



42A07NW9005 2.15024 CARMAN

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2.15024

ASSESSMENT REPORT for B SOIL-HUMUS GEOCHEMICAL SURVEY

FALCONBRIDGE LIMITED CLAIMS in CARMAN TOWNSHIP

N.T.S. 42A/06, Lat. 48° 23'N Long. 81° 05'W

FALCONBRIDGE LIMITED - TIMMINS, ONTARIO

Qual. # 2.14805

A.D. McLaughlin

April 27, 1993



42A07NW9005 2.15024 CARMAN

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1. INTRODUCTION

1.1 General

In 1992, Falconbridge Limited completed a B soil and humus partial extraction survey over fourteen contiguous claims in Carman Township, between September 17 and 28, 1992. A total of 253 humus and 145 B soil samples were collected and analyzed giving a total expenditure of \$13,400 on the claims. The work was supervised by A.D. McLaughlin, author of this report.

1.2 Exploration Model

The primary exploration target is ultramafic hosted nickel sulphide deposits such as those hosted in the Norseman-Wiluna Greenstone Belt of Australia. These deposits fall into two general types; the higher grade massive sulphide Kambalda style hosted by komatiitic peridotitic to dunitic volcanics, and the larger, but lower grade type hosted by large dunite intrusives.

2. LOCATION AND ACCESS

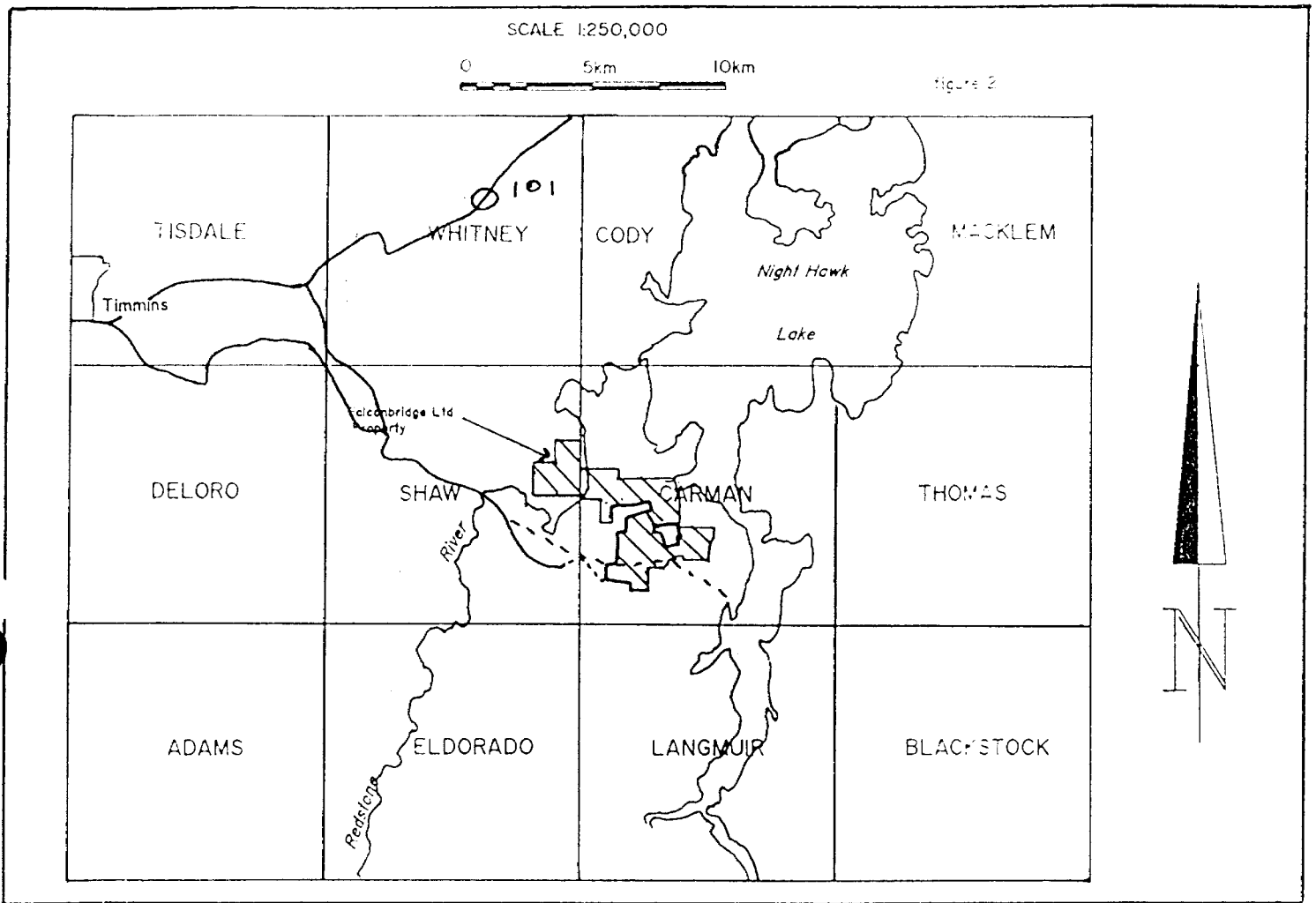
The property is located within Carman and Shaw Townships, twenty road kilometres southeast of Timmins (Figure 1). Road access is via South Porcupine along the gravel Langmuir Road which ends at the Carshaw gold mill now owned by Marshall Minerals Ltd. Permission to continue through the mill is required, and then an all terrain vehicle or skidoo will provide access throughout the Falconbridge Limited property. From the northeast side a boat can be used from Highway 101 and Frederick House River onto Night Hawk Lake which will permit access to the eastern section of the property.

3. TOPOGRAPHY AND VEGETATION

Much of the property is covered by black spruce and alder swamps with little relief. Mixed forest stands of spruce and aspen occur over the drier areas. There is approximately 5% outcrop exposure.

4. PROPERTY

Three patents and ninety staked claims comprise the entire property (Figure 2); all held by Falconbridge Limited, P.O. Box 1140, 571 Moneta Ave., Timmins, Ontario, P4N 7H9. A list of claims that work was actually performed on is presented in Table 1.



FALCONBRIDGE LIMITED
LOCATION MAP

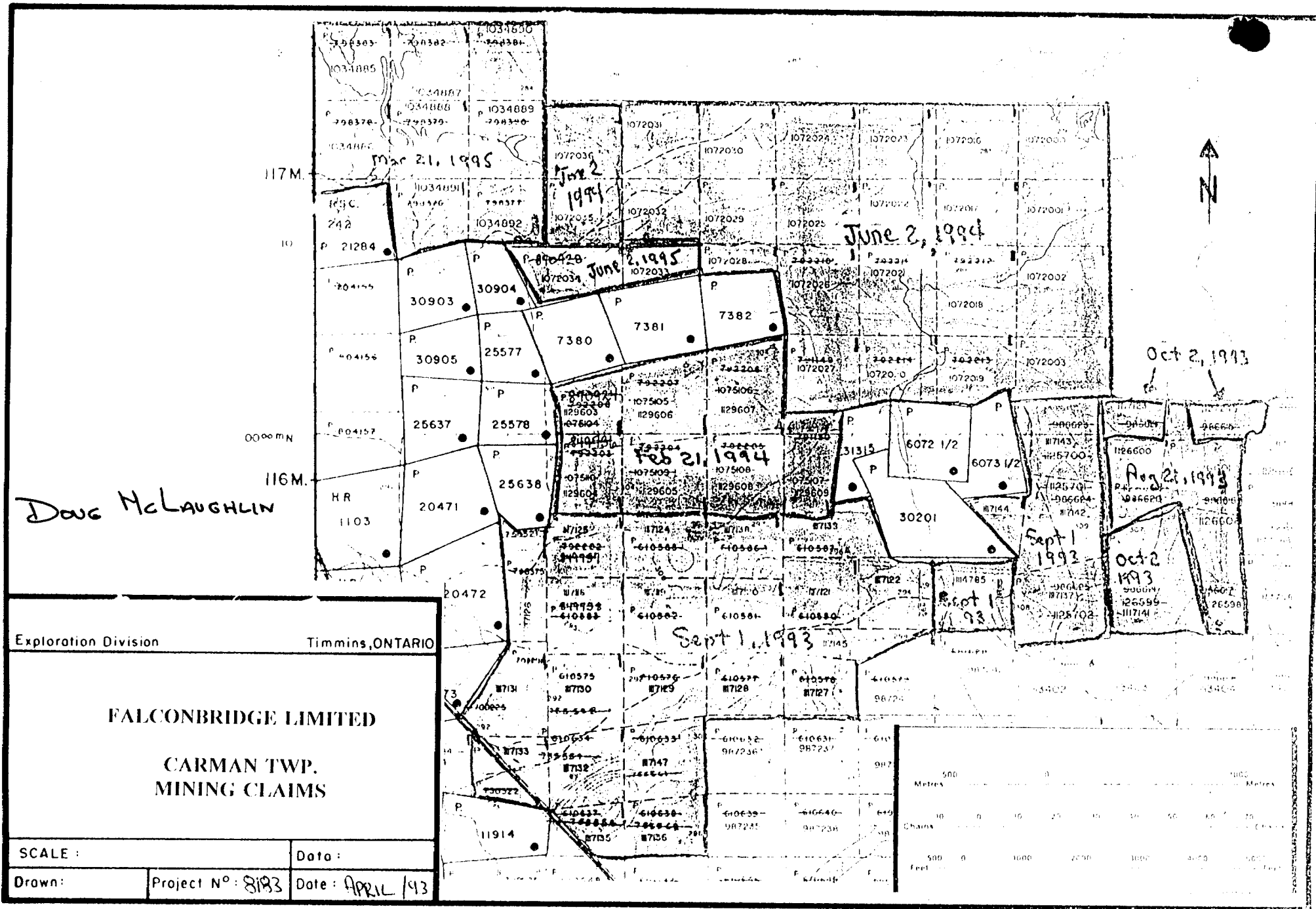
— MAIN HIGHWAY
-- TOTE ROAD

FIGURE 1

Doug McLaughlin

TABLE I GEOCHEMICAL SURVEYS ON FALCONBRIDGE LIMITED CLAIMS (CARMAN-SHAW PROJECT)

	A	B	C	D	E	F	G
1	Claim number	Number of claim units	Number of	Number of	Total	Work %	Value of
2			samples	samples	samples	done on	assessment
3			Humus	B - soils	on this claim	this claim	work done on
4						this claim	
5	P1114785	1	25	7	32	8.0	\$1,077
6	P1117119	1	13	3	16	4.0	\$539
7	P1117124	1	29	27	56	14.1	\$1,886
8	P1117125	1	3	3	6	1.5	\$202
9	P1117137	1	33	30	63	15.8	\$2,121
10	P1117141	1	14	7	21	5.3	\$707
11	P1117142	1	18	18	36	9.0	\$1,212
12	P1117143	1	16	9	25	6.3	\$842
13	P1117144	1	5	0	5	1.3	\$168
14	P1126600	1	0	5	5	1.3	\$168
15	P1129603	1	8	0	8	2.0	\$269
16	P1129604	1	15	2	17	4.3	\$572
17	P1129605	1	40	28	68	17.1	\$2,290
18	P1129606	1	34	6	40	10.1	\$1,347
19		14	253	145	398	100	\$13,400
20		Total number	Total	Total	Total	Total	Total value
21		of units	humus samples	soil sample	all samples	work	work done



DOUG McLAUGHLIN

Exploration Division Timmins, ONTARIO

FALCONBRIDGE LIMITED

CARMAN TWP. MINING CLAIMS

SCALE : Data :

Drawn: Project N^o: 8193 Date: APRIL /93

5. HISTORY

The earliest recorded work in the area was gold exploration in both Carman and Shaw Townships in the early 1900's. Over the current claims Canadian Superior Exploration Ltd., in 1965, carried out ground geophysical surveys over several airborne conductors. A single drill hole was completed east of the present property boundary. Later in that year M & M Porcupine Gold Mines Ltd. conducted airborne and ground geophysical surveys and tested EM anomalies with seven drill holes. In 1966 with McWatters Gold Mines drilled eleven holes through ultramafic and the surrounding volcanics, exploring for nickel. Gail Resources carried out MAG and VLF surveys over the eight most western claims of the current property.

Falconbridge Limited commenced exploration in 1989 when 56 claims were staked. Linecutting, ground MAG and HLEM surveys were then completed. Two diamond drill holes, totalling 723 metres, were drilled in 1990 followed by the staking of seven claims and ground MAG and HLEM surveys. Thirty-three claims were later acquired in 1990 and surveyed with MAG and HLEM in 1991.

6. GEOLOGY

6.1 Regional and Property Geology

The property is located within the Shaw Dome complex which hosts several nickel deposits and numerous showings (Figure 2 and Table II), including the recently closed Redstone and Langmuir Mines. The dome, elliptical in shape and 20 by 30 kilometres in area, contains a core of mafic to intermediate volcanics grading outwards into sediment with sulphide to oxide facies iron formation at the top. These are overlain by ultramafic volcanics and accompanying intrusives, which are in turn overlain by tholeiitic mafic volcanics to complete the section.

Specifically on the property two prospective ultramafic horizons are present on the property with the core mafic to intermediate volcanics underlying the southern portion of the property.

6.2 Glacial Deposits

Regionally the last ice direction was from the northwest (Alcock), but the large amount of outcrop in the area suggests there is only a thin overburden cover. Field work found both till and some glacialfluvial deposits.

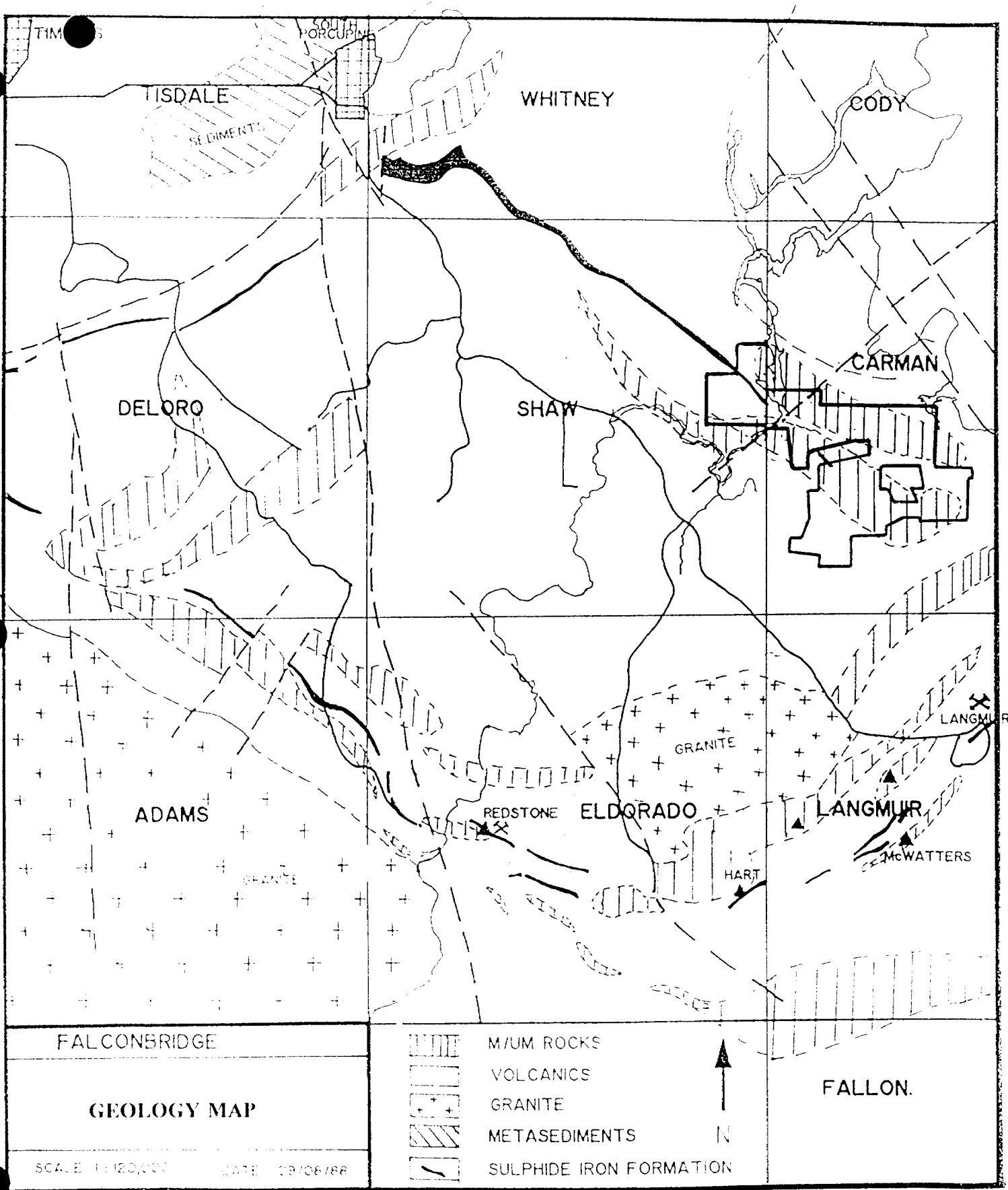
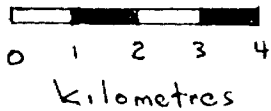


Figure 3



Doug McLaughlin

Table II Carman - Shaw Property Geology

FORMATION	LITHOLOGY	AGE
Glacial deposits	Sand, till	Pleistocene
Mafic Dykes	Mafic	Proterozoic
Upper ultramafic	Assorted volcanics, intrusives	Archean
Iron formation	Assorted	Archean
Volcanics	Intermediate to mafic	Archean
Lower ultramafic	Peridotite to dunite	Archean
Volcanics	Intermediate to mafic	Archean

7. EXPLORATION PROGRAM

7.1 Introduction

Surficial geochemical exploration has proven to be a successful exploration technique for covered mineralization so it was decided that humus and B soil surveys would be able to detect nickel mineralization from the ultramafic horizons.

The samples were analyzed with a partial extraction analytical process. Since the area is underlain by glacial tills of both unknown thickness and type, a conventional humus analytical method would detect metals emanating from both the bedrock and those derived from the till. Since the latter might mask any significant bedrock responses, a partial extraction analytical procedure was performed on the collected samples. This process, essentially a cold extraction analysis, will detect only those metal ions that were adsorbed or scavenged by the iron and manganese oxides present in B soil material, and humic acids in the humus layer. These captured ions represent only the more mobile metals emanating from either a bedrock or transported source and not directly the detrital material i.e. glacial till. Ground water moves these metal cations which are subsequently held in a relatively weak bond by the scavenging materials, unlike those more tightly bonded in sulphide or silicate minerals and are amenable to leaching by this process.

On this property the humus layer is up to ten centimetres thick and occurs below the forest litter zone. Underlying the humus layer, the B soil horizon is developed from the transported glacial material. It is marked by an upper grey bleached interval, up to 0.50 metres thick, that grades down into a distinct gossan coloured horizon of variable thickness, but less than

1.0 metres. The contact between the two zones is often gradual with a mottled zone section at the transition. B soil samples are taken from the gossan zone. Since humus is only locally developed, both humus and B soils were collected.

The samples were collected by two samplers contracted from Larchex Inc. of Timmins, Ontario. Samples were taken at twenty metre intervals on the grid along lines 100 metres apart. Due to the wet ground conditions at the time of the survey, much of the centre portion of the grid could not be sampled. Shovels and garden hoes were used to obtain enough material to fill an Kraft Paper bag 9.5 by 23 centimetres and which were then air dried in the Falconbridge Limited Timmins office. TSL/Assayers Corporation Ltd. in Rouyn, Quebec, carried out the analytical work for Ni, Co, Cu, Zn, Pb and Ag. Sample results are presented in Appendix A. The analytical process, as modified by Gwendy Hall of the Geological Survey of Canada, is also detailed in Appendix A.

7.2 Survey Statistics and Standards

All the data were statistically analyzed and these results are presented in Appendix B. Histograms were constructed for each metal in order to detect natural metal groupings. Three to five sample ranges were found in the samples with background interpreted to be the two lowest ranges for each metal. The higher range values may represent a separate sample population, potentially related to mineralization.

In order to monitor analytical precision eleven sample standards were submitted as a control on the method and the laboratory. A sample standard, SO-4, obtained from the Canada Centre for Mineral and Energy Technology, was used. Two of the humus results (Appendix A) returned reasonably precise values and comparable to other project survey standards submitted in 1992, while the third was high for nickel and cobalt, but low for zinc and lead. The eight B soil standards show more variation, especially from the nickel and lead. Overall the results indicate the analytical work is acceptable.

7.3 Humus Survey

7.3.1 Introduction

Two blocks were surveyed. First to the north overlying the western section of the lower ultramafic, and secondly to the east over both ultramafic units.

Sample location and numbers are presented on Figure 4 and the complete data set for each metal is presented in Figures 5 - 9. About 95% of the silver values are less than or equal to 1.0 ppm, and the maps are not included in this report.

7.3.2 Results

Lower Ultramafic Unit- West side

The survey defined an area 1,000 metres in length by 500 metres in width containing nickel values ranging from 14 to 2,184 ppm Ni. Within this area two discrete zones are present. First an area is defined by a nickel values greater than 200 ppm that form a "V" shaped pattern, open to the west, extending 400 metres from grid line L18+00E to L14+00E area. The highest values occur on L17+00 where two the "arms" of the "V" are each sixty metres wide and returned 1,303 ppm Ni and 786 ppm Ni on the north and south limbs respectively. Four values returned greater than 1,000 ppm Ni. The anomaly is open along strike, although one sample taken 100 metres east, on L19+00E, returned 32 ppm Ni suggesting the trend is decreasing.

Cobalt forms a coincident "V" pattern, but generally only one station wide (twenty metres) with the highest values on L18+00E. Zinc shows a slight clustering along the southern flank of the "V" with values ranging from 25 - 120 ppm Zn, while up to 49 ppm Cu and 131 ppm Pb are present, south of the "V" with the zinc, and also to the east over L19+00E, but with no accompanying nickel or cobalt.

The nickel trend overlies a two similarly orientated topographic ridges approximately ten metres above the gullies which did not contain any significant metals. It is associated with outcropping ultramafic. To the south the zinc, copper and lead cluster over the ultramafic's lower contact with the footwall volcanics, while to the east, the solitary copper, zinc and lead overlie the inferred strike extension of the lower ultramafic. Relief is minimal in the area, less than twenty metres.

Five hundred metres to the south, the highest nickel value returned in the survey, 2,184 ppm Ni with 13 ppm Co, 49 ppm Cu, 73 ppm Zn and 13 ppm Pb; occurs on L17+00E/14+40S, located southwest of a small ridge, but with no outcrop present. On the northeast side of the ridge, 150 metres away and between two ultramafic outcroppings, up to 384 ppm Ni is present with the other metals only elevated.

Lower ultramafic - East side

To the east 2.5 kilometres, a second nickel trend overlies the lower portion of this ultramafic. Defined by values greater than 100 ppm Ni, the trend is approximately 400 metres in length and 100 metres wide, extending from L33+00E to L37+00E. The trend, however, may not be continuous since grid lines L35+00E and L36+00E could not be sampled while to the east two grid lines, L35+00E and L36+00E, were also not sampled although the anomaly is not present over L40+00E. Maximum result is 1,750 ppm Ni, (L34+00E/Station 20+00S) with up to 34 ppm Cu and 51 ppm Zn present. The latter two metals do not form any recognizable pattern.

A second nickel anomaly lies 500 metres to the east over L42+00E between 24+00S and 25+20 S. Up to 738 ppm Ni is present with 11 ppm Co and 131 ppm Cu. A single anomalous value of 217 ppm Ni on L41+00E/Station 25+20S may represent the western extension of this trend. Copper forms a similarly orientated trend, but is shifted to the east 200 metres, extending from L35+00E to L40+00E. Defined by greater than 18 ppm Cu, the anomaly is sixty metres wide with up to 57 ppm Cu is present over the eastern end of the main nickel trend at L37+00E/24+20S. Zinc forms a similarly orientated trend, in a "Y" shaped pattern open to the northwest. It is shifted fifty metres north of the copper anomaly and is marked by greater than 25 ppm Zn with a maximum 66 ppm Zn.

There is no clear cut pattern from the lead and cobalt, but all are anomalous over the south end of L40+00E and L41+00E, same as copper and zinc. There is no nickel present.

Upper Ultramafic Unit

The lower contact of this unit was sampled between L35+00E and L39+00E, and the entire sequence was sampled on L39+00E. Much of the ground was extremely wet and swampy, or contained insufficient humus material. As a result the komatiite section survey area consists of humus and B soil samples.

Anomalous concentrations of up to 123 ppm Ni, 30 ppm Co, 23 ppm Cu, and 35 ppm Pb from one or, two consecutive, stations overlay the basal section. The nickel values are not statistically anomalous from this survey, but still represent a substantially high amount of metal. Up section over L39+00E the survey returned elevated nickel, copper and lead from the lower, southern, half of the section. Cobalt and zinc were noisy over the length of the surveyed line.

7.4 B Soil Survey

7.4.1 Introduction

B soils were sampled in order to fill in the gaps from the humus survey. However since much of the area is underlain by swamp only 145 samples were collected from the higher ground. Sample numbers and locations are presented on Figure 10 with the data set for each metal presented on Figures 11 - 15. Similar to the humus survey, 98% of the silver values are less than or equal to 1.0 ppm, and the maps are not included in this report.

7.4.2 Results

Lower ultramafic - West side

Nickel show an east - west trend around the baseline extending from L18+00E to L14+00E for a strike length of 400 metres and a maximum width of 200 metres. The anomaly is defined by greater than 4 ppm Ni with up to 23 ppm Ni present. Located 200 metres south of the humus "V" anomaly, the trend occurs with elevated copper ranging from 5 - 12 ppm Cu, while elevated and sporadic cobalt, zinc and lead occur south of the baseline. There is no B soil response from the area of the 2,184 ppm Ni humus sample.

The baseline nickel - copper trend overlies the basal section of the lower ultramafic, while to the east, the other metals cluster around the lower contact between the ultramafic and volcanics.

Lower ultramafic - East side

There are no associated anomalous metals over this area although up to 9 ppm Co, 7 ppm Cu and 7 ppm Zn lie within 100 metres south of the humus trend over the lower ultramafic, mafic dyke and the footwall volcanics.

Upper Ultramafic Unit

Results do not define any significant trend. There are noisy high values from over the basal contact; 14 ppm Ni, 10 ppm Cu, and 8 ppm Co. Further up section a single station, L37+00E/16+00S returned 32 ppm Ni, 7 ppm Cu and 11 ppm Co, but this does not correlate with any significant geological or geophysical feature. Zinc and lead are not anomalous.

8. DISCUSSION AND INTERPRETATION

Both the high magnitude and wide distribution range of nickel, and, to a lesser degree, of cobalt and copper, especially over the lower ultramafic unit does suggest a bedrock control. The apparent thin overburden further suggests a bedrock control. Alternatively this specific metal association of nickel, cobalt and copper could be generated from an ultramafic dominated till quite likely derived from the local ultramafic bedrock.

9. RECOMMENDATIONS

Field examin all high nickel humus and B soil sample sites over the lower ultramafic unit. Check for nearby mineralized outcrop.

10. REFERENCES

- Alcock, P.W.,(1986),Project # 86-20, Quaternary Geology of the Shining Tree Area, Districts of Sudbury and Timiskaming, from 1985 COMDA.
- Bolviken, B. and Gleeson, C.F., (1979),Focus on the Use of Soils for Geochemical Exploration in Glaciated Terrane, in Geophysics and Geochemistry in the Search for Metallic Ores, Geological Survey of Canada Report 31.
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- Leshner, C.M. and Groves, D.I. (1984), Geochemical and Mineralogical Criteria for the Identification of Mineralized Komatiites in Archean Greenstone Belts in Australia. Proceedings of the 27th International Geological Congress, Vol. 9, pp. 283-302.
- Pyke, D.R., (1982), Geology of the Timmins Area, Ontario Geological Survey Report # 219.

Appendix A

Sample Analyzes, Standard Samples and Analytical Procedures

Laboratoires TSL/ASSAYERS Laboratories

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I.C.A.P. ANALYSIS

CONBRIDGE LTD

TIMMINS

2R-1807-SA1-8

ATTN: D. McLAGHLIN

PROJ.: 8183

REPORT No. : **R1807**

Page No. : 1 of 6

File No. : OC28MZ

Date : NOV-18-1992

ALL RESULTS PPM

SAMPLE #	Co ppm	Cu ppm	Ni ppm	Pb ppm	Zn ppm	Ag ppm
SA08624	30.0	22	28	34	25	< 1
SA08633	5.5	10	8	31	41	< 1
SA08635	5.0	17	20	18	26	1
SA08636	6.0	8	11	21	49	< 1
SA08639	3.5	12	20	11	4	< 1
SA08640	3.0	10	20	11	19	< 1
SA08641	5.5	10	43	19	38	1
SA08642	13.5	9	114	7	59	2
SA08643	1.5	8	23	10	17	1
SA08644	2.5	10	39	9	7	< 1
SA08645	6.0	9	22	12	6	< 1
SA08646	2.5	57	109	9	1	< 1
SA08647	0.5	30	105	11	2	< 1
SA08657	10.0	10	24	31	66	2
SA08658	15.5	24	51	10	18	1
SA08659	5.0	18	44	11	11	< 1
SA08660	7.5	24	65	17	44	< 1
SA08661	6.5	17	33	14	19	< 1
SA08662	8.5	17	42	29	35	< 1
SA08663	4.5	16	30	20	44	< 1
SA08664	15.5	19	44	26	35	1
SA08665	39.5	12	14	38	32	1
SA08666	7.5	8	19	21	11	1
SA08667	10.5	22	46	18	29	2
SA08668	10.0	12	31	41	23	< 1
SA08669	3.0	12	31	16	11	< 1
SA08670	15.5	39	87	22	22	2
SA08671	5.5	60	108	12	43	< 1
SA08672	12.5	27	56	19	57	1
SA08673	6.0	21	52	24	28	1
SA08674	2.5	63	168	11	47	1
SA08675	7.0	32	92	13	77	1
SA08676	6.5	27	79	14	46	< 1
SA08677	6.0	38	123	15	44	< 1
SA08679	13.5	15	39	19	16	< 1

SIGNED :

[Handwritten Signature]

Laboratoires TSL/ASSAYERS Laboratories

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PHONE #: 819-797-4653

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I.C.A.P. ANALYSIS

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ATTN: D. McLAGHLIN

PROJ.: 8183

REPORT No. : **R1807**

Page No. : 2 of 6

File No. : OC28MZ

Date : NOV-18-1992

ALL RESULTS PPM

SAMPLE #	Co ppm	Cu ppm	Ni ppm	Pb ppm	Zn ppm	Ag ppm
SA08680	24.0	23	42	35	20	< 1
SA08683	4.0	16	35	24	9	< 1
SA08690	4.5	8	19	13	4	< 1
SA08691	5.5	8	10	37	19	< 1
SA08694	2.5	15	44	26	14	< 1
SA08695	7.5	12	22	29	21	< 1
SA08762	2.0	6	18	28	18	< 1
SA08763	3.0	14	31	24	13	1
SA08765	2.5	14	37	78	47	< 1
SA08767	11.5	12	217	15	45	1
SA08768	1.0	9	21	38	28	1
SA08769	1.0	8	13	16	25	1
SA08770	1.5	9	24	23	25	< 1
SA08771	5.5	15	39	23	18	< 1
SA08771	5.5	8	26	9	7	< 1
SA09008	4.5	21	49	9	4	1
SA09009	4.5	10	30	11	< 1	< 1
SA09011	4.5	16	34	14	1	< 1
SA09012	4.5	21	45	9	8	< 1
SA09015	9.5	7	29	29	50	< 1
SA09016	1.0	5	137	25	51	< 1
SA09020	5.5	10	940	11	11	< 1
SA09021	<0.5	15	1750	6	10	< 1
SA09043	1.5	7	90	12	15	< 1
SA09044	1.0	9	64	9	2	< 1
SA09045	1.0	4	31	8	19	1
SA09046	2.0	5	63	9	3	< 1
SA09047	1.0	2	56	10	24	< 1
SA09048	2.5	6	93	9	14	< 1
SA09049	4.0	7	48	10	12	2
SA09052	5.0	12	217	8	< 1	2
SA09054	6.5	4	727	11	< 1	1
SA09055	5.0	6	400	9	16	1
SA09056	7.0	3	128	11	7	< 1
SA09057	5.5	3	193	8	17	< 1

SIGNED : *M. L. Gagnon*

Laboratoires TSL/ASSAYERS Laboratories

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PROJ.: 8183

REPORT No. : **R1807**
Page No. : 3 of 6
File No. : OC28MZ
Date : NOV-18-1992

ALL RESULTS PPM

SAMPLE #	Co ppm	Cu ppm	Ni ppm	Pb ppm	Zn ppm	Ag ppm
SA09058	5.5	12	479	7	21	< 1
SA09202	3.5	8	416	19	6	< 1
SA09205	4.5	8	346	18	33	< 1
SA09207	23.5	9	325	26	19	1
SA09208	4.5	8	66	7	16	< 1
SA09209	3.5	6	18	11	38	< 1
SA09210	7.5	5	44	8	9	1
SA09211	9.0	14	39	28	14	< 1
SA09215	9.5	6	50	10	32	1
SA09216	8.0	4	31	21	40	< 1
SA09217	6.0	10	24	18	39	1
SA09218	1.0	18	45	8	5	< 1
SA09220	1.5	11	24	10	10	< 1
SA09222	2.5	7	16	15	9	< 1
SA09223	6.0	8	22	22	36	1
SA09224	0.5	5	12	11	4	1
SA09225	2.5	5	20	10	29	1
SA09226	<0.5	20	1238	11	8	2
SA09227	8.5	7	206	10	37	< 1
SA09229	3.5	11	59	24	36	1
SA09231	7.5	25	99	27	21	< 1
SA09236	2.0	7	12	9	2	< 1
SA09237	3.0	16	12	8	3	< 1
SA09239	18.0	7	39	12	37	1
SA09243	5.0	9	39	131	9	2
SA09244	13.0	9	27	20	8	1
SA09246	2.0	4	21	10	10	< 1
SA09249	11.0	7	243	41	81	< 1
SA09250	1.5	7	8	6	11	< 1
SA09251	1.5	8	38	40	68	1
SA09256	1.5	6	12	7	5	< 1
SA09257	2.0	11	55	9	1	< 1
SA09259	2.0	5	150	10	10	< 1
SA09260	4.5	11	385	3	5	< 1
SA09261	4.0	9	295	10	5	1

SIGNED : _____

[Handwritten Signature]

Laboratoires TSL/ASSAYERS Laboratories

780 AV. DU CUIVRE C.P. 665 ROUYN-NORANDA QUEBEC J9X 5C6

PHONE #: 819-797-4653

FAX #: 819-797-4501

I.C.A.P. ANALYSIS

FALCONBRIDGE LTD

TIMMINS

2R-1807-SA1-8

ATTN: D. McLAGHLIN

PROJ.: 8183

REPORT No. : **R1807**

Page No. : 5 of 6

File No. : OC28MZ

Date : NOV-18-1992

ALL RESULTS PPM

SAMPLE #	Co ppm	Cu ppm	Ni ppm	Pb ppm	Zn ppm	Ag ppm
SA09315	1.0	3	28	11	3	< 1
SA09340	16.0	7	77	20	36	2
SA09341	1.5	5	31	11	15	< 1
SA09342	5.0	8	310	10	15	< 1
SA09344	6.0	11	62	13	10	1
SA09345	1.0	5	29	14	3	< 1
SA09347	1.0	6	10	25	11	< 1
SA09349	3.0	5	13	22	29	< 1
SA09350	1.0	6	3	4	8	< 1
SA09351	1.0	7	24	13	25	< 1
SA09352	1.5	18	29	11	5	< 1
SA09353	6.5	12	24	12	12	< 1
SA09354	3.5	20	27	13	14	< 1
SA09355	1.0	10	7	8	2	< 1
SA09356	0.5	8	4	8	2	< 1
SA09357	19.0	13	50	10	5	2
SA09358	12.0	11	38	18	12	2
SA09359	6.0	14	59	12	16	< 1
SA09360	3.0	18	46	12	6	1
SA09361	3.0	19	49	9	2	< 1
SA09363	2.5	21	56	9	2	1
SA09364	8.5	9	35	12	21	2
SA09365	14.0	7	88	11	30	2
SA09366	9.0	13	104	13	34	1
SA09373	28.5	7	20	35	39	< 1
SA09380	1.5	7	8	9	2	< 1
SA09385	3.0	6	226	6	< 1	< 1
SA09386	3.5	8	145	7	< 1	< 1
SA09387	1.0	4	31	10	6	< 1
SA09388	4.5	7	32	25	29	< 1
SA09389	1.0	5	18	32	28	< 1
SA09390	1.5	4	14	31	24	< 1
SA09391	11.5	5	60	13	16	< 1
SA09392	2.5	6	49	11	11	< 1
SA09394	1.0	15	63	9	2	< 1

SIGNED :

W. L. ...

Laboratoires TSL/ASSAYERS Laboratoires

780 AV. DU CUIVRE C.P. 665 ROUYN-NORANDA QUEBEC J9X 5C6

PHONE #: 819-797-4653

FAX #: 819-797-4501

I.C.A.P. ANALYSIS

FALCONBRIDGE LTD

TIMMINS

2R-1807-SA1-8

ATTN: D. McLAGHLIN

PROJ.: 8183

REPORT No. : R1807

Page No. : 6 of 6

File No. : OC28MZ

Date : NOV-18-1992

ALL RESULTS PPM

SAMPLE #	Co ppm	Cu ppm	Ni ppm	Pb ppm	Zn ppm	Ag ppm
SA09396	4.5	24	169	17	5	< 1
SA09397	3.0	7	67	10	5	< 1
SA09398	4.5	8	89	11	9	< 1

SIGNED :

W. P. ...

Laboratoires TSL/ASSAYERS Laboratories

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PHONE #: 819-797-4653

FAX #: 819-797-4501

I.C.A.P. ANALYSIS

FALCONBRIDGE LTD

TIMMINS

2R-1807-SA6-9

ATTN: DOUG McLAUGHLIN

PROJ.: 8183

REPORT No. : **H1807**

Page No. : 1 of 3

File No. : OC30MZ

Date : NOV-21-1992

ALL RESULTS PPM

SAMPLE #	Co ppm	Cu ppm	Ni ppm	Pb ppm	Zn ppm	Ag ppm
SA09399	5.0	11	85	12	20	< 1
SA09400	1.5	7	6	6	12	< 1
SA09419	12.0	8	384	10	12	< 1
SA09423	9.0	3	164	9	9	< 1
SA09428	70.5	13	270	24	37	< 1
SA09433	5.0	26	135	12	3	< 1
SA09437	4.0	8	137	20	20	< 1
SA09442	6.0	9	27	18	5	< 1
SA09445	14.5	26	113	15	12	< 1
SA09446	8.0	17	52	13	16	< 1
SA09447	17.5	22	88	24	7	< 1
SA09448	17.5	10	36	30	58	< 1
SA09450	2.0	8	4	5	10	< 1
SA09454	1.5	5	9	29	35	< 1
SA09455	1.0	3	27	16	47	< 1
SA09457	6.0	8	50	17	33	< 1
SA09458	1.0	5	20	16	18	< 1
SA09460	3.5	8	139	11	27	< 1
SA09461	8.5	10	21	14	< 1	< 1
SA09462	5.5	5	35	16	23	< 1
SA09465	1.5	18	286	16	6	< 1
SA09470	3.5	4	68	16	20	< 1
SA09471	10.0	8	323	26	32	2
SA09472	34.0	8	237	35	30	< 1
SA09475	11.5	7	191	28	43	1
SA09478	29.0	10	229	21	23	< 1
SA09481	1.5	9	20	36	120	< 1
SA09482	14.5	6	74	27	18	< 1
SA09483	4.0	6	100	11	3	< 1
SA09484	2.5	9	399	4	1	< 1
SA09485	61.5	14	163	32	20	< 1
SA09489	3.5	15	17	15	24	< 1
SA09490	1.5	13	10	12	24	< 1
SA09491	3.0	21	146	10	36	1
SA09492	10.0	14	147	8	2	< 1

SIGNED :

W.P.

Laboratoires TSL/ASSAYERS Laboratories

780 AV. DU CUIVRE C.P. 665 ROUYN-NORANDA QUEBEC J9X 5C6

PHONE #: 819-797-4653

FAX #: 819-797-4501

I.C.A.P. ANALYSIS

LCONBRIDGE LTD

TIMMINS

2R-1807-SA6-9

ATTN: DOUG McLAUGHLIN

PROJ.: 8183

REPORT No. : **H1807**

Page No. : 3 of 3

File No. : OC30MZ

Date : NOV-21-1992

ALL RESULTS PPM

SAMPLE #	Co ppm	Cu ppm	Ni ppm	Pb ppm	Zn ppm	Ag ppm
SA09709	26.0	18	56	16	43	2
SA09710	6.0	20	67	10	15	2
SA09711	3.5	18	39	13	10	< 1
SA09712	10.0	25	66	35	37	< 1
SA09761	11.0	131	114	13	18	< 1
SA09762	4.0	15	738	9	11	< 1
SA09763	9.0	11	580	10	4	< 1
SA09764	14.5	6	489	10	7	< 1
SA09765	6.0	19	449	12	22	< 1
SA09767	14.0	12	105	14	25	< 1

SIGNED : *M. P.*

Laboratoires TSL/ASSAYERS Laboratories

780 AV. DU CUIVRE C.P. 665 ROUYN-NORANDA QUEBEC J9X 5C6

PHONE #: 819-797-4653

FAX #: 819-797-4501

I.C.A.P. ANALYSIS

INFLCONBRIDGE LTD

TIMMINS

3R-0028-SA1

ATTN: IAN LIU

PROJ.: 8183

REPORT No. : **A28**

Page No. : 1 of 3

File No. : JA22MZ

Date : JAN-22-1993

SAMPLE #	Co ppm	Cu ppm	Ni ppm	Pb ppm	Zn ppm	Ag ppm
SA08605	2	5	3	< 1	3	< 1
SA08606	11	7	32	5	37	< 1
SA08607	2	4	3	< 1	3	< 1
SA08619	< 1	3	2	1	< 1	< 1
SA08648	< 1	3	3	7	5	< 1
SA08649	4	2	2	7	10	< 1
SA08650	6	4	6	9	15	< 1
SA08651	3	3	2	6	7	< 1
SA08652	4	2	2	8	9	< 1
SA08653	2	3	3	5	5	< 1
SA08654	2	3	2	10	4	< 1
SA08655	< 1	4	4	5	5	< 1
SA08656	1	2	5	< 1	2	< 1
SA08681	2	3	2	1	< 1	< 1
SA08687	< 1	3	4	2	2	< 1
SA08688	2	2	7	5	2	< 1
SA08689	1	3	2	1	2	< 1
SA08692	3	4	9	5	5	< 1
SA08693	2	4	7	6	7	< 1
SA08697	1	3	4	3	2	< 1
SA08700	6	4	6	5	16	< 1
SA08701	3	3	5	2	6	< 1
SA08708	< 1	3	4	6	1	< 1
SA08711	1	3	4	7	3	< 1
SA08712	< 1	3	3	3	< 1	< 1
SA08714	< 1	3	2	6	1	< 1
SA09010	2	4	7	6	3	< 1
SA09024	1	3	3	< 1	2	< 1
SA09025	1	4	4	2	3	< 1
SA09026	2	3	3	1	3	< 1
SA09059	1	3	3	5	6	< 1
SA09080	< 1	3	2	7	5	1
SA09081	1	3	4	6	7	< 1
SA09082	1	5	4	1	7	< 1
SA09085	2	5	4	5	3	< 1

SIGNED :

[Handwritten Signature]

Laboratoires TSL/ASSAYERS Laboratories

780 AV. DU CUIVRE C.P. 665 ROUYN-NORANDA QUEBEC J9X 5C6

PHONE #: 819-797-4653

FAX #: 819-797-4501

I.C.A.P. ANALYSIS

MILCONBRIDGE LTD

TIMMINS

3R-0028-SA1

ATTN: IAN LIU

PROJ.: 8183

REPORT No. : **A28**

Page No. : 2 of 3

File No. : JA22MZ

Date : JAN-22-1993

SAMPLE #	Co ppm	Cu ppm	Ni ppm	Pb ppm	Zn ppm	Ag ppm
SA09086	1	4	4	3	1	< 1
SA09087	< 1	1	1	8	4	< 1
SA09232	3	8	10	11	11	< 1
SA09233	6	4	2	9	3	< 1
SA09234	2	4	2	3	3	< 1
SA09245	2	4	3	7	2	< 1
SA09252	2	5	5	1	7	1
SA09253	2	3	3	1	< 1	< 1
SA09254	< 1	1	< 1	9	2	< 1
SA09255	< 1	3	1	7	1	< 1
SA09263	< 1	5	4	11	7	< 1
SA09267	2	2	8	5	6	< 1
SA09268	3	6	34	7	2	< 1
SA09271	1	4	4	2	6	< 1
SA09272	1	3	1	7	5	< 1
SA09273	< 1	3	1	4	3	< 1
SA09286	3	1	17	10	16	2
SA09288	3	2	6	5	3	< 1
SA09305	1	3	4	2	4	1
SA09312	6	5	18	3	24	< 1
SA09316	1	3	4	4	2	< 1
SA09317	2	3	12	4	4	< 1
SA09319	5	< 1	19	4	5	< 1
SA09320	3	2	7	8	11	< 1
SA09321	5	3	4	7	5	< 1
SA09322	< 1	< 1	3	7	2	1
SA09323	1	2	3	6	2	1
SA09324	1	4	2	7	6	1
SA09325	1	5	3	7	5	< 1
SA09326	1	5	1	4	4	< 1
SA09327	< 1	2	< 1	7	5	1
SA09328	5	3	29	6	3	< 1
SA09330	2	4	2	1	2	< 1
SA09331	< 1	2	1	8	2	< 1
SA09332	< 1	2	1	5	2	< 1

SIGNED : *Al P...*

Laboratoires TSL/ASSAYERS Laboratories

780 AV. DU CUIVRE C.P. 665 ROUYN-NORANDA QUEBEC J9X 5C6

PHONE #: 819-797-4653

FAX #: 819-797-4501

I.C.A.P. ANALYSIS

WALCONBRIDGE LTD

TIMMINS
3R-0028-SA1
ATTN: IAN LIU
PROJ.: 8183

REPORT No. : **A28**
Page No. : 3 of 3
File No. : JA22MZ
Date : JAN-22-1993

SAMPLE #	Co ppm	Cu ppm	Ni ppm	Pb ppm	Zn ppm	Ag ppm
SA09333	1	2	2	5	4	< 1
SA09334	1	2	1	7	4	< 1
SA09335	< 1	3	< 1	2	2	< 1
SA09336	2	5	2	8	3	1
SA09346	1	3	5	6	1	< 1
SA09368	30	3	120	9	8	< 1
SA09370	< 1	< 1	4	8	< 1	< 1
SA09371	1	7	4	9	1	< 1
SA09372	1	7	4	5	3	< 1
SA09374	1	7	3	9	4	< 1
SA09375	2	4	4	3	3	1
SA09376	1	6	2	6	4	< 1
SA09377	1	4	2	2	2	1
SA09378	< 1	3	3	3	2	< 1
SA09379	1	5	2	< 1	< 1	< 1
SA09381	2	< 1	3	< 1	2	< 1
SA09382	2	3	3	4	4	< 1
SA09383	1	1	3	5	5	< 1
SA09384	3	3	4	2	7	< 1

SIGNED :

[Handwritten Signature]

Laboratoires TSL/ASSAYERS Laboratories

780 AV. DU CUIVRE C.P. 665 ROUYN-NORANDA QUEBEC J9X 5C6

PHONE #: 819-797-4653

FAX #: 819-797-4501

I.C.A.P. ANALYSIS

MILCONBRIDGE LTD.

B SOIL PARTIAL EXTRACTION

ATTN: IAN LIU

3R-0028-SA1

PROJ:8183

REPORT No. : **A28**

Page No. : 1 of 2

File No. : JA22MF

Date : JAN-22-1993

SAMPLE #	Pb ppm	Zn ppm	Ni ppm	Cu ppm	Co ppm	Ag ppm
SA09435	6	12	7	6	1	< 1
SA09443	2	2	3	2	< 1	< 1
SA09451	< 1	3	2	4	3	< 1
SA09467	7	1	13	4	< 1	< 1
SA09468	< 1	6	8	3	2	< 1
SA09476	< 1	15	23	2	8	< 1
SA09477	< 1	4	5	4	< 1	< 1
SA09478	< 1	2	7	3	< 1	< 1
SA09479	< 1	4	9	4	1	< 1
SA09486	6	< 1	12	3	4	< 1
SA09487	2	4	12	6	3	< 1
SA09501	3	7	4	3	1	< 1
SA09502	3	7	4	4	2	< 1
SA09503	< 1	2	3	2	2	< 1
SA09504	9	5	9	4	2	< 1
SA09601	< 1	3	2	3	< 1	< 1
SA09602	< 1	4	9	5	1	1
SA09604	< 1	3	5	3	1	< 1
SA09605	6	6	12	5	3	< 1
SA09608	< 1	2	2	3	< 1	< 1
SA09611	4	3	11	6	1	< 1
SA09615	3	6	8	6	2	< 1
SA09626	3	3	14	2	5	< 1
SA09627	< 1	9	12	3	6	< 1
SA09628	< 1	4	5	3	8	< 1
SA09629	< 1	1	10	6	5	< 1
SA09630	8	7	4	4	2	< 1
SA09631	8	< 1	5	1	< 1	< 1
SA09632	1	2	4	3	< 1	< 1
SA09633	5	6	10	6	3	1
SA09634	5	6	9	7	1	< 1
SA09635	1	2	1	2	< 1	< 1
SA09636	< 1	< 1	1	2	< 1	< 1
SA09637	1	< 1	1	3	< 1	1
SA09640	3	< 1	2	2	< 1	< 1

SIGNED :

Fanny Fred

Laboratoires TSL/ASSAYERS Laboratories

780 AV. DU CUIVRE C.P. 665 ROUYN-NORANDA QUEBEC J9X 5C6

PHONE #: 819-797-4653

FAX #: 819-797-4501

I.C.A.P. ANALYSIS

PHILCONBRIDGE LTD.

B SOIL PARTIAL EXTRACTION

ATTN: IAN LIU

3R-0028-SA1

PROJ:8183

REPORT No. : **A28**

Page No. : 2 of 2

File No. : JA22MP

Date : JAN-22-1993

SAMPLE #	Pb ppm	Zn ppm	Ni ppm	Cu ppm	Co ppm	Ag ppm
SA09643	5	< 1	9	8	< 1	< 1
SA09644	< 1	22	16	< 1	3	< 1
SA09645	3	3	3	2	< 1	< 1
SA09646	8	2	4	5	< 1	< 1
SA09647	5	1	< 1	2	< 1	< 1
SA09648	5	7	4	4	7	1
SA09649	< 1	3	6	4	1	< 1
SA09650	7	13	11	2	5	< 1
SA09651	< 1	7	9	6	1	< 1
SA09680	3	10	11	4	2	< 1
SA09681	< 1	3	14	6	2	1
SA09683	< 1	2	12	5	2	< 1
SA09685	< 1	2	2	2	< 1	< 1
SA09686	< 1	4	11	6	1	< 1
SA09687	< 1	2	21	7	< 1	< 1
SA09688	5	7	3	4	< 1	< 1
SA09693	< 1	6	5	4	8	< 1
SA09694	3	6	94	11	3	1
SA09714	8	27	15	8	10	1
SA09766	< 1	5	13	4	10	< 1
SA09768	5	3	4	4	< 1	< 1
SA09769	< 1	2	3	5	< 1	1
SA09770	< 1	1	7	3	< 1	< 1
SA09771	< 1	3	10	5	1	< 1

SIGNED :

Ramy Saad

ORGANIC PHASE EXTRACTION FROM HUMUS SAMPLES

REAGENT: 0.1M $\text{Na}_4\text{P}_2\text{O}_7$ (pH 10.0) prepared by adding 44.6 grams of $\text{Na}_4\text{P}_2\text{O}_7$ to 990mL of DDI H_2O . The pH can adjusted to 10.0 by adding approximately 60uL of concentrated HNO_3 to the solution. Make up volume to 1L mark with DDI H_2O and shake well.

PROCEDURE:

1. Weigh out 1.0 gram of sample into 250 ml Erlenmeyer flasks.
2. Add 85 mL of 0.1M $\text{Na}_4\text{P}_2\text{O}_7$ to the samples.
3. Cover top of flasks with parafilm.
4. Swirl the samples to mix and to remove any sample stuck to flask bottom.
5. Shake on shaker for 3 hours @ 100 shakes per minute.
6. Remove samples from shaker.
7. Swirl and transfer the sample into two 50 mL Falcon tubes. Make sure that tubes have same amount of sample.
8. Weigh Falcon tube and balance them by adding 0.1M to $\text{Na}_4\text{P}_2\text{O}_7$ the samples.
9. Centrifuge the samples for 10 minutes. NOTE: Position the tubes in Centrifuge so that they are opposite to the tubes with the corresponding weight.
10. Set up Millipore suction filtering apparatus. Clean with 10 mL HNO_3 in 250 mL of DDI H_2O allowing the solution to be drawn through the filtering apparatus. Rinse twice with 250 mL of DDI.
11. Use Whatman #41 diameter 5.5 cm for filtering of samples.
12. Decant supernatant (top of solution) into filter cup. Pour into middle of the filter paper to prevent sample from sticking to the sides.
13. Rinse the filter cup sides twice with 0.1M $\text{Na}_4\text{P}_2\text{O}_7$ and remove filter cup. Remove filter paper and place it just inside the mouth of the flask from which the sample came. Transfer the filtrate (sample in the filter flask) into a clean and labelled 100 mL volumetric flask using a funnel. Rinse the funnel twice using 0.1M $\text{Na}_4\text{P}_2\text{O}_7$. Cap the volumetric flasks.

14. Clean filtering apparatus between samples as described in Step # 10 and rinse funnel between samples with DDI.
15. Add 10mL of $\text{Na}_4\text{P}_2\text{O}_7$ to the residue and transfer back into the Erlenmeyer from which it came. Rinse each tube two or three times to transfer all remaining residue into the flask. Do this to each tube keeping in mind that the total volume must be 85 mL and also that there are two tubes for each sample.
16. Make volume up to 100 mL in the volumetric flasks.
17. Analyze both sets by Flame AA.
18. Refrigerate residues.

B SOIL PARTIAL EXTRACTION FROM HUMUS SAMPLES

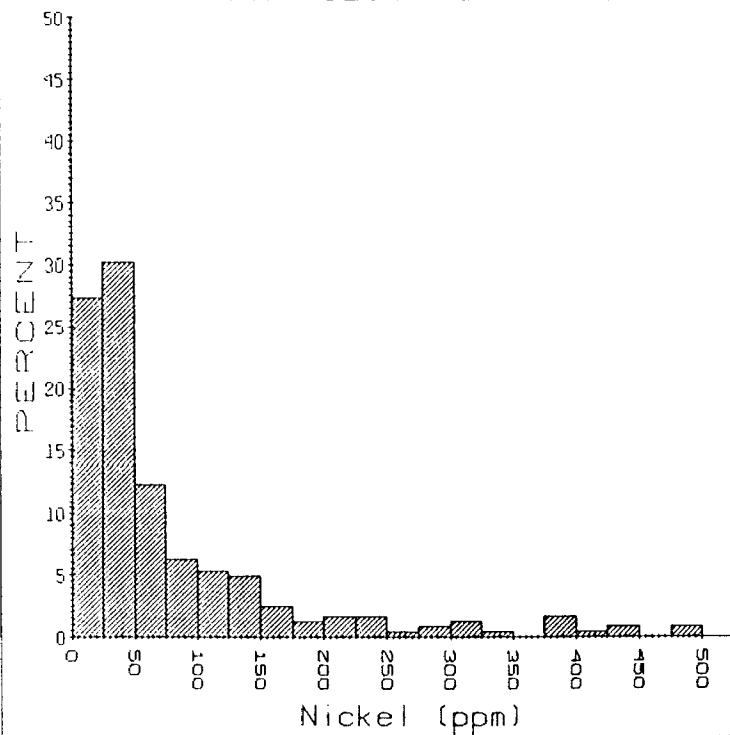
1. Weigh out 1.0 g of sample into a 50mL Falcon tube.
2. Add 20 mL of 1M NaOAc to samples.
3. Vortex samples.
4. Shake samples on shaker for 6 hours at 160 shakes per minute.
5. Centrifuge samples for 10 minutes at 2800 rpm.
6. Decant supernatant from samples into separate Falcon tube.
7. Add 5 mL of DDI H₂O to residues; vortex and centrifuge for 10 minutes.
8. Repeat Steps 6 and 7.
9. Make up volume to 30 mL mark with DDI H₂O.
10. Add 20ml of 0.25M of reagent NH₂OH,HCL to residues.
11. Vortex samples.
12. Heat samples in H₂O bath for 2 hours at 60° C. Vortex every 5-10 minutes. Leave caps initially on loosely to reflux samples.
13. Centrifuge samples for 10 minutes.
14. Decant supernatant into separate Falcon tubes.
15. Add 5mL of DDI H₂O to residues, vortex and centrifuge for 10 minutes.
16. Repeat Steps 6 and 7. Decant remaining supernatant into Falcon tubes.
17. Analyze both sets by Flame AA.

1992 PN# 8183 CARMAN-SHAW STANDARD DATA							B SOILS	PEG SURVEY
:SAMPLE	Co	Cu	Ni	Pb	Zn	Ag	STD	
:	ppm	ppm	ppm	ppm	ppm	ppm	TYPE	
SA8650	6	4	6	9	15	0.5	SO-4	
SA8700	6	4	6	5	16	0.5	SO-4	
SA9650	7	13	11	2	5	0.5	SO-4	

1992 PN# 8183 CARMAN-SHAW SO-4 STANDARD DATA					HUMUS		SURVEY			
:SAMPLE	EASTTING	NORTHING	Co	Cu	Ni	Pb	Zn	Ag		
:	UTM	UTM	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SA9250	-1	-1	1.5	7	8	6	11	0.5		
SA9300	-1	-1	1.5	6	17	7	10	0.5		
SA9350	-1	-1	1	6	3	4	8	0.5		
SA9400	-1	-1	1.5	7	6	6	12	0.5		
SA9450	-1	-1	2	8	4	5	10	0.5		

Appendix B
Statistical Analyzes

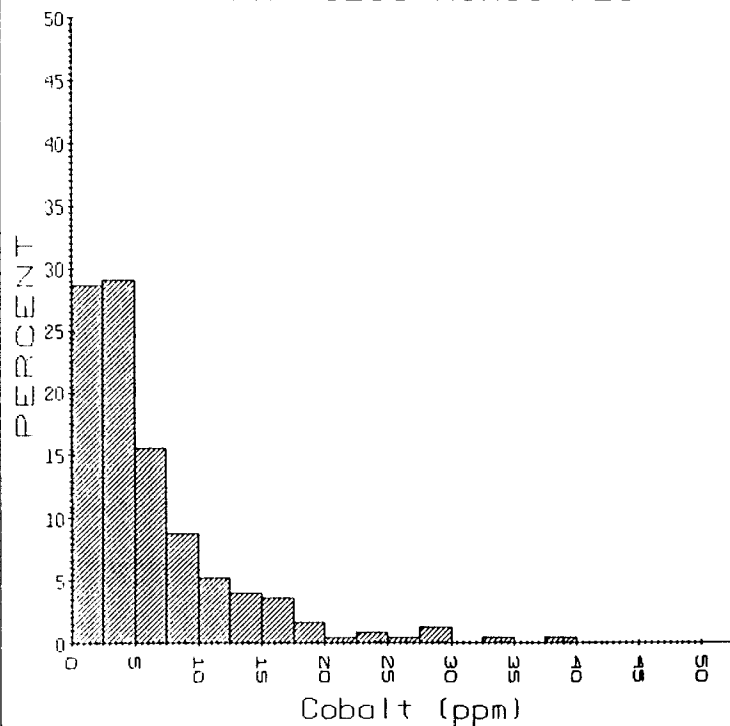
PN* 8183 HUMUS PEG



Statistical Summary

Original number of samples	253
Samples removed by filter	11
Samples left after filtering	242
Samples greater than zero	242
Minimum sample value	4.000
Maximum value	489.000
Mean	80.355
Standard Deviation	95.133
Standard Error of Mean	6.115
Median	246.500
Geometric Mean	48.174
Geometric Standard Deviation	2.700
Skewness	2.308
Kurtosis	8.245
Sum of samples	19446.000
Sum of samples > 0.0	19446.000

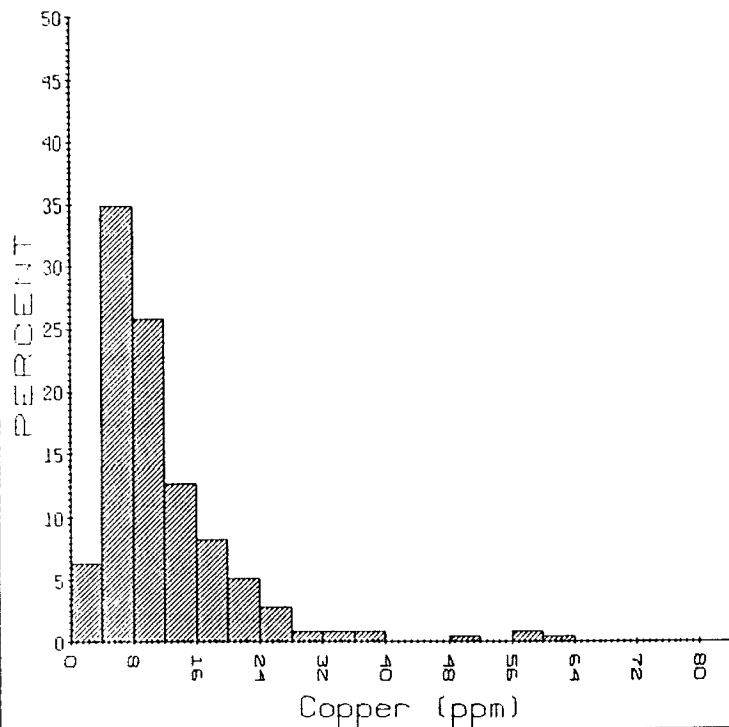
PN* 8183 HUMUS PEG



Statistical Summary

Original number of samples	253
Samples removed by filter	2
Samples left after filtering	251
Samples greater than zero	251
Minimum sample value	0.300
Maximum value	39.500
Mean	6.392
Standard Deviation	6.157
Standard Error of Mean	0.389
Median	19.900
Geometric Mean	4.316
Geometric Standard Deviation	2.508
Skewness	2.209
Kurtosis	9.120
Sum of samples	1604.400
Sum of samples > 0.0	1604.400

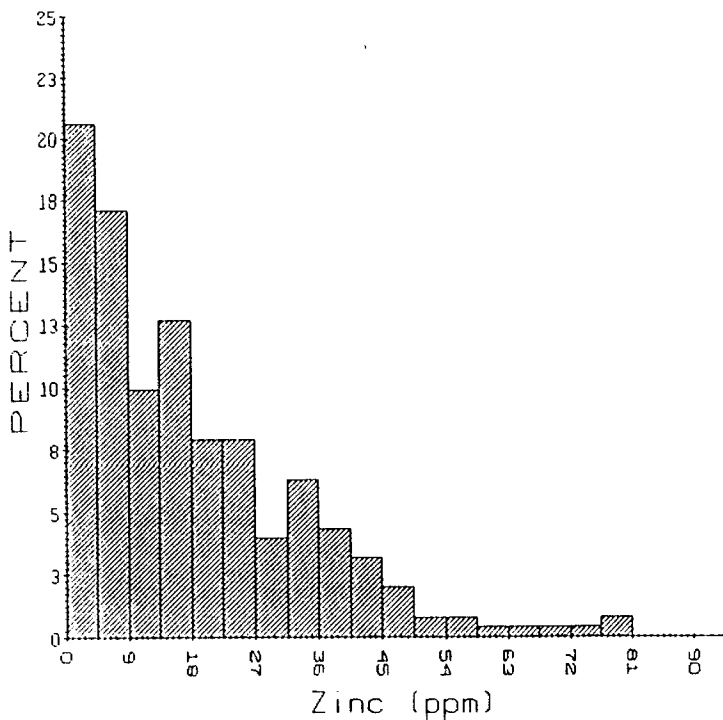
PN* 8183 HUMUS PEG



Statistical Summary

Original number of samples	253
Samples removed by filter	1
Samples left after filtering	252
Samples greater than zero	252
Minimum sample value	2.000
Maximum value	63.000
Mean	12.139
Standard Deviation	8.751
Standard Error of Mean	0.551
Median	32.500
Geometric Mean	10.103
Geometric Standard Deviation	1.798
Skewness	2.746
Kurtosis	13.666
Sum of samples	3059.000
Sum of samples > 0.0	3059.000

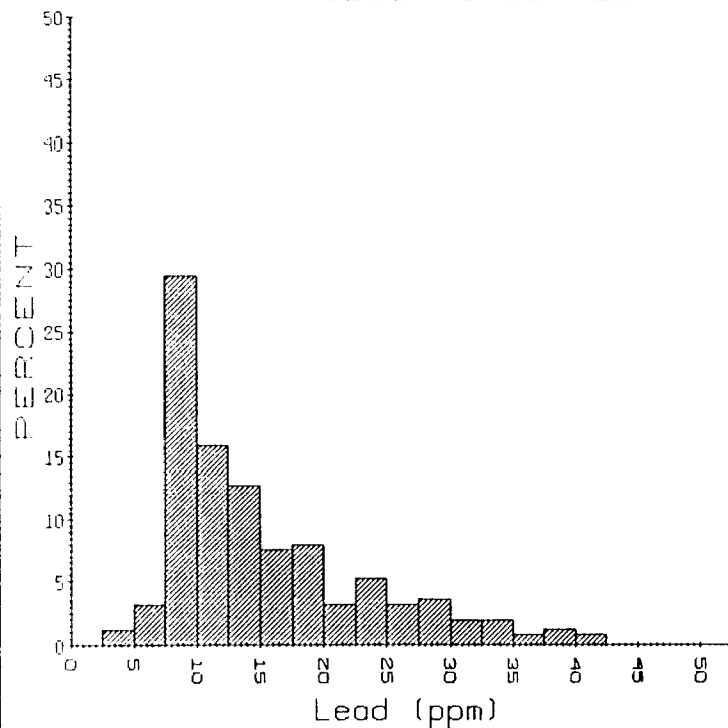
PN* 8183 HUMUS PEG



Statistical Summary

Original number of samples	253
Samples removed by Filter	1
Samples left after Filtering	252
Samples greater than zero	252
Minimum sample value	0.500
Maximum value	81.000
Mean	18.177
Standard Deviation	15.741
Standard Error of Mean	0.992
Median	40.750
Geometric Mean	11.049
Geometric Standard Deviation	3.242
Skewness	1.264
Kurtosis	4.663
Sum of samples	4580.500
Sum of samples > 0.0	4580.500

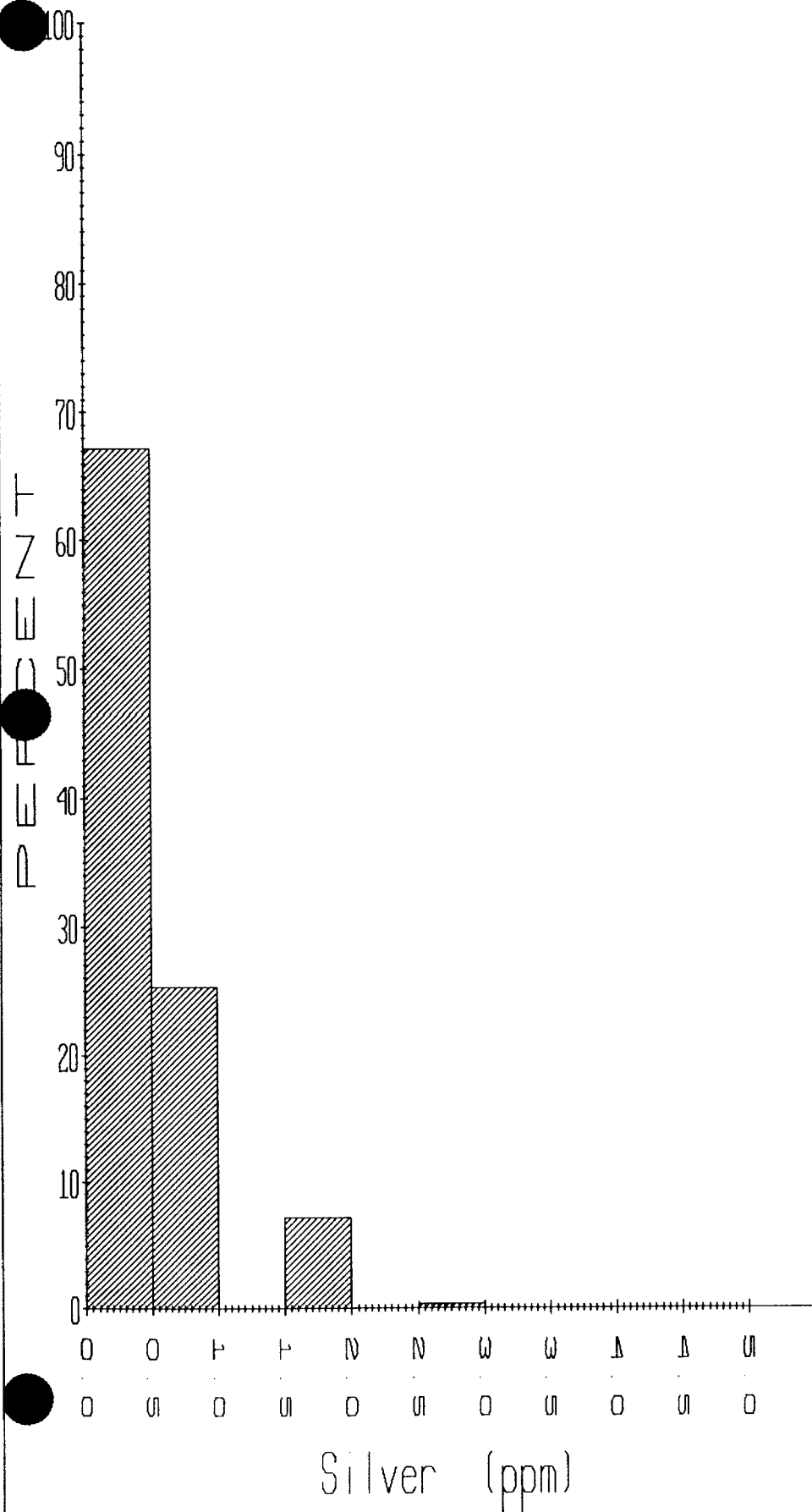
PN* 8183 HUMUS PEG



Statistical Summary

Original number of samples	253
Samples removed by Filter	2
Samples left after filtering	251
Samples greater than zero	251
Minimum sample value	3.000
Maximum value	41.000
Mean	15.482
Standard Deviation	7.931
Standard Error of Mean	0.501
Median	22.000
Geometric Mean	13.815
Geometric Standard Deviation	1.599
Skewness	1.251
Kurtosis	3.901
Sum of samples	3886.000
Sum of samples > 0.0	3886.000

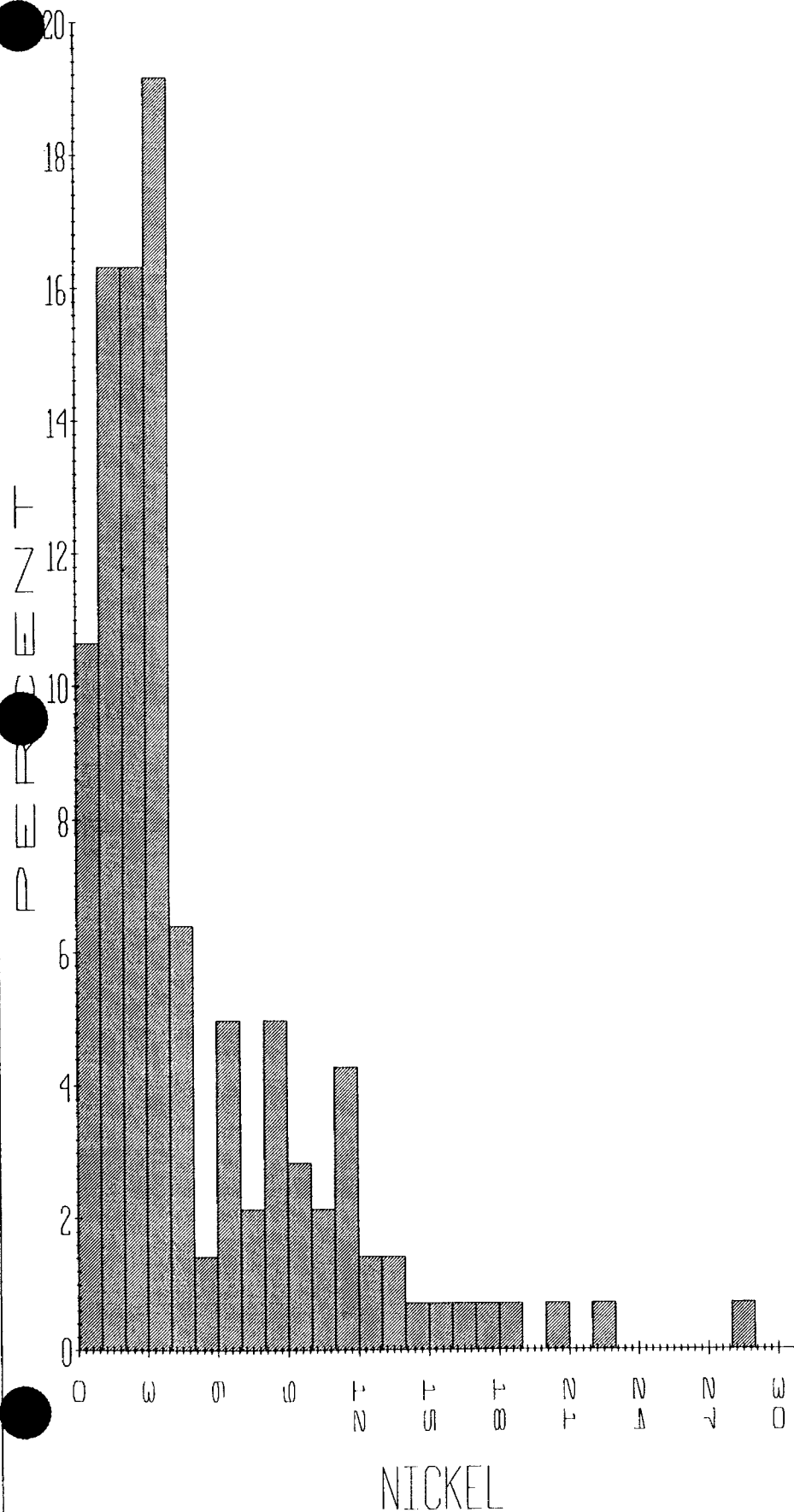
PN# 8183 HUMUS PEG



Statistical Summary

Original number of samples	253
Samples removed by filter	0
Samples left after filtering	253
Samples greater than zero	253
Minimum sample value	0.500
Maximum value	3.000
Mean	0.743
Standard Deviation	0.436
Standard Error of Mean	0.027
Median	1.750
Geometric Mean	0.662
Geometric Standard Deviation	1.551
Skewness	2.204
Kurtosis	7.913
Sum of samples	188.000
Sum of samples > 0.0	188.000

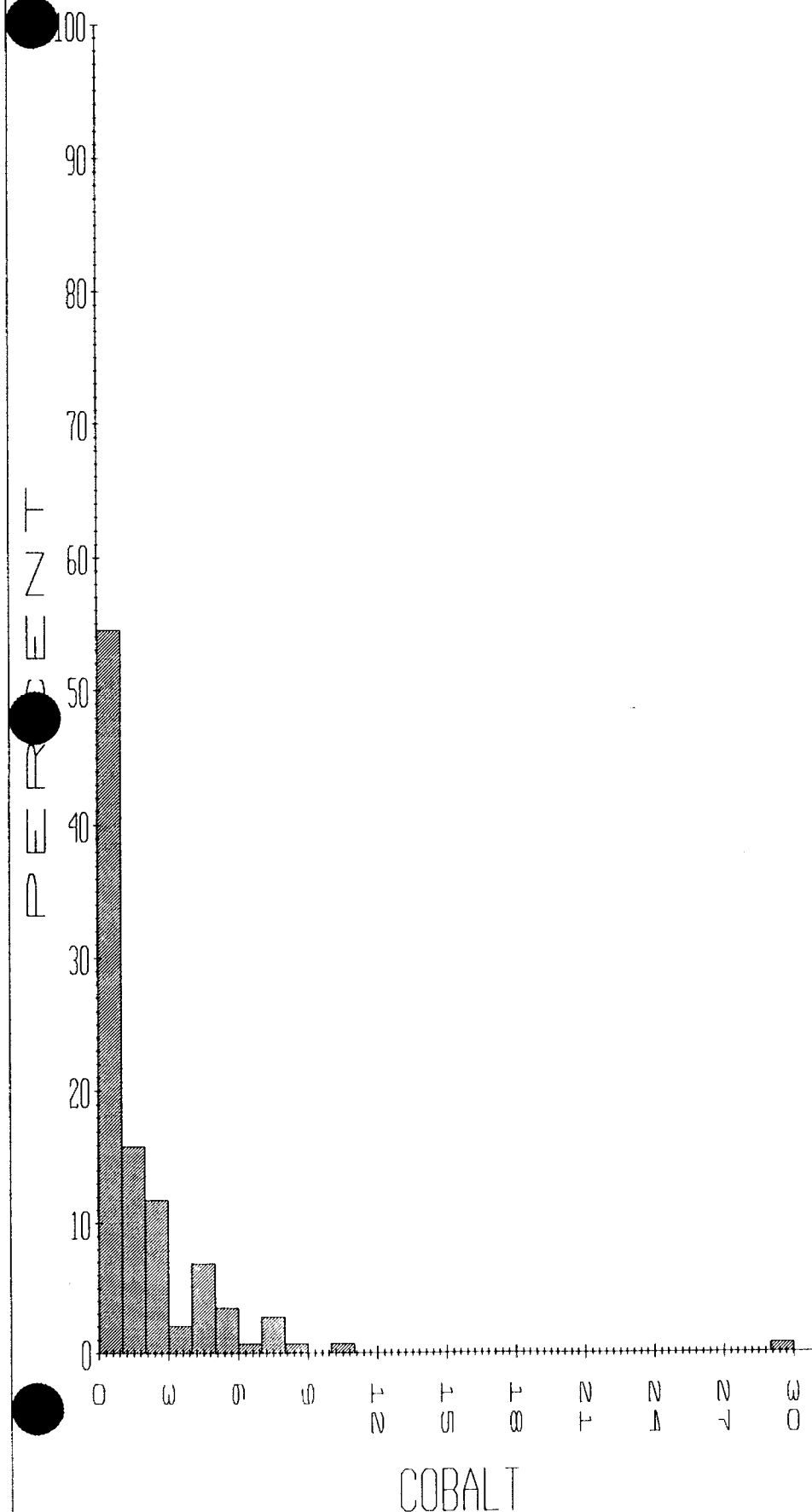
PN 8183 PEG B SOILS



Statistical Summary

Original number of samples	145
Samples removed by filter	4
Samples left after filtering	141
Samples greater than zero	141
Minimum sample value	0.500
Maximum value	29.000
Mean	5.574
Standard Deviation	4.916
Standard Error of Mean	0.414
Median	14.750
Geometric Mean	3.975
Geometric Standard Deviation	2.330
Skewness	1.880
Kurtosis	7.179
Sum of samples	786.000
Sum of samples > 0.0	786.000

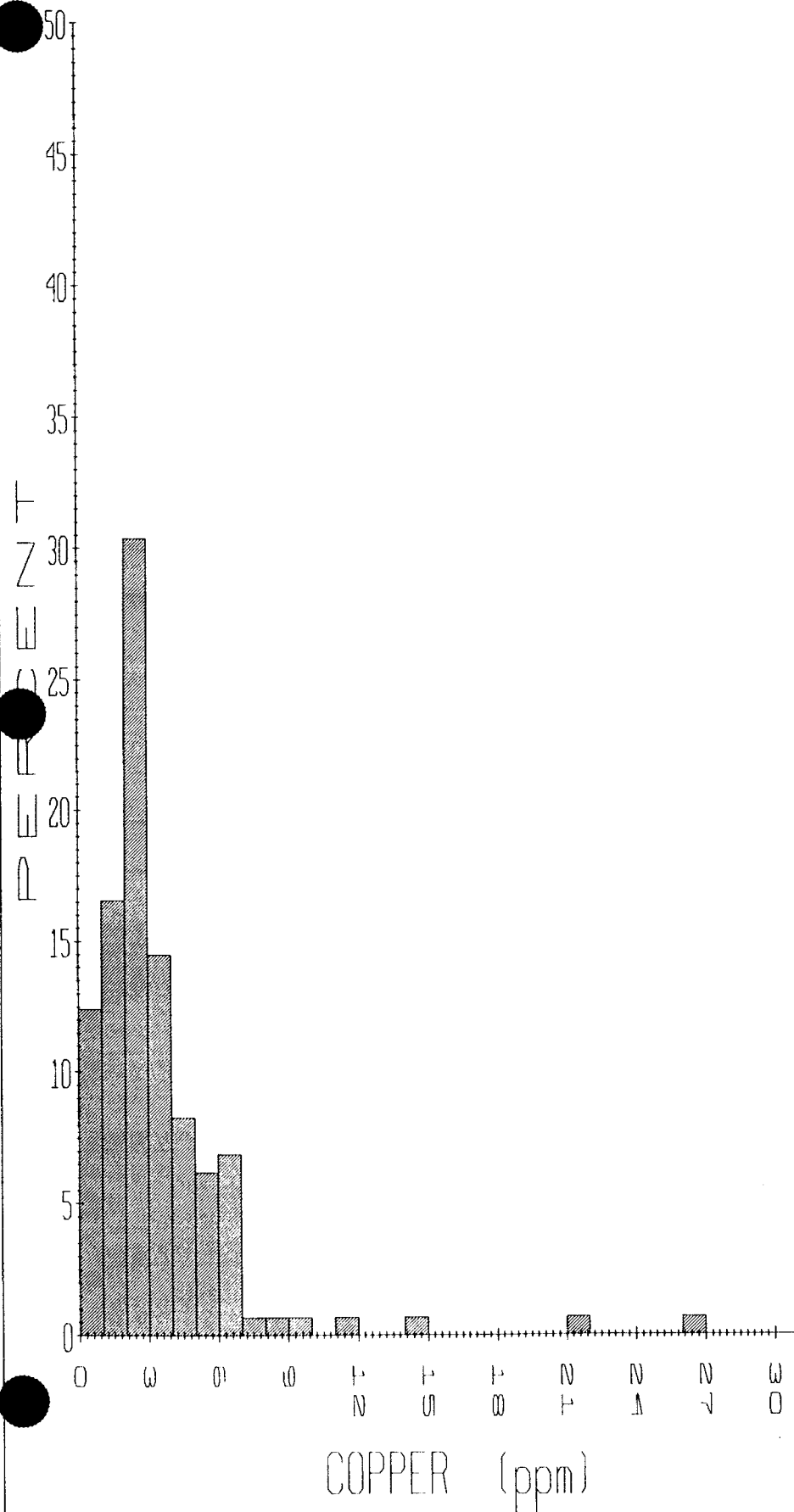
PN 8183 PEG B SOILS



Statistical Summary

Original number of samples	145
Samples removed by filter	0
Samples left after filtering	145
Samples greater than zero	145
Minimum sample value	0.500
Maximum value	30.000
Mean	2.297
Standard Deviation	3.127
Standard Error of Mean	0.260
Median	15.250
Geometric Mean	1.400
Geometric Standard Deviation	2.578
Skewness	5.267
Kurtosis	43.828
Sum of samples	333.000
Sum of samples > 0.0	333.000

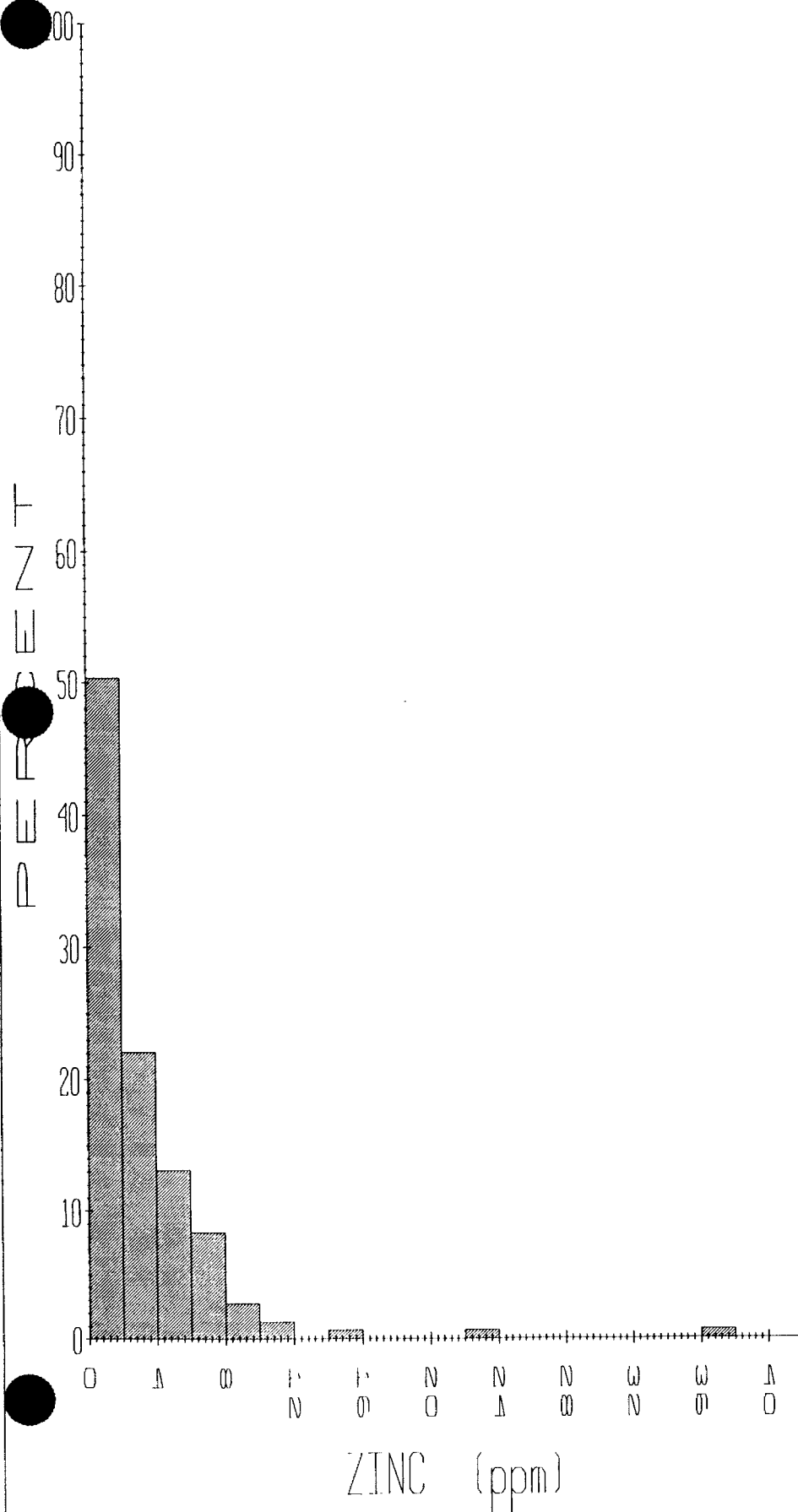
PN# 8183 B SOIL PEG



Statistical Summary

Original number of samples	145
Samples removed by filter	0
Samples left after filtering	145
Samples greater than zero	145
Minimum sample value	0.500
Maximum value	27.000
Mean	3.890
Standard Deviation	3.318
Standard Error of Mean	0.276
Median	13.750
Geometric Mean	3.019
Geometric Standard Deviation	2.097
Skewness	3.847
Kurtosis	23.943
Sum of samples	564.000
Sum of samples > 0.0	564.000

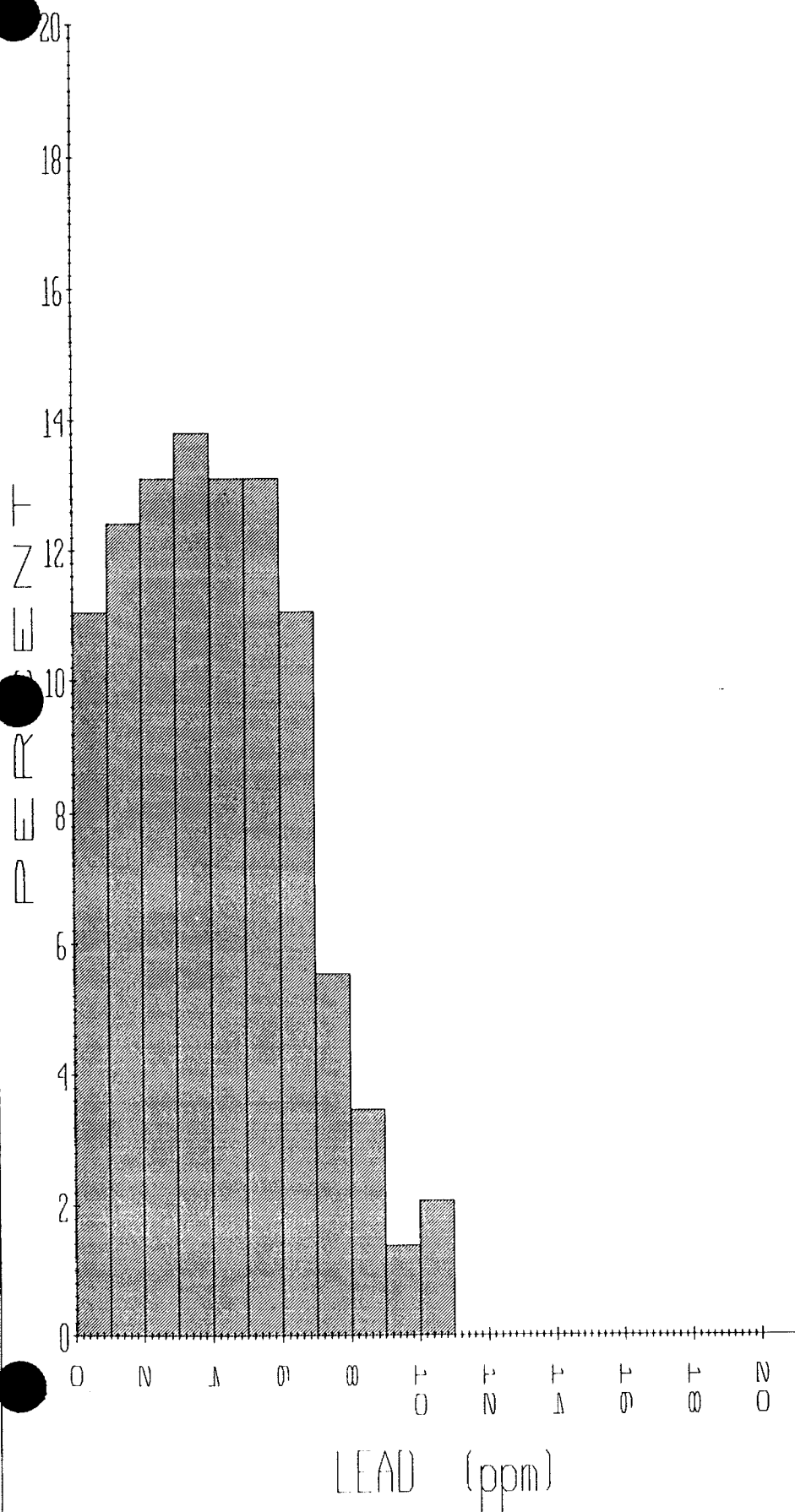
PN# 8183 B SOIL PEG



Statistical Summary

Original number of samples	145
Samples removed by filter	0
Samples left after filtering	145
Samples greater than zero	145
Minimum sample value	0.500
Maximum value	37.000
Mean	3.593
Standard Deviation	4.283
Standard Error of Mean	0.356
Median	18.750
Geometric Mean	2.246
Geometric Standard Deviation	2.700
Skewness	4.329
Kurtosis	30.138
Sum of samples	521.000
Sum of samples > 0.0	521.000

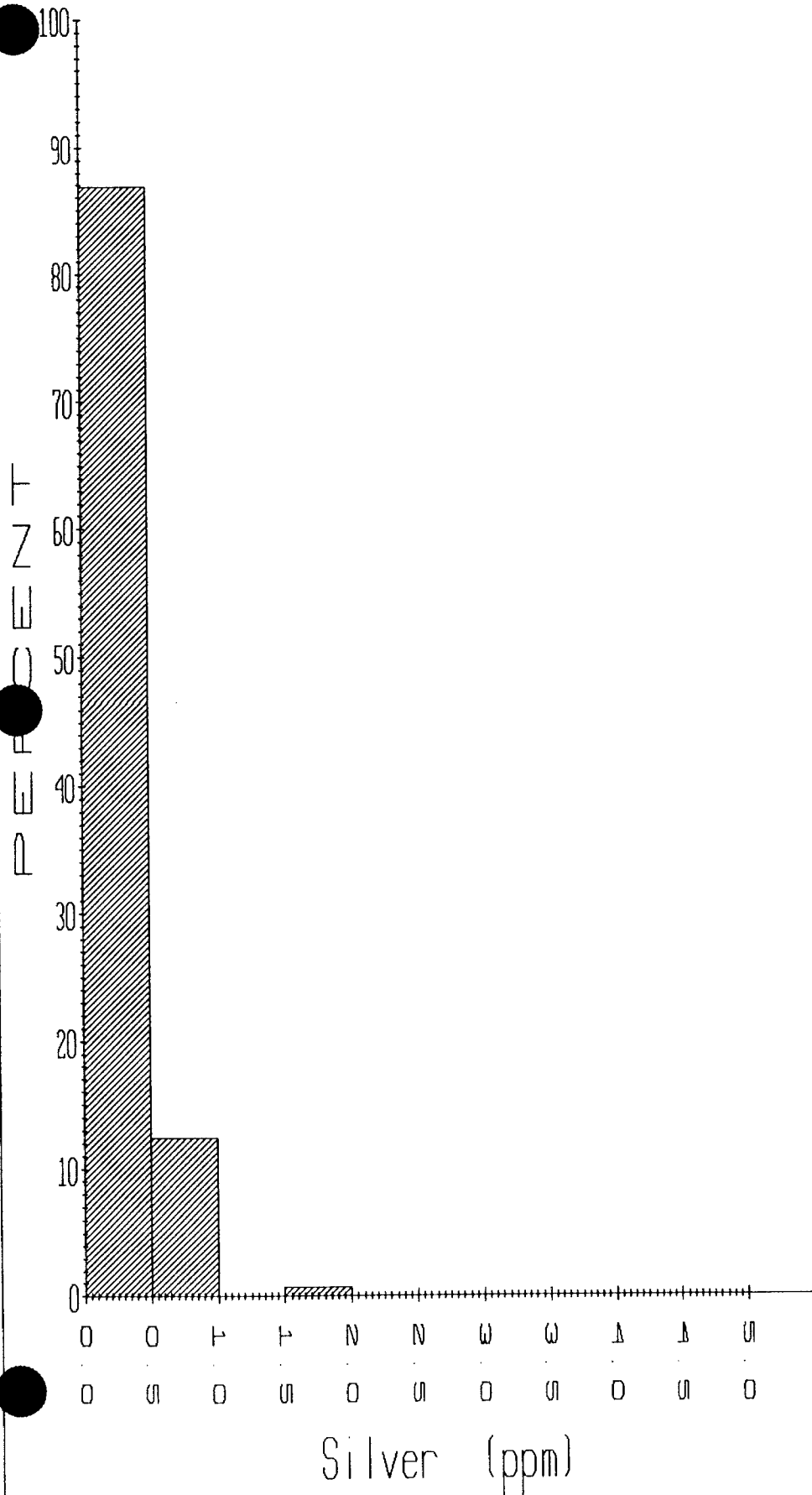
PN# 8183 B SOIL PEG



Statistical Summary

Original number of samples	145
Samples removed by filter	0
Samples left after filtering	145
Samples greater than zero	145
Minimum sample value	0.500
Maximum value	11.000
Mean	4.610
Standard Deviation	2.520
Standard Error of Mean	0.209
Median	5.750
Geometric Mean	3.743
Geometric Standard Deviation	2.089
Skewness	0.341
Kurtosis	2.528
Sum of samples	668.500
Sum of samples > 0.0	668.500

PN# 8183 B SOIL PEG



Statistical Summary

Original number of samples	145
Samples removed by filter	0
Samples left after filtering	145
Samples greater than zero	145
Minimum sample value	0.500
Maximum value	2.000
Mean	0.572
Standard Deviation	0.204
Standard Error of Mean	0.017
Median	1.250
Geometric Mean	0.550
Geometric Standard Deviation	1.288
Skewness	3.494
Kurtosis	19.100
Sum of samples	83.000
Sum of samples > 0.0	83.000

Appendix C
Author's Statement of Qualifications
and Field Personnel

STATEMENT OF QUALIFICATIONS

I, Arthur Douglas McLaughlin, of 163 Basalm Street, Timmins, Ontario, do hereby declare:

I graduated from Acadia University in Wolfville, Nova Scotia with a Bachelor of Science degree in geology,

I have been employed as a mineral exploration geologist for the past twelve years,

I am currently employed as a geologist with Falconbridge Limited and that the work described in this report was conducted under my direct supervision,

I have no legal interest, nor expect any, in the mining claims described in this report, or in Falconbridge Limited.

A handwritten signature in black ink, appearing to read 'Doug McLaughlin', written over a horizontal line.

Doug McLaughlin

Timmins, Ontario

FIELD PERSONNEL

Doug McLaughlin	Project Geologist, Falconbridge Limited 571 Moneta Ave., Timmins, Ontario. P4N 7H9
Stan Clemmer	Senior Project Geologist, Falconbridge Limited 571 Moneta Ave., Timmins, Ontario. P4N 7H9
Ian Liu	Technician, Falconbridge Limited 571 Moneta Ave., Timmins, Ontario. P4N 7H9
Jack Robert	Sampler, Larchex Inc., Exploration and Mining 218 Ogden Street, Timmins, Ontario P4N 1M9
Jake Lagault	Sampler, Larchex Inc., Exploration and Mining #3 - 28 Vimy Street, Timmins, Ontario P4N 4xx

Contractors

Sampling	Larchex Inc., Mining Exploration 74 Roblin Ave., P.O. Box 1394 Timmins, Ontario. P4N 7N2
Analytical Lab	Assayers Laboratoires 780 Av. Du Cuivre, C.P. 685 Rouyn Noranda, Quebec. J9X 5C6



900

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Geoscience Approvals Section
Willet Green Miller Centre
933 Ramsey Lake Rd., 6th Floor
Sudbury, Ontario
P3E 6B5

Telephone: (705) 670-5853
Fax: (705) 670-5863

Our File: 2.15024
Transaction #: W9360.00093

JULY 21, 1993

Mining Recorder
Ministry of Northern
Development and Mines
60 Wilson Avenue
1st Floor
Timmins, Ontario
P4N 2S7

Dear Sir:

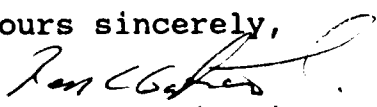
**RE: APPROVAL OF ASSESSMENT WORK ON MINING CLAIMS P 1114785 ET.AL. IN
CARMEN TOWNSHIP.**

The Assessment Credits for GEOCHEMISTRY, section 13 of the Mining Act Regulations, as listed on the original submission, have been approved as of JULY 20, 1993.

Please indicate this approval on the claim record sheets.

If you have any questions please call Clive Stephenson at (705) 670-5856.

Yours sincerely,


Ron C. Gashinski
Senior Manager, Mining Lands Section
Mining and Land Management Branch
Mines and Minerals Division


CDS/dm

cc: Resident Geologist
Timmins, Ontario


Assessment Files Office
Toronto, Ontario

AMENDED - MNG-LANDS



Ministry of Northern Development and Mines Ontario

Report of Work Conducted After Recording Claim

Mining Act

Transaction Number
W9360.00093

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, Fourth Floor, 188 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7284.

- Instructions:
- Please type or print and submit in duplicate.
 - Refer to the Mining Act and Regulations for requirements of filing assessment work or consult the Mining Recorder.
 - A separate copy of this form must be completed for each Work Group.
 - Technical reports and maps must accompany this form in duplicate.
 - A sketch, showing the claims the work is assigned to, must accompany this form.

2.15024

Recorded Holder(s) FALCONBRIDGE LIMITED		Client No. 130679
Address Box 1140, 571 Moneta Ave, Timmins, Ont P4N7H7		Telephone No. (705) 267-1188
Mining Division PORCUPINE	Township/Area CARNAN	M or G Plan No.
Date Work Performed From	To	
Sept 17, 1992	September 23, 1992	

Work Performed (Check One Work Group Only)

Work Group	Type
Geotechnical Survey	HUMUS MB B SOIL GEOTECHNICAL SURVEY
Physical Work, Including Drilling	
Rehabilitation	
Other Authorized Work	
Assays	
Assignment from Reserve	

Total Assessment Work Claimed on the Attached Statement of Costs \$ **13,400**

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
SEE SCHEDULE I	

RECORDED &
APR 30 1993
Receipt

(attach a schedule if necessary)

Certification of Beneficial Interest * See Note No. 1 on reverse side

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.

Date: **April 27/93** Recorded Holder or Agent (Signature): *[Signature]*

Certification of Work Report

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.

Name and Address of Person Certifying:
DOUG McLAUGHLIN, 163 BASAL STREET, TIMMINS, ONT P4N6H7

Telephone No.: **705 267-1188** Date: **April 27, 1993** (Signature): *[Signature]*

For Office Use Only

Total Value Cr. Recorded \$ 13,400	Date Recorded April 30th/93	Mining Recorder <i>[Signature]</i>	Received RECEIVED
	Deceased Approval Date JULY 29th 1993	Date Approved	APR 30 1993
	Date Notice for Amendments Sent		



Report of Work Conducted After Recording Claim

Mining Act

Transaction Number

W9360.00093

MPO LANDS

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, Fourth Floor, 159 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

- Instructions:**
- Please type or print and submit in duplicate.
 - Refer to the Mining Act and Regulations for requirements of filing assessment work or consult the Mining Recorder.
 - A separate copy of this form must be completed for each Work Group.
 - Technical reports and maps must accompany this form in duplicate.
 - A sketch, showing the claims the work is assigned to, must accompany this form.

2.15024

Recorded Holder(s) FALCONBRIDGE LIMITED		Client No. 130679
Address Box 1145, 571 MONETA AVE, TIMMINS, ONT P4N7M9		Telephone No. (705) 267-1188
Mining Division PORCUPINE	Township/Area CARHAN	M or G Plan No.
Dates Work Performed From: SEPTEMBER 17, 1992		To: SEPTEMBER 28, 1992

Work Performed (Check One Work Group Only)

Work Group	Type
<input checked="" type="checkbox"/> Geotechnical Survey	HUMUS AND B SOIL SURVEY
<input type="checkbox"/> Physical Work, including Drilling	
<input type="checkbox"/> Rehabilitation	
<input type="checkbox"/> Other Authorized Work	
<input type="checkbox"/> Assays	
<input type="checkbox"/> Assignment from Reserve	

RECORDED
APR 30 1993
Receipt _____

Total Assessment Work Claimed on the Attached Statement of Costs \$ 13,400

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
DOUG McLAUGHLIN	SEC schedule I

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MAY 19 1993
MINING LANDS DIVISION

(attach a schedule if necessary)

Certification of Beneficial Interest * See Note No. 1 on reverse side

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	Date APRIL 28, 1993	Recorded Holder or Agent (Signature) <i>Doug McLaughlin</i>
--	-------------------------------	--

Certification of Work Report

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.

Name and Address of Person Certifying DOUG McLAUGHLIN, 163 BASALM ST. N. TIMMINS, ONT. P4N6H8		
Telephone No. 267-8105	Date APRIL 28, 1993	Certified By (Signature) <i>Doug McLaughlin</i>

For Office Use Only

Total Value Cr. Recorded 13,400.00	Date Recorded APR 30th / 93	Mining Recorder <i>White</i>	Received RECEIVED APR 30 1993 1245
	Deemed Approval Date JULY 29th / 93	Date Approved	
	Date Notice for Amendments Sent		

TABLE I GEOCHEMICAL SURVEYS ON FALCONBRIDGE LIMITED CLAIMS (CARMAN-SHAW PROJECT)

	A	B	C	D	E	F
23			Value of	Value	Value	Reserve:
24	Claim	Number of	assessment	applied to	assigned from	work to be
25	number	claim units	work done on	this claim	this claim	claimed at a
26			this claim			future date
27	P1114785	1	\$1,077	\$280	\$797	\$0
28	P1117119	1	\$539	\$280	\$259	\$0
29	P1117124	1	\$1,886	\$280	\$1,606	\$0
30	P1117125	1	\$202	\$280	\$0	\$0
31	P1117137	1	\$2,121	\$280	\$1,841	\$0
32	P1117141	1	\$707	\$280	\$427	\$0
33	P1117142	1	\$1,212	\$280	\$932	\$0
34	P1117143	1	\$842	\$280	\$562	\$0
35	P1117144	1	\$168	\$280	\$0	\$0
36	P1126600	1	\$168	\$280	\$0	\$0
37	P1129603	1	\$269	\$280	\$0	\$0
38	P1129604	1	\$572	\$280	\$292	\$0
39	P1129605	1	\$2,290	\$280	\$1,437	\$573
40	P1129606	1	\$1,347	\$280	\$0	\$1,067
41	P1126598	1	\$0	\$280	\$0	\$0
42	P1126601	1	\$0	\$280	\$0	\$0
43	P1126608	1	\$0	\$280	\$0	\$0
44	P1117118	1	\$0	\$280	\$0	\$0
45	P1117120	1	\$0	\$280	\$0	\$0
46	P1117121	1	\$0	\$280	\$0	\$0
47	P1117122	1	\$0	\$280	\$0	\$0
48	P1117126	1	\$0	\$280	\$0	\$0
49	P1117127	1	\$0	\$280	\$0	\$0
50	P1117128	1	\$0	\$280	\$0	\$0
51	P1117129	1	\$0	\$280	\$0	\$0
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56	P1117134	1	\$0	\$280	\$0	\$0
57	P1117135	1	\$0	\$280	\$0	\$0
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59	P1117138	1	\$0	\$280	\$0	\$0
60	P1117139	1	\$0	\$280	\$0	\$0
61	P1117145	1	\$0	\$280	\$0	\$0
62	P1117147	1	\$0	\$280	\$0	\$0
63	P1117123	1	\$0	\$280	\$0	\$0
64	P1127123	1	\$0	\$280	\$0	\$0
65	P1127245	1	\$0	\$280	\$0	\$0
66	P1129607	1	\$0	\$280	\$0	\$0
67	P1129608	1	\$0	\$280	\$0	\$0
68	P1129609	1	\$0	\$280	\$0	\$0
69		42	\$13,400	\$11,760	\$8,153	\$1,640
70		Total number	Total value	Total value	Total assigned	Total reserve
71		of units	work done	work applied	from	

RECORDED
APR 30 1993

*Amended
May 4, 1993
Dary M.R.*

1. Credits are to be cut back starting with the claim noted first, working backwards.
2. Credits are to be cut back equally over all claims contained in this report of work.
3. Credits are to be cut back as prioritized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.

Note 2: If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.	Signature	Date
---	-----------	------



Statement of Costs for Assessment Credit

État des coûts aux fins du crédit d'évaluation

Mining Act/Loi sur les mines

Transaction No./N° de transaction

W9360.00093

2. 15024

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la Loi sur les mines et serviront à tenir à jour un registre des concessions minières. Adresser toute question sur la collecte de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4^e étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

1. Direct Costs/Coûts directs

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'oeuvre	3,050	
	Field Supervision Supervision sur le terrain	500	3,550
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert-conseil	Type SAMPLE Collection	5,848	
	SAMPLE Analyze	3,502	
			9,350
Supplies Used Fouritures utilisées	Type Sample books,		
	bags, flagging		
	tape, tags		
	markers	500	500
Equipment Rental Location de matériel	Type φ		
			φ
Total Direct Costs Total des coûts directs			13,400

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MAY 19 1993
MINING LANDS BRANCH

2. Indirect Costs/Coûts indirects

** Note: When claiming Rehabilitation work Indirect costs are not allowable as assessment work.
 Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
Transportation Transport	Type		
Food and Lodging Nourriture et hébergement			
Mobilization and Demobilization Mobilisation et démoblisation			
Sub Total of indirect Costs Total partiel des coûts indirects			φ
Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20% des coûts directs)			
Total Value of Assessment Credit (Total of Direct and Allowable indirect costs) Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles)			13,400

RECORDED
APR 30 1993
Receipt

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note: Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

Filing Discounts

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Remises pour dépôt

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Total Value of Assessment Credit Total Assessment Claimed
 × 0.50 =

Valeur totale du crédit d'évaluation Evaluation totale demandée
 × 0,50 =

Certification Verifying Statement of Costs

I hereby certify: that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

Attestation de l'état des coûts

J'atteste par la présente : que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

that as PROJECT GEOLOGIST I am authorized (Recorded Holder, Agent, Position in Company)

Et qu'à titre de _____ je suis autorisé (titulaire enregistré, représentant, poste occupé dans la compagnie)

to make this certification

à faire cette attestation.

Signature [Signature] Date APRIL 28 1993

SCHEDULE I

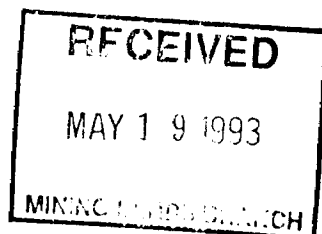
FIELD PERSONNEL

Doug McLaughlin	Project Geologist, Falconbridge Limited 571 Moneta Ave., Timmins, Ontario. P4N 7H9
Stan Clemmer	Senior Project Geologist, Falconbridge Limited 571 Moneta Ave., Timmins, Ontario. P4N 7H9
Ian Liu	Technician, Falconbridge Limited 571 Moneta Ave., Timmins, Ontario. P4N 7H9
Jack Robert	Sampler, Larchex Inc., Exploration and Mining 218 Ogden Street, Timmins, Ontario P4N 1M9
Jake Lagault	Sampler, Larchex Inc., Exploration and Mining #3 - 28 Vimy Street, Timmins, Ontario P4N 4xx

Contractors

Sampling	Larchex Inc., Mining Exploration 74 Roblin Ave., P.O. Box 1394 Timmins, Ontario. P4N 7N2
Analytical Lab	Assayers Laboratoires 780 Av. Du Cuivre, C.P. 685 Rouyn Noranda, Quebec. J9X 5C6

2. 15024



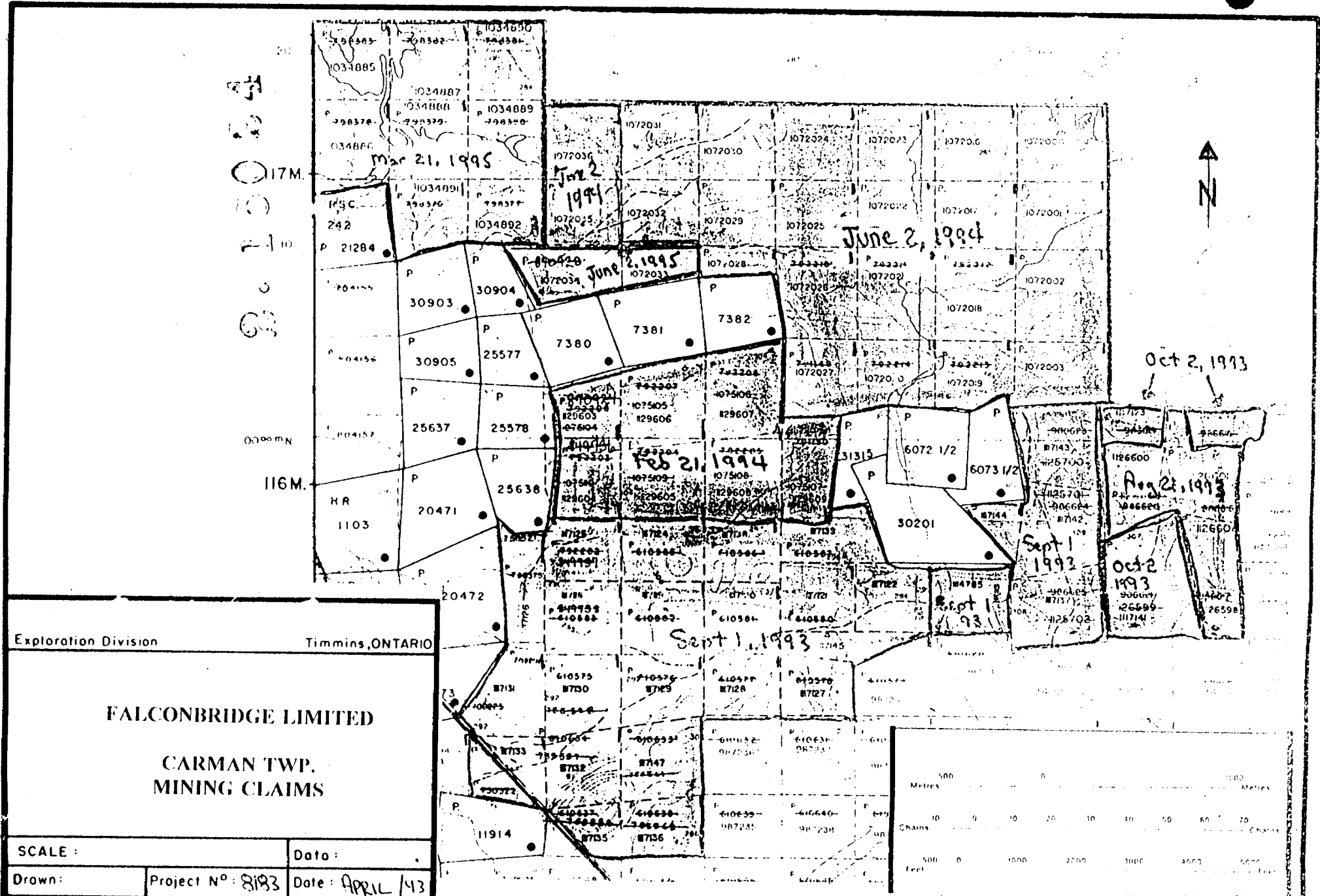


FIGURE 2

G-4000

CARMAN TWP

G-4000

MAP SYMBOLOGY

Aerial Cableway	Pipeline
Boundary	Railroad
International	Single Track
Imperial	Double Track
Ditch, Feeding	Abandoned
Under Bridge	Turbine
Abandoned	Road
Highway	Highway, County
Trail	Trail
Bridge	Access Road of doubtful
Rock, Railroad	importance at
Building	" " " " " "
Chimney	" " " " " "
CHT, P.H., F., &	Spot Elevation
Conduits	(See elevations) 1000
Introduction	Vertical
Abandoned	Horizontal
Openness	Vertical
Central Points	Culvert
Horizontal	Spot Elevation
Vertical	(See elevations) 1000
Fence, Hedge, Wall	Transmission Line
Feature Outline	Power Lines
(Construction features, etc.)	Tunnel
Flooded Land	Utility Poles
Lock	Wharf, Dock, Pier
Marsh or Swamp	Wooded Area
Mast	
Mine Head Frame	
Outcrop	

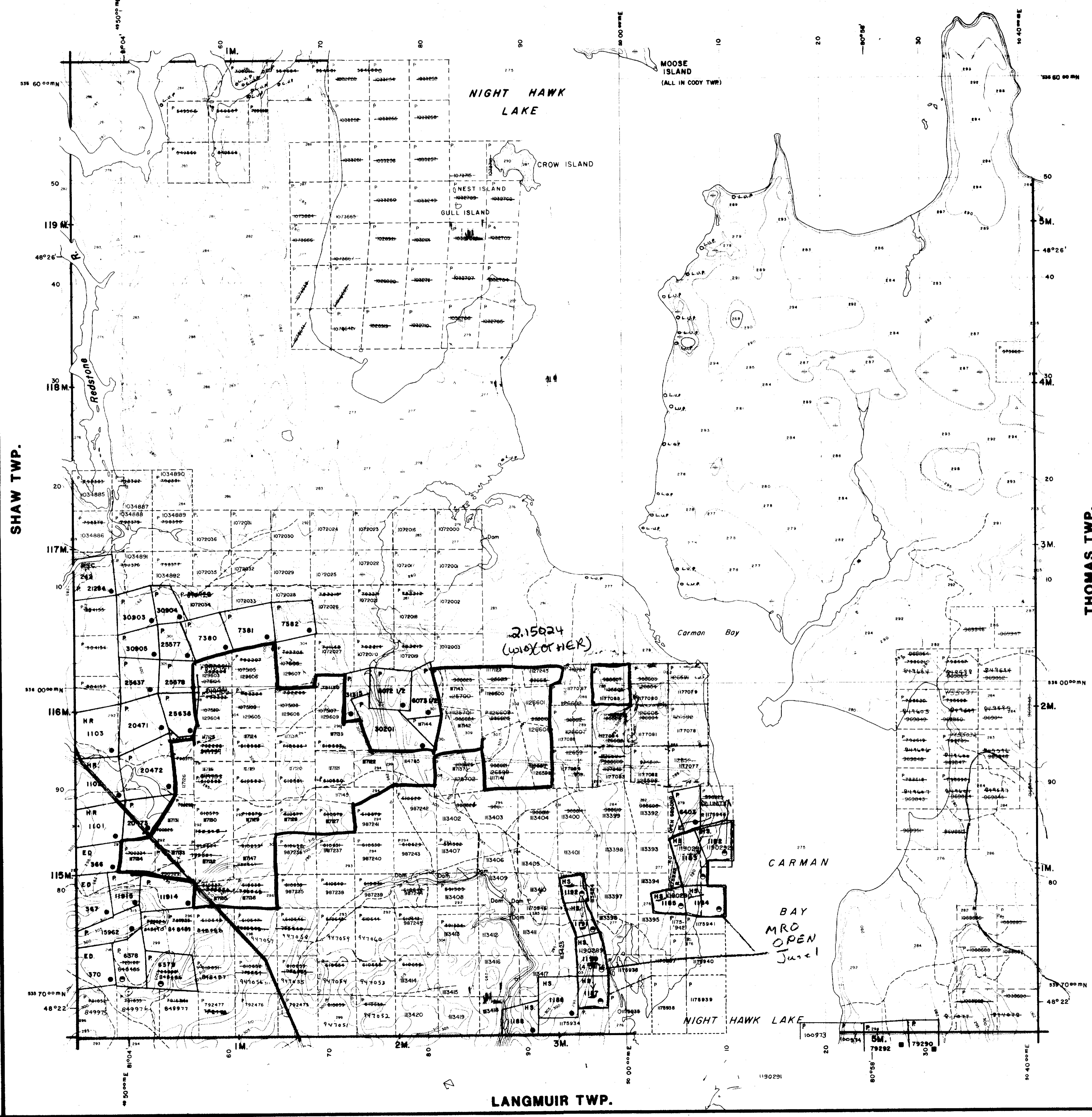
AREAS WITHDRAWN FROM DISPOSITION

- M.R.O. - MINING RIGHTS ONLY
- S.R.O. - SURFACE RIGHTS ONLY
- M.+S. - MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

CODY TWP.



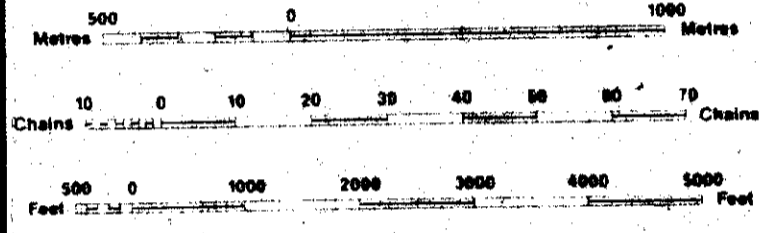
LEGEND

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

DISPOSITION OF CROWN LANDS

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

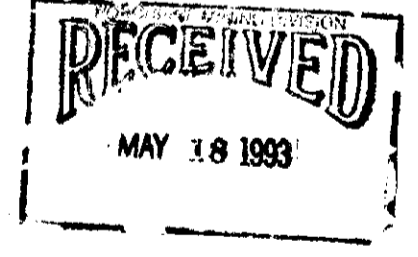
NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 4 1913, VESTED IN ORIGINAL PATENTEES BY THE PUBLIC LANDS ACT, R.S.O. 1910, CHAP. 380, SEC. 65, SUBSEC. 1.



SCALE 1:20 000
GRID ZONE: 17

THIS TWP. SUBJECT TO FOREST ACTIVITY IN 1992/93. FURTHER INFORMATION ON FILE.

2.15024



Rec'd Jan 23/85
TOWNSHIP

CARMAN

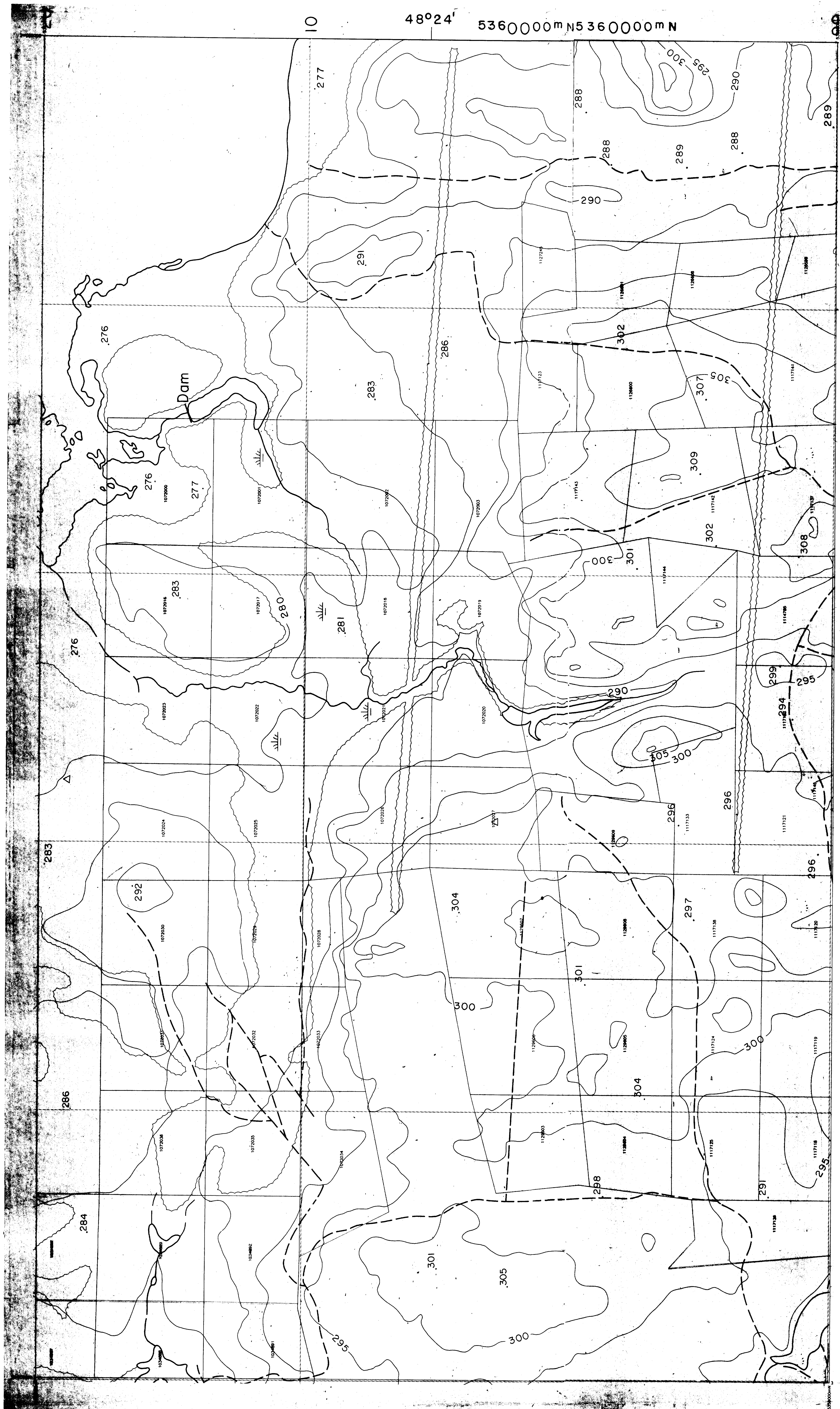
M.N.R. ADMINISTRATIVE DISTRICT
TIMMINS
MINING DIVISION
PORCUPINE
LAND TITLES / REGISTRY DIVISION
COCHRANE

Ministry of Natural Resources
Land Management Branch
Ontario

ORIGINAL COMPLETION JULY 1984
REVISED:
Number: G-4000

1/8 June 28/85
2/8 July 3/85



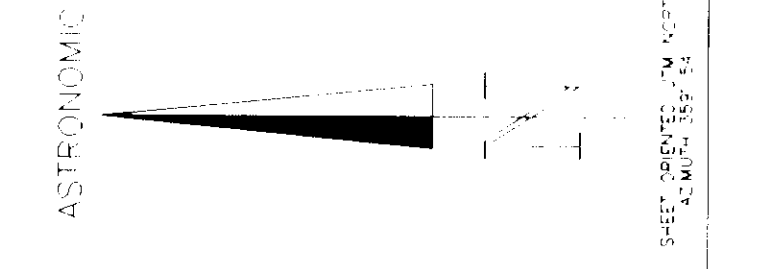


48°24' 5360000m N 5360000m N

10

2.150 24

FALCONBRIDGE LIMITED
 Exploration Services
 Carman Township
 CLAIM MAP
 CENTRAL WEST SHEET
 DATE: 20/09/1993
 SHEET NO: 495239
 PROJECT: 048460



INDEX MAP	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
495239	495244	495249	495254	495259	495264	495269	495274	495279	495284	495289	495294	495299	495304	495309	495314	495319	495324	495329	495334	495339	495344
495349	495354	495359	495364	495369	495374	495379	495384	495389	495394	495399	495404	495409	495414	495419	495424	495429	495434	495439	495444	495449	495454
495459	495464	495469	495474	495479	495484	495489	495494	495499	495504	495509	495514	495519	495524	495529	495534	495539	495544	495549	495554	495559	495564
495569	495574	495579	495584	495589	495594	495599	495604	495609	495614	495619	495624	495629	495634	495639	495644	495649	495654	495659	495664	495669	495674
495679	495684	495689	495694	495699	495704	495709	495714	495719	495724	495729	495734	495739	495744	495749	495754	495759	495764	495769	495774	495779	495784
495789	495794	495799	495804	495809	495814	495819	495824	495829	495834	495839	495844	495849	495854	495859	495864	495869	495874	495879	495884	495889	495894
495899	495904	495909	495914	495919	495924	495929	495934	495939	495944	495949	495954	495959	495964	495969	495974	495979	495984	495989	495994	495999	496004

SYMBOLS

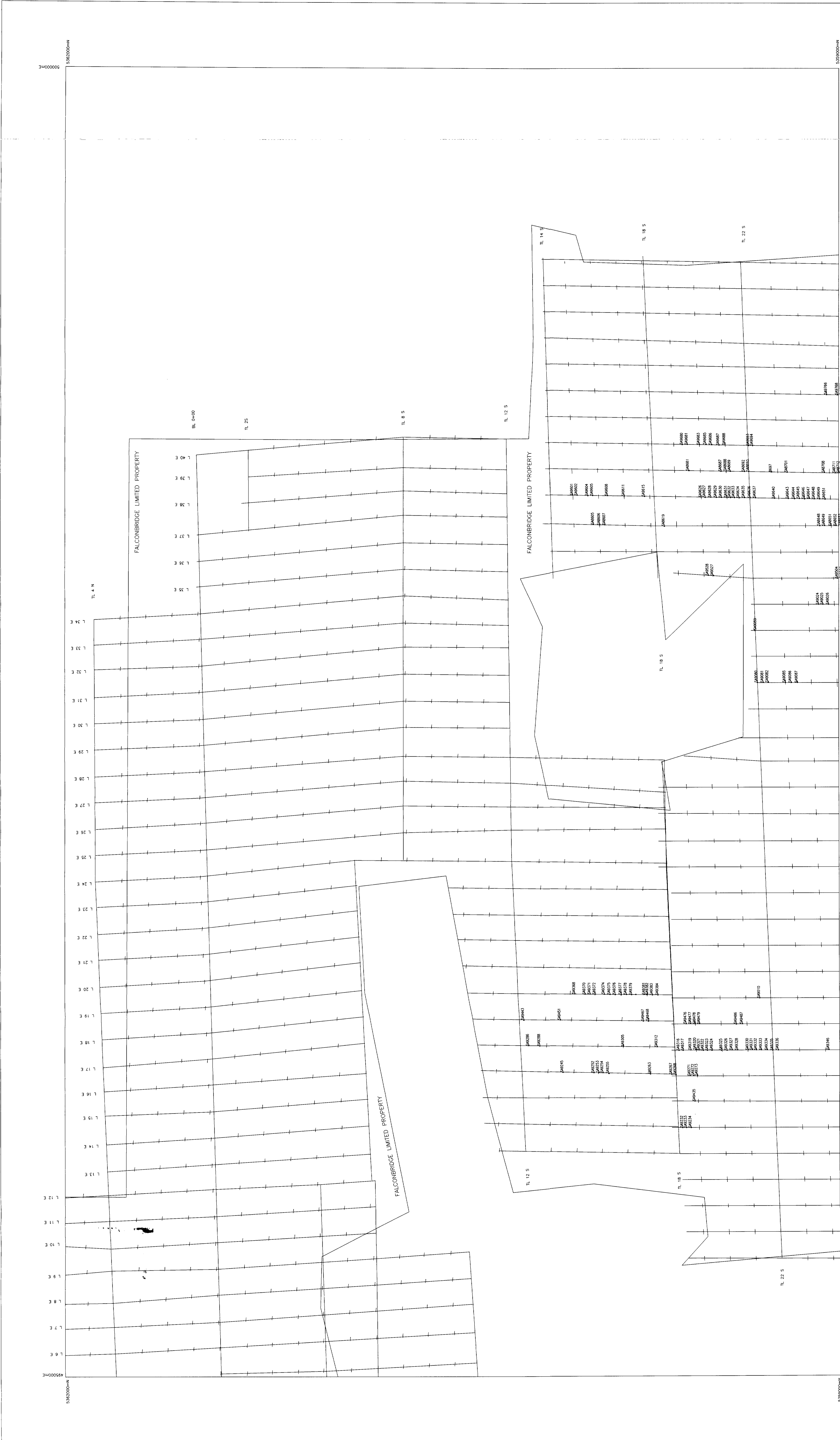
PHYSICAL FEATURES

- Contour lines: 1:10000 scale
- Spot heights: 1:10000 scale
- Water bodies: 1:10000 scale
- Vegetation: 1:10000 scale
- Buildings: 1:10000 scale
- Power lines: 1:10000 scale
- Roads: 1:10000 scale
- Boundaries: 1:10000 scale

CULTURAL AND PHYSIOGRAPHIC FEATURES

- Contours: 1:10000 scale
- Spot heights: 1:10000 scale
- Water bodies: 1:10000 scale
- Vegetation: 1:10000 scale
- Buildings: 1:10000 scale
- Power lines: 1:10000 scale
- Roads: 1:10000 scale
- Boundaries: 1:10000 scale





INDEX MAP

J4001	J4002	J4003	J4004	J4005	J4006	J4007	J4008	J4009	J4010	J4011	J4012	J4013	J4014	J4015	J4016	J4017	J4018	J4019	J4020
J4021	J4022	J4023	J4024	J4025	J4026	J4027	J4028	J4029	J4030	J4031	J4032	J4033	J4034	J4035	J4036	J4037	J4038	J4039	J4040
J4041	J4042	J4043	J4044	J4045	J4046	J4047	J4048	J4049	J4050	J4051	J4052	J4053	J4054	J4055	J4056	J4057	J4058	J4059	J4060
J4061	J4062	J4063	J4064	J4065	J4066	J4067	J4068	J4069	J4070	J4071	J4072	J4073	J4074	J4075	J4076	J4077	J4078	J4079	J4080
J4081	J4082	J4083	J4084	J4085	J4086	J4087	J4088	J4089	J4090	J4091	J4092	J4093	J4094	J4095	J4096	J4097	J4098	J4099	J4100

LEGEND
 B SOIL PARTIAL EXTRACTION SURVEY
 B SOIL PARTIAL EXTRACTION SURVEY
 B SOIL PARTIAL EXTRACTION SURVEY
 B SOIL PARTIAL EXTRACTION SURVEY

--- SAMPLE NUMBER

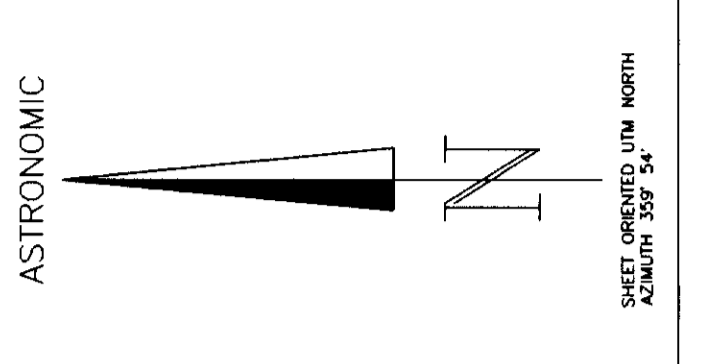
--- SAMPLE LOCATION

FALCONBRIDGE LIMITED
 Exploration Division

SHAW - CARMAN TOWNSHIP
 B SOIL PARTIAL EXTRACTION SURVEY
SAMPLE LOCATION MAP

DATE: 03/23
 DATE: 03/23
 DATE: 03/23
 DATE: 03/23
 DATE: 03/23
 DATE: 03/23
 DATE: 03/23
 DATE: 03/23
 DATE: 03/23
 DATE: 03/23

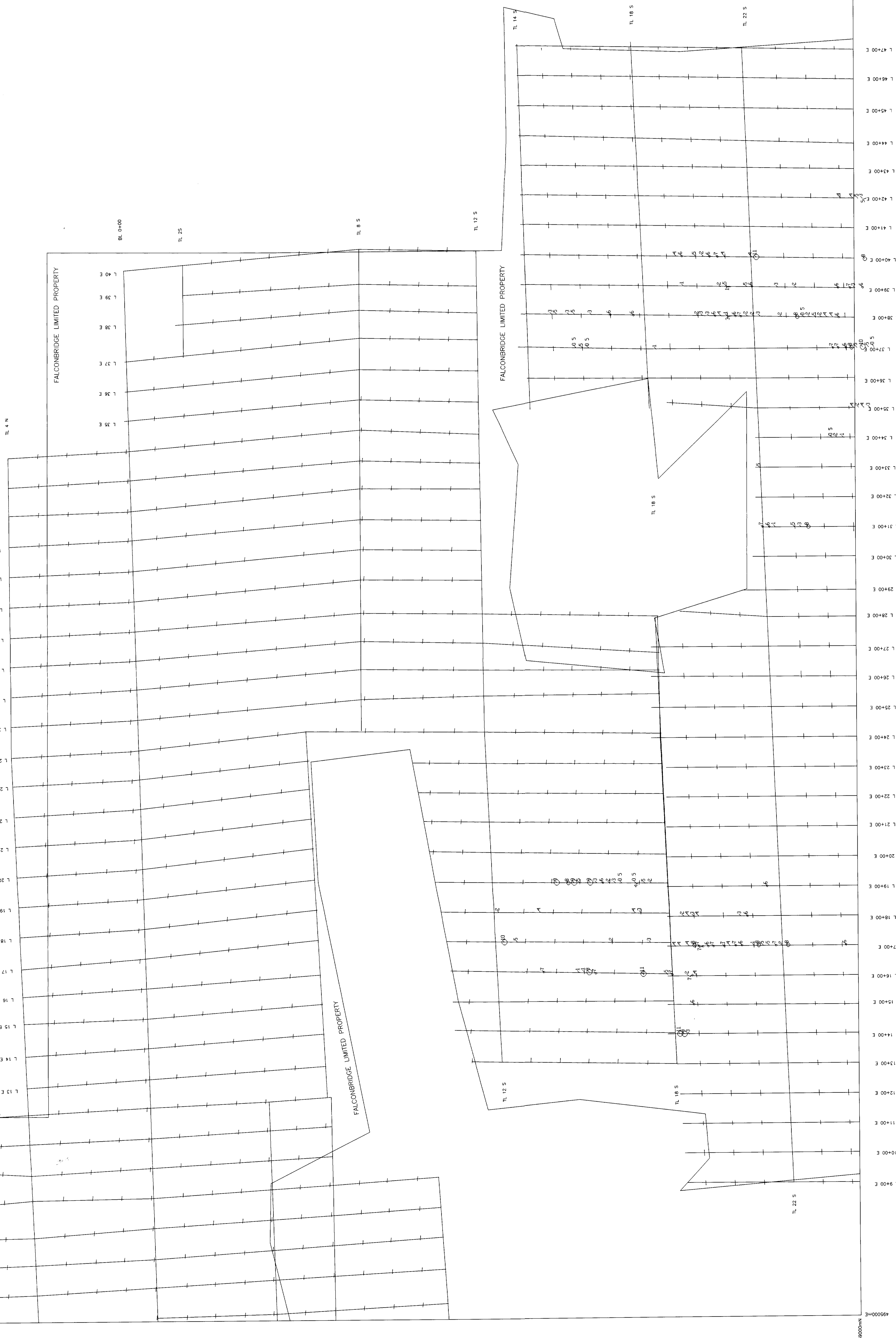
SCALE: 1:50,000



Done HCLANSHAW



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950000000
1000000000



FALCONBRIDGE LIMITED PROPERTY

FALCONBRIDGE LIMITED PROPERTY

FALCONBRIDGE LIMITED PROPERTY

LEGEND

B-L SOIL PARTIAL EXTRACTION SURVEY
SAMPLE SITES: Locations 1-10 in Schedule B-10
ABOVE: Locations 11-12 in Schedule B-10

SAMPLE INCHES - LEAD

1:1-2:00 PPM
2:1-3:00 PPM
3:1-4:00 PPM
4:1-5:00 PPM

INDEX MAP

4802374	4792374	4802374	4802374	4802374	4802374	4802374	4802374	4802374	4802374
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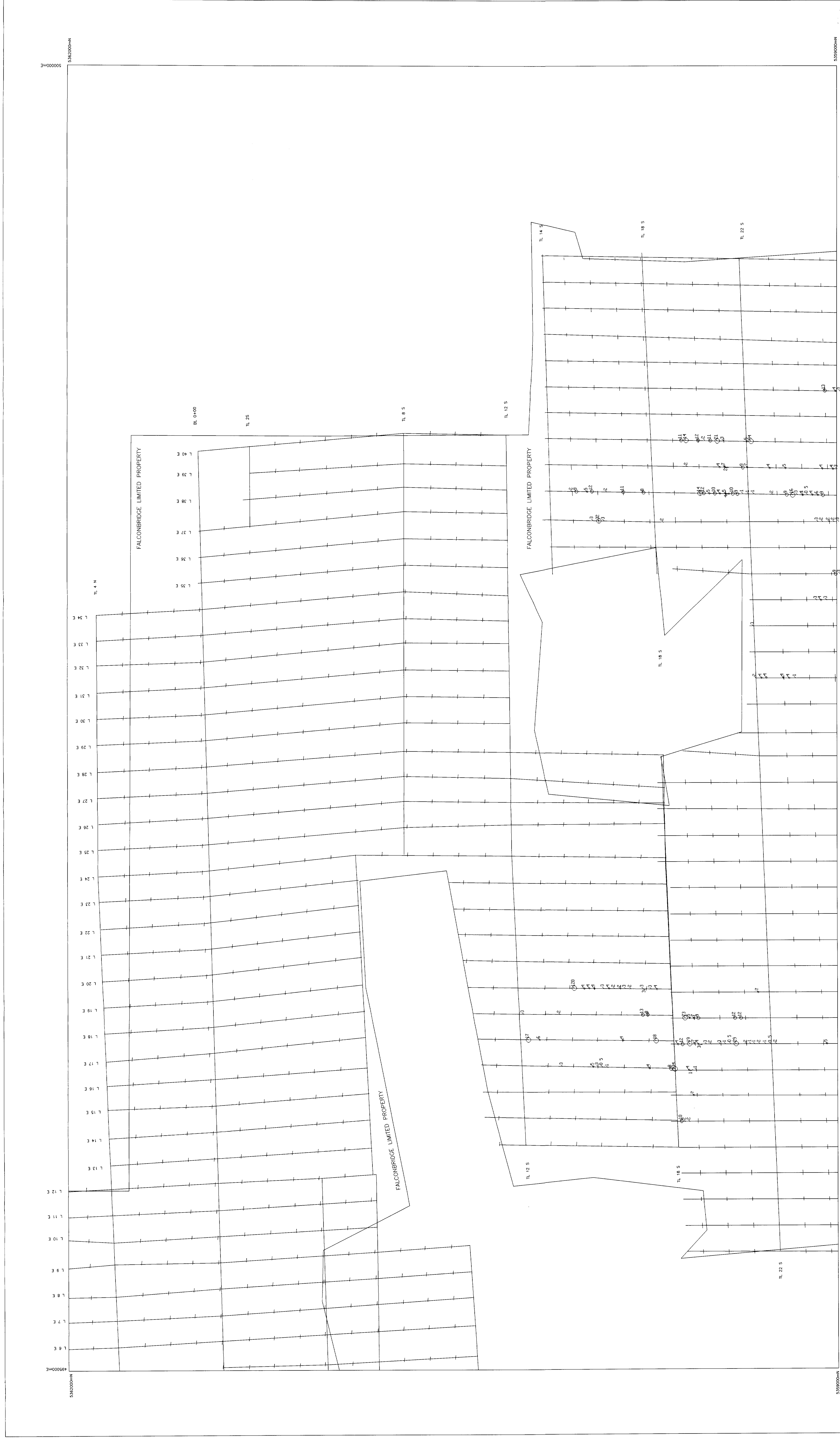
B-15024
121024

FALCONBRIDGE LIMITED
Exploration Division
Toronto, Ontario

SHAW - CARMAN TOWNSHIP
B SOIL PARTIAL EXTRACTION SURVEY
LEAD (PPM)

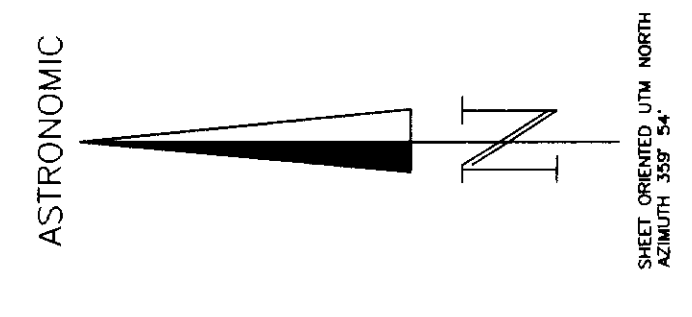
DATE	BY	SCALE	SHEET	TOTAL SHEETS	PROJECT
12/15/04	J. J. J.	1:50,000	1	1	B-15024

ASTRONOMIC



LEGEND
 BOREHOLE IDENTIFICATION SYMBOL
 SAMPLE MARKERS
 (Symbol: circle with 'X')
 600 - 100 PPM
 800 - 1200 PPM
 > 1200 PPM

NO.	DATE	DEPTH	LOG	ANALYST	LAB
4953374	4/7/03	0.20	34	ADAMS	5053374
4953375	4/7/03	0.40	34	ADAMS	5053375
4953376	4/7/03	0.60	34	ADAMS	5053376
4953377	4/7/03	0.80	34	ADAMS	5053377
4953378	4/7/03	1.00	34	ADAMS	5053378
4953379	4/7/03	1.20	34	ADAMS	5053379
4953380	4/7/03	1.40	34	ADAMS	5053380
4953381	4/7/03	1.60	34	ADAMS	5053381
4953382	4/7/03	1.80	34	ADAMS	5053382
4953383	4/7/03	2.00	34	ADAMS	5053383
4953384	4/7/03	2.20	34	ADAMS	5053384
4953385	4/7/03	2.40	34	ADAMS	5053385
4953386	4/7/03	2.60	34	ADAMS	5053386
4953387	4/7/03	2.80	34	ADAMS	5053387
4953388	4/7/03	3.00	34	ADAMS	5053388
4953389	4/7/03	3.20	34	ADAMS	5053389
4953390	4/7/03	3.40	34	ADAMS	5053390
4953391	4/7/03	3.60	34	ADAMS	5053391
4953392	4/7/03	3.80	34	ADAMS	5053392
4953393	4/7/03	4.00	34	ADAMS	5053393
4953394	4/7/03	4.20	34	ADAMS	5053394
4953395	4/7/03	4.40	34	ADAMS	5053395
4953396	4/7/03	4.60	34	ADAMS	5053396
4953397	4/7/03	4.80	34	ADAMS	5053397
4953398	4/7/03	5.00	34	ADAMS	5053398
4953399	4/7/03	5.20	34	ADAMS	5053399
4953400	4/7/03	5.40	34	ADAMS	5053400



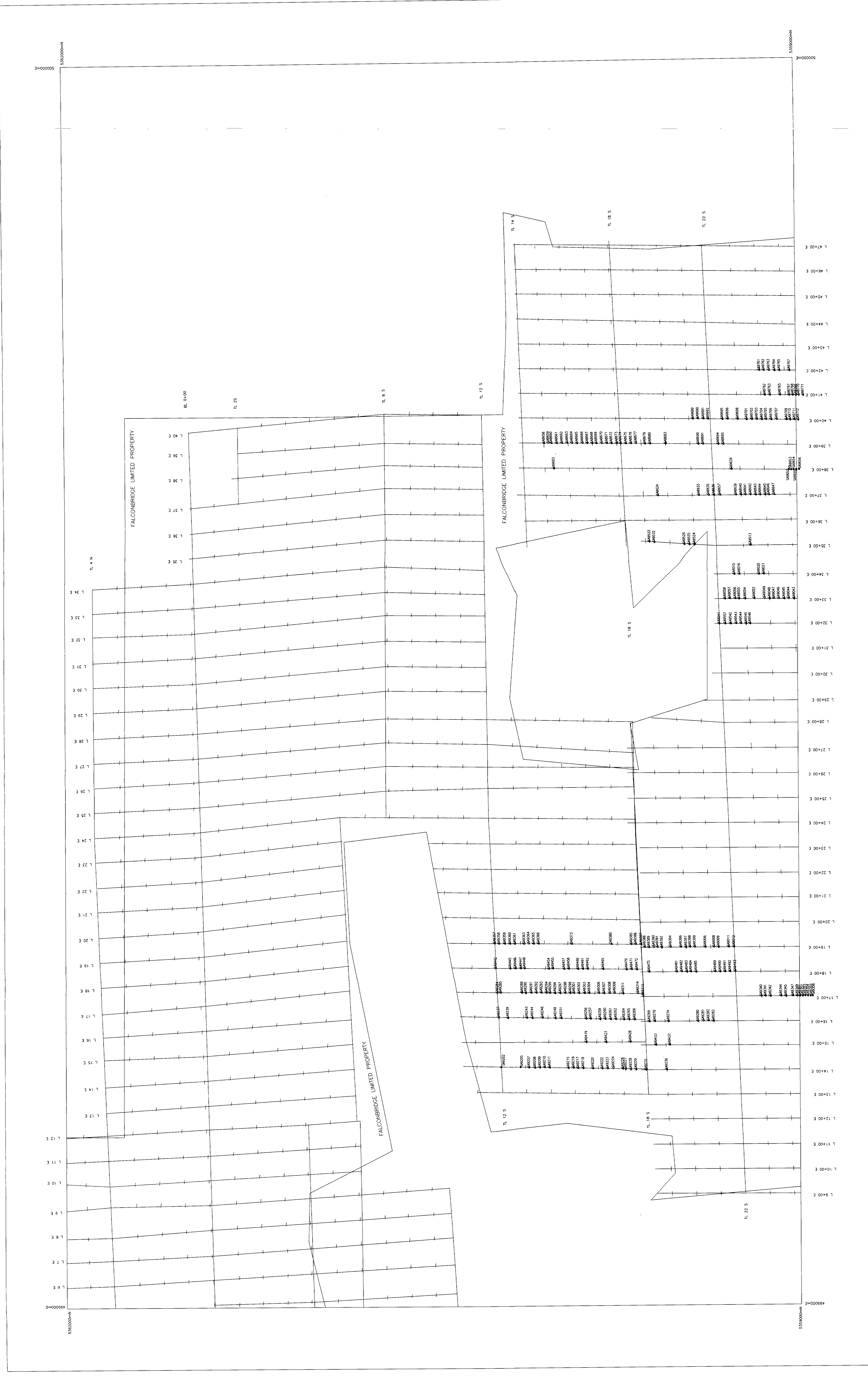
NO.	DATE	DEPTH	LOG	ANALYST	LAB
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4953377	4/7/03	0.80	34	ADAMS	5053377
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4953379	4/7/03	1.20	34	ADAMS	5053379
4953380	4/7/03	1.40	34	ADAMS	5053380
4953381	4/7/03	1.60	34	ADAMS	5053381
4953382	4/7/03	1.80	34	ADAMS	5053382
4953383	4/7/03	2.00	34	ADAMS	5053383
4953384	4/7/03	2.20	34	ADAMS	5053384
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4953388	4/7/03	3.00	34	ADAMS	5053388
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4953394	4/7/03	4.20	34	ADAMS	5053394
4953395	4/7/03	4.40	34	ADAMS	5053395
4953396	4/7/03	4.60	34	ADAMS	5053396
4953397	4/7/03	4.80	34	ADAMS	5053397
4953398	4/7/03	5.00	34	ADAMS	5053398
4953399	4/7/03	5.20	34	ADAMS	5053399
4953400	4/7/03	5.40	34	ADAMS	5053400

2.18024

FALCONBRIDGE LIMITED
 Exploration Division
 Shaw - Carman Township
 B SOIL PARTIAL EXTRACTION SURVEY
 NICKEL (PPM)

DATE: 07/03
 SCALE: 1:50,000
 SHEET: 10/10
 TOTAL SHEETS: 10

Done McLaughlin



INDEX MAP

440001	440002	440003	440004	440005	440006	440007	440008	440009	440010	440011	440012	440013	440014	440015	440016	440017	440018	440019	440020
440021	440022	440023	440024	440025	440026	440027	440028	440029	440030	440031	440032	440033	440034	440035	440036	440037	440038	440039	440040
440041	440042	440043	440044	440045	440046	440047	440048	440049	440050	440051	440052	440053	440054	440055	440056	440057	440058	440059	440060
440061	440062	440063	440064	440065	440066	440067	440068	440069	440070	440071	440072	440073	440074	440075	440076	440077	440078	440079	440080
440081	440082	440083	440084	440085	440086	440087	440088	440089	440090	440091	440092	440093	440094	440095	440096	440097	440098	440099	440100

LEGEND

HUMUS PARTIAL EXTRACTION SURVEY
 SURVEY AREA - Hatched
 PROPERTY LINE - Solid
 SAMPLE LOCATION - Dotted

ASTRONOMIC

UTM NORTH

0 100m

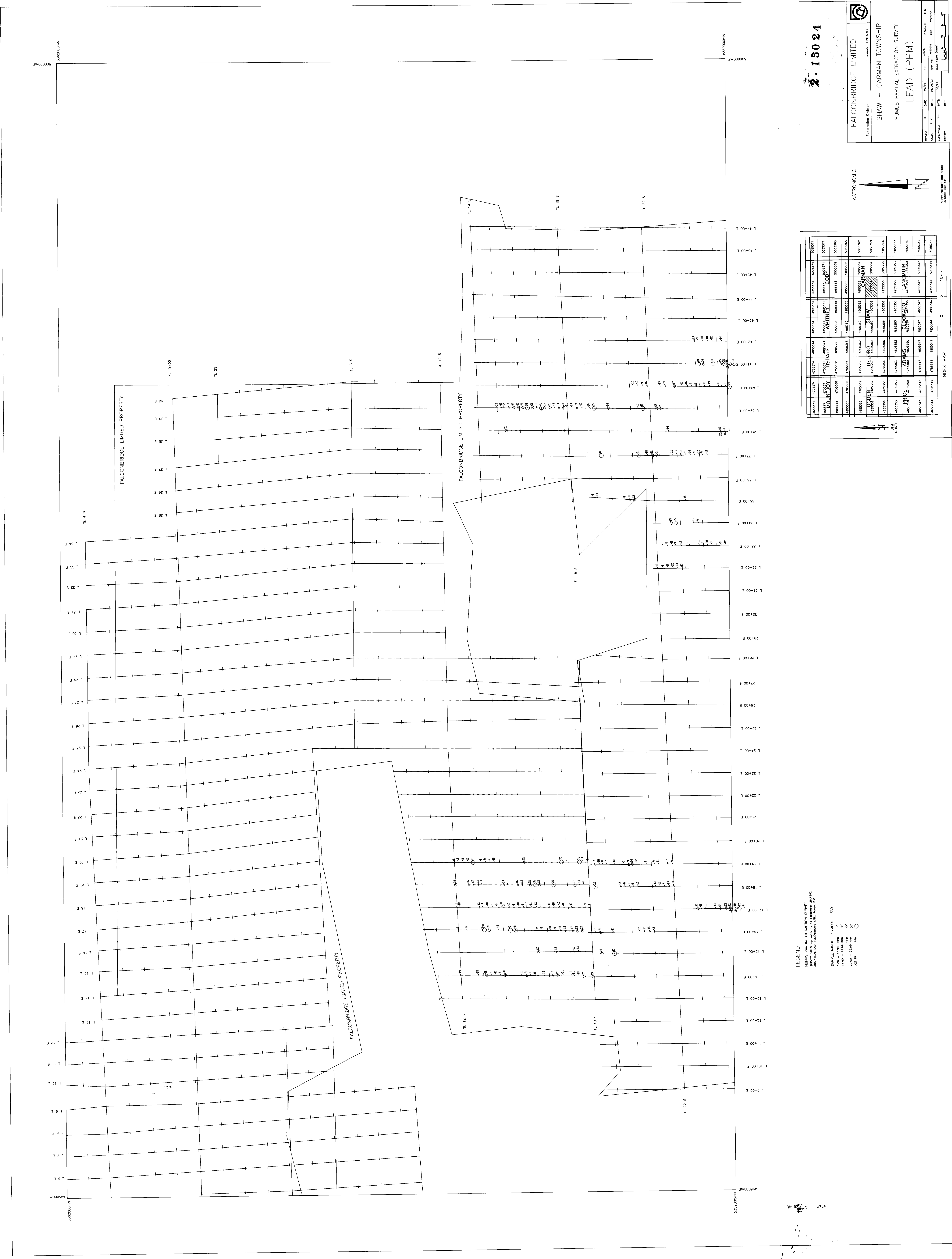
FALCONBRIDGE LIMITED
 SHAW - CARMAN TOWNSHIP
 HUMUS PARTIAL EXTRACTION SURVEY
 SAMPLE LOCATION MAP

DATE: 05/23/2014
 DRAWN BY: J. L. SHAW
 CHECKED BY: J. L. SHAW
 SCALE: 1:50,000
 SHEET NUMBER: 05
 TOTAL SHEETS: 20

2-15024

DATE: 05/23/2014

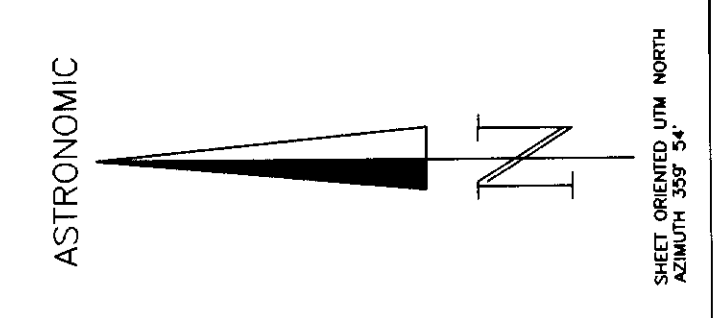
REG



2. I 50 24

FALCONBRIDGE LIMITED
 Exploration Division
 SHAW - CARMAN TOWNSHIP
 HUMUS PARTIAL EXTRACTION SURVEY
LEAD (PPM)

DATE: 03/19/03
 DRAWN BY: J. H. HARRIS
 CHECKED BY: J. H. HARRIS
 SCALE: 1:50,000
 SHEET NO. 400334
 PROJECT NO. 03-03



INDEX MAP

UTM NORTH	0	1	2	3	4	5	6	7	8	9	UTM EAST
4950000											4950000
4951000											4951000
4952000											4952000
4953000											4953000
4954000											4954000
4955000											4955000
4956000											4956000
4957000											4957000
4958000											4958000
4959000											4959000
4960000											4960000

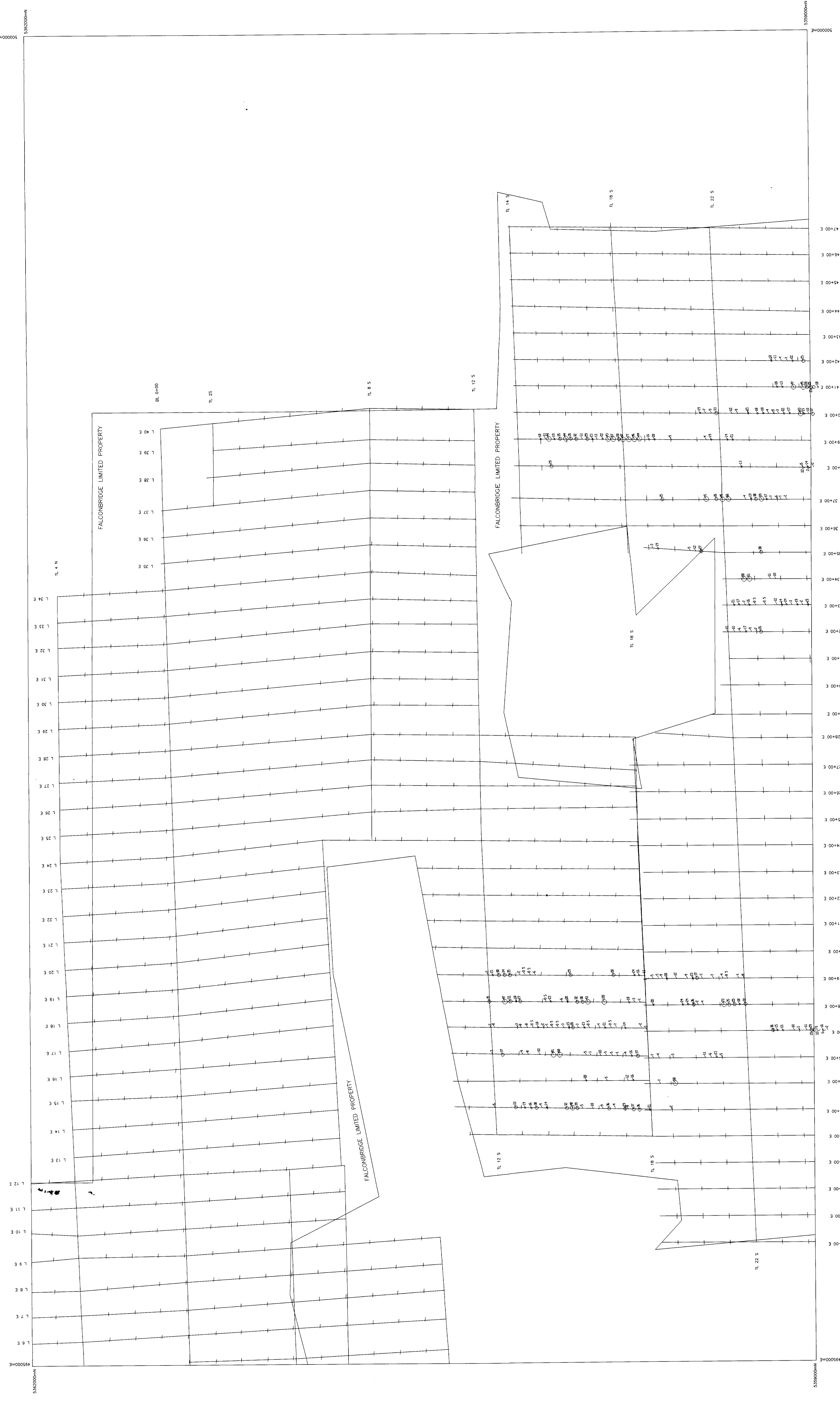
LEGEND

HUMUS PARTIAL EXTRACTION SURVEY
 ASTRONOMIC NORTH ARROW
 SAMPLE RANGE SYMBOLS - LEAD

- 0.00 - 1.00 PPM
- 1.00 - 1.50 PPM
- 1.50 - 2.00 PPM
- 2.00 - 2.50 PPM
- 2.50 - 3.00 PPM

David H. Harris



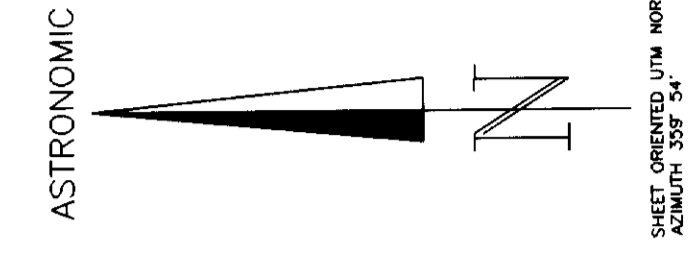


INDEX MAP

UTM NORTH	4950000	4960000	4970000	4980000	4990000	5000000
54500000	4950000	4960000	4970000	4980000	4990000	5000000
54600000	4950000	4960000	4970000	4980000	4990000	5000000
54700000	4950000	4960000	4970000	4980000	4990000	5000000
54800000	4950000	4960000	4970000	4980000	4990000	5000000
54900000	4950000	4960000	4970000	4980000	4990000	5000000
55000000	4950000	4960000	4970000	4980000	4990000	5000000

LEGEND
 HUMUS PARTIAL EXTRACTION SURVEY
 SAMPLE DATE: September 17 to September 28 1992
 ANALYST: G. H. (G. H. HARRISON) (G. H. HARRISON)

SAMPLE RANGE SYMBOL - ZINC
 1.00-14.99 PPM
 15.00-24.99 PPM
 25.00-34.99 PPM
 >34.99 PPM



2.15024

FALCONBRIDGE LIMITED
 Exploration Division
 SHAW - CARMAN TOWNSHIP
 HUMUS PARTIAL EXTRACTION SURVEY
 ZINC (PPM)

NO.	TL	DATE	BY	CHKD	PROJCT	MAP	SCALE
000001	TL	08/27/92	G.H.H.	G.H.H.	000001	000001	1:50,000
000002	TL	09/01/92	G.H.H.	G.H.H.	000002	000002	1:50,000
000003	TL	09/01/92	G.H.H.	G.H.H.	000003	000003	1:50,000
000004	TL	09/01/92	G.H.H.	G.H.H.	000004	000004	1:50,000
000005	TL	09/01/92	G.H.H.	G.H.H.	000005	000005	1:50,000

Doug McLaughlin

