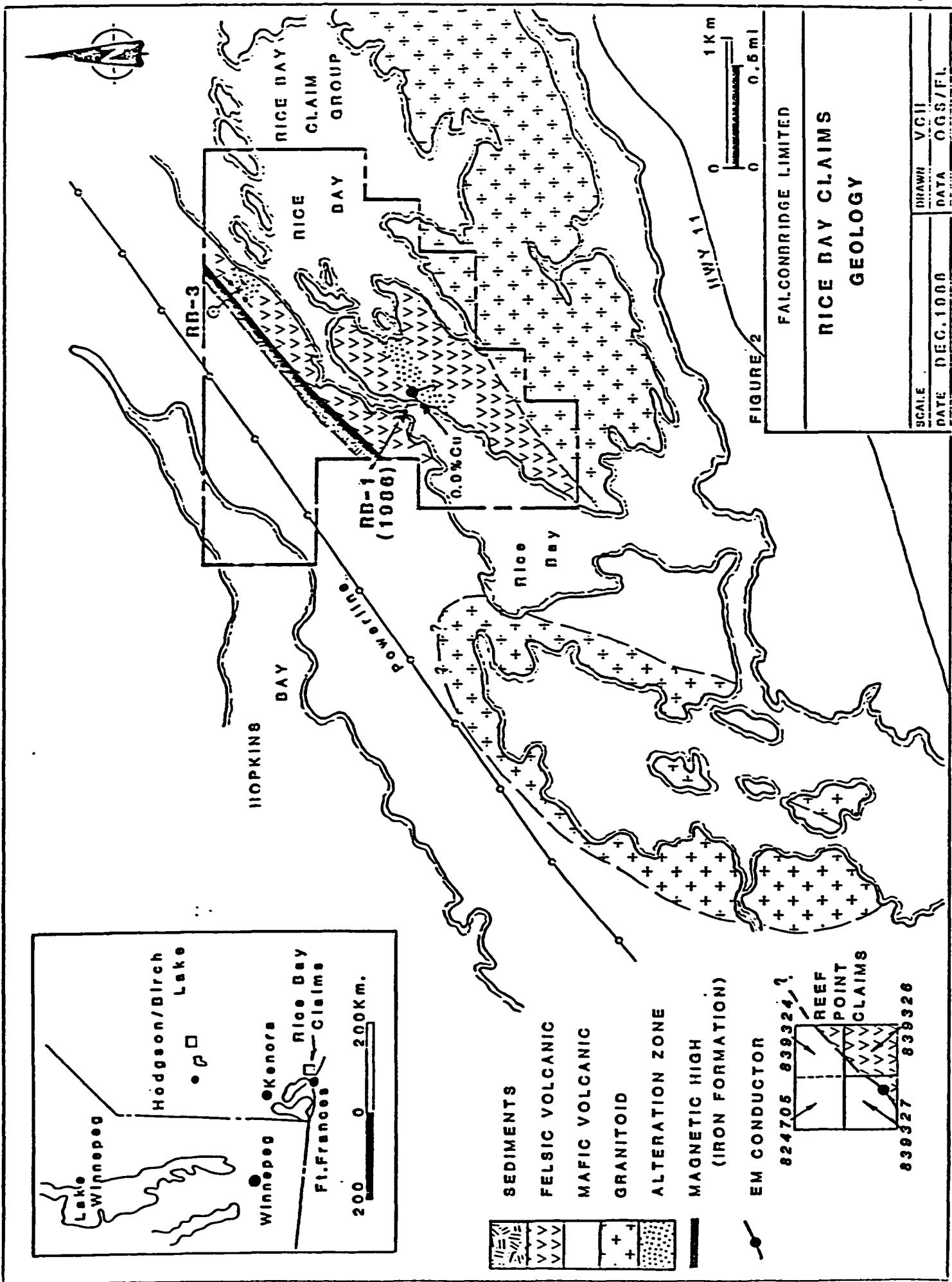
1.0 INTRODUCTION

The Reef Point Claim Group comprises 4 contiguous claims (K.824705, 839324, 839326, 839327) in Watten Township, 20 km. northeast of Ft. Frances, northwestern Ontario (Figures 1,2). These claims were staked in January, 1985 to encompass two airborne EM anomalies (OGS, 1980). Forty days assessment work is due on each of these claims by January 24, 1988.

Access to the property is directly from Highway 11 or from the Hopkins Bay Rd. which crosses the northwestern part of the claims, (Figure 1). Mapping, at a scale of 1:2400, was done directly on the existing basemap. Efforts were made to visit critical outcrops in two areas. Iron formation on K824705 and outcrops along the "favourable horizon" on K839326 and 839327. With the exception of late granitic and pegmatitic intrusions all rocks have been metamorphosed; none retain their primary mineralogy. Therefore, for the sake of brevity, the prefix "meta-" has been omitted and will be used only in the general sense, as for example, metavolcanic or metasedimentary.

The present report is a follow up to the work of Tennant, Baillie and M. Morrice (Morrice, 1986) and the reader is referred to that report for descriptive geology of the property.





2.0 PREVIOUS WORK

The Rainy Lake area is one of the classic areas of Archaean geology. Lawson (1913) first mapped this area for the Geological Survey of Canada at a scale of 1:63,360. Subsequently, Harris (1974) mapped the Rice Bay Dome and surrounding area at a scale of 1:31,680 for the Ontario Department of Mines (now Ontario Geological Survey). Recently, Poulsen (1984) synthesized the structure and metallogenesis of the Ft. Frances-Mine Centre greenstone belt. The area underlain by the Rice Bay Claim Group is included on Map 80495 of the AEM survey of the Atikokan-Mine Centre Area conducted by the Ontario Geological Survey (OGS, 1980).

There is no indication of sustained mineral exploration within the confines of the Reef Point Claim Group; a search of the assessment files confirmed this.

MLEM geophysical surveys in 1985 identified a short strike length conductor (150 metres) on claim K839327 (Zang, 1986). In the same year, a geological survey using air photo blow-ups to 1:2400 was completed. The survey provided a detailed description of the property and litho-geochemical results indicated anomalous zinc along the contact interpreted to contain the HLEM conductor.

3.0 GENERAL GEOLOGY

The Reef Point Claim Group occurs in the Ft. Frances-Mine Centre greenstone belt, a westward thickening wedge of metavolcanic, metasedimentary and plutonic rocks which is sandwiched between the Wabigoon Subprovince to the north and the Quetico Subprovince to the south. The boundaries of the greenstone belt are defined to the north by the Quetico Fault and by the Seine River-Rainy Lake Fault to the south.

The claims occupy part of the west flank of a prominent structural feature, the "Rice Bay Dome" (Lawson, 1913; Harris, 1974; Poulsen, 1984). The Rice Bay Dome comprises a core of quartzofeldspathic gneisses which are flanked by schistose metavolcanic and metasedimentary rocks. Until very recently the structural superposition of flanking units overlying the core of the dome was interpreted to indicate a stratigraphic younging direction away from the core region (Lawson, 1913; Harris, 1974). However, Poulsen et al, (1980) demonstrated that stratigraphic facing directions are towards the centre of the dome, that is the domal sequence is overturned.

4.0 GEOLOGY OF THE REEF POINT CLAIM GROUP

The Reef Point Claim Group is underlain by a NE-striking, NW dipping sequence of metavolcanic, meta-sedimentary and plutonic rocks. Rocks retain metamorphic mineral assemblages which indicate they have been elevated to amphibolite grade metamorphism. With the exception of some felsic porphyry units and pegmatite veins, all rocks have a well-developed penetrative fabric. This foliation, parallel to local bedding and the regional trend of lithologic units, trends at 235 degrees and dips 70-85 degrees northwest.

The Reef Point Claim Group is underlain by an interlayered sequence of mainly mafic volcanic rocks and silicate to oxide facies iron formation. This sequence has been intruded by phases of the mafic-intermediate Rocky Islet Bay Complex (Harris, 1974). Late granitic sills and dykes occur locally throughout the property. For a more detailed description of all rock types, the reader is referred to the report by Morrice (1986). The check mapping program provided a confirmation of the stratigraphic relationships interpreted on claims K839326 and 839327.

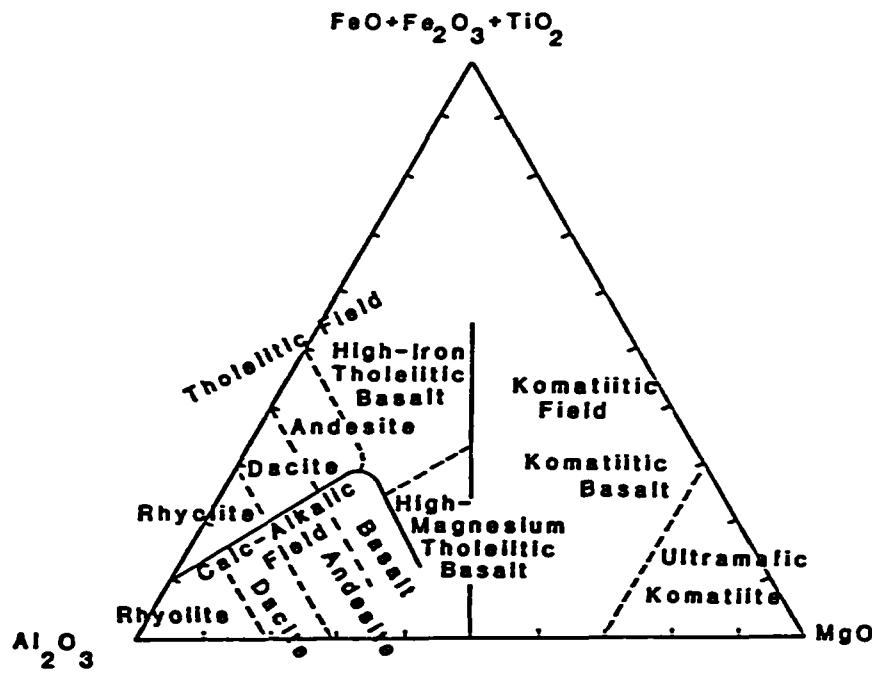
5.0 LITHOGEOCHEMISTRY

A total of 18 wholerock samples were collected on the property in 1988. These were analyzed by X-Ray Assay Laboratories in Don Mills, using XRF on borate-fused beads. A total of eleven major and nine trace elements including Cu and Zn were analyzed by this method. In addition neutron activation analysis for gold was carried out on all samples. Appendix A provides the list of chemical analyses. Map A, back pocket, indicates the Cu, Zn and Au values returned from the property.

A Jensen cation plot has been used to examine the major element pattern. From Appendix A, it is clear that most rocks are mafic in composition. These plot near the high-iron to high-magnesium basalt fields in Figure 3. Distinctive outlines on this diagram are the "high-Al" sample (WAO4051) which is actually a cherty unit, silicate facies iron formation (WAO4043 and 4052) and three Mg-rich samples (WAO4045, 4047 and 4048).

Figure 4 examines relative alkali mobility of the samples after Hughes, (1972), and shows a tendency of the units to have a K-enrichment relative to Na but an overall low alkali content. The majority of basalt samples lie in the igneous spectrum on this diagram. The feldspar-destruction indicator (ACNK) is plotted in Figure 5 against SiO₂. This diagram may help to clarify the chemical sediments from the igneous rocks. All samples lie in the igneous spectrum except the high silica chert and low-Alumina ironstone. In Figure 6, all samples plot below the critical value of 70 for the Hashimoto alteration index and the 1.2 for ACNK. The exception is the alumina-bearing chert sample WAO4051.

Overall, these chemical diagrams indicate a sequence dominated by relatively unaltered mafic volcanic rocks with minor ironstone and cherty chemical sediments.



JENSEN CATION PLOT INVOLVING
THE CATION PERCENTAGES OF
 $\text{FeO} + \text{Fe}_2\text{O}_3 + \text{TiO}_2$, MgO and Al_2O_3

(Source: Jensen, 1976)

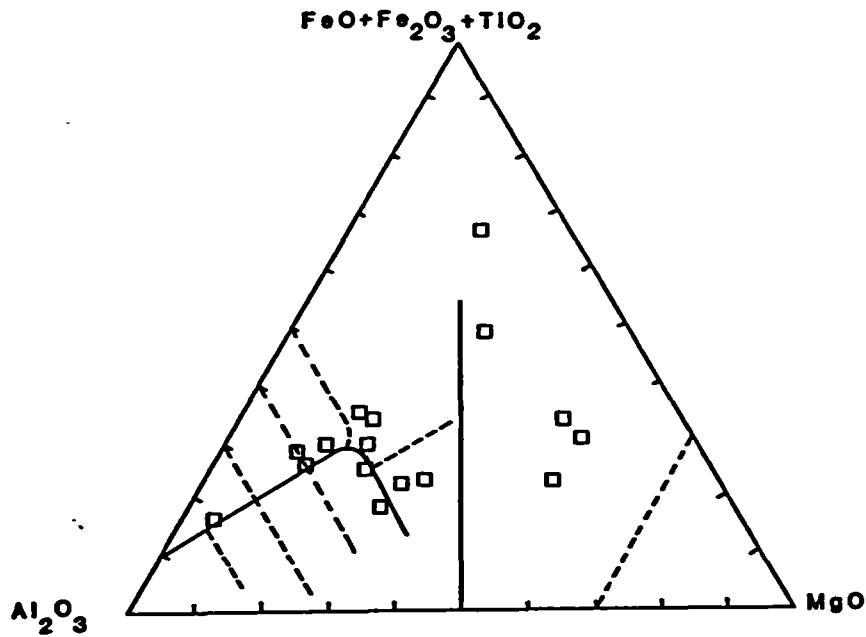


FIGURE 3

FALCONBRIDGE LIMITED		
REEF POINT		
JENSEN CATION PLOT		
SCALE	DRAWN	VCH
DATE	JAN. 1989	DATA BY
		DJH

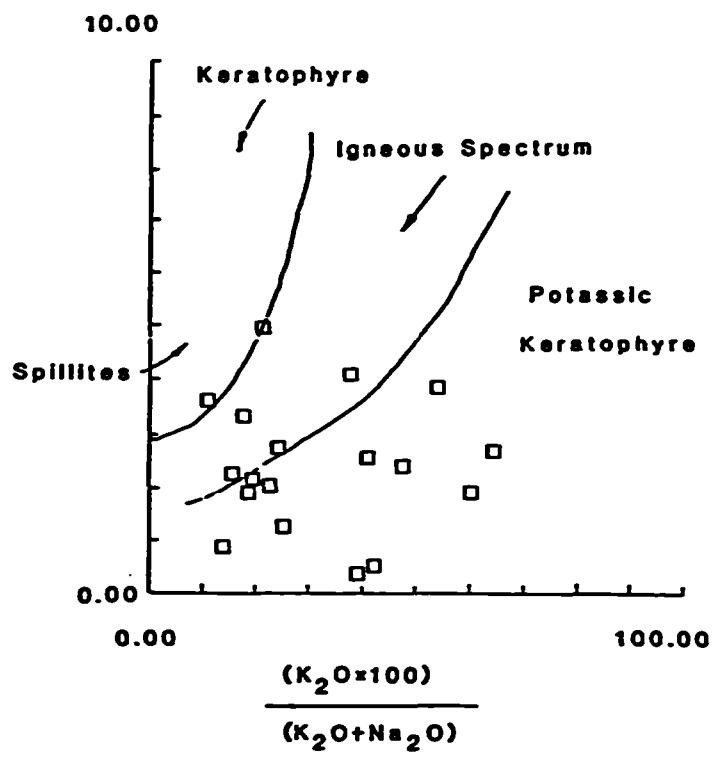
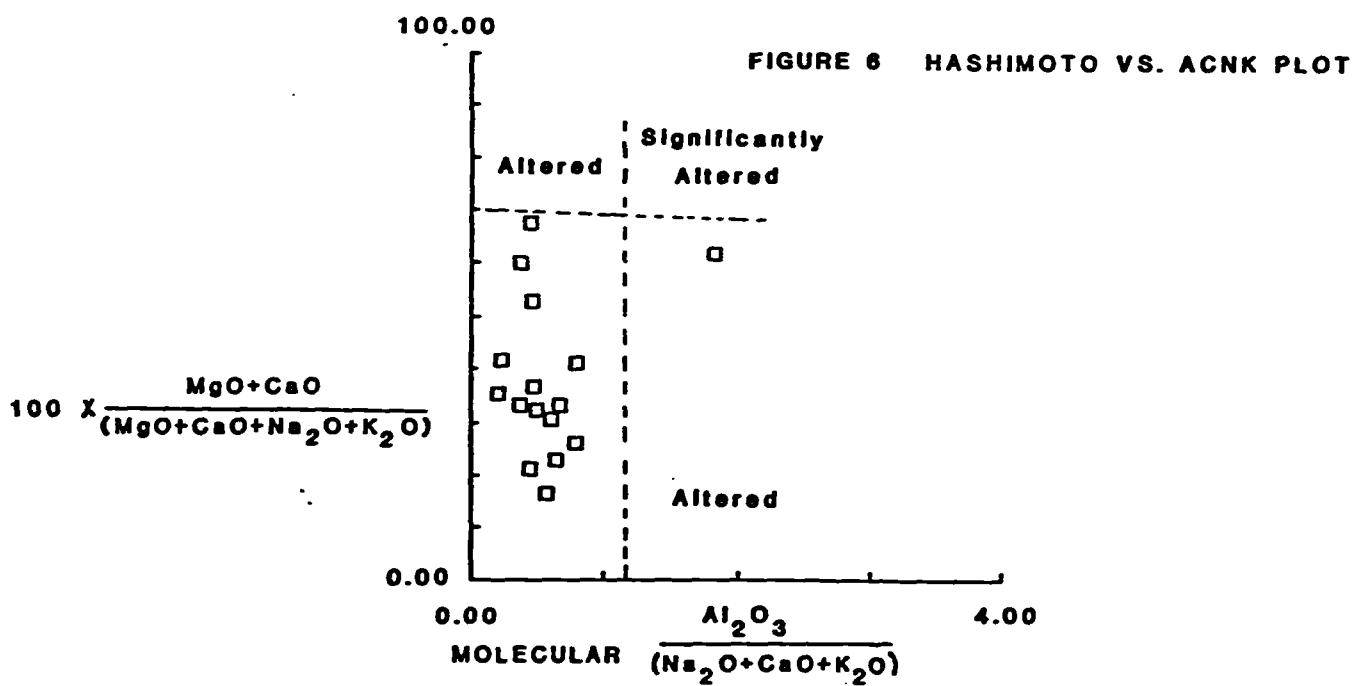
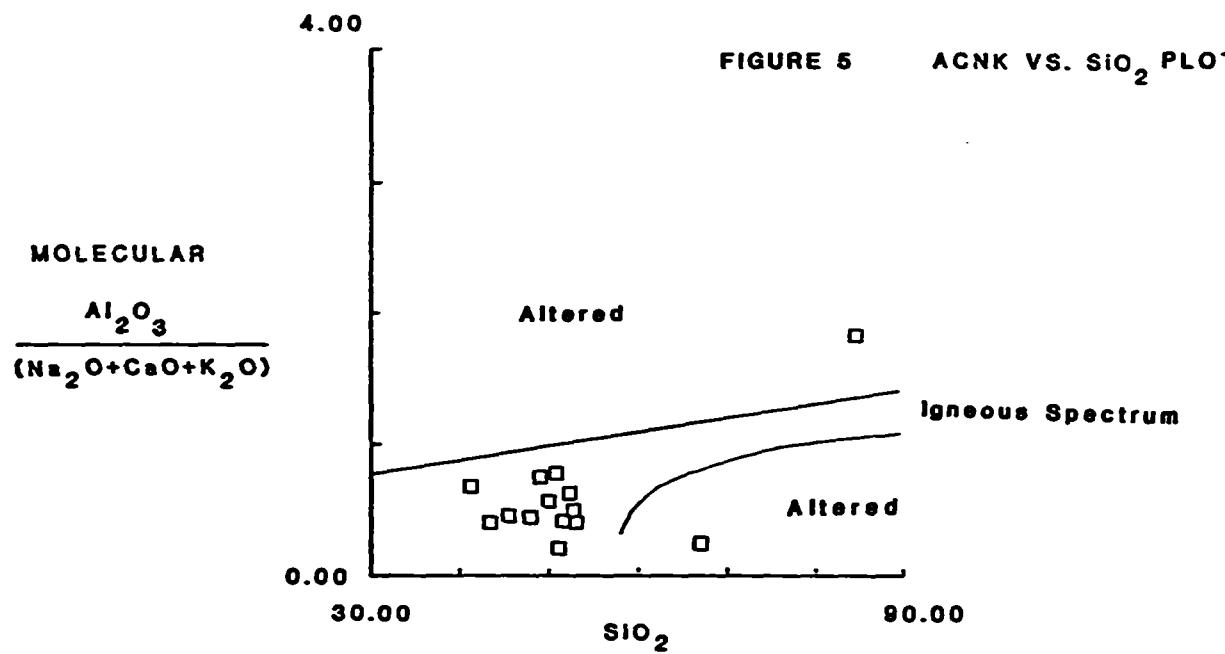


FIGURE 4

FALCONBRIDGE LIMITED	
REEF POINT	
ALKALI MOBILITY PLOT	
SCALE	DRAWN VCH
DATE JAN. 1989	DATA BY DJH



FALCONBRIDGE LIMITED	
REEF POINT	
SCALE	DRAWN
DATE JAN. 1989	DATA BY DJH

6.0 ECONOMIC GEOLOGY

Examination of Map A shows that the economic metals are of very low content in these rocks. The anomalous Zn sampled in 1986 was not repeatable and is interpreted to be of very limited areal extent. Gold is extremely low in most rocks (<1 ppb). Sulphide mineralization is restricted to iron sulphides associated with the ironstones and locally within local tectonized zones in mafic volcanics. Neither of these are potential targets.

REFERENCES

- Hughes, J. (1972) Spillites, Keratophyres and the Igneous Spectrum., Geological Magazine, V109, pp 513-527.
- Jensen, L.S. 1976 A New Cation Plot for Classifying Subalkalic Rocks. ODM Misc Paper 66; 22p.
- Morrice, M. 1986 Kidd Creek Mines Ltd. Geological Report Reef Point Claim Group. NTS 52-C-11. Internal Report. 21p.

APPENDIX A

XRAL

RECEIVED
17-01-1988

CERTIFICATE OF ANALYSIS

REPORT

6616

X-RAY ASSAY LABORATORIES LIMITED

TO: FALCONBRIDGE LIMITED
ATTN: D. ALDERMAN
3074 PORTAGE AVENUE, SUITE 100
WINNIPEG, MANITOBA
R3K 0Y2

CUSTOMER No. 228

DATE SUBMITTED
11-Oct-88

REF. FILE 3070-W4

Total Pages 3

19 ROCKS Proj. 603-022

	METHOD	DETECTION LIMIT
AU PPB	FADCP	1.
WRMAJ %	WR	0.01
WRMIN PPM	WR	10.

*** UNLESS INSTRUCTED OTHERWISE WE WILL DISCARD PULPS 180 DAYS ***
AND REJECTS 30 DAYS FROM DATE OF THIS REPORT

DATE 20-OCT-88

X-RAY ASSAY LABORATORIES LIMITED

CERTIFIED BY *[Signature]*

SAMPLE AU PPB

WA4C41 --
WA4C42 --
WA4C43 --
WA4C44 --
WA4C45 --

WA4C46 --
WA4C47 --
WA4C48 --
WA4C49 --
WA4C50 --

WA4C51 <1
WA4C52 32
WA4C53 6
WA4C54 --
WA4C55 --

WA4C56 --
WA4C57 --
WA4C58 --
WA4C59 --

SAMPLE %	SIC2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
WA4041	50.2	17.3	14.5	2.80	1.74	0.42	10.5	0.49	1.18	0.10	0.04	1.16	100.5
WA4042	52.1	12.9	13.4	7.47	1.42	1.03	9.70	0.20	0.57	0.09	0.12	1.08	100.2
WA4043	45.5	7.53	7.54	8.03	0.74	1.13	22.4	0.52	3.25	0.12	0.46	1.08	98.6
WA4044	50.8	12.5	8.60	3.39	3.87	1.06	10.5	0.27	1.02	0.67	<0.31	1.00	100.2
WA4045	51.5	7.09	15.5	11.8	1.55	0.36	9.09	0.23	0.54	0.12	0.02	1.00	98.9
WA4046	53.1	13.6	14.1	6.73	0.96	0.32	8.75	0.37	0.70	0.07	0.05	0.85	99.7
WA4047	43.5	6.74	7.84	16.9	0.24	0.16	16.0	0.26	2.25	0.16	0.27	3.93	98.3
WA4048	43.5	7.05	9.57	15.2	0.74	0.12	18.2	0.29	2.07	0.15	0.25	1.54	98.8
WA4049	41.2	16.9	11.3	5.36	2.08	0.56	16.9	0.16	1.64	1.20	<0.01	1.08	99.1
WA4050	49.2	17.1	8.68	6.31	2.55	1.55	12.2	0.19	0.90	0.18	<0.01	1.31	100.3
WA4051	84.8	7.43	0.34	0.37	0.94	1.71	2.01	0.02	0.34	0.03	0.04	2.00	100.1
WA4052	67.8	2.52	5.63	3.00	0.29	0.21	18.7	0.25	0.15	0.12	0.02	1.31	100.1
WA4054	52.6	14.8	13.1	6.42	1.76	2.14	7.04	0.16	0.63	0.25	0.02	1.00	100.1
WA4055	48.0	13.7	14.9	4.08	1.86	0.34	13.7	0.42	1.17	0.12	0.02	1.16	99.5
WA4056	48.2	14.2	14.9	4.11	1.92	0.37	13.5	0.45	1.26	0.12	0.02	1.16	100.4
WA4057	52.0	14.9	10.3	5.13	2.73	0.59	11.3	0.49	1.26	0.11	0.03	0.85	100.3
WA4058	52.9	16.1	10.5	3.56	3.19	0.40	11.3	0.46	1.36	0.11	0.02	0.54	100.5
WA4059	52.9	12.3	14.7	7.41	1.55	0.45	9.33	0.18	0.50	0.07	0.21	1.00	100.7

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ PPM	RS	SR	T	ZR	NS	BA	NI	CU	ZN
WA4041	17	110	26	45	25	56	122	83	67
WA4042	32	122	13	48	19	173	175	39	73
WA4043	41	125	<10	43	27	302	720	67	130
WA4044	45	13-0	15	64	<10	775	27	53	70
WA4045	<10	309	12	53	18	169	230	45	82
WA4046	<10	65	12	<10	27	63	129	21	186
WA4047	14	56	12	111	30	87	222	27	166
WA4048	31	27	<10	95	24	44	571	38	78
WA4049	25	1030	21	<10	23	299	29	38	97
WA4050	45	3-8	18	30	17	335	89	44	86
WA4051	53	79	<10	40	11	313	<10	32	24
WA4052	24	153	21	<10	11	68	<10	28	102
WA4053	36	329	10	116	<10	460	81	<10	74
WA4055	27	215	15	53	15	98	18	27	80
WA4056	26	130	24	48	<10	60	70	57	86
WA4057	38	97	33	41	<10	136	79	33	72
WA4058	<10	88	25	62	16	147	45	20	99
WA4059	19	325	<10	16	19	212	167	17	78

XRAL

CERTIFICATE OF ANALYSIS

REPORT 7058

- TO: FALCONBRIDGE LIMITED
ATTN: D. ALDERMAN
3074 PORTAGE AVENUE, SUITE 100
WINNIPEG, MANITOBA
R3K 0Y2

CUSTOMER No. 228

DATE SUBMITTED
25-Nov-88

REF. FILE 3593-PH

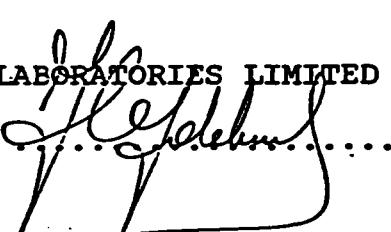
Total Pages 1

16 PULPS Proj. 603-022

AU PPB	METHOD FADCP	DETECTION LIMIT 1.
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DATE 29-NOV-88

X-RAY ASSAY LABORATORIES LIMITED

CERTIFIED BY 

KRAL

29-NOV-28

REPORT 7053

REF. FILE 3593-PH

PAGE 1 OF 1

FILE	AU PPS
WA4041	<1
WA4042	<1
WA4043	<1
WA4044	<1
WA4045	<1
WA4046	<1
WA4047	<1
WA4048	1
WA4049	<1
WA4050	<1
WA4054	<1
WA4055	<1
WA4056	<1
WA4057	<1
WA4058	<1
WA4059	<1

APPENDIX B

MAN DAY BREAKDOWN: BEEF POINT CLAIMS (PN 526))

Field Days: D. J. Alderman 2 x 12 hours/day = 3 technical days

Drafting: V. C. Harg = 1 technical day

Data Analysis and
Report Writing: D. Hodges = 4 technical days

TOTAL 8 technical days

Technical Days Credit: 8 x 7 = 56 days

Credits Requested:

Claim No.	Days per claim
K339327	16
K339326	40

CERTIFIED CORRECT:

John H. Hodges
A Commissioner for Oaths in and for
the Province of Manitoba
My Commission expires February 25, 1989

Daryl J. Hodges
DARYL J. HODGES

STATEMENT OF QUALIFICATIONS

I, DARYL JOHN HODGES, of the City of Winnipeg, Province of Manitoba,

DO SOLEMNLY DECLARE THAT:

- 1) I am a BSc (1982) and MSc (1987) graduate of the University of Waterloo, Ontario.
- 2) I have been practising geology since 1977.
- 3) I am responsible for the writing of this report.
- 4) I have no interest nor do I intend to take an interest in the property described herein.

Kicki G. Hargrave
Witness

Daryl John Hodges
Daryl John Hodges
FALCONBRIDGE LIMITED

STATEMENT OF QUALIFICATIONS

I, RAYMOND BRIAN BAND, of the City of Winnipeg, Province of Manitoba,

DO SOLEMNLY DECLARE THAT:

- 1. I am a B.Sc (Hons) 1962 and PhD (1969) graduate of the University of London, England.**
- 2. I have been practising geology since graduating in 1962.**
- 3. I supervised the execution of the work described in this report.**
- 4. I have no interest nor do I intend to take an interest in the property described herein.**

Witness

Raymond Brian Band



**Raymond Brian Band
Falconbridge Limited**



Ontario

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

May 12, 1989

Mining Lands Section
3rd floor, 880 Bay Street
Toronto, Ontario
M5S 1Z8

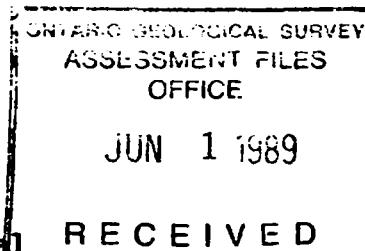
Telephone: (416) 965-4888

Your file: W8901-29
Our file: 2.12082

Mining Recorder
Ministry of Northern Development and Mines
808 Robertson Street
P.O. Box 5200
Kenora, Ontario
P8N 3X9

Dear Sir:

Re: Notice of Intent dated April 12, 1989 Geochemical Survey submitted on Mining Claims K 839327 and K 839326 in the Watten 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,



W.R. Cowan
Provincial Manager, Mining Lands
Mines & Minerals Division

DK:eb
Enclosure

cc: Mr. G.H. Ferguson
Mining and Lands Commissioner
Toronto, Ontario

Resident Geologist
Kenora, Ontario

Falconbridge Ltd.
Winnipeg, Manitoba

Falconbridge Ltd.
Toronto, Ontario



Ministry of
Northern Development
and Mines

Technical Assessment
Work Credits

File

2.12082

Date

April 12, 1989

Mining Recorder's Report of
Work No.
W8901-29

Recorded Holder

FALCONBRIDGE LIMITED

Township or Area

WATTEN TOWNSHIP

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic _____ days	K 839326-27
Magnetometer _____ days	
Radiometric _____ days	
Induced polarization _____ days	
Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological _____ days	
Geochemical 14 days	
Man days <input checked="" type="checkbox"/>	Airborne <input type="checkbox"/>
Special provision <input type="checkbox"/>	Ground <input checked="" type="checkbox"/>
<input type="checkbox"/> Credits have been reduced because of partial coverage of claims.	
<input type="checkbox"/> 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

Geochemical credits approved under Section 77(12) of the Mining Act R.S.O. 1980. Credit approved equally over the mining claims the work was carried out on (56 days divided by 4 claims = 14 days).

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; Geological - 40; Geochemical - 40; Section 77(19) - 60.

SAMPLE AU PPB

WA4041	--
WA4042	--
WA4043	--
WA4044	--
WA4045	--
WA4046	--
WA4047	--
WA4048	--
WA4049	--
WA4050	--
WA4051	<1
WA4052	32
WA4053	6
WA4054	--
WA4055	--
WA4056	--
WA4057	--
WA4058	--
WA4059	--

SAMPLE \ %	SiO2	Al2O3	CaO	MgO	Na2O	K2O	Fe2O3	MnO	TiO2	P2O5	Cr2O3	LOI	SUM
WA4041	50.2	17.3	14.5	2.80	1.74	0.42	10.5	0.49	1.18	0.10	0.04	1.16	100.5
WA4042	52.1	12.9	13.4	7.47	1.48	1.03	9.70	0.20	0.57	0.09	0.12	1.08	100.2
WA4043	45.6	7.58	7.54	8.03	0.74	1.13	22.4	0.52	3.25	0.12	0.46	1.08	98.6
WA4044	50.8	18.6	8.60	3.39	3.87	1.06	10.6	0.27	1.02	0.67	<0.01	1.00	100.2
WA4045	51.5	7.09	15.5	11.8	1.55	0.36	9.09	0.23	0.54	0.12	0.02	1.00	98.9
WA4046	53.1	13.6	14.1	6.73	0.96	0.32	8.75	0.37	0.70	0.07	0.05	0.85	99.7
WA4047	43.5	6.74	7.84	16.9	0.24	0.16	16.0	0.26	2.25	0.16	0.27	3.93	98.3
WA4048	43.5	7.05	9.57	15.2	0.74	0.12	18.2	0.29	2.07	0.15	0.25	1.54	98.8
WA4049	41.2	16.9	11.3	5.86	2.08	0.66	16.8	0.16	1.64	1.20	<0.01	1.08	99.1
WA4050	49.2	17.1	8.68	6.31	2.56	1.55	12.2	0.19	0.90	0.18	<0.01	1.31	100.3
WA4051	84.8	7.43	0.34	0.37	0.94	1.71	2.01	0.02	0.34	0.03	0.04	2.00	100.1
WA4052	67.8	2.52	5.63	3.00	0.29	0.21	18.7	0.26	0.15	0.12	0.02	1.31	100.1
WA4054	52.6	14.8	13.1	6.42	1.76	2.14	7.04	0.16	0.63	0.25	0.02	1.00	100.1
WA4055	48.0	13.7	14.9	4.08	1.86	0.34	13.7	0.42	1.17	0.12	0.02	1.16	99.5
WA4056	48.2	14.2	14.9	4.11	1.92	0.37	13.6	0.45	1.26	0.12	0.02	1.16	100.4
WA4057	52.0	14.9	10.3	5.13	2.73	0.59	11.8	0.49	1.26	0.11	0.03	0.85	100.3
WA4058	52.9	16.1	10.5	3.56	3.19	0.40	11.3	0.46	1.36	0.11	0.02	0.54	100.5
WA4059	52.9	12.3	14.7	7.41	1.55	0.45	9.33	0.18	0.50	0.07	0.21	1.00	100.7

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ PPM	RB	SR	Y	ZR	NB	BA	NI	CU	ZN
WA4041	17	110	26	45	25	56	122	83	67
WA4042	32	188	13	48	19	173	175	39	73
WA4043	41	185	<10	43	27	302	720	67	130
WA4044	45	1340	15	64	<10	775	27	53	70
WA4045	<10	309	12	50	18	109	230	45	82
WA4046	<10	63	12	<10	27	60	129	21	186
WA4047	14	56	12	111	30	87	222	27	166
WA4048	31	27	<10	93	24	44	571	38	78
WA4049	25	1030	21	<10	20	299	29	38	97
WA4050	45	348	18	30	17	335	89	44	86
WA4051	53	79	<10	40	11	313	<10	32	24
WA4052	24	158	21	<10	11	68	<10	28	102
WA4054	36	389	10	116	<10	460	81	<10	74
WA4055	27	215	15	53	15	98	18	27	80
WA4056	26	130	24	48	<10	60	70	57	86
WA4057	38	97	33	41	<10	136	79	33	72
WA4058	<10	88	25	62	16	147	45	20	99
WA4059	19	325	<10	16	19	212	167	17	78

P.M. 510

Mining Act

Do not use shaded areas below.

Type of Survey

Township or Area

Prospecting, Lithogeochemical Sampling

Watten Twp (Ft. Frances)

Claim Holder(s)

Prospector's Licence No.

Falconbridge Limited

A21647

Address

Box 40 Commerce Court West Toronto, Ontario M5L 1B4

Survey Company

Date of Survey from & to:

Total Miles or Line Cut

Falconbridge Limited

31-08-88 02-09-88

Name and Address of Author of Geo-Technical Report

Daryl Hodges 100-3074 Portage Avenue, Winnipeg, Manitoba R3K 0Y2

Credits Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

Special Provisions

Geophysical Days per

Claim

For first survey:

Enter 40 days. (This
includes line cutting.)

- Electromagnetic

- Magnetometer

For each additional survey:

using the same grid:

Enter 20 days (for each.)

- Radiometric

- Other

Geological

Geochemical

Total Days

Geophysical

Days per

Complete reverse side
and enter total(s) here

- Electromagnetic

- Magnetometer

- Radiometric

- Other

Geological

Geochemical

See Attached

Airborne Credits

Days per

Note: Special provisions
credits do not apply
to Airborne Surveys.

Electromagnetic

Magnetometer

Radiometric

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claims(s)

Calculation of Expenditure Days Credits

Total Days Credits

Total Expenditures

$$S \quad \div \quad 15 \quad = \quad \boxed{\quad}$$

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.

2

Date

Jan 19/89

Daryl Hodges

For Office Use Only		Mining Recorder
Total Days Cr. Recorded	Date Recorded	Mining Recorder
Date Approved as Recorded		Branch Director

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

Daryl Hodges, 100-3074 Portage Avenue Winnipeg, Manitoba R3K 0Y2

Date Certified	Certified by
Jan 19/89	<i>Daryl Hodges</i>



Ministry of Natural Resources

File _____

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

**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) Mapping, Lithogeochemistry, Prospecting
 Township or Area Watten TWP, Fort Frances
 Claim Holder(s) Falconbridge Limited
P.O.Box 40, Commerce Ct., Toronto M5L1B5
 Survey Company Same
 Author of Report Daryl Hodges
 Address of Author 100-3074 Portage Ave. Winnipeg, MB
 Covering Dates of Survey August 31 to September 2, 1988
(linecutting to office)
 Total Miles of Line Cut _____

<u>SPECIAL PROVISIONS</u> <u>CREDITS REQUESTED</u>		<u>DAYS</u> per claim.
ENTER 40 days (includes line cutting) for first survey.	Geophysical	
ENTER 20 days for each additional survey using same grid.	- 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: _____ SIGNATURE: _____

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder
.....
.....
.....
.....
.....

MINING CLAIMS TRAVERSED
List numerically

..... (prefix) (number)
 K 824705
 839324
 839327
 839326

If space insufficient, attach list

TOTAL CLAIMS 4NL1
E US
OF



Ministry of Natural Resources

File _____

**GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL
TECHNICAL DATA STATEMENT**

**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) Mapping, Lithogeochemistry, Prospecting

Township or Area Watten TWP, Fort Frances

Claim Holder(s) Falconbridge Limited

P.O. Box 40, Commerce Ct., Toronto M5L 1B5

Survey Company Same

Author of Report Daryl Hodges

Address of Author 100-3074 Portage Ave., Winnipeg, MB

Covering Dates of Survey August 31 to September 2, 1988
(line cutting to office)

Total Miles of Line Cut _____

MINING CLAIMS TRAVESED
List numerically

.....(prefix)(number)

K 824705

839324

839327

839326

If space insufficient, attach list

SPECIAL PROVISIONS CREDITS REQUESTED		DAYS per claim
ENTER 40 days (includes line cutting) for first survey.	Geophysical	
ENTER 20 days for each additional survey using same grid.	–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: _____ SIGNATURE: _____

Res. Geol. _____ Qualifications _____

Previous Surveys

File No. Type Date Claim Holder

.....
.....
.....
.....
.....

TOTAL CLAIMS _____ 4

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 _____

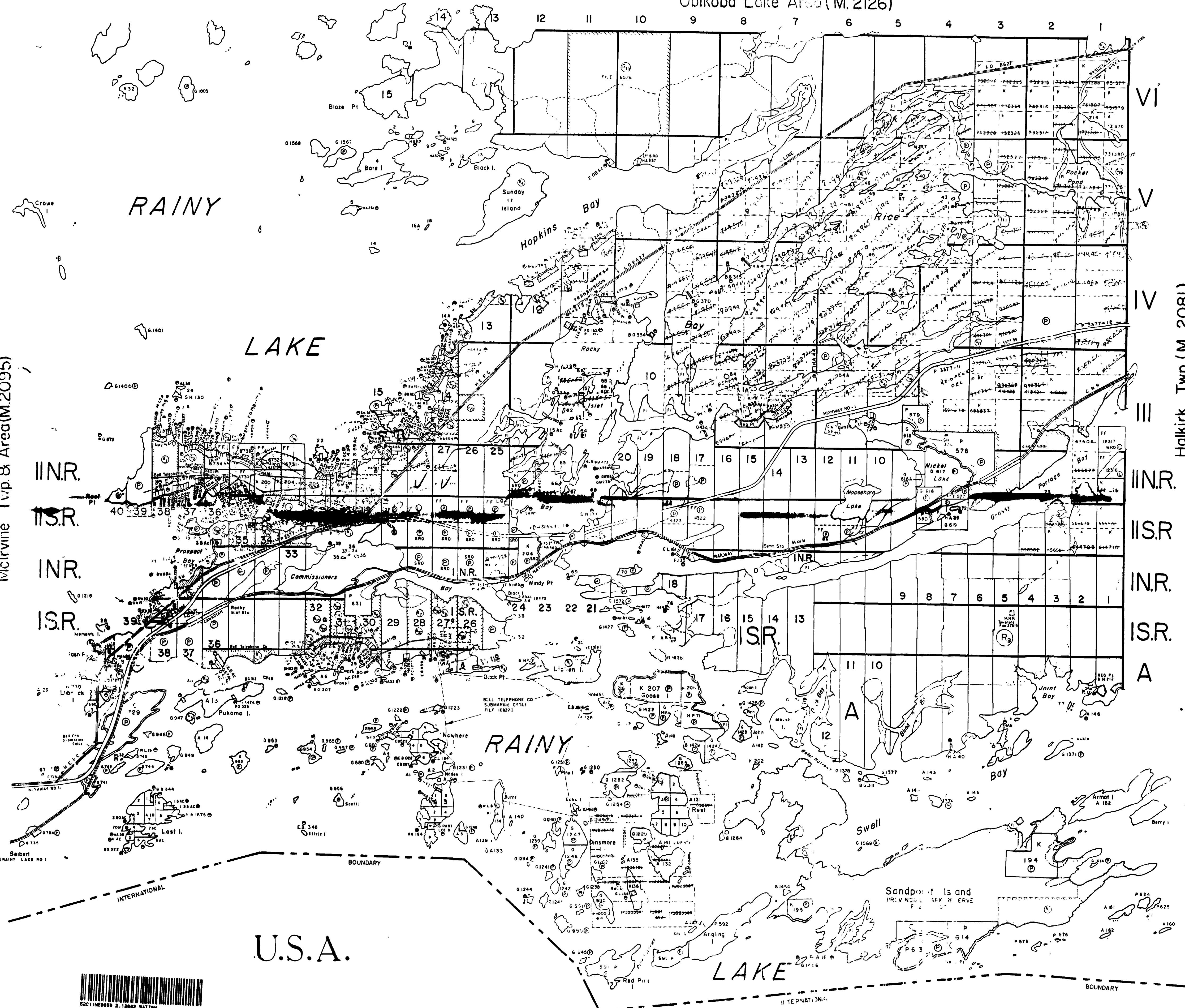
Base station value and location _____

Elevation accuracy _____

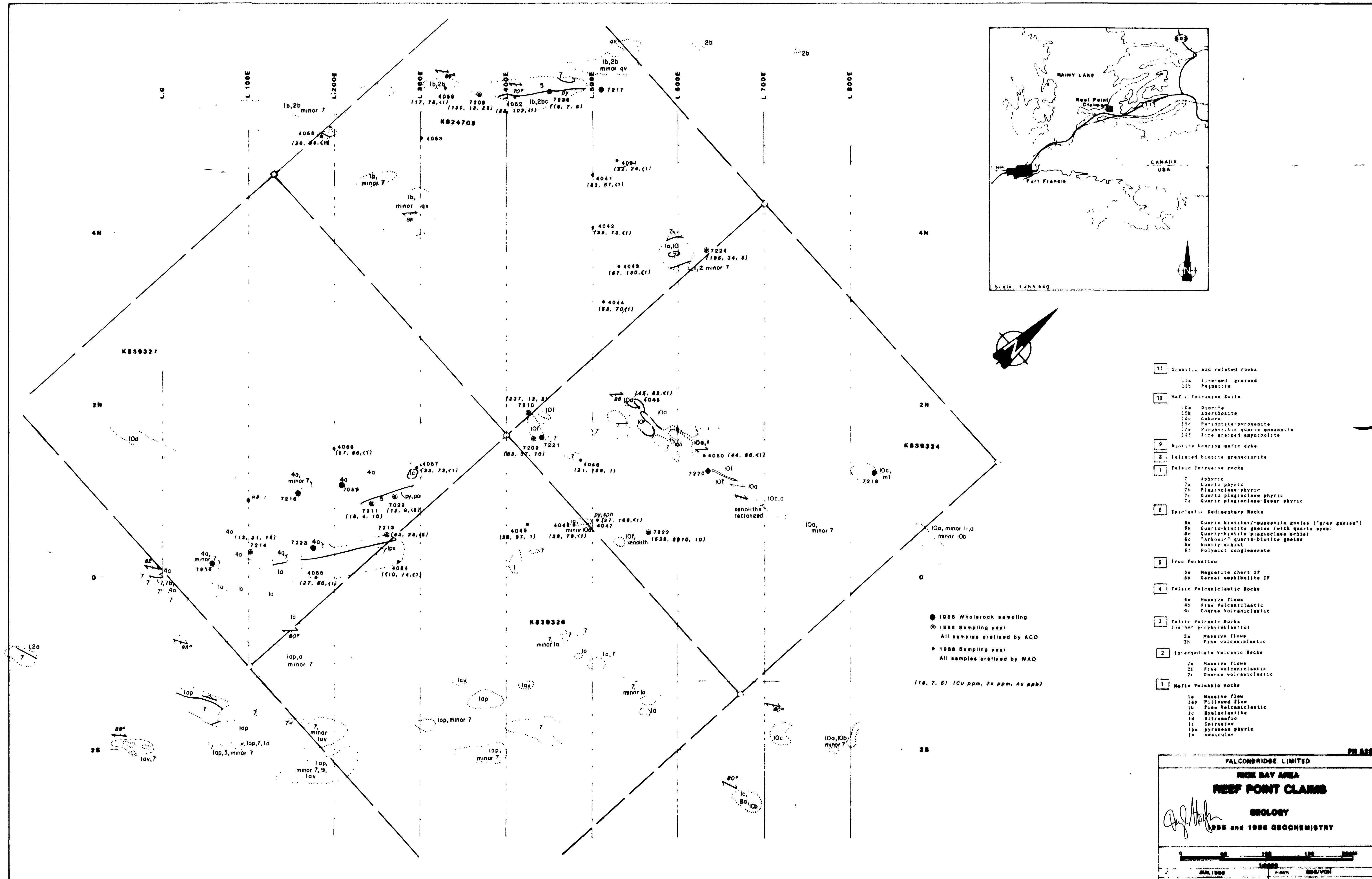
INDUCED POLARIZATION
RESISTIVITY

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 _____

McIrvine Twp. & Area (M.2095)



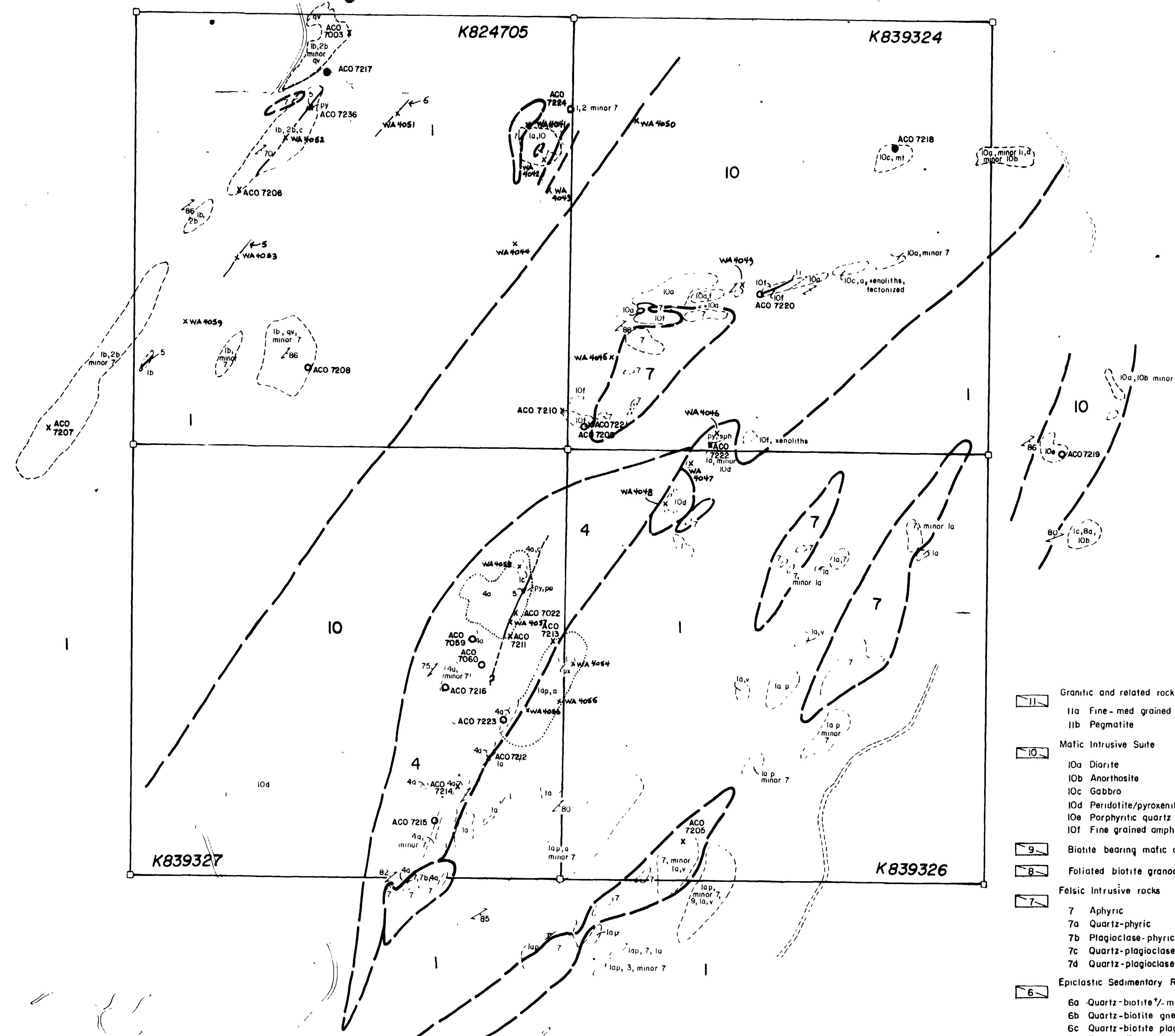
200



Rainy Lake

Rocky Islet Bay
(Rainy Lake)

Hopkins Bay Road



PRECAMBRIAN

- Felsic Volcaniclastic Rocks
4a Massive flows
4b Fine Volcaniclastic
4c Coarse Volcaniclastic
Felsic Volcanic Rocks (Garnet porphyroblastic)
3a Massive flows
3b Fine volcanoclastic
Intermediate Volcanic Rocks
2a Massive flows
2b Fine volcanoclastic
2c Coarse volcanoclastic
Mafic Volcanic rocks
1a Massive flow
1b Pillowed flow
1c Fine Volcaniclastic
1d Ultramafic
1e Intrusive
1f pyroxene phryic
1g vesicular
- Epiclastic Sedimentary Rocks
6a Quartz-biotite-muscovite gneiss ("gray gneiss")
6b Quartz-biotite gneiss (with quartz eyes)
6c Quartz-biotite plagioclase schist
6d "Arkose" quartz-biotite gneiss
6e knotty schist
6f Polymict conglomerate
- Iron Formation
5a Magnetite chert IF
5b Garnet amphibolite IF

SYMBOLS

- Small outcrop
Area of outcrop
Outcrop
Vegetation boundary
Swamp
Ditch
Road or highway

ROCK SAMPLES

- X GEOCHEMISTRY
O WHOLEROCK
● WHOLEROCK & MEEP

X WAO series 1989 Wholerock Cu, Zn, Au

KIDD CREEK MINES LTD.

REEF POINT CLAIMS

GEOLOGY WITH SAMPLE LOCATIONS

SCALE 1:2400
0 30 60 90 120 150 180 210 m

Date Aug 1989
Drawn by M. Murray
N.L. 52C/II

UPDATED May 1990

