MAR 19950018: NORTHERN/FIREBAG/MARGUER

Received date: Sep 21, 1995

Public release date: Sep 22, 1996

19950018

FOCAL RESOURCES LIMITED

Northern Block, Firebag, and Marguerite Properties

Assessment Report

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August 1995

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Summary

Focal Resources Limited began its Northeast Alberta field programme in the spring of 1994. The Northern Block, Firebag, and Marguerite Properties were included in that study. The principal exploration objective was to find gold and other metals in the Devonian limestones. In order to test the mineralisation model lake sediment , lake water, well water, stream sediment, soil and biological samples were collected and analysed.

Several high geochemical values were found; however, there is no significant evidence supporting any of the hypotheses which led to exploration in this area. It is recommended that further work be done on this property; in particular analysis of existing core to determine bedrock geochemistry, and study of existing geophysical data to determine bedrock structure and its relationship to the potential for gold and base metal mineralisation.

Introduction

This report summarises the exploration efforts carried out by Focal Resources Limited on the Northern Block, Firebag, and Marguerite Properties (NTS 74 E and 74 L; Maps 1 and 2) during the 1994 summer field season. A study involving the sampling and analysis of core stored at the Mineral Core Research Facility (Edmonton) from holes previously drilled within the present boundaries of the Northern Block will be discussed in a separate report.

Regional Geology

The Northeast corner of Alberta is occupied by rocks of the Canadian Shield belonging to the Churchill Structural Province. These rocks are overlain by Phanerozoic sediments, thickening westwards. The Precambrian rocks in the region consist of the basement complex of intrusive and metasedimentary gneisses, unconformably overlain by the flat-lying sandstones of the Athabasca Group. During the Hudsonian Orogeny theses rocks were structurally deformed, and metamorphosed to amphibolite grade. A hematitic regolith (the La Loche Formation), is commonly found overlying the Athabasca Formation (if present) or the Precambrian basement. A wedge of Devonian limestones unconformably overlies the Precambrian rocks, but is rarely found in outcrop due to the thick layer of glacial cover. Further west the Devonian is overlain by Cretaceous sandstones and shales.

Map 3 shows the bedrock geology of North-eastern Alberta, and Diagram 1 represents the regional stratigraphy of Northeast Alberta.

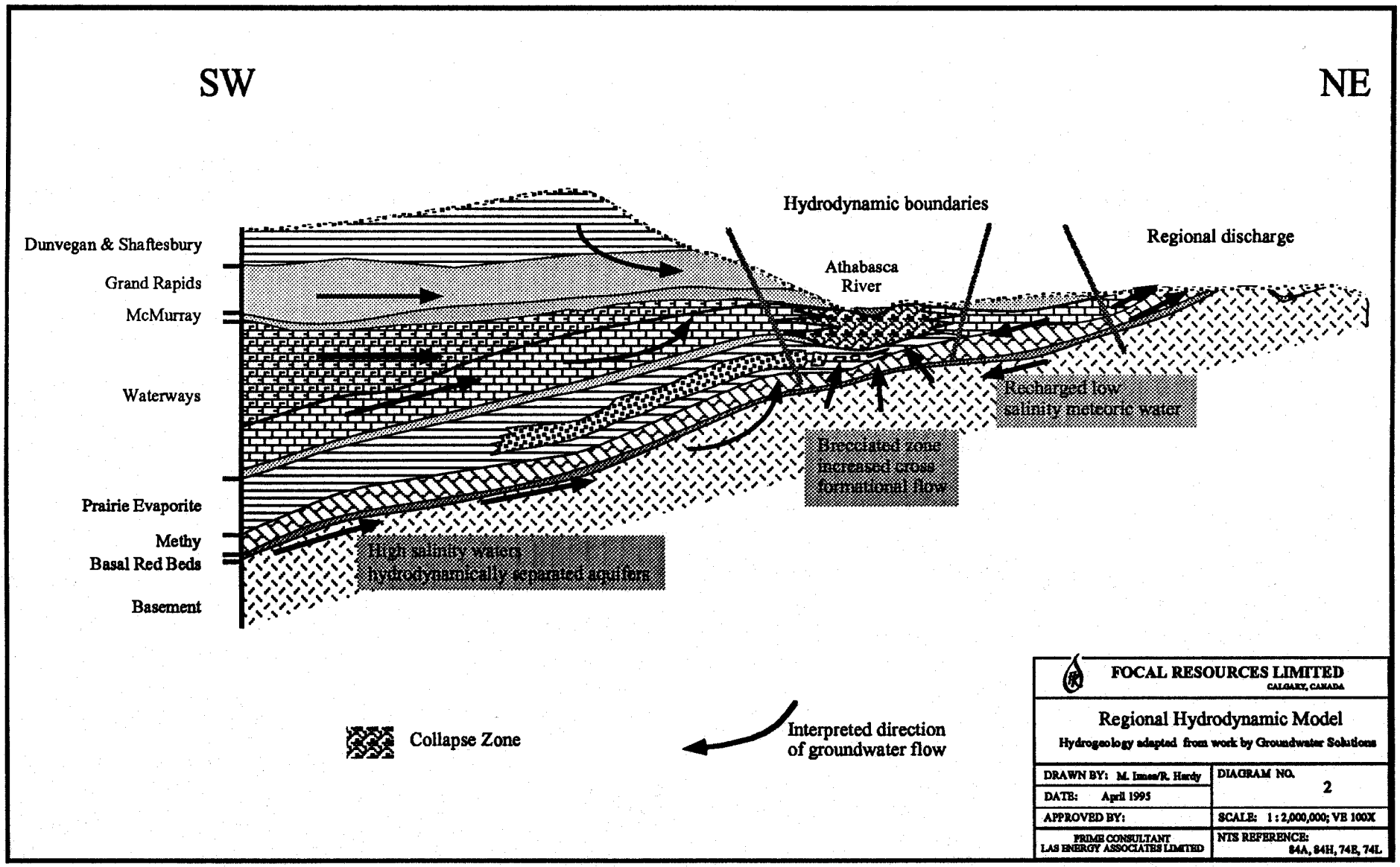
Previous Exploration

Northeastern Alberta has been explored for many years. During the late 1960s and 1970s the Precambrian Shield in Alberta was explored by numerous companies for uranium and

Diagram 1. Generalized Stratigraphy of Northeastern Alberta.

SYSTEM		GROUP	FORMATION	MEMBER	DOMINANT LITHOLOGY
Recent-Pleistocene			Drift		till outwash gravels aeolian sands
Cretaceous	Upper	La Biche	La Biche		shale
			Dunvegan		sandstone, siltstone
			Shaftsbury		shale, bentonites fish scale horizon
	Lower		Pelican		sand
			Joli Fou		shale
		Mannville	Grand Rapids		lithic sands
			Clearwater		shale & glauconite sands
			McMurray		quartzose sands, heavy oil
Devonian	Upper	Beaverhill Lake	Waterways	Mildred	argillaceous limestone
				Moberly	limestone & shale
				Christina	shale & limestone
				Calumet	limestone & shale
				Firebag	shale, minor limestone
	Middle		Slave Point		limestone
		Upper Elk Point	Prairie Evaporite		salts, anhydrite, shale & dolomite
			Methy		dolomite, minor reefs
	Lower	Lower Elk Point	McLean River		shale, siltstone, dolomite
			Cold Lake		salt, minor shale
			Erestina		shale, limestone, anhydrite
			Lotsberg		salt, minor shale
			La Loche		arkosic sand & conglomerate (basal red beds/granite wash)
Precambrian			Athabasca Group		sandstone
			Basement Complex		granitoids

Modified after Dufresne et al (1994), and Hamilton and Mellon (1973).



FOCAL RESOURCES LIMITED
CALGARY, CANADA

Regional Hydrodynamic Model

Hydrogeology adapted from work by Groundwater Solutions

DRAWN BY: M. Innes/R. Hardy	DIAGRAM NO. 2
DATE: April 1995	
APPROVED BY:	SCALE: 1 : 2,000,000; VE 100X
PRIME CONSULTANT LAS ENERGY ASSOCIATES LIMITED	NTS REFERENCE: 84A, 84H, 74E, 74L

was extensively staked (Olson et al, 1994; Wilson, 1985). Most of this work involved the use of geophysical methods and subsequent drilling to delineate conductors in the flat-lying Athabasca Group sandstones (Helikian). During 1992-1993 the area underwent renewed interest for diamond exploration. As of 1990 there were 170 unique assessment reports on file with the Alberta Geological Survey pertaining to Northeast Alberta (Olson et al, 1994).

The following assessment reports are considered pertinent to the exploration effort on the permits covered in this report.

Table 1
Pertinent Assessment Reports

Reference Number	Company	Date	Location	Contents
Pb AF 002 & 3			T98, R5± N½ W4	Firebag IP survey, Pine Point type anomalies; second domain type EM survey did not confirm the IP results; see ARC report for geochem.
U AF 42-41-43-44			T107 R1, R2 and north W4	Aero mag and radiometric
U AF 045-46			N½ T109, 110 and part T111 R3 W4	Aero mag and radiometric
U AF 047			N½ T105, 106, 2/3 107 R1 W4	Airphoto geology and radiometrics
U AF 49-50			S½ T108, N½ T107± R3 W4; N½ T108, S2/3 T109 R3 W4	Canada Aero-Mineral Surveys
U AF 51-60			T104-107 R2-4	Canada Aero-Mineral Surveys; Mag and radiometrics
U AF 074-075	RADEX Minerals Limited Permits #117, 118 (Trigg, Woolett & Associates)	1969	N½ T100 R3, part of T101 R3, T102 R3; E½ T100-102 R4 W4	Marguerite River area; aeromag, radiometric with ground follow-up

185 U AF 115 186 & 187	Eldorado Nuclear Permits 185, 186, 187	1975	T105-107 R2-6 W4	Aeromag, soils, EM 16, lake seds and waters for Cu, U, Ni, Zn; drilling
179 U AF 109, 110, 111	Permits 179, 180, 181		N½ T103, 104, S ½ 105 R4 and some of R5W4	Lake seds for Zn, Cu, Ni, U
207 U AF 141				drill hole data
208 U AF 136(1,2,3) 209 U AF 132(1,2,3) 210 U AF 138(1,2,3) 211 U AF 139(1,2,3) 212 U AF 140(1,2,3) 213 U AF 128(1,2,3)	Norcen McWilliams et al			good maps; lake sediment data
214 U AF 142 (1,2)	Eldorado Nuclear Limited		NE of Richardson River	ground mag; TURAM EM
215 U AF 143	Eldorado Nuclear Limited		E of Richardson Fire Tower	ground geophysics
216 U AF 144	Eldorado Nuclear Limited Project Number 508; Mitchell et al		Includes 207, 214, 215, 217, 218	Airborne geophysics
218 U AF 154 225 U AF 153			NE of Maybelle River	
232 U AF 129 (3,4,5,6)	Denison Mines Ltd. Exploration Report on the Old Fort Project #232 and 233	1976	T107, N½ T108 most of R2, 3 and part of R4W4	Aeromag and EM
233 U AF 130			T107, 108 R1,2	Lake sediment and water Cr, Mo, Cu, Zn, Pb
6876120003 U AF 135(3)	Preliminary Report Project A76-1, Johnson Lake, Permit #687609003; Taiga Consultants			DDH and geophysics
6876090003 U AF 135(3,4)	An Evaluation of the Johnson Lake Property 6876090003 by Taiga Consultants; J.R. Allen	1977	Johnson Lk - T100, 99 R 3,4±	Geochem and lake sediments for U, Cu, Pb, Zn, Ni, Co, Mo; VLF EM; test hole

6876120002 U AF 159	Norcen Energy Resources Ltd; G. McWilliams	1977		Drill hole
687612004 U AF 160(2)	Norcen		NE of Six Lakes	
6876120005 U AF 161(2)	Norcen	1979	west side of the Richardson River	Questor airborne EM anomalies - one not drilled near Six Lakes
6878110001 U AF 162	Norcen			

Mineralisation Model

Several variations of a working model were developed before the field work began and have been improved upon since (Diagram 2). The generic model for metallic mineral deposition involves ion rich waters migrating upwards and precipitating metals upon reaching an appropriate change in redox conditions. The upward migration of such fluids from the basal red beds or granite wash (La Loche Formation) is dependent on the breaching of aquatards in the overlying formations. Dissolution of the Prairie Evaporite salts results in collapse structures, and the associated faulting/brecciation would provide the necessary fluid conduits for cross-formational fluid migration. The salts also provide a source of ions for the migrating fluids. Fluids with meteoric compositions moving downward through the overlying surficial material will also affect overall fluid chemistry. The resultant fluids have a high oxygen content, and precipitation of the dissolved ions will occur when the fluids encounter a reducing environment. The McMurray Formation in the area contains hydrocarbons, providing the necessary reducing conditions. The redox boundary may not be a planar horizon, such as the base of the McMurray Formation, but due to leakage of hydrocarbons into the underlying rocks may be a wider zone enveloping the McMurray/Waterways contact. As such, there is potential for mineralisation in the Cretaceous sands as well as in the Devonian limestones.

The model described above is a variation of the two-fluid mixing model for the deposition of Mississippi Valley Type lead-zinc ores. The carbonate rocks in the area exhibit several of the regional characteristics of MVT deposits: high porosity and permeability as a result of karstification, fracturing or faulting; the presence of biostromal carbonates; dolomitization and silicification; and an association with hydrocarbons (Olson et al, 1994).

In order to determine the potential for the type of mineralisation described above, geological interpretation (air photo and Landsat image analysis) and subsequent geochemical sampling of soils, biological materials, spring waters, lake waters and sediments, and stream sediments was conducted. . The analyses show elevated geochemical values for several metals in all sample types.

Location, Access and Permit Tabulation

The Northern Block Property comprises the lands listed in Table 2. The Firebag and Marguerite lands are outlined in tables 3 and 4. These properties are found within NTS 74 E (Bitumount) and 74 L (Fort Chipewyan). Map 1 shows the regional context of the properties, and Map 2 shows the boundaries and permit numbers in detail. The Metallic Mineral Permits comprising the Northern Block Property are currently held by Winslow Gold Corporation et al. The Marguerite and Firebag Properties are held by Northwind Ventures Limited.

Table 2
Northern Block
Permit Numbers and Locations

Permit Number	Section(s)	Twp	Rng	Mdn	Commencement Date
9393060142	1-36	101	4	W4	June 28, 1993
9393060143	1-36	101	5	W4	June 28, 1993
9393060144	1-36	101	6	W4	June 28, 1993
9393060145	1-36	101	8	W4	June 28, 1993
9393060146	1-36	102	4	W4	June 28, 1993
9393060147	1-36	102	5	W4	June 28, 1993
9393060148	1-36	102	6	W4	June 28, 1993
9393060149	1-36	102	7	W4	June 28, 1993
9393060150	1-36	102	8	W4	June 28, 1993
9393060151	1-36	103	4	W4	June 28, 1993
9393060152	1-36	103	6	W4	June 28, 1993
9393060153	1-36	103	7	W4	June 28, 1993
9393060154	1-36	103	8	W4	June 28, 1993
9393060155	1-24;25S,L11-13;26-34; 35S,NW,L9,L10,L15;36L 4,L9,L15,L16 6	 104 105	 4 4	 W4 W4	June 28, 1993
9393060156	1-36	104	5	W4	June 28, 1993
9393060157	1-36	104	6	W4	June 28, 1993
9393060158	1-36	104	7	W4	June 28, 1993
9393060159	1-36	104	8	W4	June 28, 1993

9393060160	1N, SE, L3, L6, 2L3, L5, L16; 3S, NW, L9, L10, L15; 4; 5; 7; 8; 9S, NW, L9, L10, L15, 10SW, L2, L16, 11N, SE, L5, L6, 12-14; 15SE, L6, L11, L13, L14, 16SW, L2, L12; 17-19; 20S, NW, L10; 21NE, L1, L7, L8, L14; 23-26; 28SW, L11-L13; 29SW; 30S, NW, L10, L15 36 1; 2; 11-14; 23S, NE, L11, L12, L14; 24; 25; 26N, SE, L3, L5, L6, 34-36	105 106 107	4 4 4	W4 W4 W4	June 28, 1993
9393060161	31W, L2, L7, L10, L15; 32 L8, L9, L15, L16; 5N, SE, L3, L6, 6SW, L11-L13; 7L4, L5, L12, L13, L16 1-3; 4E, 5W, 6; 7W; 9E; 10-12; 13S; 14S; NW; 15; 16E; 18NW, SWP, Portions lying outside the restricted area of the Athabasca Sand Dunes Ecological Reserve; 19W; 21E; 22; 23W; 26W; 27-34; 35W; 27-29; 32-34	105 106 106 107	4 4 5 5	W4 W4 W4 W4	June 28, 1993
9393060162	1-36	105	5	W4	June 28, 1993
9393060163	1-25; 26S, NE, 27S; 28S, NW; 29-32; 33W 4W; 5-8	105 106	6 6	W4 W4	June 28, 1993
9393060164	1-36	105	7	W4	June 28, 1993
9393060165	1-36	105	8	W4	June 28, 1993
9393060166	9W; 13EP; 16W; 17-36, Portions lying outside the restricted area of the Athabasca Sand Dunes Ecological Reserve	106	6	W4	June 28, 1993
9393060167	1-36	106	7	W4	June 28, 1993
9393060168	1-36	106	8	W4	June 28, 1993
9393060169	1-35	107	6	W4	June 28, 1993
9393060170	1-36	107	7	W4	June 28, 1993
9393060171	1-36	107	8	W4	June 28, 1993

Table 3
Firebag Property
Permit Numbers and Locations

Permit Number	Section(s)	Twp	Rng	Mdn	Commencement Date
9393090003	1-36	100	8	4	Sept 11, 1993

Table 4
Marguerite Property
Permit Numbers and Locations

Permit Number	Section(s)	Twp	Rng	Mdn	Commencement Date
9393090008	1-36	100	3	W4	Sept 11, 1993
9393090009	1-36	100	4	W4	Sept 11, 1993
9393090010	1-36	100	5	W4	Sept 11, 1993
9393090011	1-36	100	6	W4	Sept 11, 1993

Access to the area was gained via Highway 63 and the Fort Chipewyan winter road to the Firebag River, and then by quad to the property. The area can also be accessed by float plane/ helicopter from Fort McMurray.

Work Performed

Tables 5 and 6 show the work carried out on and/or in support of work on the Northern Block, Firebag and Marguerite Property from June 1993 - June 1995, and the cost of that work.

Table 5
Work Performed - Geological and Geochemical Surveys

Type of Work	Dates	Statistics
Compilation of Existing Information	May - July 1994	
Lake Sediment Sampling	August & October 1994	28 samples
Regional Surface and Groundwater Sampling	August & October 1994	127 samples
Stream Sediment Sampling	October 1994	9 sample
Soil Sampling	June - August 1994	35 samples
Biological Sampling	July - August 1994	70 samples
Sample Analysis	August - October 1994	
Data Analysis, Interpretation and Consolidation	November 1994	
Drill Core Study	March 1995 -	

FOCAL RESOURCES LIMITED

SUITE 640, 910 - 7TH AVENUE S.W. • CALGARY, ALBERTA T2P 3N8 • TELEPHONE (403) 261-9770 • FAX (403) 261-9772

December 7, 1995

Alberta Energy/Mineral Resources Division
Resource Agreements
12th Floor, South Tower
Petroleum Plaza
9915 - 108th Street
Edmonton, Alberta
T5K 2G8

Attention: Mr. Brian Hudson, Manager Mineral Agreements

Dear Sir:

Enclosed are two copies of the Revised Expenditure Statement for the Marguerite River Property Assessment Report previously submitted.

Focal wishes to retain for a further 2 years the following Lands, being N/2 - Township 100, Range 4, W4M & N/2 - Township 100, Range 5, W4M.

We anticipate that this Statement will meet your requirements, but should you need additional information, please do not hesitate to contact us.

FOCAL RESOURCES LIMITED

[redacted]

Chris C. Abbott
President & C.E.O.

FOCAL RESOURCES LIMITED

SUITE 640, 910 – 7TH AVENUE S.W. • CALGARY, ALBERTA T2P 3N8 • TELEPHONE (403) 261-9770 • FAX (403) 261-9772

December 7, 1995

Alberta Energy/Mineral Resources Division
Resource Agreements
12th Floor, South Tower
Petroleum Plaza
9915 - 108th Street
Edmonton, Alberta
T5K 2G8

Attention: Mr. Brian Hudson, Manager Mineral Agreements

Dear Sir:

Enclosed are two copies of the Revised Expenditure Statement for the Firebag River Property Assessment Report previously submitted.

Focal wishes to retain for a further 2 years the entire Permit, being Township 100, Range 8, W4M.

We anticipate that this Statement will meet your requirements, but should you need additional information, please do not hesitate to contact us.

FOCAL RESOURCES LIMITED

[redacted]

Chris C. Abbott
President & C.E.O.

	FOCAL RESOURCES LIMITED					
	FIREBAG PROPERTY EXPENDITURE STATEMENT					
	AS OF OCTOBER 1, 1995					
Code				EXPENDITURES		
1	Company labour			$ 4,321.50		
2	Travel & vehicles			$ 1,246.24		
3	Contract Labour			$ 1,026.31		
10	Consulting Fees			$ 15,530.19		
15	Meals & Entertainment			$ 94.32		
90	Safety & Security			$ -		
100	Site access & prep.			$ 33.83		
110	Camp & catering			$ 967.43		
120	Communications			$ 237.72		
160	Permits & licenses			$ -		
190	Surveying & photogrammetry			$ 249.79		
200	Assaying & testing			$ 5,899.03		
210	Studies - geological & mapping			$ 1,874.06		
211	Studies - geophysical			$ 3.41		
212	Studies - geochemical			$ 4,143.90		
255	Fuel, lubricants & utilities			$ 15.93		
260	Printing & reproduction			$ 169.71		
300	Non-controllable material			$ 382.48		
310	Controllable equipment			$ 863.32		
411	Transportation - helicopters			$ 3,279.64		
412	Transportation - fixed wing aircraft			$ 152.33		
413	Transportation - vehicles			$ 28.34		
430	Move- in/out			$ 8.77		
480	Equipment rentals			$ 242.57		
900	Miscellaneous			$ 26.90		
990	Overhead			$ 5,282.28		
	TOTAL EXPENDITURES			$ 46,080.00		

Table 6
Cost of Work Performed (as of June 30, 1995).

	Northern Block	Firebag River	Marguerite River
Company Labour	$ 75,312.56	$ 940.20	$ 3,946.71
Contract Labour	31,107.45	297.54	1,652.36
Consulting Fees	172,497.31	2,676.08	11,527.59
Meals etc.	2,312.99	19.99	111.04
Safety & Security	9.00		
Site Access & Preparation	1,196.71	12.00	66.66
Camp & Catering	37,374.79	341.79	1,898.12
Communications	3,676.02	37.36	196.05
Surveying	8,851.57	88.62	492.15
Assay and Analysis	27,129.29	627.15	2,059.33
Geological Studies	28,511.03	134.48	746.84
Geophysical Studies	120.39	1.21	6.71
Geochemical Studies	129,341.64	936.53	5,200.96
Fuel etc.	600.23	5.65	31.38
Printing & Reproduction	2,771.91	122.88	276.61
Non-controllable Material	12,746.79	119.89	665.78
Controllable Equipment	30,535.97	306.28	1,700.93
Transportation - Helicopter	17,518.10	1,856.39	2,714.12
Transportation - Fixed Wing	6,381.37	8.99	49.95
Transportation - Vehicles	28,619.03	267.46	1,466.19
Move In/Out	309.98	3.11	17.27
Equipment Rentals	9,236.40	86.06	477.92
Miscellaneous	261.20	6.36	24.04
Overhead	82,612.33	1,216.59	4,834.23
Total	$709,034.06	$10,112.61	$40,162.94

Sampling Rationale, Procedures and Analysis

Exploration Strategy

The permits discussed in this report form a portion of the lands considered in Focal Resources Limited overall Northeast Alberta exploration programme. Positioning any specific property in a regional geological framework is an essential step in the interpretation of any data collected from that property. The information gathered from the

literature was assembled and interpreted, an exploration and data collections strategy was developed, the appropriate field work was implemented, and the results were interpreted within a regional framework.

Due to the lack of bedrock exposure in this area, alternatives to the conventional approach were taken. Based on the literature and the available sampling media biological, soil, stream sediment, lake sediment, and water samples were collected for geochemical analysis.

Lake Sediment Sampling

The lake sediment samples were collected using a tube-type sampling device designed by Dr. J. D. Campbell of Jaycon Reconnaissance. The lake sediment samples were transported to the lab as is (sealed in plastic bottles), where they were subsequently either ashed and analysed using Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES) and fire assay with an atomic absorption spectrometry finish (FA-AA) for gold, or a Neutron Activation Analysis (NAA) was performed on the whole sample (Appendix I, Tables 8,9,10).

Biological Sampling

The theory behind biogeochemical sampling is that if there is an enrichment of metals in a substrate, there will subsequently be an enrichment of metals in the vegetation growing on that substrate. Plants and algae extract elements from large volumes of soil or bedrock and ground water, and concentrate non-essential elements in their extremities such as the foliage, outer bark, twigs and tree tops (Dunn, 1991). Therefore, the geochemistry of the vegetation should reveal something about the geochemistry of the soil, bedrock, and ground water beneath it.

Samples were taken of a variety of land and water plants and algae. The outer bark of land plants was sampled using the dull edge of a knife blade; twigs and leaves were clipped from the ends of branches. Algae and aquatic plants were sampled whole, if possible, down to the roots.

The biological samples were assayed using ICP-AES and FA-AA for gold (Appendix I, Table 9).

Soil Sampling

The terrain in this area is mainly sand dunes (fine-grained quartz) with little or no vegetative cover. The overburden varies in thickness, ranging up to almost 100 metres in the region (Wilson, 1985).

The intent of the soil sampling survey was to sample B-horizon soils. The soil profile in the area is not consistent with the usual soil development profile. The organic layer is

extremely thin, on the order of a few centimetres. The leached zone consists of an average of 10 cm of white to yellow, fine-grained quartz sand. The oxidised zone (thought to be the B-horizon equivalent) is a rusty brown quartz sand, due to coating of the grains with iron and manganese oxides. This zone continues to some depth. The C-horizon was not seen mainly because of the immense depth of the oxide zone. However, where unconsolidated material was found near outcrop the C-horizon did not appear to be developed.

The soil samples were assayed using ICP-AES and FA-AA for gold (Table 9, Appendix I).

Stream Sediment Sampling

Sample sites were selected based on previous work and aerial reconnaissance of the property. The sampling was done in the fall to take advantage of low water levels. A 6mm screen was used to remove course material in the field. Approximately 40 kg of >6mm material was collected in a large plastic pail. The stream samples were taken to the University of Alberta Minerals Benefaction Laboratory and screened to 60 mesh. The minus 60 mesh fraction was run over a shaker table, and each sample was divided into concentrate, middling and tails; the heavy mineral fraction making up most of the concentrate. The fractions were subsequently examined under the light microscope and the concentrate assayed for gold using FA-AA (Table 9, Appendix 1).

Regional Surface and Groundwater Study

Water samples were collected from a wide variety of locations throughout the Northern Block Property. Samples were taken from two types of sources: surficial sources, such as springs, streams and lakes, and from observational wells completed in specific horizons. Surface samples were collected in 1l bottles and, in the case of springs, as close to the source as possible. Observational wells and sample source wells were completed using both gas powered and human operated augers. Lake water samples were taken using a pontoon equipped helicopter or boat. Sampling devices were designed and built by Dr. J. D. Campbell of Jaycon Reconnaissance. All water samples were placed in clean sample bottles and treated as follows (Cody, 1995):

> Electrical conductivity and pH were measured on the raw, un-filtered water as soon as possible. Samples were filtered through a 0.45 µm cellulose acetate filter housed in a 2.4 l barrel filter unit using hand pumped air as a drive. Water was collected into 2, 125 ml polypropylene bottles. One was acidified to a pH<2 with five drops of concentrated nitric acid, sealed, labelled filtered acidified water and sent for analysis. The other was sealed and archived as filtered un-acidified water. A second filtered acidified sample was commonly taken for quality assurance and quality control purposes.
>
> Gold, silver, and platinum group elements (PGEs) are unstable in aqueous solutions in plastic containers. To preserve these specific elements and to allow for lower limits of detection, a pre-concentration technique following that of Hall (1986), was

utilised. To one litre of acidified water, 250 mg of activated carbon was added and vigorously agitated. The unstable elements are adsorbed onto the activated carbon. This mixture has been shown to be stable for over 30 days. The water plus activated carbon mixture was then re-filtered through a 0.45 µm cellulose acetate filter to collect the activated carbon. The collected activated carbon was then analysed for the above mentioned elements.

The collecting, handling and treatment of all water samples was done under the supervision of Ground Water Solutions Limited of Calgary.

The acidified water samples and the activated carbon samples were analysed using Inductively Coupled Plasma Mass Spectrometry (ICP-MS) by Elemental Research Incorporated of Vancouver. The acidified water samples were run as received at ten times dilution. Table 11, Appendix I lists the elements and the standard detection limits for the ICP-MS method run on the water samples. The activated carbon samples were made into solutions; 0.2g of dried sample was dissolved in 2 ml of aqua regia, and made up to 10 ml of solution with 18 megaohm water. These solutions were run at 2.5X dilution. Table 12, Appendix I lists the elements and their respective detection limits for the ICP-MS analyses of the activated carbon samples.

Results

The complete analytical results are presented in Appendices II and III. Table 7 below summarises the ranges of selected metals.

Table 7
Analytical Results - Ranges of Selected Elements

	Gold	Copper	Lead	Zinc	Nickel
Lake Sediment (ICP)	<5-361 ppb	<1-18 ppm	<2-36 ppm	<1-89 ppm	1-16 ppm
Lake Sediment (NAA)	<5-5 ppb			<50-190	<100 ppm
Surface Water	<0.1-0.3 ppb	<0.05-16.6 ppb	<0.01-5.08 ppb	<0.1-50.2 ppb	<0.05-6.73 ppb
Soil	<5 ppb	<1-32 ppm	<2-7 ppm	<1-34 ppm	<1-10 ppm
Biological	<5-329 ppb	<1-28 ppm	<2-2824 ppm	2-145 ppm	<1-16 ppm
Stream Sediment	1-622 ppb				

The two techniques for analysing the lake sediment samples yield different results. The differences in detection limits for the two methods makes it difficult to compare data obtained from the two methods. For several elements, in particular nickel, the NAA detection limit (100 ppm) is likely well above background, judging from the ICP-AES data. Of the elements tabulated above, zinc is the only one for which the data overlap; as such the results would be expected to be comparable, and they are to the extent that the Six Lakes area is anomalous with respect to zinc using either method.

The ICP-AES method is done on the ashed sample, whereas the NAA method is done on a subsample of the whole sample. Ashing captures all of the metals in a sample, so the

results from the ICP-AES method would be expected to be higher than those obtained from NAA, even when the data is corrected for loss on ignition. This explains why the gold values from the NAA are at or below the detection limit of 5 ppb, whereas those from the ICP-AES analysis are up to several orders of magnitude higher. The variability in the gold values from the ICP-AES analyses and the fact that the NAA data does not substantiate the high gold values is most likely due to the preconcentration step inherent in the ICP analytical process. The sample analysed using the ICP-AES technique represents a larger quantity of the original sample than that using NAA; therefore the highs from the ICP-AES method would be expected to be higher than comparable samples analysed using NAA.

The results of the stream sediment sampling confirm that there is anomalous gold in the area, however the limited sampling done to date is insufficient to determine its source.

On the whole, the water analyses do not correlate directly with the lake sediment analyses. There are many factors that influence the mobility of the various elements in the various media, influencing the results and making interpretation across sample types difficult.

The analyses of the biological samples are generally high for the metals of interest. This is to be expected because plants tend to segregate unnecessary metals towards their extremities. Determining the relationship between the metal content of the plant and that of the substrate is influenced by numerous factors, making the data difficult to interpret in isolation from the other available information. The high lead values in the biological samples likely results from the fact that lead is highly toxic and will therefore be preferentially concentrated as a waste product.

Conclusions

This area is geochemically interesting due to the presence of elevated values for several base metals. There is not enough data to conduct meaningful statistics, but a review of the data shows that while the ranges are broad there are several relatively high values. Background values for the various elements has not been statistically defined, but it can be assumed to be above detection for lead, zinc, copper, and nickel.

The distribution of elevated values is somewhat random, however, there is an anomalous area in the vicinity of Six Lakes (Twp 103 R 4W4). Lake sediment values of up to 361 ppb and high values for base metals in all sample types render this area worthy of further study.

Correlation of the geochemical data between different types of samples is not good; each sample type appears to be an independent population. The background levels of each element in each sampling media is different, so threshold values for anomalies will also differ. The factors that affect the concentrations of metals in soil, water, lake sediment, surface water, and groundwater are numerous and variable on local and regional scales.

There are also factors that influence the variability of element concentrations in samples from the same media. The best example of this is surface waters. Factors such as temperature, recent rainfall, and seasonality could dramatically affect the element

concentrations of a particular water and its geochemistry undoubtedly varies, on some as yet unknown basis

From the field work done to date, there is no direct evidence that the elevated values have a bedrock source, however, it is conceivable that faults to bedrock provide fluid conduits for metal transportation. The presence of thick till and dune sand in the area lends credence to the alternative: that the elevated values have a surficial source.

The fact that the majority of gold assays are below detection exemplifies the importance of geochemical pathfinders and indicator elements as a tool for exploration in this area. Detailed geochemical study of suites of elements will be the key to understanding the geology and mineralisation potential of this area. The most important elements are lead, zinc, sulphur, and the classic pathfinders for Mississippi Valley Type deposits: barium, fluorine, cadmium, copper, nickel, cobalt, and mercury.

The focus of exploration in this area should be shifted from gold to base metals. The environment, the mineralisation model, and the data collected to date point towards a Mississippi Valley Type style of mineralisation rather that a low temperature gold style of deposit. The possibility of the existence of economic gold concentrations cannot be ruled out at this stage, however, the discovery of a lead-zinc deposit similar to Pine Point appears more likely. In any event, further study is essential.

Recommendation

Further work is warranted to determine the significance and meaning of the elevated geochemical values in this area. In order to make sense of the work done so far it will be necessary to determine background values and sources for the various elements.

Previous work in the area needs to be studied in great detail. There are a number of diamond drill holes in the area which can be logged and analysed to determine the whole rock geochemistry of the area and identify mineralisation trends. Examination of existing geophysical information is also necessary to understand the bedrock geology and basement structure as it pertains to the current mineralisation model.

The thick, ubiquitous overburden in the area renders surface sampling techniques difficult to interpret necessitating the use of information from diamond drilling and geophysics.

The following work programme is recommended:

1. Log and sample the available drill core from previous uranium exploration projects.
2. Analyse the core samples using ICP for a variety of elements; gold, lead, zinc, sulphur, barium, fluorine, cadmium, copper, nickel, cobalt, and mercury being the most important.
3. Analyse the available airborne geophysics.
4. Integrate the geophysical and geochemical information.
5. Carry out ground geophysics and geochemical sampling in anomalous areas.
6. Drill the detailed anomalies.

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Appendices

I. Analytical Techniques and Detection Limits

Table 8
ICP-AES Element Suite and Detection Limits

Element	Atomic Number	Symbol	Detection Limit	Units
Molybdenum	42	Mo	1	ppm
Copper	29	Cu	1	ppm
Lead	82	Pb	3	ppm
Zinc	30	Zn	1	ppm
Silver	47	Ag	0.3	ppm
Nickel	28	Ni	1	ppm
Cobalt	27	Co	1	ppm
Manganese	25	Mn	2	ppm
Iron	26	Fe	0.01	%
Arsenic	33	As	2	ppm
Uranium	92	U	5	ppm
Thorium	90	Th	2	ppm
Strontium	38	Sr	1	ppm
Cadmium	48	Cd	0.2	ppm
Antimony	51	Sb	2	ppm
Bismuth	83	Bi	2	ppm
Vanadium	23	V	1	ppm
Calcium	20	Ca	0.01	%
Phosphorous	15	P	0.001	%
Lanthanum	57	La	1	ppm
Chromium	24	Cr	1	ppm
Magnesium	12	Mg	0.01	%
Barium	56	Ba	1	ppm
Titanium	22	Ti	0.01	%
Boron	5	B	3	ppm
Aluminum	13	Al	0.01	%
Sodium	11	Na	0.01	%
Potassium	19	K	0.01	%
Tungsten	74	W	2	ppm

Table 9
Fire assay with atomic absorption spectrometry finish (FA-AA)

Element	Atomic Number	Symbol	Detection Limit	Units
Gold	79	Au	5	ppb

Table 10
Neutron Activation Analysis Element Suite and Detection Limits

Element	Atomic Number	Symbol	Detection Limit	Units
Silver	47	Ag	5.0000	ppm
Arsenic	33	As	2.0000	ppm
Gold	79	Au	5.0000	ppb
Barium	56	Ba	100.0000	ppm
Bromine	35	Br	1.0000	ppm
Calcium	20	Ca	1.0000	%
Cadmium	48	Cd	5.0000	ppm
Chromium	24	Cr	10.0000	ppm
Cesium	58	Cs	3.000	ppm
Iron	26	Fe	0.1000	%
Hafnium	72	Hf	1.0000	ppm
Molybdenum	42	Mo	5.0000	ppm
Sodium	11	Na	500.0000	ppm
Nickel	28	Ni	100.0000	ppm
Rubidium	37	Rb	30.0000	ppm
Antimony	51	Sb	0.2000	ppm
Selenium	34	Se	5.0000	ppm
Strontium	38	Sr	500.0000	ppm
Tantalum	73	Ta	1.0000	ppm
Thorium	90	Th	0.5000	ppm
Uranium	92	U	0.5000	ppm
Tungsten	74	W	4.0000	ppm
Zinc	30	Zn	50.0000	ppm
Lanthanum	57	La	1.0000	ppm
Cerium	58	Ce	3.0000	ppm
Neodymium	60	Nd	10.0000	ppm
Samarium	62	Sm	0.5000	ppm
Europium	63	Eu	0.2000	ppm
Terbium	65	Tb	0.5000	ppm
Ytterbium	70	Yb	0.2000	ppm
Lutetium	71	Lu	0.0500	ppm
Iridium	77	Ir	20.0000	ppb

Table 11
Acidified Water ICP-MS Analysis Elements and Standard Detection Limits

Element	Atomic Number	Symbol	Detection Limit	Units*
Sodium	11	Na	10	µg/l
Magnesium	12	Mg	0.3	µg/l
Calcium	20	Ca	10	µg/l
Manganese	25	Mn	0.3	µg/l
Iron	26	Fe	2	µg/l
Nickel	28	Ni	0.3	µg/l
Copper	29	Cu	0.5	µg/l
Zinc	30	Zn	1	µg/l
Silver	47	Ag	0.08	µg/l
Cesium	58	Ce	0.03	µg/l
Platinum	78	Pt	0.03	µg/l
Lead	82	Pb	0.2	µg/l
Gold	79	Au	0.02	µg/l

* 1 µg/l = 1 ppb

Table 12
Activated Carbon ICP-MS Analysis Elements and Standard Detection Limits

Element	Atomic Number	Symbol	Detection Limit	Units
Silver	47	Ag	0.08	µg/l*
Platinum	78	Pt	0.03	µg/l
Gold	79	Au	0.02	µg/l
Ruthenium	44	Ru	0.04	µg/l
Rhodium	45	Rh	0.03	µg/l
Palladium	46	Pd	0.06	µg/l
Rhenium	75	Re	0.03	µg/l
Osmium	76	Os	0.02	µg/l
Iridium	77	Ir	0.02	µg/l

* 1 µg/l = 1 ppb

II. Summary of Analytical Results

Corrected ICP Data		Atomic number		5	11	12	15	19	20	21	22
Sample Id	Sample Type	Lab Id	LOI	B	Na	Mg	Al	P	K	Ca	Ti
		Detection limit		3	0.01	0.01	0.01	0.001	0.01	0.01	0.01
		Units	%	ppm	%	%	%	%	%	%	%
N4MI-BS-1	lake sediment	72682	7.66	4	0.01	0.02	0.06	0.01	0.01	0.20	< .01
N4MI-BS-2	lake sediment	72683	78.33	19	0.03	0.29	0.54	0.08	0.04	1.61	0.01
N4MI-BS-3	lake sediment	72684	20.44	12	0.02	0.25	0.61	0.04	0.11	0.72	0.01
N4MI-BS-4	lake sediment	72685	43.73	19	0.02	0.25	0.82	0.14	0.17	0.89	0.01
N4MI-BS-6	lake sediment	72686	17.44	8	0.02	0.14	0.36	0.05	0.07	0.64	0.01
N4MI-99	lake sediment	72874	60.16	12	0.01	0.14	0.27	0.04	0.05	0.73	0.00
N4MI-103	lake sediment	72875	84.06	24	0.01	0.13	0.24	0.10	0.04	0.59	0.00
N4MI-105	lake sediment	72876	60.06	13	0.01	0.14	0.30	0.23	0.12	0.62	< .01
N4MI-114	lake sediment	72877	13.56	4	0.01	0.03	0.30	0.06	0.05	0.10	0.01
N4MI-BS-12	lake sediment	72878	77.90	19	0.01	0.27	0.31	0.04	0.05	1.08	0.00
N4MI-BS-13	lake sediment	72879	61.63	20	0.02	0.19	0.33	0.08	0.07	0.80	0.01
N4MI-BS-14	lake sediment	72880	65.15	16	0.01	0.13	0.44	0.07	0.05	0.97	0.01
N4MI-BS-15	lake sediment	72881	49.02	15	0.01	0.09	0.25	0.07	0.05	0.59	0.01
N4MI-BS-16	lake sediment	72882	58.66	36	0.02	0.27	0.57	0.11	0.10	1.56	0.01
N4MI-BS-17	lake sediment	72883	12.70	3	0.01	0.04	0.38	0.18	0.04	0.19	0.01
A1	lake sediment	A1	82.49	16	0.01	0.17	0.18	0.06	0.04	0.77	0.00
A2	lake sediment	A2	0.00	< 2	< .01		0.02	< .001	0.01	< .01	< .01
A3	lake sediment	A3	0.00	< 2	< .01	0.01	0.03	0.00	0.01	0.02	< .01
C2*	lake sediment	C-2	8.98	4	< .01	0.02	0.05	0.01	0.02	0.12	< .01
C3	lake sediment	C-3	91.38	12	0.01	0.10	0.09	0.04	0.02	0.41	0.00
C5	lake sediment	C-5	84.27	18	0.01	0.22	0.18	0.08	0.04	0.81	0.00
N4MI-108	lake sediment	N4MI-108	69.20	14	0.01	0.16	0.49	0.04	0.05	0.81	0.01
N4MI-92	lake sediment	N4MI-92	56.87	12	0.01	0.12	0.19	0.03	0.04	0.77	0.00
N4RV-76S	sediment	N4RV-76	20.36	14	0.02	0.10	0.18	0.21	0.06	0.68	0.01
N4RV-77S	sediment	N4RV-77(SL)	27.43	< 2	< .01	0.05	0.01	0.40	0.01	1.00	< .01
N4RV-83S	sediment	N4RV-83(SL)	30.78	< 2	0.01	0.13	0.19	0.65	0.05	1.05	< .01
N4RV-86S	sediment	N4RV-86(SL)	29.19	< 2	0.01	0.07	0.04	0.63	0.01	1.19	< .01

Corrected ICP Data		Atomic number	23	24	25	26	27	28	29	30	33
Sample Id	Sample Type	Lab Id	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	As
		Detection limit	1	1	2	0.01	1	1	1	1	2
		Units	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
N4MI-BS-1	lake sediment	72682	3	8	92	0.35	1	2	1	4	< 2
N4MI-BS-2	lake sediment	72683	15	42	44	0.39	1	8	8	14	3
N4MI-BS-3	lake sediment	72684	16	26	337	1.09	3	12	4	40	3
N4MI-BS-4	lake sediment	72685	34	23	649	7.70	4	16	8	61	< 2
N4MI-BS-6	lake sediment	72686	12	450	347	1.84	2	13	8	22	3
N4MI-99	lake sediment	72874	8	13	62	0.49	1	6	6	69	8
N4MI-103	lake sediment	72875	10	9	120	2.41	1	6	6	41	6
N4MI-105	lake sediment	72876	17	11	486	9.77	2	9	18	89	976
N4MI-114	lake sediment	72877	35	52	29	1.34	1	3	4	7	3
N4MI-BS-12	lake sediment	72878	8	8	32	0.37	1	5	5	34	2
N4MI-BS-13	lake sediment	72879	21	93	269	1.92	1	7	6	56	3
N4MI-BS-14	lake sediment	72880	34	19	114	4.14	2	6	5	36	2
N4MI-BS-15	lake sediment	72881	20	52	90	1.97	2	7	3	25	3
N4MI-BS-16	lake sediment	72882	15	15	322	4.61	4	12	5	71	4
N4MI-BS-17	lake sediment	72883	17	21	106	6.30	< 1	3	5	16	2
A1	lake sediment	A1	5	10	60	0.29	1	4	6	26	1
A2	lake sediment	A2	< 2	47	9	0.09	< 1	2	< 1	< 1	< 2
A3	lake sediment	A3	< 2	143	21	0.20	1	4	1	3	2
C2*	lake sediment	C-2	< 2	40	18	0.15	< 1	3	1	3	< 2
C3	lake sediment	C-3	2	4	24	0.17	1	2	4	16	1
C5	lake sediment	C-5	4	12	47	0.24	1	4	7	27	2
N4MI-108	lake sediment	N4MI-108	30	17	77	2.07	2	7	3	48	3
N4MI-92	lake sediment	N4MI-92	7	8	144	1.21	1	4	3	28	2
N4RV-76S	sediment	N4RV-76	15	156	340	18.81	< 1	8	14	17	16
N4RV-77S	sediment	N4RV-77(SL)	4	1	6227	41.49	< 1	1	5	1	14
N4RV-83S	sediment	N4RV-83(SL)	15	6	5100	32.55	< 1	7	6	6	46
N4RV-86S	sediment	N4RV-86(SL)	8	2	256	41.13	< 1	1	5	1	2

Corrected ICP Data		Atomic number	38	42	47	48	51	56	57	74	79
Sample Id	Sample Type	Lab Id	Sr	Mo	Ag	Cd	Sb	Ba	La	W	Au
		Detection limit	1	1	0.3	0.2	2	1	1	2	5
		Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb
N4MI-BS-1	lake sediment	72682	20	< 1	0	< .2	3	17	5	< 1	<5
N4MI-BS-2	lake sediment	72683	26	2	< .1	< .2	1	10	7	< 1	<5
N4MI-BS-3	lake sediment	72684	34	1	< .1	< .2	< 2	123	11	< 1	<5
N4MI-BS-4	lake sediment	72685	35	2	0	< .2	< 2	63	11	< 1	<5
N4MI-BS-6	lake sediment	72686	27	2	1	< .2	2	133	7	< 1	<5
N4MI-99	lake sediment	72874	28	2	0	0	1	53	5	< 1	4
N4MI-103	lake sediment	72875	20	2	0	0	0	4	4	0	5
N4MI-105	lake sediment	72876	42	2	2	0	19	24	6	0	160
N4MI-114	lake sediment	72877	27	1	< .1	< .2	< 2	105	27	< 1	<5
N4MI-BS-12	lake sediment	72878	34	3	0	0	< 2	8	4	< 1	<5
N4MI-BS-13	lake sediment	72879	21	2	0	0	1	29	7	< 1	NSS
N4MI-BS-14	lake sediment	72880	39	1	< .1	< .2	< 2	20	10	< 1	<5
N4MI-BS-15	lake sediment	72881	28	1	0	0	1	84	6	< 1	6
N4MI-BS-16	lake sediment	72882	40	2	0	< .2	< 2	45	7	< 1	<5
N4MI-BS-17	lake sediment	72883	19	1	0	< .2	3	169	6	< 1	<5
A1	lake sediment	A1	23	2	0	0	< 2	5	2	1	361
A2	lake sediment	A2	5	< 1	< .1	< .2	< 2	4	2	2	<5
A3	lake sediment	A3	6	< 1	0	0	< 2	5	2	1	<5
C2*	lake sediment	C-2	20	< 1	0	< .2	< 2	13	5	< 1	<5
C3	lake sediment	C-3	15	1	0	0	0	2	1	0	NSS
C5	lake sediment	C-5	27	2	0	0	0	3	2	0	NSS
N4MI-108	lake sediment	N4MI-108	22	2	< .1	0	< 2	14	14	1	<5
N4MI-92	lake sediment	N4MI-92	21	2	0	0	< 2	28	3	< 1	<5
N4RV-76S	sediment	N4RV-76	37	3	0	< .2	< 2	259	6	1	<5
N4RV-77S	sediment	N4RV-77(SL)	48	1	1	< .2	< 2	567	1	1	<5
N4RV-83S	sediment	N4RV-83(SL)	41	1	1	< .2	2	360	3	1	<5
N4RV-86S	sediment	N4RV-86(SL)	65	< 1	0	< .2	< 2	539	2	1	<5

Corrected ICP Data		Atomic number	82	83	90	92
Sample Id	Sample Type	Lab Id	Pb	Bi	Th	U
		Detection limit	3	2	2	5
		Units	ppm	ppm	ppm	ppm
N4MI-BS-1	lake sediment	72682	< 2	< 2	< 2	< 5
N4MI-BS-2	lake sediment	72683	3	< 2	2	3
N4MI-BS-3	lake sediment	72684	2	< 2	2	< 5
N4MI-BS-4	lake sediment	72685	2	6	5	< 5
N4MI-BS-6	lake sediment	72686	10	< 2	2	< 5
N4MI-99	lake sediment	72874	26	< 2	1	< 5
N4MI-103	lake sediment	72875	16	< 2	1	< 5
N4MI-105	lake sediment	72876	36	< 2	1	< 5
N4MI-114	lake sediment	72877	6	< 2	3	< 5
N4MI-BS-12	lake sediment	72878	3	< 2	1	1
N4MI-BS-13	lake sediment	72879	11	< 2	2	< 5
N4MI-BS-14	lake sediment	72880	3	3	4	< 5
N4MI-BS-15	lake sediment	72881	7	< 2	2	< 5
N4MI-BS-16	lake sediment	72882	4	< 2	3	< 5
N4MI-BS-17	lake sediment	72883	3	3	3	< 5
A1	lake sediment	A1	6	< 2	1	< 5
A2	lake sediment	A2	< 2	< 2	< 2	< 5
A3	lake sediment	A3	< 2	< 2	< 2	< 5
C2*	lake sediment	C-2	5	< 2	< 2	< 5
C3	lake sediment	C-3	25	< 2	0	1
C5	lake sediment	C-5	11	< 2	0	2
N4MI-108	lake sediment	N4MI-108	3	< 2	3	3
N4MI-92	lake sediment	N4MI-92	4	< 2	1	< 5
N4RV-76S	sediment	N4RV-76	33	< 2	2	< 5
N4RV-77S	sediment	N4RV-77(SL)	3	2	3	< 5
N4RV-83S	sediment	N4RV-83(SL)	< 2	< 2	2	< 5
N4RV-86S	sediment	N4RV-86(SL)	4	< 2	2	< 5

Lake Sediment Samples

NAA Data	Lab Id	Na	Ca	Sc	Cr	Fe	Co	Ni	Zn	As	Se	Br
Sample Id	units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
N4MI-BS-201A	73114	<500	10000	0.40	10.0	5000	< 5.0	< 100	90	< 2.0	< 5.0	230.00
N4MI-BS-201B	73115	700	10000	0.50	< 10.0	5000	< 5.0	< 100	90	3.0	< 5.0	210.00
N4MI-BS-202A	73116	800	10000	0.90	20.0	6000	< 5.0	< 100	190	4.0	< 5.0	130.00
N4MI-BS-202B	73117	800	10000	0.80	20.0	5000	< 5.0	< 100	110	3.0	< 5.0	110.00
N4MI-BS-203A	73118	<500	100000	0.70	< 10.0	4000	< 5.0	< 100	70	2.0	< 5.0	61.00
N4MI-BS-203B	73119	600	70000	0.90	10.0	5000	< 5.0	< 100	80	2.0	< 5.0	75.00
N4MI-BS-204A	73120	800	140000	0.80	20.0	9000	< 5.0	< 100	< 50	4.0	< 5.0	110.00
N4MI-BS-204B	73121	700	140000	0.80	20.0	9000	< 5.0	< 100	< 50	4.0	< 5.0	110.00
N4MI-BS-205A	73122	800	<10000	1.70	60.0	5000	< 5.0	< 100	60	2.0	< 5.0	41.00
N4MI-BS-205B	73123	800	<10000	1.80	40.0	5000	< 5.0	< 100	60	3.0	< 5.0	40.00
N4MI-BS-206A	73124	<500	10000	0.70	10.0	5000	5.0	< 100	70	3.0	< 5.0	70.00
N4MI-BS-206B	73125	<500	<10000	0.80	10.0	5000	< 5.0	< 100	60	3.0	< 5.0	67.00
N4MI-BS-207	73154	900	<10000	1.60	40.0	110000	5.0	< 100	< 50	6.0	< 5.0	72.00
N4MI-BS-208	73155	1300	<10000	1.50	120.0	143000	< 5.0	< 100	< 50	6.0	< 5.0	67.00
N4MI-BS-209	73156	1100	<10000	1.50	70.0	133000	< 5.0	< 100	< 50	5.0	< 5.0	60.00
N4MI-BS-210	73157	800	<10000	1.40	20.0	88000	< 5.0	< 100	< 50	6.0	< 5.0	100.00
N4MI-BS-211	73158	800	<10000	0.60	90.0	2000	< 5.0	< 100	< 50	< 2.0	< 5.0	22.00
N4MI-BS-212	73159	500	<10000	0.50	20.0	2000	< 5.0	< 100	< 50	2.0	< 5.0	33.00
N4MI-BS-213	73160	<500	<10000	0.50	20.0	2000	< 5.0	< 100	< 50	< 2.0	< 5.0	34.00
N4MI-BS-214	73161	500	<10000	0.60	20.0	2000	< 5.0	< 100	< 50	< 2.0	< 5.0	32.00
N4MI-BS-215	73162	500	<10000	1.70	30.0	9000	< 5.0	< 100	50	5.0	< 5.0	120.00
N4MI-BS-216	73163	<500	<10000	0.80	10.0	7000	< 5.0	< 100	50	3.0	< 5.0	47.00
N4MI-BS-217	73164	700	<10000	1.20	30.0	3000	< 5.0	< 100	< 50	3.0	< 5.0	45.00
N4MI-BS-218	73165	600	<10000	1.00	30.0	11000	< 5.0	< 100	< 50	3.0	< 5.0	52.00
N4MI-BS-219	73166	600	10000	1.60	30.0	25000	< 5.0	< 100	50	3.0	< 5.0	80.00
N4MI-BS-220	73167	800	10000	1.50	40.0	13000	< 5.0	< 100	50	5.0	< 5.0	77.00
N4MI-BS-221	73168	900	<10000	1.30	30.0	12000	< 5.0	< 100	< 50	2.0	< 5.0	33.00
N4MI-BS-222	73169	1300	<10000	1.10	30.0	13000	< 5.0	< 100	< 50	3.0	< 5.0	39.00
N4MI-BS-223	73170	600	<10000	0.70	30.0	8000	< 5.0	< 100	< 50	2.0	< 5.0	28.00
N4MI-BS-224	73171	<500	<10000	0.70	20.0	8000	< 5.0	< 100	< 50	3.0	< 5.0	37.00
N4MI-BS-225	73172	700	<10000	0.80	30.0	7000	< 5.0	< 100	< 50	2.0	< 5.0	31.00
N4MI-BS-226	73173	<500	<10000	0.70	20.0	8000	< 5.0	< 100	50	3.0	< 5.0	34.00

NAA Data	Lab Id	Rb	Sr	Mo	Ag	Sb	Cs	Ba	Hf	Ta	W	Ir
Sample Id	units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
N4MI-BS-201A	73114	< 30	< 500	< 5.0	< 5.0	0.2	< 3.0	200	< 1.0	< 1.0	< 4.0	< 20
N4MI-BS-201B	73115	< 30	< 500	< 5.0	< 5.0	0.4	< 3.0	< 100	< 1.0	< 1.0	< 4.0	< 20
N4MI-BS-202A	73116	< 30	< 500	< 5.0	< 5.0	0.2	< 3.0	100	< 1.0	< 1.0	< 4.0	< 20
N4MI-BS-202B	73117	< 30	< 500	< 5.0	< 5.0	0.2	< 3.0	100	1.0	< 1.0	< 4.0	< 20
N4MI-BS-203A	73118	< 30	< 500	< 5.0	< 5.0	< 0.2	< 3.0	200	< 1.0	< 1.0	< 4.0	< 20
N4MI-BS-203B	73119	< 30	< 500	< 5.0	< 5.0	0.3	< 3.0	100	< 1.0	< 1.0	< 4.0	< 20
N4MI-BS-204A	73120	< 30	< 500	< 5.0	< 5.0	< 0.2	< 3.0	200	1.0	< 1.0	< 4.0	< 20
N4MI-BS-204B	73121	< 30	< 500	< 5.0	< 5.0	< 0.2	< 3.0	200	1.0	< 1.0	< 4.0	< 20
N4MI-BS-205A	73122	< 30	< 500	< 5.0	< 5.0	0.2	< 3.0	100	2.0	< 1.0	< 4.0	< 20
N4MI-BS-205B	73123	< 30	< 500	< 5.0	< 5.0	0.3	< 3.0	100	2.0	< 1.0	< 4.0	< 20
N4MI-BS-206A	73124	< 30	< 500	< 5.0	< 5.0	< 0.2	< 3.0	100	< 1.0	< 1.0	< 4.0	< 20
N4MI-BS-206B	73125	< 30	< 500	< 5.0	< 5.0	< 0.2	< 3.0	100	< 1.0	< 1.0	< 4.0	< 20
N4MI-BS-207	73154	< 30	< 500	< 5.0	< 5.0	0.2	< 3.0	100	1.0	< 1.0	< 4.0	< 20
N4MI-BS-208	73155	< 30	< 500	8.0	< 5.0	0.2	< 3.0	< 100	< 1.0	< 1.0	< 4.0	< 20
N4MI-BS-209	73156	< 30	< 500	7.0	< 5.0	< 0.2	< 3.0	100	1.0	< 1.0	< 4.0	< 20
N4MI-BS-210	73157	< 30	< 500	5.0	< 5.0	< 0.2	< 3.0	100	1.0	< 1.0	< 4.0	< 20
N4MI-BS-211	73158	< 30	< 500	< 5.0	< 5.0	< 0.2	< 3.0	100	1.0	< 1.0	< 4.0	< 20
N4MI-BS-212	73159	< 30	< 500	< 5.0	< 5.0	0.2	< 3.0	100	< 1.0	< 1.0	< 4.0	< 20
N4MI-BS-213	73160	< 30	< 500	< 5.0	< 5.0	0.2	< 3.0	100	< 1.0	< 1.0	< 4.0	< 20
N4MI-BS-214	73161	< 30	< 500	< 5.0	< 5.0	0.2	< 3.0	200	1.0	< 1.0	< 4.0	< 20
N4MI-BS-215	73162	< 30	< 500	< 5.0	< 5.0	0.2	< 3.0	100	1.0	< 1.0	< 4.0	< 20
N4MI-BS-216	73163	< 30	< 500	< 5.0	< 5.0	0.3	< 3.0	100	< 1.0	< 1.0	< 4.0	< 20
N4MI-BS-217	73164	< 30	< 500	< 5.0	< 5.0	0.2	< 3.0	100	1.0	< 1.0	< 4.0	< 20
N4MI-BS-218	73165	< 30	< 500	< 5.0	< 5.0	0.4	< 3.0	100	1.0	< 1.0	< 4.0	< 20
N4MI-BS-219	73166	< 30	< 500	5.0	< 5.0	0.2	< 3.0	100	1.0	< 1.0	< 4.0	< 20
N4MI-BS-220	73167	< 30	< 500	< 5.0	< 5.0	0.3	< 3.0	100	1.0	< 1.0	< 4.0	< 20
N4MI-BS-221	73168	< 30	< 500	< 5.0	< 5.0	< 0.2	< 3.0	100	2.0	< 1.0	< 4.0	< 20
N4MI-BS-222	73169	< 30	< 500	< 5.0	< 5.0	0.2	< 3.0	100	2.0	< 1.0	< 4.0	< 20
N4MI-BS-223	73170	< 30	< 500	< 5.0	< 5.0	0.2	< 3.0	100	1.0	< 1.0	< 4.0	< 20
N4MI-BS-224	73171	< 30	< 500	< 5.0	< 5.0	0.3	< 3.0	100	< 1.0	< 1.0	< 4.0	< 20
N4MI-BS-225	73172	< 30	< 500	< 5.0	< 5.0	0.3	< 3.0	100	1.0	< 1.0	< 4.0	< 20
N4MI-BS-226	73173	< 30	< 500	< 5.0	< 5.0	0.4	< 3.0	< 100	< 1.0	< 1.0	< 4.0	< 20

Lake Sediment Samples

NAA Data	Lab Id	Au	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Th	U
Sample Id	units	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
N4MI-BS-201A	73114	< 5.0	1.0	< 3.0	< 10	< 0.5	< 0.2	< 0.5	< 0.2	< 0.05	< 0.5	< 0.5
N4MI-BS-201B	73115	< 5.0	1.0	< 3.0	< 10	< 0.5	0.2	< 0.5	< 0.2	< 0.05	< 0.5	0.5
N4MI-BS-202A	73116	< 5.0	3.0	5.0	< 10	< 0.5	0.2	< 0.5	0.2	< 0.05	0.9	0.5
N4MI-BS-202B	73117	< 5.0	3.0	5.0	< 10	< 0.5	0.2	< 0.5	0.2	< 0.05	0.9	0.8
N4MI-BS-203A	73118	< 5.0	2.0	3.0	< 10	< 0.5	0.3	< 0.5	0.3	< 0.05	0.5	0.7
N4MI-BS-203B	73119	< 5.0	3.0	4.0	< 10	< 0.5	0.3	< 0.5	0.2	< 0.05	0.9	0.8
N4MI-BS-204A	73120	< 5.0	4.0	7.0	< 10	0.5	0.2	< 0.5	0.4	< 0.05	0.8	< 0.5
N4MI-BS-204B	73121	< 5.0	4.0	7.0	< 10	0.5	0.2	< 0.5	0.4	< 0.05	0.9	< 0.5
N4MI-BS-205A	73122	< 5.0	8.0	14.0	< 10	1.2	0.4	< 0.5	0.4	< 0.05	2.4	4.4
N4MI-BS-205B	73123	< 5.0	8.0	14.0	< 10	1.1	0.3	< 0.5	0.4	< 0.05	2.3	4.5
N4MI-BS-206A	73124	< 5.0	2.0	3.0	< 10	< 0.5	0.3	< 0.5	< 0.2	< 0.05	0.8	0.7
N4MI-BS-206B	73125	< 5.0	2.0	< 3.0	< 10	< 0.5	< 0.2	< 0.5	< 0.2	< 0.05	0.7	0.7
N4MI-BS-207	73154	< 5.0	7.0	14.0	< 10	1.4	0.7	< 0.5	0.8	0.12	1.6	1.0
N4MI-BS-208	73155	< 5.0	6.0	13.0	< 10	1.3	0.6	< 0.5	0.5	0.11	1.8	1.1
N4MI-BS-209	73156	< 5.0	7.0	16.0	< 10	1.4	0.7	< 0.5	0.7	0.12	1.4	0.7
N4MI-BS-210	73157	< 5.0	8.0	18.0	< 10	1.6	0.4	< 0.5	0.8	< 0.05	2.0	1.1
N4MI-BS-211	73158	< 5.0	5.0	9.0	< 10	0.6	< 0.2	< 0.5	0.2	< 0.05	1.0	< 0.5
N4MI-BS-212	73159	< 5.0	3.0	4.0	< 10	< 0.5	0.3	< 0.5	< 0.2	< 0.05	0.8	1.0
N4MI-BS-213	73160	< 5.0	2.0	4.0	< 10	< 0.5	0.3	< 0.5	< 0.2	< 0.05	0.6	0.9
N4MI-BS-214	73161	< 5.0	3.0	5.0	< 10	< 0.5	0.2	< 0.5	0.2	< 0.05	0.6	0.9
N4MI-BS-215	73162	< 5.0	8.0	16.0	< 10	1.4	0.4	< 0.5	0.7	0.09	1.8	1.4
N4MI-BS-216	73163	< 5.0	3.0	6.0	< 10	0.5	0.3	< 0.5	0.2	< 0.05	1.0	0.8
N4MI-BS-217	73164	< 5.0	5.0	10.0	< 10	0.9	0.2	< 0.5	0.5	0.06	1.2	1.0
N4MI-BS-218	73165	5	4.0	7.0	< 10	0.6	0.2	< 0.5	0.3	0.05	1.4	0.7
N4MI-BS-219	73166	< 5.0	7.0	13.0	< 10	1.2	0.5	< 0.5	0.6	0.06	1.5	1.0
N4MI-BS-220	73167	< 5.0	7.0	14.0	< 10	1.2	0.5	< 0.5	0.6	0.09	1.5	1.7
N4MI-BS-221	73168	< 5.0	7.0	14.0	< 10	1.1	0.4	< 0.5	0.6	0.10	1.8	1.2
N4MI-BS-222	73169	< 5.0	7.0	15.0	< 10	1.1	0.3	< 0.5	0.5	0.08	1.7	0.9
N4MI-BS-223	73170	< 5.0	4.0	7.0	< 10	0.5	0.4	< 0.5	0.3	< 0.05	1.0	1.1
N4MI-BS-224	73171	< 5.0	3.0	4.0	< 10	< 0.5	0.4	< 0.5	0.3	< 0.05	0.8	2.2
N4MI-BS-225	73172	< 5.0	4.0	7.0	< 10	0.5	0.3	< 0.5	0.2	< 0.05	0.9	1.3
N4MI-BS-226	73173	< 5.0	3.0	5.0	< 10	< 0.5	0.2	< 0.5	0.3	< 0.05	0.6	1.5

NAA Data	Lab Id	Na	Ca	Sc	Cr	Fe	Co	Ni	Zn	As	Se	Br
Sample Id	units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
N4MI-BS-228	73174	600	<10000	1.70	10.0	2000	< 5.0	< 100	60	2.0	< 5.0	64.00
N4MI-BS-229	73175	600	10000	1.70	10.0	11000	< 5.0	< 100	60	4.0	< 5.0	59.00
N4MI-BS-230	73176	600	10000	1.80	20.0	12000	< 5.0	< 100	60	4.0	< 5.0	62.00
N4MI-BS-231	73177	800	10000	1.70	20.0	32000	< 5.0	< 100	50	6.0	< 5.0	98.00
N4MI-BS-232	73178	<500	<10000	1.70	20.0	82000	7.0	< 100	100	5.0	< 5.0	120.00
N4MI-BS-233	73179	<500	<10000	1.50	20.0	91000	5.0	< 100	70	7.0	< 5.0	120.00
N4MI-BS-234	73180	500	10000	1.40	30.0	48000	5.0	< 100	50	7.0	< 5.0	100.00

Lake Sediment Samples

NAA Data	Lab Id	Rb	Sr	Mo	Ag	Sb	Cs	Ba	Hf	Ta	W	Ir
Sample Id	units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
N4MI-BS-228	73174	< 30	< 500	< 5.0	< 5.0	0.2	< 3.0	100	1.0	< 1.0	< 4.0	< 20
N4MI-BS-229	73175	< 30	< 500	5.0	< 5.0	< 0.2	< 3.0	200	1.0	< 1.0	< 4.0	< 20
N4MI-BS-230	73176	< 30	< 500	5.0	< 5.0	< 0.2	< 3.0	100	< 1.0	< 1.0	< 4.0	< 20
N4MI-BS-231	73177	< 30	< 500	5.0	< 5.0	0.2	< 3.0	100	1.0	< 1.0	< 4.0	< 20
N4MI-BS-232	73178	< 30	< 500	7.0	< 5.0	0.4	< 3.0	< 100	< 1.0	< 1.0	< 4.0	< 20
N4MI-BS-233	73179	< 30	< 500	< 5.0	< 5.0	0.3	< 3.0	< 100	1.0	< 1.0	4.0	< 20
N4MI-BS-234	73180	< 30	< 500	6.0	< 5.0	0.3	< 3.0	< 100	< 1.0	< 1.0	< 4.0	< 20

Lake Sediment Samples

NAA Data	Lab Id	Au	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Th	U
Sample Id	units	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
N4MI-BS-228	73174	< 5.0	6.0	13.0	< 10	1.2	0.5	< 0.5	0.5	0.05	1.8	0.7
N4MI-BS-229	73175	< 5.0	6.0	12.0	< 10	1.2	0.5	< 0.5	0.6	0.09	1.5	1.5
N4MI-BS-230	73176	< 5.0	6.0	12.0	< 10	1.3	0.5	< 0.5	0.6	0.10	1.9	2.0
N4MI-BS-231	73177	< 5.0	7.0	16.0	< 10	1.3	0.4	< 0.5	0.7	0.11	2.1	1.7
N4MI-BS-232	73178	< 5.0	5.0	12.0	< 10	1.1	0.4	< 0.5	0.8	0.11	1.4	2.6
N4MI-BS-233	73179	< 5.0	5.0	10.0	< 10	1.0	0.4	< 0.5	0.8	0.11	1.3	1.6
N4MI-BS-234	73180	< 5.0	4.0	9.0	< 10	0.8	0.2	< 0.5	0.4	0.05	1.4	2.8

Corrected ICP Data	Atomic number		5	11	12	15	19	20	21	22	23
Sample Id	Lab Id	LOI	B	Na	Mg	Al	P	K	Ca	Ti	V
	Detection limit		3	0.01	0.01	0.01	0.001	0.01	0.01	0.01	1
	Units	%	ppm	%	%	%	%	%	%	%	ppm
C1	C-1	75.11	25	0.05	0.49	0.02	0.26	2.78	7.00	< .01	1
GS1	GROUND WATER SOLUTION #1	79.89	29	0.01	0.47	0.04	0.19	0.74	1.19	< .01	21
GS2	GROUND WATER SOLUTION #2	88.75	25	0.01	0.25	0.02	0.12	0.35	0.66	< .01	3
GS3 LEAVES	G.W.S. #3 LEAVES	95.57	39	0.00	0.23	0.01	0.12	1.08	0.48	0.00	0
GS3 TWIGS BARK	G.W.S. #3 TWIGS BARK	97.64	19	0.02	0.09	0.01	0.05	0.38	0.40	< .01	0
GS4	GROUND WATER SOLUTION #4	45.13	2	0.01	0.31	0.05	0.08	0.32	1.24	< .01	23
GS5	GROUND WATER SOLUTION #5	19.56	3	0.01	0.09	0.09	0.04	0.03	0.54	< .01	14
N4MI-101	72871	60.82	23	0.07	0.40	0.18	0.11	1.02	12.43	0.00	6
N4MI-101	RE 72871	60.82	22	0.07	0.38	0.18	0.11	0.97	11.98	0.00	5
N4MI-116	72872	97.96	8	0.00	0.06	0.06	0.02	0.08	0.52	0.00	1
N4MI-119	72873	33.22	15	0.01	0.36	0.10	0.11	1.24	1.48	< .01	6
N4MI-79	N4MI-79	1.43	5	0.01	0.02	0.08	0.01	0.03	0.09	< .01	4
N4MI-80	N4MI-80	65.59	52	0.03	2.24	0.01	0.32	4.19	4.52	< .01	< 2
N4MI-81	N4MI-81	98.63	10	0.00	0.07	0.02	0.01	0.05	0.35	< .01	0
N4MI-82a	N4MI-82 LEAVES	91.00	24	0.02	0.48	0.03	0.21	0.60	1.65	< .01	1
N4MI-82b	N4MI-82 TWIGS BARK	95.89	16	0.01	0.13	0.00	0.09	0.23	1.29	< .01	0
N4MI-83	N4MI-83 LEAVES	95.29	37	0.01	0.33	0.01	0.21	1.23	0.51	< .01	0
N4MI-83	N4MI-83 TWIGS BARK	98.62	8	0.01	0.08	0.01	0.02	0.09	0.29	0.00	0
N4MI-84	N4MI-84 FROM LAKE	88.57	12	0.09	0.23	0.02	0.05	0.42	1.70	0.00	2
N4MI-87	N4MI-87	98.35	5	0.00	0.03	0.03	0.01	0.03	0.25	0.00	1
N4MI-88	N4MI-88	43.96	275	0.38	0.18	0.02	0.11	0.73	2.50	< .01	3
N4MI-88	RE N4MI-88	43.96	276	0.37	0.18	0.03	0.11	0.71	2.56	< .01	3
N4MI-89a	N4MI-89 LEAVES	95.76	40	0.01	0.25	0.01	0.16	1.02	0.47	< .01	0
N4MI-89b	N4MI-89 TWIGS BARK	98.42	10	0.00	0.10	0.00	0.02	0.16	0.35	< .01	0
N4MI-91	N4MI-91	75.79	34	0.02	0.19	0.23	0.08	0.04	0.71	0.00	5
N4MI-93	72869	55.21	34	0.03	0.58	0.04	0.10	1.51	18.14	< .01	1
N4MI-94	N4MI-94	80.63	13	0.01	0.15	0.15	0.06	0.03	0.76	0.00	7
N4MI-96	N4MI-96	64.84	11	0.01	0.12	0.31	0.12	0.04	0.58	0.00	28
N4MI-98	72870	88.94	20	0.02	0.25	0.05	0.14	2.87	0.91	0.00	1
N4MI-P-15	72887	86.58	13	0.62	0.73	0.03	0.45	130.98	0.84	0.00	1

Corrected ICP Data	24	25	26	27	28	29	30	33	38	42	47	48	51	56
Sample Id	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Sr	Mo	Ag	Cd	Sb	Ba
	1	2	0.01	1	1	1	1	2	1	1	0.3	0.2	2	1
	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
C1	52	62	0.09	0	2	4	32	1	90	1	0	0	1	101
GS1	26	18	0.06	0	2	7	5	1	12	1	0	0	2	27
GS2	7	16	0.02	0	1	4	5	1	8	0	0	0	0	20
GS3 LEAVES	29	220	0.05	0	1	4	22	0	6	1	0	0	0	6
GS3 TWIGS BARK	25	305	0.05	0	1	2	19	1	9	1	120	0	< 2	12
GS4	30	1826	11.53	< 1	3	6	8	10	21	< 1	3	< .2	< 2	91
GS5	84	409	5.03	1	4	6	8	6	23	1	0	< .2	< 2	70
N4MI-101	33	301	0.55	1	8	11	54	8	172	1	0	0	2	48
N4MI-101	32	286	0.53	1	7	11	51	7	164	1	0	0	1	51
N4MI-116	2	111	0.04	0	1	4	41	5	7	0	0	0	0	2
N4MI-119	373	628	0.75	1	8	13	43	10	73	2	0	< .2	3	149
N4MI-79	478	97	1.32	2	15	6	2	2	21	3	1	< .2	< 2	14
N4MI-80	41	57	0.09	1	2	28	13	1	44	1	5	0	< 2	44
N4MI-81	1	116	0.01	0	0	2	27	0	2	0	0	0	0	3
N4MI-82a	169	254	0.24	1	4	5	30	1	20	1	0	0	2	18
N4MI-82b	19	190	0.03	0	1	3	19	0	17	0	0	0	< 2	13
N4MI-83	31	129	0.05	0	1	6	28	1	5	0	17	0	1	7
N4MI-83	18	108	0.04	0	1	1	5	0	5	0	0	0	0	7
N4MI-84	268	62	0.35	1	6	7	14	1	19	2	2	0	1	19
N4MI-87	2	24	0.01	0	1	2	17	0	2	0	0	0	< 2	3
N4MI-88	440	167	0.71	1	11	6	12	1	26	3	0	< .2	< 2	21
N4MI-88	453	167	0.73	1	11	6	13	2	26	3	1	< .2	< 2	21
N4MI-89a	28	191	0.05	0	1	2	31	0	4	1	0	0	0	4
N4MI-89b	9	251	0.02	0	0	1	6	0	6	1	0	0	0	6
N4MI-91	33	77	0.26	1	4	12	32	1	25	2	0	0	0	10
N4MI-93	9	180	0.12	0	1	4	40	6	114	0	0	< .2	2	153
N4MI-94	11	118	0.96	2	5	4	28	1	12	3	0	0	< 2	3
N4MI-96	13	92	8.15	5	13	10	27	4	14	3	< .1	0	< 2	15
N4MI-98	46	149	0.17	1	2	9	52	14	15	1	0	0	2	9
N4MI-P-15	11	461	0.12	0	1	3	24	3	30	1	0	0	0	15

Corrected ICP Data	57	74	79	82	83	90	92
Sample Id	La	W	Au	Pb	Bi	Th	U
	1	2	5	3	2	2	5
	ppm	ppm	ppb	ppm	ppm	ppm	ppm
C1	0	0	NSS	3	< 2	< 2	< 5
GS1	1	0	NSS	8	< 2	< 2	6
GS2	0	0	61	2	< 2	< 2	3
GS3 LEAVES	0	0	NSS	3	< 2	< 2	< 5
GS3 TWIGS BARK	< 2	0	NSS	5	1	< 2	< 5
GS4	4	< 1	16	4	2	< 2	10
GS5	6	2	216	35	2	< 2	< 5
N4MI-101	2	0	NSS	19	1	< 2	< 5
N4MI-101	2	0	NSS	19	< 2	< 2	< 5
N4MI-116	0	< 1	NSS	8	0	< 2	< 5
N4MI-119	5	1	<5	19	1	< 2	< 5
N4MI-79	6	< 1	<5	4	2	< 2	< 5
N4MI-80	< 2	0	NSS	3	< 2	< 2	< 5
N4MI-81	0	< 1	NSS	1	0	< 2	< 5
N4MI-82a	2	1	NSS	8	< 2	1	2
N4MI-82b	0	< 1	NSS	3	< 2	< 2	< 5
N4MI-83	0	< 1	NSS	7	< 2	0	2
N4MI-83	0	0	NSS	2	0	< 2	< 5
N4MI-84	< 2	1	NSS	7	0	0	< 5
N4MI-87	0	< 1	NSS	1	< 2	< 2	< 5
N4MI-88	2	1	NSS	2	1	< 2	< 5
N4MI-88	2	1	NSS	3	1	< 2	< 5
N4MI-89a	1	< 1	NSS	3	< 2	0	< 5
N4MI-89b	0	< 1	NSS	1	< 2	< 2	0
N4MI-91	2	< 1	NSS	13	< 2	1	< 5
N4MI-93	< 2	0	27	13	1	< 2	< 5
N4MI-94	3	2	329	4	< 2	1	1
N4MI-96	7	1	<5	4	< 2	2	5
N4MI-98	0	0	NSS	33	< 2	< 2	< 5
N4MI-P-15	< 2	0	<5	8	0	1	< 5

Corrected ICP Data	Atomic number		5	11	12	15	19	20	21	22	23
Sample Id	Lab Id	LOI	B	Na	Mg	Al	P	K	Ca	Ti	V
	Detection limit		3	0.01	0.01	0.01	0.001	0.01	0.01	0.01	1
	Units	%	ppm	%	%	%	%	%	%	%	ppm
N4MI-P-17	72884	27.98	< 2	0.01	0.04	0.29	0.60	0.02	0.61	< .01	6
N4MI-P-9	72885	96.14	27	0.00	0.27	0.01	0.08	20.55	0.52	0.00	0
no # - 1	UNLABELLED #1	94.91	40	0.01	0.33	0.01	0.17	0.77	0.70	0.00	0
no # - 2a	UNLABELLED #2 LEAVES	98.56	8	0.01	0.04	0.01	0.03	0.11	0.32	0.00	0
no # - 2b	UNLABELLED #2 R.RIVER TWIG	50.18	25	0.29	0.32	0.19	0.31	1.16	1.03	0.00	6
no # - 3	UNLABELLED #3 R.RIVER	53.49	22	0.13	0.11	0.18	0.17	0.32	0.44	0.02	9
RRDR-P11-A	RRDR-P11-A	7.58	6	0.01	0.05	0.13	0.07	0.06	0.19	< .01	5
RRDR-P12-A	RRDR-P12-A	1.52	5	0.01	0.09	0.26	0.02	0.06	0.14	0.01	6
RRDR-P13-A	RRDR-P13-A	16.11	5	0.01	0.04	0.14	0.57	0.10	0.37	< .01	7
RRDR-P14-A	RRDR-P14-HT	38.10	10	0.01	0.27	0.06	0.19	1.42	0.96	< .01	3
RRDR-P15a	RRDR-P15-WS FOLIAGE	96.38	6	0.00	0.11	0.00	0.09	0.52	0.63	< .01	0
RRDR-P15b	RRDR-P15-WS OUTER BARK	96.63	8	0.00	0.06	0.01	0.01	0.19	0.96	< .01	0
RRDR-P15c	RRDR-P15-WS INNER BARK	97.50	9	0.00	0.09	0.01	0.04	0.33	0.60	< .01	0
RRDR-P16a	RRDR-P16-JP OUTER BARK	98.52	4	0.00	0.02	0.02	0.01	0.03	0.34	0.00	0
RRDR-P16b	RRDR-P16-JP INNER BARK	97.45	7	0.00	0.07	0.04	0.02	0.10	0.54	0.01	2
RRDR-P17A	RRDR-P17-A	4.41	7	0.01	0.11	0.43	0.04	0.11	0.23	0.01	18
RRDR-P18a	RRDR-P18-WS FOLIAGE	94.32	7	0.00	0.11	0.03	0.11	0.58	0.75	0.00	1
RRDR-P18b	RRDR-P18-WS OUTER BARK	90.00	8	0.01	0.06	0.18	0.03	0.12	1.16	0.00	6
RRDR-P18c	RRDR-P18-WS INNER BANK	95.79	10	0.00	0.10	0.04	0.04	0.23	0.95	0.00	1
RRDR-P2a	RRDR-2 FOLIAGE	96.84	8	0.00	0.10	0.01	0.11	0.34	0.47	0.00	0
RRDR-P2b	RRDR-2 CONES	98.74	5	0.00	0.07	0.00	0.06	0.36	0.03	0.00	0
RRDR-P2c	RRDR-2 OLDER TWIGS	96.92	9	0.00	0.10	0.01	0.05	0.26	0.50	0.00	1
RRDR-P3a	RRDR-P3-WS FOLIAGE	94.98	8	0.00	0.09	0.02	0.06	0.30	0.77	0.00	0
RRDR-P3b	RRDR-P3-WS OUTER BARK	88.68	15	0.00	0.10	0.03	0.02	0.42	1.53	0.00	1
RRDR-P3c	RRDR-P3-WS INNER BARK	97.08	9	0.00	0.10	0.01	0.03	0.23	0.63	< .01	0
RRDR-P4a	RRDR-P4-JP FOLIAGE	97.49	13	0.00	0.13	0.03	0.07	0.33	0.17	0.00	0
RRDR-P4b	RE RRDR-P4-JP OUTER BARK	94.69	6	0.00	0.04	0.05	0.01	0.03	0.32	0.00	1
RRDR-P4b	RRDR-P4-JP OUTER BARK	94.69	6	0.00	0.04	0.04	0.01	0.03	0.31	0.00	1
RRDR-P4c	RRDR-P4-JP INNER BARK	96.62	9	0.00	0.08	0.04	0.01	0.08	0.40	0.00	0
RRDR-P6a	RRDR-P6-JP FOLIAGE	96.92	13	0.00	0.08	0.05	0.09	0.41	0.32	0.00	0

Corrected ICP Data	24	25	26	27	28	29	30	33	38	42	47	48	51	56
Sample Id	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Sr	Mo	Ag	Cd	Sb	Ba
	1	2	0.01	1	1	1	1	2	1	1	0.3	0.2	2	1
	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
N4MI-P-17	4	388	42.75	< 1	< 1	< 1	20	< 2	37	4	0	< .2	4	356
N4MI-P-9	6	524	0.04	0	0	2	24	3	7	1	0	0	1	2
no # - 1	33	208	0.07	0	2	5	14	2	17	2	1	0	0	11
no # - 2a	4	137	0.03	0	0	2	5	1	12	0	0	0	0	9
no # - 2b	179	1668	1.58	2	8	12	30	7	66	2	1	< .2	1	59
no # - 3	387	574	1.85	3	16	28	30	14	24	3	6	0	3	580
RRDR-P11-A	393	378	1.10	2	13	6	6	3	24	2	0	< .2	< 2	60
RRDR-P12-A	34	178	0.53	1	5	< 1	7	4	22	< 1	< .1	< .2	< 2	27
RRDR-P13-A	264	3631	4.26	3	10	7	8	15	29	2	< .1	< .2	< 2	315
RRDR-P14-A	253	142	0.45	1	7	4	9	< 2	33	1	0	< .2	< 2	33
RRDR-P15a	10	85	0.02	0	1	2	11	0	22	0	0	0	0	33
RRDR-P15b	1	90	0.01	0	1	4	50	0	23	0	0	0	0	34
RRDR-P15c	1	85	0.00	0	0	3	63	0	15	0	0	0	0	10
RRDR-P16a	1	37	0.01	0	1	3	12	0	5	0	0	0	< 2	4
RRDR-P16b	7	87	0.22	0	2	4	18	3	7	0	0	0	0	8
RRDR-P17A	29	494	1.26	4	11	4	20	3	20	1	< .1	< .2	< 2	67
RRDR-P18a	30	36	0.08	0	2	3	31	0	33	0	0	0	0	48
RRDR-P18b	51	70	0.27	1	4	7	37	1	38	1	0	0	0	84
RRDR-P18c	10	40	0.06	0	2	6	86	1	38	0	0	0	0	53
RRDR-P2a	3	174	0.02	0	1	3	15	0	20	0	0	0	0	18
RRDR-P2b	13	42	0.03	0	1	2	11	0	1	0	1	0	0	4
RRDR-P2c	10	172	0.27	0	1	4	28	0	23	0	0	0	< 2	7
RRDR-P3a	1	386	0.03	0	1	2	15	0	33	0	0	0	0	58
RRDR-P3b	27	239	0.20	0	1	10	86	0	59	0	0	0	0	138
RRDR-P3c	5	128	0.01	0	2	4	76	0	22	0	0	0	0	53
RRDR-P4a	23	130	0.04	0	1	4	18	0	3	0	0	0	0	2
RRDR-P4b	5	87	0.09	0	1	3	21	< 2	8	0	0	0	0	8
RRDR-P4b	5	84	0.08	0	1	3	20	0	7	0	0	0	< 2	7
RRDR-P4c	13	79	0.03	0	1	3	23	0	9	0	0	0	< 2	9
RRDR-P6a	18	256	0.07	0	1	4	24	0	8	0	0	0	0	7

Corrected ICP Data	57	74	79	82	83	90	92
Sample Id	La	W	Au	Pb	Bi	Th	U
	1	2	5	3	2	2	5
	ppm	ppm	ppb	ppm	ppm	ppm	ppm
N4MI-P-17	< 2	14	<5	< 2	12	8	6
N4MI-P-9	< 2	0	NSS	6	< 2	0	< 5
no # - 1	0	< 1	<5	705	< 2	< 2	< 5
no # - 2a	0	0	<5	414	< 2	< 2	< 5
no # - 2b	4	0	<5	697	< 2	< 2	< 5
no # - 3	7	38	NSS	2824	3	1	< 5
RRDR-P11-A	6	< 1	<5	4	2	< 2	< 5
RRDR-P12-A	8	< 1	<5	2	2	< 2	< 5
RRDR-P13-A	8	< 1	<5	18	3	< 2	< 5
RRDR-P14-A	4	1	<5	1	1	< 2	< 5
RRDR-P15a	0	< 1	NSS	1	< 2	< 2	< 5
RRDR-P15b	< 2	< 1	NSS	1	< 2	< 2	< 5
RRDR-P15c	< 2	< 1	NSS	0	0	< 2	< 5
RRDR-P16a	0	< 1	NSS	1	< 2	< 2	< 5
RRDR-P16b	1	16	NSS	16	1	0	< 5
RRDR-P17A	12	8	<5	6	< 2	2	< 5
RRDR-P18a	0	0	NSS	1	0	< 2	< 5
RRDR-P18b	2	0	NSS	3	< 2	1	< 5
RRDR-P18c	0	< 1	NSS	4	< 2	< 2	< 5
RRDR-P2a	0	0	NSS	2	0	0	< 5
RRDR-P2b	0	0	NSS	1	< 2	0	< 5
RRDR-P2c	0	< 1	NSS	1	< 2	< 2	< 5
RRDR-P3a	0	0	NSS	1	< 2	< 2	< 5
RRDR-P3b	0	0	NSS	3	< 2	< 2	< 5
RRDR-P3c	0	< 1	NSS	1	0	< 2	< 5
RRDR-P4a	0	< 1	NSS	2	< 2	< 2	< 5
RRDR-P4b	0	< 1	NSS	1	0	< 2	< 5
RRDR-P4b	0	< 1	NSS	1	0	< 2	< 5
RRDR-P4c	0	< 1	NSS	1	0	< 2	< 5
RRDR-P6a	0	0	NSS	4	0	< 2	< 5

Corrected ICP Data	Atomic number		5	11	12	15	19	20	21	22	23
Sample Id	Lab Id	LOI	B	Na	Mg	Al	P	K	Ca	Ti	V
	Detection limit		3	0.01	0.01	0.01	0.001	0.01	0.01	0.01	1
	Units	%	ppm	%	%	%	%	%	%	%	ppm
RRDR-P6b	RRDR-P6-JP INNER BARK	98.32	8	0.00	0.06	0.04	0.01	0.09	0.38	0.00	0
RRDR-P6b	RRDR-P6-JP TWIGS	98.01	12	0.00	0.08	0.04	0.04	0.18	0.38	0.00	1
RRDR-P6c	RRDR-P6-JP OUTER BARK	98.52	4	0.00	0.03	0.03	0.00	0.03	0.23	< .01	0
RRDR-P7a	RRDR-P7-WS FOLIAGE	95.69	12	0.00	0.14	0.01	0.16	0.82	0.59	< .01	0
RRDR-P7b	RRDR-P7-WS OUTER BARK	93.36	7	0.00	0.07	0.03	0.01	0.09	1.01	0.00	1
RRDR-P7c	RRDR-P7-WS OUTER BARK H.R.	92.16	5	0.00	0.04	0.04	0.01	0.05	0.74	0.00	2
RRDR-P7d	RRDR-P7-WS INNER BARK	96.17	9	0.00	0.12	0.01	0.04	0.22	0.74	0.00	0
RRDR-P8a	RRDR-P8-JP FOLIAGE	97.03	6	0.00	0.12	0.05	0.06	0.27	0.42	0.00	1
RRDR-P8c	RRDR-P8-JP INNER BARK	90.58	42	0.01	0.49	0.15	0.17	0.86	1.06	0.00	2
RRDR-P9a	RRDR-09A	59.93	7	0.04	0.10	0.06	0.43	0.64	0.72	< .01	2

Corrected ICP Data	24	25	26	27	28	29	30	33	38	42	47	48	51	56
Sample Id	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Sr	Mo	Ag	Cd	Sb	Ba
	1	2	0.01	1	1	1	1	2	1	1	0.3	0.2	2	1
	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RRDR-P6b	14	60	0.03	0	1	3	23	0	12	0	0	0	0	16
RRDR-P6b	35	111	0.06	0	1	5	38	0	15	0	0	0	0	14
RRDR-P6c	1	26	0.01	0	0	3	13	0	8	0	0	0	< 2	6
RRDR-P7a	7	72	0.02	0	3	8	42	0	30	0	0	0	0	16
RRDR-P7b	2	73	0.05	0	1	4	79	0	40	0	0	0	< 2	35
RRDR-P7c	25	73	0.18	0	3	4	53	0	29	0	0	0	< 2	76
RRDR-P7d	5	52	0.02	0	1	4	96	0	36	0	0	0	0	30
RRDR-P8a	13	321	0.05	0	2	3	38	0	11	0	0	0	0	13
RRDR-P8c	42	470	0.16	1	5	11	145	1	39	1	0	1	0	66
RRDR-P9a	65	1240	1.01	1	3	4	22	2	52	1	0	0	< 2	199

Corrected ICP Data	57	74	79	82	83	90	92
Sample Id	La	W	Au	Pb	Bi	Th	U
	1	2	5	3	2	2	5
	ppm	ppm	ppb	ppm	ppm	ppm	ppm
RRDR-P6b	0	< 1	NSS	2	0	< 2	< 5
RRDR-P6b	0	< 1	NSS	3	0	0	< 5
RRDR-P6c	0	< 1	NSS	0	< 2	< 2	< 5
RRDR-P7a	0	2	NSS	2	< 2	< 2	< 5
RRDR-P7b	0	< 1	NSS	1	< 2	< 2	< 5
RRDR-P7c	0	< 1	NSS	2	0	< 2	< 5
RRDR-P7d	0	< 1	NSS	0	< 2	< 2	< 5
RRDR-P8a	0	< 1	NSS	2	0	0	< 5
RRDR-P8c	1	1	NSS	7	< 2	< 2	< 5
RRDR-P9a	2	0	NSS	7	< 2	< 2	< 5

Sand Sample Concentrates
Focal Resources Ltd.

1) Split each sample into two equal parts. **Do not grind or size**

2) Reserve 1 portion for Focal's further examination, return this portion to Focal as soon as ready.

3) From the non reserve portion:
   a) split sufficient sample for assay if possible
   b) retain any unused ground sample
   c) retain any unground split until further notice.

concentrates	lab. Numbers :
Marg #2	73065
Firebag #3	73066
Mac Kay #3	73067
Marg #3	73068
Firegab #2	73069
Mac Kay #4	73070
Mac Kay #2	73071
Mac Kay #1	73072
Marg # 1, >120 mesh	73073
Marg # 3	73074
Marg #1 >60 <120 mesh	73075

[redacted]

D. Nicol

Corrected ICP Data	Atomic number		5	11	12	15	19	20	21	22	23	24
Sample Id	Lab Id	LOI	B	Na	Mg	Al	P	K	Ca	Ti	V	Cr
	Detection limit		3	0.01	0.01	0.01	0.001	0.01	0.01	0.01	1	1
	Units	%	ppm	%	%	%	%	%	%	%	ppm	ppm
N4TJ-05	72676		3	< .01	0.03	0.24	0.02	0.01	0.02	0.01	8	4
N4TJ-06	72677		5	< .01	0.04	0.28	0.03	0.01	0.03	0.01	8	6
N4TJ-07	72678		5	< .01	0.05	0.40	0.02	0.01	0.02	0.02	12	6
N4TJ-08	72679		5	< .01	0.05	0.42	0.03	0.01	0.03	0.02	17	8
N4TJ-09	72680		5	0.01	0.13	0.79	0.05	0.03	0.07	0.02	18	10
N4TJ-10	72681		< 2	0.01	0.04	0.38	0.02	0.01	0.02	0.02	10	6
N4TJ-01	72864		3	< .01	0.06	0.77	0.05	0.02	0.04	0.01	19	8
N4TJ-02	72865		2	< .01	0.03	0.46	0.06	0.01	0.03	0.01	11	4
N4TJ-03	72866		2	< .01	0.02	0.22	0.01	< .01	0.01	0.01	4	3
N4TJ-04	72867		3	< .01	0.07	0.64	0.06	0.02	0.04	0.01	12	7
N4MI-SOIL-17	72886	2.46	5	0.01	0.09	0.78	0.03	0.08	0.13	0.01	20	36
N4TJ-21	72888		3	< .01	0.03	0.45	0.02	0.01	0.02	0.01	9	5
N4TJ-22	72889		2	< .01	0.02	0.29	0.02	0.01	0.01	0.01	5	3
N4TJ-23	72890		3	< .01	0.02	0.30	0.02	0.01	0.01	0.01	4	3
N4TJ-24	72891		3	0.01	0.02	0.40	0.02	0.01	0.01	0.01	6	3
N4TJ-25	72892		4	< .01	0.03	0.40	0.02	0.01	0.01	0.01	6	4
N4TJ-27	72893		2	< .01	0.01	0.16	0.02	0.01	0.02	0.01	5	2
N4TJ-29	72895		4	< .01	0.10	0.53	0.01	0.04	0.09	0.01	11	10
N4TJ-30	72896		2	0.01	0.03	0.33	0.03	0.01	0.03	0.01	6	4
N4TJ-31	72897	6.07	16	0.02	15.96	0.13	0.02	0.05	16.59	< .01	5	4
N4TJ-32	72898	25.37	27	0.03	1.01	0.89	0.13	0.37	1.88	0.01	18	38
N4TJ-34	72900	10.55	2	0.01	0.05	0.12	0.01	0.02	0.32	< .01	4	8
N4RV-69S	N4RV 69S		20	< .01	0.04	0.14	0.51	0.01	0.47	< .01	23	17
N4RV-71S	N4RV 71S		< 2	< .01	0.03	0.33	0.02	0.01	0.03	0.01	6	2
N4RV-74S	N4RV 74S		17	0.01	0.06	0.17	0.87	0.01	0.42	0.01	57	21
N4RV-75S	N4RV 75S		< 2	< .01	0.04	0.60	0.02	0.01	0.02	0.01	12	5
N4RV-79S	N4RV 79S		< 2	< .01	0.03	0.12	0.01	0.01	0.04	< .01	4	3
N4RV-84S	N4RV 84S		2	0.01	0.03	0.16	0.01	0.01	0.02	0.01	5	3
N4MI-SOIL-17	RE 72886	2.46	5	0.01	0.09	0.79	0.03	0.08	0.13	0.01	20	38
RRAH-S1	RR-S1		3	< .01	0.02	0.06	0.01	0.01	0.02	0.01	2	< 1

Corrected ICP Data	25	26	27	28	29	30	33	38	42	47	48	51	56
Sample Id	Mn	Fe	Co	Ni	Cu	Zn	As	Sr	Mo	Ag	Cd	Sb	Ba
	2	0.01	1	1	1	1	2	1	1	0.3	0.2	2	1
	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
N4TJ-05	37	0.47	1	1	5	8	< 2	6	< 1	< .1	< .2	3	20
N4TJ-06	47	0.53	2	6	4	10	2	7	< 1	0	< .2	2	19
N4TJ-07	50	0.71	1	4	5	11	2	7	< 1	< .1	< .2	< 2	20
N4TJ-08	57	0.90	2	5	2	17	2	7	< 1	< .1	< .2	< 2	34
N4TJ-09	89	1.15	4	9	7	34	4	9	< 1	< .1	< .2	4	57
N4TJ-10	44	0.60	1	3	3	11	4	6	< 1	< .1	0	< 2	27
N4TJ-01	47	1.06	2	3	7	14	< 2	9	< 1	< .1	< .2	< 2	39
N4TJ-02	28	0.62	1	2	5	15	2	7	< 1	0	< .2	3	21
N4TJ-03	11	0.23	1	1	3	3	< 2	9	< 1	< .1	< .2	2	7
N4TJ-04	71	1.44	3	6	5	9	19	11	1	< .1	< .2	< 2	29
N4MI-SOIL-17	42	1.16	1	5	2	8	3	20	< 1	< .1	< .2	2	62
N4TJ-21	29	0.50	< 1	2	3	11	< 2	6	< 1	< .1	< .2	2	27
N4TJ-22	23	0.32	1	4	3	18	< 2	5	< 1	0	< .2	2	12
N4TJ-23	12	0.27	1	1	2	10	< 2	5	< 1	0	< .2	4	17
N4TJ-24	15	0.36	1	1	4	18	< 2	6	< 1	0	0	4	17
N4TJ-25	22	0.40	1	3	3	9	< 2	7	< 1	< .1	0	3	23
N4TJ-27	98	0.24	< 1	< 1	2	14	< 2	4	< 1	0	< .2	4	18
N4TJ-29	67	0.74	3	5	7	6	< 2	9	< 1	0	< .2	2	33
N4TJ-30	21	0.44	1	2	5	11	< 2	6	< 1	0	< .2	4	9
N4TJ-31	95	0.16	1	6	3	4	4	53	1	< .1	0	2	177
N4TJ-32	1205	2.22	3	10	5	33	3	54	1	0	< .2	< 2	63
N4TJ-34	66	0.34	< 1	2	< 1	4	3	26	< 1	< .1	< .2	2	32
N4RV-69S	1028	31.11	4	1	4	17	59	19	7	< .1	< .2	< 2	416
N4RV-71S	23	0.47	1	1	1	7	< 2	5	< 1	< .1	< .2	2	23
N4RV-74S	307	24.51	3	< 1	3	20	51	19	1	0	< .2	< 2	277
N4RV-75S	36	0.81	2	3	2	11	2	5	1	< .1	< .2	< 2	28
N4RV-79S	16	0.26	< 1	< 1	1	4	< 2	5	< 1	< .1	< .2	< 2	9
N4RV-84S	32	0.29	1	< 1	1	7	< 2	5	< 1	< .1	< .2	< 2	12
N4MI-SOIL-17	40	1.18	1	6	2	8	2	20	1	< .1	< .2	3	58
RRAH-S1	18	0.14	< 1	< 1	4	2	< 2	6	< 1	< .1	0	2	6

Corrected ICP Data	57	74	79	82	83	90	92
Sample Id	La	W	Au	Pb	Bi	Th	U
	1	2	5	3	2	2	5
	ppm	ppm	ppb	ppm	ppm	ppm	ppm
N4TJ-05	7	< 1	<5	5	< 2	3	< 5
N4TJ-06	9	< 1	<5	6	< 2	4	< 5
N4TJ-07	13	1	<5	5	< 2	6	< 5
N4TJ-08	16	< 1	<5	3	< 2	6	< 5
N4TJ-09	14	< 1	<5	3	2	4	< 5
N4TJ-10	15	1	<5	5	< 2	7	< 5
N4TJ-01	13	< 1	<5	5	< 2	5	< 5
N4TJ-02	7	< 1	<5	7	< 2	2	< 5
N4TJ-03	4	< 1	<5	2	< 2	< 2	< 5
N4TJ-04	8	< 1	<5	2	< 2	3	< 5
N4MI-SOIL-17	11	< 1	<5	3	< 2	3	< 5
N4TJ-21	6	1	<5	< 2	< 2	3	< 5
N4TJ-22	4	1	<5	< 2	< 2	2	< 5
N4TJ-23	3	< 1	<5	< 2	< 2	< 2	< 5
N4TJ-24	5	1	<5	2	< 2	2	< 5
N4TJ-25	6	1	<5	< 2	< 2	3	< 5
N4TJ-27	5	< 1	<5	< 2	< 2	2	< 5
N4TJ-29	10	< 1	<5	3	< 2	4	< 5
N4TJ-30	5	< 1	<5	< 2	2	2	< 5
N4TJ-31	< 2	5	<5	< 2	< 2	7	< 5
N4TJ-32	10	< 1	<5	4	< 2	3	< 5
N4TJ-34	6	< 1	<5	3	< 2	< 2	< 5
N4RV-69S	2	2	<5	2	12	< 2	< 5
N4RV-71S	5	< 1	<5	< 2	< 2	< 2	< 5
N4RV-74S	10	< 1	<5	3	12	2	< 5
N4RV-75S	7	< 1	<5	4	< 2	2	< 5
N4RV-79S	4	< 1	<5	< 2	< 2	< 2	< 5
N4RV-84S	5	< 1	<5	< 2	< 2	< 2	< 5
N4MI-SOIL-17	11	< 1	<5	3	< 2	2	< 5
RRAH-S1	6	< 1	<5	3	2	2	< 5

Corrected ICP Data	Atomic number		5	11	12	15	19	20	21	22	23	24
Sample Id	Lab Id	LOI	B	Na	Mg	Al	P	K	Ca	Ti	V	Cr
	Detection limit		3	0.01	0.01	0.01	0.001	0.01	0.01	0.01	1	1
	Units	%	ppm	%	%	%	%	%	%	%	ppm	ppm
RRAH-S2	RR-S2		< 2	< .01	0.09	0.24	0.01	0.04	0.07	0.01	8	5
RRAH-S3	RR-S3		2	< .01	0.01	0.06	0.07	0.01	0.03	< .01	5	2
RRAH-S4	RR-S4		< 2	< .01	0.01	0.05	0.00	0.01	0.01	0.01	3	< 1
RRAH-S5	RR-S5		3	< .01	0.01	0.05	0.00	0.01	0.01	0.01	3	1
RRAH-S6	RR-S6		8	0.01	0.10	0.15	0.29	0.02	0.32	0.01	13	6

Corrected ICP Data	25	26	27	28	29	30	33	38	42	47	48	51	56
Sample Id	Mn	Fe	Co	Ni	Cu	Zn	As	Sr	Mo	Ag	Cd	Sb	Ba
	2	0.01	1	1	1	1	2	1	1	0.3	0.2	2	1
	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RRAH-S2	48	0.44	2	4	4	14	< 2	10	1	< .1	0	< 2	18
RRAH-S3	575	2.63	4	3	< 1	4	20	8	2	0	< .2	< 2	36
RRAH-S4	22	0.24	1	< 1	4	1	< 2	6	< 1	< .1	< .2	2	5
RRAH-S5	36	0.25	1	< 1	5	< 1	< 2	6	< 1	< .1	< .2	2	5
RRAH-S6	630	10.17	5	4	32	21	18	17	< 1	0	0	< 2	182

Corrected ICP Data	57	74	79	82	83	90	92
Sample Id	La	W	Au	Pb	Bi	Th	U
	1	2	5	3	2	2	5
	ppm	ppm	ppb	ppm	ppm	ppm	ppm
RRAH-S2	7	< 1	<5	2	< 2	2	< 5
RRAH-S3	5	< 1	<5	2	< 2	2	< 5
RRAH-S4	4	< 1	<5	< 2	< 2	< 2	< 5
RRAH-S5	3	< 1	<5	< 2	< 2	< 2	< 5
RRAH-S6	10	< 1	<5	3	< 2	2	< 5

Stream Sediment Samples

Sample Number	UTM	Gold Grade in Gross Sample	Gold in Gross Sample	Gold in Concentrate	Silver in Concentrate
		g/t	ppb	ppb	ppb
Firebag #1	12-494 262 & 638 2553	0.012	12		
Firebag #2	12-487 579 &638 9800	0.008	8		
Firebag #3	12-478 170 &639 5100	0.002	2		
Marguerite #1 (60-120 mesh)	12-495 913 & 938 4773	0.001	1		
Marguerite #1 (<120 mesh)	12-495 913 & 938 4773	0.156	156		
Marguerite #2	12-499 873 &638 6560	0.622	622		
Marguerite #3	12-517 017 & 639 8355	0.193	193		
Marguerite #4	12-512 019 &639 2344	0.069	69		
Marguerite #5	12-508 636 &639 5324	0.132	132		
Grayling #1	12-499 757 & 641 0707			375	<0.1
Grayling #2	12-485 795 & 641 593			35	<0.1
Grayling #3	12-479 103 & 641 7814			925	<0.1

Stream Sediment Samples; October 1994

CB #1		sandy gravel; limestone, tar sands and shield fragments - angular/subangular/rounded respectively
CB #2		fragments mostly very well rounded shield and Athabasca material with minor angular limestone
COWPER #1	midstream bar	4m cutbank; mainly shield material
DUNKIRK #1	inside cutbank	inside cutbank 1m high through sandy till; mainly subrounded to rounded (some subangular) shield material
DUNKIRK #2	inside cutbank	20m of sandy till on other bank; sub/rounded mainly shield material
FIREBAG #1	cutbank	flat banks; 90% grey limestone fragments (angular to subangular), likely Methy Fm; few rounded/subrounded shield fragments and minor Athabasca Sst frags (rounded); clay/silt fraction present - appears carbonate rich
FIREBAG #2	midstream	upstream end of the second island; excellent sample - all size fractions represented; 75% limestone fragments - remainder shield and Athabasca Sst; minor pink/grey clay present; gypsum pebble
FIREBAG #3	midstream bar	large midstream bar; mainly sand with a small gravel fraction - majority coarse sand sized; very well rounded; collected silt from downstream end on the inside
FIREBAG #3 SLT	midstream bar	downstream end of large midstream bar
GRAYLING #1	cutbank	narrow channel in flat-lying area; mostly sand with some gravel; fragments of Athabasca Sst and shield granitoids/gneisses - didn't see a single limestone fragment
GRAYLING #2	cutbank	dirty black/buff sand of fairly uniform grain size from a flat, low-lying, almost swampy area
GRAYLING #3	midstream bar	uniform sand from a midstream bar
MacKay #1	midstream bar	midstream gravel bar; North end of outcrop (strom unit at water level); 80-95% of fragments limestone
MacKay #2	midstream bar	downstream end of midstream bar; good silt fraction; 90-95% of fragments limestone
MacKay #3	sand	very clay-rich/silty fraction; taken on the east bank; 95% of the fragments were limestone, but the sample appears to be composed mostly of reworked tar sand
MacKay #4		near mouth of MacKay - downstream of the bridge; mainly sand at top of the bar, but more gravelly below about 25cm; 80% of fragments limestone, remainded shield etc material
MARGUERITE #1	midstream	partial sample taken midstream; mainly sandy material, some rounded boulders in channel
MARGUERITE #2	midstream	midstream sample from boulder wash; significant % of boulders lst or dol; good sample
MARGUERITE #3	inside cutbank	uniform sand; surrounding land low-lying and flat
MARGUERITE #4	inside cutbank	uniform sand, slightly coarser grained than #3; low-lying, flat swampy land - perfect for moose rather than people
MARGUERITE #5	midstream bar	mid-stream gravel bar; boulders and sand (not much gravel) at the downstream end - more gravel at the upstream end, so took some material from both ends of the bar
SB #1	gravel bar	Muskeg River; almost on the North boundary line, 50m West of Strat 2; downstream end of gravel bar; mainly limestone fragments - angular, subangular, rounded
SB #2	midstream bar	Muskeg River; between two midstream bars; more limestone fragments than CB #2; angular limestone, subrounded to rounded shield and Athabasca material
SB #3	gravel bar	mouth of the Muskeg River; coarse grained sand from gravel bar in zone of fast-moving water
SB #4	river mouth silt	mouth of the Muskeg; fine fraction - sand and silt with minor clay

Stream Sediment Samples; October 1994

CB #1		sandy gravel; limestone, tar sands and shield fragments - angular/subangular/rounded respectively
CB #2		fragments mostly very well rounded shield and Athabasca material with minor angular limestone
COWPER #1	midstream bar	4m cutbank; mainly shield material
DUNKIRK #1	inside cutbank	inside cutbank 1m high through sandy till; mainly subrounded to rounded (some subangular) shield material
DUNKIRK #2	inside cutbank	20m of sandy till on other bank; sub/rounded mainly shield material
FIREBAG #1	cutbank	flat banks; 90% grey limestone fragments (angular to subangular), likely Methy Fm; few rounded/subrounded shield fragments and minor Athabasca Sst frags (rounded); clay/silt fraction present - appears carbonate rich
FIREBAG #2	midstream	upstream end of the second island; excellent sample - all size fractions represented; 75% limestone fragments - remainder shield and Athabasca Sst; minor pink/grey clay present; gypsum pebble
FIREBAG #3	midstream bar	large midstream bar; mainly sand with a small gravel fraction - majority coarse sand sized; very well rounded; collected silt from downstream end on the inside
FIREBAG #3 SLT	midstream bar	downstream end of large midstream bar
GRAYLING #1	cutbank	narrow channel in flat-lying area; mostly sand with some gravel; fragments of Athabasca Sst and shield granitoids/gneisses - didn't see a single limestone fragment
GRAYLING #2	cutbank	dirty black/buff sand of fairly uniform grain size from a flat, low-lying, almost swampy area
GRAYLING #3	midstream bar	uniform sand from a midstream bar
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MARGUERITE #1	midstream	partial sample taken midstream; mainly sandy material, some rounded boulders in channel
MARGUERITE #2	midstream	midstream sample from boulder wash; significant % of boulders lst or dol; good sample
MARGUERITE #3	inside cutbank	uniform sand; surrounding land low-lying and flat
MARGUERITE #4	inside cutbank	uniform sand, slightly coarser grained than #3; low-lying, flat swampy land - perfect for moose rather than people
MARGUERITE #5	midstream bar	mid-stream gravel bar; boulders and sand (not much gravel) at the downstream end - more gravel at the upstream end, so took some material from both ends of the bar
SB #1	gravel bar	Muskeg River; almost on the North boundary line, 50m West of Strat 2; downstream end of gravel bar; mainly limestone fragments - angular, subangular, rounded
SB #2	midstream bar	Muskeg River; between two midstream bars; more limestone fragments than CB #2; angular limestone, subrounded to rounded shield and Athabasca material
SB #3	gravel bar	mouth of the Muskeg River; coarse grained sand from gravel bar in zone of fast-moving water
SB #4	river mouth silt	mouth of the Muskeg; fine fraction - sand and silt with minor clay

Water Samples										
Sample ID	Position	Type	Latitude	Longitude	Easting	Northing	pH	pH temp	Cond (mS/cm)	Cond temp
FBOP 94062301	SPRING	spring	58 03 64.8	110 55 06	504864	6435496	5.59	14.5	0.095	10.8
FBOP 94062302	SPRING	spring	58 03 64.8	110 55 06	504864	6435496	5.67	16.7	0.0514	13.6
FBOP 94062303	SPRING	seap	58 03 44.71	110 57 36.99	502581	6425094			0.0279	24.9
FBOP 94062501	BORE	stream	58 04 29.94	110 56 29.18	503444	6437096	9.23	19.3	0.0397	18.6
FBOP 94062502	SPRING	seap	see UTM (on 74 E/14 sheet)		502208	6437871	7.55	17.6	0.0249	16.7
FBOP 94062601	SPRING	spring	57 53.4263	110 57.9017	502087	6416458	9.2	9.2	1.107	9.5
FBOP 94062602	SPRING	spring	57 53.9702	110 56.5635	503394	6417508	8.5	7.8	0.1318	8
FMOP 94062701	SAMPLE	lake	57 52.1	111 01.3	498500	6413850	8.87	15.5	0.635	15.7
FMOP 94062702	SAMPLE	lake	57 52.8	111 02.4	497550	6415400	7.85	17.5	0.808	17.8
FMOP 94062703	BORE	stream	57 54.1442	111 03.8837	496166	6417861	6.31	18	0.76	18.1
FMOP 94062704	BORE	stream	57 56.0508	111 03.0804	496958	6421386	6.43	18	0.488	18.5
FMOP 94062705	SAMPLE	lake	57 54.1754	111 02.1396	497908	6417884			0.778	17.6
FMOP 94062706	SAMPLE	lake	57 55.1371	111 04.4377	495632	6419678			0.666	17.5
FMOP 94062801	PIEZ	auger	57 53.0729	111 03.1691	496859	6415868	8.75	16	0.116	17.2
FMOP 94062802	PIEZ	auger	57 53.7564	111 03.6406	496401	6417130	6.67	12	0.001035	11.8
FMOP 94062805	PIEZ	auger	57 59.0925	111 03.5196	496550	6427035	6.57	7	0.112	6.3
FMOP 94062806	PIEZ	auger	57 59.5723	111 03.8519	496223	6427910	9.08	6.5	0.055	7
FMOP 94062807	PIEZ	auger	57 59.4992	111 03.4093	496746	6427765	5.38		0.0247	
FMOP 94062808			Ultrapure blank							
FMOP 94062901	PIEZ	auger	58 04.5196	110 54.4506	505478	6437131	9.4		0.125	
FMOP 94062902	PIEZ	auger	58 04.5196	110 54.4506	505478	6437131	9.4		0.125	
FMOP 94062903	SAMPLE	lake	58 04.9325	110 53.1814	506718	6437730				
FMOP 94062904	SAMPLE	lake	duplicate of above.		506718	6437730				
FMOP 94070101	PIEZ	auger	58.13896	110.76708	513704	6444005	6.47	12	0.1901	11.8
FMOP 94070102	PIEZ	auger	58.11929	110.79355	512145	6441809	5.64	17	0.0877	16.8
FMOP 94070103	PIEZ	auger	58.09331	110.8092	511255	6438905	6.16	17	0.0877	16.8
FMOP 94070104										

Water Samples		FA H2O analysis (ppb)							
Sample ID	Description	Na	Mg	Ca	Mn	Fe	Ni	Cu	Zn
FBOP 94062301	Sulphurous spring in sand at base of incised Richardson River. Spring associated with red staining								
FBOP 94062302	Clean spring immediately adjacet to the above but with no red staining or any sulphurous odor.								
FBOP 94062303	S. bank of rochardson River at end of shallow sloping valley. Sample taken from pit about 50 cm depth.								
FBOP 94062501	Stream sample from stream draining lakes with lie upgradient from 94062301/02. (pH calibration immediately prior to measurement w/ slope 106%)								
FBOP 94062502	Seap sample at base of Richardson river at base of slope in the flood plain in a grove of Poplar and Tamarack.								
FBOP 94062601	good volume spring immediately down gradient from Firetower sink holes. Heavy coating of oily sheen thought to be Fe-reducing bacteria with a metal colouring - Cu looking.								
FBOP 94062602	Spring inlet to un-named lake. Spring samples about 2m from discharge point at the base of a hill surrounding the lake.								
FMOP 94062701	sample of seep nearFiretower springs								
FMOP 94062702	Surface sample of Lake near Richardson Strip								
FMOP 94062703	Grayling creek								
FMOP 94062704	surface sample from lake near Winter Road								
FMOP 94062705	surface sample from lake to the North of Richardson Airstrip								
FMOP 94062706	surface sample from lake near Winter Road S.E of2704								
FMOP 94062801	Drill hole sample at intersection of Firetower and Winter roads.								
FMOP 94062802	Low point in Winter road. Black waters with slight 'decay' odour								
FMOP 94062805	Clean water at about 3' with slightly sulphourous odour.								
FMOP 94062806	Auger Hole along raod NW of 6 lakes camp V turbid red/brown waters								
FMOP 94062807	Auger Hole along raod NW of 6 lakes camp near Winter Road Dark Grey waters								
FMOP 94062808									
FMOP 94062901	Wide shallow drainage w/ water at 1.5 m. V turbid, brown cloudy water								
FMOP 94062902	Wide shallow drainage w/ water at 1.5 m. V turbid, brown cloudy water								
FMOP 94062903	surface sample from lake on S. Dune road								
FMOP 94062904									
FMOP 94070101	Drill hole location immediately adjacent to a fairly large lake. Waters are turbid and red.	4470	354	2110	22	308	0.937	0.913	8.61
FMOP 94070102	wtrs are red, turbid with a 'barnyard' odour - possibly sulphurous	417	120	682	69.3	22.9	1.12	0.189	13.8
FMOP 94070103	Topographic hollow in near to lakes. Coarse sand brought up with lots of charcoal particles.	513	230	1740	192	17.7	0.465	<0.05	5.32
FMOP 94070104								<0.05	

Water Samples							Activated Carbon (ppm in 250 mg AC)								
Sample ID	Ag	Cd	Ce	Pt	Au	Pb	Ruth	Rhod	Pd	Ag	Rhen	Os	Ir	Pt	Au
FBOP 94062301										0.21					<0.005
FBOP 94062302										0.09					0.04
FBOP 94062303										0.06					<0.005
FBOP 94062501										0.21					0.005
FBOP 94062502										0.36					0.005
FBOP 94062601										0.15					<0.005
FBOP 94062602										0.03					<0.005
FMOP 94062701															
FMOP 94062702															
FMOP 94062703															
FMOP 94062704															
FMOP 94062705							<0.002	<0.002	<0.002	0.002	0.002	<0.002	<0.002	<0.002	<0.002
FMOP 94062706															
FMOP 94062801							<0.002	<0.002	<0.002	0.004	<0.002	0.002	<0.002	<0.002	<0.002
FMOP 94062802															
FMOP 94062805							<0.002	<0.002	0.002	0.029	<0.002	<0.002	<0.002	<0.002	0.007
FMOP 94062806							<0.002	<0.002	0.009	0.005	<0.002	0.002	<0.002	<0.002	<0.002
FMOP 94062807							<0.002	<0.002	0.003	0.030	<0.002	0.003	<0.002	<0.002	<0.002
FMOP 94062808							<0.002	<0.002	0.057	0.077	<0.002	<0.002	<0.002	<0.002	0.010
FMOP 94062901							<0.002	<0.002	0.006	0.008	<0.002	<0.002	<0.002	<0.002	<0.002
FMOP 94062902							0.002	<0.002	<0.002	0.003	<0.002	<0.002	<0.002	<0.002	0.004
FMOP 94062903							<0.003	<0.003	0.005	0.017	<0.003	<0.003	<0.003	<0.003	0.038
FMOP 94062904							<0.003	<0.003	<0.003	0.067	<0.003	<0.003	<0.003	<0.003	<0.003
FMOP 94070101	<0.005		0.224	<0.01		0.162			0.011	0.014	<0.002	0.007	<0.002	0.037	<0.002
FMOP 94070102	<0.005		0.129	<0.01		0.048			0.007	0.019	<0.002	<0.002	<0.002	0.023	0.003
FMOP 94070103	0.025		0.094	<0.01		0.347			<0.002	0.008	<0.002	<0.002	<0.002	<0.002	<0.002
FMOP 94070104	<0.005			<0.01					0.008	0.011	<0.002	<0.002	<0.002	<0.002	<0.002

Water Samples					
Sample ID	Pd ppb (AC)	Ag ppb (AC)	Pt ppb (AC)	Au ppb (AC)	Loring Au#
FBOP 94062301	NA	16.6215	NA	below detection	
FBOP 94062302	NA	3.9231	NA	1.7436	
FBOP 94062303	NA	1.8348	NA	below detection	
FBOP 94062501	NA	6.3273	NA	0.1507	
FBOP 94062502	NA	12.0240	NA	0.1670	
FBOP 94062601	NA	4.3410	NA	below detection	
FBOP 94062602	NA	1.0122	NA	below detection	
FMOP 94062701	0.0000	0.0000	0.0000	0.0000	
FMOP 94062702	0.0000	0.0000	0.0000	0.0000	
FMOP 94062703	0.0000	0.0000	0.0000	0.0000	
FMOP 94062704	0.0000	0.0000	0.0000	0.0000	
FMOP 94062705	below detection	0.1185	below detection	below detection	
FMOP 94062706	0.0000	0.0000	0.0000	0.0000	<0.01
FMOP 94062801	below detection	0.1775	below detection	below detection	
FMOP 94062802	0.0000	0.0000	0.0000	0.0000	<0.01
FMOP 94062805	0.0946	1.3723	below detection	0.3312	<0.01
FMOP 94062806	0.5414	0.3008	below detection	below detection	
FMOP 94062807	0.1431	1.4313	below detection	below detection	<0.01
FMOP 94062808	2.4943	3.3695	below detection	0.4376	
FMOP 94062901	0.2722	0.3629	below detection	below detection	
FMOP 94062902	below detection	0.1843	below detection	0.2457	
FMOP 94062903	0.1481	0.5035	below detection	1.1256	
FMOP 94062904	below detection	1.8258	below detection	below detection	<0.01
FMOP 94070101	0.5128	0.6527	1.7249	below detection	<0.01
FMOP 94070102	0.2496	0.6775	0.8202	0.1070	<0.01
FMOP 94070103	below detection	0.3540	below detection	below detection	
FMOP 94070104	0.3354	0.4612	below detection	below detection	

Water Samples										
Sample ID	Position	Type	Latitude	Longitude	Easting	Northing	pH	pH temp	Cond (mS/cm)	Cond temp
FMOP 94070201	SPRING	spring	57.89558	110.96437	502129	6416875	6.97	17	0.281	16.9
FMOP 94070202	SPRING	spring			502087	6416458	9.87	8.1	1.298	8
FMOP 94070203	SAMPLE	lake	57.87743	110.96104	502315	6414856	8.6	7.2	0.566	7.8
FMOP 94070204	SAMPLE	lake	Duplicate of six lakes surface wat		498675	6425950				
FMOP 94070205	SAMPLE	lake	Duplicate of six lakes surface wat		498675	6425950				
FMOP 94070206			A.C. blank w/ acid and chemistry blank							
FMOP 94070207			A.C. blank w/ out acid and w/ out chemistry.							
FBOP 94070401			AC Blank re-filter on N4MI-111 (no H2O)							
FBOP 94070402	BORE	stream	58 04.092	110 57.634	502325.6	6437630.5				
FBOP 94070403	SPRING	spring	See A. Halleran Traverses sheet		502325.6	6437630.5				
FBOP 94070404	SPRING	spring	See A. Halleran Traverses sheet		502325.6	6437630.5				
FBOP 94070405	SPRING	spring	58 06.829	111 00.250	499754.5	6441171				
FBOP 94070406	SPRING	spring	58 09.664	111 02.942	497114.6	6446434.1				
FBOP 94070407	SPRING	spring	58 11.596	111 05.746	494369.6	6450021.3				
FBOP 94070408	SPRING	spring	See A. Halleran Traverses sheet		494250	6450750				
FBOP 94070409	SPRING	spring	See A. Halleran Traverses sheet		492400	6455150				
FBOP 940704010	SPRING	spring	See A. Halleran Traverses sheet		492750	6455650				
FBOP 940704011			duplicate AC on N4MI-120 (no H2O)							
FMOP 94070501	SAMPLE	lake	57.84467	111.1096	493504	6411218				
FMOP 94070502	SAMPLE	lake	57.84336	111.11046	433459	6411078				
FMOP 94070503	SAMPLE	lake	Duplicate of FBOP 94070502							
FMOP 94070504	BORE	stream	57.86162	111.05536	496709	6413071				
N4MI - w1	SAMPLE	lake			487075	6425150				
N4MI - w2	SAMPLE	lake			486190	6420550				
N4MI - w3	SAMPLE	lake			483650	6430800				
N4MI - w4	SAMPLE	lake			484000	6429500				
N4MI - w5	SAMPLE	lake			484000	6429500				
N4MI - w6	BORE	stream			484500	6429080				
N4MI - w7	BORE	stream			509150	6450800				
N4MI - w8	BORE	stream			508200	6455700				
N4MI - w9	SAMPLE	lake			492550	6411900				
N4MI - w10	SAMPLE	lake			490897.4	6410510.9				
N4MI - w11	SAMPLE	lake			492772.7	6409949.5				
N4MI - w12	SAMPLE	lake			488628.9	6414598.3				
N4MI - w13	SAMPLE	lake			490622.7	6419974.7				

Water Samples		FA H2O analysis (ppb)							
Sample ID	Description	Na	Mg	Ca	Mn	Fe	Ni	Cu	Zn
FMOP 94070201	seep sample near small lake to the s of the Firetower. Seep at base of a knol with some sand slumping.	788	992	5030	21.4	108	0.644	0.162	6.1
FMOP 94070202	Firetower spring	357	13600	29800	53.1	26.8	1.44	<0.05	1.97
FMOP 94070203	surfacelake sample immediately to the south of the firetower	429	4210	11700	0.786	<10	0.541	<0.05	0.934
FMOP 94070204		838	5910	15300	1.38	<10	0.734	0.269	4.03
FMOP 94070205		733	5220	13400	1.21	<10	0.641	<0.05	3.69
FMOP 94070206								<0.05	
FMOP 94070207								<0.05	
FBOP 94070401	check blank on N4MI-111								
FBOP 94070402	AH-W1 small surface crrek from lake running through grass over embankment	1390	1100	5140	4.21	174	0.52	<0.05	0.842
FBOP 94070403	AH-W2 seep from base of sand embankment on top of blue clay (perched). WQater clear but sand is rust coloured	689	332	1540	10.6	160	0.289	<0.05	5.71
FBOP 94070404	AH-W3 Seep from base of the sand embankment. Sand is rusty, water clear w/ blue/grn algae and cemented with fe-oxides	551	230	1150	0.692	<10	0.167	<0.05	2.96
FBOP 94070405	AH-W4 Seeps (numerous)at base of 25m embankment. Water is clear, some rust in sand and w/ some algae	533	219	1340	5.25	23.3	0.357	<0.05	4.99
FBOP 94070406	AH-W5 another bak, muddy wtr irredescent Fe scum on wtr and substrate with abundant organic material	788	864	6900	695	173	0.763	<0.05	13.4
FBOP 94070407	AH-W6 seeps at base of 10m (?rest cut off)	820	385	2180	3.03	<10	0.544	<0.05	4.1
FBOP 94070408	AH-W7	1000	1170	6490	16.1	28.9	0.511	<0.05	6.19
FBOP 94070409	AH-W8	1110	3220	14100	66.8	106	0.578	<0.05	50.2
FBOP 940704010	AH-W9 Lots of seeps at base of sand & Bevearhill River Bitumen Fmt? clear water.	1190	7060	28300	19.7	<10	1.42	<0.05	5.05
FBOP 940704011	check blank on N4MI-120								
FMOP 94070501	lake shore sample south of Richardson sink hole area	323	6260	12000	0.38	66.7	0.07	0.382	1.8
FMOP 94070502	lake shore sample from lake east of 05-01	403	4360	8360	0.41	144	<0.05	<0.05	<0.1
FMOP 94070503		394	3260	8300	0.765	167	<0.05	<0.05	<0.1
FMOP 94070504	stream sample draining region south of Richardson Fire tower	460	3520	9220	0.928	295	<0.05	<0.05	<0.1
N4MI - w1		1430	6250	21600	20.8	<100	3.58	<0.05	4.34
N4MI - w2		783	4980	16900	6.98	<100	<0.5	<0.05	<1.0
N4MI - w3		1180	4050	15500	75.7	<100	0.641	<0.05	2.38
N4MI - w4		1130	3960	15200	199	<100	0.607	<0.05	<1.0
N4MI - w5		1180	4060	15000	657	<100	0.831	<0.05	9.38
N4MI - w6		1360	4500	16600	37.9	<100	0.598	<0.05	2.31
N4MI - w7		1830	3570	10800	17.4	<100	1.85	<0.05	6.23
N4MI - w8		4430	5100	14400	25.1	355	2.94	0.855	15
N4MI - w9		1640	9710	23000	6.48	<100	3.25	<0.05	7.8
N4MI - w10		839	7230	14200	8.6	<100	3	<0.05	8.83
N4MI - w11		2280	4130	9390	9.6	<100	3.65	<0.05	19
N4MI - w12		2640	10600	23900	5.83	<100	2.21	<0.05	13.6
N4MI - w13		1830	9000	25700	3.78	<100	2.7	<0.05	18.4

Water Samples							*Activated Carbon (ppm in 250 mg AC)*								
Sample ID	Ag	Cd	Ce	Pt	Au	Pb	*Ruth*	*Rhod*	*Pd*	*Ag*	*Rhen*	*Os*	*Ir*	*Pt*	*Au*
FMOP 94070201	<0.005		0.254	<0.01		0.094			*0.002*	*0.011*	*<0.001*	*<0.001*	*<0.001*	*0.004*	*<0.001*
FMOP 94070202	0.023		0.045	0.012		0.134			*0.003*	*0.012*	*<0.002*	*<0.002*	*<0.002*	*0.002*	*0.003*
FMOP 94070203	0.016		<0.01	<0.01		<0.01			*0.003*	*0.022*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
FMOP 94070204	<0.005		<0.01	<0.01		0.132			*0.005*	*0.052*	*<0.003*	*<0.003*	*<0.003*	*<0.003*	*<0.003*
FMOP 94070205	<0.005		<0.01	<0.01		0.017			*0.003*	*0.022*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*0.002*
FMOP 94070206	<0.005			<0.01					*0.003*	*0.037*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
FMOP 94070207	<0.005			<0.01											
FBOP 94070401									*<0.002*	*0.055*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
FBOP 94070402	<0.005		0.025	<0.01		<0.01			*<0.002*	*0.046*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
FBOP 94070403	<0.005		0.495	<0.01		0.099			*0.006*	*0.048*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
FBOP 94070404	<0.005		0.014	<0.01		0.015			*0.004*	*0.042*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
FBOP 94070405	<0.005		0.094	<0.01		0.029			*<0.002*	*0.010*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
FBOP 94070406	0.013		0.018	<0.01		<0.01			*0.003*	*0.013*	*0.010*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
FBOP 94070407	0.008		0.079	<0.01		0.035			*0.007*	*0.012*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
FBOP 94070408	0.012		0.016	<0.01		0.015			*0.006*	*0.015*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
FBOP 94070409	<0.005		0.033	<0.01		0.032			*<0.002*	*0.024*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*0.005*
FBOP 940704010	<0.005		0.012	<0.01		0.011			*0.002*	*0.133*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
FBOP 940704011									*0.004*	*0.017*	*0.002*	*0.002*	*0.002*	*0.002*	*0.002*
FMOP 94070501	<0.005		<0.10	<0.01	<0.01	<0.01	*<0.003*	*<0.003*	*<0.003*	*0.019*	*<0.003*	*<0.003*	*<0.003*	*<0.003*	*<0.003*
FMOP 94070502	0.006		<0.10	<0.01	<0.01	<0.01	*<0.003*	*<0.003*	*<0.003*	*0.009*	*<0.003*	*0.013*	*<0.003*	*<0.003*	*<0.003*
FMOP 94070503	<0.005		<0.10	<0.01	<0.01	<0.01	*<0.003*	*<0.003*	*0.004*	*0.006*	*<0.003*	*<0.003*	*<0.003*	*<0.003*	*<0.003*
FMOP 94070504	<0.005		<0.10	<0.01	<0.01	<0.01	*<0.002*	*<0.002*	*0.002*	*0.210*	*0.003*	*<0.002*	*<0.002*	*<0.002*	*0.003*
N4MI - w1	0.059		<0.10	<0.10	0.114	<0.10	*<0.001*	*<0.001*	*0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4MI - w2	<0.05		<0.10	<0.10	<0.10	0.661	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4MI - w3	<0.05		<0.10	<0.10	<0.10	0.414	*<0.001*	*<0.001*	*0.002*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4MI - w4	0.061		<0.10	<0.10	<0.10	<0.10	*0.003*	*<0.002*	*0.008*	*0.006*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
N4MI - w5	0.059		<0.10	<0.10	<0.10	0.649	*<0.001*	*<0.001*	*0.016*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4MI - w6	<0.05		<0.10	<0.10	<0.10	0.432	*<0.001*	*<0.001*	*<0.001*	*0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4MI - w7	<0.05		<0.10	<0.10	<0.10	<0.10	*0.001*	*<0.001*	*<0.001*	*0.024*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*0.003*
N4MI - w8	0.079		<0.10	<0.10	<0.10	<0.10	*<0.001*	*<0.001*	*0.001*	*0.009*	*<0.001*	*<0.001*	*0.003*	*<0.001*	*<0.001*
N4MI - w9	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.001*	*<0.001*	*0.002*	*0.032*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4MI - w10	<0.05		<0.10	<0.10	0.3	<0.10	*<0.001*	*<0.001*	*0.003*	*0.041*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4MI - w11	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.001*	*<0.001*	*<0.001*	*0.07*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4MI - w12	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.004*	*<0.004*	*0.004*	*0.068*	*<0.004*	*<0.004*	*<0.004*	*<0.004*	*<0.004*
N4MI - w13	0.077		0.105	<0.10	<0.10	0.138	*<0.002*	*<0.002*	*<0.002*	*0.022*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*<0.002*

Water Samples					
Sample ID	Pd ppb (AC)	Ag ppb (AC)	Pt ppb (AC)	Au ppb (AC)	Loring Au#
FMOP 94070201	0.1245	0.6848	0.2490	below detection	<0.01
FMOP 94070202	0.1874	0.7498	0.1250	0.1874	0.06
FMOP 94070203	0.1447	1.0611	below detection	below detection	<0.01
FMOP 94070204	0.1684	1.7508	below detection	below detection	<0.01
FMOP 94070205	0.1595	1.1700	below detection	0.1064	
FMOP 94070206	0.1486	1.8322	below detection	below detection	
FMOP 94070207	0.0000	0.0000	0.0000	0.0000	
FBOP 94070401	below detection	2.3738	below detection	below detection	
FBOP 94070402	below detection	1.2236	below detection	below detection	
FBOP 94070403	0.1751	1.4006	below detection	below detection	
FBOP 94070404	0.1109	1.1647	below detection	below detection	
FBOP 94070405	below detection	0.3143	below detection	below detection	
FBOP 94070406	0.1218	0.5279	below detection	below detection	
FBOP 94070407	0.1966	0.3370	below detection	below detection	
FBOP 94070408	0.2014	0.5034	below detection	below detection	
FBOP 94070409	below detection	0.7308	below detection	0.1523	
FBOP 940704010	0.0712	4.7361	below detection	below detection	
FBOP 940704011	0.1656	0.7036	0.0828	0.0828	
FMOP 94070501	below detection	0.6454	below detection	below detection	<0.01
FMOP 94070502	below detection	0.3450	below detection	below detection	<0.01
FMOP 94070503	0.1391	0.2086	below detection	below detection	<0.01
FMOP 94070504	0.1034	10.8570	below detection	0.1551	<0.01
N4MI - w1	0.0265	below detection	below detection	below detection	0.06
N4MI - w2	below detection	below detection	below detection	below detection	<0.01
N4MI - w3	0.0431	below detection	below detection	below detection	0.03
N4MI - w4	0.1333	0.1000	below detection	below detection	<0.01
N4MI - w5	0.2576	below detection	below detection	below detection	0.03
N4MI - w6	below detection	0.0174	below detection	below detection	<0.01
N4MI - w7	below detection	0.6818	below detection	0.0852	<0.01
N4MI - w8	0.0500	0.4503	below detection	below detection	<0.01
N4MI - w9	0.0502	0.8026	below detection	below detection	<0.01
N4MI - w10	0.1211	1.6548	below detection	below detection	<0.01
N4MI - w11	below detection	1.5267	below detection	below detection	<0.01
N4MI - w12	0.0402	0.6827	below detection	below detection	<0.01
N4MI - w13	below detection	0.3249	below detection	below detection	<0.01

Water Samples										
Sample ID	Position	Type	Latitude	Longitude	Easting	Northing	pH	pH temp	Cond (mS/cm)	Cond temp
N4MI - w14	SAMPLE	lake			492607.1	6426371.1				
N4MI - w15	SAMPLE	lake			490637.7	6426375.9				
N4MI - w16	SAMPLE	lake			484944.1	6433167.8				
N4MI - w17	SAMPLE	lake			485249.6	6435948.6				
N4MI - w18			blank							
N4MI - w19										
N4MI - 75	SAMPLE	lake			499605	6424100				
N4MI - 85	SAMPLE	lake			502900	6424400				
N4MI - 90	SAMPLE	lake			499600	6426200				
N4MI - 95	SAMPLE	lake			500000	6424250				
N4MI - 100	SAMPLE	lake			498045	6424600				
N4MI - 102	SAMPLE	lake			498070	6423100				
N4MI-104	SAMPLE	lake			499600	6425650	9.2	14	0.641	16
N4MI-106	SAMPLE	lake			498850	6427250	8.7	15.5	0.516	16.5
N4MI-107	SAMPLE	lake			497725	6426850	8.7	16	0.43	16
N4MI-109	BORE	stream	58 20.16	111 05.54	494595.2	6465912.3			0.256	12
N4MI-110	SPRING	spring			494595.2	6465912.3			0.229	12.6
N4MI-111	SPRING	spring			494595.2	6465912.3			0.22	11.9
N4MI-112	BORE	stream	58 19.78	111 0353	496556.2	6465205.1			0.205	14
N4MI-113	SPRING	spring	58 19.78	111 0353	496556.2	6465205.1			0.1011	14
N4MI-117	SPRING	spring	58 19.68	111 03.49	496591.2	6465020			0.198	13.9
N4MI-118	SPRING	spring	58 19.60	111 03.30	496778.5	6464870.6			0.198	13.7
N4MI-120	BORE	stream	58 19.46	111 03.33	496749.0	6464610.2			0.1732	13.9
N4MI-121	BORE	stream	58 19.3836	111 03.15	496924.6	6464469.3			0.1914	12.9
N4MI-122	BORE	stream	58 19.4226	111 3.23	496848.6	6464540.9			0.1602	13.4
N4RV-85W	SPRING	spring	58 06 38.6	111 25 49.8	474955.3	6440905.8				
N4RV-82W	SPRING	spring	58 11 21.2	111 23 26.0	477409.4	6449630.6				
N4RV-78W	SPRING	spring	58 09 29.3	111 02 26.0	479955.5	6446157				
N4RV-72W	SPRING	spring	58 08 22.0	111 15 41.7	484596.6	6444054.6				
N4RV-70W	SPRING	spring	58 09 15.3	111 15 20.1	484956.2	6445700.6				
N4TJ - 01	SAMPLE	lake			478961.9	6418349				
N4TJ - 02	SAMPLE	lake			478961.9	6418349				
N4TJ - 03	SAMPLE	lake			478961.9	6418349				
N4TJ - 04	SAMPLE	lake			478961.9	6418349				
N4TJ - 11	SAMPLE	lake			493765.4	6410504.9				
N4TJ - 12	SAMPLE	lake			493171.4	6410412.9				
N4TJ - 13	SAMPLE	lake			494555.6	6410876.4				
N4TJ - 14	SAMPLE	lake			493271.6	6409949.5				
N4TJ - 15	SAMPLE	lake			494556.0	6411191.7				
N4TJ - 16	SAMPLE	lake			494557.6	6412359.9				
N4TJ - 17	SAMPLE	lake			496556.5	6431599.4				

Water Samples		FA H2O analysis (ppb)							
Sample ID	Description	Na	Mg	Ca	Mn	Fe	Ni	Cu	Zn
N4MI - w14		2470	4310	11700	4.31	<100	0.609	<0.05	8.88
N4MI - w15		2200	3670	11000	8.34	217	<0.50	<0.05	10.9
N4MI - w16		3820	9670	52700	5.88	<100	4.51	0.868	16.6
N4MI - w17		2830	5400	24000	359	9310	2.52	<0.05	20.3
N4MI - w18		24200	8230	27200	56.3	<100	2.85	25.5	9.29
N4MI - w19		3040	10900	49300	89.1	251	3.32	<0.05	14.6
N4MI - 75									
N4MI - 85									
N4MI - 90									
N4MI - 95									
N4MI - 100									
N4MI - 102									
N4MI-104									
N4MI-106									
N4MI-107									
N4MI-109	stream sample from West Richardson creek	787	846	4100	44.7	397	0.448	<0.05	3.69
N4MI-110	spring sample immediately adjacent to 109	900	924	4440	50.9	233	0.358	<0.05	3.91
N4MI-111	spring sample near 110	891	987	4580	50.8	346	0.524	<0.05	9.77
N4MI-112	stream sample from the East red Richardson creek	881	982	3520	30.1	308	0.433	<0.05	2.29
N4MI-113	seap sample from a few m's away from 112	358	385	1200	3.5	<10	0.363	0.14	3.03
N4MI-117	spring from the west bank	1010	865	3690	31.6	299	0.322	<0.05	<0.10
N4MI-118	spring sample	937	655	3780	36.8	564	0.365	<0.05	8.34
N4MI-120	small creek flowing into main creek							<0.05	
N4MI-121	creek flowing into main crrek	1010	981	3950	49.4	443	0.309	2.87	2.83
N4MI-122	rusty seep	1070	754	3590	41.2	175	0.235	<0.05	6.49
N4RV-85W		1340	4340	18800	284	308	0.526	<0.05	<0.1
N4RV-82W		784	3100	9470	247	294	<0.05	<0.05	<0.1
N4RV-78W		998	3470	15000	224	743	0.154	1.59	<0.1
N4RV-72W		700	1860	6520	293	342	<0.05	<0.05	1.8
N4RV-70W		550	1830	5320	127	<10	<0.05	<0.05	1.15
N4TJ - 01		1860	7800	24100	21.2	211	4.65	<0.50	4.13
N4TJ - 02		1620	7080	20800	20.5	140	2.12	<0.50	2.62
N4TJ - 03		2470	7720	24300	19.2	201	3.74	<0.50	4.74
N4TJ - 04		1640	8240	27800	503	3960	2.33	<0.50	2.08
N4TJ - 11		310	4090	10200	2.75	<100	1.16	<0.50	19.8
N4TJ - 12		747	4980	13500	2.46	<100	1.58	<0.50	4.65
N4TJ - 13		496	5990	15200	3.34	<100	6.73	0.867	13.3
N4TJ - 14		613	4630	14400	38.3	1280	1.7	<0.50	8.62
N4TJ - 15		358	7270	12100	4.58	<100	1.26	<0.50	4.77
N4TJ - 16		367	7670	17800	4.08	<100	0.581	<0.50	9.48
N4TJ - 17		1170	7370	26700	51.6	982	2.23	1.08	6.41

Water Samples							*Activated Carbon (ppm in 250 mg AC)*								
Sample ID	Ag	Cd	Ce	Pt	Au	Pb	*Ruth*	*Rhod*	*Pd*	*Ag*	*Rhen*	*Os*	*Ir*	*Pt*	*Au*
N4MI - w14	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.001*	*<0.001*	*0.003*	*0.006*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4MI - w15	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.002*	*<0.002*	*0.004*	*0.018*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
N4MI - w16	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.004*	*<0.004*	*<0.004*	*0.034*	*<0.004*	*<0.004*	*<0.004*	*<0.004*	*<0.004*
N4MI - w17	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.002*	*<0.002*	*0.006*	*0.01*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
N4MI - w18	0.075		<0.10	<0.10	<0.10	1.41	*<0.001*	*<0.001*	*<0.001*	*0.01*	*<0.001*	*<0.001*	*<0.001*	*0.005*	*<0.002*
N4MI - w19	0.09		<0.10	<0.10	<0.10	0.115									
N4MI - 75										*0.07*					*<0.005*
N4MI - 85										*0.02*					*<0.005*
N4MI - 90							*<0.001*	*<0.001*	*<0.001*	*0.023*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*0.002*
N4MI - 95							*<0.001*	*<0.001*	*0.003*	*0.016*	*0.002*	*<0.001*	*<0.001*	*<0.001*	*0.003*
N4MI - 100							*<0.002*	*<0.002*	*0.004*	*0.009*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*0.004*
N4MI - 102							*<0.002*	*<0.002*	*0.012*	*0.027*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*0.003*
N4MI-104															
N4MI-106							*<0.002*	*<0.002*	*<0.003*	*0.009*	*0.002*	*<0.002*	*<0.002*	*<0.002*	*0.009*
N4MI-107							*<0.002*	*<0.002*	*0.006*	*0.013*	*0.002*	*<0.002*	*0.003*	*<0.002*	*0.007*
N4MI-109	0.006		0.192	<0.01		0.054	*<0.002*	*<0.002*	*0.006*	*0.006*	*<0.002*	*0.002*	*<0.002*	*<0.002*	*<0.002*
N4MI-110	<0.005		0.15	<0.01		<0.01	*<0.002*	*<0.002*	*0.008*	*0.008*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*0.007*
N4MI-111	<0.005		0.22	0.012		0.061	*<0.002*	*<0.002*	*0.006*	*0.01*	*<0.002*	*<0.002*	*0.002*	*<0.002*	*<0.002*
N4MI-112	0.032		0.186	<0.01		0.014	*<0.002*	*<0.002*	*0.007*	*0.01*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
N4MI-113	<0.005		0.611	<0.01		0.079	*<0.002*	*<0.002*	*0.005*	*0.005*	*<0.002*	*<0.002*	*0.002*	*<0.002*	*<0.002*
N4MI-117	0.005		0.181	<0.01		0.021	*<0.002*	*<0.002*	*0.006*	*0.005*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*0.004*
N4MI-118	<0.005		0.661	<0.01		0.052	*<0.005*	*<0.005*	*0.03*	*0.012*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	*<0.005*
N4MI-120			<0.5	<0.01											
N4MI-121	0.013		0.237	<0.01		0.157	*<0.003*	*<0.003*	*0.01*	*0.005*	*<0.003*	*0.007*	*<0.003*	*<0.003*	*<0.003*
N4MI-122	0.014		0.716	<0.01		0.043	*<0.004*	*<0.004*	*0.041*	*0.011*	*<0.004*	*0.005*	*<0.004*	*<0.004*	*<0.004*
N4RV-85W	0.009		0.015	<0.01	<0.01	<0.01			*<0.003*	*0.017*	*<0.003*	*<0.003*	*<0.003*	*<0.003*	*<0.003*
N4RV-82W	0.009		<0.10	<0.01	<0.01	<0.01			*0.007*	*0.03*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	*<0.005*
N4RV-78W	<0.005		<0.10	<0.01	<0.01	<0.01			*<0.004*	*0.012*	*<0.004*	*<0.004*	*<0.004*	*<0.004*	*<0.004*
N4RV-72W	<0.005		0.01	<0.01	<0.01	<0.01			*0.007*	*0.011*	*<0.003*	*<0.003*	*<0.003*	*<0.003*	*<0.003*
N4RV-70W	<0.005		0.019	<0.01	<0.01	0.012			*0.005*	*0.031*	*<0.003*	*<0.003*	*<0.003*	*<0.003*	*<0.003*
N4TJ - 01	<0.05		<0.10	<0.10	<0.10	0.598	*<0.001*	*<0.001*	*0.006*	*0.068*	*0.003*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4TJ - 02	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.001*	*<0.001*	*<0.001*	*0.002*	*<0.001*	*<0.001*	*<0.001*	*0.008*	*<0.001*
N4TJ - 03	<0.05		<0.10	<0.10	0.107	<0.10	*0.002*	*<0.001*	*0.002*	*0.052*	*0.003*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4TJ - 04	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4TJ - 11	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.001*	*<0.001*	*0.004*	*0.004*	*0.002*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4TJ - 12	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.001*	*<0.001*	*0.003*	*0.015*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4TJ - 13	<0.05		<0.10	<0.10	<0.10	0.127	*<0.001*	*<0.001*	*0.002*	*0.028*	*0.002*	*<0.001*	*<0.001*	*0.135*	*0.001*
N4TJ - 14	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.001*	*<0.001*	*0.004*	*0.009*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4TJ - 15	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.001*	*<0.001*	*<0.001*	*0.008*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4TJ - 16	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.002*	*<0.002*	*<0.002*	*0.004*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*0.005*
N4TJ - 17	0.088		<0.10	<0.10	<0.10	0.146	*<0.001*	*<0.001*	*0.002*	*0.016*	*0.001*	*<0.001*	*0.002*	*0.101*	*<0.001*

Water Samples					
Sample ID	Pd ppb (AC)	Ag ppb (AC)	Pt ppb (AC)	Au ppb (AC)	Loring Au#
N4MI - w14	0.0510	0.1021	below detection	below detection	<0.01
N4MI - w15	0.0558	0.2513	below detection	below detection	<0.01
N4MI - w16	below detection	0.2948	below detection	below detection	<0.01
N4MI - w17	0.0693	0.1155	below detection	below detection	<0.01
N4MI - w18	below detection	0.2429	0.1215	below detection	
N4MI - w19		0.0000	0.0000	0.0000	
N4MI - 75	NA	2.3730	0.0000	below detection	
N4MI - 85	NA	0.7066	0.0000	below detection	
N4MI - 90	below detection	1.0822	below detection	0.0941	
N4MI - 95	0.1508	0.8040	below detection	0.1508	
N4MI - 100	0.2378	0.5351	below detection	0.2378	
N4MI - 102	0.3647	0.8205	below detection	0.0912	
N4MI-104	0.0000	0.0000	0.0000	0.0000	
N4MI-106	below detection	0.5390	below detection	0.5390	
N4MI-107	0.1792	0.3882	below detection	0.2090	
N4MI-109	0.1420	0.1420	below detection	below detection	0.03
N4MI-110	0.1606	0.1606	below detection	0.1405	<0.01
N4MI-111	0.1723	0.2872	below detection	below detection	<0.01
N4MI-112	0.1392	0.1988	below detection	below detection	<0.01
N4MI-113	0.1458	0.1458	below detection	below detection	<0.01
N4MI-117	0.1574	0.1312	below detection	0.1049	<0.01
N4MI-118	0.3297	0.1319	below detection	below detection	<0.01
N4MI-120	0.0000	0.0000	0.0000	0.0000	<0.01
N4MI-121	0.1814	0.0907	below detection	below detection	<0.01
N4MI-122	0.5699	0.1529	below detection	below detection	<0.01
N4RV-85W	below detection	0.4877	below detection	below detection	<0.01
N4RV-82W	0.0984	0.4218	below detection	below detection	<0.01
N4RV-78W	below detection	0.2010	below detection	below detection	<0.01
N4RV-72W	0.1579	0.2481	below detection	below detection	<0.01
N4RV-70W	0.0989	0.6132	below detection	below detection	<0.01
N4TJ - 01	0.1077	1.2206	below detection	below detection	0.06
N4TJ - 02	below detection	0.0579	0.2317	below detection	0.03
N4TJ - 03	0.0329	0.8564	below detection	below detection	0.03
N4TJ - 04	below detection	below detection	below detection	below detection	<0.01
N4TJ - 11	0.1012	0.1012	below detection	below detection	<0.01
N4TJ - 12	0.0789	0.3944	below detection	below detection	<0.01
N4TJ - 13	0.0674	0.9430	4.5468	0.0337	<0.01
N4TJ - 14	0.0889	0.2001	below detection	below detection	<0.01
N4TJ - 15	below detection	0.3756	below detection	below detection	<0.01
N4TJ - 16	below detection	0.0565	below detection	0.0706	<0.01
N4TJ - 17	0.0608	0.4867	3.0724	below detection	<0.01

Water Samples										
Sample ID	Position	Type	Latitude	Longitude	Easting	Northing	pH	pH temp	Cond (mS/cm)	Cond temp
N4TJ - 18	SAMPLE	lake			496043.0	6414027.4				
N4TJ - 19	SAMPLE	lake								
N4TJ - 20	SPRING	spring	Sulphurous spring at Firebag River			6390100				
N4TJ - 26										
FBOP 94080401	SPRING	spring	58 03 64.8	110 55 06	504864	6435496	6	13.4	0.0745	12.7
FBOP 94080402	SPRING	spring	58 03 64.8	110 55 06	504864	6435496	6.69	12.1	0.0645	10.7
FBOP 94080403	SPRING	spring	58 03 64.8	110 55 06	504864	6435496	7.04	13.7	0.076	12.1
FBOP 94080404	SPRING	spring	58 03 64.8	110 55 06	504864	6435496				
FBOP 94080405	SPRING	spring	58 03 64.8	110 55 06	504864	6435496	7.09	15.3	0.0988	13
FBOP 94080406	SPRING	spring	58 03 64.8	110 55 06	504864	6435496	6.94	13	0.1224	11.6
FBOP 94080407	SPRING	spring	58 03 64.8	110 55 06	504864	6435496	6.96	12.3	0.1651	10.2
N4MI - 201										
N4MI - 202										
N4MI - 203										
N4MI - 204										
N4MI - 205										
N4MI - 206										
N4MI - 210										
N4MI - 212										
N4MI - 217										
N4MI - 226										
N4MI - 227										
N4MI - 229										
N4MI - 231										

Water Samples		FA H2O analysis (ppb)							
Sample ID	Description	Na	Mg	Ca	Mn	Fe	Ni	Cu	Zn
N4TJ - 18		858	5600	20700	49.7	866	2.3	<0.50	1.86
N4TJ - 19									
N4TJ - 20		9460	22300	86600	18.9	<100	5.96	<0.50	3.51
N4TJ - 26		276	4210	10100	16	<100	1.28	<0.50	23.8
FBOP 94080401	revisited spring at Richardson River. Western most outlet of 'clean' springs with high gold values. samples taken west to east at about a 4m spacing	1040	1580	7630	4.82	<100	0.937	<0.50	20.4
FBOP 94080402	clean spring	867	1390	6580	1.78	<100	0.968	<0.50	15.4
FBOP 94080403	1st spring with any noticeable Fe staining	933	1710	10100	1.1	<100	2.37	<0.50	14.7
FBOP 94080404		1010	1820	9100	2.8	<100	1.39	<0.50	6.64
FBOP 94080405	true ferriginous spring with light Fe-oxide film	1490	2820	16400	5.81	111	10.3	1.55	8.68
FBOP 94080406	Ferriginous spring with slight (possibly sulphurous) odour	1210	4310	14300	42.9	1440	0.851	<0.50	12
FBOP 94080407	generally increase in volume of flow from 01 to 07	1160	4220	14300	29.8	353	<0.50	<0.50	3.81
N4MI - 201		7670	14500	33200	0.871	191	2.24	1.8	4.09
N4MI - 202		17300	16300	35600	<0.10	<100	1.92	2.25	1.99
N4MI - 203		9610	17400	29700	<0.10	<100	1.88	1.06	5.25
N4MI - 204		26600	17500	49000	2.34	623	3.78	7.15	8.61
N4MI - 205		1450	9900	18400	<0.10	123	0.703	<0.50	5.69
N4MI - 206		14600	2220	14700	0.368	<100	0.574	2.92	4.3
N4MI - 210		15500	1910	19400	4.54	<100	0.874	0.905	7.02
N4MI - 212		14800	3040	26300	1.32	220	1.57	2.6	8.49
N4MI - 217		15000	8160	23200	0.209	<100	0.959	3.54	9.48
N4MI - 226		14200	2130	19200	<0.10	<100	1.05	1.57	2.29
N4MI - 227		13900	2320	22500	0.271	154	1.08	1.11	1.53
N4MI - 229		2690	13900	44100	1.34	275	2.7	16.6	6.6
N4MI - 231		2370	11400	41000	0.89	271	1.98	0.505	8.85

Water Samples							*Activated Carbon (ppm in 250 mg AC)*								
Sample ID	Ag	Cd	Ce	Pt	Au	Pb	*Ruth*	*Rhod*	*Pd*	*Ag*	*Rhen*	*Os*	*Ir*	*Pt*	*Au*
N4TJ - 18	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.002*	*<0.002*	*<0.002*	*0.025*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
N4TJ - 19							*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4TJ - 20	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.002*	*<0.002*	*<0.002*	*0.007*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
N4TJ - 26	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.002*	*<0.002*	*0.007*	*0.029*	*<0.002*	*<0.002*	*<0.002*	*0.296*	*<0.002*
FBOP 94080401	<0.05		<0.10	<0.10	<0.10	0.68	*<0.002*	*<0.002*	*<0.002*	*0.229*	*<0.002*	*<0.002*	*0.007*	*<0.002*	*0.012*
FBOP 94080402	0.093		<0.10	<0.10	<0.10	0.178	*<0.002*	*<0.002*	*<0.002*	*0.934*	*<0.002*	*<0.002*	*<0.002*	*0.059*	*<0.002*
FBOP 94080403	<0.05		<0.10	<0.10	<0.10	0.27	*<0.009*	*<0.009*	*0.026*	*0.285*	*<0.009*	*<0.009*	*<0.009*	*<0.009*	*<0.009*
FBOP 94080404	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.001*	*<0.001*	*0.002*	*0.065*	*<0.001*	*<0.001*	*0.006*	*<0.001*	*0.003*
FBOP 94080405	<0.05		<0.10	0.1	0.1	<0.10	*<0.002*	*<0.002*	*<0.002*	*0.062*	*<0.002*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
FBOP 94080406	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.002*	*<0.002*	*0.006*	*0.086*	*<0.002*	*<0.002*	*<0.002*	*0.023*	*<0.002*
FBOP 94080407	<0.05		0.215	<0.10	0.1	<0.10	*<0.003*	*<0.003*	*<0.003*	*0.114*	*<0.003*	*<0.003*	*<0.003*	*<0.003*	*<0.003*
N4MI - 201	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.001*	*<0.001*	*0.012*	*0.043*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4MI - 202	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.001*	*<0.001*	*0.01*	*0.016*	*<0.001*	*<0.001*	*<0.001*	*0.004*	*<0.001*
N4MI - 203	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.001*	*<0.001*	*0.009*	*0.003*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4MI - 204	<0.05		<0.10	0.174	0.115	<0.10	*<0.001*	*<0.001*	*0.006*	*0.016*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4MI - 205	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.001*	*<0.001*	*0.005*	*0.019*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4MI - 206	<0.05		<0.10	<0.10	<0.10	<0.10	*<0.001*	*<0.001*	*0.005*	*0.028*	*<0.001*	*<0.001*	*<0.001*	*0.002*	*<0.001*
N4MI - 210	<0.05		<0.10	<0.10	<0.10	1.63	*<0.001*	*<0.001*	*0.009*	*0.049*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*0.001*
N4MI - 212	<0.05		<0.10	0.156	0.103	2.12	*<0.001*	*<0.001*	*0.006*	*0.021*	*<0.001*	*<0.001*	*<0.001*	*0.001*	*<0.001*
N4MI - 217	0.337		<0.10	<0.10	<0.10	1.79	*<0.001*	*<0.001*	*0.006*	*0.019*	*<0.001*	*<0.001*	*<0.001*	*0.002*	*<0.001*
N4MI - 226	<0.05		<0.10	<0.10	<0.10	0.69	*<0.001*	*<0.001*	*0.007*	*0.072*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*
N4MI - 227	<0.05		<0.10	<0.10	<0.10	5.08	*<0.001*	*<0.001*	*0.007*	*0.016*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*0.001*
N4MI - 229	<0.05		<0.10	0.176	0.116	0.63	*<0.001*	*<0.001*	*0.007*	*0.203*	*<0.001*	*0.002*	*<0.001*	*<0.001*	*<0.001*
N4MI - 231	<0.05		<0.10	0.161	0.106	<0.10	*<0.001*	*<0.001*	*0.005*	*0.043*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*

Water Samples					
Sample ID	Pd ppb (AC)	Ag ppb (AC)	Pt ppb (AC)	Au ppb (AC)	Loring Au#
N4TJ - 18	below detection	0.4058	below detection	below detection	<0.01
N4TJ - 19	below detection	below detection	below detection	below detection	<0.01
N4TJ - 20	below detection	0.1097	below detection	below detection	<0.01
N4TJ - 26	0.1233	0.5110	5.2155	below detection	<0.01
FBOP 94080401	below detection	3.0984	below detection	0.1624	<0.01
FBOP 94080402	below detection	12.7211	0.8036	below detection	<0.01
FBOP 94080403	0.0879	0.9633	below detection	below detection	<0.01
FBOP 94080404	0.0356	1.1583	below detection	0.0535	0.06
FBOP 94080405	below detection	0.8234	below detection	below detection	
FBOP 94080406	0.0835	1.1963	0.3199	below detection	<0.01
FBOP 94080407	below detection	1.0100	below detection	below detection	<0.01
N4MI - 201	0.8522	3.0539	below detection	below detection	
N4MI - 202	0.5636	0.9018	0.2254	below detection	
N4MI - 203	0.6409	0.2136	below detection	below detection	
N4MI - 204	0.3519	0.9384	below detection	below detection	
N4MI - 205	0.2799	1.0636	below detection	below detection	
N4MI - 206	0.2586	1.4479	0.1034	below detection	
N4MI - 210	0.2538	1.3818	below detection	0.0282	
N4MI - 212	0.3226	1.1292	0.0538	below detection	
N4MI - 217	0.3929	1.2443	0.1310	below detection	
N4MI - 226	0.4895	5.0350	below detection	below detection	
N4MI - 227	0.8968	2.0498	below detection	0.1281	
N4MI - 229	0.3480	10.0911	below detection	below detection	
N4MI - 231	0.2404	2.0674	below detection	below detection	

III. Assay and Analysis Certificates

To: FOCAL RESOURCES,
640, 910 - 7th Avenue S.W.,
Calgary, Alberta T2P 3N8

ATTN: Eric Allen

File No. 37052
Date November 30, 1994
Samples Sand

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	OZ./TON GOLD
"Assay Analysis"	
73065	0.562
73066	0.103
73068	0.163
73069	0.077
73073	0.371
73074	0.556
73075	0.003

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

[redacted]
Assayer

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

To: FOCAL RESOURCES,
640, 910 - 7th Avenue S.W.,
Calgary, Alberta T2P 3N8

ATTN: Eric Allen

File No. 36792
Date August 29, 1994
Samples Soils

Certificate of Assay
LORING LABORATORIES LTD.

Geochemical Analysis

SAMPLE NO.	PPB Au
RR-S 1	<5
S 2	<5
S 3	<5
S 4	<5
S 5	<5

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

[redacted]
Assayer

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

To: FOCAL RESOURCES,
640, 910 - 7th Avenue S.W.,
Calgary, Alberta T2P 3N8

ATTN: Eric Allen

File No. 36792
Date August 29, 1994
Samples Soils

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	PPB Au
RR S 6	<5
N4 RV-69S	<5
71S	<5
73S	<5
74S	<5
75S	<5
79S	<5
84S	<5

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

[redacted]
Assayer

To: FOCAL RESOURCES,
640, 910 - 7th Avenue S.W.,
Calgary, Alberta T2P 3N8

ATTN: Eric Allen

File No. 36791
Date October 13, 1994
Samples

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	% LOI
LOI Determinations	
A1	82.49
A2 *	
A3 *	
C1	75.11
C2	8.98
C3	91.38
C5	84.27
Groundwater Sol'n # 1	79.89
Groundwater Sol'n # 2	88.75
Groundwater Sol'n # 3 leaves	95.57
Groundwater Sol'n # 3 twigs, bark	97.64
Groundwater # 4	45.13
Groundwater # 5	19.56
N4M1-78	2.45
N4M1-79	1.43
N4M1-80	65.59
N4M1-81	98.63
N4M1-82 Leaves	91.00
N4M1-82 Twigs, Bark	95.89
N4M1-83 Leaves	95.29
N4M1-83 Twigs, Bark	98.62
N4M1-84 From Lake	88.57
N4M1-87	98.35
N4M1-88	43.96
N4M1-89 Twigs, Bark	98.42

* Not Ashed

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

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Pulps retained one month unless specific arrangements are made in advance.

[redacted]
Assayer

To: FOCAL RESOURCES,
640, 910 - 7th Avenue S.W.,
Calgary, Alberta T2P 3N8

ATTN: Eric Allen

File No. 36791
Date October 13, 1994
Samples

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	% LOI
N4M1-89 Leaves	95.76
N4M1-91	75.79
N4M1-92	56.87
N4M1-94	80.63
N4M1-96	64.84
N4M1-108	69.20
Unlabeled 1	94.91
Unlabeled 2 Leaves	98.56
Unlabeled 2 Twigs, R River	50.18
Unlabeled 3	53.49
RRDR-2 Foliage	96.84
RRDR-2 Leaves	98.74
RRDR-2 Older Twigs	96.92
RRDR-P3-WS Foliage	94.98
RRDR-P3 Outer Bark	88.68
RRDR-P3-WS Inner Bark	97.08
RRDR-P4-JP Foliage	97.49
RRDR-P4-JP Outer Bark	94.69
RRDR-P4-JP Inner Bark	96.62
RRDR-P6-JP Foliage	96.92
RRDR-P6-JP Twigs	98.01
RRDR-P6-JP Outer Bark	98.52
RRDR-P6-JP Inner Bark	98.32
RRDR-P7-W5 Foliage	95.69
RRDR-P7-W5 Outer Bark	93.36

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

[redacted]
Assayer

To: FOCAL RESOURCES,
640, 910 - 7th Avenue S.W.,
Calgary, Alberta T2P 3N8

ATTN: Eric Allen

File No. 36791
Date October 13, 1994
Samples

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	% LOI
RRDR-P7-W5 Outer Bark High Resin	92.16
RRDR-P7-W5 Inner Bark	96.17
RRDR-P8-JP Foliage	97.03
RRDR-P8-JP Outer Bark	95.83
RRDR-P8-JP Inner Bark	90.58
RRDR-09A	59.93
RRDR-P11-A	7.58
RRDR-P12-A	1.52
RRDR-P13-A	16.11
RRDR-P14-HT	38.10
RRDR-P15-W5 Foliage	96.38
RRDR-P15-W5 Outer Bark	96.63
RRDR-P15-W5 Inner Bark	97.50
RRDR-P16-JP Outer Bark	98.52
RRDR-P16-JP Inner Bark	97.45
RRDR-P17-A	4.41
RRDR-P18-W5 Foliage	94.32
RRDR-P18-W5 Outer Bark	90.00
RRDR-P18-W5 Inner Bark	95.79
R16-52	55.36
N4RV-76	20.36
N4RV-77 SL	27.43

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

[redacted]
Assayer

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Pulps retained one month unless specific arrangements are made in advance.

To: FOCAL RESOURCES,
640, 910 - 7th Avenue S.W.,
Calgary, Alberta T2P 3N8

ATTN: Eric Allen

File No. 36791
Date October 13, 1994
Samples

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	% LOI
N4RV-83 (SL)	30.78
N4RV-86 (SL)	29.19
72682	7.66
72683	78.33
72684	20.44
72685	43.73
72686	17.44
72878	77.90
72879	61.63
72880	65.15
72881	49.02
72882	58.66
72883	12.70
72884	27.98

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month
unless specific arrangements
are made in advance.

[redacted]
Assayer

To: FOCAL RESOURCES,
640, 910 - 7th Avenue S.W.,
Calgary, Alberta T2P 3N8

ATTN: Eric Allen

File No. 36791
Date October 13, 1994
Samples

Certificate of Assay
LORING LABORATORIES LTD.

Page # 5

SAMPLE NO.	% LOI
72885	96.14
72886	2.46
72887	86.58

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month
unless specific arrangements
are made in advance.

[redacted]
Assayer

To: FOCAL RESOURCES,
640, 910 - 7th Avenue S.W.,
Calgary, Alberta T2P 3N8

ATTN: Eric Allen

File No. 37036
Date November 18, 1994
Samples Sand

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	OZ./TON GOLD	OZ./TON SILVER	OZ./TON PLATINUM
"Assay Analysis"			
FIREBAG # 1 CONC	0.061	<0.01	
MARG # 5 CONC	3.232	1.07	0.272

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

[redacted]
Assayer

To: FOCAL RESOURCES
640,910 - 7th AVENUE S.W.
CALGARY,ALBERTA

File No. 37145
Date JANUARY 27,1995
Samples SAND

Certificate of Assay
LORING LABORATORIES LTD.

SAMPLE NO.	GOLD PPB	SILVER PPB
GRAYLING #1	375	<0.1
GRAYLING #2	35	<0.1
GRAYLING #3	925	<0.1

I.Hereby.Certify that the above results are those assays made by me upon the herein described samples....

[redacted]
Assayer

Rejects retained one month.
Pulps retained one month unless specific arrangements are made in advance.

XRAL ACTIVATION SERVICES INCORPORATED

3915 RESEARCH PARK, SUITE A-12, ANN ARBOR, MICHIGAN, 48108

PHONE: (800) 232-4130 FAX: (313) 662-3260

CERTIFICATE OF ANALYSIS

TO: LORING LABORATORIES LTD.
ATTN: GARY SWABEY
629 BEAVERDAM RD. N.E.
CALGARY, ALBERTA
T2K 4W7
CANADA

CUSTOMER NO. 418/01/01

DATE SUBMITTED
18-AUG-94

REPORT: 4905 FILE NUMBER: 4928

13 SAMPLES

WERE ANALYZED AS FOLLOWS:

ELEMENTS	DETECTION LIMIT	UNITS	METHOD	ELEMENTS	DETECTION LIMIT	UNITS	METHOD
AG	5.0000	PPM	INAA	SE	5.0000	PPM	INAA
AS	2.0000	PPM	INAA	SR	500.0000	PPM	INAA
AU	5.0000	PPB	INAA	TA	1.0000	PPM	INAA
BA	100.0000	PPM	INAA	TH	0.5000	PPM	INAA
BR	1.0000	PPM	INAA	U	0.5000	PPM	INAA
CA	1.0000	%	INAA	W	4.0000	PPM	INAA
CO	5.0000	PPM	INAA	ZN	50.0000	PPM	INAA
CR	10.0000	PPM	INAA	LA	1.0000	PPM	INAA
CS	3.0000	PPM	INAA	CE	3.0000	PPM	INAA
FE	0.1000	%	INAA	ND	10.0000	PPM	INAA
HF	1.0000	PPM	INAA	SM	0.5000	PPM	INAA
MO	5.0000	PPM	INAA	EU	0.2000	PPM	INAA
NA	500.0000	PPM	INAA	TB	0.5000	PPM	INAA
NI	100.0000	PPM	INAA	YB	0.2000	PPM	INAA
RB	30.0000	PPM	INAA	LU	0.0500	PPM	INAA
SB	0.2000	PPM	INAA	IR	20.0000	PPB	INAA

CERTIFICATE OF ANALYSIS (CONT'D)

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ELEMENTS	DETECTION LIMIT	UNITS	METHOD	ELEMENTS	DETECTION LIMIT	UNITS	METHOD
SC	0.1000	PPM	INAA				

COMMENTS:

THIS IS YOUR P.O. #3488.
THIS IS A FINAL REPORT.

[redacted]

DATE 14-SEP-94

XRAL ACTIVATION SERVICES INC.

CERTIFIED BY [redacted]

*** UNLESS INSTRUCTED OTHERWISE WE WILL DISCARD ALL SAMPLES ***
IRRADIATED SAMPLES AFTER 30 DAYS. ANY OTHER MATERIAL AFTER 120 DAYS.

XRAL ACTIVATION SERVICES INCORPORATED

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SAMPLE NUMBERS

ELEMENT & UNITS		80B N4AH-1	80B N4AH-2	80B N4AH-3	80B N4AH-4	80B N4AH-6	80B N4AH-7
AG	PPM	<5	<5	<5	<5	<5	<5
AS	PPM	<2	<2	<2	<2	<2	<2
AU	PPB	23	<5	<5	<5	<5	<5
BA	PPM	100	100	100	100	100	100
BR	PPM	5	5	5	5	4	3
CA	%	<1	<1	<1	<1	<1	<1
CO	PPM	<5	<5	<5	<5	<5	<5
CR	PPM	10	<10	10	10	10	<10
CS	PPM	<3	<3	<3	<3	<3	<3
FE	%	0.3	0.3	0.3	0.4	0.4	0.1
HF	PPM	4	3	2	3	2	1
MO	PPM	<5	<5	<5	<5	<5	<5
NA	PPM	1500	1100	1200	1600	1400	900
NI	PPM	<100	<100	<100	<100	<100	<100
RB	PPM	<30	<30	<30	<30	<30	<30
SB	PPM	<0.2	<0.2	<0.2	<0.2	0.2	<0.2
SC	PPM	1.1	0.9	1.0	1.2	1.0	0.6
SE	PPM	<5	<5	<5	<5	<5	<5
SR	PPM	<500	<500	<500	<500	<500	<500
TA	PPM	<1	<1	<1	<1	<1	<1
TH	PPM	2.1	2.3	2.0	2.1	2.0	1.2
U	PPM	0.5	0.5	0.6	0.6	0.5	<0.5
W	PPM	<4	<4	<4	<4	<4	<4
ZN	PPM	<50	<50	<50	<50	<50	<50
LA	PPM	9	8	9	10	9	8
CE	PPM	16	15	16	19	16	14
ND	PPM	<10	<10	<10	<10	<10	<10
SM	PPM	1.1	1.0	1.0	1.2	1.0	0.8
EU	PPM	0.4	<0.2	0.2	0.2	0.2	0.2
TB	PPM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
YB	PPM	0.5	0.5	0.4	0.5	0.4	0.4
LU	PPM	0.09	0.08	0.08	0.08	0.07	0.08
IR	PPB	<20	<20	<20	<20	<20	<20

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SAMPLE NUMBERS

ELEMENT & UNITS		-80B** N4AH-12**	-80B** N4AH-13**	-80B** N4AH-40**	-80B** N4AH-56**	-80B** N4AH-57**	-80B** N4AH-58**
AG	PPM	<5	<5	<5	<5	<5	<5
AS	PPM	<2	<2	<2	<2	<2	<2
AU	PPB	<5	<5	<5	<5	<5	<5
BA	PPM	100	100	100	100	100	100
BR	PPM	4	3	5	8	4	7
CA	%	<1	<1	<1	<1	<1	<1
CO	PPM	<5	<5	<5	<5	<5	<5
CR	PPM	<10	<10	10	10	<10	<10
CS	PPM	<3	<3	<3	<3	<3	<3
FE	%	0.2	0.1	0.5	0.6	0.1	0.2
HF	PPM	1	6	4	2	1	3
MO	PPM	<5	<5	<5	<5	<5	<5
NA	PPM	1000	800	1300	1000	900	1400
NI	PPM	<100	<100	<100	<100	<100	<100
RB	PPM	<30	<30	<30	<30	<30	<30
SB	PPM	<0.2	<0.2	0.2	<0.2	<0.2	<0.2
SC	PPM	0.6	0.6	1.5	1.2	0.4	1.0
SE	PPM	<5	<5	<5	<5	<5	<5
SR	PPM	<500	<500	<500	<500	<500	<500
TA	PPM	<1	<1	<1	<1	<1	<1
TH	PPM	1.2	1.9	2.6	2.2	1.4	1.7
U	PPM	<0.5	0.6	0.5	0.5	<0.5	<0.5
W	PPM	<4	<4	<4	<4	<4	<4
ZN	PPM	<50	<50	<50	<50	<50	<50
LA	PPM	7	9	11	9	8	9
CE	PPM	13	16	19	17	15	16
ND	PPM	<10	<10	<10	<10	<10	<10
SM	PPM	0.8	1.1	1.2	1.1	0.9	1.0
EU	PPM	0.3	<0.2	0.2	0.3	0.3	<0.2
TB	PPM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
YB	PPM	0.3	0.6	0.5	0.5	0.2	0.4
LU	PPM	<0.05	0.10	0.08	0.07	<0.05	0.07
IR	PPB	<20	<20	<20	<20	<20	<20

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SAMPLE NUMBERS

ELEMENT & UNITS		-80B** N4AH-60**
AG	PPM	<5
AS	PPM	<2
AU	PPB	<5
BA	PPM	100
BR	PPM	3
CA	%	<1
CD	PPM	<5
CR	PPM	<10
CS	PPM	<3
FE	%	0.2
HF	PPM	4
MO	PPM	<5
NA	PPM	1400
NI	PPM	<100
RB	PPM	<30
S	PPM	<0.2
SC	PPM	1.1
SE	PPM	<5
SR	PPM	<500
TA	PPM	<1
TH	PPM	1.6
U	PPM	<0.5
W	PPM	<4
ZN	PPM	<50
LA	PPM	8
CE	PPM	15
ND	PPM	<10
SM	PPM	1.0
EU	PPM	0.2
TB	PPM	<0.5
YB	PPM	0.5
LU	PPM	0.07
IR	PPB	<20

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SAMPLE NUMBERS

ELEMENT & UNITS		** 73114**	** 73115**	** 73116**	** 73117**	** 73118**
AG	PPM	<5	<5	<5	<5	<5
AS	PPM	<2	3	4	3	2
AU	PPB	<5	<5	<5	<5	<5
BA	PPM	200	<100	100	100	200
BR	PPM	230	210	130	110	61
CA	%	1	1	1	1	10
CO	PPM	<5	<5	<5	<5	<5
CR	PPM	10	<10	20	20	<10
CS	PPM	<3	<3	<3	<3	<3
FE	%	0.5	0.5	0.6	0.5	0.4
HF	PPM	<1	<1	<1	1	<1
MO	PPM	<5	<5	<5	<5	<5
NA	PPM	<500	700	800	800	<500
NI	PPM	<100	<100	<100	<100	<100
RB	PPM	<30	<30	<30	<30	<30
S	PPM	0.2	0.4	0.2	0.2	<0.2
SC	PPM	0.4	0.5	0.9	0.8	0.7
SE	PPM	<5	<5	<5	<5	<5
SR	PPM	<500	<500	<500	<500	<500
TA	PPM	<1	<1	<1	<1	<1
TH	PPM	<0.5	<0.5	0.9	0.9	0.5
U	PPM	<0.5	0.5	0.5	0.8	0.7
W	PPM	<4	<4	<4	<4	<4
ZN	PPM	90	90	190	110	70
LA	PPM	1	1	3	3	2
CE	PPM	<3	<3	5	5	3
ND	PPM	<10	<10	<10	<10	<10
SM	PPM	<0.5	<0.5	<0.5	<0.5	<0.5
EU	PPM	<0.2	0.2	0.2	0.2	0.3
TB	PPM	<0.5	<0.5	<0.5	<0.5	<0.5
YB	PPM	<0.2	<0.2	0.2	0.2	0.3
LU	PPM	<0.05	<0.05	<0.05	<0.05	<0.05
IR	PPB	<20	<20	<20	<20	<20

SAMPLE NUMBERS

ELEMENT & UNITS		** 73119**	** 73120**	** 73121**	** 73122**	** 73123**	** 73124**
AG	PPM	<5	<5	<5	<5	<5	<5
AS	PPM	2	4	4	2	3	3
AU	PPB	<5	<5	<5	<5	<5	<5
BA	PPM	100	200	200	100	100	100
BR	PPM	75	110	110	41	40	70
CA	%	7	14	14	<1	<1	1
CO	PPM	<5	<5	<5	<5	<5	5
CR	PPM	10	20	20	60	40	10
CS	PPM	<3	<3	<3	<3	<3	<3
FE	%	0.5	0.9	0.9	0.5	0.5	0.5
HF	PPM	<1	1	1	2	2	<1
MO	PPM	<5	<5	<5	<5	<5	<5
NA	PPM	600	800	700	800	800	<500
NI	PPM	<100	<100	<100	<100	<100	<100
RB	PPM	<30	<30	<30	<30	<30	<30
SB	PPM	0.3	<0.2	<0.2	0.2	0.3	<0.2
SC	PPM	0.9	0.8	0.8	1.7	1.8	0.7
SE	PPM	<5	<5	<5	<5	<5	<5
SR	PPM	<500	<500	<500	<500	<500	<500
TA	PPM	<1	<1	<1	<1	<1	<1
TH	PPM	0.9	0.8	0.9	2.4	2.3	0.8
U	PPM	0.8	<0.5	<0.5	4.4	4.5	0.7
W	PPM	<4	<4	<4	<4	<4	<4
ZN	PPM	80	<50	<50	60	60	70
LA	PPM	3	4	4	8	8	2
CE	PPM	4	7	7	14	14	3
ND	PPM	<10	<10	<10	<10	<10	<10
SM	PPM	<0.5	0.5	0.5	1.2	1.1	<0.5
EU	PPM	0.3	0.2	0.2	0.4	0.3	0.3
TB	PPM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
YB	PPM	0.2	0.4	0.4	0.4	0.4	<0.2
LU	PPM	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
IR	PPB	<20	<20	<20	<20	<20	<20

SAMPLE NUMBERS

ELEMENT & UNITS		** 73125**	** 73126**	** 73127**	** 73128**	** 73129**	** 73130**
AG	PPM	<5	<5	<5	<5	<5	<5
AS	PPM	3	6	5	5	5	15
AU	PPB	<5	<5	<5	<5	<5	<5
BA	PPM	100	100	100	200	200	400
BR	PPM	67	93	82	65	63	34
CA	%	<1	1	<1	<1	<1	1
CD	PPM	<5	<5	<5	11	11	18
CR	PPM	10	10	10	40	40	60
CS	PPM	<3	<3	<3	<3	<3	<3
FE	%	0.5	0.8	0.6	0.9	0.9	10.1
HF	PPM	<1	<1	<1	2	2	5
MO	PPM	<5	<5	<5	<5	<5	<5
NA	PPM	<500	<500	<500	1200	1300	3900
NI	PPM	<100	<100	<100	<100	<100	<100
RB	PPM	<30	<30	<30	<30	30	60
SB	PPM	<0.2	0.2	0.2	0.3	0.4	0.2
SC	PPM	0.8	0.6	0.6	3.4	3.7	6.4
SE	PPM	<5	<5	<5	<5	<5	<5
SR	PPM	<500	<500	<500	<500	<500	<500
TA	PPM	<1	<1	<1	<1	<1	<1
TH	PPM	0.7	0.8	0.5	3.4	4.3	6.2
U	PPM	0.7	1.2	0.5	0.9	1.1	1.8
W	PPM	<4	<4	<4	<4	<4	<4
ZN	PPM	60	70	70	180	150	120
LA	PPM	2	2	2	13	14	26
CE	PPM	<3	3	<3	25	27	49
ND	PPM	<10	<10	<10	10	10	20
SM	PPM	<0.5	<0.5	<0.5	1.9	2.0	3.6
EU	PPM	<0.2	0.3	0.2	0.7	0.7	1.1
TB	PPM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
YB	PPM	<0.2	0.2	<0.2	0.8	1.0	1.9
LU	PPM	<0.05	<0.05	<0.05	0.12	0.13	0.25
IR	PPB	<20	<20	<20	<20	<20	<20

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SAMPLE NUMBERS

ELEMENT & UNITS		73131**	73132**	73133**	73134**	73135**	73136**
AG	PPM	<5	<5	<5	<5	<5	<5
AS	PPM	13	6	5	6	6	7
AU	PPB	<5	<5	<5	<5	<5	<5
BA	PPM	600	200	100	200	200	200
BR	PPM	32	43	41	69	72	95
CA	%	1	<1	<1	1	<1	<1
CO	PPM	15	5	<5	6	7	8
CR	PPM	60	20	20	40	30	60
CS	PPM	3	<3	<3	<3	<3	<3
FE	%	9.2	0.6	0.5	1.1	1.2	2.1
HF	PPM	5	1	1	1	1	4
MO	PPM	<5	<5	<5	<5	<5	<5
NA	PPM	4500	1700	1600	1600	2000	3400
NI	PPM	<100	<100	<100	<100	<100	<100
RB	PPM	30	<30	<30	<30	<30	<30
SB	PPM	<0.2	<0.2	<0.2	0.4	0.2	0.4
SC	PPM	7.0	1.6	1.5	2.6	2.9	4.7
SE	PPM	<5	<5	<5	<5	<5	<5
SR	PPM	<500	<500	<500	500	<500	<500
TA	PPM	<1	<1	<1	<1	<1	<1
TH	PPM	6.6	1.1	1.4	2.8	2.5	5.2
U	PPM	1.7	<0.5	<0.5	1.2	1.8	2.3
W	PPM	<4	<4	<4	<4	<4	<4
ZN	PPM	130	100	90	60	80	130
LA	PPM	27	5	5	9	11	18
CE	PPM	53	10	10	18	19	35
ND	PPM	20	<10	<10	<10	10	10
SM	PPM	3.9	0.8	0.7	1.4	1.4	2.5
EU	PPM	0.9	0.4	0.2	0.2	0.8	0.7
TB	PPM	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
YB	PPM	1.9	0.3	0.3	0.7	0.7	1.2
LU	PPM	0.30	<0.05	<0.05	0.08	0.09	0.14
IR	PPB	<20	<20	<20	<20	<20	<20

SAMPLE NUMBERS

ELEMENT & UNITS		** 73137**	** 73138**	** 73139**	** 73140**	** 73141**	** 73142**
AG	PPM	<5	<5	<5	<5	<5	<5
AS	PPM	6	28	31	3	3	6
AU	PPB	<5	<5	<5	<5	<5	<5
BA	PPM	300	800	600	200	200	200
BR	PPM	88	48	31	80	82	44
CA	%	1	1	<1	2	1	<1
CD	PPM	9	13	14	7	7	7
CR	PPM	50	70	90	30	30	30
CS	PPM	<3	3	<3	<3	<3	<3
FE	%	2.1	8.4	6.7	1.2	1.2	0.7
HF	PPM	4	3	4	2	2	1
MO	PPM	<5	<5	<5	<5	<5	<5
NA	PPM	3700	3300	4200	1800	1900	1100
NI	PPM	<100	<100	<100	<100	<100	<100
RB	PPM	<30	<30	<30	30	<30	<30
[redacted]	PPM	0.3	0.4	0.2	<0.2	<0.2	0.2
[redacted]	PPM	4.8	5.5	5.6	3.9	3.9	1.8
SE	PPM	<5	<5	<5	<5	<5	<5
SR	PPM	<500	<500	<500	<500	<500	<500
TA	PPM	<1	<1	<1	<1	<1	<1
TH	PPM	5.0	5.6	5.7	3.9	3.5	2.0
U	PPM	1.0	1.1	1.6	1.1	0.6	1.1
W	PPM	<4	<4	<4	<4	<4	<4
ZN	PPM	140	120	70	70	70	100
LA	PPM	19	21	23	13	14	7
CE	PPM	37	42	45	25	26	12
ND	PPM	10	20	20	10	10	<10
SM	PPM	2.7	3.0	3.4	1.8	2.0	0.9
EU	PPM	1.1	0.8	1.2	0.3	0.6	0.4
TB	PPM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
YB	PPM	1.3	1.4	1.4	0.8	0.8	0.6
LU	PPM	0.19	0.20	0.21	0.15	0.16	0.06
IR	PPB	<20	<20	<20	<20	<20	<20

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SAMPLE NUMBERS

ELEMENT & UNITS		** 73143**	** 73144**	** 73145**	** 73146**	** 73147**	** 73148**
AG	PPM	<5	<5	<5	<5	<5	<5
AS	PPM	6	2	3	5	6	6
AU	PPB	8	<5	<5	<5	<5	<5
BA	PPM	200	100	100	300	300	300
BR	PPM	38	100	110	78	83	94
CA	%	1	2	2	1	1	1
CO	PPM	7	<5	<5	8	8	7
CR	PPM	30	10	10	60	50	80
CS	PPM	<3	<3	<3	3	<3	<3
FE	%	0.6	0.8	0.9	1.7	1.8	1.6
HF	PPM	1	<1	<1	3	3	2
MO	PPM	<5	<5	<5	<5	<5	<5
NA	PPM	900	900	900	2800	2600	2400
NI	PPM	<100	<100	<100	<100	<100	<100
RB	PPM	<30	<30	<30	<30	<30	<30
SB	PPM	0.2	<0.2	0.2	0.3	0.5	0.6
SC	PPM	1.5	1.0	1.1	4.8	4.4	3.7
SE	PPM	<5	<5	<5	<5	<5	<5
SR	PPM	<500	<500	<500	<500	<500	<500
TA	PPM	<1	<1	<1	<1	<1	<1
TH	PPM	1.6	1.2	0.9	4.9	4.3	3.6
U	PPM	0.6	0.8	1.0	2.3	1.7	2.3
W	PPM	<4	<4	<4	<4	<4	<4
ZN	PPM	120	<50	<50	60	60	70
LA	PPM	5	3	4	18	17	13
CE	PPM	10	6	7	34	32	24
ND	PPM	<10	<10	<10	10	10	10
SM	PPM	0.8	0.5	0.5	2.6	2.5	2.0
EU	PPM	<0.2	0.4	<0.2	0.9	0.6	0.6
TB	PPM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
YB	PPM	0.4	0.3	0.2	1.1	1.1	1.0
LU	PPM	<0.05	<0.05	<0.05	0.19	0.15	0.13
IR	PPB	<20	<20	<20	<20	<20	<20

SAMPLE NUMBERS

ELEMENT & UNITS		** 73149**	** 73150**	** 73151**	** 73152**	** 73153**	** 73154**
AG	PPM	<5	<5	<5	<5	<5	<5
AS	PPM	5	3	9	8	2	6
AU	PPB	<5	<5	<5	<5	<5	<5
BA	PPM	100	100	300	400	200	100
BR	PPM	61	63	83	81	5	72
CA	%	<1	<1	1	<1	<1	<1
CD	PPM	<5	<5	11	11	<5	5
CR	PPM	10	10	60	70	100	40
CS	PPM	<3	<3	3	<3	<3	<3
FE	%	0.4	0.4	3.9	3.7	0.8	11.0
HF	PPM	<1	<1	4	4	4	1
MO	PPM	<5	<5	7	<5	<5	<5
NA	PPM	1100	600	2900	2700	2200	900
NI	PPM	<100	<100	<100	<100	<100	<100
RB	PPM	<30	<30	30	40	<30	<30
[illegible]	PPM	0.3	0.2	0.2	0.2	0.3	0.2
[illegible]	PPM	0.4	0.4	5.8	5.5	1.7	1.6
SE	PPM	<5	<5	<5	<5	<5	<5
SR	PPM	<500	<500	<500	<500	<500	<500
TA	PPM	<1	<1	<1	<1	<1	<1
TH	PPM	0.5	0.5	6.1	6.3	2.7	1.6
U	PPM	<0.5	<0.5	2.1	2.2	0.5	1.0
W	PPM	<4	<4	<4	<4	<4	<4
ZN	PPM	70	70	100	90	<50	<50
LA	PPM	1	1	23	22	12	7
CE	PPM	<3	<3	47	41	23	14
ND	PPM	<10	<10	20	20	10	<10
SM	PPM	<0.5	<0.5	3.5	3.3	1.6	1.4
EU	PPM	<0.2	0.2	0.7	0.8	0.5	0.7
TB	PPM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
YB	PPM	<0.2	<0.2	1.7	1.7	0.6	0.8
LU	PPM	<0.05	<0.05	0.24	0.26	0.13	0.12
IR	PPB	<20	<20	<20	<20	<20	<20

SAMPLE NUMBERS

ELEMENT & UNITS		** 73155**	** 73156**	** 73157**	** 73158**	** 73159**	** 73160**
AG	PPM	<5	<5	<5	<5	<5	<5
AS	PPM	6	5	6	<2	2	<2
AU	PPB	<5	<5	<5	<5	<5	<5
BA	PPM	<100	100	100	100	100	100
BR	PPM	67	60	100	22	33	34
CA	%	<1	<1	<1	<1	<1	<1
CO	PPM	<5	<5	<5	<5	<5	<5
CR	PPM	120	70	20	90	20	20
CS	PPM	<3	<3	<3	<3	<3	<3
FE	%	14.3	13.3	8.8	0.2	0.2	0.2
HF	PPM	<1	1	1	1	<1	<1
MO	PPM	8	7	5	<5	<5	<5
NA	PPM	1300	1100	800	800	500	<500
NI	PPM	<100	<100	<100	<100	<100	<100
RB	PPM	<30	<30	<30	<30	<30	<30
[illegible]	PPM	0.2	<0.2	<0.2	<0.2	0.2	0.2
[illegible]	PPM	1.5	1.5	1.4	0.6	0.5	0.5
SE	PPM	<5	<5	<5	<5	<5	<5
SR	PPM	<500	<500	<500	<500	<500	<500
TA	PPM	<1	<1	<1	<1	<1	<1
TH	PPM	1.8	1.4	2.0	1.0	0.8	0.6
U	PPM	1.1	0.7	1.1	<0.5	1.0	0.9
W	PPM	<4	<4	<4	<4	<4	<4
ZN	PPM	<50	<50	<50	<50	<50	<50
LA	PPM	6	7	8	5	3	2
CE	PPM	13	16	18	9	4	4
ND	PPM	<10	<10	<10	<10	<10	<10
SM	PPM	1.3	1.4	1.6	0.6	<0.5	<0.5
EU	PPM	0.6	0.7	0.4	<0.2	0.3	0.3
TB	PPM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
YB	PPM	0.5	0.7	0.8	0.2	<0.2	<0.2
LU	PPM	0.12	0.11	0.12	<0.05	<0.05	<0.05
IR	PPB	<20	<20	<20	<20	<20	<20

SAMPLE NUMBERS

ELEMENT & UNITS		** 73161**	** 73162**	** 73163**	** 73164**	** 73165**	** 73166**
AG	PPM	<5	<5	<5	<5	<5	<5
AS	PPM	<2	5	3	3	3	3
AU	PPB	<5	<5	<5	<5	5	<5
BA	PPM	200	100	100	100	100	100
BR	PPM	32	120	47	45	52	80
CA	%	<1	<1	<1	<1	<1	1
CD	PPM	<5	<5	<5	<5	<5	<5
CR	PPM	20	30	10	30	30	30
CS	PPM	<3	<3	<3	<3	<3	<3
FE	%	0.2	0.9	0.7	0.3	1.1	2.5
HF	PPM	1	1	<1	1	1	1
MO	PPM	<5	<5	<5	<5	<5	5
NA	PPM	500	500	<500	700	600	600
NI	PPM	<100	<100	<100	<100	<100	<100
RB	PPM	<30	<30	<30	<30	<30	<30
SB	PPM	0.2	0.2	0.3	0.2	0.4	0.2
[illegible]	PPM	0.6	1.7	0.8	1.2	1.0	1.6
SE	PPM	<5	<5	<5	<5	<5	<5
SR	PPM	<500	<500	<500	<500	<500	<500
TA	PPM	<1	<1	<1	<1	<1	<1
TH	PPM	0.6	1.8	1.0	1.2	1.4	1.5
U	PPM	0.9	1.4	0.8	1.0	0.7	1.0
W	PPM	<4	<4	<4	<4	<4	<4
ZN	PPM	<50	50	50	<50	<50	50
LA	PPM	3	8	3	5	4	7
CE	PPM	5	16	6	10	7	13
ND	PPM	<10	<10	<10	<10	<10	<10
SM	PPM	<0.5	1.4	0.5	0.9	0.6	1.2
EU	PPM	0.2	0.4	0.3	0.2	0.2	0.5
TB	PPM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
YB	PPM	0.2	0.7	0.2	0.5	0.3	0.6
LU	PPM	<0.05	0.09	<0.05	0.06	0.05	0.06
IR	PPB	<20	<20	<20	<20	<20	<20

SAMPLE NUMBERS

ELEMENT & UNITS		** 73167**	** 73168**	** 73169**	** 73170**	** 73171**	** 73172**
AG	PPM	<5	<5	<5	<5	<5	<5
AS	PPM	5	2	3	2	3	2
AU	PPB	<5	<5	<5	<5	<5	<5
BA	PPM	100	100	100	100	100	100
BR	PPM	77	33	39	28	37	31
CA	%	1	<1	<1	<1	<1	<1
CO	PPM	<5	<5	<5	<5	<5	<5
CR	PPM	40	30	30	30	20	30
CS	PPM	<3	<3	<3	<3	<3	<3
FE	%	1.3	1.2	1.3	0.8	0.8	0.7
HF	PPM	1	2	2	1	<1	1
MO	PPM	<5	<5	<5	<5	<5	<5
NA	PPM	800	900	1300	600	<500	700
NI	PPM	<100	<100	<100	<100	<100	<100
RB	PPM	<30	<30	<30	<30	<30	<30
[illegible]	PPM	0.3	<0.2	0.2	0.2	0.3	0.3
[illegible]	PPM	1.5	1.3	1.1	0.7	0.7	0.8
SE	PPM	<5	<5	<5	<5	<5	<5
SR	PPM	<500	<500	<500	<500	<500	<500
TA	PPM	<1	<1	<1	<1	<1	<1
TH	PPM	1.5	1.8	1.7	1.0	0.8	0.9
U	PPM	1.7	1.2	0.9	1.1	2.2	1.3
W	PPM	<4	<4	<4	<4	<4	<4
ZN	PPM	50	<50	<50	<50	<50	<50
LA	PPM	7	7	7	4	3	4
CE	PPM	14	14	15	7	4	7
ND	PPM	<10	<10	<10	<10	<10	<10
SM	PPM	1.2	1.1	1.1	0.5	<0.5	0.5
EU	PPM	0.5	0.4	0.3	0.4	0.4	0.3
TB	PPM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
YB	PPM	0.6	0.6	0.5	0.3	0.3	0.2
LU	PPM	0.09	0.10	0.08	<0.05	<0.05	<0.05
IR	PPB	<20	<20	<20	<20	<20	<20

SAMPLE NUMBERS

ELEMENT & UNITS		** 73173**	** 73174**	** 73175**	** 73176**	** 73177**	** 73178**
AG	PPM	<5	<5	<5	<5	<5	<5
AS	PPM	3	2	4	4	6	5
AU	PPB	<5	<5	<5	<5	<5	<5
BA	PPM	<100	100	200	100	100	<100
BR	PPM	34	64	59	62	98	120
CA	%	<1	<1	1	1	1	<1
CO	PPM	<5	<5	<5	<5	<5	7
CR	PPM	20	10	10	20	20	20
CS	PPM	<3	<3	<3	<3	<3	<3
FE	%	0.8	0.2	1.1	1.2	3.2	8.2
HF	PPM	<1	1	1	<1	1	<1
MO	PPM	<5	<5	5	5	5	7
NA	PPM	<500	600	600	600	800	<500
NI	PPM	<100	<100	<100	<100	<100	<100
RB	PPM	<30	<30	<30	<30	<30	<30
SB	PPM	0.4	0.2	<0.2	<0.2	0.2	0.4
[illegible]	PPM	0.7	1.7	1.7	1.8	1.7	1.7
SE	PPM	<5	<5	<5	<5	<5	<5
SR	PPM	<500	<500	<500	<500	<500	<500
TA	PPM	<1	<1	<1	<1	<1	<1
TH	PPM	0.6	1.8	1.5	1.9	2.1	1.4
U	PPM	1.5	0.7	1.5	2.0	1.7	2.6
W	PPM	<4	<4	<4	<4	<4	<4
ZN	PPM	50	60	60	60	50	100
LA	PPM	3	6	6	6	7	5
CE	PPM	5	13	12	12	16	12
ND	PPM	<10	<10	<10	<10	<10	<10
SM	PPM	<0.5	1.2	1.2	1.3	1.3	1.1
EU	PPM	0.2	0.5	0.5	0.5	0.4	0.4
TB	PPM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
YB	PPM	0.3	0.5	0.6	0.6	0.7	0.8
LU	PPM	<0.05	0.05	0.09	0.10	0.11	0.11
IR	PPB	<20	<20	<20	<20	<20	<20

SAMPLE NUMBERS

ELEMENT & UNITS		** 73179**	** 73180**
AG	PPM	<5	<5
AS	PPM	7	7
AU	PPB	<5	<5
BA	PPM	<300	<100
BR	PPM	120	100
CA	%	<1	1
CO	PPM	5	5
CR	PPM	20	30
CS	PPM	<3	<3
FE	%	9.1	4.8
HF	PPM	1	<1
MO	PPM	<5	6
NA	PPM	<500	500
NI	PPM	<100	<100
RB	PPM	<30	<30
SB	PPM	0.3	0.3
[illegible]	PPM	1.5	1.4
[illegible]	PPM	<5	<5
SR	PPM	<500	<500
TA	PPM	<1	<1
TH	PPM	1.3	1.4
U	PPM	1.6	2.8
W	PPM	4	<4
ZN	PPM	70	50
LA	PPM	5	4
CE	PPM	10	9
ND	PPM	<10	<10
SM	PPM	1.0	0.8
EU	PPM	0.4	0.2
TB	PPM	<0.5	<0.5
YB	PPM	0.8	0.4
LU	PPM	0.11	0.05
IR	PPB	<20	<20

EXPLANATION OF CODES

VARIABLE DETECTION LIMITS DUE TO SAMPLE COMPOSITION

XRAL ACTIVATION SERVICES INCORPORATED

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SAMPLE NUMBERS

ELEMENT & UNITS		** 73101**	** 73102**	** 73103**	** 73104**	** 73105**	** 73106**
AG	PPM	<5	<5	<5	<5	<5	<5
AS	PPM	2	<2	4	6	6	6
AU	PPB	<5	<5	<5	<5	<5	<5
BA	PPM	300	300	100	100	200	200
BR	PPM	26	5	39	49	73	74
CA	%	<1	<1	14	10	1	1
CO	PPM	5	<5	6	7	5	6
CR	PPM	420	220	10	20	10	10
CS	PPM	<3	<3	<3	<3	<3	<3
FE	%	1.1	0.6	1.3	1.6	1.3	1.2
HF	PPM	3	4	1	1	1	1
MO	PPM	<5	<5	<5	<5	<5	<5
NA	PPM	3800	4800	800	900	500	500
NI	PPM	<100	<100	<100	<100	<100	<100
RB	PPM	<30	<30	<30	<30	<30	<30
[illegible]	PPM	0.4	0.6	<0.2	0.2	0.2	0.2
[illegible]	PPM	2.0	1.8	1.3	1.6	1.0	1.0
SE	PPM	<5	<5	<5	<5	<5	<5
SR	PPM	<500	<500	700	<500	<500	<500
TA	PPM	<1	<1	<1	<1	<1	<1
TH	PPM	2.9	2.5	1.2	1.6	0.9	0.9
U	PPM	1.9	0.8	1.7	2.1	0.8	0.9
W	PPM	<4	<4	<4	<4	<4	<4
ZN	PPM	70	<50	100	130	170	170
LA	PPM	11	11	5	6	3	3
CE	PPM	21	21	8	11	6	5
ND	PPM	<10	10	<10	<10	<10	<10
SM	PPM	1.4	1.4	0.6	0.8	0.5	<0.5
EU	PPM	0.3	0.7	0.4	0.4	0.2	0.2
TB	PPM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
YB	PPM	0.8	0.7	0.4	0.4	0.3	0.2
LU	PPM	0.09	0.10	<0.05	0.05	<0.05	<0.05
IR	PPB	<20	<20	<20	<20	<20	<20

Raw ICP Data		Atomic number		5	11	12	13	15	19	20
Sample Id	Sample Type	Lab Id	LOI	B	Na	Mg	Al	P	K	Ca
		Detection limit		3	0.01	0.01	0.01	0.001	0.01	0.01
		Units	%	ppm	%	%	%	%	%	%
N4MI-93	biological	72869	55.21	77	0.06	1.29	0.09	0.215	3.38	40.50
N4MI-98	biological	72870	88.94	183	0.18	2.23	0.45	1.265	25.97	8.22
N4MI-101	biological	72871	60.82	58	0.18	1.02	0.47	0.292	2.60	31.72
N4MI-116	biological	72872	97.96	381	0.08	3.09	2.71	1.153	4.14	25.41
N4MI-119	biological	72873	33.22	22	0.02	0.54	0.15	0.170	1.86	2.21
N4MI-P-17	biological	72884	27.98	< 2	0.02	0.05	0.4	0.834	0.03	0.85
N4MI-P-9	biological	72885	96.14	707	0.05	7	0.34	1.989	532.32	13.44
N4MI-P-15	biological	72887	86.58	99	4.63	5.41	0.21	3.39	976.01	6.26
C1	biological	C-1	75.11	100	0.2	1.95	0.07	1.058	11.17	28.13
GS3 LEAVES	biological	G.W.S. #3 LEAVES	95.57	877	0.08	5.2	0.12	2.788	24.27	10.84
GS3 TWIGS BARK	biological	G.W.S. #3 TWIGS BARK	97.64	787	0.93	3.76	0.29	1.964	16.16	16.77
GS1	biological	GROUND WATER SOLUTION #1	79.89	146	0.05	2.33	0.20	0.964	3.67	5.93
GS2	biological	GROUND WATER SOLUTION #2	88.75	220	0.05	2.23	0.16	1.092	3.12	5.86
GS4	biological	GROUND WATER SOLUTION #4	45.13	3	0.02	0.56	0.10	0.154	0.58	2.26
GS5	biological	GROUND WATER SOLUTION #5	19.56	4	0.01	0.11	0.11	0.046	0.04	0.67
N4MI-79	biological	N4MI-79	1.43	5	0.01	0.02	0.08	0.011	0.03	0.09
N4MI-80	biological	N4MI-80	65.59	151	0.09	6.5	0.02	0.918	12.18	13.15
N4MI-81	biological	N4MI-81	98.63	752	0.05	5	1.37	0.535	3.77	25.40
N4MI-82a	biological	N4MI-82 LEAVES	91.00	269	0.2	5.31	0.35	2.353	6.66	18.29
N4MI-82b	biological	N4MI-82 TWIGS BARK	95.89	388	0.2	3.17	0.09	2.106	5.67	31.41
N4MI-83	biological	N4MI-83 LEAVES	95.29	785	0.22	6.93	0.13	4.432	26.06	10.78
N4MI-83	biological	N4MI-83 TWIGS BARK	98.62	590	0.53	6.05	0.51	1.168	6.81	20.89
N4MI-84	biological	N4MI-84 FROM LAKE	88.57	103	0.75	2.04	0.14	0.412	3.65	14.87
N4MI-87	biological	N4MI-87	98.35	277	0.05	1.53	1.53	0.638	1.92	15.36
N4MI-88	biological	N4MI-88	43.96	491	0.68	0.32	0.04	0.200	1.30	4.46
N4MI-89a	biological	N4MI-89 LEAVES	95.76	943	0.21	5.79	0.17	3.812	24.15	11.06
N4MI-89b	biological	N4MI-89 TWIGS BARK	98.42	616	0.13	6.36	0.13	1.541	10.11	21.93
N4MI-91	biological	N4MI-91	75.79	140	0.07	0.79	0.95	0.314	0.15	2.93
N4MI-94	biological	N4MI-94	80.63	65	0.04	0.79	0.75	0.291	0.16	3.90
N4MI-96	biological	N4MI-96	64.84	31	0.02	0.35	0.88	0.342	0.11	1.65
N4MI-101	biological	RE 72871	60.82	55	0.17	0.98	0.45	0.281	2.47	30.57
N4MI-88	biological	RE N4MI-88	43.96	493	0.66	0.32	0.05	0.202	1.27	4.57
RRDR-P4b	biological	RE RRDR-P4-JP OUTER BARK	94.69	117	0.02	0.69	0.88	0.227	0.54	6.06
RRDR-P9a	biological	RRDR-09A	59.93	18	0.11	0.26	0.15	1.071	1.59	1.80
RRDR-P2b	biological	RRDR-2 CONES	98.74	413	0.13	5.35	0.39	5.155	28.44	2.77
RRDR-P2a	biological	RRDR-2 FOLIAGE	96.84	247	0.04	3.26	0.37	3.335	10.89	14.82

Raw ICP Data		Atomic number	22	23	24	25	26	27	28	29
Sample Id	Sample Type	Lab Id	Ti	V	Cr	Mn	Fe	Co	Ni	Cu
		Detection limit	0.01	1	1	2	0.01	1	1	1
		Units	%	ppm	ppm	ppm	%	ppm	ppm	ppm
N4MI-93	biological	72869	< .01	2	19	401	0.26	1	3	9
N4MI-98	biological	72870	0.01	13	412	1348	1.54	5	21	85
N4MI-101	biological	72871	0.01	15	85	767	1.41	3	20	28
N4MI-116	biological	72872	0.02	64	83	5464	1.93	10	65	220
N4MI-119	biological	72873	< .01	9	559	940	1.13	2	12	20
N4MI-P-17	biological	72884	< .01	8	6	539	59.36	< 1	< 1	< 1
N4MI-P-9	biological	72885	0.01	10	152	13575	1.13	7	10	63
N4MI-P-15	biological	72887	0.01	7	84	3433	0.92	1	8	21
C1	biological	C-1	< .01	3	209	251	0.36	2	10	16
GS3 LEAVES	biological	G.W.S. #3 LEAVES	0.01	6	652	4973	1.11	3	27	97
GS3 TWIGS BARK	biological	G.W.S. #3 TWIGS BARK	< .01	9	1040	12911	1.91	7	47	94
GS1	biological	GROUND WATER SOLUTION #1	< .01	106	131	89	0.30	1	11	34
GS2	biological	GROUND WATER SOLUTION #2	< .01	31	65	138	0.22	1	8	32
GS4	biological	GROUND WATER SOLUTION #4	< .01	42	55	3328	21.01	< 1	6	11
GS5	biological	GROUND WATER SOLUTION #5	< .01	17	105	509	6.25	1	5	8
N4MI-79	biological	N4MI-79	< .01	4	485	98	1.34	2	15	6
N4MI-80	biological	N4MI-80	< .01	< 2	119	167	0.27	3	7	80
N4MI-81	biological	N4MI-81	< .01	8	67	8497	0.49	2	16	166
N4MI-82a	biological	N4MI-82 LEAVES	< .01	15	1878	2824	2.68	7	43	58
N4MI-82b	biological	N4MI-82 TWIGS BARK	< .01	4	474	4629	0.78	3	20	61
N4MI-83	biological	N4MI-83 LEAVES	< .01	9	651	2730	1.12	3	27	119
N4MI-83	biological	N4MI-83 TWIGS BARK	0.02	21	1285	7813	2.65	6	42	76
N4MI-84	biological	N4MI-84 FROM LAKE	0.01	16	2348	542	3.04	6	50	58
N4MI-87	biological	N4MI-87	0.01	48	101	1429	0.68	2	31	103
N4MI-88	biological	N4MI-88	< .01	5	785	298	1.27	2	19	10
N4MI-89a	biological	N4MI-89 LEAVES	< .01	8	652	4505	1.29	3	28	54
N4MI-89b	biological	N4MI-89 TWIGS BARK	< .01	8	572	15893	1.26	3	30	42
N4MI-91	biological	N4MI-91	0.01	20	138	316	1.08	5	18	50
N4MI-94	biological	N4MI-94	0.02	37	55	607	4.96	8	25	20
N4MI-96	biological	N4MI-96	0.01	79	38	261	23.17	14	37	29
N4MI-101	biological	RE 72871	0.01	14	82	730	1.36	3	18	27
N4MI-88	biological	RE N4MI-88	< .01	6	808	298	1.31	2	20	10
RRDR-P4b	biological	RE RRDR-P4-JP OUTER BARK	0.01	11	101	1640	1.68	2	11	53
RRDR-P9a	biological	RRDR-09A	< .01	6	161	3094	2.51	3	7	11
RRDR-P2b	biological	RRDR-2 CONES	0.05	17	1021	3371	2.07	10	46	188
RRDR-P2a	biological	RRDR-2 FOLIAGE	0.01	13	85	5492	0.69	3	17	80

Raw ICP Data		Atomic number	30	33	38	42	47	48	51	56
Sample Id	Sample Type	Lab Id	Zn	As	Sr	Mo	Ag	Cd	Sb	Ba
		Detection limit	1	2	1	1	0.3	0.2	2	1
		Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
N4MI-93	biological	72869	89	13	254	1	0.5	< .2	4	341
N4MI-98	biological	72870	474	123	140	7	4.5	1.4	15	81
N4MI-101	biological	72871	137	21	438	3	0.8	0.6	4	122
N4MI-116	biological	72872	1995	265	355	12	6	6.9	18	76
N4MI-119	biological	72873	64	15	109	3	0.5	< .2	4	223
N4MI-P-17	biological	72884	28	< 2	51	6	0.1	< .2	5	494
N4MI-P-9	biological	72885	610	85	185	18	3.8	1.4	13	45
N4MI-P-15	biological	72887	181	26	225	5	1.3	0.6	2	109
C1	biological	C-1	130	5	362	3	0.4	0.5	3	406
GS3 LEAVES	biological	G.W.S. #3 LEAVES	489	3	129	27	1.9	1.3	8	143
GS3 TWIGS BARK	biological	G.W.S. #3 TWIGS BARK	811	26	402	44	5090.9	2.3	< 2	500
GS1	biological	GROUND WATER SOLUTION #1	26	6	59	5	0.4	0.2	8	133
GS2	biological	GROUND WATER SOLUTION #2	40	5	70	3	0.3	0.2	3	180
GS4	biological	GROUND WATER SOLUTION #4	14	18	38	< 1	5.0	< .2	< 2	165
GS5	biological	GROUND WATER SOLUTION #5	10	8	28	1	0.3	< .2	< 2	87
N4MI-79	biological	N4MI-79	2	2	21	3	1.3	< .2	< 2	14
N4MI-80	biological	N4MI-80	37	2	129	4	15.8	0.3	< 2	128
N4MI-81	biological	N4MI-81	1936	4	124	3	1.7	4.2	3	247
N4MI-82a	biological	N4MI-82 LEAVES	331	10	222	12	3.2	0.7	18	195
N4MI-82b	biological	N4MI-82 TWIGS BARK	453	8	404	5	4.7	0.6	< 2	321
N4MI-83	biological	N4MI-83 LEAVES	602	19	112	8	353.3	0.8	19	143
N4MI-83	biological	N4MI-83 TWIGS BARK	353	18	395	18	8.7	2.0	10	509
N4MI-84	biological	N4MI-84 FROM LAKE	120	5	168	16	18.5	1.1	5	166
N4MI-87	biological	N4MI-87	1044	5	144	6	0.8	3.1	< 2	167
N4MI-88	biological	N4MI-88	22	2	47	5	0.7	< .2	< 2	37
N4MI-89a	biological	N4MI-89 LEAVES	727	7	96	16	11.6	5.5	4	102
N4MI-89b	biological	N4MI-89 TWIGS BARK	400	6	360	34	1.6	3.0	5	354
N4MI-91	biological	N4MI-91	131	6	103	9	0.2	0.6	2	42
N4MI-94	biological	N4MI-94	144	7	60	15	0.3	0.6	< 2	15
N4MI-96	biological	N4MI-96	77	11	39	8	< .1	1.1	< 2	44
N4MI-101	biological	RE 72871	129	19	419	3	0.7	0.5	3	130
N4MI-88	biological	RE N4MI-88	23	3	47	5	1.0	< .2	< 2	38
RRDR-P4b	biological	RE RRDR-P4-JP OUTER BARK	391	< 2	142	2	0.6	2.1	2	149
RRDR-P9a	biological	RRDR-09A	55	4	130	3	0.5	0.4	< 2	497
RRDR-P2b	biological	RRDR-2 CONES	867	11	110	9	63.8	0.9	12	319
RRDR-P2a	biological	RRDR-2 FOLIAGE	460	7	626	3	0.6	0.3	3	562

Raw ICP Data		Atomic number	57	74	79	82	83	90	92
Sample Id	Sample Type	Lab Id	La	W	Au	Pb	Bi	Th	U
		Detection limit	1	2	5	3	2	2	5
		Units	ppm	ppm	ppb	ppm	ppm	ppm	ppm
N4MI-93	biological	72869	< 2	1	60	29	2	< 2	< 5
N4MI-98	biological	72870	2	1	NSS	296	< 2	< 2	< 5
N4MI-101	biological	72871	5	1	NSS	49	2	< 2	< 5
N4MI-116	biological	72872	9	< 1	NSS	375	2	< 2	< 5
N4MI-119	biological	72873	8	1	<5	29	2	< 2	< 5
N4MI-P-17	biological	72884	< 2	19	<5	< 2	17	11	8
N4MI-P-9	biological	72885	< 2	3	NSS	167	< 2	11	< 5
N4MI-P-15	biological	72887	< 2	2	<5	59	2	5	< 5
C1	biological	C-1	2	1	NSS	12	< 2	< 2	< 5
GS3 LEAVES	biological	G.W.S. #3 LEAVES	7	1	NSS	69	< 2	< 2	< 5
GS3 TWIGS BARK	biological	G.W.S. #3 TWIGS BARK	< 2	11	NSS	221	24	< 2	< 5
GS1	biological	GROUND WATER SOLUTION #1	3	2	NSS	40	< 2	< 2	32
GS2	biological	GROUND WATER SOLUTION #2	4	4	540	14	< 2	< 2	30
GS4	biological	GROUND WATER SOLUTION #4	8	< 1	30	7	3	< 2	18
GS5	biological	GROUND WATER SOLUTION #5	7	3	268	43	2	< 2	< 5
N4MI-79	biological	N4MI-79	6	< 1	<5	4	2	< 2	< 5
N4MI-80	biological	N4MI-80	< 2	1	NSS	8	< 2	< 2	< 5
N4MI-81	biological	N4MI-81	3	< 1	NSS	53	2	< 2	< 5
N4MI-82a	biological	N4MI-82 LEAVES	17	12	NSS	91	< 2	6	18
N4MI-82b	biological	N4MI-82 TWIGS BARK	3	< 1	NSS	70	< 2	< 2	< 5
N4MI-83	biological	N4MI-83 LEAVES	10	< 1	NSS	139	< 2	7	38
N4MI-83	biological	N4MI-83 TWIGS BARK	9	4	NSS	111	4	< 2	< 5
N4MI-84	biological	N4MI-84 FROM LAKE	< 2	7	NSS	65	4	2	< 5
N4MI-87	biological	N4MI-87	6	< 1	NSS	66	< 2	< 2	< 5
N4MI-88	biological	N4MI-88	4	1	NSS	4	2	< 2	< 5
N4MI-89a	biological	N4MI-89 LEAVES	19	< 1	NSS	66	< 2	2	< 5
N4MI-89b	biological	N4MI-89 TWIGS BARK	7	< 1	NSS	49	< 2	< 2	9
N4MI-91	biological	N4MI-91	10	< 1	NSS	54	< 2	3	< 5
N4MI-94	biological	N4MI-94	13	11	1700	23	< 2	3	6
N4MI-96	biological	N4MI-96	19	2	<5	10	< 2	5	14
N4MI-101	biological	RE 72871	5	1	NSS	49	< 2	< 2	< 5
N4MI-88	biological	RE N4MI-88	4	1	NSS	6	2	< 2	< 5
RRDR-P4b	biological	RE RRDR-P4-JP OUTER BARK	7	< 1	NSS	21	2	< 2	< 5
RRDR-P9a	biological	RRDR-09A	5	1	NSS	17	< 2	< 2	< 5
RRDR-P2b	biological	RRDR-2 CONES	13	2	NSS	83	< 2	4	< 5
RRDR-P2a	biological	RRDR-2 FOLIAGE	4	3	NSS	64	2	2	< 5

Raw ICP Data		Atomic number		5	11	12	13	15	19	20
Sample Id	Sample Type	Lab Id	LOI	B	Na	Mg	Al	P	K	Ca
		Detection limit		3	0.01	0.01	0.01	0.001	0.01	0.01
		Units	%	ppm	%	%	%	%	%	%
RRDR-P2c	biological	RRDR-2 OLDER TWIGS	96.92	290	0.05	3.4	0.43	1.622	8.36	16.13
RRDR-P11-A	biological	RRDR-P11-A	7.58	6	0.01	0.05	0.14	0.078	0.06	0.21
RRDR-P12-A	biological	RRDR-P12-A	1.52	5	0.01	0.09	0.26	0.021	0.06	0.14
RRDR-P13-A	biological	RRDR-P13-A	16.11	6	0.01	0.05	0.17	0.676	0.12	0.44
RRDR-P14-A	biological	RRDR-P14-HT	38.10	16	0.02	0.43	0.10	0.299	2.30	1.55
RRDR-P15a	biological	RRDR-P15-WS FOLIAGE	96.38	157	0.02	2.91	0.13	2.582	14.39	17.31
RRDR-P15c	biological	RRDR-P15-WS INNER BARK	97.50	352	0.02	3.72	0.25	1.439	13.17	24.06
RRDR-P15b	biological	RRDR-P15-WS OUTER BARK	96.63	235	0.03	1.82	0.22	0.312	5.53	28.47
RRDR-P16b	biological	RRDR-P16-JP INNER BARK	97.45	279	0.03	2.9	1.46	0.741	4.04	21.09
RRDR-P16a	biological	RRDR-P16-JP OUTER BARK	98.52	272	0.05	1.22	1.65	0.723	2.18	23.06
RRDR-P17A	biological	RRDR-P17-A	4.41	7	0.01	0.11	0.45	0.044	0.11	0.24
RRDR-P18a	biological	RRDR-P18-WS FOLIAGE	94.32	126	0.02	1.92	0.48	1.852	10.28	13.19
RRDR-P18c	biological	RRDR-P18-WS INNER BANK	95.79	243	0.07	2.47	0.91	1.013	5.37	22.66
RRDR-P18b	biological	RRDR-P18-WS OUTER BARK	90.00	80	0.06	0.61	1.84	0.259	1.23	11.63
RRDR-P3a	biological	RRDR-P3-WS FOLIAGE	94.98	169	0.03	1.74	0.35	1.166	6.01	15.41
RRDR-P3c	biological	RRDR-P3-WS INNER BARK	97.08	324	0.03	3.58	0.24	1.125	7.89	21.41
RRDR-P3b	biological	RRDR-P3-WS OUTER BARK	88.68	135	0.04	0.9	0.26	0.192	3.72	13.53
RRDR-P4a	biological	RRDR-P4-JP FOLIAGE	97.49	535	0.06	5.33	1.16	2.808	13.26	6.87
RRDR-P4c	biological	RRDR-P4-JP INNER BARK	96.62	264	0.07	2.34	1.19	0.403	2.25	11.79
RRDR-P4b	biological	RRDR-P4-JP OUTER BARK	94.69	109	0.02	0.66	0.83	0.217	0.51	5.86
RRDR-P6a	biological	RRDR-P6-JP FOLIAGE	96.92	417	0.03	2.6	1.60	2.784	13.46	10.27
RRDR-P6b	biological	RRDR-P6-JP INNER BARK	98.32	462	0.08	3.56	2.22	0.871	5.33	22.90
RRDR-P6c	biological	RRDR-P6-JP OUTER BARK	98.52	297	0.02	1.79	1.72	0.285	2.20	15.27
RRDR-P6b	biological	RRDR-P6-JP TWIGS	98.01	620	0.21	3.96	1.87	2.149	9.06	19.33
RRDR-P7a	biological	RRDR-P7-WS FOLIAGE	95.69	290	0.02	3.29	0.17	3.688	18.96	13.76
RRDR-P7d	biological	RRDR-P7-WS INNER BARK	96.17	244	0.06	3.13	0.30	0.991	5.76	19.29
RRDR-P7b	biological	RRDR-P7-WS OUTER BARK	93.36	109	0.03	1.09	0.44	0.193	1.31	15.24
RRDR-P7c	biological	RRDR-P7-WS OUTER BARK H.R.	92.16	68	0.03	0.57	0.46	0.137	0.70	9.45
RRDR-P8a	biological	RRDR-P8-JP FOLIAGE	97.03	208	0.07	4.08	1.71	2.123	9.20	14.20
RRDR-P8c	biological	RRDR-P8-JP INNER BARK	90.58	442	0.08	5.15	1.64	1.784	9.15	11.22
no # - 1	biological	UNLABELLED #1	94.91	794	0.25	6.45	0.17	3.260	15.17	13.68
no # - 2a	biological	UNLABELLED #2 LEAVES	98.56	554	0.42	2.66	0.35	1.921	7.70	22.03
no # - 2b	biological	UNLABELLED #2 R.RIVER TWIG	50.18	51	0.59	0.65	0.38	0.614	2.32	2.06
no # - 3	biological	UNLABELLED #3 R.RIVER	53.49	47	0.27	0.24	0.39	0.356	0.68	0.95
N4MI-BS-1	lake sediment	72682	7.66	4	0.01	0.02	0.07	0.008	0.01	0.22
N4MI-BS-2	lake sediment	72683	78.33	87	0.13	1.34	2.48	0.351	0.18	7.44

Raw ICP Data		Atomic number	22	23	24	25	26	27	28	29
Sample Id	Sample Type	Lab Id	Ti	V	Cr	Mn	Fe	Co	Ni	Cu
		Detection limit	0.01	1	1	2	0.01	1	1	1
		Units	%	ppm	ppm	ppm	%	ppm	ppm	ppm
RRDR-P2c	biological	RRDR-2 OLDER TWIGS	0.01	24	324	5573	8.68	4	31	131
RRDR-P11-A	biological	RRDR-P11-A	< .01	5	425	409	1.19	2	14	6
RRDR-P12-A	biological	RRDR-P12-A	0.01	6	35	181	0.54	1	5	< 1
RRDR-P13-A	biological	RRDR-P13-A	< .01	8	315	4328	5.08	4	12	8
RRDR-P14-A	biological	RRDR-P14-HT	< .01	5	409	229	0.72	2	11	6
RRDR-P15a	biological	RRDR-P15-WS FOLIAGE	< .01	5	263	2360	0.60	2	26	47
RRDR-P15c	biological	RRDR-P15-WS INNER BARK	< .01	2	21	3404	0.15	4	13	119
RRDR-P15b	biological	RRDR-P15-WS OUTER BARK	< .01	7	42	2665	0.35	4	19	127
RRDR-P16b	biological	RRDR-P16-JP INNER BARK	0.24	86	283	3420	8.77	14	83	174
RRDR-P16a	biological	RRDR-P16-JP OUTER BARK	0.01	17	78	2520	0.70	4	34	184
RRDR-P17A	biological	RRDR-P17-A	0.01	19	30	517	1.32	4	12	4
RRDR-P18a	biological	RRDR-P18-WS FOLIAGE	0.01	15	525	632	1.48	5	33	56
RRDR-P18c	biological	RRDR-P18-WS INNER BANK	0.03	19	229	944	1.33	7	40	152
RRDR-P18b	biological	RRDR-P18-WS OUTER BARK	0.04	56	509	699	2.66	12	42	67
RRDR-P3a	biological	RRDR-P3-WS FOLIAGE	0.01	8	25	7688	0.53	3	21	33
RRDR-P3c	biological	RRDR-P3-WS INNER BARK	< .01	3	156	4372	0.44	6	52	128
RRDR-P3b	biological	RRDR-P3-WS OUTER BARK	0.01	11	240	2107	1.76	3	13	84
RRDR-P4a	biological	RRDR-P4-JP FOLIAGE	0.01	13	914	5163	1.59	6	52	142
RRDR-P4c	biological	RRDR-P4-JP INNER BARK	0.01	8	383	2352	0.79	3	18	79
RRDR-P4b	biological	RRDR-P4-JP OUTER BARK	0.01	11	97	1574	1.60	2	11	51
RRDR-P6a	biological	RRDR-P6-JP FOLIAGE	0.01	11	570	8315	2.19	7	47	135
RRDR-P6b	biological	RRDR-P6-JP INNER BARK	0.01	15	858	3545	1.88	6	41	187
RRDR-P6c	biological	RRDR-P6-JP OUTER BARK	< .01	11	80	1743	0.39	2	12	171
RRDR-P6b	biological	RRDR-P6-JP TWIGS	0.02	34	1749	5571	3.04	10	67	264
RRDR-P7a	biological	RRDR-P7-WS FOLIAGE	< .01	5	151	1667	0.57	4	74	175
RRDR-P7d	biological	RRDR-P7-WS INNER BARK	0.01	9	119	1367	0.58	6	35	95
RRDR-P7b	biological	RRDR-P7-WS OUTER BARK	0.01	16	24	1101	0.82	4	16	58
RRDR-P7c	biological	RRDR-P7-WS OUTER BARK H.R.	0.01	20	316	932	2.25	4	37	51
RRDR-P8a	biological	RRDR-P8-JP FOLIAGE	0.02	17	434	10820	1.69	8	57	88
RRDR-P8c	biological	RRDR-P8-JP INNER BARK	0.02	20	444	4990	1.69	8	49	117
no # - 1	biological	UNLABELLED #1	0.01	7	646	4086	1.41	4	34	91
no # - 2a	biological	UNLABELLED #2 LEAVES	0.02	16	260	9509	2.07	6	29	136
no # - 2b	biological	UNLABELLED #2 R.RIVER TWIG	0.01	12	360	3348	3.18	4	16	25
no # - 3	biological	UNLABELLED #3 R.RIVER	0.04	20	833	1234	3.98	6	35	60
N4MI-BS-1	lake sediment	72682	< .01	3	9	100	0.38	1	2	1
N4MI-BS-2	lake sediment	72683	0.04	69	196	205	1.79	6	35	36

Raw ICP Data		Atomic number	30	33	38	42	47	48	51	56
Sample Id	Sample Type	Lab Id	Zn	As	Sr	Mo	Ag	Cd	Sb	Ba
		Detection limit	1	2	1	1	0.3	0.2	2	1
		Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RRDR-P2c	biological	RRDR-2 OLDER TWIGS	914	6	738	4	1.4	0.6	< 2	227
RRDR-P11-A	biological	RRDR-P11-A	7	3	26	2	0.1	< .2	< 2	65
RRDR-P12-A	biological	RRDR-P12-A	7	4	22	< 1	< .1	< .2	< 2	27
RRDR-P13-A	biological	RRDR-P13-A	9	18	34	2	< .1	< .2	< 2	376
RRDR-P14-A	biological	RRDR-P14-HT	14	< 2	53	2	0.3	< .2	< 2	53
RRDR-P15a	biological	RRDR-P15-WS FOLIAGE	301	4	611	3	1.3	0.5	3	904
RRDR-P15c	biological	RRDR-P15-WS INNER BARK	2525	4	611	2	1.0	1.5	5	383
RRDR-P15b	biological	RRDR-P15-WS OUTER BARK	1486	5	670	3	0.8	1.0	2	995
RRDR-P16b	biological	RRDR-P16-JP INNER BARK	698	103	260	14	7.3	3.6	15	306
RRDR-P16a	biological	RRDR-P16-JP OUTER BARK	811	6	370	6	1.4	4.1	< 2	277
RRDR-P17A	biological	RRDR-P17-A	21	3	21	1	< .1	< .2	< 2	70
RRDR-P18a	biological	RRDR-P18-WS FOLIAGE	552	2	582	6	0.7	0.4	2	842
RRDR-P18c	biological	RRDR-P18-WS INNER BANK	2041	19	902	7	1.1	0.7	6	1266
RRDR-P18b	biological	RRDR-P18-WS OUTER BARK	370	6	381	6	0.4	0.4	2	840
RRDR-P3a	biological	RRDR-P3-WS FOLIAGE	305	6	663	2	0.5	0.4	3	1157
RRDR-P3c	biological	RRDR-P3-WS INNER BARK	2613	6	766	2	1.1	0.5	4	1804
RRDR-P3b	biological	RRDR-P3-WS OUTER BARK	761	3	523	3	0.5	0.3	4	1220
RRDR-P4a	biological	RRDR-P4-JP FOLIAGE	720	5	116	6	2.3	1.0	3	95
RRDR-P4c	biological	RRDR-P4-JP INNER BARK	691	2	277	3	0.7	3.2	< 2	278
RRDR-P4b	biological	RRDR-P4-JP OUTER BARK	383	2	133	3	0.4	2.2	< 2	139
RRDR-P6a	biological	RRDR-P6-JP FOLIAGE	792	12	272	16	1.0	0.8	11	230
RRDR-P6b	biological	RRDR-P6-JP INNER BARK	1366	17	726	9	4.7	8.4	9	928
RRDR-P6c	biological	RRDR-P6-JP OUTER BARK	900	3	524	2	1.6	3.1	< 2	424
RRDR-P6b	biological	RRDR-P6-JP TWIGS	1925	15	776	12	7.2	7.5	10	681
RRDR-P7a	biological	RRDR-P7-WS FOLIAGE	979	3	694	2	0.7	1.8	2	372
RRDR-P7d	biological	RRDR-P7-WS INNER BARK	2508	6	927	2	0.9	0.6	2	791
RRDR-P7b	biological	RRDR-P7-WS OUTER BARK	1189	4	606	1	0.6	0.5	< 2	533
RRDR-P7c	biological	RRDR-P7-WS OUTER BARK H.R.	682	6	368	4	3.3	1.0	< 2	972
RRDR-P8a	biological	RRDR-P8-JP FOLIAGE	1292	10	366	6	1.2	2.9	5	446
RRDR-P8c	biological	RRDR-P8-JP INNER BARK	1537	12	418	6	1.7	8.0	2	703
no # - 1	biological	UNLABELLED #1	283	31	333	31	13.3	1.1	9	210
no # - 2a	biological	UNLABELLED #2 LEAVES	346	56	857	27	16.3	1.3	16	641
no # - 2b	biological	UNLABELLED #2 R.RIVER TWIG	60	14	132	5	1.1	< .2	2	119
no # - 3	biological	UNLABELLED #3 R.RIVER	64	31	51	7	13.3	0.5	7	1248
N4MI-BS-1	lake sediment	72682	4	< 2	22	< 1	0.1	< .2	3	18
N4MI-BS-2	lake sediment	72683	64	15	118	11	< .1	< .2	3	45

Raw ICP Data		Atomic number	57	74	79	82	83	90	92
Sample Id	Sample Type	Lab Id	La	W	Au	Pb	Bi	Th	U
		Detection limit	1	2	5	3	2	2	5
		Units	ppm	ppm	ppb	ppm	ppm	ppm	ppm
RRDR-P2c	biological	RRDR-2 OLDER TWIGS	6	< 1	NSS	24	< 2	< 2	< 5
RRDR-P11-A	biological	RRDR-P11-A	7	< 1	<5	4	2	< 2	< 5
RRDR-P12-A	biological	RRDR-P12-A	8	< 1	<5	2	2	< 2	< 5
RRDR-P13-A	biological	RRDR-P13-A	10	< 1	<5	21	3	< 2	< 5
RRDR-P14-A	biological	RRDR-P14-HT	7	1	<5	2	2	< 2	< 5
RRDR-P15a	biological	RRDR-P15-WS FOLIAGE	2	< 1	NSS	32	< 2	< 2	< 5
RRDR-P15c	biological	RRDR-P15-WS INNER BARK	< 2	< 1	NSS	15	2	< 2	< 5
RRDR-P15b	biological	RRDR-P15-WS OUTER BARK	< 2	< 1	NSS	29	< 2	< 2	< 5
RRDR-P16b	biological	RRDR-P16-JP INNER BARK	41	618	NSS	623	46	6	< 5
RRDR-P16a	biological	RRDR-P16-JP OUTER BARK	8	< 1	NSS	47	< 2	< 2	< 5
RRDR-P17A	biological	RRDR-P17-A	13	8	<5	6	< 2	2	< 5
RRDR-P18a	biological	RRDR-P18-WS FOLIAGE	7	1	NSS	20	3	< 2	< 5
RRDR-P18c	biological	RRDR-P18-WS INNER BANK	9	< 1	NSS	92	< 2	< 2	< 5
RRDR-P18b	biological	RRDR-P18-WS OUTER BARK	21	3	NSS	34	< 2	5	< 5
RRDR-P3a	biological	RRDR-P3-WS FOLIAGE	7	3	NSS	21	< 2	< 2	< 5
RRDR-P3c	biological	RRDR-P3-WS INNER BARK	3	< 1	NSS	25	4	< 2	< 5
RRDR-P3b	biological	RRDR-P3-WS OUTER BARK	4	2	NSS	28	< 2	< 2	< 5
RRDR-P4a	biological	RRDR-P4-JP FOLIAGE	7	< 1	NSS	72	< 2	< 2	< 5
RRDR-P4c	biological	RRDR-P4-JP INNER BARK	5	< 1	NSS	23	4	< 2	< 5
RRDR-P4b	biological	RRDR-P4-JP OUTER BARK	6	< 1	NSS	25	3	< 2	< 5
RRDR-P6a	biological	RRDR-P6-JP FOLIAGE	4	2	NSS	118	3	< 2	< 5
RRDR-P6b	biological	RRDR-P6-JP INNER BARK	3	< 1	NSS	93	5	< 2	< 5
RRDR-P6c	biological	RRDR-P6-JP OUTER BARK	3	< 1	NSS	12	< 2	< 2	< 5
RRDR-P6b	biological	RRDR-P6-JP TWIGS	15	< 1	NSS	158	13	3	< 5
RRDR-P7a	biological	RRDR-P7-WS FOLIAGE	2	38	NSS	36	< 2	< 2	< 5
RRDR-P7d	biological	RRDR-P7-WS INNER BARK	5	< 1	NSS	11	< 2	< 2	< 5
RRDR-P7b	biological	RRDR-P7-WS OUTER BARK	6	< 1	NSS	17	< 2	< 2	< 5
RRDR-P7c	biological	RRDR-P7-WS OUTER BARK H.R.	6	< 1	NSS	27	2	< 2	< 5
RRDR-P8a	biological	RRDR-P8-JP FOLIAGE	11	< 1	NSS	74	3	2	< 5
RRDR-P8c	biological	RRDR-P8-JP INNER BARK	9	6	NSS	77	< 2	< 2	< 5
no # - 1	biological	UNLABELLED #1	4	< 1	<5	13845	< 2	< 2	< 5
no # - 2a	biological	UNLABELLED #2 LEAVES	10	6	<5	28731	< 2	< 2	< 5
no # - 2b	biological	UNLABELLED #2 R.RIVER TWIG	8	1	<5	1400	< 2	< 2	< 5
no # - 3	biological	UNLABELLED #3 R.RIVER	14	81	NSS	6071	7	3	< 5
N4MI-BS-1	lake sediment	72682	5	< 1	<5	< 2	< 2	< 2	< 5
N4MI-BS-2	lake sediment	72683	33	< 1	<5	15	< 2	10	12

Raw ICP Data		Atomic number		5	11	12	13	15	19	20
Sample Id	Sample Type	Lab Id	LOI	B	Na	Mg	Al	P	K	Ca
		Detection limit		3	0.01	0.01	0.01	0.001	0.01	0.01
		Units	%	ppm	%	%	%	%	%	%
N4MI-BS-3	lake sediment	72684	20.44	15	0.02	0.31	0.77	0.046	0.14	0.91
N4MI-BS-4	lake sediment	72685	43.73	33	0.04	0.45	1.45	0.247	0.3	1.58
N4MI-BS-6	lake sediment	72686	17.44	10	0.02	0.17	0.44	0.065	0.09	0.77
N4MI-99	lake sediment	72874	60.16	31	0.03	0.34	0.68	0.109	0.13	1.82
N4MI-103	lake sediment	72875	84.06	149	0.06	0.79	1.48	0.631	0.25	3.73
N4MI-105	lake sediment	72876	60.06	32	0.03	0.34	0.76	0.570	0.30	1.56
N4MI-114	lake sediment	72877	13.56	5	0.01	0.04	0.35	0.069	0.06	0.12
N4MI-BS-12	lake sediment	72878	77.90	85	0.05	1.21	1.42	0.169	0.21	4.89
N4MI-BS-13	lake sediment	72879	61.63	52	0.04	0.5	0.87	0.206	0.19	2.08
N4MI-BS-14	lake sediment	72880	65.15	45	0.02	0.37	1.25	0.188	0.15	2.78
N4MI-BS-15	lake sediment	72881	49.02	29	0.02	0.17	0.49	0.147	0.1	1.16
N4MI-BS-16	lake sediment	72882	58.66	87	0.04	0.65	1.38	0.256	0.25	3.77
N4MI-BS-17	lake sediment	72883	12.70	3	0.01	0.05	0.43	0.204	0.05	0.22
A1	lake sediment	A1	82.49	93	0.05	0.97	1.00	0.339	0.20	4.37
A2	lake sediment	A2	0.00	< 2	< .01	< .01	0.02	< .001	0.01	< .01
A3	lake sediment	A3	0.00	< 2	< .01	0.01	0.03	0.003	0.01	0.02
C2*	lake sediment	C-2	8.98	4	< .01	0.02	0.06	0.012	0.02	0.13
C3	lake sediment	C-3	91.38	135	0.12	1.19	1.05	0.439	0.25	4.70
C5	lake sediment	C-5	84.27	115	0.08	1.37	1.17	0.480	0.25	5.16
N4MI-108	lake sediment	N4MI-108	69.20	45	0.03	0.51	1.58	0.139	0.16	2.64
N4MI-92	lake sediment	N4MI-92	56.87	28	0.02	0.28	0.45	0.074	0.09	1.79
N4MI-78	rock	N4MI-78	2.45	3	< .01	0.02	0.08	0.017	0.02	0.19
N4RV-76S	sediment	N4RV-76	20.36	17	0.03	0.13	0.22	0.261	0.08	0.86
N4RV-77S	sediment	N4RV-77(SL)	27.43	< 2	< .01	0.07	0.02	0.545	0.01	1.38
N4RV-83S	sediment	N4RV-83(SL)	30.78	< 2	0.01	0.19	0.28	0.938	0.07	1.51
N4RV-86S	sediment	N4RV-86(SL)	29.19	< 2	0.01	0.1	0.06	0.884	0.02	1.68
N4TJ-05	soil	72676		3	< .01	0.03	0.24	0.017	0.01	0.02
N4TJ-06	soil	72677		5	< .01	0.04	0.28	0.029	0.01	0.03
N4TJ-07	soil	72678		5	< .01	0.05	0.4	0.021	0.01	0.02
N4TJ-08	soil	72679		5	< .01	0.05	0.42	0.028	0.01	0.03
N4TJ-09	soil	72680		5	0.01	0.13	0.79	0.048	0.03	0.07
N4TJ-10	soil	72681		< 2	0.01	0.04	0.38	0.017	0.01	0.02
N4TJ-01	soil	72864		3	< .01	0.06	0.77	0.046	0.02	0.04
N4TJ-02	soil	72865		2	< .01	0.03	0.46	0.055	0.01	0.03
N4TJ-03	soil	72866		2	< .01	0.02	0.22	0.007	< .01	0.01
N4TJ-04	soil	72867		3	< .01	0.07	0.64	0.063	0.02	0.04

Raw ICP Data		Atomic number	22	23	24	25	26	27	28	29
Sample Id	Sample Type	Lab Id	Ti	V	Cr	Mn	Fe	Co	Ni	Cu
		Detection limit	0.01	1	1	2	0.01	1	1	1
		Units	%	ppm	ppm	ppm	%	ppm	ppm	ppm
N4MI-BS-3	lake sediment	72684	0.01	20	33	424	1.37	4	15	5
N4MI-BS-4	lake sediment	72685	0.01	60	40	1154	13.69	7	29	14
N4MI-BS-6	lake sediment	72686	0.01	14	545	420	2.23	3	16	10
N4MI-99	lake sediment	72874	0.01	21	33	155	1.22	3	14	14
N4MI-103	lake sediment	72875	0.02	64	59	750	15.1	8	37	37
N4MI-105	lake sediment	72876	< .01	42	27	1216	24.45	4	23	46
N4MI-114	lake sediment	72877	0.01	40	60	33	1.55	1	4	5
N4MI-BS-12	lake sediment	72878	0.02	37	37	147	1.67	5	23	22
N4MI-BS-13	lake sediment	72879	0.02	54	242	701	5.01	3	19	15
N4MI-BS-14	lake sediment	72880	0.02	98	54	328	11.88	6	18	14
N4MI-BS-15	lake sediment	72881	0.01	39	102	176	3.87	3	14	6
N4MI-BS-16	lake sediment	72882	0.02	36	36	780	11.15	10	29	11
N4MI-BS-17	lake sediment	72883	0.01	20	24	121	7.22	< 1	4	6
A1	lake sediment	A1	0.02	26	59	343	1.67	5	21	33
A2	lake sediment	A2	< .01	< 2	47	9	0.09	< 1	2	< 1
A3	lake sediment	A3	< .01	< 2	143	21	0.20	1	4	1
C2*	lake sediment	C-2	< .01	< 2	44	20	0.16	< 1	3	1
C3	lake sediment	C-3	0.02	27	42	280	2.02	7	23	49
C5	lake sediment	C-5	0.02	27	74	299	1.51	8	27	46
N4MI-108	lake sediment	N4MI-108	0.03	96	54	249	6.72	6	24	11
N4MI-92	lake sediment	N4MI-92	0.01	16	19	333	2.81	2	10	7
N4MI-78	rock	N4MI-78	< .01	2	161	77	0.92	1	6	2
N4RV-76S	sediment	N4RV-76	0.01	19	196	427	23.62	< 1	10	17
N4RV-77S	sediment	N4RV-77(SL)	< .01	6	1	8580	57.17	< 1	2	7
N4RV-83S	sediment	N4RV-83(SL)	< .01	22	8	7368	47.02	< 1	10	8
N4RV-86S	sediment	N4RV-86(SL)	< .01	12	3	362	58.09	< 1	2	7
N4TJ-05	soil	72676	0.01	8	4	37	0.47	1	1	5
N4TJ-06	soil	72677	0.01	8	6	47	0.53	2	6	4
N4TJ-07	soil	72678	0.02	12	6	50	0.71	1	4	5
N4TJ-08	soil	72679	0.02	17	8	57	0.9	2	5	2
N4TJ-09	soil	72680	0.02	18	10	89	1.15	4	9	7
N4TJ-10	soil	72681	0.02	10	6	44	0.6	1	3	3
N4TJ-01	soil	72864	0.01	19	8	47	1.06	2	3	7
N4TJ-02	soil	72865	0.01	11	4	28	0.62	1	2	5
N4TJ-03	soil	72866	0.01	4	3	11	0.23	1	1	3
N4TJ-04	soil	72867	0.01	12	7	71	1.44	3	6	5

Raw ICP Data		Atomic number	30	33	38	42	47	48	51	56
Sample Id	Sample Type	Lab Id	Zn	As	Sr	Mo	Ag	Cd	Sb	Ba
		Detection limit	1	2	1	1	0.3	0.2	2	1
		Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
N4MI-BS-3	lake sediment	72684	50	4	43	1	< .1	< .2	< 2	154
N4MI-BS-4	lake sediment	72685	108	< 2	62	4	0.1	< .2	< 2	112
N4MI-BS-6	lake sediment	72686	27	4	33	3	0.8	< .2	3	161
N4MI-99	lake sediment	72874	172	19	71	4	0.1	0.7	3	134
N4MI-103	lake sediment	72875	256	36	123	10	0.5	1.3	2	25
N4MI-105	lake sediment	72876	224	2444	105	6	5	0.3	48	59
N4MI-114	lake sediment	72877	8	4	31	1	< .1	< .2	< 2	121
N4MI-BS-12	lake sediment	72878	153	11	152	12	0.2	0.9	< 2	34
N4MI-BS-13	lake sediment	72879	147	8	54	4	0.1	0.7	2	75
N4MI-BS-14	lake sediment	72880	102	6	111	4	< .1	< .2	< 2	56
N4MI-BS-15	lake sediment	72881	50	6	54	2	0.1	0.2	2	164
N4MI-BS-16	lake sediment	72882	171	10	97	4	0.1	< .2	< 2	108
N4MI-BS-17	lake sediment	72883	18	2	22	1	0.1	< .2	4	194
A1	lake sediment	A1	146	6	129	9	1.3	0.5	< 2	29
A2	lake sediment	A2	< 1	< 2	5	< 1	< .1	< .2	< 2	4
A3	lake sediment	A3	3	2	6	< 1	0.1	0.2	< 2	5
C2*	lake sediment	C-2	3	< 2	22	< 1	0.1	< .2	< 2	14
C3	lake sediment	C-3	189	13	170	11	4.0	1.4	2	19
C5	lake sediment	C-5	169	15	171	13	0.7	0.9	2	22
N4MI-108	lake sediment	N4MI-108	155	11	71	6	< .1	0.6	< 2	46
N4MI-92	lake sediment	N4MI-92	66	4	49	5	0.1	0.3	< 2	66
N4MI-78	rock	N4MI-78	2	2	23	1	< .1	< .2	< 2	16
N4RV-76S	sediment	N4RV-76	21	20	46	4	0.2	< .2	< 2	325
N4RV-77S	sediment	N4RV-77(SL)	2	19	66	1	0.9	< .2	< 2	782
N4RV-83S	sediment	N4RV-83(SL)	9	66	59	1	0.8	< .2	3	520
N4RV-86S	sediment	N4RV-86(SL)	1	3	92	< 1	0.5	< .2	< 2	761
N4TJ-05	soil	72676	8	< 2	6	< 1	< .1	< .2	3	20
N4TJ-06	soil	72677	10	2	7	< 1	0.1	< .2	2	19
N4TJ-07	soil	72678	11	2	7	< 1	< .1	< .2	< 2	20
N4TJ-08	soil	72679	17	2	7	< 1	< .1	< .2	< 2	34
N4TJ-09	soil	72680	34	4	9	< 1	< .1	< .2	4	57
N4TJ-10	soil	72681	11	4	6	< 1	< .1	0.2	< 2	27
N4TJ-01	soil	72864	14	< 2	9	< 1	< .1	< .2	< 2	39
N4TJ-02	soil	72865	15	2	7	< 1	0.1	< .2	3	21
N4TJ-03	soil	72866	3	< 2	9	< 1	< .1	< .2	2	7
N4TJ-04	soil	72867	9	19	11	1	< .1	< .2	< 2	29

Raw ICP Data		Atomic number	57	74	79	82	83	90	92
Sample Id	Sample Type	Lab Id	La	W	Au	Pb	Bi	Th	U
		Detection limit	1	2	5	3	2	2	5
		Units	ppm	ppm	ppb	ppm	ppm	ppm	ppm
N4MI-BS-3	lake sediment	72684	14	< 1	<5	2	< 2	3	< 5
N4MI-BS-4	lake sediment	72685	19	< 1	<5	3	10	8	< 5
N4MI-BS-6	lake sediment	72686	8	< 1	<5	12	< 2	2	< 5
N4MI-99	lake sediment	72874	13	< 1	10	66	< 2	2	< 5
N4MI-103	lake sediment	72875	25	1	30	101	< 2	7	< 5
N4MI-105	lake sediment	72876	14	1	400	89	< 2	3	< 5
N4MI-114	lake sediment	72877	31	< 1	<5	7	< 2	3	< 5
N4MI-BS-12	lake sediment	72878	18	< 1	<5	15	< 2	5	6
N4MI-BS-13	lake sediment	72879	17	< 1	NSS	28	< 2	5	< 5
N4MI-BS-14	lake sediment	72880	30	< 1	<5	9	8	11	< 5
N4MI-BS-15	lake sediment	72881	11	< 1	12	13	< 2	4	< 5
N4MI-BS-16	lake sediment	72882	16	< 1	<5	10	< 2	7	< 5
N4MI-BS-17	lake sediment	72883	7	< 1	<5	4	4	3	< 5
A1	lake sediment	A1	12	3	2060	36	< 2	3	< 5
A2	lake sediment	A2	2	2	<5	< 2	< 2	< 2	< 5
A3	lake sediment	A3	2	1	<5	< 2	< 2	< 2	< 5
C2*	lake sediment	C-2	5	< 1	<5	5	< 2	< 2	< 5
C3	lake sediment	C-3	13	1	NSS	289	< 2	3	8
C5	lake sediment	C-5	13	1	NSS	68	< 2	3	15
N4MI-108	lake sediment	N4MI-108	47	2	<5	11	< 2	11	9
N4MI-92	lake sediment	N4MI-92	8	< 1	<5	10	< 2	2	< 5
N4MI-78	rock	N4MI-78	6	< 1	<5	2	< 2	< 2	< 5
N4RV-76S	sediment	N4RV-76	7	1	<5	41	< 2	2	< 5
N4RV-77S	sediment	N4RV-77(SL)	2	2	<5	4	3	4	< 5
N4RV-83S	sediment	N4RV-83(SL)	4	2	<5	< 2	< 2	3	< 5
N4RV-86S	sediment	N4RV-86(SL)	3	2	<5	6	< 2	3	< 5
N4TJ-05	soil	72676	7	< 1	<5	5	< 2	3	< 5
N4TJ-06	soil	72677	9	< 1	<5	6	< 2	4	< 5
N4TJ-07	soil	72678	13	1	<5	5	< 2	6	< 5
N4TJ-08	soil	72679	16	< 1	<5	3	< 2	6	< 5
N4TJ-09	soil	72680	14	< 1	<5	3	2	4	< 5
N4TJ-10	soil	72681	15	1	<5	5	< 2	7	< 5
N4TJ-01	soil	72864	13	< 1	<5	5	< 2	5	< 5
N4TJ-02	soil	72865	7	< 1	<5	7	< 2	2	< 5
N4TJ-03	soil	72866	4	< 1	<5	2	< 2	< 2	< 5
N4TJ-04	soil	72867	8	< 1	<5	2	< 2	3	< 5

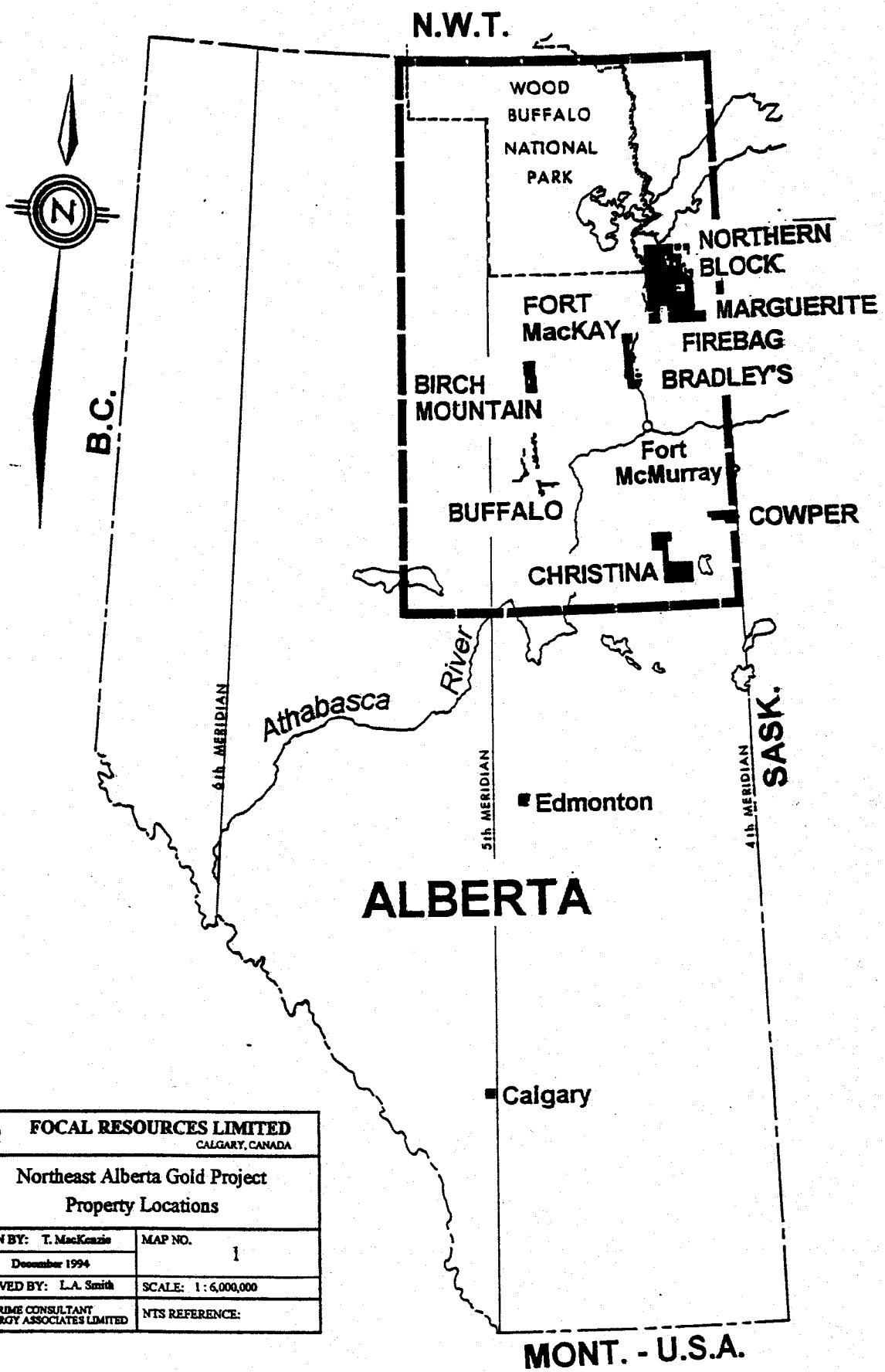
Raw ICP Data		Atomic number		5	11	12	13	15	19	20
Sample Id	Sample Type	Lab Id	LOI	B	Na	Mg	Al	P	K	Ca
		Detection limit		3	0.01	0.01	0.01	0.001	0.01	0.01
		Units	%	ppm	%	%	%	%	%	%
N4MI-SOIL-17	soil	72886	2.46	5	0.01	0.09	0.8	0.026	0.08	0.13
N4TJ-21	soil	72888		3	< .01	0.03	0.45	0.024	0.01	0.02
N4TJ-22	soil	72889		2	< .01	0.02	0.29	0.021	0.01	0.01
N4TJ-23	soil	72890		3	< .01	0.02	0.3	0.015	0.01	0.01
N4TJ-24	soil	72891		3	0.01	0.02	0.4	0.023	0.01	0.01
N4TJ-25	soil	72892		4	< .01	0.03	0.4	0.018	0.01	0.01
N4TJ-27	soil	72893		2	< .01	0.01	0.16	0.023	0.01	0.02
N4TJ-29	soil	72895		4	< .01	0.1	0.53	0.005	0.04	0.09
N4TJ-30	soil	72896		2	0.01	0.03	0.33	0.03	0.01	0.03
N4TJ-31	soil	72897	6.07	17	0.02	16.99	0.14	0.016	0.05	17.66
N4TJ-32	soil	72898	25.37	36	0.04	1.35	1.19	0.169	0.49	2.52
N4TJ-34	soil	72900	10.55	2	0.01	0.06	0.13	0.016	0.02	0.36
N4RV-69S	soil	N4RV 69S		20	< .01	0.04	0.14	0.511	0.01	0.47
N4RV-71S	soil	N4RV 71S		< 2	< .01	0.03	0.33	0.02	0.01	0.03
N4RV-74S	soil	N4RV 74S		17	0.01	0.06	0.17	0.87	0.01	0.42
N4RV-75S	soil	N4RV 75S		< 2	< .01	0.04	0.6	0.024	0.01	0.02
N4RV-79S	soil	N4RV 79S		< 2	< .01	0.03	0.12	0.007	0.01	0.04
N4RV-84S	soil	N4RV 84S		2	0.01	0.03	0.16	0.006	0.01	0.02
N4MI-SOIL-17	soil	RE 72886	2.46	5	0.01	0.09	0.81	0.027	0.08	0.13
RRAH-S1	soil	RR-S1		3	< .01	0.02	0.06	0.006	0.01	0.02
RRAH-S2	soil	RR-S2		< 2	< .01	0.09	0.24	0.013	0.04	0.07
RRAH-S3	soil	RR-S3		2	< .01	0.01	0.06	0.069	0.01	0.03
RRAH-S4	soil	RR-S4		< 2	< .01	0.01	0.05	0.004	0.01	0.01
RRAH-S5	soil	RR-S5		3	< .01	0.01	0.05	0.004	0.01	0.01
RRAH-S6	soil	RR-S6		8	0.01	0.1	0.15	0.287	0.02	0.32

Raw ICP Data		Atomic number	22	23	24	25	26	27	28	29
Sample Id	Sample Type	Lab Id	Ti	V	Cr	Mn	Fe	Co	Ni	Cu
		Detection limit	0.01	1	1	2	0.01	1	1	1
		Units	%	ppm	ppm	ppm	%	ppm	ppm	ppm
N4MI-SOIL-17	soil	72886	0.01	20	37	43	1.19	1	5	2
N4TJ-21	soil	72888	0.01	9	5	29	0.5	< 1	2	3
N4TJ-22	soil	72889	0.01	5	3	23	0.32	1	4	3
N4TJ-23	soil	72890	0.01	4	3	12	0.27	1	1	2
N4TJ-24	soil	72891	0.01	6	3	15	0.36	1	1	4
N4TJ-25	soil	72892	0.01	6	4	22	0.4	1	3	3
N4TJ-27	soil	72893	0.01	5	2	98	0.24	< 1	< 1	2
N4TJ-29	soil	72895	0.01	11	10	67	0.74	3	5	7
N4TJ-30	soil	72896	0.01	6	4	21	0.44	1	2	5
N4TJ-31	soil	72897	< .01	5	4	101	0.17	1	6	3
N4TJ-32	soil	72898	0.01	24	51	1615	2.98	4	13	7
N4TJ-34	soil	72900	< .01	4	9	74	0.38	< 1	2	< 1
N4RV-69S	soil	N4RV 69S	< .01	23	17	1028	31.11	4	1	4
N4RV-71S	soil	N4RV 71S	0.01	6	2	23	0.47	1	1	1
N4RV-74S	soil	N4RV 74S	0.01	57	21	307	24.51	3	< 1	3
N4RV-75S	soil	N4RV 75S	0.01	12	5	36	0.81	2	3	2
N4RV-79S	soil	N4RV 79S	< .01	4	3	16	0.26	< 1	< 1	1
N4RV-84S	soil	N4RV 84S	0.01	5	3	32	0.29	1	< 1	1
N4MI-SOIL-17	soil	RE 72886	0.01	20	39	41	1.21	1	6	2
RRAH-S1	soil	RR-S1	0.01	2	< 1	18	0.14	< 1	< 1	4
RRAH-S2	soil	RR-S2	0.01	8	5	48	0.44	2	4	4
RRAH-S3	soil	RR-S3	< .01	5	2	575	2.63	4	3	< 1
RRAH-S4	soil	RR-S4	0.01	3	< 1	22	0.24	1	< 1	4
RRAH-S5	soil	RR-S5	0.01	3	1	36	0.25	1	< 1	5
RRAH-S6	soil	RR-S6	0.01	13	6	630	10.17	5	4	32

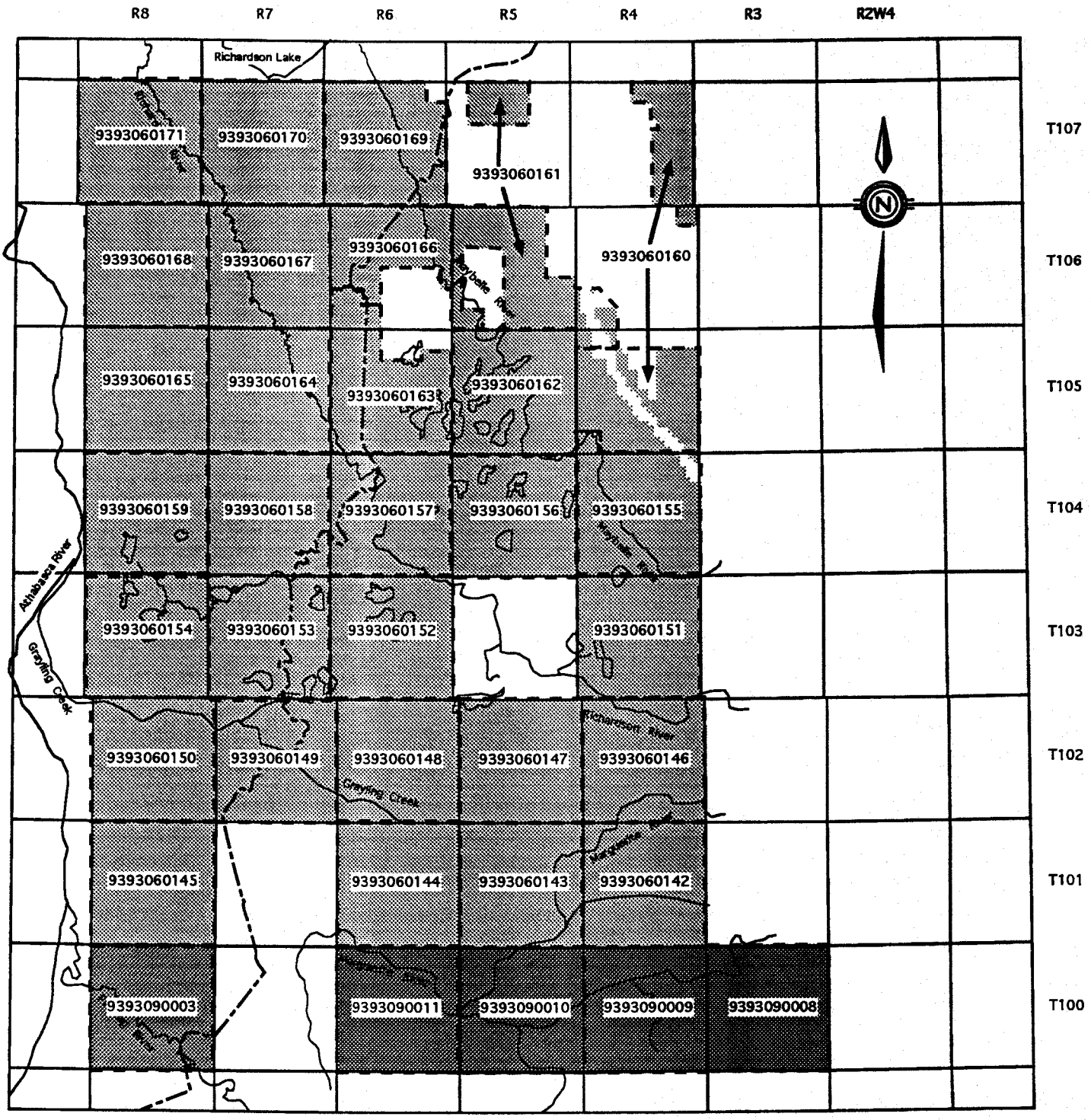
Raw ICP Data		Atomic number	30	33	38	42	47	48	51	56
Sample Id	Sample Type	Lab Id	Zn	As	Sr	Mo	Ag	Cd	Sb	Ba
		Detection limit	1	2	1	1	0.3	0.2	2	1
		Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
N4MI-SOIL-17	soil	72886	8	3	21	< 1	< .1	< .2	2	64
N4TJ-21	soil	72888	11	< 2	6	< 1	< .1	< .2	2	27
N4TJ-22	soil	72889	18	< 2	5	< 1	0.1	< .2	2	12
N4TJ-23	soil	72890	10	< 2	5	< 1	0.1	< .2	4	17
N4TJ-24	soil	72891	18	< 2	6	< 1	0.1	0.2	4	17
N4TJ-25	soil	72892	9	< 2	7	< 1	< .1	0.2	3	23
N4TJ-27	soil	72893	14	< 2	4	< 1	0.1	< .2	4	18
N4TJ-29	soil	72895	6	< 2	9	< 1	0.2	< .2	2	33
N4TJ-30	soil	72896	11	< 2	6	< 1	0.1	< .2	4	9
N4TJ-31	soil	72897	4	4	56	1	< .1	0.3	2	188
N4TJ-32	soil	72898	44	4	72	1	0.2	< .2	< 2	85
N4TJ-34	soil	72900	5	3	29	< 1	< .1	< .2	2	36
N4RV-69S	soil	N4RV 69S	17	59	19	7	< .1	< .2	< 2	416
N4RV-71S	soil	N4RV 71S	7	< 2	5	< 1	< .1	< .2	2	23
N4RV-74S	soil	N4RV 74S	20	51	19	1	0.1	< .2	< 2	277
N4RV-75S	soil	N4RV 75S	11	2	5	1	< .1	< .2	< 2	28
N4RV-79S	soil	N4RV 79S	4	< 2	5	< 1	< .1	< .2	< 2	9
N4RV-84S	soil	N4RV 84S	7	< 2	5	< 1	< .1	< .2	< 2	12
N4MI-SOIL-17	soil	RE 72886	8	2	20	1	< .1	< .2	3	59
RRAH-S1	soil	RR-S1	2	< 2	6	< 1	< .1	0.2	2	6
RRAH-S2	soil	RR-S2	14	< 2	10	1	< .1	0.2	< 2	18
RRAH-S3	soil	RR-S3	4	20	8	2	0.1	< .2	< 2	36
RRAH-S4	soil	RR-S4	1	< 2	6	< 1	< .1	< .2	2	5
RRAH-S5	soil	RR-S5	< 1	< 2	6	< 1	< .1	< .2	2	5
RRAH-S6	soil	RR-S6	21	18	17	< 1	0.1	0.2	< 2	182

Raw ICP Data		Atomic number	57	74	79	82	83	90	92
Sample Id	Sample Type	Lab Id	La	W	Au	Pb	Bi	Th	U
		Detection limit	1	2	5	3	2	2	5
		Units	ppm	ppm	ppb	ppm	ppm	ppm	ppm
N4MI-SOIL-17	soil	72886	11	< 1	<5	3	< 2	3	< 5
N4TJ-21	soil	72888	6	1	<5	< 2	< 2	3	< 5
N4TJ-22	soil	72889	4	1	<5	< 2	< 2	2	< 5
N4TJ-23	soil	72890	3	< 1	<5	< 2	< 2	< 2	< 5
N4TJ-24	soil	72891	5	1	<5	2	< 2	2	< 5
N4TJ-25	soil	72892	6	1	<5	< 2	< 2	3	< 5
N4TJ-27	soil	72893	5	< 1	<5	< 2	< 2	2	< 5
N4TJ-29	soil	72895	10	< 1	<5	3	< 2	4	< 5
N4TJ-30	soil	72896	5	< 1	<5	< 2	2	2	< 5
N4TJ-31	soil	72897	< 2	5	<5	< 2	< 2	7	< 5
N4TJ-32	soil	72898	14	< 1	<5	6	< 2	4	< 5
N4TJ-34	soil	72900	7	< 1	<5	3	< 2	< 2	< 5
N4RV-69S	soil	N4RV 69S	2	2	<5	2	12	< 2	< 5
N4RV-71S	soil	N4RV 71S	5	< 1	<5	< 2	< 2	< 2	< 5
N4RV-74S	soil	N4RV 74S	10	< 1	<5	3	12	2	< 5
N4RV-75S	soil	N4RV 75S	7	< 1	<5	4	< 2	2	< 5
N4RV-79S	soil	N4RV 79S	4	< 1	<5	< 2	< 2	< 2	< 5
N4RV-84S	soil	N4RV 84S	5	< 1	<5	< 2	< 2	< 2	< 5
N4MI-SOIL-17	soil	RE 72886	11	< 1	<5	3	< 2	2	< 5
RRAH-S1	soil	RR-S1	6	< 1	<5	3	2	2	< 5
RRAH-S2	soil	RR-S2	7	< 1	<5	2	< 2	2	< 5
RRAH-S3	soil	RR-S3	5	< 1	<5	2	< 2	2	< 5
RRAH-S4	soil	RR-S4	4	< 1	<5	< 2	< 2	< 2	< 5
RRAH-S5	soil	RR-S5	3	< 1	<5	< 2	< 2	< 2	< 5
RRAH-S6	soil	RR-S6	10	< 1	<5	3	< 2	2	< 5

IV. Maps



FOCAL RESOURCES LIMITED CALGARY, CANADA	
Northeast Alberta Gold Project Property Locations	
DRAWN BY: T. MacKenzie	MAP NO. 1
DATE: December 1994	
APPROVED BY: L.A. Smith	SCALE: 1 : 6,000,000
PRIME CONSULTANT LAS ENERGY ASSOCIATES LIMITED	NTS REFERENCE:


R8
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R2W4
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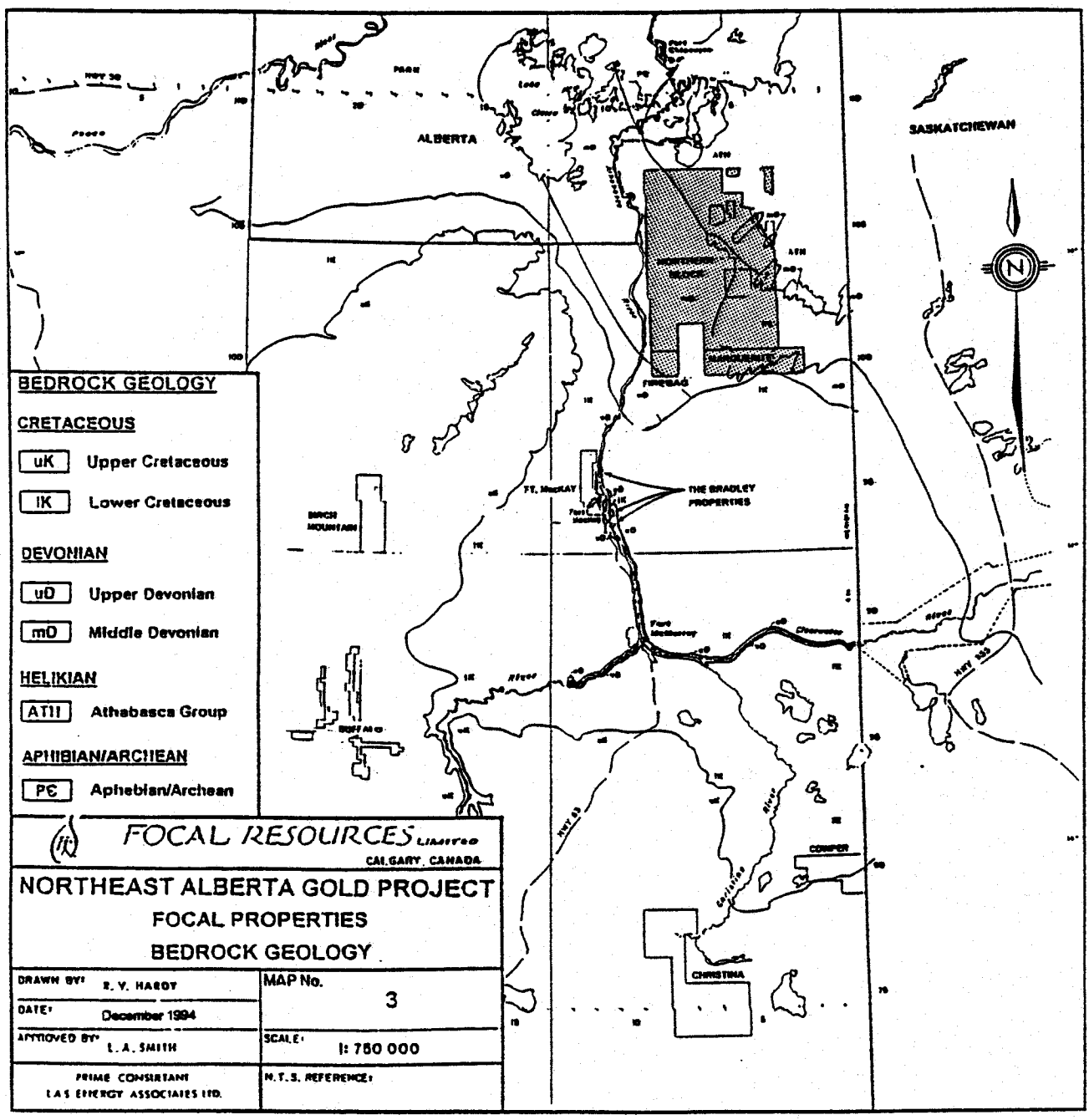
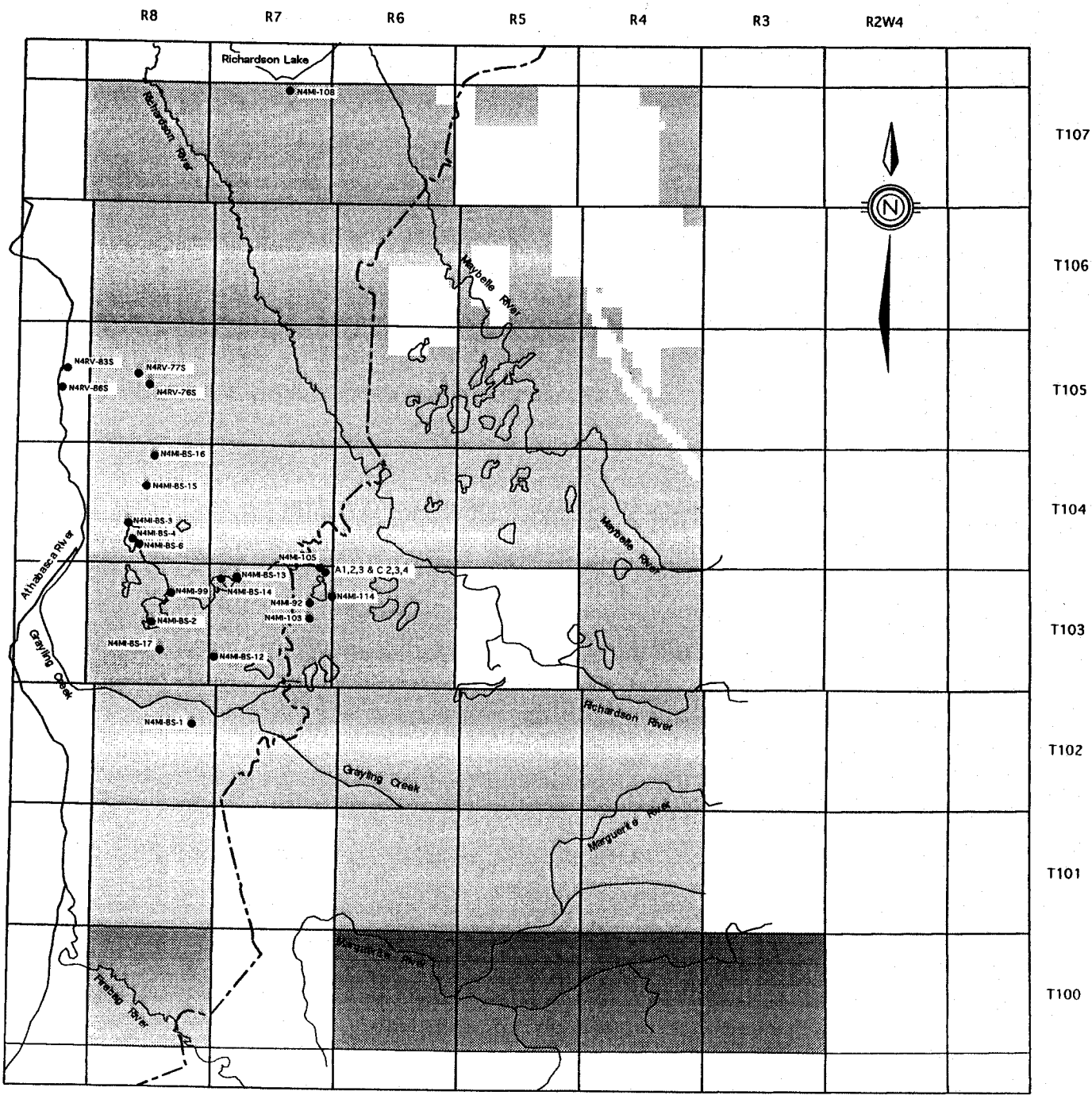
9393060142
9393090003
9393090011
9393090010
9393090009
9393090008
Athabasca River
Grayling Creek
Richardson River
Legend
Northern Block Property
Firebag Property
Marguerite Property
Winter Road
9393090011 Permit Number
FOCAL RESOURCES LIMITED
CALGARY, CANADA
Northern Block, Firebag, and Marguerite Properties
Permit Numbers
DRAWN BY: M. Innes
DATE: Aug 1995
APPROVED BY:
5 km
MAP NO. 2
SCALE:
NTS REFERENCE: 74E & 74L


ALBERTA
SASKATCHEWAN
N
THE BRADLEY PROPERTIES
BIRCH MOUNTAIN
CHRISTINA
BEDROCK GEOLOGY
CRETACEOUS
uK Upper Cretaceous
lK Lower Cretaceous
DEVONIAN
uD Upper Devonian
mD Middle Devonian
HELIKIAN
ATH Athabasca Group
APHIBIAN/ARCHEAN
PE Aphebian/Archean
FOCAL RESOURCES Limited
CALGARY, CANADA
NORTHEAST ALBERTA GOLD PROJECT
FOCAL PROPERTIES
BEDROCK GEOLOGY
DRAWN BY: R. V. HARDY
DATE: December 1994
APPROVED BY: L. A. SMITH
MAP No. 3
SCALE: 1: 750 000
PRIME CONSULTANT
LAS ENERGY ASSOCIATES LTD.
N.T.S. REFERENCE:



Legend

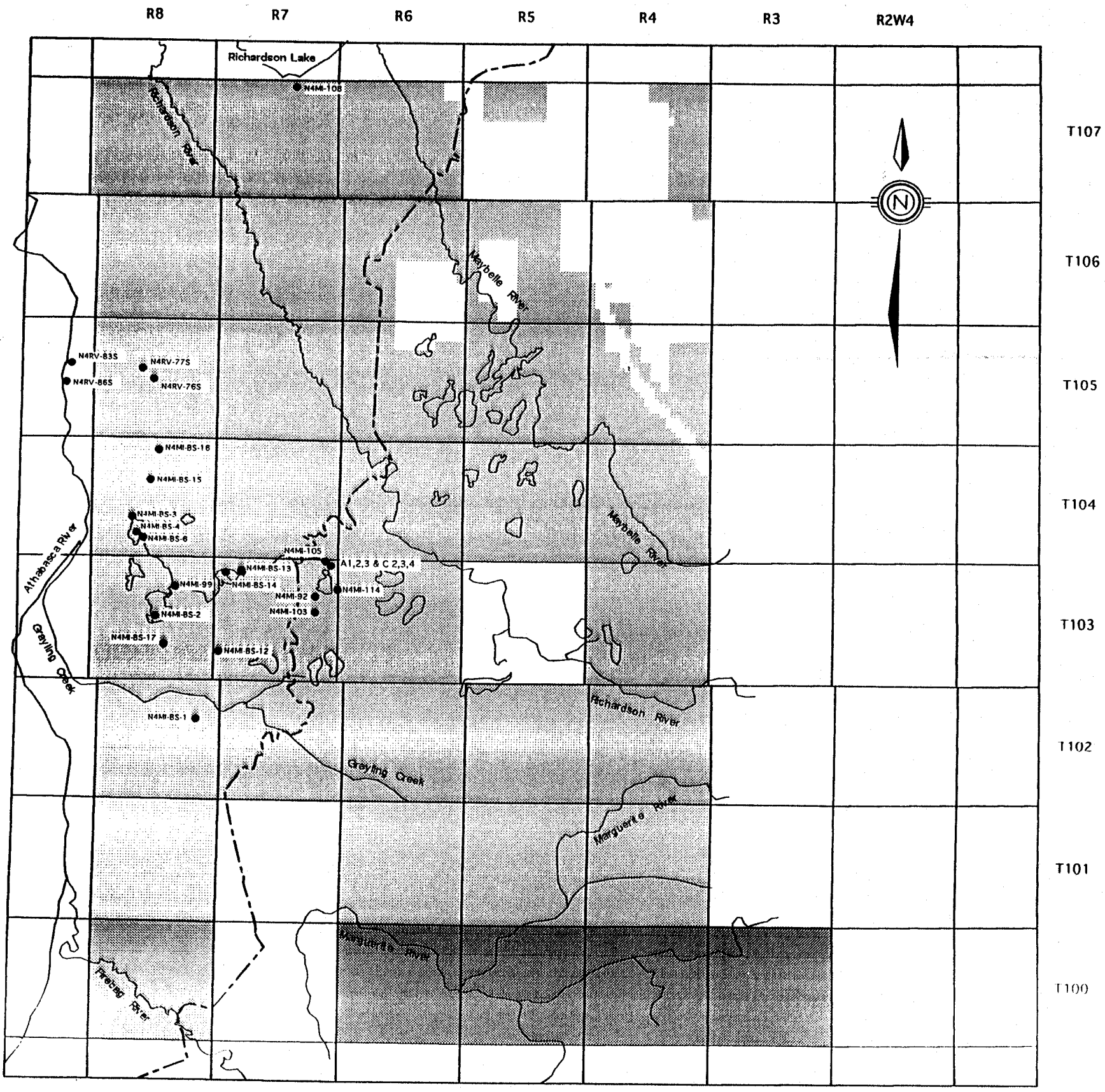
- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties

Lake Sediment Sample Locations (Analysed by ICP-AES)

DRAWN BY: M. Innes	MAP NO. 4a
DATE: Aug 1995	
APPROVED BY: DN	SCALE: 5 km
Revised: 7/11/95	NTS REFERENCE: 74E & 74L



Legend

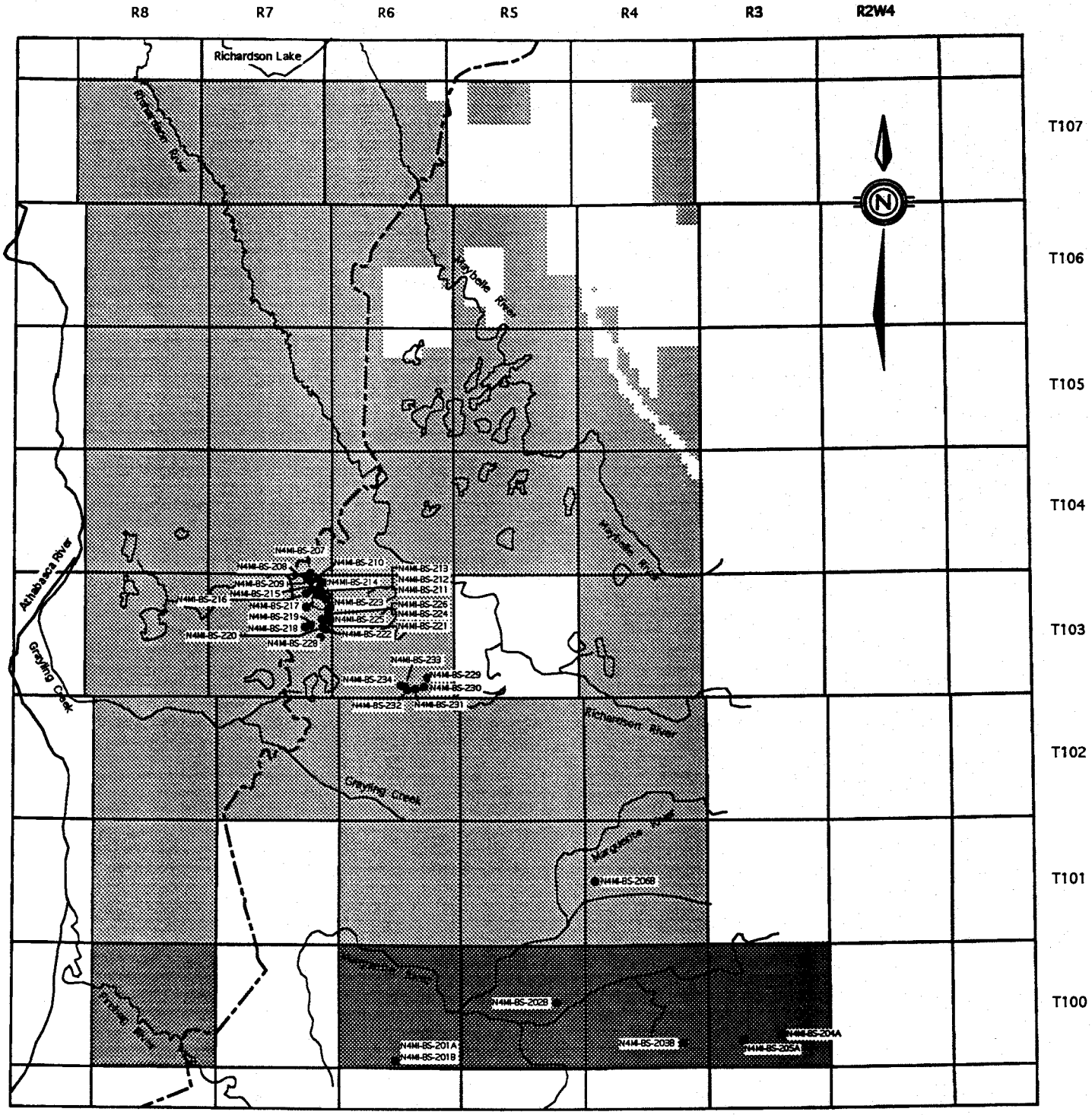
- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties

Lake Sediment Sample Locations (Analysed by ICP-AES)

DRAWN BY: M. Innes	MAP NO. 4a
DATE: Aug 1995	SCALE: 5 km
APPROVED BY: DN	NTS REFERENCE: 74E & 74L
Revised: 7/11/95	



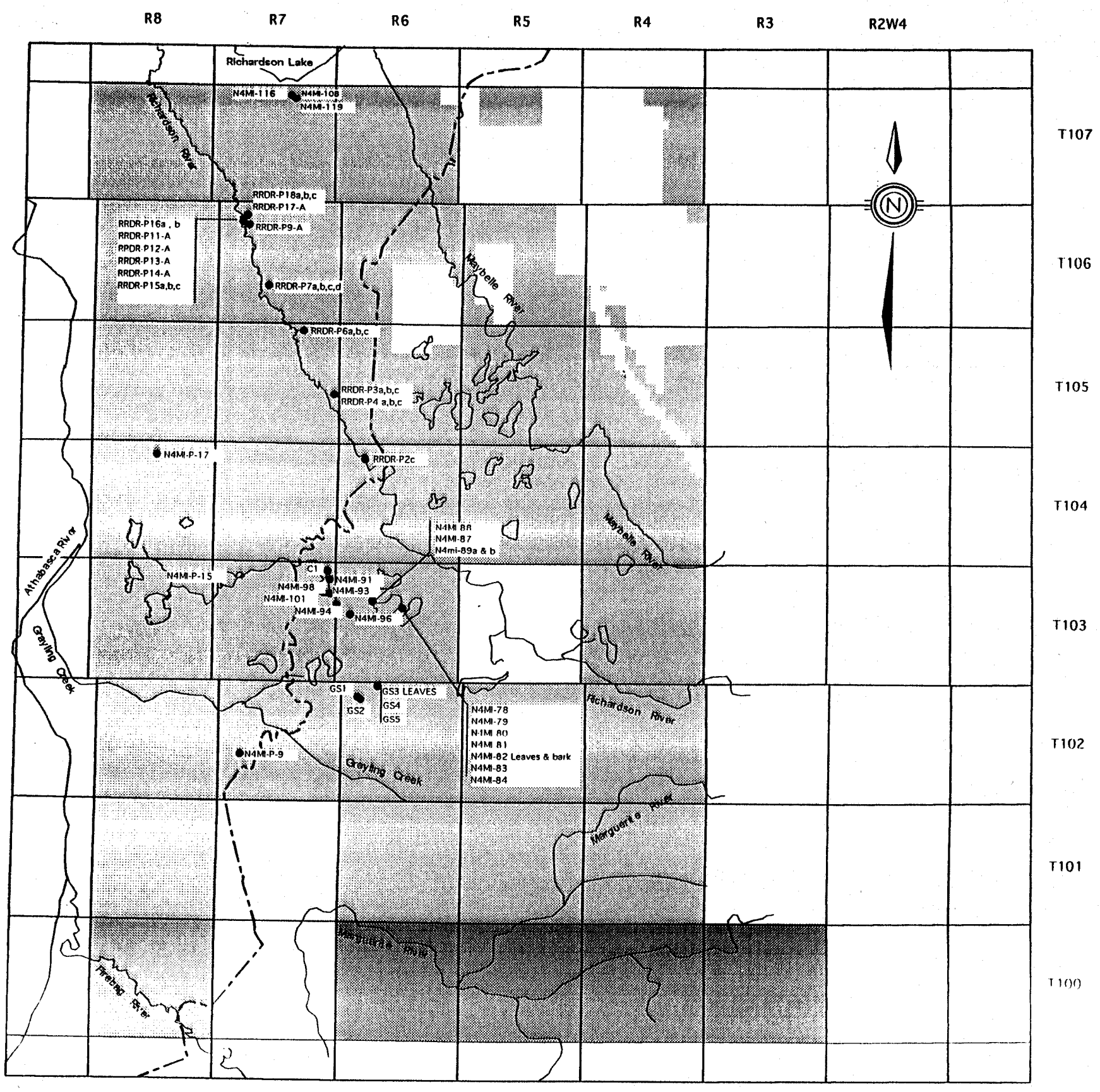
Legend

- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Lake Sediment Sample Locations (Analysed by NAA)

DRAWN BY: M. Innes	MAP NO. 4b
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L



Legend

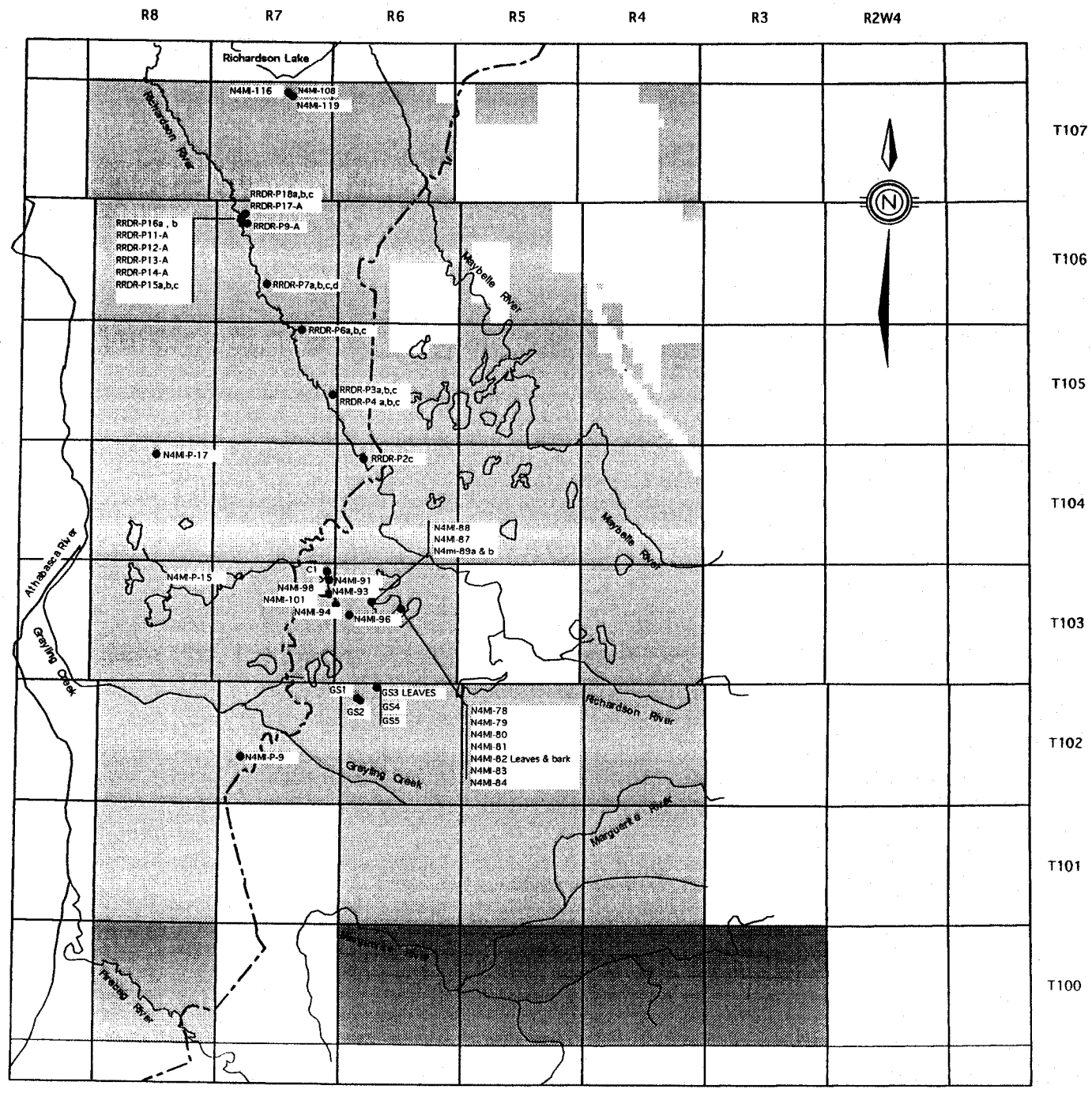
- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Propertics

Biological Samples

DRAWN BY: M. Innes	MAP NO. 4c
DATE: Aug 1995	
APPROVED BY: DN	SCALE: 5 km
Revised: 7/11/95	NTS REFERENCE: 74E & 74L



Legend

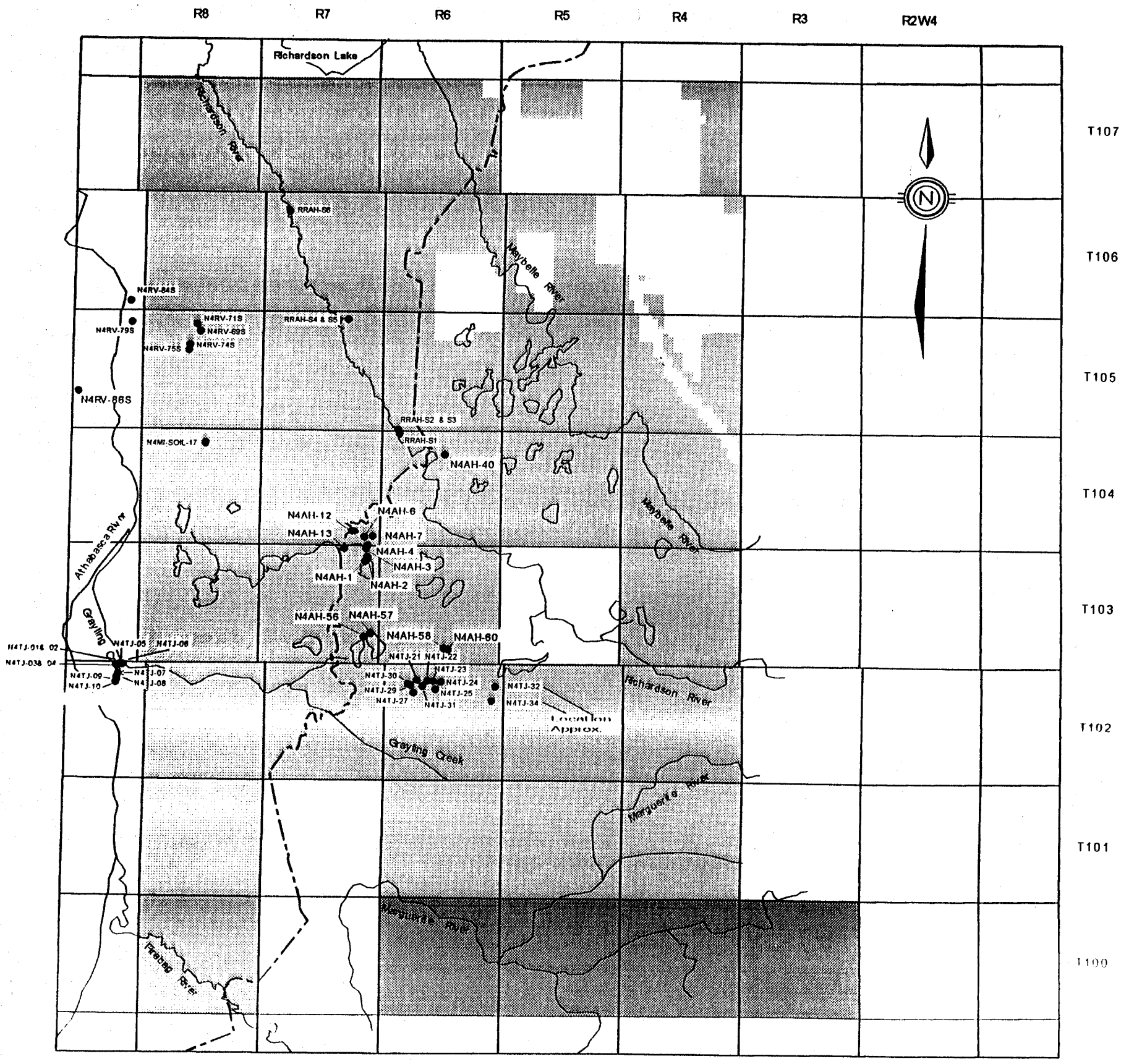
- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties

Biological Samples

DRAWN BY: M. Innes	MAP NO. 4c
DATE: Aug 1995	SCALE: 5 km
APPROVED BY: DN	
Revised: 7/11/95	NTS REFERENCE: 74E & 74L



Legend

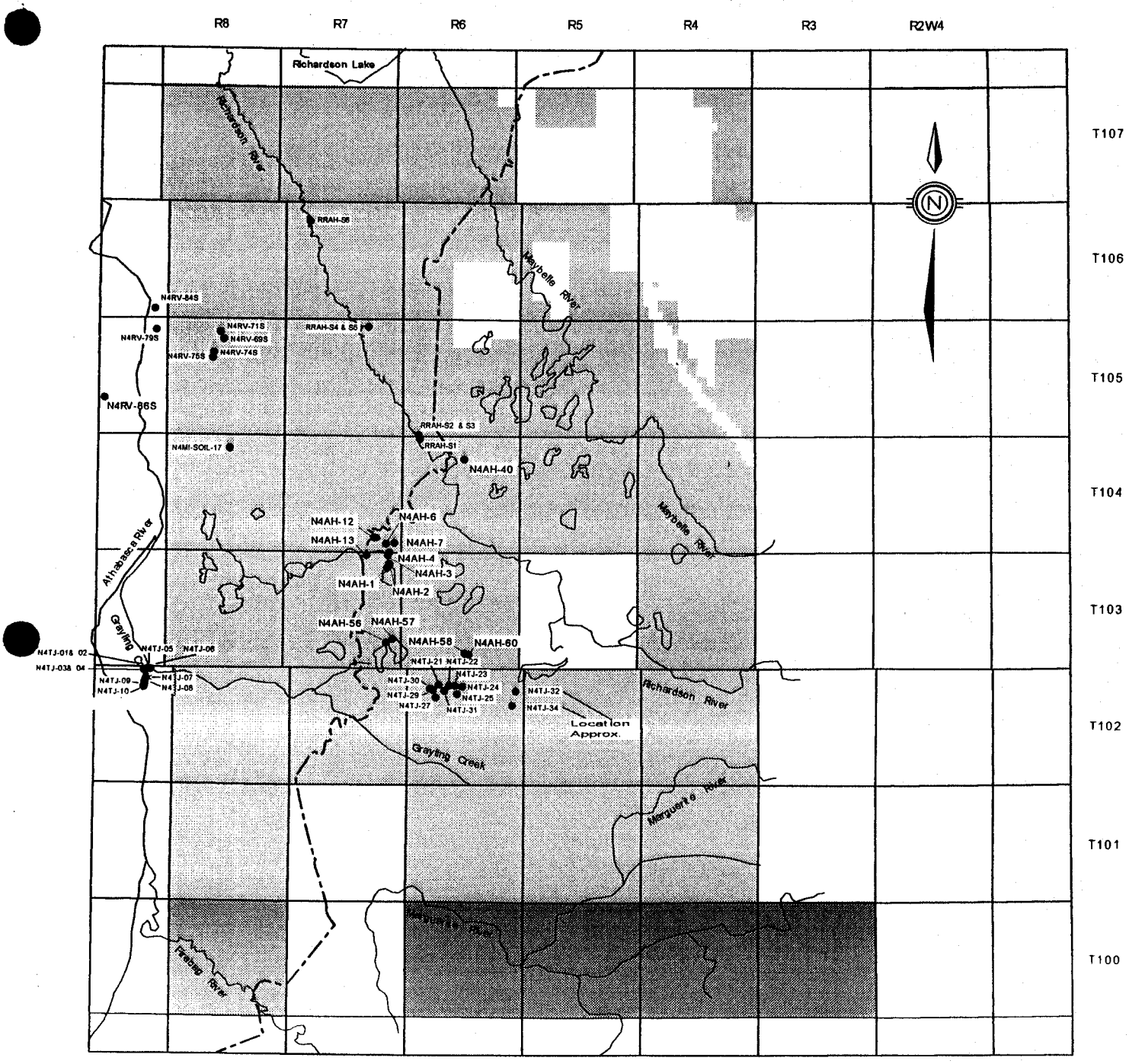
- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties

Soil Sample Locations

DRAWN BY: M. Innes	MAP NO. 4d
DATE: Aug 1995	
APPROVED BY: DN	SCALE: 5 km
Revised: 7/11/95	NTS REFERENCE: 74E & 74L



Legend

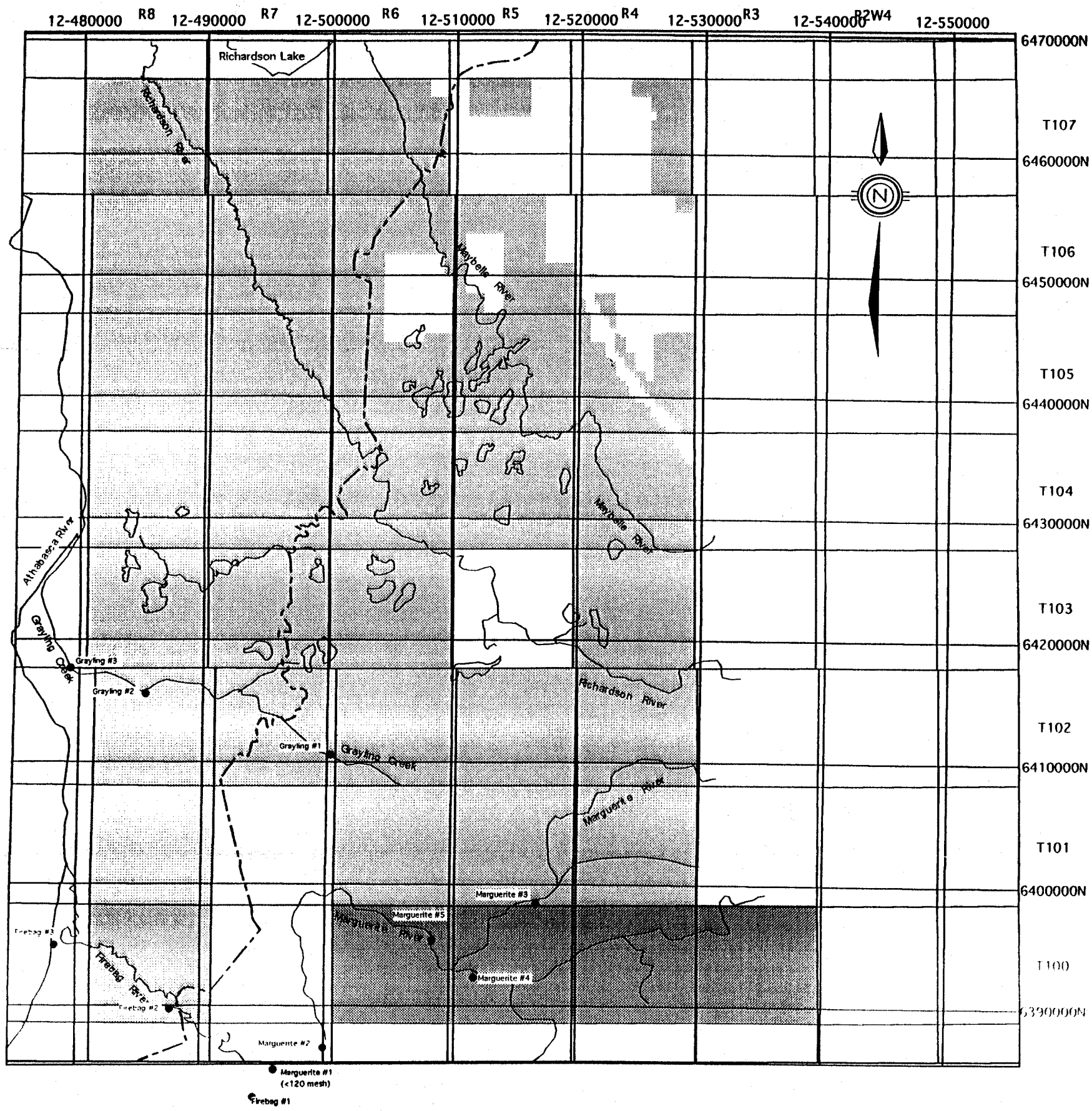
- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties

Soil Sample Locations

DRAWN BY: M. Innes	MAP NO. 4d
DATE: Aug 1995	
APPROVED BY: DN	SCALE: 5 km
Revised: 7/11/95	NTS REFERENCE: 74E & 74L



Legend

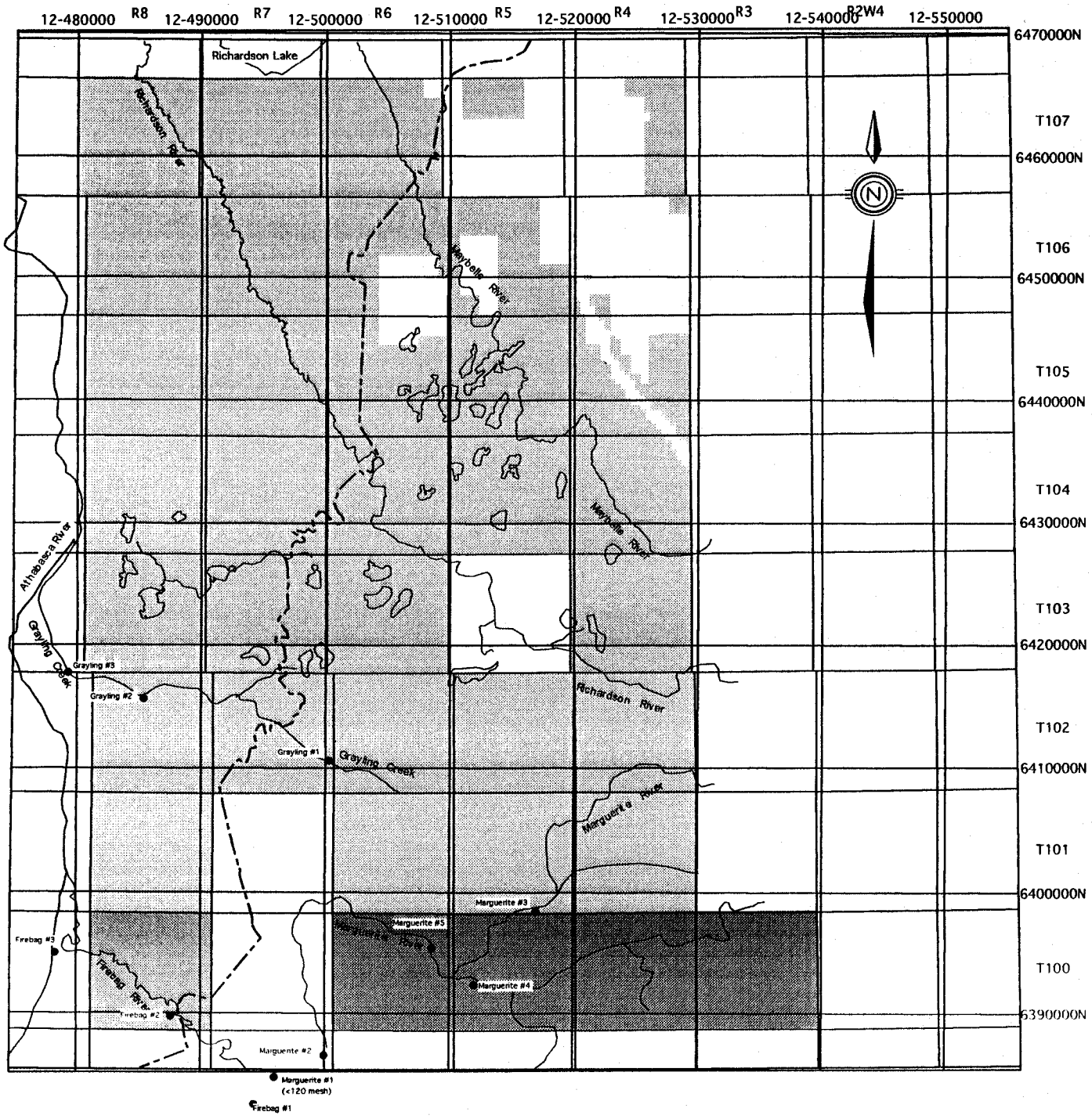
- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties

Stream Sediment Sample Locations

DRAWN BY: M. Innes	MAP NO. 4c
DATE: Aug 1995	SCALE: 5 km
APPROVED BY: DN	NTS REFERENCE: 74E & 74L
Revised: 7/11/95	



Legend

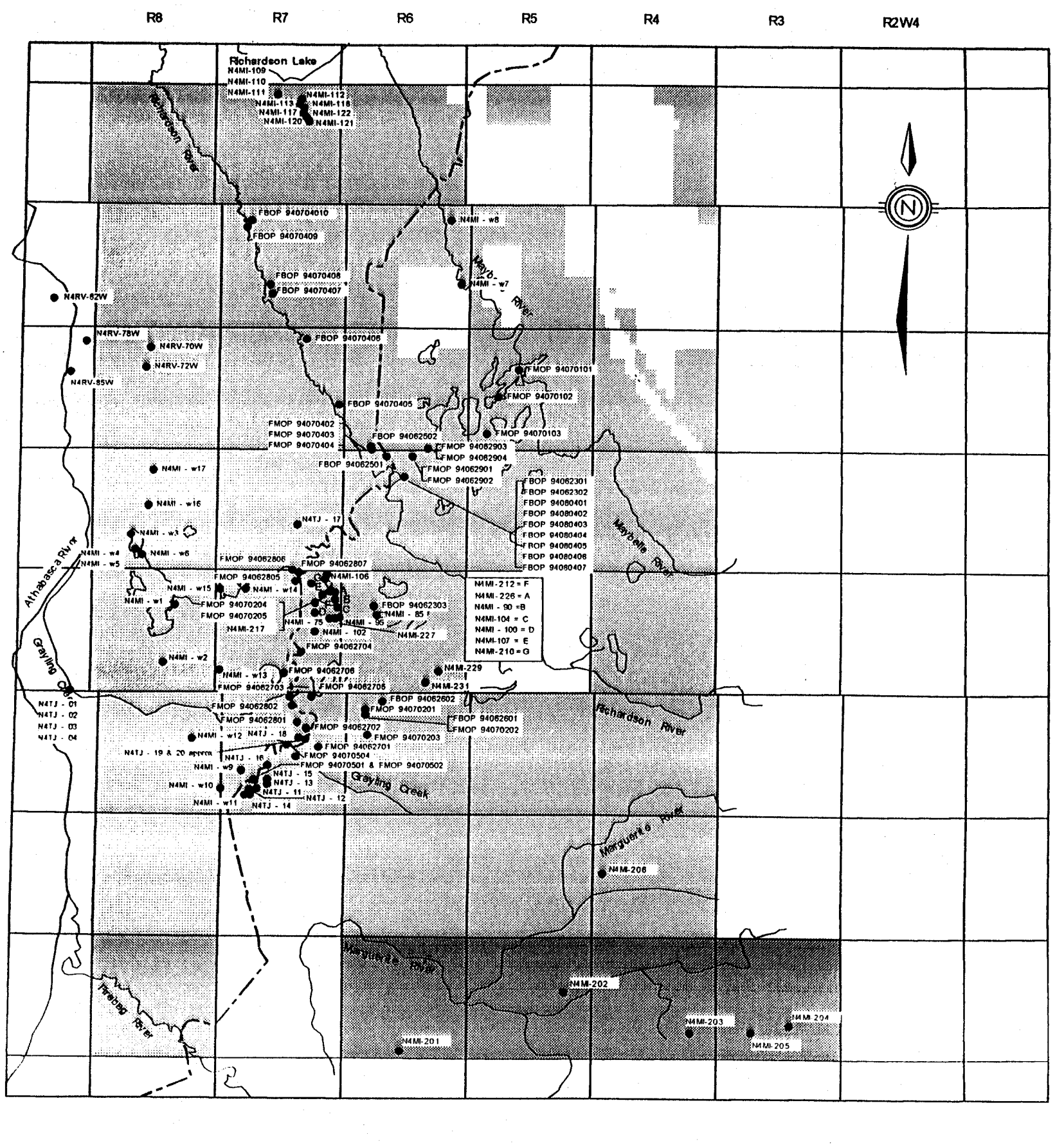
- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties

Stream Sediment Sample Locations

DRAWN BY: M. Innes	MAP NO. 4e
DATE: Aug 1995	
APPROVED BY: DN	SCALE: 5 km
Revised: 7/11/95	NTS REFERENCE: 74E & 74L



Legend

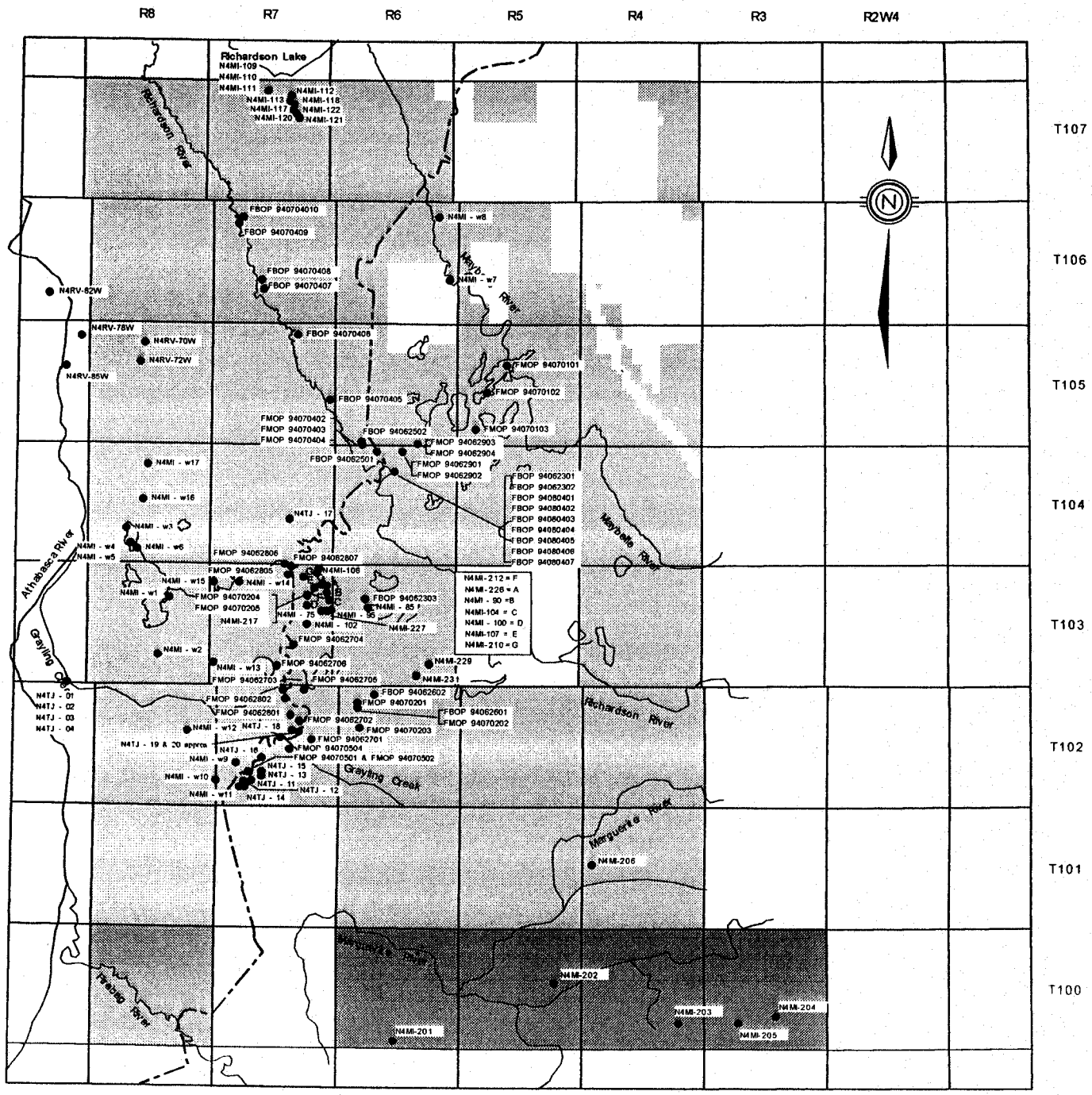
- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties

Water Sample Locations

DRAWN BY: M. Innes	MAP NO. 4f
DATE: Aug 1995	
APPROVED BY: DN	SCALE: 5 km
Revised: 7/11/95	NTS REFERENCE: 74E & 74L



Legend

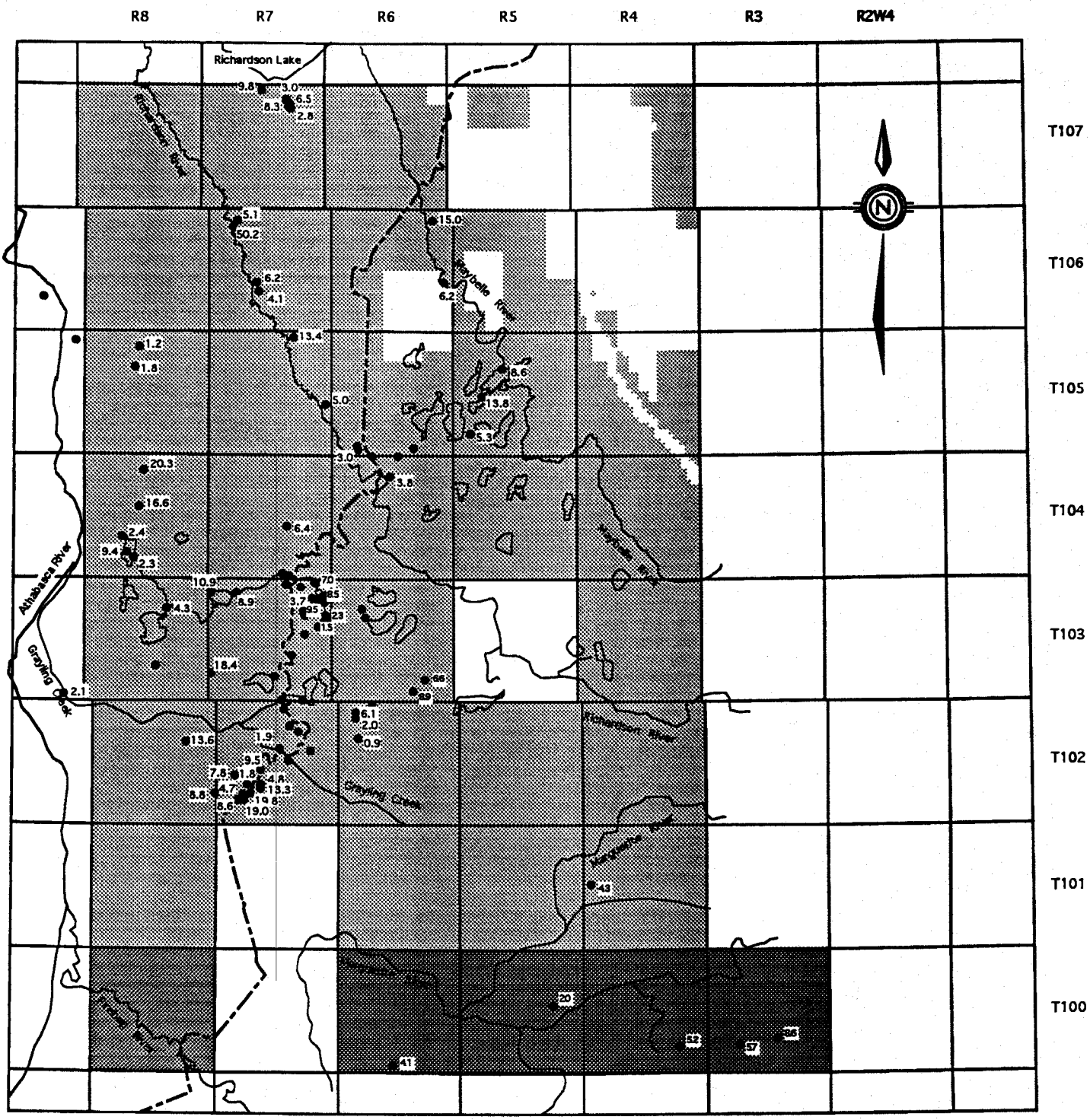
- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties

Water Sample Locations

DRAWN BY: M. Innes	MAP NO. 4f
DATE: Aug 1995	
APPROVED BY: DN	SCALE: 5 km
Revised: 7/11/95	NTS REFERENCE: 74E & 74L



Legend

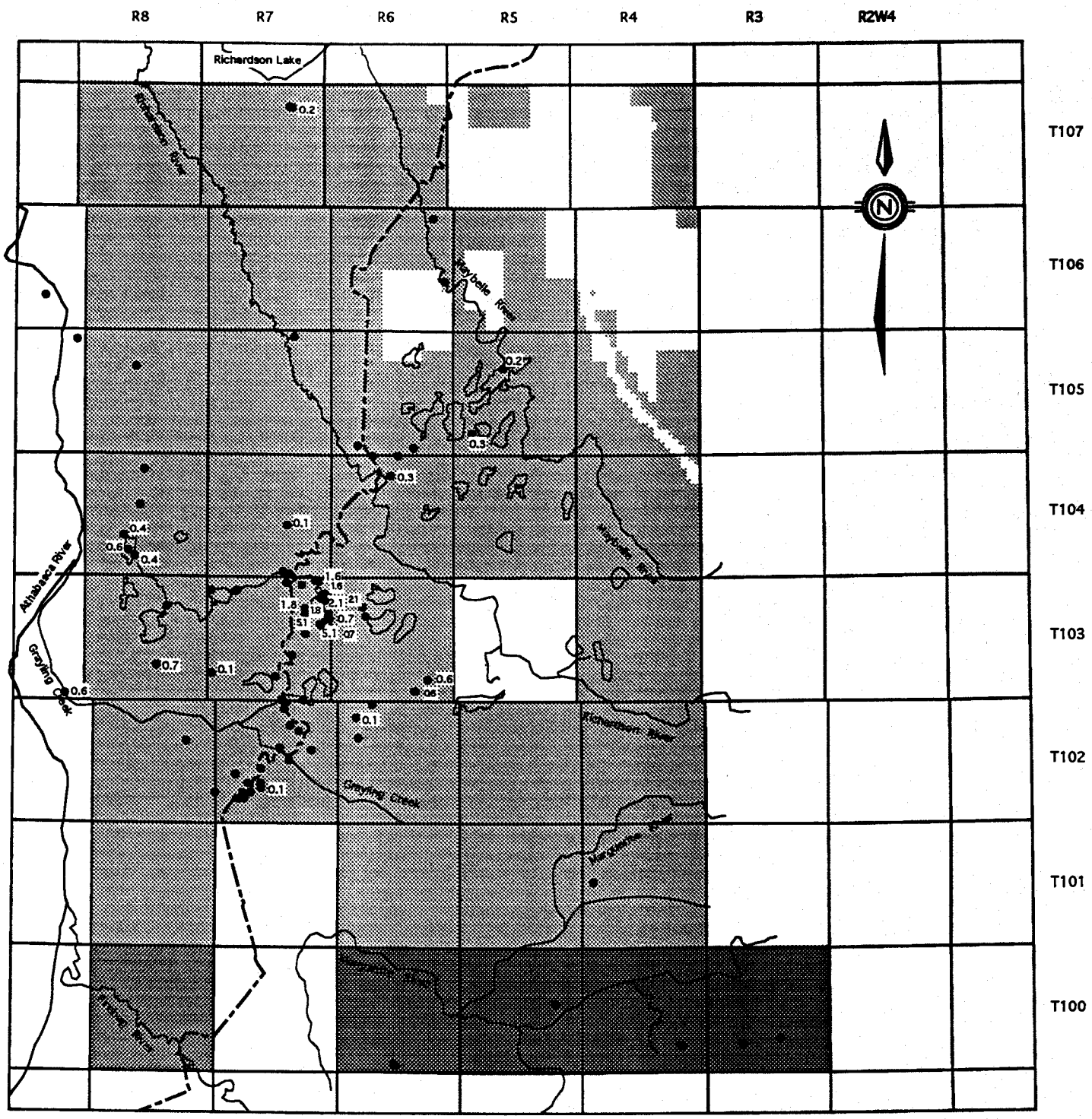
- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties

Water Sample Zn (ppb)

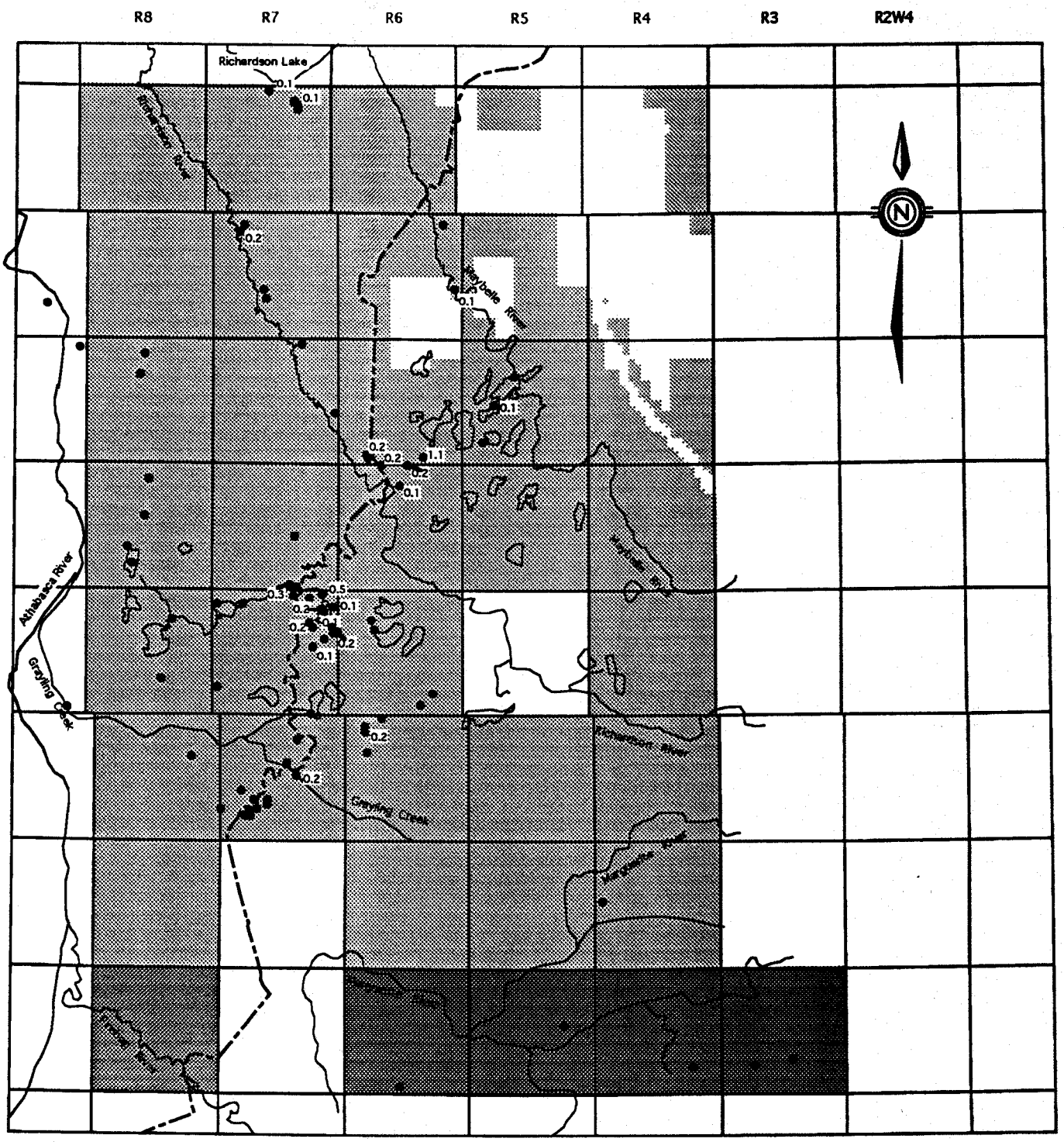
DRAWN BY: M. Innes	MAP NO. 5a
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L



FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Water Samples Pb (ppb)

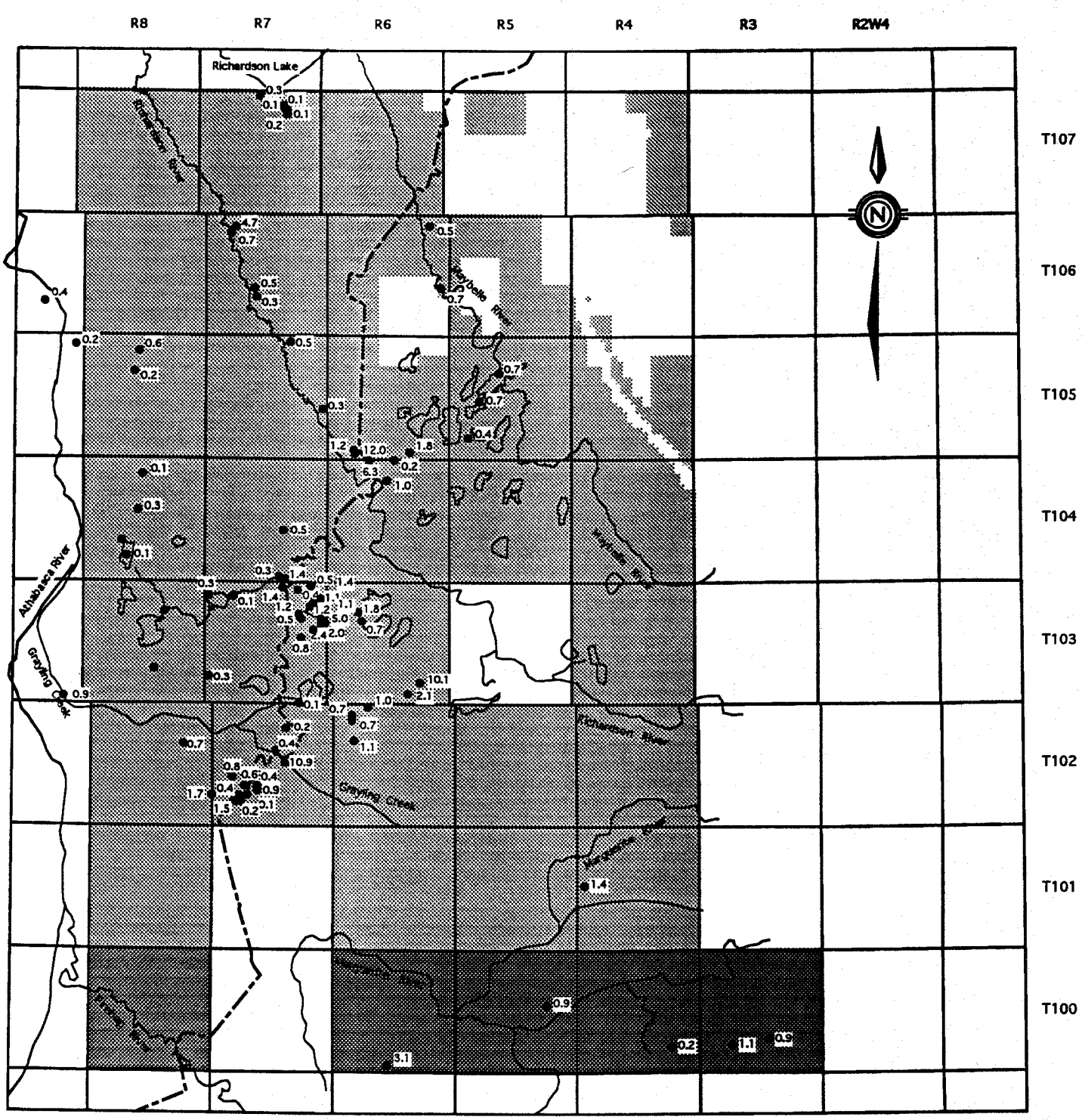
DRAWN BY: M. Innes	MAP NO. 5b
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L



FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Water Samples An AC (ppb)

DRAWN BY: M. Innes	MAP NO. 5c
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L



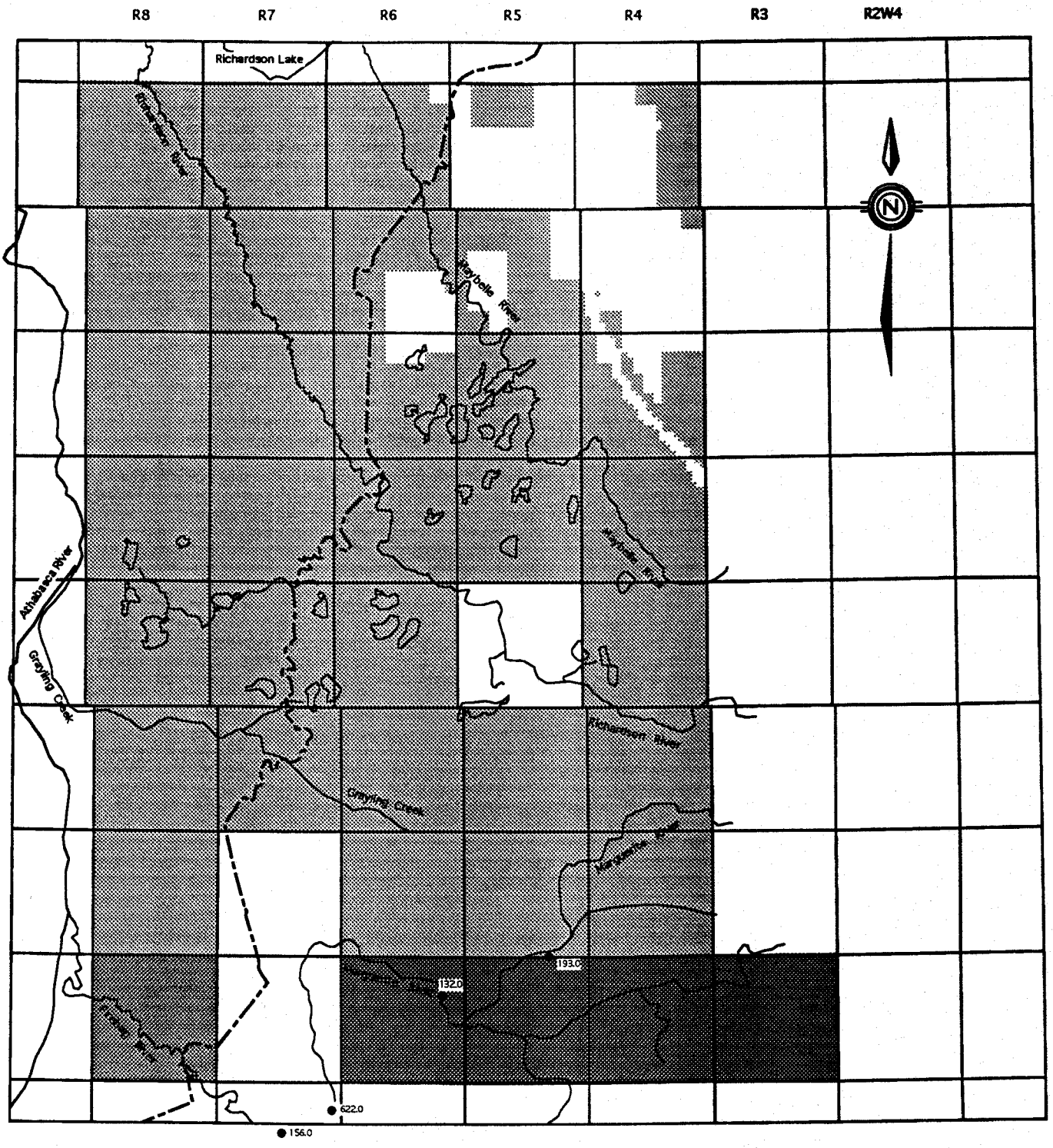
Legend

- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Water Samples Ag AC (ppb)

DRAWN BY: M. Innes	MAP NO. 5d
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L



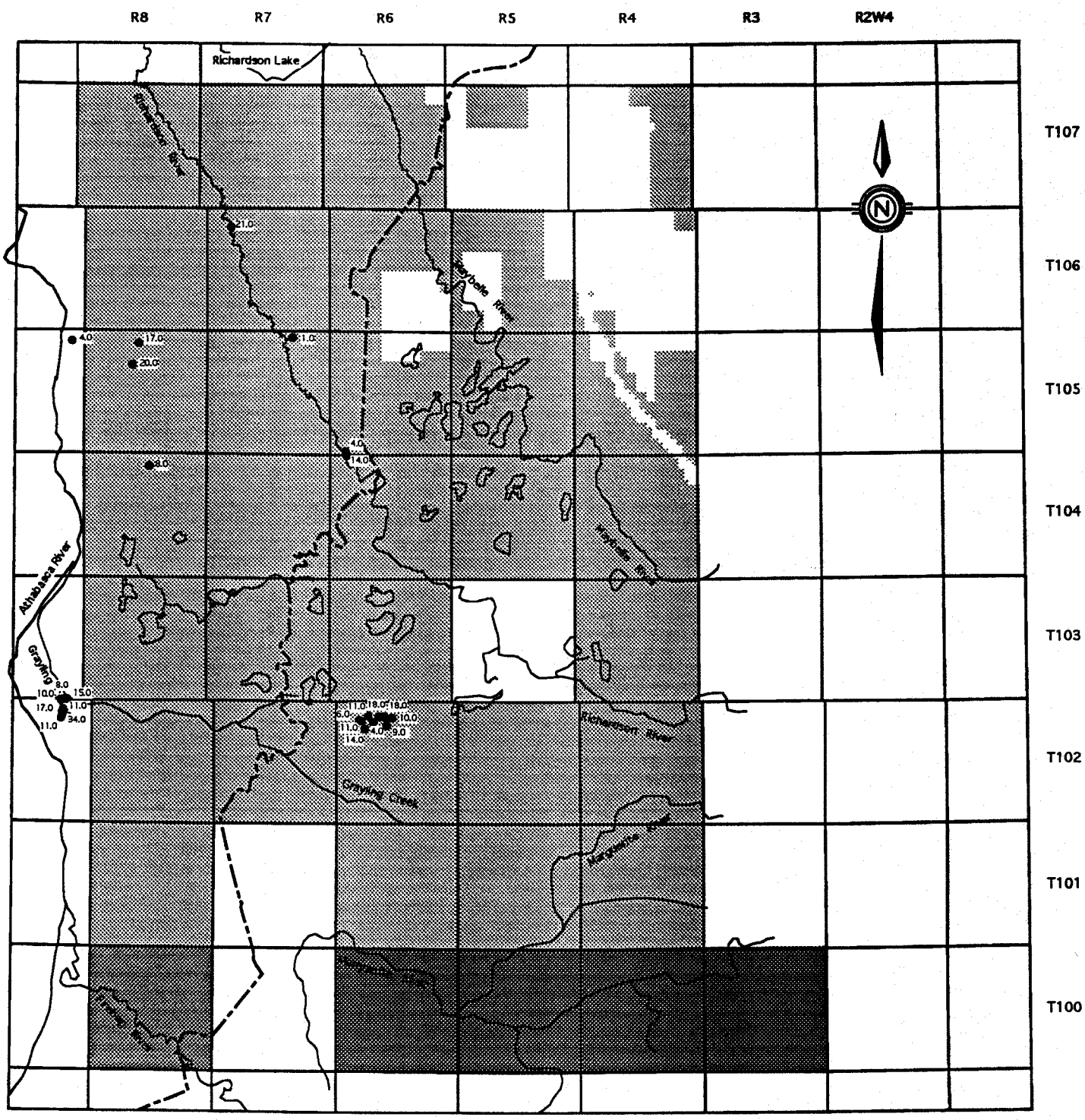
Legend

- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Stream Sediment Samples Au (ppb)

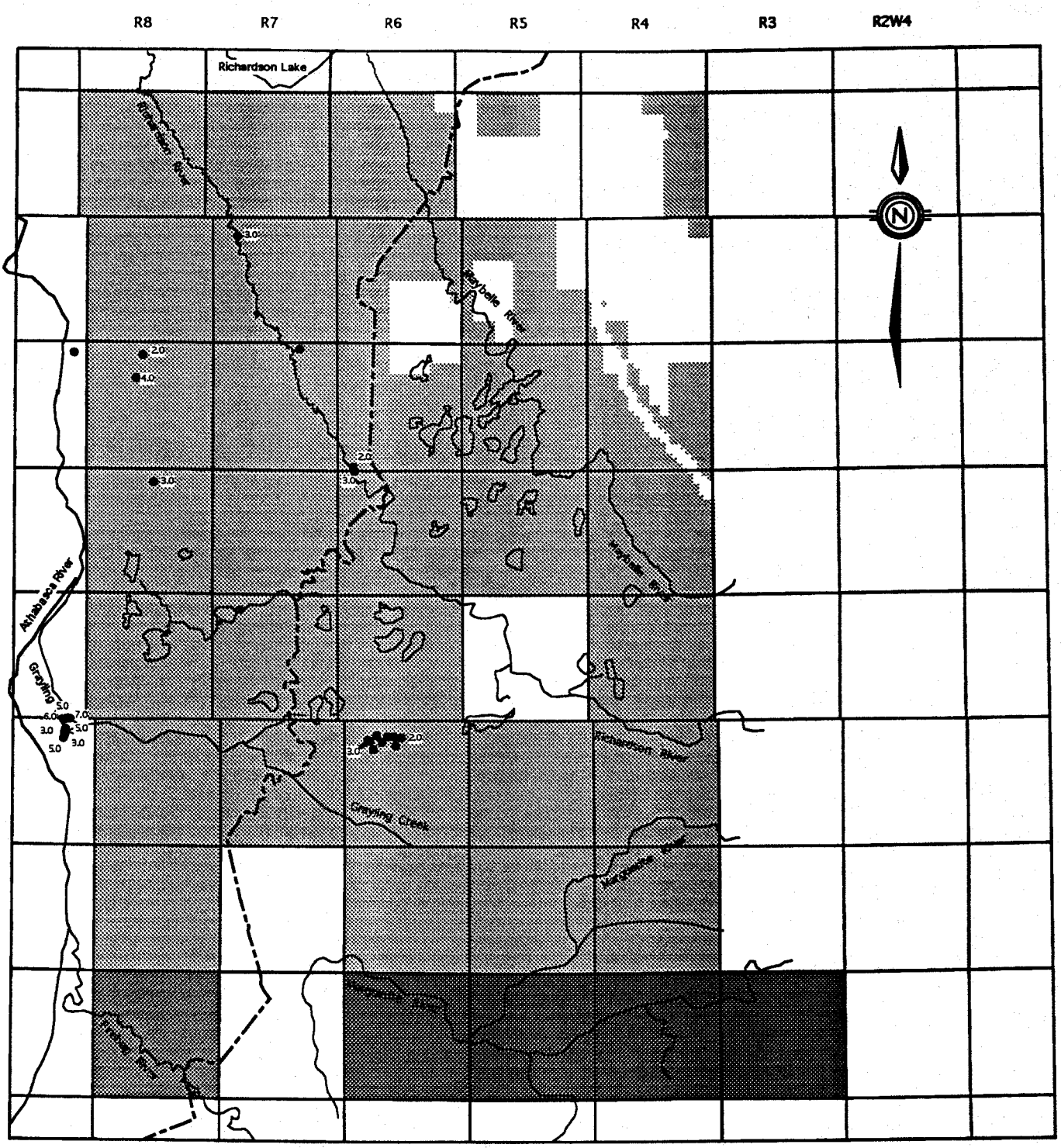
DRAWN BY: M. Innes	MAP NO. 5e
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L



FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Soil Samples Zn (ppm)

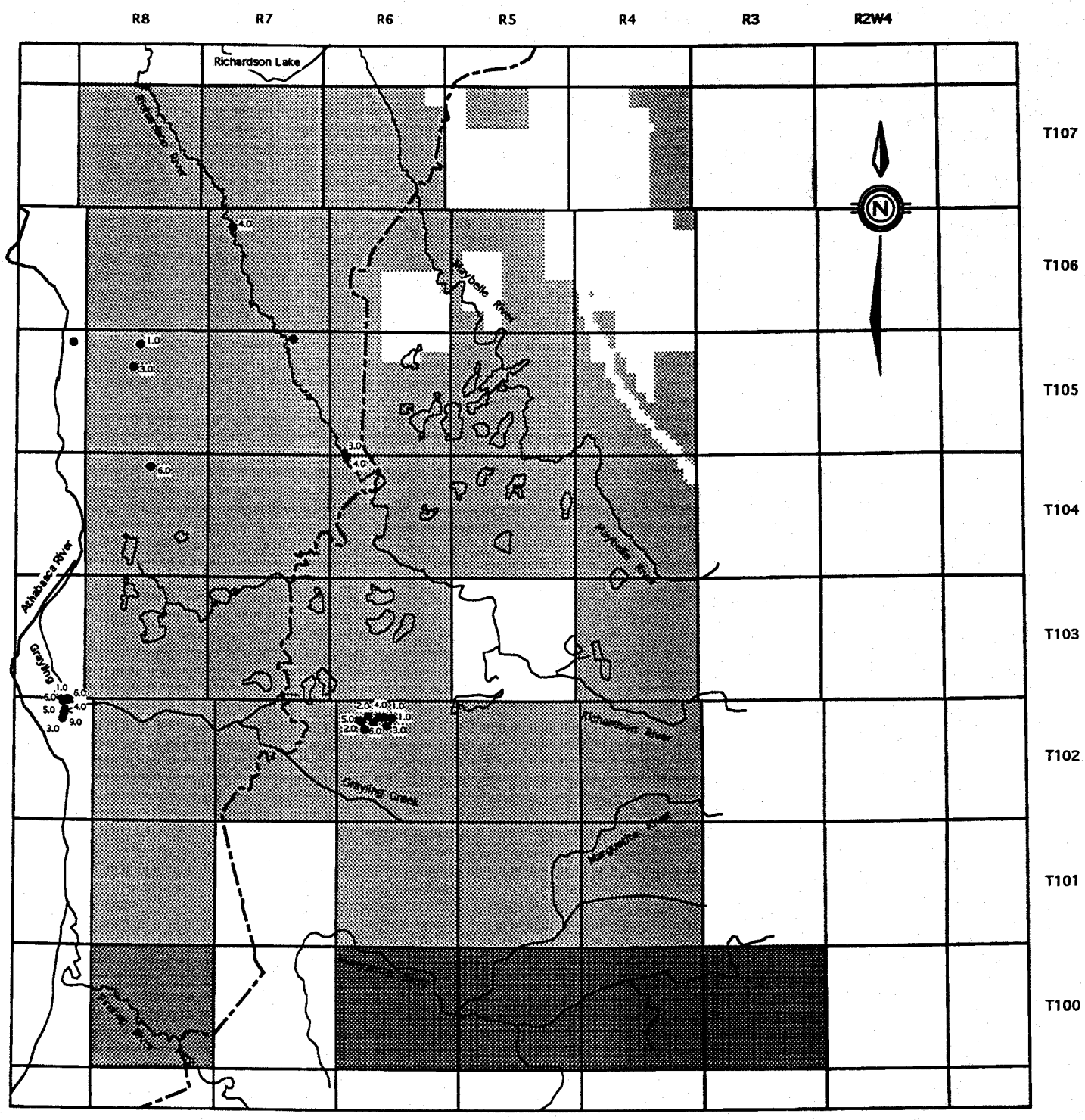
DRAWN BY: M. Innes	MAP NO. 5f
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L

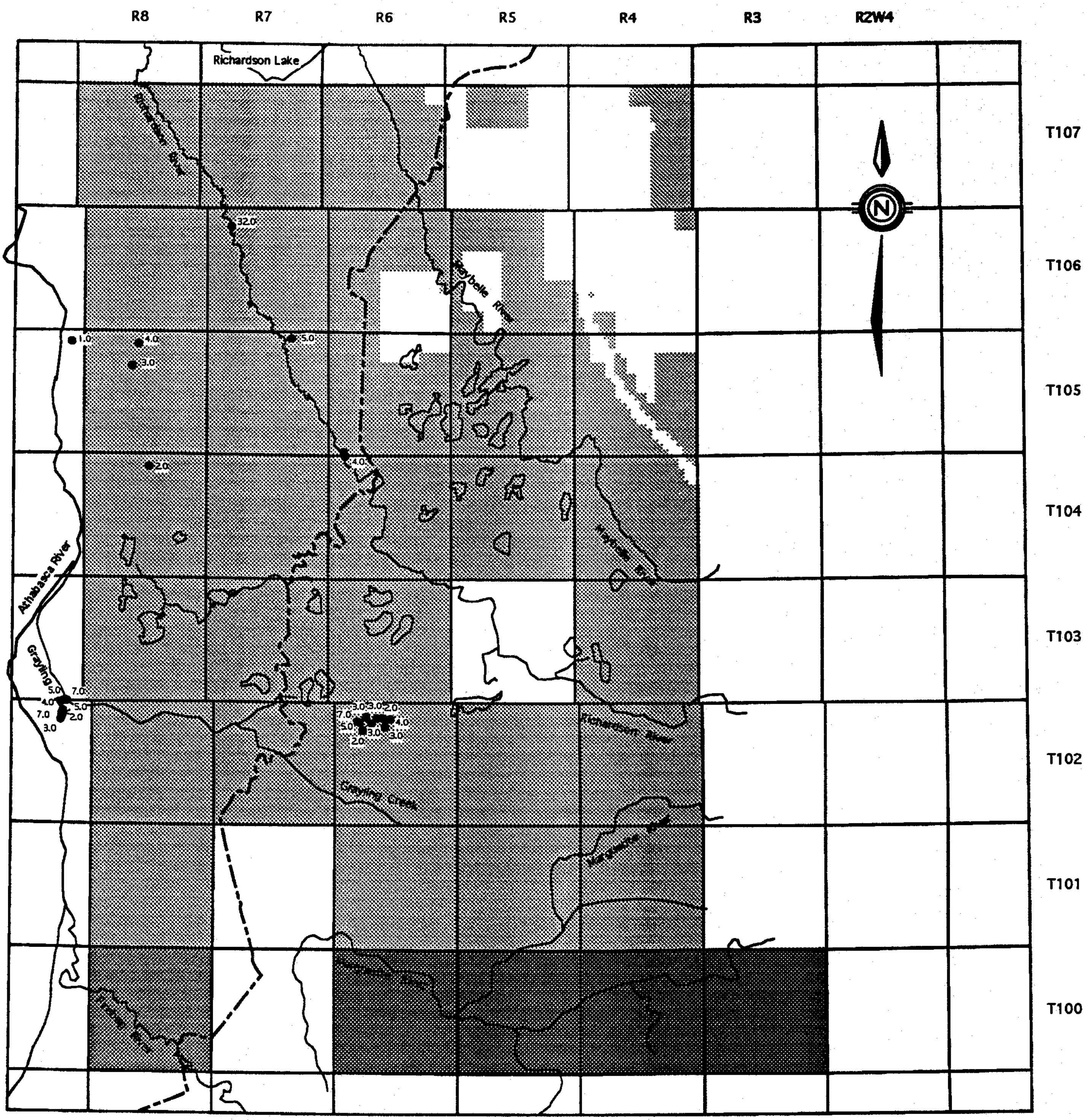


FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Soil Samples Pb (ppm)

DRAWN BY: M. Innes	MAP NO. 5g
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L


R8
R7
R6
R5
R4
R3
R2W4
T107
T106
T105
T104
T103
T102
T101
T100
Richardson Lake
Richardson River
Athabasca River
Greyling
Greyling Creek
Firebag River
Marguerite River
Legend
Northern Block Property
Firebag Property
Marguerite Property
Winter Road
Sample Location
5 km
FOCAL RESOURCES LIMITED
CALGARY, CANADA
Northern Block, Firebag, and Marguerite Properties
Soil Samples Ni (ppm)
DRAWN BY: M. Innes
DATE: Aug 1995
APPROVED BY:
MAP NO. 5h
SCALE:
NTS REFERENCE: 74E & 74L



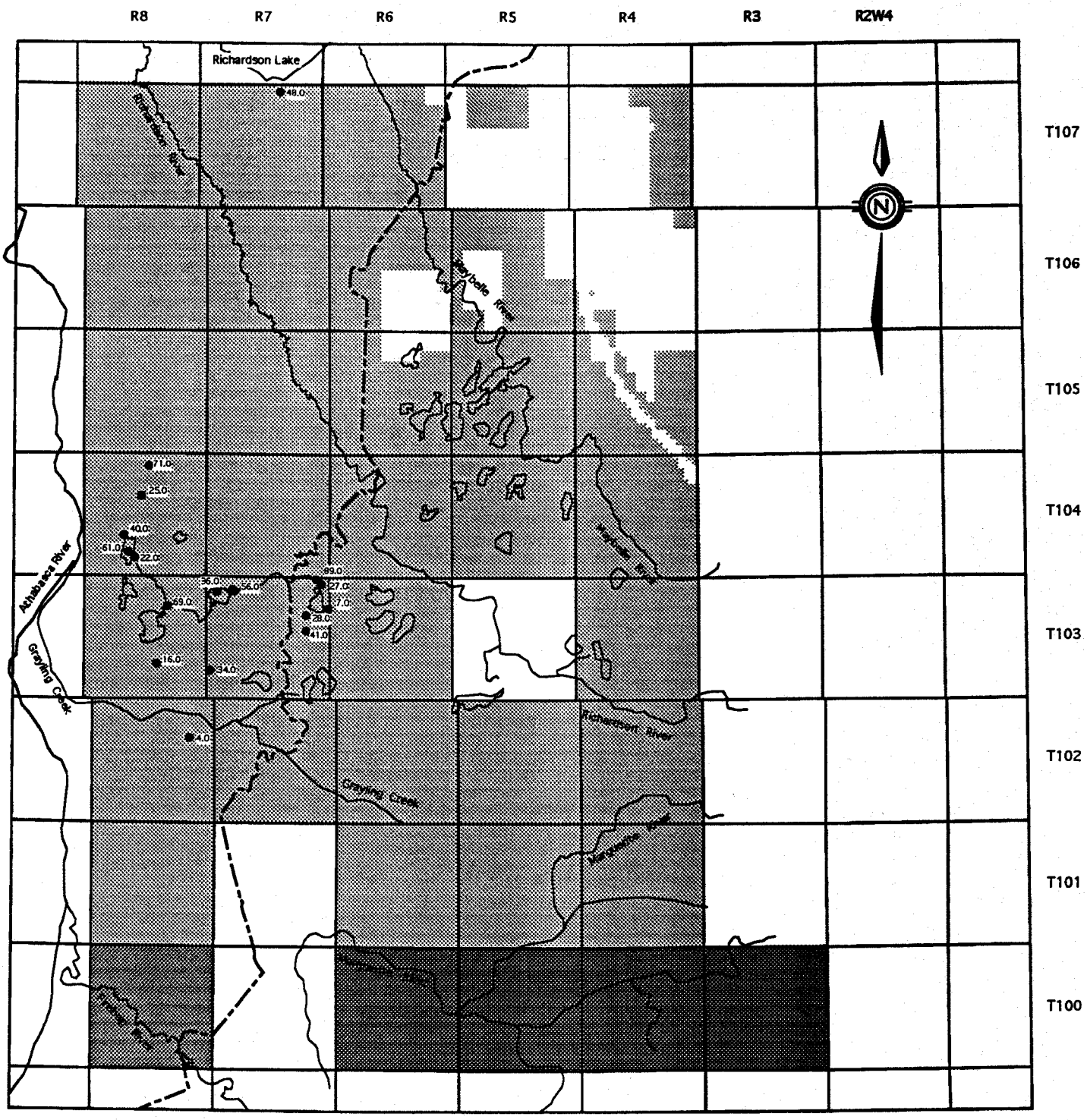
Legend

	Northern Block Property		Winter Road
		•	Sample Location
	Firebag Property		
	Marguerite Property		

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Soil Samples Cu (ppm)

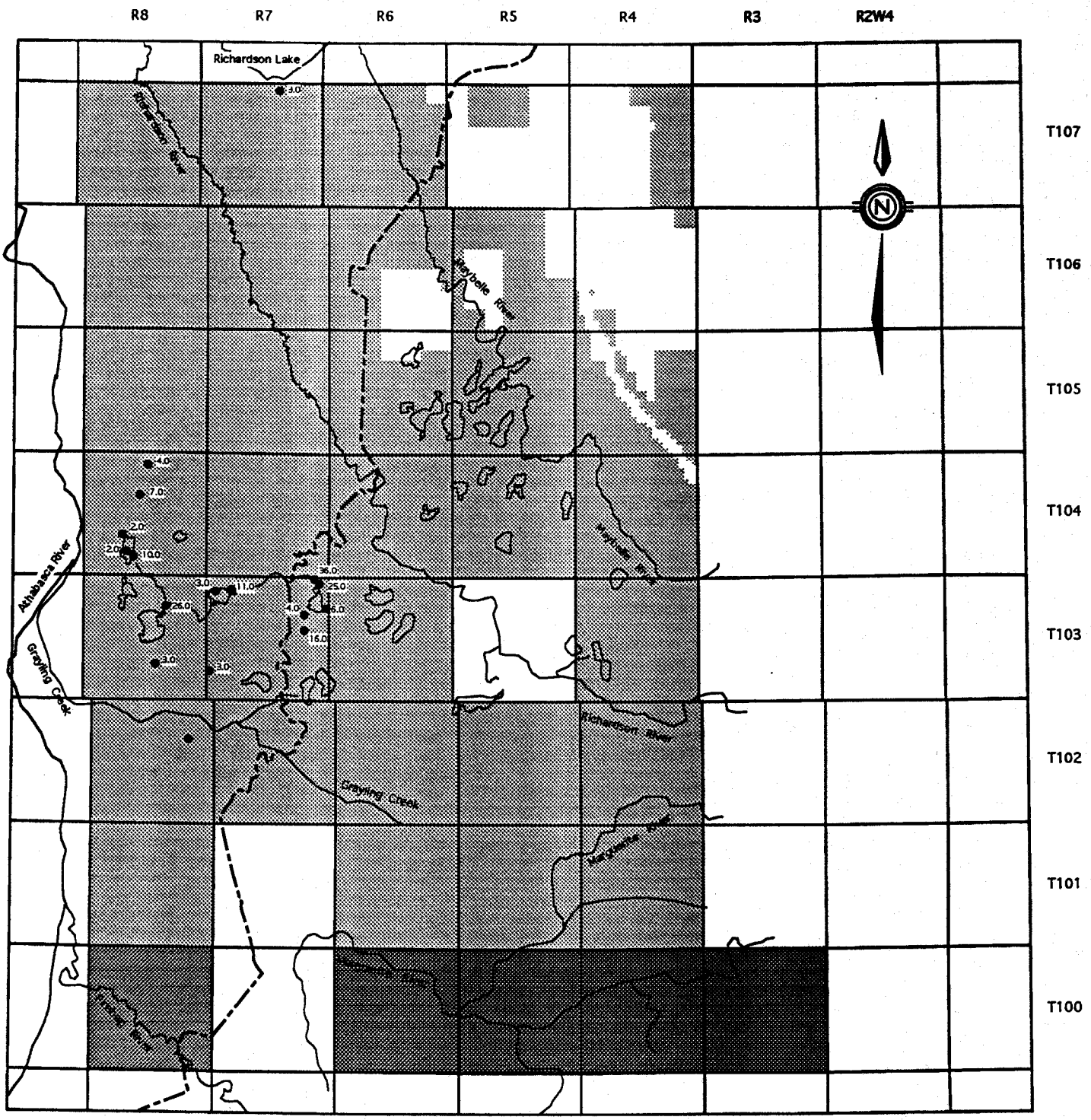
DRAWN BY: M. Innes	MAP NO. Si
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L



FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Lake Sediment Samples Zn (ppm)

DRAWN BY: M. Innes	MAP NO. 5j
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L



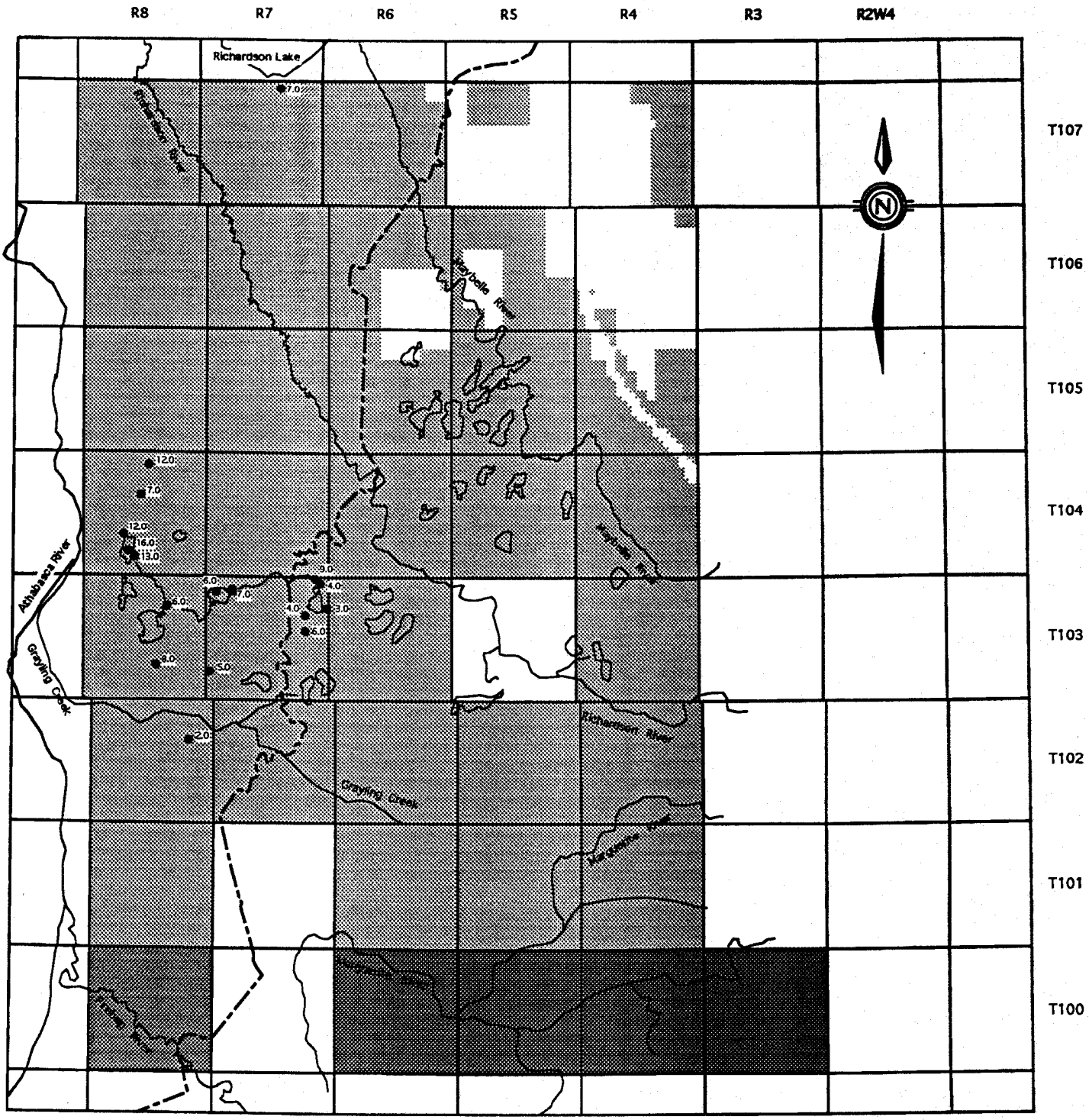
Legend

- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Lake Sediment Samples Pb (ppm)

DRAWN BY: M. Innes	MAP NO. 5k
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L



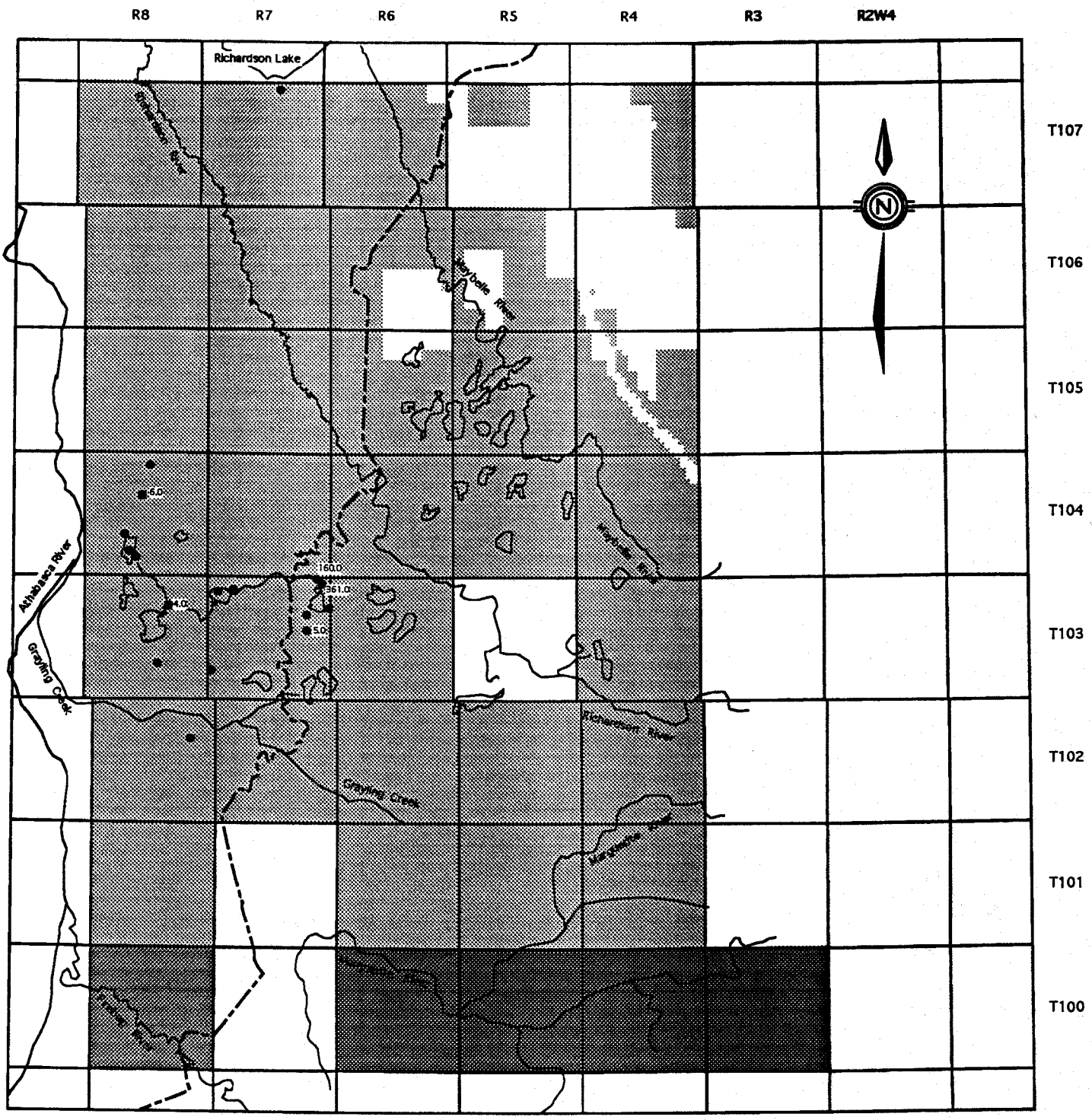
Legend

- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Lake Sediment Samples Ni (ppm)

DRAWN BY: M. Innes	MAP NO. 51
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L



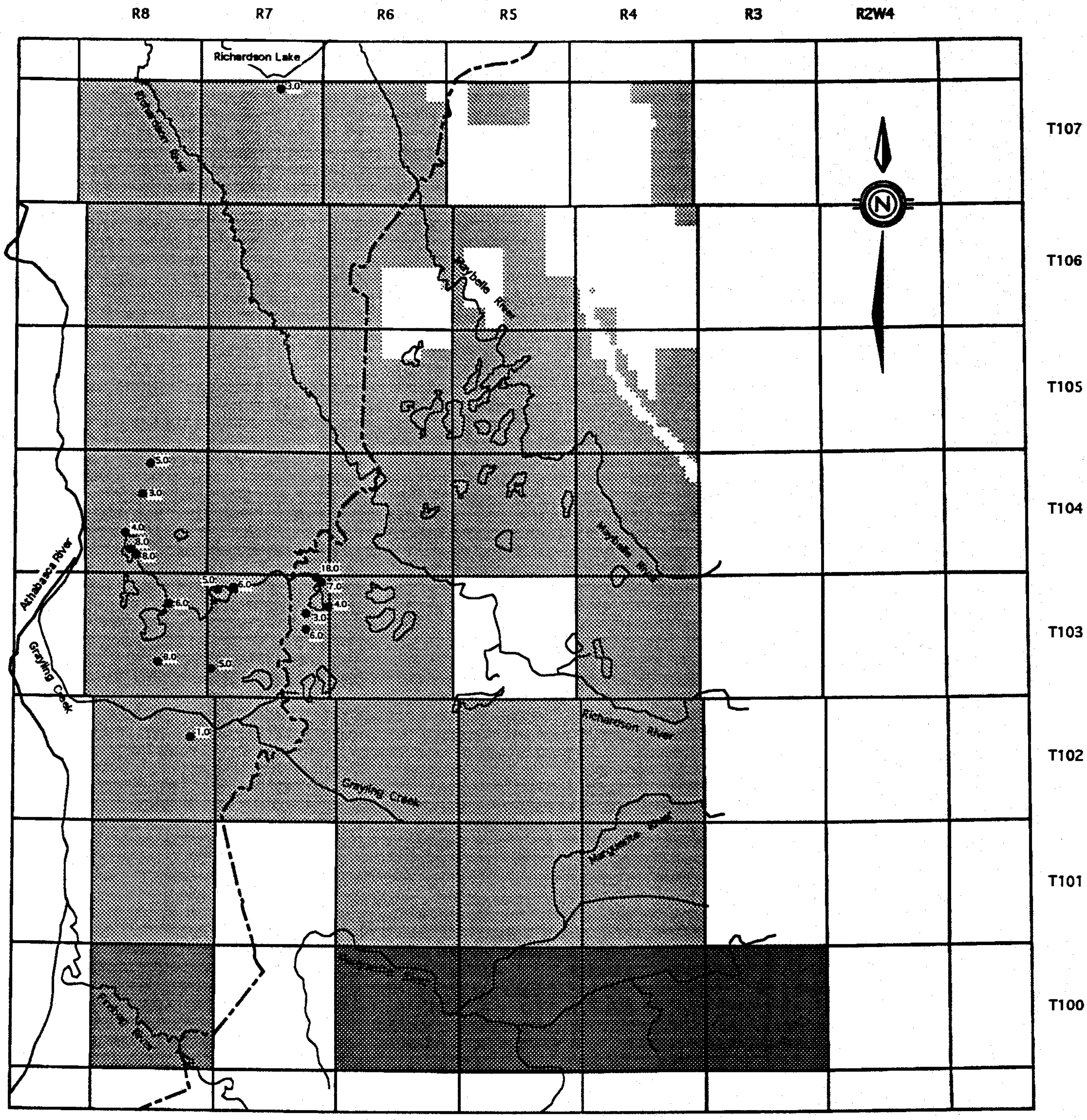
Legend

- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Lake Sediment Samples Au (ppb)

DRAWN BY: M. Innes	MAP NO. 5m
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L



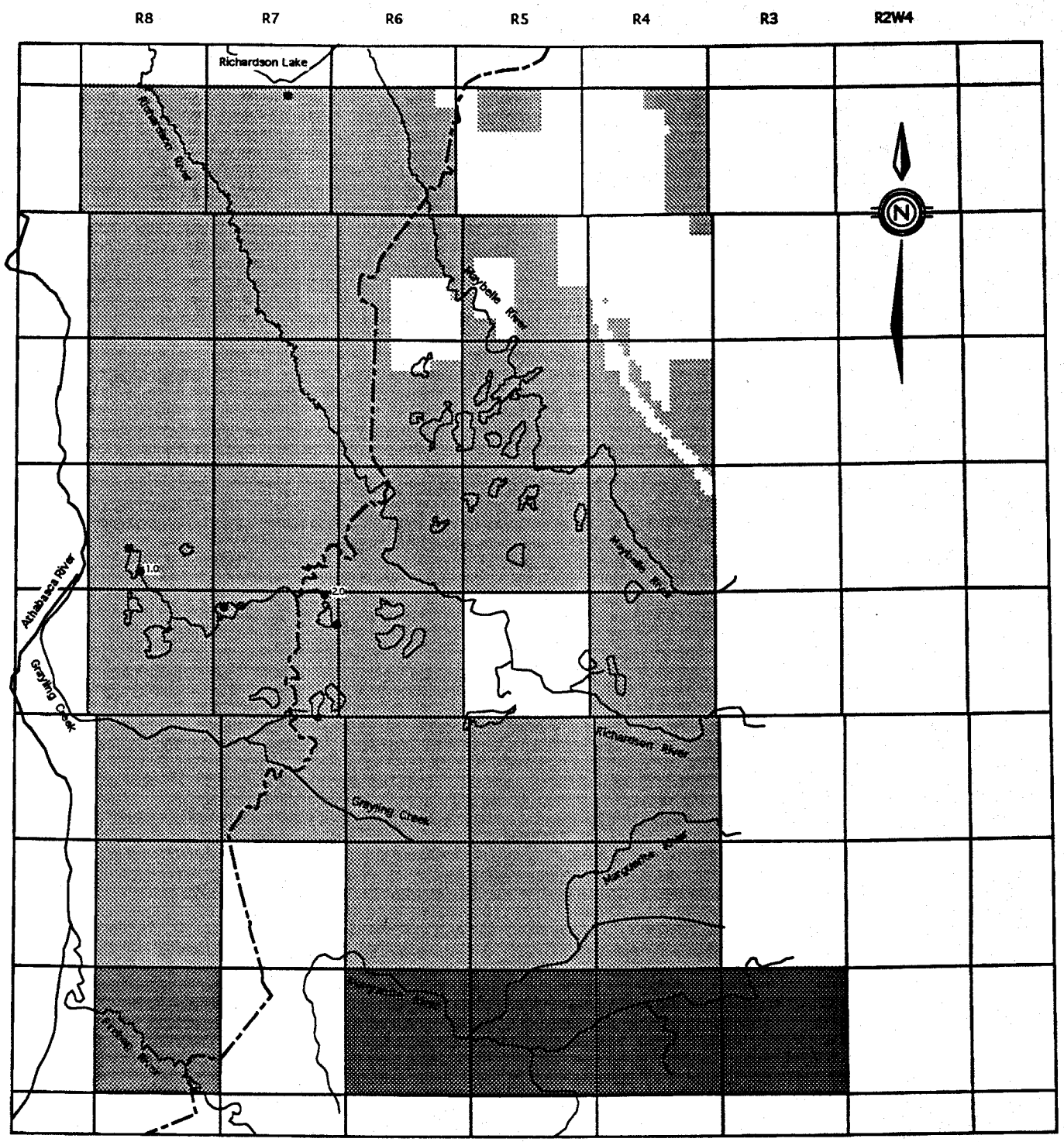
Legend

	Northern Block Property		Winter Road
	Firebag Property	•	Sample Location
	Marguerite Property		

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Lake Sediment Samples Cu (ppm)

DRAWN BY: M. Innes	MAP NO. 5n
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L



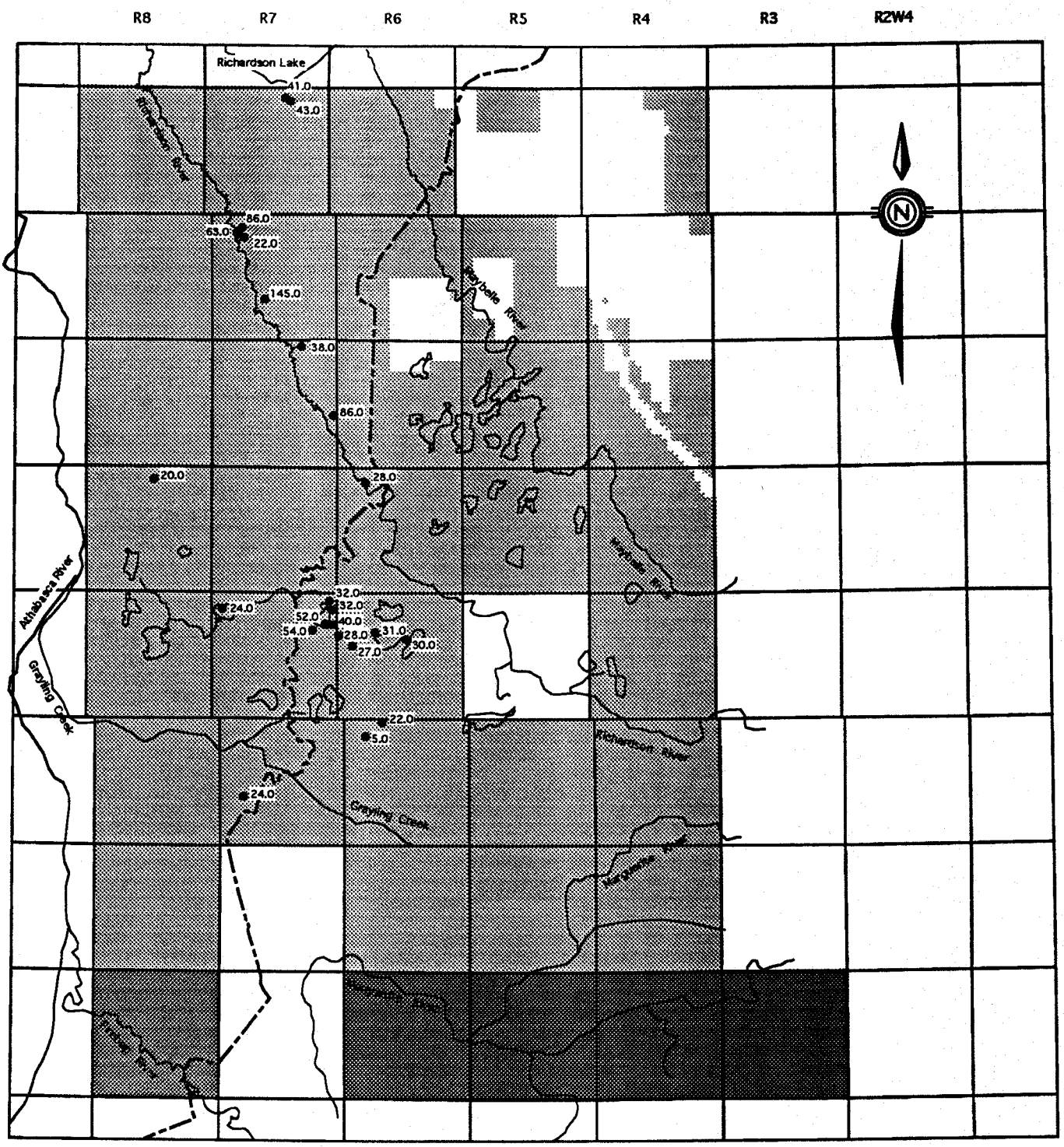
Legend

- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Lake Sediment Samples Ag (ppm)

DRAWN BY: M. Innes	MAP NO. 5o
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L



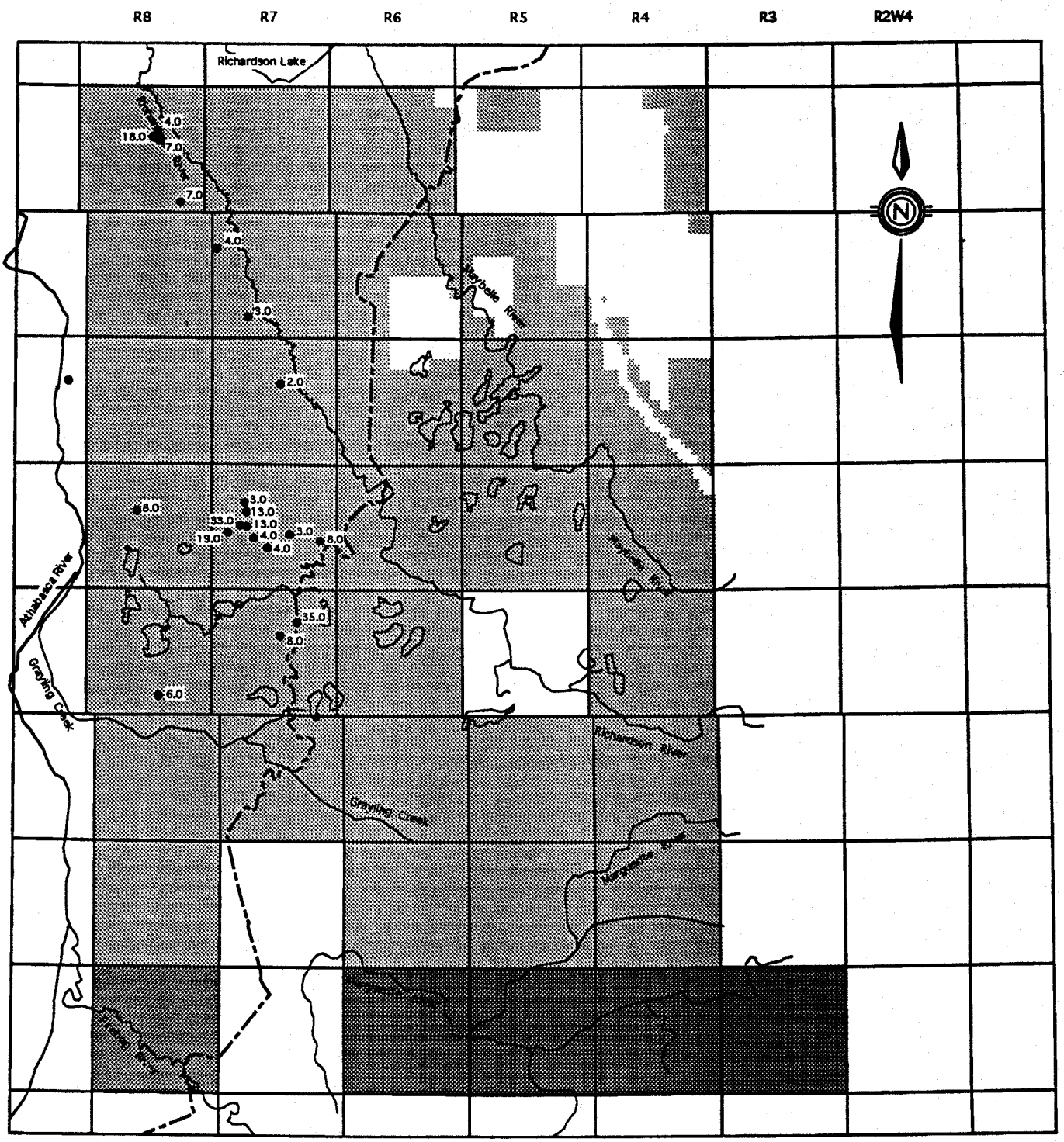
Legend

- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Biological Samples Zn (ppm)

DRAWN BY: M. Innes	MAP NO. 5p
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74B & 74L



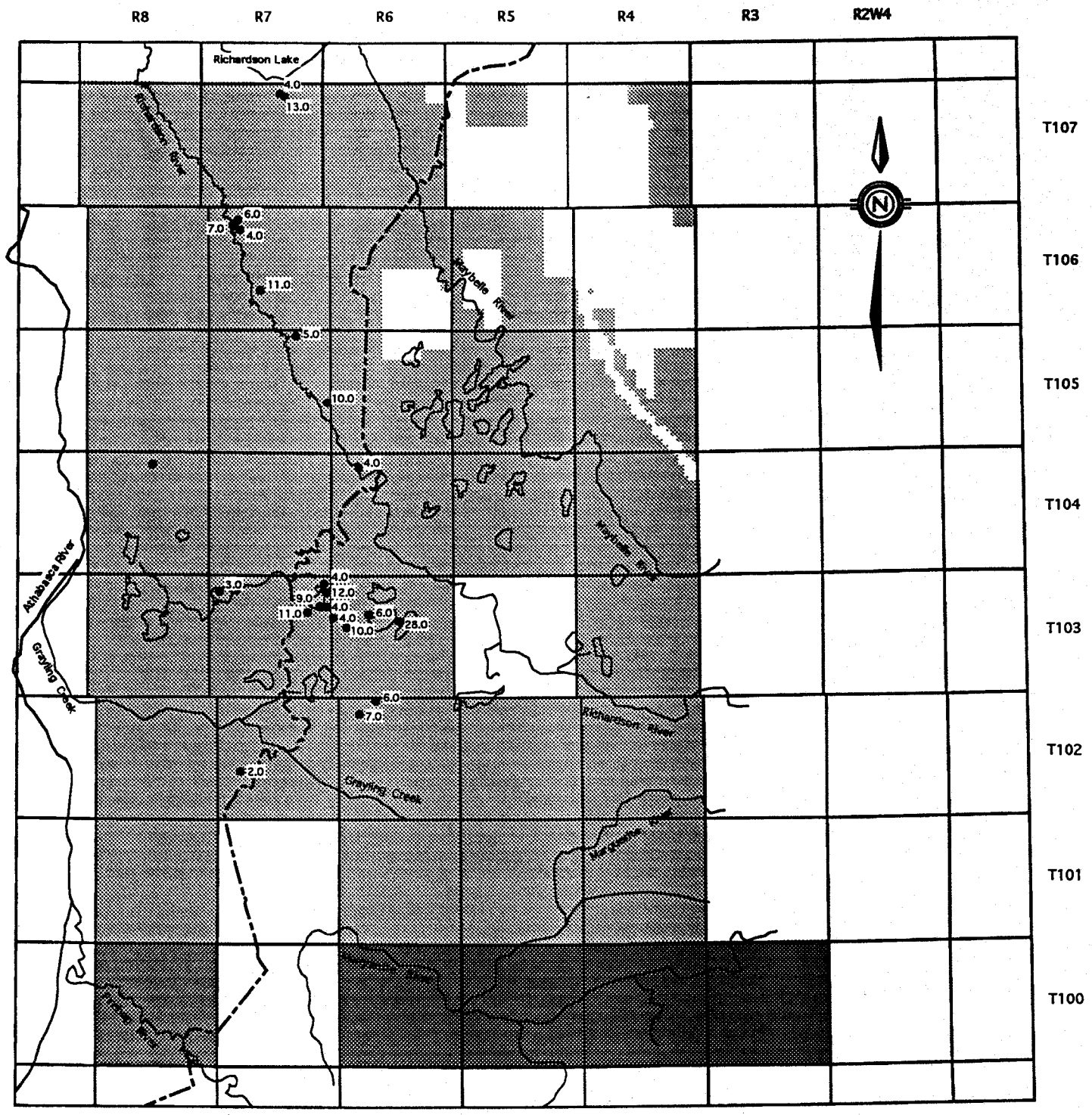
Legend

- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Biological Samples Pb (ppm)

DRAWN BY: M. Innes	MAP NO. 5q
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L



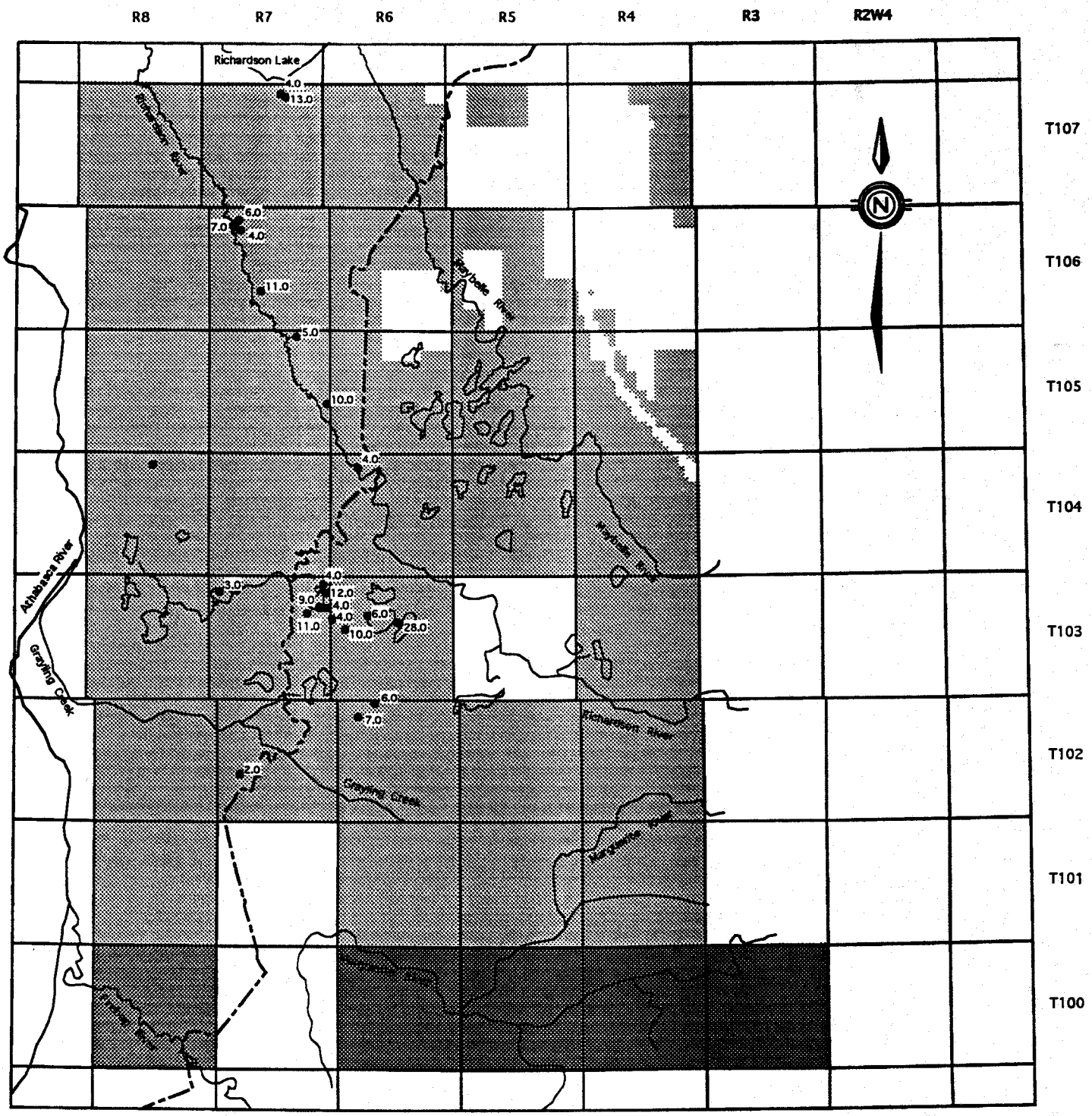
Legend

- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Biological Samples Ni (ppm)

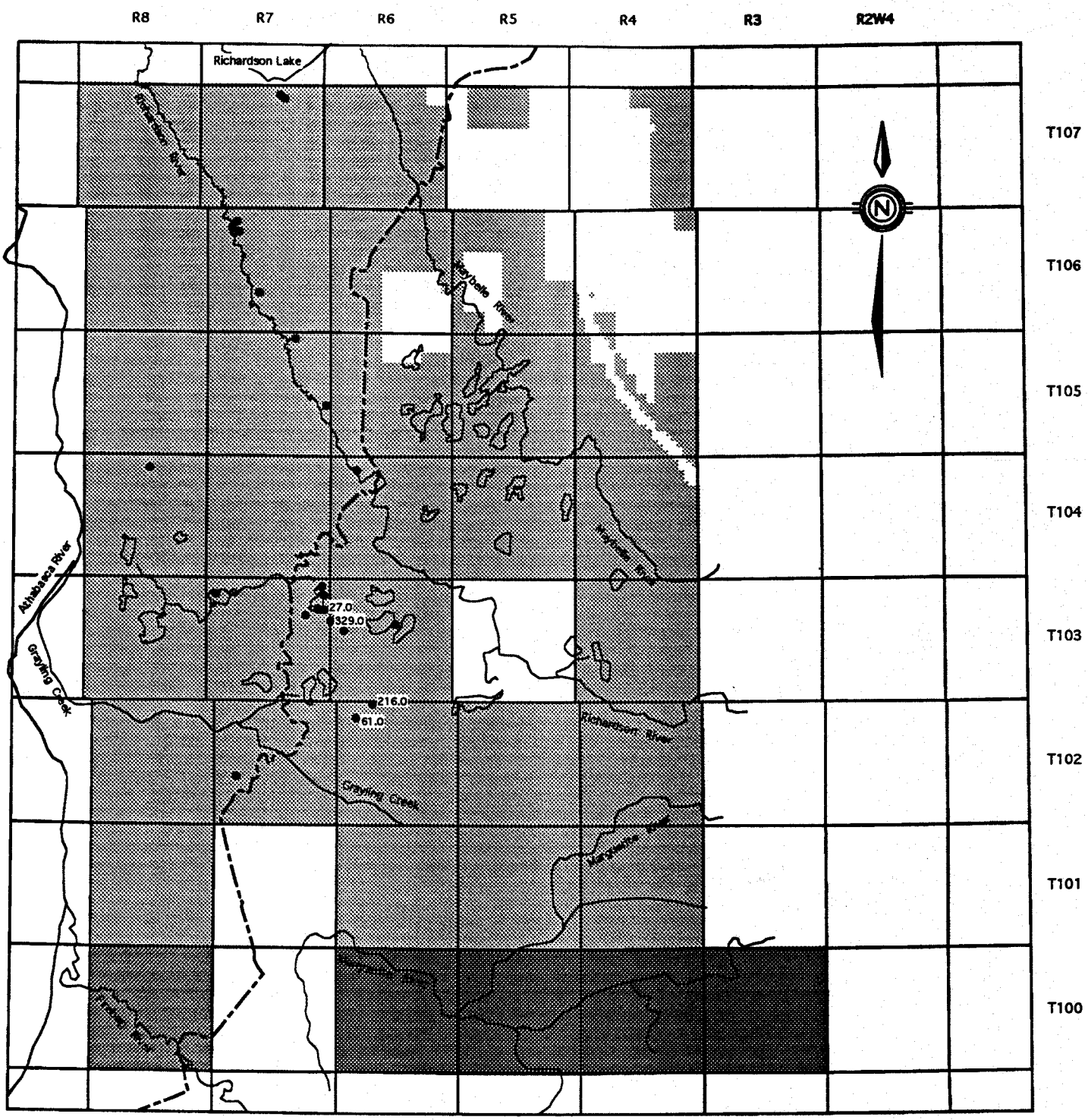
DRAWN BY: M. Innes	MAP NO. 5r
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74B & 74L



FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Biological Samples Cu (ppm)

DRAWN BY: M. Innes	MAP NO. 5s
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L



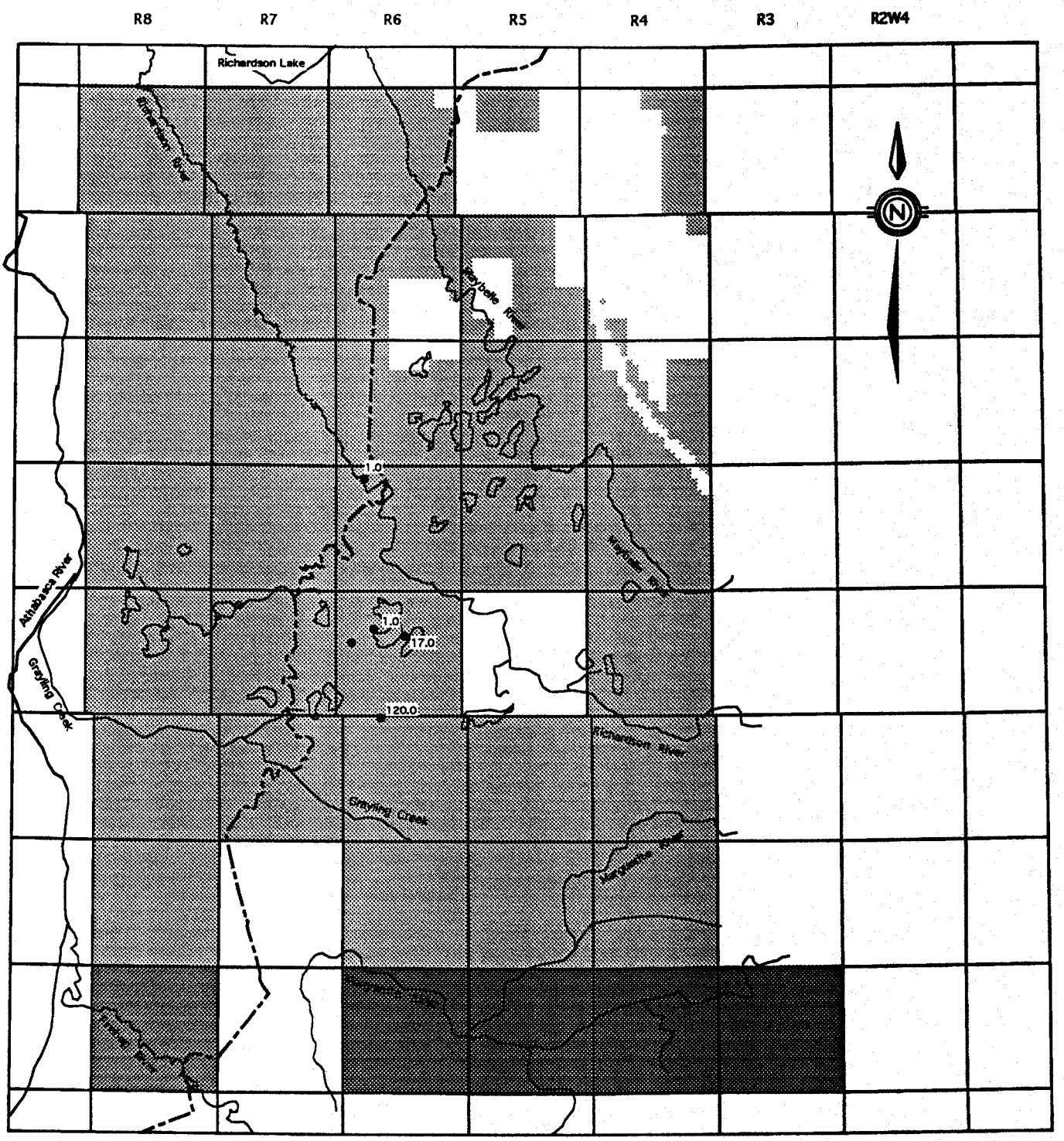
Legend

- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Biological Samples Au (ppb)

DRAWN BY: M. Innes	MAP NO. 5t
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L



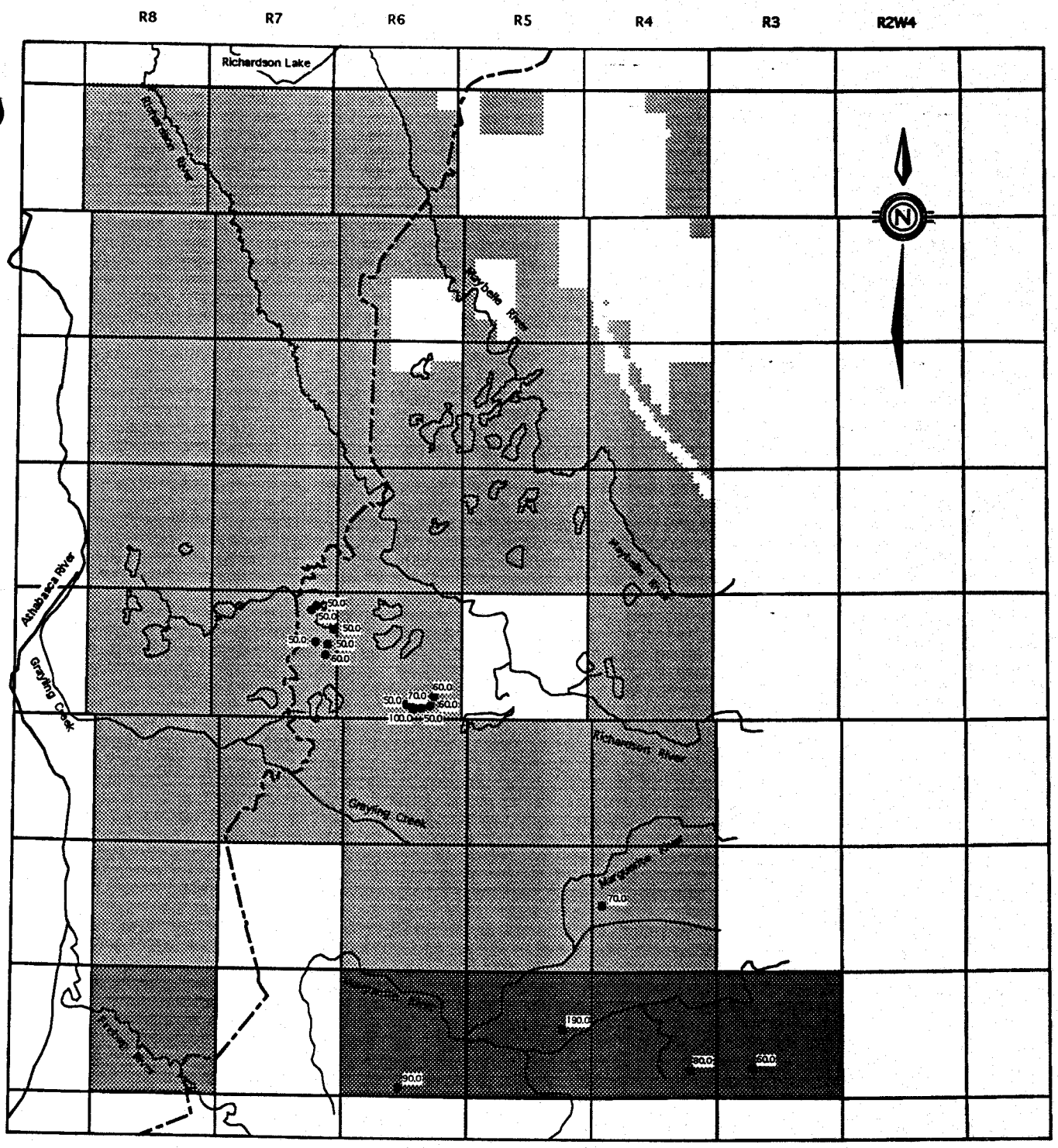
Legend

- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Biological Samples Ag (ppm)

DRAWN BY: M. Innes	MAP NO. 5u
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74B & 74L



Legend

- Northern Block Property
- Firebag Property
- Marguerite Property
- Winter Road
- Sample Location

FOCAL RESOURCES LIMITED
CALGARY, CANADA

Northern Block, Firebag, and Marguerite Properties
Lake Sediment Samples (NAA) Zn (ppm)

DRAWN BY: M. Innes	MAP NO. 5v
DATE: Aug 1995	
APPROVED BY:	SCALE:
5 km	NTS REFERENCE: 74E & 74L