

093461

REPORT ON
1995 GRID SOIL GEOCHEMICAL SURVEY
OF THE
MIC PROPERTY
DAWSON MINING DISTRICT
NTS 116C/7, 8

Lat.: 64° 18' N. Long.: 140° 30' W.

BY

Uwe Schmidt, P.Geo.

FOR

ATNA RESOURCES LTD.

March. 21, 1996

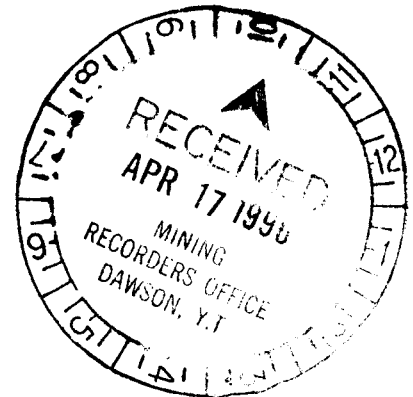


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1. SUMMARY

Atna Resources Ltd. explored the Mic property 60 km northwest of Dawson City, Yukon under an option agreement with YGC Resources Ltd. The Mic property is underlain by metasedimentary and minor metavolcanic rocks of Devono-Mississippian Nasina assemblage. Previous work on the property by Cominco and Archer Cathro and Associates outlined large coincident Pb and Zn anomalies on the east side of the property. Trenching within the anomalies failed to locate mineralization, but rare galena, sphalerite and barite mineralized float have produced lead isotope ratios similar to the Tom and Jason SEDEX Ba-Pb-Zn deposit in east central Yukon. This has provided encouragement for further exploration.

Atna explored the property in 1995 by prospecting and extending the existing soil grid to the west. Results of the soil survey indicate exploration potential in low-lying areas on the west and northwest boundaries of the property. The locations of these anomalies support a SEDEX exploration model and suggest that the property is underlain by a metalliferous horizon that to date has been underexplored.

2. INTRODUCTION

The recent discovery of the ABM polymetallic massive sulphide deposit by Cominco Ltd. in Finlayson Lake area of south-central Yukon has renewed an interest by other mining and exploration companies in volcanogenic massive sulphide (VMS) deposits within Yukon-Tanana Terrane. The fault-displaced extension of Yukon-Tanana lies west of Dawson City, southwest of the Tintina Fault Zone. It is this geological setting which attracted Atna Resources to the area and led to an option agreement with YGC Resources covering five mineral properties in the area, including the Mic claims.

From July 18 to 25, 1995, Atna Resources Ltd. explored the Mic property, located 60 km northwest of Dawson City, Yukon. Exploration included a grid soil geochemical survey and prospecting. The aim of the 1995 work was to assess the potential for SEDEX style, strata-bound, base metal mineralization in the Nasina Assemblage of the Yukon-Tanana Terrane. The 1995 work included a grid soil sampling program on the west side of the property, prospecting and examination of existing trenches.

Work was carried out by Northwest Geological Consulting Ltd. employees from a fly camp located on the property. A total of 342 soil samples were collected along 17 km of line. The writer was contracted by Atna Resources to carry out field management and supply field crews. Field crew consisted of the writer and field assistants Ron Beauchamp and Regan Moran. Overall program supervision was provided by Peter DeLancey, P.Eng., president of Atna Resources Ltd.

3. PROPERTY, LOCATION AND ACCESS

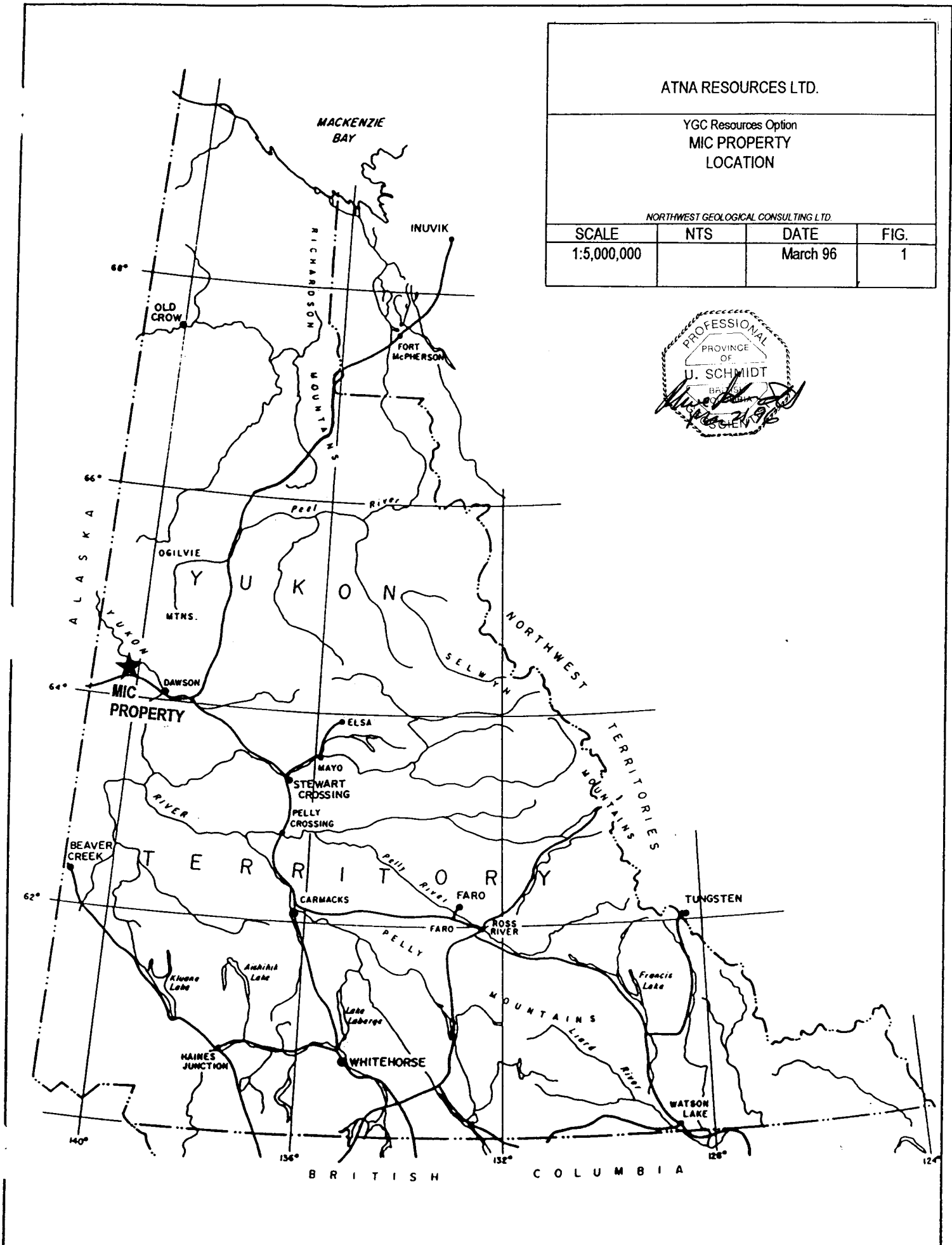
The Mic property consists of 38 quartz mineral claims, covering an area of 794 hectares, located 60 km northwest of Dawson City, Yukon. The claims are registered in the Dawson Mining District in the name of YGC Resources Ltd. The property is accessible by road from Dawson City. The Clinton Creek road, an infrequently used gravel road, bisects the claims in a north-south direction, approximately 11 km south of its junction with highway 9, "Top of the World Highway". The coordinates of the approximate centre of the property are

ATNA RESOURCES LTD.

YGC Resources Option
MIC PROPERTY
LOCATION

NORTHWEST GEOLOGICAL CONSULTING LTD.

SCALE	NTS	DATE	FIG.
1:5,000,000		March 96	1



latitude 64° 18' N and longitude 140° 30' W, located within NTS map areas 116C/7,8.

Name	Grant Numbers	Lapse Date
Mic 1-14	YB30547-YB30560	Mar. 4, 1996
Mic 15-22	YB38785-YB38792	Mar. 4, 1996
Mic 23-38	YB40069-YB40084	Mar. 4, 1996

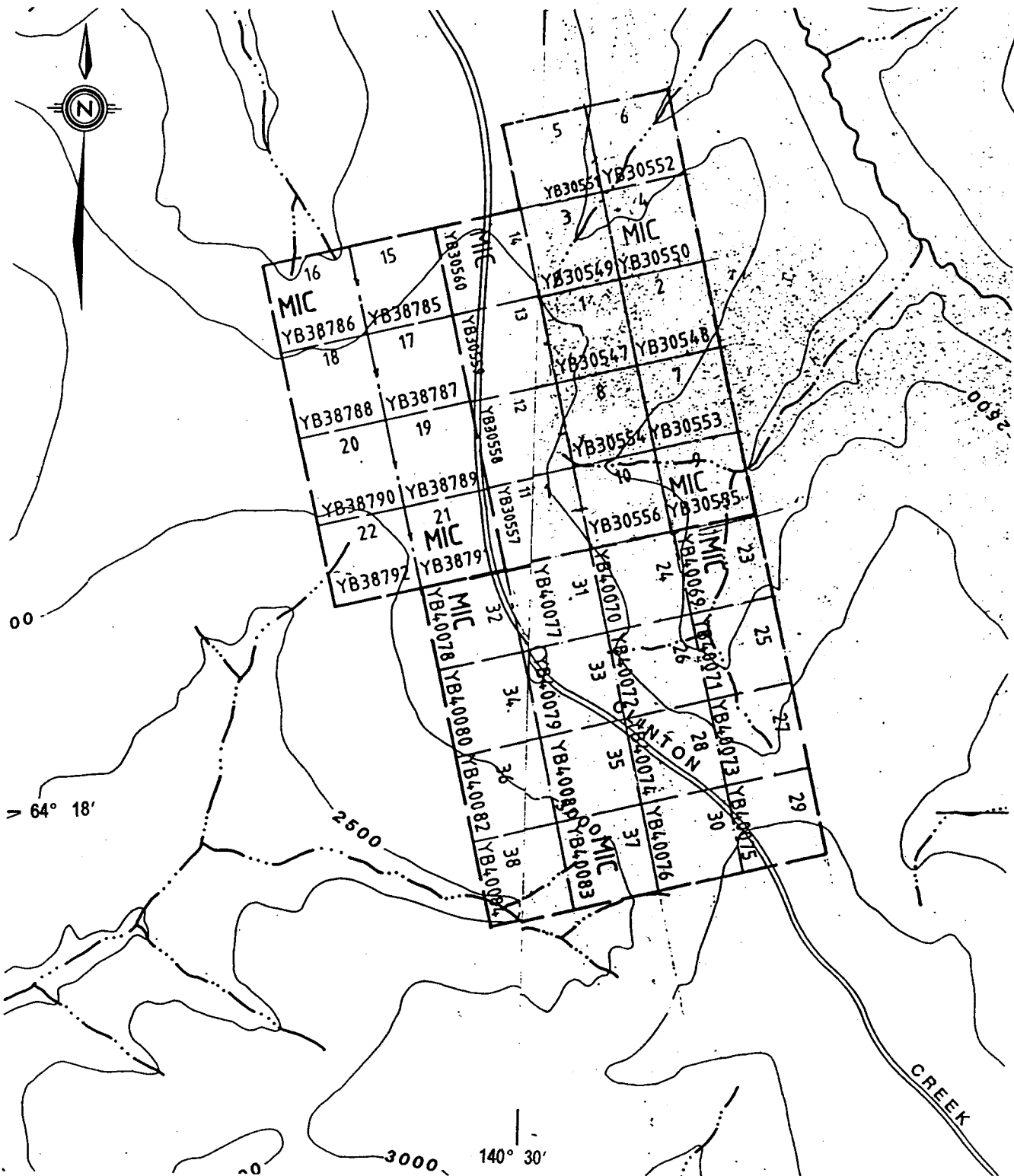
4. PHYSIOGRAPHY

The property lies within the Klondike Plateau, a minor, unglaciated, subdivision of the Yukon Plateau. Ridge crests generally lie at elevations ranging from 900 to 1200 metres and probably represent an old uplifted erosion surface (Green, 1972). Major streams and rivers have gentle gradients but tributary streams occupy narrow, V-shaped valleys with steep gradients and well developed dendritic patterns. The claims cover and parallel a gently-sloped, northerly-trending ridge. Exposure is limited to road cuts, steep northeast-facing slopes, creek valleys and sporadic outcrops and felsenmeer along the ridge tops. Overburden depth varies over the property but in general ranges from 1 to 4 metres in thickness.

5. HISTORY

The property was first staked by Cominco Ltd. in 1978. This was followed by grid soil sampling and bulldozer trenching in 1979-80, and one diamond drill hole in 1980. The property was restaked in 1990 by Archer Cathro and Associates for YGC Resources Ltd. Archer Cathro explored the property in 1990 by grid soil sampling, prospecting and bulldozer trenching. In 1991 Archer Cathro extended the property southward and grid soil sampled the southeast area of the property.

Atna Resources Ltd. explored the property in 1995 by prospecting in the vicinity of previous work and extended the soil grid westward to the limits of the claims. The interpretation of the geochemical survey is the subject of this report.



64° 18'

3000 140° 30'

PROFESSIONAL
 PROVINCE OF
 U. SCHMIDT
 CONSULTANT
U. Schmidt
 March 96

ATNA RESOURCES LTD.

YGC Resources Option
 MIC PROPERTY
 CLAIMS

NORTH-WEST GEOLOGICAL CONSULTING LTD.

SCALE	NTS	DATE	FIG.
1:30,000	116C/7,8	March 96	2

6. REGIONAL GEOLOGY

A large area of the western to southeastern Yukon is underlain by the Yukon-Tanana Terrane (YTT). This geologically complex terrane consists of polydeformed metamorphic rocks derived from a variety of igneous and sedimentary protoliths thought to have originated outboard of North American autochthonous strata, and ranges in age from Precambrian to Recent. Yukon-Tanana Terrane is host to a variety of economically important classes of mineral deposits. Recently, exploration has focussed on stratabound massive sulphide deposits that occur in subdivisions of this terrane in two areas of the Yukon. A number of stratabound base metal occurrences are known west and south of Dawson City. A second group of similar but economically more important mineral occurrences is known in YTT of Finlayson Lake area. The geology is similar to Dawson area but is now geographically removed by 450 km of right-lateral displacement along the Tintina Fault.

Mortensen (1992) divided the YTT into 3 structural assemblages: 1) Nisling assemblage, a lower structural package of quartzite and marble of possible Proterozoic and/or Cambrian age; 2) Nasina assemblage, a middle structural package of Late Devonian to middle Mississippian carbonaceous metasedimentary, mafic and felsic metavolcanic rocks; 3) an upper structural package of mid-Permian felsic metavolcanic (Klondike Schist) and metaplutonic rocks.

Three classes of stratabound, syngenetic mineralization have been identified in YTT. These are:

- 1) Kuroko-type VMS deposits, hosted by metamorphosed felsic volcanic and subvolcanic rocks;
- 2) Besshi-type VMS deposits, hosted mainly by metamorphosed mafic volcanic and associated sedimentary rocks;
- 3) SEDEX-type deposits, hosted mainly by metamorphosed carbonaceous siliciclastic rocks.

7. PROPERTY GEOLOGY

The property and surrounding area are underlain predominantly by metamorphic rocks of sedimentary origin. These rocks were assigned to unit A, Nasina "Series" by Green (1972) and belong to Mortensen's middle structural assemblage (Nasina). They consist primarily of medium to dark grey, fine-grained carbonaceous, quartz-muscovite +/- chlorite, biotite schists and muscovite-bearing quartzite. This structural assemblage may also contain marble bands, pebble conglomerate, chloritic schists and amphibolite, but these were not observed on the property.

Because of the lack of bedrock exposure, no property scale mapping has been carried out. During the 1995 program, geological work was also limited to an examination of previous trenches and to prospecting within areas of previous soil anomalies. The southwestern area of the property was also examined for possible outcrop. The best exposure occurs along the Clinton Creek road. At the south end of the property, road cuts expose dark grey carbonaceous quartz-muscovite schist. Foliation attitudes have variable strikes and dips but generally trend northward with gentle westerly dips. This trend is expressed in the property topography which typically has gentle west-facing slopes and steep east-facing slopes.

The property has been explored as a potential host for Pb-Zn-Ba volcanic-hosted or SEDEX massive sulphide mineralization. Previous exploration by bulldozer trenching has been unsuccessful at locating mineralization in bedrock. This may be partly the result of deep weathering. Sax and Carne (1990) reported finding a single piece of laminated barite, galena and sphalerite float in overburden up slope from a 1990 trench. A similar piece of float was found by J. Mortensen in one of Cominco's 1980 trenches and is reported to have lead isotope ratios close to those of the Tom and Jason SEDEX deposit in east-central Yukon. This led earlier workers to conclude that the most likely exploration target on the property is Devonian-aged barite-lead-zinc mineralization of the SEDEX type. Since the area is unglaciated and geochemical anomalies are dispersed downhill, the mineralized horizon is expected to occur above the upper limits of base metal soil anomalies. Sax and Carne (1990) proposed a possible lead-zinc mineralized horizon at this location.

The trenches were briefly examined by the writer and are predominantly underlain by

carbonaceous quartz-muscovite phyllite. Pyrite is fairly common within the phyllite and is often associated with iron stained cavities or boxwork. A change in lithologies occurs near the top of the trenches, where carbonaceous phyllite grades into light brown, rusty weathering, pyritic, quartz-muscovite-chlorite schist. This unit is exposed on the west side of the Clinton Creek road and has been interpreted as a possible felsic volcanic unit within the sedimentary sequence (Carne 1991). Early Mississippian U-Pb ages are reported for metatuff units elsewhere in this setting (Johnston and Mortensen 1994).

8. GEOCHEMISTRY

In preparation for soil sampling, the program commenced with 3.2 km of line-cutting along a base-line on the west side of the property. The base-line and grid coordinates on the west side of the property use the coordinate system of the existing 1991 grid. The new base-line was established by a slope corrected, chain and compass survey from the existing 1991 grid. This grid was established by Archer Cathro and Associates in 1990 and expanded in 1991. Previous grid soil surveys include 330 samples taken by Cominco in 1979 at a 25 metre sample spacing and line spacing of 150 metres. Archer Cathro expanded this grid in 1990 by 420 samples at the same sample interval and line spacing. In 1991 Archer Cathro extended the sampling 1,500 metres south at a line spacing of 150 metres and 50 metre sample interval for a total of 197 samples. A total of 342 soil samples were collected during the 1995 program at a line spacing of 150 metres and sample interval of 50 metres.

Sample lines are marked with orange flagging tape and were established by slope-corrected compass and "hip-chain" surveys. Grid stations are identified by blue and orange flagging tape and "Tivek" tags. The grid coordinates were used to identify the soil sample. Samples of B horizon soils were collected using sampling shovels or mattocks. Typical sample depths ranged from 20 to 40 cm. Soils typically consist of clay rich-colluvium covered by a variable thickness of organic material. Permafrost development is variable but did not hinder sampling.

Samples were analyzed by Acme Analytical Laboratories Ltd. of Vancouver, employing a standard 30 element Inductively Coupled Argon Plasma (ICP) package with gold analyzed

by acid leach/AA from a 10 g sample. Barium analyses employed a Lithium Metaborate fusion/ICP analysis. Certificates of analyses are appended to this report (Appendix A).

The 1995 soil sample locations and Cu, Pb, Zn and Ba analyses are plotted at 1: 5000 scale on Fig. 3. Interpreted plots for Cu, Pb and Zn are presented on Figures 4 to 6. These plots include data from the 1990, 1991 and 1980 programs. Barium analyses from the 1995 survey are presented on Fig. 7. The barium analyses are restricted to 1995 survey because the Lithium Metaborate fusion / ICP analysis used during this program produces more accurate results than a standard digestion used for ICP analyses during the previous programs.

STATISTICAL METHOD

Analytical data from 1995 and previous years were combined and analyzed statistically using Probplot, a computer program designed to optimally fit multiple normal distributions to exploration geochemical data on probability plots (Stanley 1987). Data from the 1979 Cominco survey were taken from maps produced by Archer Cathro and entered manually into a computer. Data from Archer Cathro's 1990 and 1991 surveys were obtained in digital format from Chemex Labs' archives and merged with the 1995 Acme Analytical Labs' digital data.

A number of samples from the data set were removed to avoid bias and to simplify data plotting. These include soil samples taken within trenches, duplicate sample sites and contour soil sample lines. During data analyses the data set was further reduced by eliminating analyses which are at the analytical detection limit. Trial graph plots were modified by eliminating isolated high values until the best resolution of sub-populations in the data was obtained. The degree of data truncation varies with each element. Summary statistics, histograms, and probability plots produced by Probplot, are appended to this report (Appendix B).

A statistical analysis of Cu, Pb, Zn and Ba analytical data was carried out with the aid of histograms and cumulative probability plots generated by Probplot. Sub-population

boundaries were visually estimated and modified until theoretical mixed population curves closely matched the real data points. Anomaly thresholds for each sub-population were then calculated by the Probplot program. Threshold values assigned to six symbol classes were determined by selecting the mean value and the mean plus two standard deviations of each sub-population. Trial plots were generated within Autocad and final thresholds were selected by a visual assessment of anomaly definition and contrast with background values. The final plots classify the analytical data for each element into ranges of increasing value which are assigned symbols of increasing size. In most cases, log probability plots were used to determine thresholds. The lowest population thresholds are often ignored on symbol plots because they represent background concentrations. Clusters of anomalous samples are outlined on these plots for clarity and discussion purposes.

DISCUSSION OF RESULTS

Copper (Fig.4)

Copper concentrations in soil range from 3 to 100 ppm. Of the 954 samples in the data set, 332 were below the detection limit of 4 ppm. Only 1 analysis exceeded 120 ppm, the upper limit used in data analysis.

The log probability plot of the data was divided into three sub populations, with population breaks selected at 50% and 94% of the data. Population boundaries were selected from arithmetic probability plots but anomaly thresholds were determined from log-transformed data. An anomalous threshold of 31 ppm was selected, representing the mean of population 2. Symbol boundaries were chosen at 41, 63 and 94 ppm Cu. These concentrations represent the mean plus two standard deviations of population 2, the mean of population 3, and the mean plus two standard deviations of population 3, respectively.

Scaled symbol plots of the data at 1:5000 scale (Fig.4) outline clusters of anomalous concentrations within areas of previously outlined anomalies at the north end of the 1990 soil grid and within a large area of the 1991 survey area.

Copper analyses for the 1979 Cominco soil survey were not available, but it is likely that

this area would also be defined by copper because of the strong copper association with lead and zinc, just north of the Cominco grid.

Three small clusters of anomalous copper concentrations were outlined on the west side of the 1995 grid. Copper concentrations in these areas ranged from 32 to 76 ppm.

Lead (Fig. 5)

A total of 1269 samples within the range from 5 to 720 ppm Pb were included in the data analysis. The data were sub-divided into 3 lognormal populations with population boundaries selected at 55% and 95% of the data. A concentration of 42 ppm Pb was chosen as the anomalous threshold. This value represents the mean of population 2. Scaled symbols were assigned thresholds of 142, 320 and 706 ppm Pb, representing the mean plus two standard deviations of population 2, the mean of population 3, and the mean plus two standard deviations of population 3, respectively.

Plots of the data outline previous anomalies on the east side of the property. The upper limits of the anomalies are clearly defined and downhill dispersion anomalies are evident.

Anomalous lead concentrations were detected in the central area of the 1995 sample grid. One of the anomalies has a length of at least 300 metres and width of approximately 200 metres. Analyses in this area range from 36 to 141 ppm lead. The anomaly is defined by 3 sample lines and is closed off by adjacent lines. The second anomaly is only detected by samples on one line and extends a previous single line anomaly 100 metres to the west.

Zinc (Fig. 6)

The zinc analytical data were divided into four populations. The data were truncated by a lower limit of 10 ppm, which is the detection limit and a maximum value of 750 ppm. Two samples were below the minimum and six samples exceeded the maximum limit. A total of 1282 samples were included in the statistical analysis. Population boundaries were selected at 14, 62 and 95%. An anomaly threshold of 107 was selected, which represents the mean of population 3. Scaled anomaly symbols were assigned thresholds of 184, 325 and 624 ppm. These values correspond to the mean plus two standard deviations of population 3, the mean of population 4 and the mean plus two standard deviations of population 4.

Scaled symbol plots of zinc concentrations outline two large areas of anomalous soils on the east side of the grid, in areas of known anomalies.

Three areas of weakly anomalous zinc were outlined on the 1995 grid. A cluster of 6 zinc analyses in the range from 119 to 181 ppm occur in the southwest corner of the grid. This anomaly covers an area of 6 hectares and is open to the south. Three anomalous analyses ranging from 116 to 141 ppm occur along 100 metres of line at the west end of line 1+50 N. This anomaly is open to the west but bracketed by low concentration to the north and south.

The third area of interest is located at the north end of the 1995 grid along line 13+50 N. Isolated analyses of 139 ppm and 149 ppm zinc occur at sites separated by 150 metres. These two sites are of interest because they correlate with a barium anomaly.

Barium (Fig. 7)

Barium analyses are available from 1990, 1991 and 1995 programs. The previous sample programs used a standard digestion procedure and ICP analysis. This method produces low analyses because of partial digestion of barium. The 1995 survey used a separate digestion procedure before ICP analyses and the analytical results are much higher and are incompatible with the old data. A statistical analysis of the 1995 barium analyses produced three populations with boundaries selected at 85 and 97%. An anomalous threshold of 1330 ppm was chosen which corresponds to the mean plus two standard deviations of population 2. Scaled symbol thresholds of 1500, 1700, 1817 and 2050 ppm Ba were chosen based on the statistical parameters of populations 2 and 3.

Interpreted anomaly plots of the data outline three anomalous areas. Two clusters of anomalous samples occur in the southwest corner of the grid. Analyses range from 1351 to 1837 ppm and the anomaly is open to the south and west.

The second anomalous area is defined by eight samples on lines 0+00 and 1+50 N. Analyses range from 1368 to 3713 ppm and are open to the west.

The third anomaly is located at the northern limit of the grid along line 13+50 N. The anomaly is defined by five analyses which ranged from 1449 to 1895 ppm Ba.

9. CONCLUSIONS

A grid soil sampling program on the Mic property in 1995 and the statistical interpretation of the geochemical data, including analyses from previous programs, suggest that a metal-rich horizon underlies the Mic property. Previous soil sampling programs on the east side of the property have outlined large lead and zinc soil geochemical anomalies which parallel the regional strike and may be caused by a north-south trending gently west-dipping mineralized horizon.

The statistical methods employed indicate a strong correlation among Pb, Zn, Cu and Ba analyses. Copper and barium appear to be useful pathfinder elements. This was not previously recognized.

Soil anomalies outlined in 1995 support earlier interpretations that geochemical anomalies are derived from a stratabound mineralized horizon and suggest this horizon extends to the west side of the property and may be exposed at lower elevations farther west. Barium, zinc and copper anomalies cluster at three sites; in the southwest, west-central and northern limits of the grid and indicate exploration potential west of the claim boundary.

The highest barium analyses are located on lines 0+00 and 1+50 N on the west side of the property. This anomaly is significant because it lies west and possibly down dip from the highest Pb anomalies and rare float fragments of lead, zinc mineralization associated with barite.

Deep weathering and an associated lack of surface mineralization have hindered a more aggressive exploration strategy on the Mic property. The soil survey in 1995 has not changed this but did provide some encouraging evidence that suggests a more extensive target horizon exists on the property. The low level zinc, copper and isolated lead anomalies which accompany the barium anomalies on the west side of the property suggest that the weathering surface has not completely penetrated the favourable horizon and that additional exploration potential exists in the sub surface on the claims and at lower elevations to the west and northwest of the claim boundary. Alternatively, if weathering has penetrated the metalliferous horizon then low concentrations of these elements would

indicate decreasing concentrations of base metals toward the west.

10. RECOMMENDATIONS

The areas west and northwest of the of the property should be further explored. A program of stream sediment sampling, prospecting and grid soil sampling is recommended. Expansion of the property in these directions may be advisable if initial results are encouraging, or a substantial grid soil sampling program is contemplated or if exploration in the area becomes more competitive.

11. ACKNOWLEDGEMENTS

The author would like to thank Rob Carne and Archer Cathro and Associates (1981) Limited for discussions of the geology of the Mic property and for providing base maps and access to archived geochemical analytical data.

12. BIBLIOGRAPHY AND REFERENCES

- Carne, R. C. (1991): Summary Report on 1991 Exploration , Mickey Creek Property (Mickey Claims)
- Green, L.H., (1972): Geology of Nash Creek, Larsen Creek and Dawson Map-Areas, Yukon Territory; G.S.C. Memoir 364
- Johnston, S.T. and Mortensen, J.K.,(1994): Regional Setting of Porphyry Cu-Mo deposits, Volcanogenic Massive-Sulphide Deposits, and Mesothermal Gold Deposits in the Yukon-Tanana Terrane, Yukon. Extended Abstracts from: Abstracts and Proceedings of the District 6 CIM 1994 Annual General Meeting
- Mortensen, J.K. and Jilson, G.A. (1985): Evolution of the Yukon-Tanana terrane: Evidence from southeastern Yukon Territory, GEOLOGY, v.13 p.806-810
- Mortensen, J.K.,(1988): Geology of southwestern Dawson map area, Yukon Territory; in Current Research, Part E, G.S.C. Paper 88-1E, p.73-78
- Mortensen, J.K., (1992): Pre-Mid-Mesozoic Tectonic Evolution of the Yukon-Tanana Terrane, Yukon and Alaska, TECTONICS, VOL. 11 NO. 4 , p.836-853
- Sax, K., Carne, R.C.(1990): Summary Report on 1990 Exploration , Mickey Creek Property
- Sinclair, A.J., (1976): Applications of Probability Graphs in Mineral Exploration; The Association of Exploration Geochemists, Special Volume No. 4
- Stanley, C.R., (1987): Probplot; The Association of Exploration Geochemists, Special Volume No. 14

13. STATEMENT OF EXPENDITURE

I. Field Expenses

1) Labour

U.Schmidt (Project Geologist) July 18-26, 1995

8 days @\$350/day \$2,800.00

R.Beauchamp (Field Assistant) July 19 - 24, 1995

6 days @ \$200/day \$1,200.00

R. Moran (Field Assistant) July 18-25, 1995

8 days @ \$175/day \$1,400.00

\$5,400.00

2) Consumables and Supplies \$1,249.93

3) Camp and Equipment Rental \$608.00

4) Transportation

Truck Rental July 18 - 25, 1995 (8 days @ \$55/day \$440.00

5) Geochemical Analysis

342 soils, 33 element ICP analysis \$667.85

II. OFFICE

Data compilation, Interpretation, Report Writing

U. Schmidt Dec. 8,14(1/2),15(1/2),29(1/2),Jan. 9-11,21,23(1/2), March 6(1/2),15,18-20,
1996

11 1/2 days @\$350/day \$4,025.00

Data Plotting \$347.50

\$4,372.50

GST \$891.68

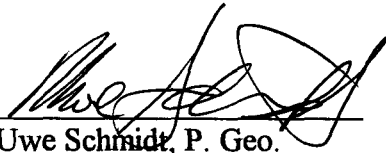
TOTAL \$14,521.64

STATEMENT OF EXPENDITURES
MIC 1-38

CANADA) In the matter of an evaluation program on the
) Mic 1-38

I, Uwe Schmidt, for Atna Resources Ltd., 1550 - 409 Granville Street, Vancouver, British Columbia do solemnly declare that a program consisting of prospecting, grid geochemical soil survey and hand trenching was carried out on the Mic 1-38 mineral claims during the period from July 18 to 26, 1995.

The preceding expenses were incurred during the course of this work and the compilation and reporting of the results.



Uwe Schmidt, P. Geo.
March 21, 1996

Appendix A

CERTIFICATES OF ANALYSIS

GEOCHEMICAL ANALYSIS CERTIFICATE

Atna Resources Ltd. File # 95-2623 Page 1
 900 - 409 Granville St., Vancouver BC V6C 1T2 Submitted by: Uwe Schmidt

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Tl	Hg	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm
M 13+50N 14+00W	1	16	16	58	.3	18	6	225	2.35	3	<5	<2	<2	15	<.2	<2	<2	34	.14	.053	20	24	.29	177	.02	<3	1.24	.01	.06	<2	<5	<1	1454
M 13+50N 13+50W	1	10	8	30	<.3	11	3	114	1.26	<2	<5	<2	<2	10	<.2	<2	2	26	.07	.031	17	15	.12	67	.02	<3	.62	.01	.05	<2	<5	<1	1325
M 13+50N 13+00W	1	22	16	49	.3	14	9	568	1.79	2	<5	<2	<2	66	.3	<2	<2	28	1.03	.065	23	16	.24	299	.01	<3	1.00	.01	.07	<2	<5	<1	1245
M 13+50N 12+50W	1	15	17	71	.6	14	6	209	1.90	2	<5	<2	2	34	<.2	<2	<2	33	.49	.051	20	18	.28	262	.01	<3	1.17	.01	.08	<2	<5	<1	1275
M 13+50N 12+00W	1	17	21	69	<.3	15	13	571	2.32	<2	<5	<2	2	30	<.2	<2	<2	35	.42	.053	23	19	.30	226	.02	<3	1.20	.01	.08	<2	<5	<1	1290
M 13+50N 11+50W	1	27	11	82	.4	25	10	334	2.65	4	<5	<2	<2	37	<.2	<2	<2	38	.58	.073	23	25	.34	277	.02	3	1.43	.01	.08	<2	<5	<1	1128
RE M 13+50N 11+50W	1	26	13	81	.3	24	10	330	2.63	5	<5	<2	<2	37	.4	<2	<2	38	.57	.073	24	24	.34	269	.02	<3	1.41	.01	.08	<2	<5	<1	1136
M 13+50N 11+00W	1	29	17	62	.6	20	5	89	2.36	8	<5	<2	<2	18	.2	<2	<2	38	.19	.070	25	24	.28	175	.02	<3	1.45	.01	.07	<2	<5	<1	1118
M 13+50N 10+50W	1	24	14	55	.6	18	7	164	1.99	3	<5	<2	<2	21	.2	<2	<2	33	.22	.060	25	23	.27	196	.02	<3	1.16	.01	.08	<2	<5	<1	1137
M 13+50N 10+00W	2	22	18	75	.6	28	11	369	2.73	7	<5	<2	2	21	<.2	<2	<2	41	.20	.060	29	31	.43	191	.03	<3	1.42	.01	.09	<2	<5	<1	1492
M 13+50N 9+50W	1	39	25	139	<.3	23	8	221	2.49	5	<5	<2	3	20	.7	<2	<2	32	.18	.061	35	20	.29	162	.03	<3	1.05	.01	.07	<2	<5	<1	1895
M 13+50N 9+00W	1	36	35	96	<.3	19	7	194	2.59	4	<5	<2	<2	19	.5	<2	<2	40	.18	.056	26	23	.37	243	.04	3	1.38	.01	.06	<2	<5	<1	1711
M 13+50N 8+50W	1	34	43	85	<.3	14	6	158	2.58	5	<5	<2	<2	17	.5	<2	<2	41	.13	.056	25	25	.32	240	.02	<3	1.51	.01	.07	<2	<5	<1	1703
M 13+50N 8+00W	1	34	26	149	.3	23	7	182	2.47	4	<5	<2	4	21	.7	<2	2	36	.21	.048	29	24	.40	239	.05	<3	1.22	.01	.06	<2	<5	<1	1449
M 13+50N 7+50W	1	23	16	75	.3	19	8	277	2.84	6	<5	<2	2	18	.3	<2	<2	46	.16	.060	21	26	.37	132	.05	<3	1.45	.01	.06	<2	5	<1	1087
M 13+50N 7+00W	1	38	18	83	.4	23	9	281	2.85	5	<5	<2	<2	20	.3	<2	2	41	.16	.070	26	28	.34	185	.04	5	1.61	.01	.07	<2	<5	<1	1462
M 13+50N 6+50W	1	25	11	70	.5	21	7	185	2.49	2	<5	<2	3	19	.3	<2	2	37	.19	.051	30	24	.41	155	.05	<3	1.29	.01	.06	<2	5	<1	1083
M 12+00N 15+50W	1	20	20	68	1.1	18	6	121	2.08	5	<5	<2	<2	19	.4	<2	<2	35	.15	.070	24	26	.30	205	.01	<3	1.66	.01	.09	<2	<5	<1	1215
M 12+00N 15+00W	1	20	14	75	.4	23	7	264	2.36	6	<5	<2	<2	22	.3	<2	<2	37	.19	.061	22	21	.23	138	.02	4	.96	.01	.09	<2	<5	<1	1324
M 12+00N 14+50W	1	22	18	80	.7	23	8	266	2.49	4	<5	<2	3	21	.2	<2	<2	30	.16	.065	33	19	.24	130	.03	<3	.97	.01	.09	<2	<5	<1	1715
M 12+00N 14+00W	1	20	14	60	.4	18	6	184	1.93	2	<5	<2	<2	20	.2	<2	<2	22	.18	.070	24	16	.17	130	.01	<3	.84	.01	.09	<2	<5	<1	1140
M 12+00N 13+50W	1	18	20	69	.4	19	13	524	2.45	2	<5	<2	<2	28	.3	<2	<2	34	.29	.083	27	21	.32	317	.02	<3	1.52	.01	.07	<2	<5	<1	1340
M 12+00N 13+00W	1	15	20	47	.4	14	5	84	1.88	2	<5	<2	<2	16	<.2	<2	<2	32	.15	.046	24	23	.29	177	.02	<3	1.53	.01	.06	<2	<5	<1	1202
M 12+00N 12+50W	1	12	13	50	.5	14	8	336	1.83	<2	<5	<2	<2	26	.2	<2	<2	25	.30	.068	28	18	.25	223	.01	<3	1.11	.01	.07	<2	<5	<1	1246
M 12+00N 12+00W	1	22	18	60	.6	20	15	833	3.16	5	<5	<2	4	32	<.2	<2	<2	25	.72	.065	45	18	.25	280	.01	<3	1.21	.01	.09	<2	<5	<1	1559
M 12+00N 11+50W	1	28	13	88	.3	19	9	725	2.40	5	<5	<2	<2	77	.4	<2	<2	30	1.18	.077	19	17	.26	294	.02	<3	1.17	.01	.06	<2	<5	<1	1343
M 12+00N 11+00W	1	19	23	74	<.3	15	8	176	2.55	4	<5	<2	4	33	<.2	<2	<2	38	.47	.049	23	20	.30	272	.01	<3	1.35	.01	.07	<2	<5	<1	1618
M 12+00N 10+50W	1	28	33	88	.4	16	9	157	2.46	6	<5	<2	8	33	<.2	<2	<2	31	.53	.054	35	18	.21	249	.01	<3	1.23	.01	.09	<2	<5	<1	1453
M 12+00N 10+00W	2	29	20	100	.3	42	11	384	3.14	21	<5	<2	2	14	.3	<2	<2	34	.14	.065	35	26	.24	95	.02	3	.93	.01	.09	<2	<5	<1	1255
M 12+00N 9+50W	1	18	14	50	<.3	16	6	176	2.10	3	<5	<2	<2	15	<.2	2	<2	29	.16	.042	24	18	.27	123	.02	<3	1.02	.01	.08	<2	<5	<1	1041
M 12+00N 9+00W	1	15	10	27	.3	10	2	68	1.33	6	<5	<2	<2	21	.2	<2	2	22	.21	.048	21	14	.15	149	.02	<3	.94	.02	.06	<2	<5	<1	953
M 12+00N 8+50W	1	25	11	62	<.3	23	7	269	2.52	13	<5	<2	3	16	.4	<2	<2	39	.16	.041	29	25	.37	172	.04	<3	1.38	.01	.07	<2	5	<1	1248
M 12+00N 8+00W	1	37	30	88	.4	30	8	294	2.77	3	<5	<2	5	21	.4	<2	<2	32	.21	.064	40	20	.31	170	.04	<3	.98	.01	.09	<2	5	<1	1454
M 12+00N 7+50W	1	13	14	40	<.3	12	4	163	2.44	5	<5	<2	<2	12	<.2	<2	<2	37	.13	.036	15	22	.28	96	.03	<3	1.35	.01	.04	<2	<5	<1	957
M 12+00N 7+00W	1	21	9	68	.3	22	7	213	2.49	4	<5	<2	3	19	<.2	<2	<2	39	.22	.048	20	26	.45	192	.05	<3	1.46	.01	.07	<2	6	<1	1117
STANDARD C/SO-15	20	59	37	133	7.3	71	33	1023	4.01	41	19	7	36	51	19.2	18	19	60	.50	.096	43	57	.91	186	.08	30	1.87	.06	.15	10	5	1	2131

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.

THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.

- SAMPLE TYPE: SOIL BA* .2 GM SAMPLE FUSED WITH 1.2 GM LIBO2, ANALYSIS BY ICP.

Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: JUL 31 1995

DATE REPORT MAILED: Aug 7/95

SIGNED BY: C. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Tl	Hg	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	
M 12+00N 6+50W	1	21	12	55	.7	14	5	217	2.24	11	<5	<2	7	26	.2	3	<2	34	.30	.063	34	20	.23	230	.01	<3	1.21	.01	.09	<2	<5	<1	1337
M 12+00N 6+00W	1	17	13	54	.5	14	8	274	3.25	12	<5	<2	11	32	<.2	2	3	27	.52	.052	44	17	.23	196	.01	<3	1.18	.01	.08	<2	<5	<1	1020
M 12+00N 5+50W	1	14	11	55	<.3	18	7	286	2.39	7	<5	<2	5	37	<.2	<2	<2	27	.57	.057	32	20	.44	186	.01	<3	1.48	.01	.06	<2	<5	<1	1058
M 10+50N 16+00W	1	15	5	37	<.3	12	4	247	1.62	9	<5	<2	<2	14	.2	<2	<2	28	.10	.038	14	15	.13	97	.03	3	.82	.02	.06	<2	<5	<1	985
M 10+50N 15+50W	1	25	10	77	.4	24	7	391	2.33	9	<5	<2	6	20	<.2	<2	<2	31	.23	.049	33	20	.31	189	.04	<3	1.02	.01	.08	<2	<5	<1	1307
M 10+50N 15+00W	<1	9	<3	20	<.3	4	1	63	1.07	8	<5	<2	<2	9	.2	2	3	24	.05	.022	4	7	.06	33	.04	<3	.63	.02	.04	<2	<5	<1	944
M 10+50N 14+50W	1	34	10	72	.6	22	8	221	2.52	12	<5	<2	5	21	.2	2	3	37	.23	.057	32	25	.32	180	.03	<3	1.29	.01	.10	<2	<5	<1	1324
M 10+50N 14+00W	1	18	9	57	.3	16	7	299	2.64	11	<5	<2	6	15	<.2	<2	3	32	.16	.043	40	20	.31	111	.04	3	1.20	.01	.10	<2	<5	<1	1083
M 10+50N 13+50W	1	17	20	39	<.3	13	6	368	2.22	12	<5	<2	<2	15	.2	<2	<2	31	.12	.058	32	17	.16	107	.02	<3	.99	.01	.10	<2	<5	<1	920
M 10+50N 13+00W	1	15	7	59	<.3	19	8	453	3.38	11	<5	<2	5	15	<.2	<2	<2	44	.12	.027	20	27	.36	126	.05	3	1.78	.01	.07	<2	<5	<1	1006
M 10+50N 12+50W	1	19	7	59	.3	17	6	234	2.50	9	<5	<2	2	17	<.2	<2	<2	40	.18	.044	25	25	.39	134	.04	<3	1.55	.01	.08	<2	<5	<1	1056
M 10+50N 12+00W	1	24	10	63	.3	20	6	207	2.48	10	<5	<2	3	18	<.2	2	2	41	.19	.044	22	27	.42	162	.05	<3	1.57	.01	.09	<2	<5	<1	1035
M 10+50N 11+50W	1	19	8	55	.3	19	6	197	2.66	11	<5	<2	3	15	.2	<2	<2	39	.15	.033	27	26	.39	135	.04	3	1.61	.01	.08	<2	<5	<1	1023
M 10+50N 11+00W	1	27	9	49	.3	21	7	264	2.66	7	<5	<2	7	19	<.2	<2	<2	27	.25	.040	56	20	.36	181	.02	4	1.34	.01	.08	<2	<5	<1	1313
M 10+50N 10+50W	1	18	6	41	<.3	14	6	215	1.84	7	<5	<2	<2	26	.3	<2	<2	33	.30	.051	15	18	.25	183	.03	<3	1.25	.01	.05	<2	<5	<1	1025
M 10+50N 10+00W	<1	14	11	25	<.3	9	4	134	1.66	8	<5	<2	<2	13	.3	<2	<2	26	.10	.035	15	13	.14	108	.02	<3	1.16	.02	.07	<2	<5	<1	1033
M 10+50N 9+50W	1	13	9	35	.3	12	5	140	1.90	8	<5	<2	<2	16	<.2	2	2	32	.16	.024	20	19	.25	122	.03	<3	1.29	.01	.07	<2	<5	<1	1036
M 10+50N 9+00W	1	21	14	56	.4	21	7	240	2.44	9	<5	<2	7	14	.2	2	3	36	.14	.027	37	22	.35	120	.04	<3	1.39	.01	.09	<2	<5	<1	1066
M 10+50N 8+50W	1	28	9	62	<.3	23	7	226	2.73	9	<5	<2	5	16	<.2	<2	2	42	.16	.027	32	30	.49	153	.06	5	1.63	.01	.07	<2	<5	<1	1007
M 10+50N 8+00W	1	20	10	55	<.3	19	6	188	2.66	11	<5	<2	3	14	.3	<2	2	43	.15	.039	22	29	.39	106	.05	<3	1.66	.01	.06	<2	<5	<1	930
M 10+50N 7+50W	1	14	10	46	<.3	15	5	169	2.31	9	<5	<2	3	16	<.2	<2	2	40	.17	.029	18	24	.36	110	.05	<3	1.48	.01	.07	<2	<5	<1	1041
RE M 10+50N 7+50W	1	15	10	48	.3	17	5	177	2.40	9	5	<2	2	17	.3	4	4	42	.18	.030	18	26	.37	115	.05	<3	1.54	.01	.07	<2	5	<1	1055
M 10+50N 7+00W	1	22	12	54	.6	17	9	265	2.57	6	<5	<2	4	23	.3	<2	2	36	.29	.050	36	24	.32	241	.02	<3	1.46	.01	.08	<2	<5	<1	1224
M 10+50N 6+50W	1	18	12	49	<.3	18	6	189	2.38	8	<5	<2	2	16	.2	<2	2	37	.19	.033	25	24	.40	130	.04	<3	1.49	.01	.07	<2	<5	<1	1010
M 10+50N 6+00W	1	21	12	52	<.3	20	7	242	2.22	5	<5	<2	5	17	<.2	<2	2	29	.21	.032	40	23	.43	135	.04	<3	1.44	.01	.08	<2	<5	<1	1072
M 10+50N 5+50W	1	31	11	81	<.3	31	9	316	2.86	10	<5	<2	9	20	.2	<2	<2	36	.24	.044	37	27	.53	162	.04	<3	1.75	.01	.10	<2	<5	<1	1154
M 9+00N 16+00W	1	18	12	32	.3	13	5	190	2.09	8	<5	<2	6	12	<.2	<2	2	24	.13	.027	47	17	.24	98	.03	<3	1.03	.01	.09	<2	<5	<1	974
M 9+00N 15+50W	1	32	15	62	.3	21	6	171	2.55	8	<5	<2	8	17	.3	2	<2	40	.16	.026	37	25	.39	164	.05	<3	1.42	.01	.08	<2	5	<1	1101
M 9+00N 15+00W	1	32	11	68	.3	24	7	247	2.86	15	<5	<2	6	15	.2	2	<2	42	.14	.031	34	26	.38	161	.04	<3	1.44	.01	.08	<2	<5	<1	1101
M 9+00N 14+50W	1	24	11	60	<.3	20	5	239	2.32	6	<5	<2	3	15	<.2	<2	3	35	.15	.032	32	22	.29	148	.04	<3	1.14	.01	.07	<2	<5	<1	1247
M 9+00N 14+00W	1	17	8	50	<.3	20	6	157	2.29	7	<5	<2	2	13	.2	<2	<2	38	.14	.029	18	26	.38	110	.04	3	1.59	.01	.06	<2	<5	<1	1117
M 9+00N 13+50W	1	21	9	53	<.3	18	6	227	2.39	7	<5	<2	<2	18	.2	<2	2	39	.15	.046	18	23	.32	155	.03	<3	1.39	.01	.10	<2	<5	<1	1085
M 9+00N 13+00W	1	24	11	51	.3	18	6	179	2.25	5	<5	<2	6	16	<.2	<2	2	39	.15	.026	25	24	.40	145	.06	<3	1.43	.01	.08	<2	5	<1	1153
M 9+00N 12+50W	1	25	11	50	.3	16	4	145	2.08	5	<5	<2	5	16	.2	<2	<2	38	.16	.033	25	25	.39	103	.06	5	1.30	.01	.07	<2	5	<1	1054
M 9+00N 12+00W	1	22	9	53	<.3	17	5	168	2.30	5	<5	<2	4	16	.3	<2	<2	39	.17	.033	24	24	.41	136	.06	3	1.40	.01	.07	<2	6	<1	1082
STANDARD C/SO-15	19	57	35	133	7.5	72	30	1123	3.95	40	23	7	37	52	19.0	18	23	61	.51	.095	43	58	.91	188	.08	31	1.88	.06	.16	10	<5	<1	2343

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



ACRE ANALYTICAL



ACRE ANALYTICAL

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Tl	Hg	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm
M 9+00N 11+50W	1	34	12	69	<.3	25	6	259	2.66	4	<5	<2	6	24	<.2	<2	<2	44	.22	.030	28	27	.44	313	.07	<3	1.43	.01	.08	<2	<5	<1	1442
M 9+00N 11+00W	1	23	10	52	<.3	18	5	193	2.21	4	<5	<2	5	22	.2	<2	<2	36	.20	.023	25	23	.37	236	.05	<3	1.25	.01	.07	<2	<5	<1	1355
M 9+00N 10+50W	1	42	16	68	.3	27	8	219	2.67	12	<5	<2	17	26	<.2	<2	<2	28	.32	.103	68	19	.27	161	.02	<3	1.02	.01	.13	<2	<5	<1	1643
M 9+00N 10+00W	1	23	16	56	.3	24	10	236	3.12	6	<5	<2	12	12	<.2	2	<2	32	.13	.028	43	24	.50	98	.03	<3	1.68	.01	.09	<2	<5	<1	1077
M 9+00N 9+50W	1	23	17	43	.4	24	12	450	2.87	4	<5	<2	12	22	<.2	3	<2	26	.36	.044	48	23	.49	174	.02	3	1.58	.01	.11	<2	<5	<1	1130
M 9+00N 9+00W	<1	18	13	39	<.3	24	8	283	2.43	3	<5	<2	8	17	<.2	<2	<2	26	.24	.037	37	22	.48	141	.03	<3	1.67	.01	.08	<2	<5	<1	1265
M 9+00N 8+50W	1	30	15	57	.3	31	17	397	3.34	3	<5	<2	7	35	.3	<2	<2	38	.62	.053	40	29	.65	224	.02	<3	2.01	.01	.09	<2	<5	<1	1072
M 9+00N 8+00W	1	28	22	60	.4	27	11	325	3.22	8	<5	<2	10	27	<.2	2	<2	39	.44	.039	39	29	.60	219	.03	<3	1.89	.01	.09	<2	<5	<1	1045
M 9+00N 7+50W	1	21	17	49	.4	23	9	205	2.82	6	<5	<2	6	28	<.2	2	<2	37	.40	.036	31	24	.52	216	.03	<3	1.86	.01	.08	<2	<5	<1	1069
M 9+00N 7+00W	1	36	23	63	.3	31	14	358	3.02	10	<5	<2	11	40	<.2	2	36	.57	.040	42	26	.60	236	.03	<3	1.90	.01	.09	<2	<5	<1	1190	
M 9+00N 6+50W	1	30	18	66	<.3	29	13	446	3.36	5	<5	<2	13	26	.2	<2	<2	35	.38	.035	51	27	.59	179	.03	<3	1.95	.01	.08	<2	<5	<1	1128
M 9+00N 6+00W	1	33	20	68	<.3	31	13	407	3.23	7	<5	<2	8	46	.2	<2	<2	38	.66	.047	40	27	.56	205	.03	<3	1.82	.01	.07	<2	<5	<1	1063
M 7+50N 17+50W	1	27	14	62	<.3	23	8	227	2.93	11	<5	<2	3	15	.4	2	2	49	.14	.032	29	31	.43	138	.05	3	1.71	.01	.09	<2	<5	<1	1097
M 7+50N 17+00W	1	19	10	50	<.3	18	7	226	2.54	10	<5	<2	6	13	<.2	2	<2	41	.10	.018	28	25	.31	99	.05	<3	1.42	.01	.08	<2	<5	<1	1112
M 7+50N 16+50W	1	13	13	28	<.3	11	6	192	2.00	5	<5	<2	2	10	.2	<2	<2	29	.10	.036	30	19	.25	89	.03	<3	1.29	.01	.09	<2	<5	<1	992
M 7+50N 16+00W	1	12	11	32	<.3	11	4	96	1.85	10	<5	<2	<2	9	<.2	<2	<2	28	.08	.023	29	17	.23	70	.03	<3	1.18	.01	.08	<2	<5	<1	956
M 7+50N 15+50W	1	19	13	43	<.3	19	7	210	2.70	6	<5	<2	6	13	<.2	<2	<2	41	.12	.023	27	25	.37	119	.05	<3	1.66	.01	.08	<2	<5	<1	976
M 7+50N 15+00W	1	26	18	29	<.3	10	4	98	2.06	5	<5	<2	<2	14	.3	3	<2	36	.09	.115	14	20	.15	145	.03	<3	1.61	.02	.07	<2	<5	<1	952
RE M 7+50N 15+00W	1	26	15	29	<.3	9	3	97	2.03	6	<5	<2	<2	14	.2	3	2	36	.09	.115	13	19	.15	144	.03	<3	1.61	.02	.07	<2	<5	<1	935
M 7+50N 14+50W	1	29	12	61	<.3	20	6	169	2.71	12	<5	<2	5	14	.3	<2	<2	41	.11	.025	31	25	.37	111	.05	<3	1.43	.01	.08	<2	<5	<1	1182
M 7+50N 14+00W	1	28	10	64	<.3	26	7	289	2.70	5	<5	<2	5	22	<.2	<2	<2	46	.23	.029	24	29	.51	251	.08	<3	1.58	.01	.07	<2	<5	<1	1230
M 7+50N 13+50W	1	14	10	48	<.3	19	6	143	2.36	4	<5	<2	4	16	<.2	<2	<2	40	.12	.020	24	24	.27	149	.04	<3	1.51	.01	.09	<2	<5	<1	1258
M 7+50N 13+00W	1	21	17	31	.3	12	5	126	1.70	5	<5	<2	7	14	.3	<2	2	34	.09	.014	37	21	.27	136	.05	<3	1.18	.01	.09	<2	<5	<1	1635
M 7+50N 12+50W	1	20	11	40	<.3	15	5	144	2.23	5	<5	<2	4	16	.4	2	<2	41	.14	.021	23	25	.37	142	.06	<3	1.43	.01	.07	<2	<5	<1	1161
M 7+50N 12+00W	1	31	8	48	<.3	24	14	257	2.66	7	<5	<2	4	15	.3	<2	2	42	.11	.022	15	27	.36	127	.06	<3	1.87	.01	.06	<2	<5	<1	1057
M 7+50N 11+50W	1	21	11	38	<.3	15	6	211	2.15	2	<5	<2	4	17	<.2	<2	<2	38	.14	.019	21	24	.35	122	.07	<3	1.30	.01	.06	<2	<5	<1	1181
M 7+50N 11+00W	1	21	10	45	<.3	19	7	234	2.29	4	<5	<2	5	16	.2	<2	<2	40	.16	.028	23	27	.41	143	.07	<3	1.45	.01	.07	<2	<5	<1	1101
M 7+50N 10+50W	1	18	14	47	.3	20	7	214	2.18	4	<5	<2	9	15	.3	<2	<2	33	.13	.018	32	30	.38	110	.06	<3	1.33	.01	.12	<2	<5	1	1065
M 7+50N 10+00W	1	25	13	55	.4	26	8	265	2.61	7	<5	<2	10	18	<.2	<2	<2	25	.18	.028	42	24	.34	135	.04	<3	1.04	.01	.07	<2	<5	<1	1042
M 7+50N 9+50W	1	18	11	57	<.3	28	8	244	2.46	9	<5	<2	2	15	.5	<2	2	34	.14	.030	26	35	.45	125	.05	<3	1.43	.01	.06	<2	<5	<1	1053
M 7+50N 9+00W	1	14	12	58	<.3	18	7	192	2.54	6	<5	<2	2	13	.2	<2	<2	36	.13	.029	24	23	.42	109	.04	<3	1.66	.01	.08	<2	<5	<1	1048
M 7+50N 8+50W	1	15	7	40	<.3	16	5	204	2.03	4	<5	<2	2	18	<.2	<2	<2	32	.18	.022	17	20	.34	179	.04	<3	1.52	.02	.06	<2	<5	<1	1119
M 7+50N 8+00W	<1	16	9	51	<.3	19	6	187	2.09	5	<5	<2	4	25	<.2	<2	<2	31	.33	.034	22	22	.49	168	.03	<3	1.70	.01	.06	<2	<5	<1	1445
M 7+50N 7+50W	1	21	11	58	<.3	18	9	349	2.27	3	5	<2	5	18	<.2	<2	<2	34	.24	.031	26	22	.49	179	.04	<3	1.59	.01	.07	<2	<5	<1	1434
STANDARD C/SO-15	20	59	41	131	7.0	70	32	1123	3.94	43	16	7	38	53	19.0	16	20	61	.51	.094	40	57	.89	189	.09	31	1.90	.06	.16	10	<5	1	2289

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



ACHE ANALYTICAL



ACHE ANALYTICAL

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Tl	Hg	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	
M 6+00N 17+00W	1	17	14	49	<.3	16	7	326	2.59	6	<5	<2	4	19	.5	<2	3	45	.21	.049	27	24	.42	140	.05	<3	1.41	.01	.08	2	<5	<1	977
M 6+00N 16+50W	1	20	16	51	<.3	18	7	248	2.39	5	<5	<2	4	16	.6	<2	2	43	.16	.024	28	24	.39	150	.05	<3	1.41	.01	.07	<2	<5	<1	1011
M 6+00N 16+00W	1	30	11	60	<.3	22	7	258	2.63	10	<5	<2	5	18	.8	<2	3	49	.17	.035	26	25	.40	205	.06	<3	1.40	.01	.08	2	<5	<1	1271
M 6+00N 15+50W	1	15	10	34	<.3	12	3	115	1.86	6	<5	<2	<2	13	.5	<2	3	40	.09	.045	10	20	.20	120	.04	<3	1.42	.02	.07	<2	<5	<1	1051
M 6+00N 15+00W	1	21	12	54	<.3	20	6	207	2.37	7	<5	<2	3	15	.5	<2	<2	46	.13	.022	23	25	.38	137	.06	<3	1.38	.01	.07	<2	<5	<1	1113
M 6+00N 14+50W	1	25	14	64	.3	22	7	243	2.28	3	<5	<2	4	19	.5	<2	2	35	.16	.031	33	19	.29	199	.04	<3	.99	.01	.09	<2	<5	<1	1403
M 6+00N 14+00W	1	20	10	49	<.3	22	8	323	2.54	2	<5	<2	3	17	.7	<2	<2	42	.16	.029	29	22	.39	188	.05	<3	1.37	.01	.08	<2	<5	<1	1071
M 6+00N 13+50W	1	13	12	37	<.3	15	4	113	2.08	5	<5	<2	2	13	.7	<2	<2	39	.13	.027	23	21	.33	81	.04	5	1.35	.01	.06	<2	<5	<1	859
M 6+00N 13+00W	1	20	11	45	<.3	18	6	178	2.30	6	5	<2	4	17	.7	<2	3	48	.18	.028	21	25	.43	137	.07	<3	1.44	.01	.06	<2	<5	<1	1047
M 6+00N 12+50W	1	12	10	26	<.3	10	3	90	1.76	7	<5	<2	<2	13	.5	<2	2	42	.11	.025	12	19	.24	89	.05	<3	1.24	.01	.05	<2	<5	<1	1023
M 6+00N 12+00W	1	20	11	39	<.3	15	5	175	2.01	4	<5	<2	5	16	.7	<2	3	42	.15	.020	23	23	.36	148	.06	<3	1.28	.01	.06	<2	<5	<1	1257
M 6+00N 11+50W	1	15	11	40	<.3	16	5	127	2.21	5	<5	<2	3	13	.6	<2	2	42	.13	.021	24	23	.36	100	.05	<3	1.51	.01	.07	<2	<5	<1	1079
M 6+00N 11+00W	1	21	11	61	<.3	27	8	281	2.71	7	5	<2	5	15	.4	<2	4	39	.16	.027	31	25	.43	154	.05	<3	1.44	.01	.06	<2	<5	<1	1135
M 6+00N 10+50W	1	26	17	66	<.3	38	10	307	2.89	17	10	<2	4	34	.7	<2	3	43	.39	.036	28	27	.39	250	.04	<3	1.58	.01	.07	<2	<5	<1	1180
M 6+00N 10+00W	1	28	18	67	<.3	32	17	684	3.65	17	7	<2	4	36	.7	<2	<2	47	.54	.035	27	28	.38	265	.03	<3	1.62	.01	.07	<2	<5	<1	1164
RE M 6+00N 10+00W	1	29	17	70	<.3	33	18	745	3.82	17	6	<2	4	38	.6	<2	2	48	.57	.037	27	29	.39	278	.04	<3	1.69	.01	.07	<2	<5	<1	1159
M 6+00N 9+50W	1	18	11	52	<.3	19	8	197	2.42	5	6	<2	4	22	.5	<2	3	42	.28	.039	27	27	.41	195	.04	<3	1.51	.01	.08	<2	<5	<1	1088
M 6+00N 9+00W	1	21	15	53	<.3	22	8	188	2.54	6	6	<2	5	21	.6	<2	3	46	.23	.034	28	35	.51	218	.05	<3	1.66	.01	.08	<2	<5	<1	1150
M 6+00N 8+50W	1	15	15	49	<.3	19	8	219	2.58	7	<5	<2	3	19	.5	<2	<2	41	.23	.039	28	24	.42	202	.03	<3	1.64	.01	.08	<2	<5	<1	1029
M 4+50N 17+50W	1	17	14	57	<.3	20	6	199	2.70	11	5	<2	5	14	.7	<2	3	58	.12	.022	19	28	.37	144	.06	<3	1.63	.01	.07	<2	<5	<1	1188
M 4+50N 17+00W	1	20	14	57	<.3	17	6	235	2.72	10	7	<2	<2	15	.7	<2	3	58	.11	.046	16	27	.30	160	.04	<3	1.79	.01	.07	<2	<5	<1	1073
M 4+50N 16+50W	2	22	15	65	<.3	22	8	329	2.96	8	6	<2	3	15	.8	<2	3	58	.14	.040	22	29	.42	154	.06	4	1.71	.01	.08	<2	<5	<1	1079
M 4+50N 16+00W	2	14	15	60	<.3	18	7	282	3.16	12	7	<2	5	15	.7	<2	4	71	.13	.026	18	32	.41	162	.07	<3	1.96	.01	.08	<2	<5	<1	991
M 4+50N 15+50W	1	21	15	63	<.3	19	7	298	2.51	5	6	<2	6	15	.7	<2	<2	37	.18	.036	39	21	.38	135	.04	<3	1.20	.01	.08	<2	<5	<1	984
M 4+50N 15+00W	1	15	12	45	<.3	15	6	242	2.25	5	5	<2	<2	15	.6	<2	<2	36	.17	.041	29	20	.34	123	.03	<3	1.32	.01	.09	<2	<5	<1	962
M 4+50N 14+50W	1	14	12	41	.3	13	6	215	2.11	5	9	<2	<2	14	.4	<2	2	39	.15	.033	19	20	.35	120	.04	<3	1.32	.01	.07	<2	<5	<1	943
M 4+50N 14+00W	1	16	14	41	<.3	17	6	185	2.36	5	6	<2	6	13	.5	<2	3	39	.14	.025	26	22	.35	109	.05	<3	1.44	.01	.08	<2	<5	<1	970
M 4+50N 13+50W	1	15	13	40	.3	14	5	166	2.10	4	5	<2	3	15	.5	<2	2	33	.17	.039	36	20	.32	122	.03	<3	1.23	.01	.09	<2	<5	<1	1061
M 4+50N 13+00W	1	19	16	46	<.3	17	8	254	2.66	4	6	<2	11	11	.6	<2	3	36	.09	.022	41	21	.31	112	.03	<3	1.48	.01	.11	<2	<5	<1	1084
M 4+50N 12+50W	1	17	12	42	<.3	14	5	176	2.04	5	9	<2	7	13	.6	<2	4	36	.13	.025	31	20	.36	99	.05	<3	1.22	.01	.08	<2	<5	<1	933
M 4+50N 12+00W	1	18	15	25	<.3	15	7	178	2.69	5	7	<2	5	8	.5	<2	<2	30	.06	.025	30	14	.16	90	.01	<3	1.37	.01	.13	<2	<5	<1	945
M 4+50N 11+50W	1	16	19	54	<.3	18	7	194	2.68	8	5	<2	3	15	.6	<2	2	49	.18	.038	21	26	.42	143	.05	<3	1.59	.01	.07	<2	<5	<1	937
M 4+50N 11+00W	1	26	14	53	.3	17	6	163	2.32	5	9	<2	5	16	.5	<2	<2	45	.17	.043	28	25	.36	129	.05	<3	1.48	.01	.09	<2	<5	<1	1157
M 4+50N 10+50W	1	17	10	45	<.3	14	5	126	2.01	3	5	<2	2	15	.6	<2	3	40	.16	.036	20	21	.32	99	.04	<3	1.29	.01	.07	<2	<5	<1	1078
M 4+50N 10+00W	1	22	14	54	<.3	17	6	184	2.07	5	6	<2	<2	14	.5	<2	2	40	.09	.040	24	20	.22	121	.02	<3	1.12	.01	.09	<2	<5	<1	1187
STANDARD C/SO-15	20	56	39	131	7.1	72	32	1081	3.92	43	22	7	36	50	19.1	18	22	67	.51	.093	41	57	.90	184	.08	27	1.83	.06	.15	9	<5	2	2198

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#

Mo Cu Pb Zn Ag Ni Co Mn Fe As U Au Th Sr Cd Sb Bi V Ca P La Cr Mg Ba Ti B Al Na K W Tl Hg Ba*
ppm ppm ppm ppm ppm ppm ppm ppm % ppm ppm ppm ppm ppm ppm ppm ppm ppm % % ppm ppm % ppm % % ppm ppm ppm ppm

M 4+50N 9+50W	1	34	10	85	.5	28	7	267	2.37	11	7	<2	2	18	.6	<2	3	33	.15	.055	29	21	.23	150	.03	<3	.88	.01	.10	<2	<5	<1	1811
M 3+00N 17+50W	1	22	10	65	<.3	27	7	233	3.09	12	5	<2	4	16	.6	<2	<2	62	.14	.063	20	26	.35	202	.03	<3	1.81	.01	.09	<2	<5	<1	1190
M 3+00N 17+00W	1	19	9	73	.7	15	5	255	2.06	9	<5	<2	<2	20	.8	<2	2	54	.14	.075	15	23	.18	221	.03	<3	1.54	.02	.10	<2	<5	<1	1286
M 3+00N 16+50W	1	13	11	37	.3	13	5	177	2.03	11	<5	<2	4	25	.6	<2	<2	31	.41	.026	23	13	.20	159	.02	<3	.98	.01	.11	<2	<5	<1	1202
M 3+00N 16+00W	1	25	24	94	.3	24	9	374	2.53	8	6	<2	6	20	.5	<2	2	26	.31	.054	46	15	.21	116	.03	<3	.79	.01	.14	<2	<5	<1	1196
M 3+00N 15+50W	1	20	12	43	<.3	20	9	411	2.35	8	5	<2	4	15	.5	<2	<2	29	.20	.061	37	17	.23	120	.02	<3	.93	.01	.10	<2	<5	<1	992
M 3+00N 15+00W	1	17	17	41	<.3	16	7	205	2.11	5	6	<2	6	13	.3	<2	<2	26	.17	.040	41	16	.24	133	.02	<3	1.08	.01	.09	<2	<5	<1	1024
M 3+00N 14+50W	1	20	40	80	<.3	16	6	187	1.90	5	8	<2	13	10	.4	<2	2	11	.11	.039	61	10	.11	92	.01	<3	.82	<.01	.13	<2	<5	<1	1128
M 3+00N 14+00W	1	12	12	34	<.3	13	5	253	1.93	6	<5	<2	11		.6	<2	<2	34	.10	.027	20	17	.27	78	.04	3	1.03	.01	.08	<2	<5	<1	935
M 3+00N 13+50W	1	17	11	39	<.3	18	5	184	2.09	8	<5	<2	7	17	.6	<2	3	40	.19	.025	28	21	.39	126	.06	<3	1.30	.01	.07	<2	<5	<1	1202
M 3+00N 13+00W	1	21	11	51	<.3	21	6	199	2.26	8	8	<2	7	19	.6	<2	4	42	.21	.040	28	26	.40	167	.06	<3	1.39	.01	.09	<2	<5	<1	1277
M 3+00N 12+50W	1	25	10	58	<.3	22	5	178	2.41	9	6	<2	4	27	.7	<2	3	46	.29	.042	22	27	.43	230	.07	<3	1.41	.01	.07	<2	<5	<1	1448
M 3+00N 12+00W	1	27	13	56	<.3	22	6	191	2.41	8	5	<2	4	22	.7	<2	3	49	.23	.046	23	28	.43	200	.07	<3	1.45	.01	.07	<2	<5	<1	1371
M 3+00N 11+50W	1	33	13	65	<.3	25	6	242	2.59	9	8	<2	6	32	.9	<2	3	52	.30	.054	28	27	.44	271	.07	<3	1.41	.01	.09	<2	<5	<1	1630
M 3+00N 11+00W	1	28	11	62	<.3	24	7	230	2.38	7	<5	<2	4	26	.6	<2	3	44	.28	.043	20	25	.41	272	.06	<3	1.34	.01	.07	<2	<5	<1	1323
M 3+00N 10+50W	2	30	12	57	<.3	24	6	234	2.35	8	<5	<2	5	32	.7	<2	2	43	.31	.057	22	23	.36	223	.06	<3	1.00	.01	.08	<2	<5	<1	1216
M 1+50N 18+00W	1	43	15	116	<.3	44	12	234	2.66	8	6	<2	5	11	.5	<2	<2	21	.07	.046	27	15	.06	96	<.01	<3	.57	<.01	.13	<2	<5	<1	1606
M 1+50N 17+50W	2	63	19	133	<.3	51	13	286	3.05	8	7	<2	9	22	.6	<2	3	33	.18	.061	38	23	.11	212	.02	<3	.84	<.01	.13	<2	<5	<1	2463
M 1+50N 17+00W	2	50	19	141	<.3	63	16	469	3.93	16	5	<2	8	13	.3	<2	3	41	.04	.044	27	37	.10	140	<.01	<3	1.07	<.01	.14	<2	<5	<1	2524
M 1+50N 16+50W	1	28	18	50	<.3	27	10	188	2.66	10	8	<2	10	11	.4	<2	<2	21	.11	.030	62	11	.11	95	.01	<3	.73	.01	.11	<2	<5	<1	1270
M 1+50N 16+00W	1	23	14	91	.3	21	9	454	2.61	11	<5	<2	<2	33	.6	<2	2	48	.61	.072	24	22	.34	202	.02	<3	1.50	.01	.12	<2	<5	<1	1176
M 1+50N 15+50W	2	18	16	64	<.3	22	7	269	3.02	10	<5	<2	6	15	.8	<2	2	61	.15	.024	20	33	.42	205	.05	<3	1.91	.01	.08	<2	<5	<1	1133
M 1+50N 15+00W	1	19	12	71	<.3	22	7	360	2.82	9	<5	<2	3	16	.6	<2	4	52	.16	.047	20	26	.40	153	.05	<3	1.56	.01	.08	<2	<5	<1	1284
RE M 1+50N 15+00W	1	18	13	68	<.3	22	7	345	2.68	9	<5	<2	3	15	.7	<2	<2	50	.15	.046	19	27	.38	147	.05	<3	1.50	.01	.08	<2	<5	<1	1281
M 1+50N 14+50W	1	21	19	65	<.3	20	7	256	2.51	6	<5	<2	2	17	.6	<2	2	46	.17	.049	19	24	.36	133	.05	5	1.33	.01	.08	2	<5	<1	1339
M 1+50N 14+00W	1	20	19	56	<.3	18	6	176	2.25	7	5	<2	2	18	.7	<2	2	44	.21	.048	18	24	.41	152	.06	<3	1.45	.01	.07	<2	<5	<1	1196
M 1+50N 13+50W	1	23	28	50	<.3	18	5	144	1.93	2	<5	<2	4	22	.5	<2	2	39	.24	.045	20	24	.37	175	.06	3	1.20	.01	.06	<2	<5	<1	1295
M 1+50N 13+00W	1	22	36	54	<.3	19	5	151	2.14	5	<5	<2	<2	20	.7	<2	3	42	.22	.046	16	24	.38	151	.06	<3	1.45	.01	.06	<2	<5	<1	1143
M 1+50N 12+50W	1	24	64	43	<.3	14	4	128	1.66	4	5	<2	4	24	.6	<2	3	35	.19	.034	21	19	.31	172	.06	<3	1.11	.01	.06	<2	<5	<1	1333
M 1+50N 12+00W	1	22	80	53	<.3	17	5	164	2.07	3	5	<2	4	21	.6	<2	4	42	.26	.039	20	25	.41	191	.07	<3	1.30	.01	.05	<2	<5	<1	1198
M 1+50N 11+50W	1	24	251	54	<.3	18	5	181	2.16	4	5	<2	4	22	.7	<2	2	44	.27	.048	19	24	.44	167	.08	<3	1.43	.01	.05	<2	<5	<1	1146
M 0+00 18+00W	1	76	21	94	.3	50	13	225	2.10	5	6	<2	13	33	.3	<2	<2	29	.17	.079	28	12	.05	105	<.01	<3	.30	<.01	.15	2	<5	<1	2036
M 0+00 17+50W	1	40	17	105	<.3	37	10	536	3.54	3	5	<2	5	32	.3	<2	2	27	.10	.073	24	13	.09	135	.01	<3	.54	<.01	.12	<2	<5	<1	3713
M 0+00 17+00W	1	15	20	45	<.3	13	3	72	1.54	3	<5	<2	<2	17	.4	<2	<2	29	.11	.037	23	16	.23	149	.02	<3	1.13	.01	.06	<2	<5	<1	1185
M 0+00 16+50W	1	18	27	48	.4	13	5	101	1.54	4	<5	<2	<2	22	.3	<2	2	31	.12	.048	24	16	.23	184	.01	<3	1.15	.01	.08	<2	<5	<1	1450
STANDARD C/SO-15	18	60	37	123	6.6	73	30	1029	3.65	42	20	6	36	48	17.9	18	20	64	.47	.087	39	55	.84	169	.08	28	1.74	.06	.15	10	<5	1	2381

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Tl	Hg	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm
M 0+00 16+00W	1	16	35	40	.4	11	4	86	1.65	9	<5	<2	<2	29	.4	<2	2	34	.11	.047	22	17	.22	182	.02	3	1.13	.01	.10	<2	<5	<1	1382
M 0+00 15+50W	1	17	24	59	.4	17	6	134	1.98	7	<5	<2	<2	32	.5	<2	<2	36	.27	.060	18	23	.33	270	.02	<3	1.47	.01	.09	<2	<5	<1	1368
M 0+00 15+00W	1	13	25	52	.3	13	5	141	2.01	8	<5	<2	<2	23	.5	<2	2	41	.19	.046	17	22	.33	172	.03	<3	1.36	.01	.08	<2	<5	<1	1157
M 0+00 14+50W	2	22	22	61	.3	18	11	362	2.56	13	<5	<2	<2	27	.8	<2	4	51	.19	.056	19	27	.34	265	.03	<3	1.63	.01	.08	<2	<5	<1	1218
M 0+00 14+00W	1	12	16	48	<.3	12	5	179	2.03	9	<5	<2	<2	16	.7	<2	3	48	.14	.027	16	20	.34	109	.06	<3	1.22	.01	.07	<2	<5	<1	1125
M 0+00 13+50W	1	18	18	55	<.3	16	6	158	2.17	9	<5	<2	<2	19	.6	<2	4	44	.21	.048	19	24	.40	153	.06	<3	1.51	.01	.06	<2	<5	<1	1057
M 0+00 13+00W	1	16	15	46	<.3	13	4	126	1.89	9	5	<2	<2	18	.5	<2	4	39	.19	.041	17	20	.34	122	.05	<3	1.25	.01	.06	<2	<5	<1	1025
M 0+00 12+50W	1	28	21	55	<.3	15	6	213	2.18	11	<5	<2	7	25	.6	<2	3	37	.17	.045	32	20	.29	172	.05	<3	1.04	.01	.08	<2	<5	<1	1528
RE M 0+00 12+50W	1	27	22	54	.3	15	6	219	2.15	12	<5	<2	7	25	.6	<2	3	36	.16	.044	31	20	.28	171	.05	<3	1.01	.01	.07	<2	<5	<1	1531
M 0+00 12+00W	1	23	19	55	<.3	16	5	143	2.26	10	<5	<2	4	19	.8	<2	4	44	.22	.048	24	24	.42	134	.07	<3	1.54	.01	.06	<2	<5	<1	1026
M 1+50S 14+00W	1	25	57	61	.3	13	6	135	2.16	8	<5	<2	4	21	.7	<2	2	42	.21	.048	24	22	.37	192	.05	<3	1.27	.01	.07	<2	<5	<1	1307
M 1+50S 13+50W	1	16	39	52	<.3	13	5	115	1.92	8	<5	<2	<2	21	.6	<2	2	39	.22	.044	18	21	.35	145	.04	<3	1.25	.01	.06	2	<5	<1	1067
M 1+50S 13+00W	1	19	43	60	.3	16	5	128	2.16	7	<5	<2	2	20	.7	<2	4	42	.23	.052	17	24	.42	123	.06	<3	1.45	.01	.06	<2	<5	<1	996
M 1+50S 12+00W	1	17	67	56	<.3	15	5	133	2.00	8	<5	<2	3	18	.7	<2	5	40	.25	.050	15	22	.41	106	.07	<3	1.39	.01	.06	<2	<5	<1	922
M 1+50S 11+50W	1	22	141	63	<.3	15	5	158	1.92	3	<5	<2	5	21	1.1	<2	4	37	.26	.057	24	21	.32	151	.07	<3	.97	.01	.06	<2	<5	<1	1293
M 1+50S 11+00W	1	29	37	69	.3	19	8	245	2.45	8	5	<2	5	23	.8	<2	4	46	.25	.051	27	25	.46	194	.08	<3	1.50	.01	.07	<2	<5	<1	1142
M 1+50S 10+50W	1	26	24	63	<.3	18	7	222	2.31	6	<5	<2	4	20	.8	<2	4	44	.24	.048	23	25	.44	158	.07	<3	1.43	.01	.07	<2	<5	<1	1060
M 3+00S 14+00W	1	23	20	65	<.3	19	7	229	2.53	9	<5	<2	3	19	.9	<2	3	49	.24	.057	22	26	.46	164	.07	<3	1.57	.01	.07	<2	<5	<1	1009
M 3+00S 13+00W	1	24	43	67	<.3	18	7	198	2.53	7	<5	<2	2	21	.8	<2	2	48	.23	.052	22	26	.46	197	.07	<3	1.58	.01	.07	<2	<5	<1	1203
M 3+00S 12+50W	1	22	53	69	<.3	18	6	169	2.54	7	<5	<2	2	20	.7	<2	3	49	.23	.049	20	26	.46	169	.07	<3	1.58	.01	.07	<2	<5	<1	1155
M 3+00S 12+00W	2	30	52	80	<.3	21	6	202	2.70	10	<5	<2	2	24	.9	<2	4	50	.26	.052	24	26	.45	216	.07	<3	1.55	.01	.08	<2	<5	<1	1255
M 3+00S 11+50W	1	33	67	94	<.3	24	8	285	2.69	11	<5	<2	3	28	1.1	<2	3	51	.33	.062	23	29	.51	225	.08	<3	1.49	.01	.08	<2	<5	<1	1205
M 3+00S 11+00W	1	25	107	68	.3	20	5	177	2.29	8	<5	<2	3	24	.8	<2	3	46	.32	.059	19	25	.48	165	.08	<3	1.35	.01	.06	<2	<5	<1	1028
M 3+00S 10+50W	1	25	92	70	.3	20	6	200	2.33	6	<5	<2	3	27	.8	<2	2	47	.33	.057	19	26	.51	215	.08	4	1.43	.01	.06	<2	<5	<1	1129
M 3+00S 10+00W	1	22	23	55	<.3	16	5	136	2.26	8	<5	<2	<2	20	.7	<2	3	48	.23	.052	16	25	.41	157	.05	<3	1.54	.01	.06	2	<5	<1	955
M 4+50S 14+00W	1	21	23	59	<.3	18	6	207	2.64	8	<5	<2	2	17	.8	<2	2	55	.19	.043	17	27	.43	143	.07	<3	1.55	.01	.07	<2	<5	<1	1019
M 4+50S 13+50W	2	29	19	73	<.3	22	8	300	2.69	10	<5	<2	2	18	.8	<2	3	44	.17	.051	25	22	.35	125	.05	<3	1.25	.01	.08	<2	<5	<1	1152
M 4+50S 13+00W	1	23	23	61	<.3	19	7	270	2.59	10	5	<2	2	17	.6	<2	5	47	.17	.036	22	24	.40	123	.06	<3	1.37	.01	.07	<2	<5	<1	1051
M 4+50S 12+50W	1	27	17	64	<.3	22	7	259	2.75	10	<5	<2	3	20	.8	<2	4	52	.24	.047	21	29	.51	162	.07	<3	1.59	.01	.07	<2	<5	<1	1064
M 4+50S 12+00W	1	27	15	62	<.3	21	6	221	2.52	9	<5	<2	3	22	.9	<2	3	48	.26	.050	21	27	.52	173	.08	<3	1.39	.01	.07	<2	<5	<1	1112
M 4+50S 11+50W	2	31	56	78	<.3	25	7	236	2.87	13	<5	<2	3	22	1.0	<2	4	54	.26	.060	21	28	.48	164	.08	<3	1.52	.01	.08	<2	<5	<1	1148
M 4+50S 11+00W	1	21	55	60	<.3	18	6	158	2.64	10	<5	<2	2	19	.7	<2	4	51	.21	.050	15	25	.45	131	.06	<3	1.61	.01	.07	<2	<5	<1	1006
M 4+50S 10+50W	1	13	36	50	<.3	13	4	151	2.57	8	<5	<2	3	15	.8	<2	4	56	.16	.031	14	22	.34	95	.06	<3	1.44	.01	.05	<2	<5	<1	986
M 4+50S 10+00W	2	19	59	80	<.3	16	6	262	3.54	14	<5	<2	2	15	.7	<2	5	74	.11	.049	16	29	.30	118	.06	<3	1.85	.01	.06	<2	<5	<1	1090
STANDARD C/SO-15	20	57	37	134	7.2	70	32	1040	4.00	44	19	7	37	52	19.3	17	23	68	.51	.094	42	57	.92	175	.09	30	1.93	.06	.16	10	<5	1	2089

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#

Mo Cu Pb Zn Ag Ni Co Mn Fe As U Au Th Sr Cd Sb Bi V Ca P La Cr Mg Ba Ti B Al Na K W Tl Hg Ba*
ppm ppm ppm ppm ppm ppm ppm ppm % ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm % % ppm ppm ppm ppm

Table with columns for sample ID and 30 elements (Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, U, Au, Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Ba, Ti, B, Al, Na, K, W, Tl, Hg, Ba*). Rows include samples M 6+00S, M 7+50S, M 9+00S, RE M 7+50S, and STANDARD C/SO-15.

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Tl	Hg	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm
M 10+50S 12+00W	2	40	12	67	<.3	25	6	228	2.95	7	<5	<2	8	15	.7	<2	4	42	.10	.019	25	27	.41	123	.05	3	1.48	.01	.08	<2	<5	<1	1261
M 10+50S 11+50W	2	40	13	69	<.3	24	6	187	2.97	9	<5	<2	6	14	.7	<2	4	41	.09	.028	27	24	.33	115	.04	<3	1.49	.01	.07	2	<5	<1	1309
M 10+50S 11+00W	2	26	12	65	<.3	23	7	290	3.19	7	<5	<2	3	14	.6	<2	4	53	.12	.029	17	30	.46	135	.05	<3	1.87	.01	.08	<2	<5	<1	1135
M 10+50S 10+50W	1	10	10	29	<.3	7	2	108	1.50	5	<5	<2	2	12	.4	<2	<2	34	.11	.020	11	16	.21	69	.05	<3	1.12	.02	.06	2	<5	<1	1100
M 10+50S 10+00W	1	28	10	49	<.3	18	5	197	2.24	5	<5	<2	3	16	.7	<2	3	40	.16	.024	22	26	.42	119	.06	<3	1.27	.01	.06	<2	<5	<1	1308
M 10+50S 9+50W	1	32	11	58	<.3	23	6	256	2.56	6	<5	<2	6	18	.7	<2	2	44	.18	.027	25	28	.48	162	.07	<3	1.51	.01	.06	2	<5	<1	1191
M 12+00S 16+00W	2	35	17	88	.3	24	6	180	2.86	17	<5	<2	<2	18	.9	<2	3	45	.10	.033	23	23	.34	164	.05	<3	1.38	.01	.09	<2	<5	<1	1519
M 12+00S 15+50W	2	38	14	73	<.3	25	7	205	2.93	12	6	<2	2	22	.8	<2	3	49	.15	.050	19	29	.44	262	.05	<3	1.74	.01	.11	<2	<5	<1	1649
M 12+00S 15+00W	2	38	18	83	<.3	24	6	216	2.85	10	<5	<2	6	21	.8	<2	3	42	.17	.039	25	25	.40	186	.06	<3	1.27	.01	.08	<2	<5	<1	1615
M 12+00S 14+50W	2	28	17	58	<.3	19	5	155	2.73	8	6	<2	4	17	.5	<2	4	47	.13	.022	22	25	.41	167	.05	<3	1.50	.01	.08	<2	<5	<1	1378
M 12+00S 14+00W	1	27	13	54	<.3	18	5	166	2.46	9	6	<2	5	16	.6	<2	3	41	.13	.020	22	25	.41	131	.05	<3	1.34	.01	.07	<2	<5	<1	1329
M 12+00S 13+50W	2	18	13	39	<.3	13	4	117	2.10	9	6	<2	3	13	.5	<2	3	41	.09	.021	12	20	.27	129	.05	<3	1.38	.02	.08	<2	<5	<1	1178
M 12+00S 13+00W	2	40	21	58	.3	24	7	191	3.24	11	<5	<2	7	14	.8	<2	6	55	.10	.022	19	30	.37	216	.06	<3	2.24	.01	.09	<2	<5	<1	1364
M 12+00S 12+50W	2	42	16	73	<.3	24	6	205	2.79	7	6	<2	5	17	.5	<2	5	37	.12	.033	31	20	.33	135	.04	3	1.14	.01	.08	<2	<5	<1	1679
M 12+00S 12+00W	1	34	15	60	<.3	21	5	182	2.51	6	5	<2	5	14	.6	<2	3	38	.11	.026	22	21	.32	121	.05	<3	1.20	.01	.07	<2	<5	<1	1382
M 12+00S 11+50W	1	29	12	61	<.3	21	6	205	2.65	6	6	<2	5	16	.7	<2	3	46	.14	.017	22	28	.47	135	.07	<3	1.48	.01	.07	<2	<5	<1	1316
M 12+00S 11+00W	1	26	13	58	<.3	19	5	202	2.57	6	6	<2	6	14	.6	<2	2	44	.13	.021	22	25	.42	104	.06	<3	1.37	.01	.07	<2	<5	<1	1261
M 12+00S 10+50W	1	30	14	62	<.3	20	6	226	2.59	6	5	<2	5	16	.8	<2	3	43	.15	.034	25	26	.41	108	.06	<3	1.36	.01	.07	<2	<5	<1	1353
M 12+00S 10+00W	1	25	15	56	<.3	19	5	196	2.61	8	8	<2	4	16	.4	<2	5	49	.14	.024	17	27	.44	127	.06	4	1.70	.01	.07	<2	<5	<1	1068
M 12+00S 9+50W	1	15	15	43	<.3	12	4	184	2.06	6	6	<2	<2	15	.6	<2	3	43	.15	.038	15	22	.34	105	.05	<3	1.35	.01	.06	2	<5	<1	1007
M 12+00S 9+00W	1	19	14	48	<.3	18	5	185	2.50	9	6	<2	<2	16	.8	<2	4	50	.14	.027	14	27	.39	160	.06	<3	1.75	.01	.06	<2	<5	<1	1164
RE M 12+00S 9+00W	1	19	13	48	<.3	18	5	186	2.49	11	5	<2	2	16	.6	<2	4	50	.14	.027	14	27	.39	160	.06	<3	1.75	.01	.06	<2	<5	<1	1227
M 12+00S 8+50W	1	26	65	56	<.3	19	5	163	2.66	8	5	<2	2	14	.9	<2	4	53	.11	.047	15	28	.40	134	.06	5	1.79	.01	.07	<2	<5	<1	1157
M 12+00S 8+00W	1	24	34	58	<.3	17	6	324	2.44	8	6	<2	<2	18	.6	2	4	46	.17	.037	15	26	.38	147	.05	<3	1.63	.01	.07	2	<5	<1	1320
M 12+00S 7+00W	1	32	129	89	.3	27	8	303	2.63	9	6	<2	4	25	.7	<2	5	42	.22	.039	19	24	.41	217	.06	<3	1.36	.01	.08	2	<5	<1	1923
M 13+50S 16+00W	1	26	15	59	<.3	20	5	205	2.44	8	7	<2	6	21	.8	<2	3	42	.21	.030	23	26	.45	215	.07	<3	1.29	.01	.06	2	<5	<1	1520
M 13+50S 15+50W	2	26	16	60	<.3	20	5	154	2.67	11	6	<2	2	19	.6	<2	3	48	.15	.030	16	27	.38	202	.05	<3	1.68	.01	.08	2	<5	<1	1351
M 13+50S 15+00W	2	25	17	63	<.3	19	5	210	2.59	9	6	<2	6	16	.7	<2	3	42	.16	.040	21	22	.37	127	.06	<3	1.31	.01	.07	<2	<5	<1	1369
M 13+50S 14+50W	2	35	18	81	<.3	25	8	392	3.19	14	7	<2	4	19	.9	2	5	49	.17	.040	23	28	.42	185	.06	<3	1.76	.01	.10	2	<5	<1	1467
M 13+50S 14+00W	2	24	17	62	<.3	20	5	161	2.68	9	6	<2	4	16	.6	<2	2	46	.14	.027	22	25	.41	137	.06	<3	1.49	.01	.08	<2	<5	<1	1368
M 13+50S 13+50W	2	26	18	58	<.3	19	5	169	2.61	9	7	<2	3	16	.7	<2	2	47	.13	.031	22	24	.33	124	.05	<3	1.50	.01	.08	2	<5	<1	1451
M 13+50S 13+00W	1	20	14	57	<.3	19	5	167	2.63	10	5	<2	4	16	.6	<2	3	49	.15	.025	17	26	.42	140	.06	3	1.52	.01	.07	2	<5	<1	1297
M 13+50S 12+50W	1	20	13	52	<.3	18	5	144	2.35	7	8	<2	5	17	.5	<2	2	43	.19	.028	20	26	.46	149	.07	4	1.45	.01	.07	2	<5	<1	1309
M 13+50S 12+00W	1	24	11	54	<.3	17	5	190	2.35	7	5	<2	5	16	.7	<2	3	42	.16	.029	21	26	.42	130	.06	<3	1.37	.01	.07	<2	<5	<1	1302
M 13+50S 11+50W	1	22	10	52	<.3	17	5	188	2.26	7	5	<2	5	17	.7	<2	2	41	.19	.032	21	25	.44	136	.06	<3	1.37	.01	.06	2	<5	<1	1242
STANDARD C/SO-15	20	57	37	133	7.2	71	29	1040	3.98	43	21	7	37	52	19.6	19	23	62	.53	.095	42	58	.93	171	.08	28	1.89	.06	.16	10	<5	1	2141

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#

Mo Cu Pb Zn Ag Ni Co Mn Fe As U Au Th Sr Cd Sb Bi V Ca P La Cr Mg Ba Ti B Al Na K W Tl Hg Ba*
ppm ppm ppm ppm ppm ppm ppm ppm % ppm ppm ppm ppm ppm ppm ppm ppm ppm % ppm ppm % ppm % % ppm ppm ppm ppm

Table with columns for sample ID and various chemical elements (Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, U, Au, Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Ba, Ti, B, Al, Na, K, W, Tl, Hg, Ba*) and their corresponding concentrations in ppm or %.

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Tl	Hg	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm
M 16+50S 15+00W	2	32	22	79	<.3	26	6	222	2.75	12	9	<2	9	14	.6	<2	5	47	.10	.020	21	27	.46	131	.07	<3	1.55	.01	.08	<2	<5	<1	1679
M 16+50S 14+50W	2	49	24	88	.3	33	11	382	3.20	19	8	<2	11	19	.8	<2	3	48	.11	.021	27	26	.44	132	.06	<3	1.49	.01	.08	<2	<5	<1	1234
M 16+50S 14+00W	4	53	48	127	<.3	41	27	1476	3.37	12	11	<2	10	20	.8	<2	3	51	.10	.032	39	24	.26	249	.02	<3	1.78	.01	.08	<2	<5	<1	1536
M 16+50S 13+50W	2	40	21	101	<.3	34	16	505	3.26	9	9	<2	8	18	.7	<2	3	52	.11	.027	24	28	.35	165	.04	<3	1.79	.01	.07	<2	<5	<1	1181
M 16+50S 13+00W	2	25	25	123	.7	29	15	718	3.43	9	10	<2	<2	17	.5	<2	2	46	.12	.059	22	23	.30	178	.02	<3	1.39	.01	.08	<2	<5	<1	1310
M 16+50S 12+50W	2	24	18	97	.3	22	7	306	2.94	11	8	<2	2	16	.3	<2	<2	45	.11	.040	27	22	.33	168	.03	<3	1.50	.01	.08	<2	<5	<1	1363
M 16+50S 12+00W	1	20	16	76	<.3	20	7	306	2.57	8	5	<2	5	14	.5	<2	2	41	.11	.029	24	18	.29	115	.04	<3	1.07	.01	.06	<2	<5	<1	1264
RE M 16+50S 12+00W	1	20	15	79	<.3	21	7	317	2.65	8	6	<2	5	14	.4	<2	2	42	.11	.030	24	20	.30	119	.04	<3	1.10	.01	.06	2	<5	<1	1335
M 16+50S 11+50W	2	18	20	59	<.3	18	4	143	2.37	8	<5	<2	<2	16	.4	<2	2	48	.11	.026	19	21	.29	180	.03	<3	1.47	.01	.08	2	<5	<1	1269
M 16+50S 11+00W	1	25	18	79	<.3	24	7	303	2.72	9	5	<2	5	16	.7	<2	3	48	.12	.027	21	23	.39	137	.05	<3	1.32	.01	.07	<2	<5	<1	1333
M 16+50S 10+50W	1	15	15	57	<.3	17	6	191	2.19	10	7	<2	<2	19	.5	<2	3	43	.19	.044	19	21	.35	135	.04	3	1.23	.01	.06	<2	<5	<1	1007
M 16+50S 10+00W	1	13	15	57	.3	18	8	264	2.23	8	6	<2	2	20	.3	<2	<2	44	.21	.049	16	22	.36	151	.04	<3	1.32	.01	.07	<2	<5	<1	990
M 16+50S 9+50W	1	15	16	66	<.3	19	10	437	2.50	10	<5	<2	<2	21	.5	<2	3	50	.22	.049	17	24	.41	170	.04	<3	1.49	.01	.07	<2	<5	<1	1048
M 16+50S 9+00W	1	13	14	56	<.3	17	6	145	2.10	9	6	<2	2	17	.5	<2	<2	45	.19	.041	16	22	.39	141	.04	<3	1.37	.01	.06	<2	<5	<1	1014
M 16+50S 8+50W	1	24	13	62	<.3	20	6	146	2.19	9	7	<2	2	19	.4	<2	2	44	.20	.042	22	25	.42	167	.05	<3	1.42	.01	.06	<2	<5	<1	1154
M 16+50S 8+00W	1	21	15	66	<.3	20	7	234	2.81	11	7	<2	<2	17	.6	<2	4	51	.19	.048	18	26	.44	171	.05	<3	1.68	.01	.07	<2	<5	<1	1131
M 16+50S 7+50W	1	21	14	62	<.3	22	6	212	2.46	9	5	<2	2	16	.6	<2	<2	49	.18	.042	17	27	.44	126	.06	<3	1.58	.01	.07	<2	<5	<1	1085
M 16+50S 7+00W	1	20	14	63	<.3	22	6	204	2.33	11	<5	<2	2	15	.6	<2	2	48	.15	.027	16	25	.42	105	.06	<3	1.37	.01	.07	<2	<5	<1	1076
M 16+50S 6+50W	1	14	17	40	.3	13	3	89	1.58	6	6	<2	<2	13	.4	<2	<2	31	.12	.039	12	19	.29	91	.03	<3	1.19	.02	.06	<2	<5	<1	1040
M 16+50S 6+00W	1	26	16	77	<.3	21	6	217	2.26	9	<5	<2	3	16	.5	<2	2	43	.19	.041	20	22	.42	116	.06	<3	1.31	.01	.06	<2	<5	<1	1165
M 16+50S 5+50W	1	16	13	47	<.3	17	6	276	1.45	8	5	<2	3	14	.3	<2	<2	23	.17	.034	14	14	.22	94	.03	3	.60	.01	.06	2	<5	<1	1008
M 18+00S 14+00W	2	66	24	154	.5	56	24	1738	4.13	13	10	<2	17	14	.6	<2	<2	15	.04	.038	64	10	.06	213	<.01	<3	.43	<.01	.08	<2	<5	<1	1579
M 18+00S 13+50W	1	31	21	75	.3	37	18	1422	3.64	11	10	<2	18	16	.4	<2	<2	20	.21	.071	84	14	.36	335	.01	<3	1.10	.01	.17	<2	<5	<1	1534
M 18+00S 13+00W	1	43	18	181	<.3	57	18	1447	3.76	36	10	<2	17	17	.4	<2	3	16	.19	.094	79	10	.17	233	<.01	<3	.63	<.01	.14	<2	<5	<1	1697
M 18+00S 12+50W	2	46	22	130	<.3	52	12	458	3.30	19	7	<2	5	36	.5	2	<2	36	.07	.043	29	17	.18	165	.01	<3	.66	<.01	.10	<2	<5	<1	1837
M 18+00S 12+00W	2	27	14	63	.4	24	8	301	2.63	12	5	<2	<2	21	.6	<2	<2	48	.16	.054	20	24	.32	209	.02	<3	1.45	.01	.09	<2	<5	<1	1214
M 18+00S 11+50W	2	21	13	76	<.3	23	9	372	2.64	19	7	<2	3	18	.4	<2	<2	52	.13	.038	17	24	.33	162	.04	3	1.33	.01	.08	<2	<5	<1	1278
M 18+00S 11+00W	1	19	12	59	<.3	20	7	329	2.37	14	5	<2	<2	15	.5	<2	<2	46	.13	.038	17	22	.35	113	.04	<3	1.16	.01	.07	<2	<5	<1	1056
M 18+00S 10+50W	1	18	11	48	.3	17	5	140	2.13	9	<5	<2	<2	16	.4	<2	3	43	.16	.039	17	23	.39	123	.04	<3	1.36	.01	.07	<2	<5	<1	990
M 18+00S 10+00W	1	16	10	53	<.3	18	7	247	2.30	9	6	<2	2	16	.5	<2	3	45	.16	.036	17	21	.38	128	.05	<3	1.35	.01	.07	<2	<5	<1	1007
M 18+00S 9+50W	1	17	10	45	.3	16	4	140	1.78	7	5	<2	<2	15	.4	<2	<2	37	.15	.030	15	20	.35	107	.04	<3	1.16	.01	.07	<2	<5	<1	998
M 18+00S 9+00W	1	18	11	54	<.3	19	6	241	2.17	8	8	<2	2	16	.6	<2	<2	42	.20	.040	18	22	.43	117	.06	<3	1.22	.01	.06	2	<5	<1	1021
M 18+00S 8+50W	1	21	11	56	<.3	20	7	322	2.38	10	7	<2	2	13	.6	<2	3	45	.14	.036	20	21	.35	99	.05	<3	1.15	.01	.07	<2	<5	<1	1030
M 18+00S 8+00W	1	22	10	61	<.3	22	7	253	2.28	8	6	<2	2	17	.4	<2	5	44	.20	.040	20	24	.48	146	.06	<3	1.41	.01	.07	<2	<5	<1	1088
M 18+00S 7+50W	1	23	8	38	.4	17	4	150	1.69	8	<5	<2	<2	15	.4	<2	<2	34	.12	.050	13	22	.20	128	.02	<3	.97	.02	.06	2	<5	<1	874
STANDARD C/SO-15	20	58	40	131	7.2	77	33	1116	3.97	44	24	7	36	52	19.0	18	22	68	.52	.093	41	56	.94	177	.08	28	1.88	.06	.15	10	<5	1	2191

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Tl	Hg	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm
M 18+00S 7+00W	1	21	15	70	<.3	22	7	254	2.71	6	10	<2	2	17	.5	<2	3	58	.19	.037	23	29	.50	124	.07	<3	1.61	.01	.09	<2	<5	<1	972
M 18+00S 6+50W	1	20	14	62	<.3	20	5	175	2.51	7	6	<2	3	17	.6	<2	2	54	.19	.038	21	27	.47	124	.07	5	1.54	.01	.07	<2	<5	<1	976
M 18+00S 6+00W	1	19	14	63	<.3	19	5	178	2.41	6	<5	<2	<2	19	.4	<2	3	52	.20	.044	19	27	.47	138	.06	3	1.44	.01	.08	<2	<5	<1	996
M 18+00S 5+50W	1	19	13	61	<.3	20	5	174	2.41	3	7	<2	3	17	.7	<2	3	52	.21	.043	21	27	.46	121	.07	3	1.46	.01	.08	<2	<5	<1	977
RE M 18+00S 5+50W	1	19	15	63	<.3	20	5	176	2.46	7	<5	<2	3	18	.5	<2	3	53	.21	.044	21	27	.47	123	.07	<3	1.49	.01	.08	<2	<5	<1	980

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Appendix B

STATISTICS

COPPER STATISTICS

mic geochem

 SUMMARY STATISTICS and HISTOGRAM LOGARITHMIC VALUES

Variable = Cu Unit = ppm N = 956

Mean = 1.3942 Min = 0.4771 1st Quartile = 1.2788

Std. Dev. = 0.1855 Max = 2.6902 Median = 1.3802

CV % = 13.3052 Skewness = 0.6150 3rd Quartile = 1.4914

Anti-Log Mean = 24.788 Anti-Log Std. Dev. : (-) 16.171
 (+) 37.996

```

=====
%   cum %   antilog   cls int   (# of bins = 30 - bin size = 0.0763)
-----
0.00  0.05   2.748     0.4390
0.10  0.16   3.276     0.5153
0.00  0.16   3.905     0.5916
0.00  0.16   4.655     0.6679
0.00  0.16   5.549     0.7442
0.00  0.16   6.615     0.8205
0.31  0.47   7.886     0.8968 *
0.21  0.68   9.401     0.9732 *
1.26  1.93   11.206    1.0495 ****
3.14  5.07   13.359    1.1258 *****
6.28  11.34  15.926    1.2021 *****
13.39 24.71  18.985    1.2784 ***** --> 40
19.25 43.94  22.632    1.3547 ***** --> 58
15.17 59.09  26.979    1.4310 ***** --> 46
18.20 77.27  32.162    1.5073 ***** --> 55
9.10  86.36  38.341    1.5837 *****
6.69  93.05  45.706    1.6600 *****
2.20  95.25  54.486    1.7363 *****
2.09  97.34  64.953    1.8126 *****
1.46  98.80  77.430    1.8889 ****
0.84  99.63  92.305    1.9652 ***
0.21  99.84  110.036   2.0415 *
0.00  99.84  131.174   2.1178
0.00  99.84  156.373   2.1942
0.00  99.84  186.412   2.2705
0.00  99.84  222.222   2.3468
0.00  99.84  264.912   2.4231
0.00  99.84  315.801   2.4994
0.00  99.84  376.467   2.5757
0.00  99.84  448.786   2.6520
0.10  99.95  534.998   2.7284
-----
    
```

0 1 2 3 4

Each "*" represents approximately 3.2 observations.

#####

MIC GEOCHEM GRID

#####

PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS

Data File Name = A:MICGEOCH.DAT

Variable = Cu Unit = N = 954
N CI = 36

Transform = Logarithmic Number of Populations = 3

of Missing Observations = 0.

332 Observations Were Below the Minimum Value of 4.0000
1 Observations Were Above the Maximum Value of 120.0000

=====

Users Visual Parameter Estimates

Population	Mean	Std Dev	Percentage
-----	-----	-----	-----
1	18.138	- 14.603	50.00
		+ 22.529	
2	30.873	- 25.627	44.00
		+ 37.194	
3	62.611	- 51.029	6.00
		+ 76.822	

=====

User Defined Thresholds.

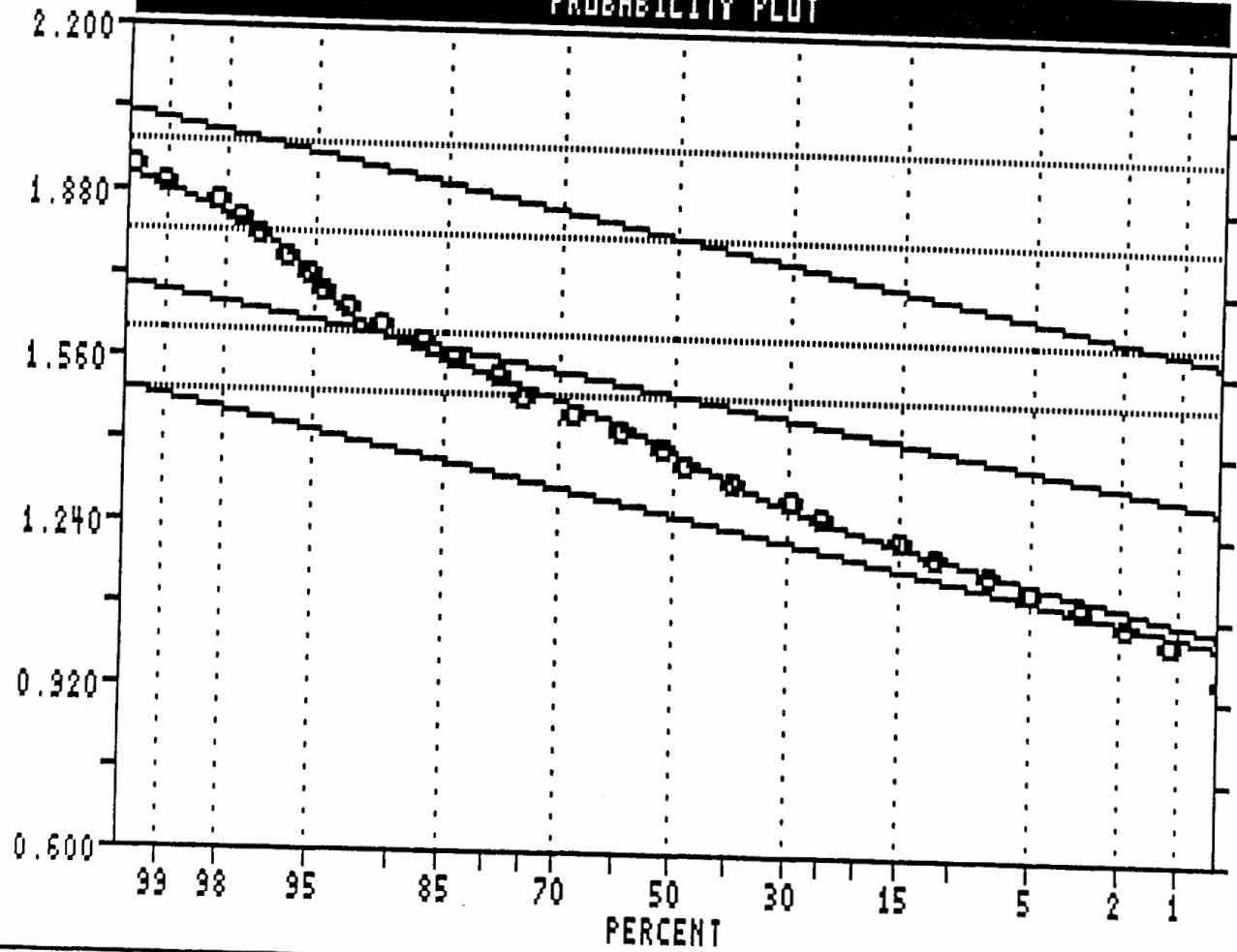
Thresholds

93.994
62.994
41.002
31.003

#####

HIC GEOCHEM GRID

PROBABILITY PLOT



LOGARITHMIC VALUES

===== =====
 VARIABLE = CU
 UNIT =
 N = 954
 N CI = 36

POPULATIONS

=====

Pop.	Mean	Std.Dev.	%
1	1.2586	0.0941	50.0
2	1.4896	0.0809	44.0
3	1.7967	0.0888	6.0

THRESHOLDS

=====

1.9731	1.7993
1.6128	1.4914

USERS VISUAL
 PARAMETER ESTIMATES

LEAD STATISTICS

MIC GEOCHEM GRID

#####

PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS

Data File Name = A:MICGEOCH.DAT

Variable = Pb Unit = N = 1269
N CI = 36

Transform = Logarithmic Number of Populations = 3

of Missing Observations = 0.

11 Observations Were Below the Minimum Value of 4.0000
7 Observations Were Above the Maximum Value of 750.0000

=====

Users Visual Parameter Estimates

Population	Mean	Std Dev	Percentage
-----	-----	-----	-----
1	13.168	- 9.723 + 17.833	55.00
2	42.102	- 22.914 + 77.357	40.00
3	320.878	- 216.309 + 475.998	5.00

=====

User Defined Thresholds.

Thresholds

705.992
319.963
142.004
41.995
23.999

#####

MIC GEOCHEM GRID

SUMMARY STATISTICS and HISTOGRAM LOGARITHMIC VALUES

Variable = Pb Unit = N = 1269

Mean = 1.4025 Min = 0.6021 1st Quartile = 1.1139

Std. Dev. = 0.4100 Max = 2.8573 Median = 1.2553

CV % = 29.2311 Skewness = 1.1594 3rd Quartile = 1.6232

Anti-Log Mean = 25.266 Anti-Log Std. Dev. : (-) 9.830
(+) 64.941

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=====
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%	cum %	antilog	cls int	(# of bins = 36 - bin size = 0.0644)
0.00	0.04	3.714	0.5698	
0.63	0.67	4.308	0.6343	**
0.00	0.67	4.997	0.6987	
0.16	0.83	5.796	0.7632	*
0.79	1.61	6.723	0.8276	***
0.79	2.40	7.799	0.8920	***
3.47	5.87	9.046	0.9565	*****
6.15	12.01	10.493	1.0209	*****
10.32	22.32	12.171	1.0853	*****
11.66	33.98	14.118	1.1498	***** --> 41
8.12	42.09	16.376	1.2142	*****
7.96	50.04	18.995	1.2786	*****
10.09	60.12	22.033	1.3431	*****
3.70	63.82	25.557	1.4075	*****
3.47	67.28	29.645	1.4720	*****
3.62	70.91	34.386	1.5364	*****
3.15	74.06	39.886	1.6008	*****
3.47	77.52	46.266	1.6653	*****
2.44	79.96	53.666	1.7297	*****
3.31	83.27	62.249	1.7941	*****
2.36	85.63	72.205	1.8586	*****
1.97	87.60	83.754	1.9230	*****
2.21	89.80	97.150	1.9874	*****
1.89	91.69	112.688	2.0519	*****
1.02	92.72	130.712	2.1163	****
1.02	93.74	151.618	2.1808	****
1.02	94.76	175.868	2.2452	****
0.71	95.47	203.997	2.3096	**
0.71	96.18	236.625	2.3741	**
0.87	97.05	274.471	2.4385	***
0.87	97.91	318.370	2.5029	***
0.39	98.31	369.291	2.5674	*
0.24	98.54	428.356	2.6318	*
0.39	98.94	496.869	2.6962	*
0.47	99.41	576.339	2.7607	**
0.47	99.88	668.520	2.8251	**
0.08	99.96	775.444	2.8896	

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```

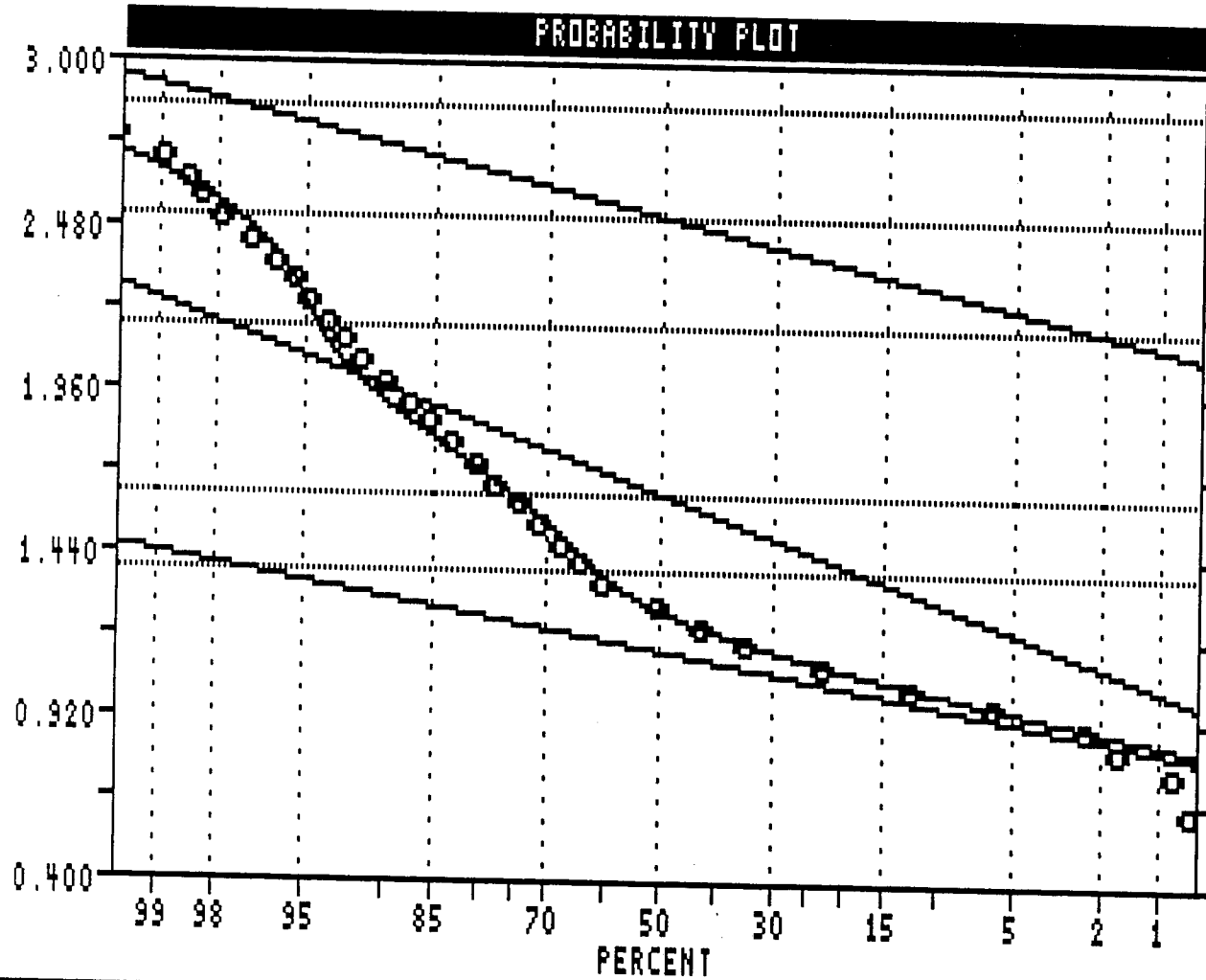
0 1 2 3 4

Each "*" represents approximately 3.6 observations.

#####

HIC GEOCHEM GRID

PROBABILITY PLOT



LOGARITHMIC VALUES

=====

VARIABLE = Pb

UNIT =

N = 1269

N CI = 36

POPULATIONS

=====

Pop.	Mean	Std.Dev.	%
1	1.1195	0.1317	55.0
2	1.6243	0.2642	40.0
3	2.5063	0.1713	5.0

THRESHOLDS

=====

2.8488	2.5051
2.1523	1.6232
1.3802	

USERS VISUAL
PARAMETER ESTIMATES

ZINC STATISTICS

MIC GEOCHEM GRID

SUMMARY STATISTICS and HISTOGRAM ARITHMETIC VALUES

Variable = Zn Unit = N = 1285
 Mean = 91.096 Min = 12.000 1st Quartile = 54.000
 Std. Dev. = 89.531 Max = 1230.000 Median = 67.000
 CV % = 98.281 Skewness = 5.887 3rd Quartile = 94.000

```
=====
%   cum %   cls int   (# of bins = 32 - bin size = 39.290)
-----
0.00  0.04   -7.645
4.98  5.02    31.645
50.82 55.79   70.935
25.06 80.83   110.226
9.34  90.16   149.516
3.74  93.90   188.806
1.32  95.22   228.097
1.09  96.31   267.387
0.62  96.93   306.677
1.01  97.94   345.968
0.62  98.56   385.258
0.16  98.72   424.548
0.08  98.79   463.839
0.23  99.03   503.129
0.16  99.18   542.419
0.08  99.26   581.710
0.08  99.34   621.000
0.23  99.57   660.290
0.16  99.73   699.581
0.00  99.73   738.871
0.00  99.73   778.161
0.00  99.73   817.452
0.00  99.73   856.742
0.00  99.73   896.032
0.00  99.73   935.323
0.00  99.73   974.613
0.00  99.73  1013.903
0.00  99.73  1053.194
0.08  99.81  1092.484
0.08  99.88  1131.774
0.00  99.88  1171.065
0.00  99.88  1210.355
0.08  99.96  1249.645
-----
```

0 1 2 3 4

Each "*" represents approximately 3.6 observations.

#####

MIC GEOCHEM GRID

 SUMMARY STATISTICS and HISTOGRAM LOGARITHMIC VALUES

Variable = Zn Unit = N = 1285

Mean = 1.8686 Min = 1.0792 1st Quartile = 1.7324

Std. Dev. = 0.2514 Max = 3.0899 Median = 1.8261

CV % = 13.4520 Skewness = 0.8886 3rd Quartile = 1.9731

Anti-Log Mean = 73.887 Anti-Log Std. Dev. : (-) 41.420
(+) 131.804

```

=====
%      cum %      antilog  cls int  (# of bins = 32 - bin size = 0.0649)
-----
0.00  0.04      11.137   1.0468
0.16  0.19      12.930   1.1116  *
0.23  0.43      15.013   1.1765  *
0.23  0.66      17.432   1.2413  *
0.54  1.21      20.239   1.3062  **
0.47  1.67      23.500   1.3711  **
1.71  3.38      27.285   1.4359  *****
1.63  5.02      31.680   1.5008  *****
1.79  6.80      36.783   1.5656  *****
3.97  10.77     42.708   1.6305  *****
6.93  17.69     49.587   1.6954  *****
12.84 30.52     57.575   1.7602  ***** --> 46
18.83 49.34     66.849   1.8251  ***** --> 67
13.85 63.18     77.617   1.8900  ***** --> 49
9.49  72.67     90.120   1.9548  *****
5.99  78.65    104.636  2.0197  *****
5.14  83.79    121.491  2.0845  *****
4.90  88.69    141.060  2.1494  *****
2.88  91.56    163.782  2.2143  *****
2.41  93.97    190.164  2.2791  *****
1.09  95.06    220.796  2.3440  ****
1.09  96.15    256.362  2.4089  ****
0.70  96.85    297.657  2.4737  **
1.09  97.94    345.603  2.5386  ****
0.70  98.64    401.273  2.6034  **
0.16  98.79    465.910  2.6683  *
0.39  99.18    540.958  2.7332  *
0.16  99.34    628.096  2.7980  *
0.39  99.73    729.269  2.8629  *
0.00  99.73    846.740  2.9277
0.00  99.73    983.132  2.9926
0.16  99.88   1141.495  3.0575  *
0.08  99.96   1325.367  3.1223
-----

```

Each "*" represents approximately 3.6 observations.

#####

MIC GEOCHEM GRID

#####

PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS

Data File Name = A:MICGEOCH.DAT

Variable = Zn Unit = N = 1282
N CI = 36

Transform = Logarithmic Number of Populations = 4

of Missing Observations = 0.

2 Observations Were Below the Minimum Value of 10.0000
3 Observations Were Above the Maximum Value of 750.0000

=====

Users Visual Parameter Estimates

Population	Mean	Std Dev	Percentage
-----	-----	-----	-----
1	33.810	- 24.941 + 45.833	14.00
2	60.676	- 53.118 + 69.310	48.00
3	107.076	- 81.792 + 140.177	33.00
4	324.851	- 234.398 + 450.209	5.00

=====

Default Thresholds.

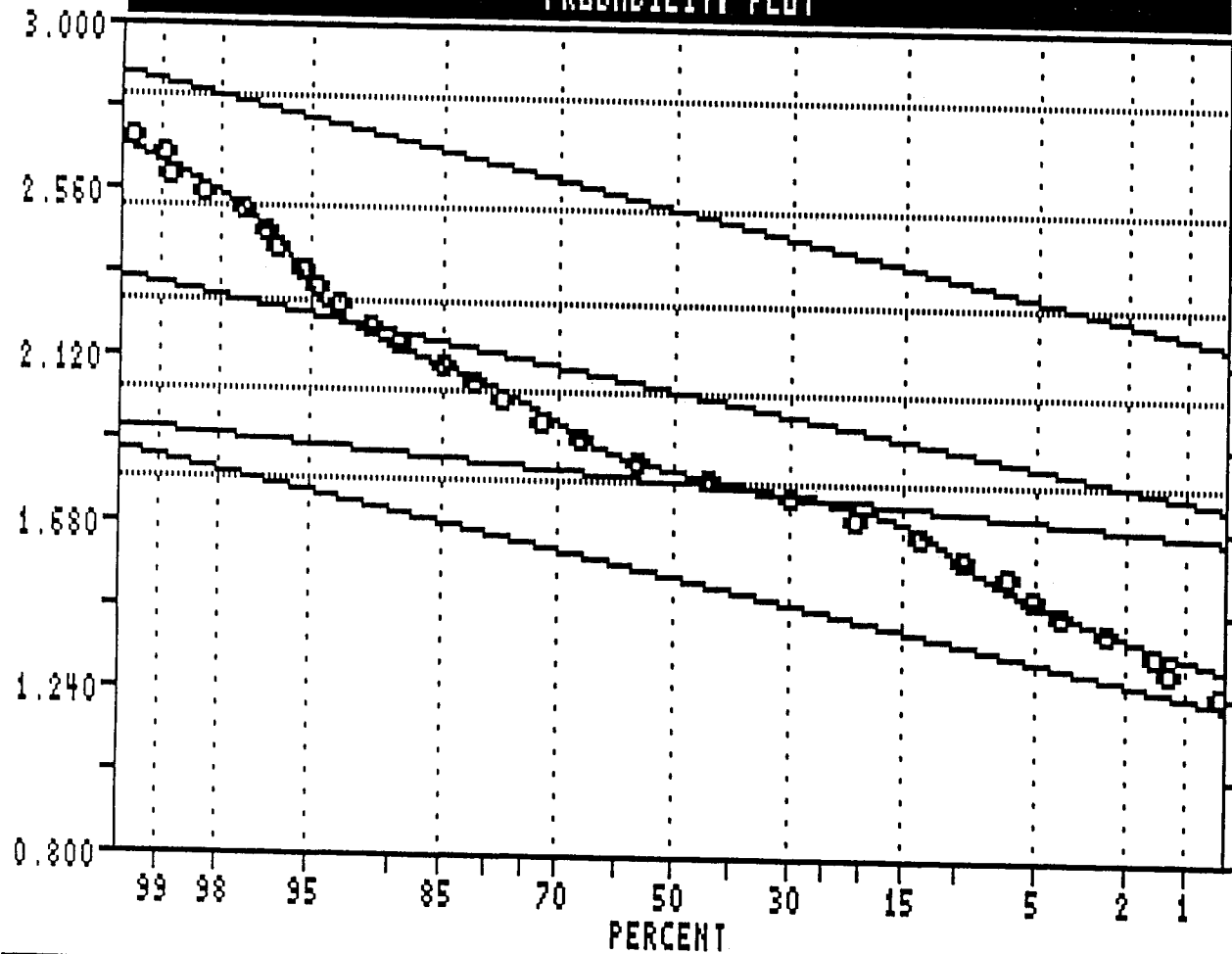
Standard Deviation Multiplier = 2.0

Pop.	Thresholds
----	-----
1	18.399 62.130
2	46.501 79.171
3	62.478 183.511
4	169.131 623.941

#####

HIC GEOCHEM GRID

PROBABILITY PLOT



LOGARITHMIC VALUES

=====

VARIABLE = Zn

UNIT =

N = 1282

N CI = 36

POPULATIONS

=====

Pop.	Mean	Std.Dev.	%
1	1.5290	0.1321	14.0
2	1.7830	0.0578	48.0
3	2.0297	0.1170	33.0
4	2.5117	0.1417	5.0

THRESHOLDS

=====

2.7952	2.5119
2.2648	2.0294
1.7853	

USERS VISUAL
PARAMETER ESTIMATES

BARIUM STATISTICS

MIC GEOCHEM GRID

 SUMMARY STATISTICS and HISTOGRAM ARITHMETIC VALUES

Variable = Ba ppm Unit = N = 339
 Mean = 1195.310 Min = 857.000 1st Quartile = 1051.000
 Std. Dev. = 205.142 Max = 2036.000 Median = 1148.500
 CV % = 17.162 Skewness = 1.226 3rd Quartile = 1298.500

```

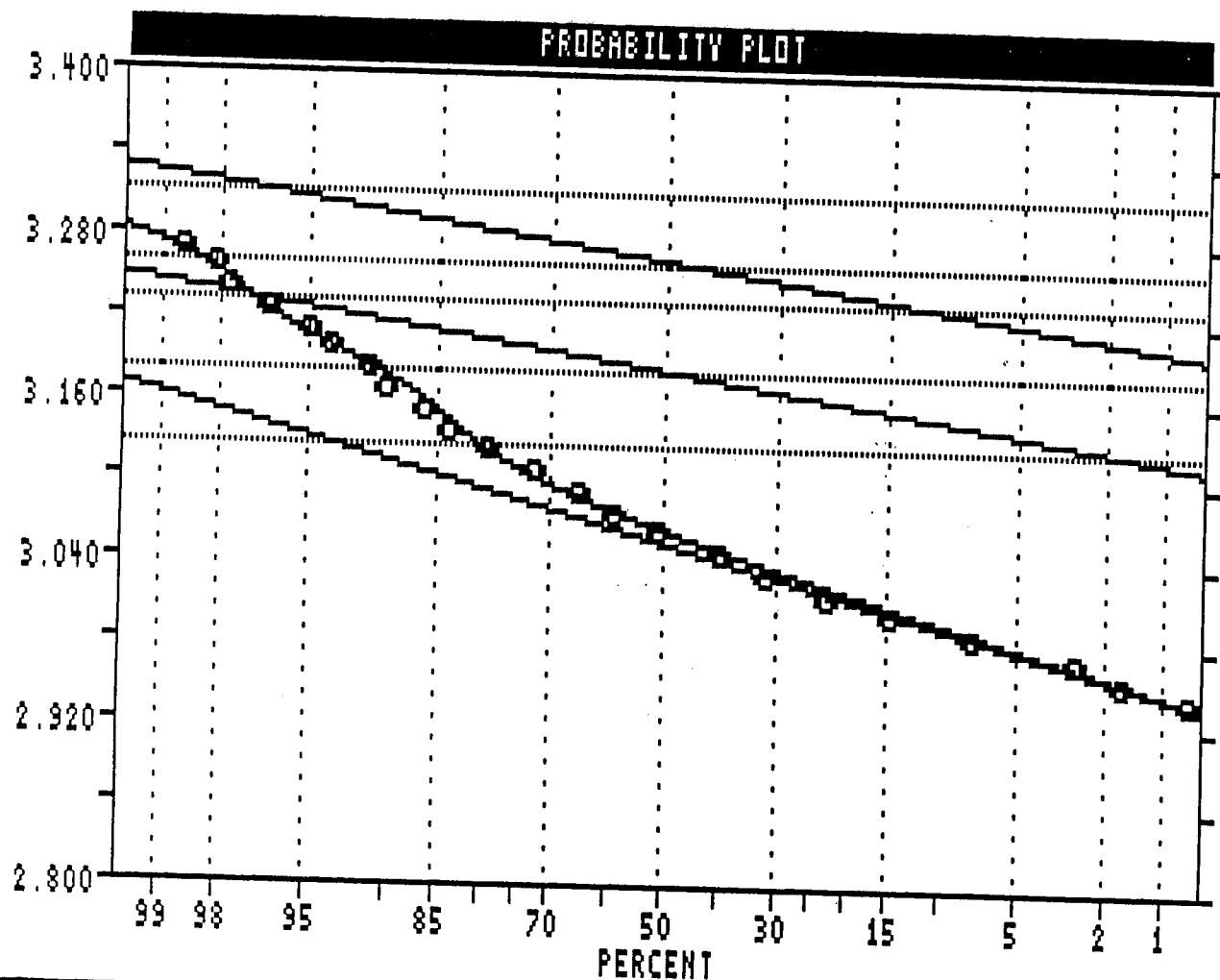
=====
%   cum %   cls int   (# of bins = 26 - bin size = 47.160)
-----
0.00 0.15   833.420
1.18 1.32   880.580   **
0.88 2.21   927.740   **
6.49 8.68   974.900   *****
10.03 18.68 1022.060  *****
11.50 30.15 1069.220  *****
10.62 40.74 1116.380  *****
12.39 53.09 1163.540  *****
9.14 62.21 1210.700  *****
6.49 68.68 1257.860  *****
7.08 75.74 1305.020  *****
6.78 82.50 1352.180  *****
3.54 86.03 1399.340  *****
1.47 87.50 1446.500  ***
3.54 91.03 1493.660  *****
1.77 92.79 1540.820  ***
1.18 93.97 1587.980  **
1.47 95.44 1635.140  ***
1.18 96.62 1682.300  **
1.18 97.79 1729.460  **
0.00 97.79 1776.620
0.59 98.38 1823.780  *
0.29 98.68 1870.940  *
0.59 99.26 1918.100  *
0.29 99.56 1965.260  *
0.00 99.56 2012.420
0.29 99.85 2059.580  *
=====
0           1           2           3           4
    
```

Each "*" represents approximately 2.0 observations.

#####

MIC GEOCHEM GRID

PROBABILITY PLOT



LOGARITHMIC VALUES

=====

VARIABLE = Ba pph

UNIT =

N = 339

N CI = 26

POPULATIONS

=====

Pop.	Mean	Std.Dev.	%
1	3.0497	0.0470	85.0
2	3.1782	0.0266	12.0
3	3.2594	0.0263	3.0

THRESHOLDS

=====

3.3118	3.2594
3.2304	3.1761
3.1239	

USERS VISUAL
PARAMETER ESTIMATES

Appendix C

STATEMENT OF QUALIFICATIONS

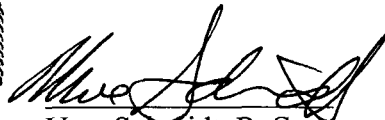
STATEMENT OF QUALIFICATIONS

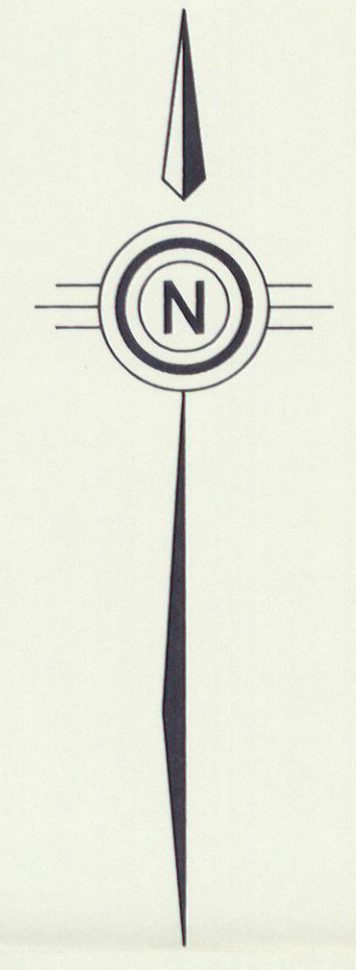
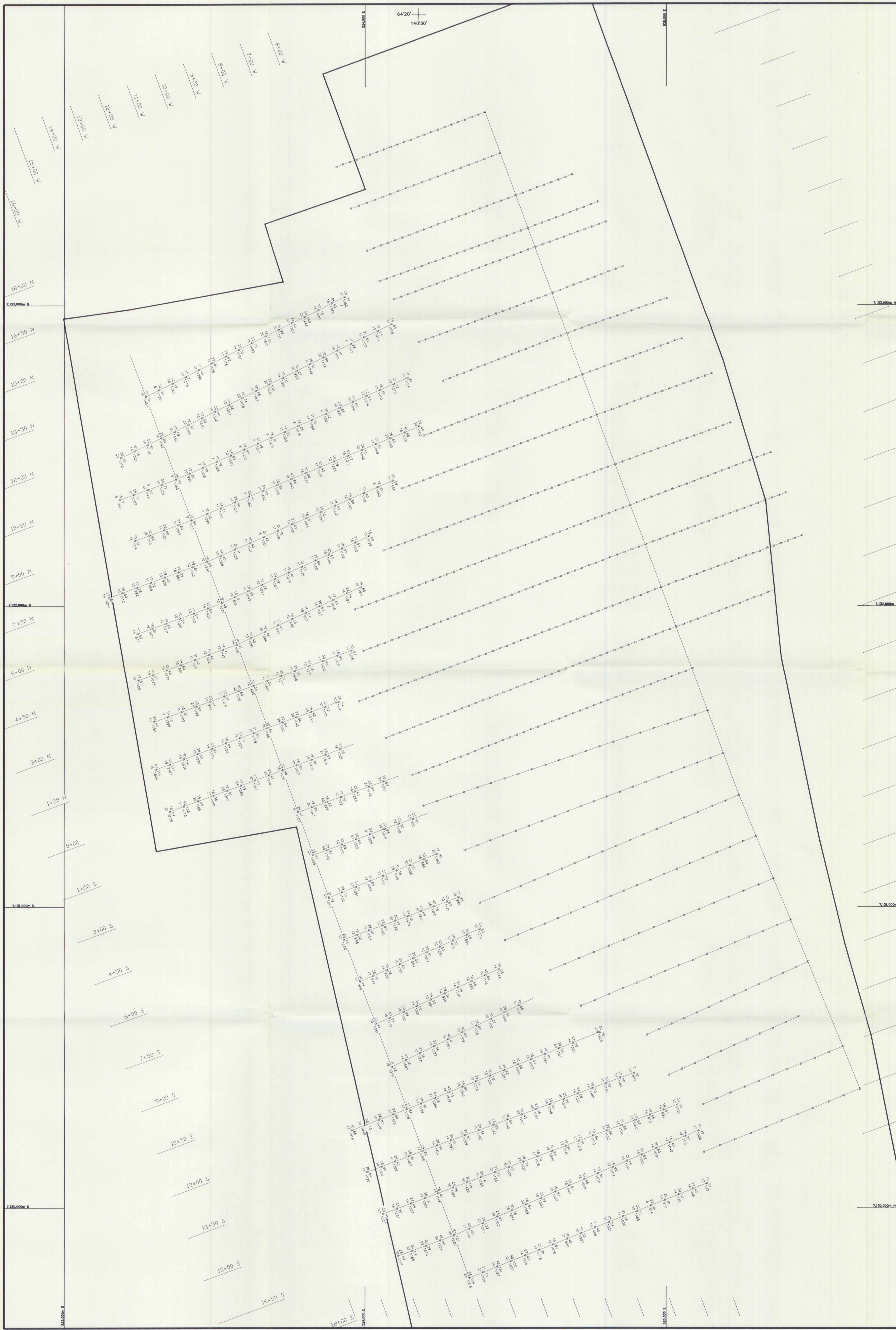
I, Uwe Schmidt, of 656 Foresthill Place, Port Moody, B.C. do hereby declare:

- (1) I am a consulting geologist and controlling shareholder of Northwest Geological Consulting Ltd.
- (2) I am a 1971 graduate of the University of British Columbia with a B.Sc. degree in Geology.
- (3) I am a member of The Association of Professional Engineers and Geoscientists of British Columbia and a Fellow of the Geological Association of Canada.
- (4) I have practised my profession continuously since graduation.
- (5) This report is based on work carried out by me or by workers under my supervision.

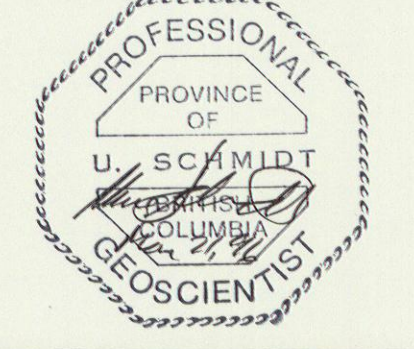
March 21, 1996
Vancouver, B.C.




Uwe Schmidt, P. Geo.



- Symbols**
- CLAIM BOUNDARY
 - PRE 1995 SOIL SAMPLE LOCATION
 - 1995 SOIL SAMPLE LOCATION
 - Cu in ppm 19 61 Zn in ppm
 - Pb in ppm 13 977 Bi in ppm



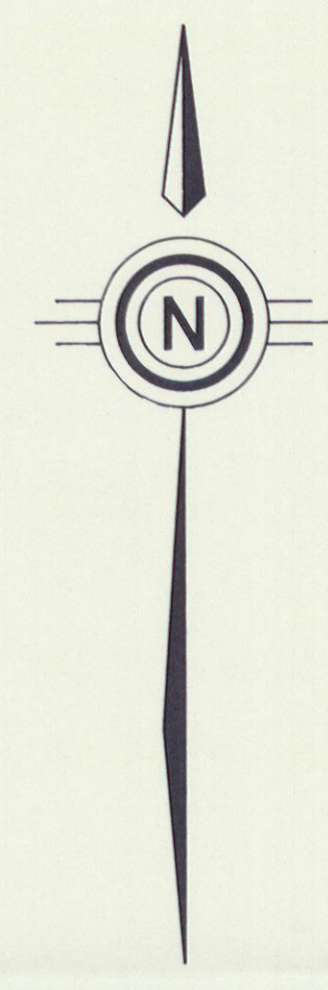
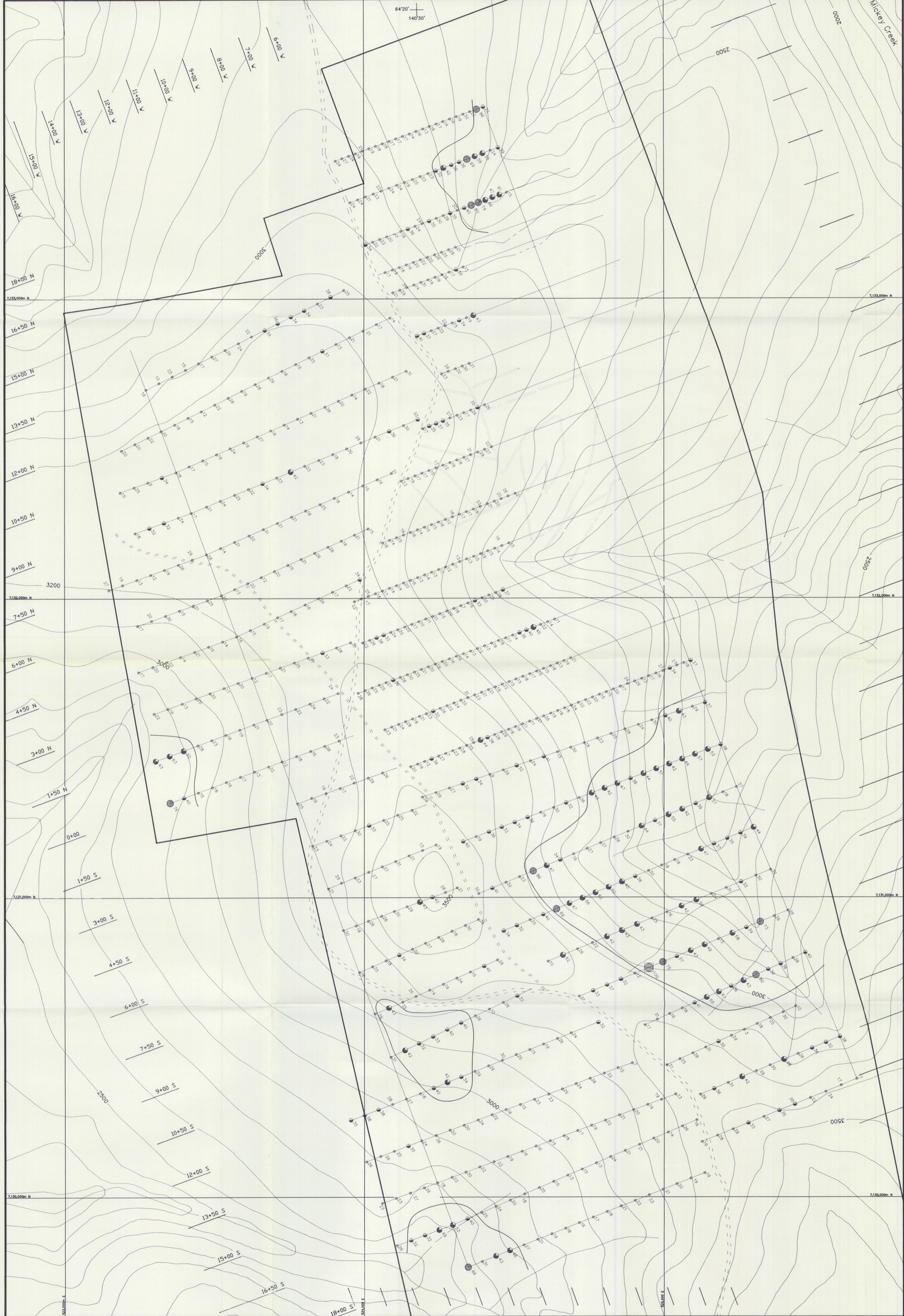
ATNA RESOURCES LTD.

Work By	U. Schmidt
Date Drafted	01-18-96
Drafted By	
Date Revised	01-18-96
Revised By	
N.T.S. Number	116/C 7.8
File Name	MIC95DAT

**YGC OPTION
Mic Property
1995 SOIL GEOCHEMISTRY**

Northwest Geological Consulting Ltd.
SCALE 1 : 5000

C.3461 DWG ①

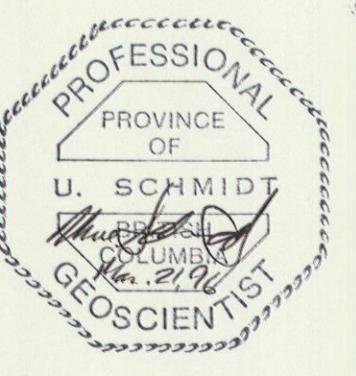


- Symbols**
- SOIL SAMPLE LOCATION
 - CLAIM BOUNDARY
 - - - - ANOMALY OUTLINE
 - == ROADS
 - TRENCH

Analytical Thresholds

Cu Values in ppm
not used

○	0 -	31
⊕	32 -	41
●	42 -	63
●	64 -	94
●	95 >>>>	



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Work By
U. Schmidt
Date Drafted
01-18-96
Drafted By

Date Revised
01-18-96
Revised By

YGC OPTION
Mic Property
Cu Soil Interpretation

Northwest Geological Consulting Ltd.

N.T.S. Number
116/C 7,8
File Name
MIGFINAL

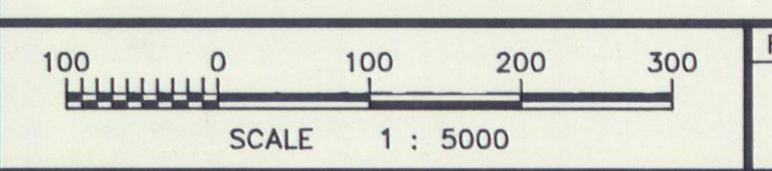
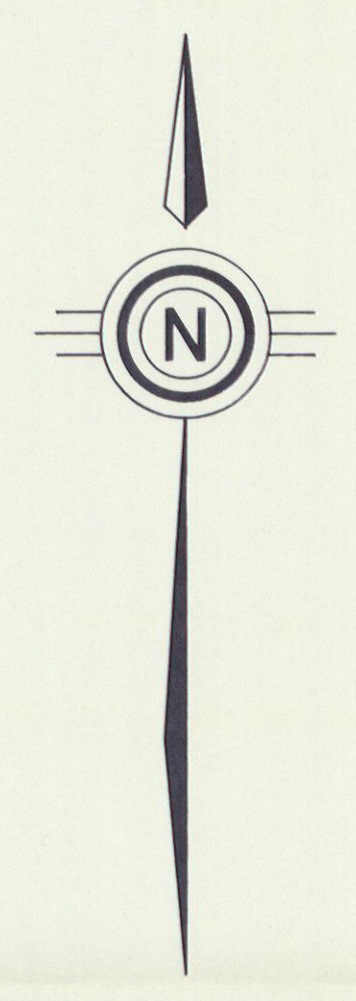
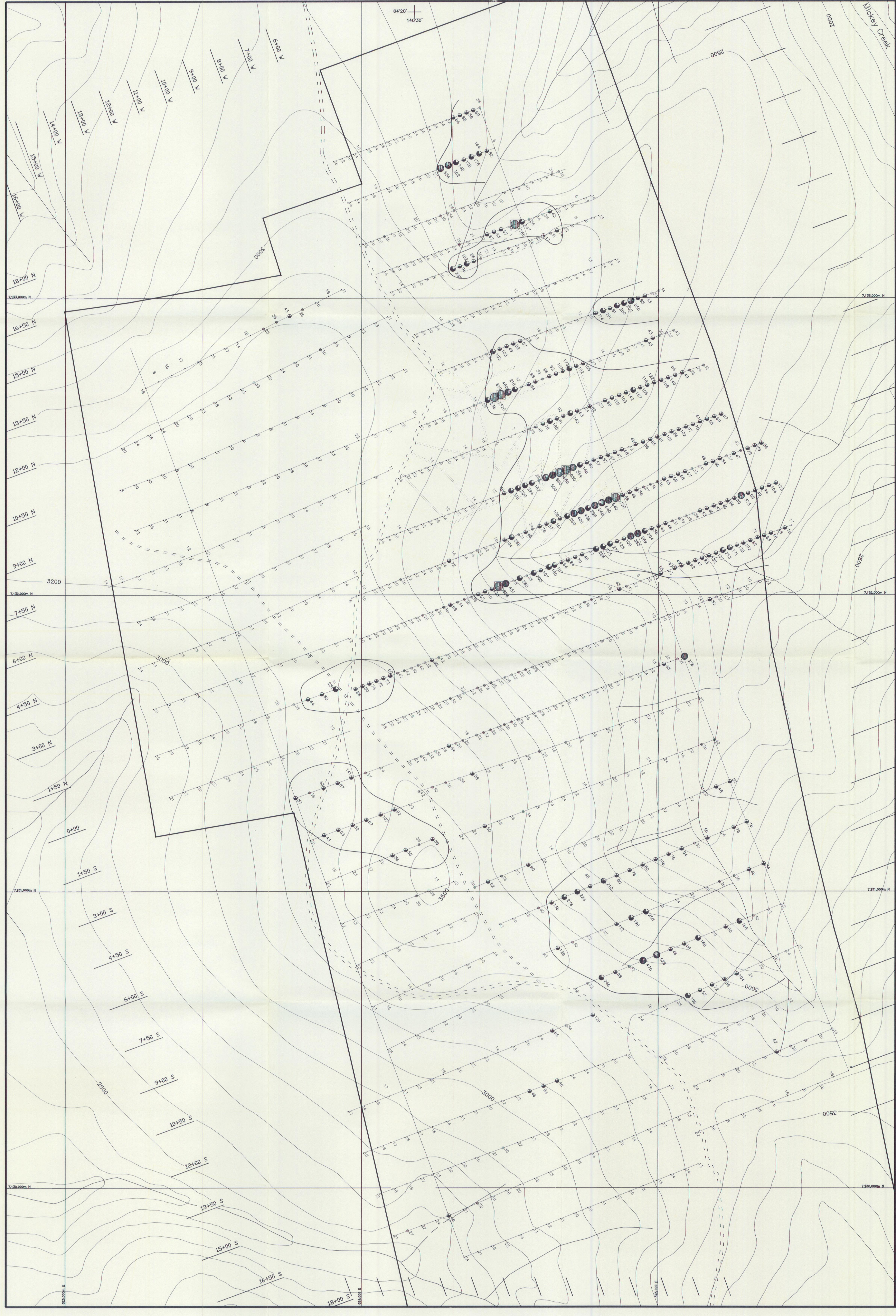


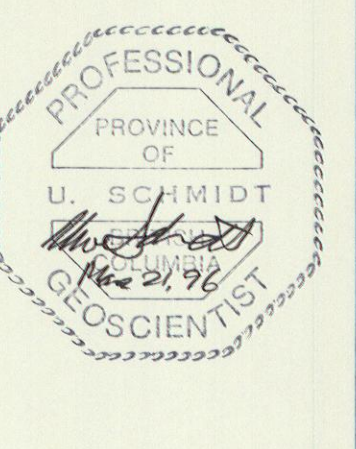
Figure
4



- Symbols**
- SOIL SAMPLE LOCATION
 - ▭ CLAIM BOUNDARY
 - ANOMALY OUTLINE
 - ROADS
 - - - TRENCH

Analytical Thresholds

PB Value in ppm	Symbol
<1 - 24	○
25 - 42	⊕
43 - 142	●
143 - 320	⦿
321 - 706	⦿
707 >>>>	⦿



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Work By
U. Schmidt
Date Drafted
01-18-96
Drafted By

Date Revised
01-18-96
Revised By

YGC OPTION
Mic Property
Pb Soil Interpretation

Northwest Geological Consulting Ltd.

N.T.S. Number
116/C 7.8
File Name
MICFINAL

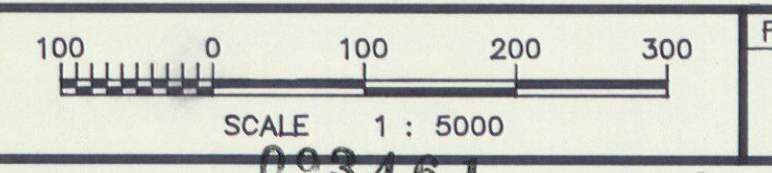
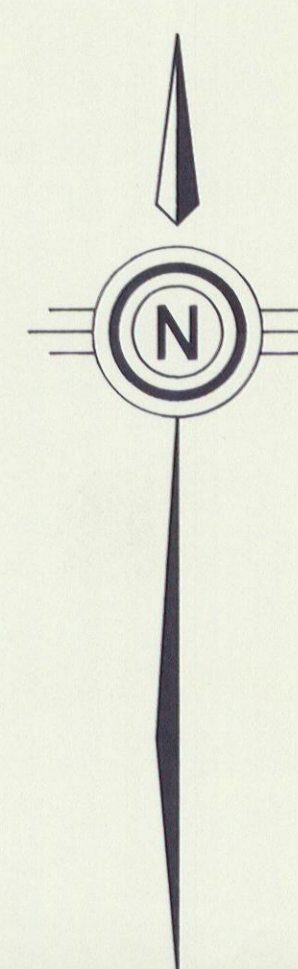


Figure
5

0-3461 DWG (3)

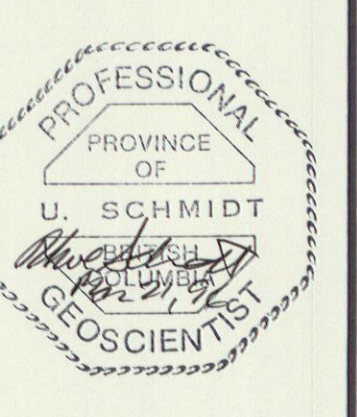


- Symbols**
- SOIL SAMPLE LOCATION
 - CLAIM BOUNDARY
 - ANOMALY OUTLINE
 - - - ROADS
 - ⋯ TRENCH

Analytical Thresholds

ZN Values in ppm

○	<1 - 61
⊕	62 - 107
●	108 - 184
●	185 - 325
●	326 - 624
●	625 >>>>



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Work By
U. Schmidt
Date Drafted
01-18-96
Drafted By
Date Revised
01-18-96
Revised By
N.T.S. Number
116/C 7.8
File Name
MICFINAL

YGC OPTION
Mic Property
Zn Soil Interpretation

Northwest Geological Consulting Ltd.

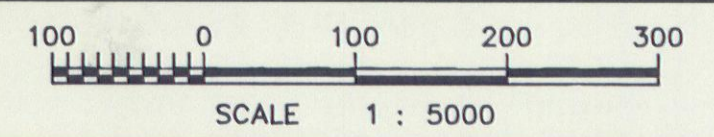
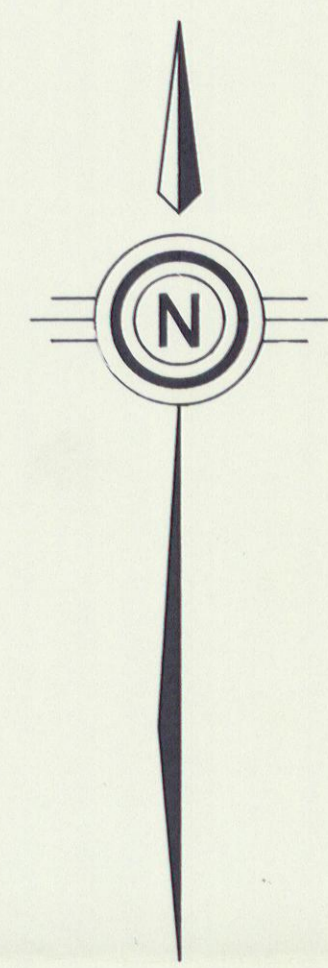
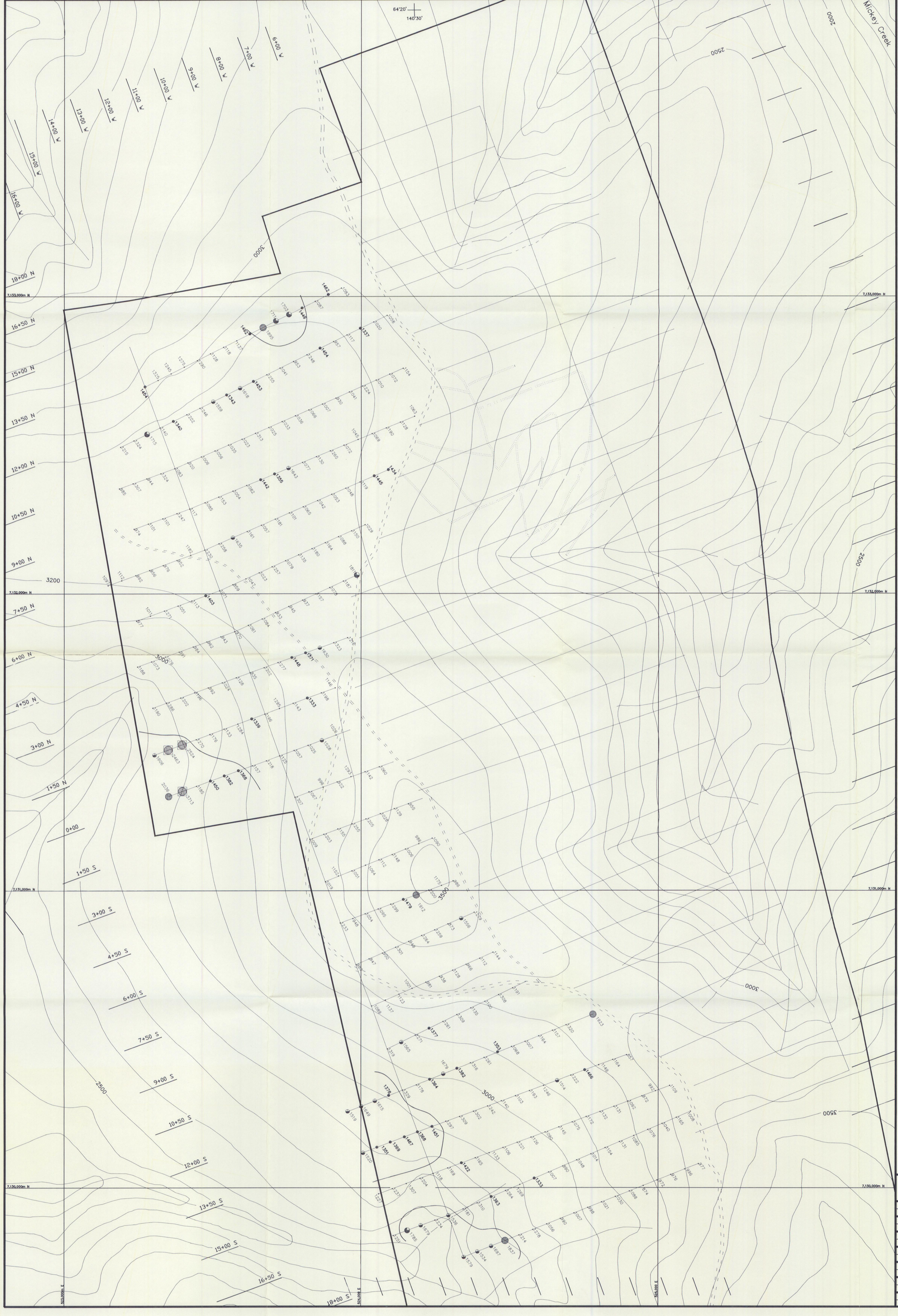


Figure
6

093461 DWG(4)

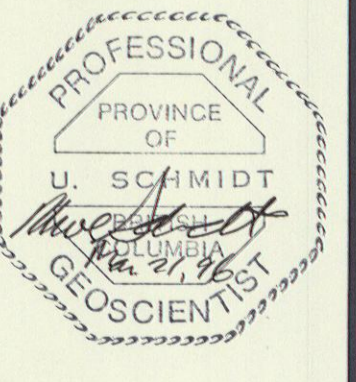


- Symbols**
- SOIL SAMPLE LOCATION
 - CLAIM BOUNDARY
 - - - - ANOMALY OUTLINE
 - == == ROADS
 - TRENCH

Analytical Thresholds

BAF Values in ppm

<5	1330
1331	1500
1501	1700
1701	1817
1818	2050
2051	>>>>



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Work By	U. Schmidt
Date Drafted	01-18-96
Drafted By	
Date Revised	01-18-96
Revised By	
N.T.S. Number	T16/C 7.8
File Name	MICINAL

YGC OPTION
Mic Property
Ba Soil Interpretation

Northwest Geological Consulting Ltd.

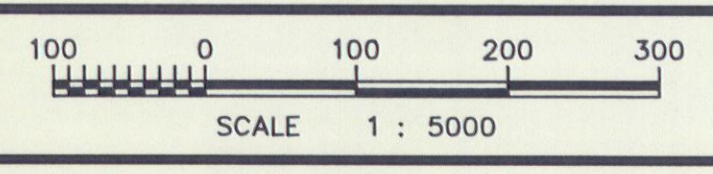


Figure **7**