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REPORT ON
SOIL GEOCHEMICAL SURVEY and GEOLOGY
OF THE
TREE 1-28 CLAIMS, TREE PROPERTY
WATSON LAKE MINING DISTRICT
NTS 105F /9

Lat.: 61° 38' N. Long.: 132° 25' W.

BY

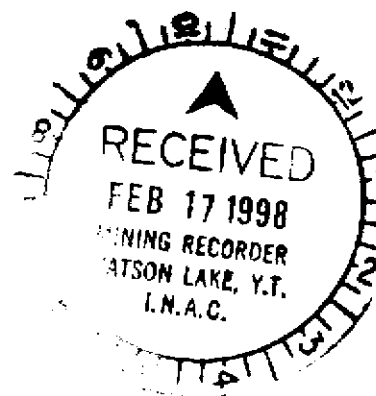
Uwe Schmidt, P.Geo.

FOR

ATNA RESOURCES LTD.

Feb. 3, 1997

Work Performed
July 27 to Aug. 9, 1997



This report has been examined by
the Geological Evaluation Unit
under Section 63 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 12,400.00.

M. B. B.
Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

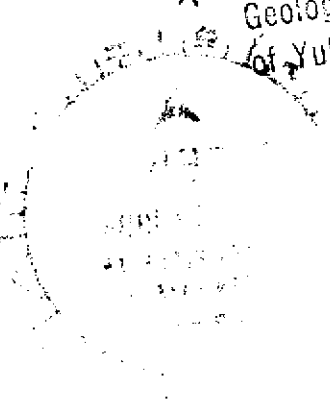


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SUMMARY

The Tree claims cover a Mississippian aged assemblage of intermediate to felsic volcanic rocks which host zinc-lead-copper massive sulphide deposits elsewhere in the district. This area was previously explored in 1977 and 1978 by Utah Mines Ltd. Atna Resources acquired the property because of the favourable geology and the limited reconnaissance geochemical sampling carried out to date.

In 1996, Atna staked 16 claims over the target and explored the property with a soil geochemical survey. A total of 221 samples were collected and an additional 12 claims were added to the property. In 1997, an additional 314 samples were collected and reconnaissance mapping was carried out.

The 1997 program indicates that the property is underlain by at least two intermediate to felsic volcanic cycles. A statistical analysis of all the geochemical data indicates that the lower volcanics are associated with barium and lead anomalies while the higher volcanic cycle is associated with elevated zinc backgrounds. This suggests that the lower volcanic sequence is a more favourable exploration target for volcanic hosted massive sulphide deposits because significant zinc-lead-barite massive sulphide deposits have been discovered in this setting, elsewhere in the district.

To date, previous mapping has focussed primarily on the upper volcanic sequence because it forms spectacular rusty weathering outcrops. Further exploration of the lower volcanic sequence is recommended.

1. INTRODUCTION

The Tree claims were staked by Atna Resources Ltd. in October 1996. The claims cover a Mississippian aged assemblage of intermediate to felsic volcanic and volcanoclastic rocks intercalated with tuffaceous sedimentary rocks. This area was previously explored in 1977 and 1978 by Utah Mines Ltd. Atna Resources acquired the property because of the favourable geology and the limited reconnaissance geochemical sampling carried out to date.

In 1996, Atna carried out a grid soil geochemical survey on the western half of the Tree 1 to 16 claims. A total of 221 samples were collected and an additional 12 claims were added to the property, south of the original claims, in December, 1996.

In 1997, Atna explored the southern half of the property by grid soil sampling, increased the sample density on the 1996 grid and carried out reconnaissance mapping. A total of 314 soil samples were collected.

The field crew consisted of the writer and field assistant Ron Beauchamp. Work was carried out from a fly camp located on Tree 4, during the period from July 27 to Aug. 9, 1997.

2. PROPERTY, LOCATION AND ACCESS

The Tree property is located approximately 40 km south of Ross River, Yukon and consists of 28 contiguous mineral claims, covering an area of approximately 580 hectares. The property is owned 100% by Atna Resources Ltd. The claims are recorded in the Watson Lake Mining District as follows:

Name	Grant Number	Expiry Date
Tree 1-16	YB70076-YB70091	Oct. 11, 2001
Tree 17	YB88907	Dec. 23, 1998
Tree 18FR	YB88908	Dec. 23, 1998
Tree 19-28	YB88909-YB88918	Dec. 23, 1998

The property lies within NTS 105F/9 map areas and the coordinates of the approximate centre of the property are latitude 61° 38' N and longitude 132° 25' W.

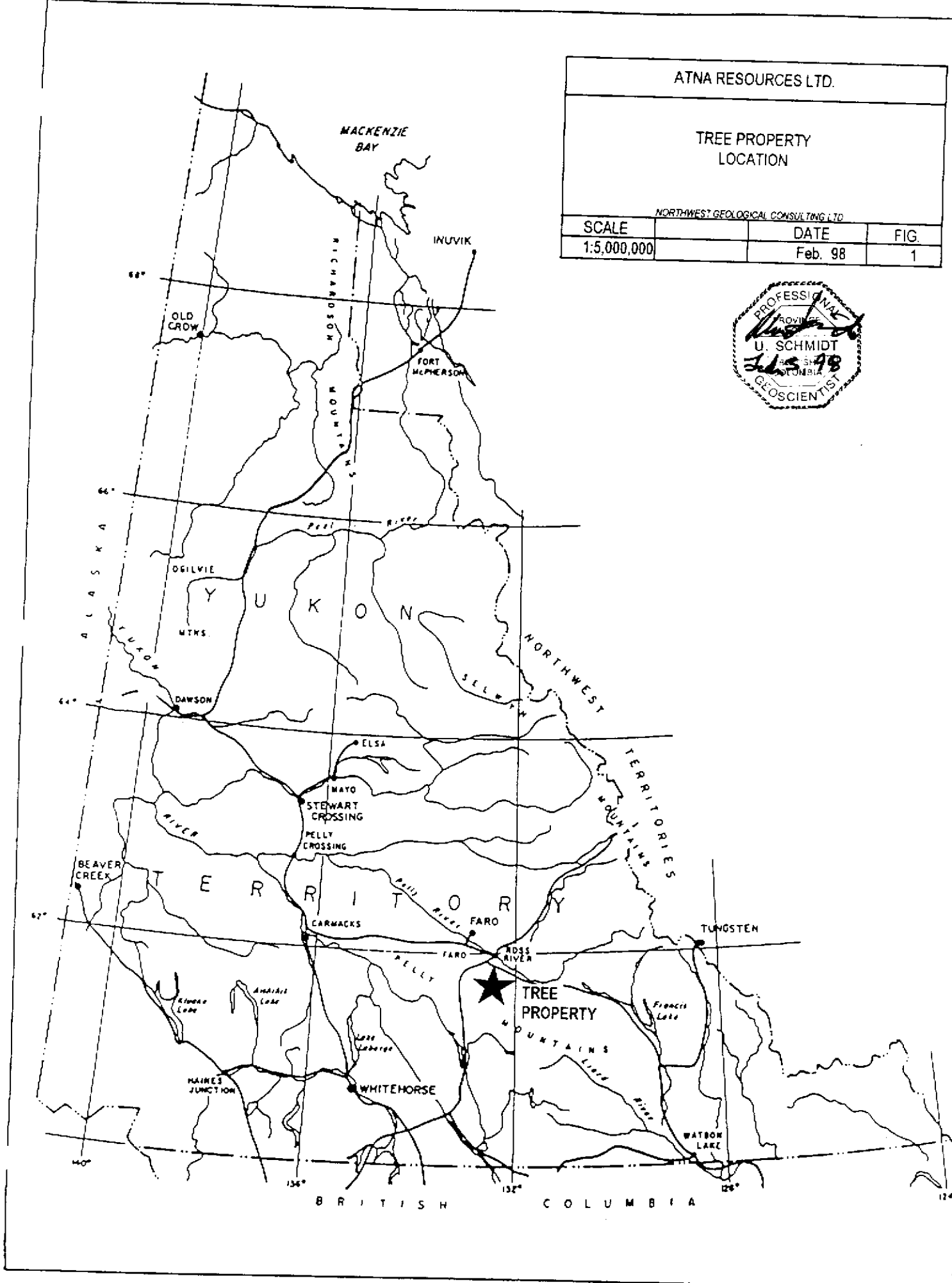
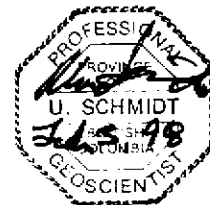
The property is accessible only by helicopter. Helicopters based within flying distance of the

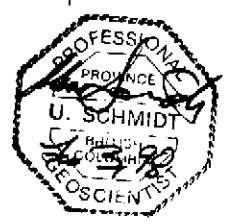
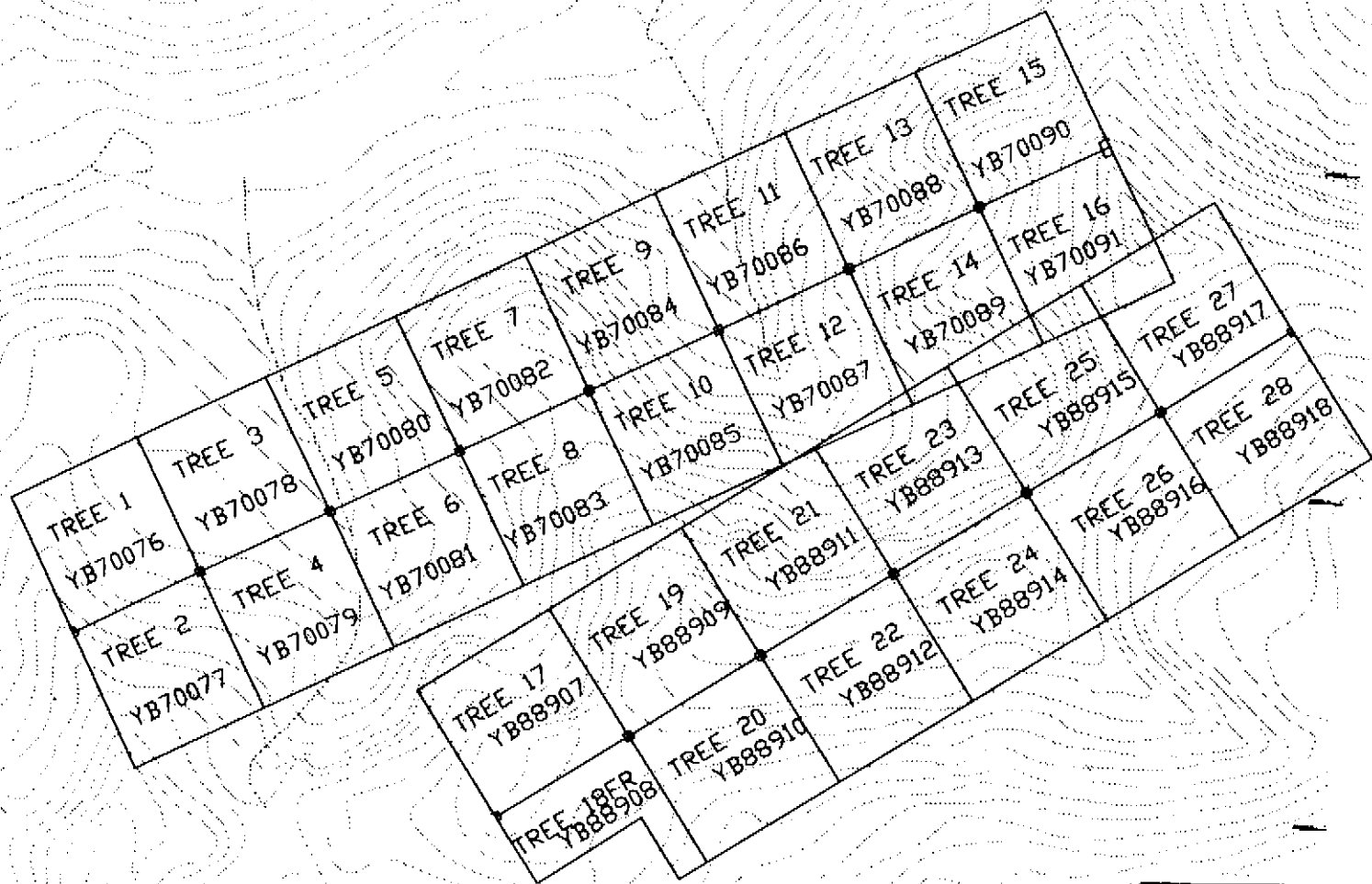
ATNA RESOURCES LTD.

TREE PROPERTY
LOCATION

NORTHWEST GEOLOGICAL CONSULTING LTD.

SCALE		DATE	FIG.
1:5,000,000		Feb. 98	1





Aina Resources Ltd.	
Work By U.SCHMIDT	Tree Project CLAIM LOCATION
Date Drafted 12-12-87	
Drafted By U.SCHMIDT	
Date Revised 12-12-87	
Revised By U.SCHMIDT	Northwest Geological Consulting Ltd.
N.T.S. Number 105F/9	Figure 2
File Name TREEFC2	SCALE APPROXIMATELY 1:20,000

property are located at Ross River, Watson Lake and Whitehorse. The field crew reduced mobilization costs by driving to a staging area located at the junction of Cloutier Creek and Ketz River, on the Ketz River Mine road, approximately 17 km northeast of the property. A Bell 206 helicopter, based in Ross River was used to mobilize to the property and a Hughes 500D helicopter was utilized to demobe from the property.

3. PHYSIOGRAPHY

The property is located in the rugged St. Cyr Range of the Pelly Mountains, within the Yukon Plateau physiographic region of the northern Cordillera. The northeast boundary of the Pelly Mountains is marked by Tintina Trench, a major northwest-trending valley and surface expression of the Tintina Fault Zone. Elevations in this region range from approximately 1000 metres to 2350 metres. Elevations on the property range from 1400 to 2100 metres.

The area was covered by McConnell glaciation from 26.5 ka to 10 ka and ice flow directions in the vicinity of the property are northwesterly. Glaciation has produced broad anastomosing valleys which are now occupied by underfit streams and rivers. Valley bottoms are typically underlain by glaciofluvial sediments covered by grassy wetlands and "buckbrush" with patches of black spruce. Lower slopes above the valley floor are draped by colluvial apron sediments. Slopes above the valley floor up to tree line are covered by open black spruce and balsam fir forest. Tree line varies from 1400 to 1500 metres elevation.

Most of the 1997 exploration was carried out above tree line. Outcrops on the north-facing slopes consist of steep, often inaccessible spurs which project from the rims of cirques. Angular rockfall deposits form aprons below these outcrops. Bedrock exposure in these areas is excellent but access is often hindered by unstable outcrop and talus. The southern grid lines cross a south-facing dip slope with scarce outcrop because of extensive talus deposits.

Heavy snow accumulations in this area limit field work from mid May to early October.

4. HISTORY

The area covered by the current Tree claims was previously staked in 1977 and explored in 1977 and 1978 by Utah Mines Ltd. The exploration program in 1977 included prospecting, geological

mapping, reconnaissance geochemical soil and rock chip sampling. The 1978 field work consisted of geological mapping, prospecting, reconnaissance geochemical and electromagnetic surveys. A total of 91 soil samples were collected in 1977 and 105 were collected in 1978.

Records of work in the vicinity of the property date back to 1955 with the discovery of massive sulphide showings by Newmont, in similar geology, on the nearby Wolf property.

5. REGIONAL GEOLOGY

The geology of the Pelly Mountains is stratigraphically and structurally complex. The regional geology has been previously described by Mortensen (1982a, b) and others. The oldest rocks in the area are a miogeoclinal sequence of Middle Proterozoic to Late Ordovician aged clastic sedimentary rocks with minor carbonates and volcanic rocks. This sequence accumulated along the western margin of the North American craton. A narrow shelf with shallow water carbonate and quartz sand deposition (Pelly-Cassiar Platform), developed on the western edge of this depositional basin, parallel to the craton edge during Silurian to Middle Devonian time. Shale and deep water chert accumulation continued during this time, southwest of the platform and northeast in Selwyn Basin between the platform and craton margin.

Late Devonian and Mississippian tectonism transformed the period of platform sedimentation to deeper water sedimentation characterized by carbonaceous shales, cherts and pebble conglomerates. Rift related intermediate and felsic volcanic centres developed locally, accompanied by tuffaceous mudstone and shale deposition on Pelly-Cassiar platform.

Deeper water sedimentation continued from Upper Paleozoic to Triassic time when calcareous argillites were deposited above the shale-volcanic sequence.

A northeasterly directed, late Triassic to early Cretaceous, tectonic event juxtaposed older platformal rocks over Devonian and Mississippian shales and volcanic rocks. Two major thrust faults have been recognized in Pelly Mountains. The metavolcanic rocks are restricted to the lowermost structural package. Intermediate to felsic volcanic rocks, intercalated with tuffaceous mudstone and shale form an arcuate 130 by 5 km belt. Numerous massive sulphide showings are associated with these rocks.

The most explored of these deposits is the MM which is located 23 km southwest of the

property. The discovery massive sulphide mineralization by Atna Resources Ltd. on the Wolf property in 1997 suggests that the potential for more discoveries exists in this belt.

6. PROPERTY GEOLOGY

During the time spent on the property the writer examined as many of the accessible outcrops as possible, but there was insufficient time to map the property in the detail already achieved by Utah geologists in 1977-78. As a result, much of the mapping was a confirmation of previous mapping. As was pointed out by previous mappers, the volcanic stratigraphy is difficult to trace laterally because of rapid facies changes. The stratigraphy is further complicated by vertical faults.

The claims are underlain by Mississippian aged volcanic rocks and associated sedimentary rocks. Orange to yellow weathering volcanic assemblages are exposed along the north slope of a northeast-trending ridge. These cliff-forming outcrops occur in a series of north-facing cirques, parallel to the central, long axis of the property. Lithologies along this ridge are folded into an open synform around a northwest-trending, south-dipping fold axis (Wilson, Westerman, 1978). Strata on the limbs of this synform generally dip gently to moderately southeast and southwest. The southern end of the property covers a moderately steep, south-facing dip slope which is covered predominantly by talus deposits.

The stratigraphy includes at least two intermediate to felsic volcanic cycles. A black argillite and shale unit near the northern claim boundary is the basal unit on the property. This is overlain by intermediate volcanics which are in turn overlain by felsic volcanics. The lower volcanic cycle includes andesite, dacite, rhyodacite, and rhyolite according to Utah's mapping. Only a few of the lower cycle volcanic rocks were reexamined.

Traversing south and moving up section, the felsic volcanic cycle is overlain by a mixed package of predominantly intermediate volcanic tuffs. The higher volcanic cycle comprises primarily andesitic lapilli tuffs with minor flows and interbedded lenses of phyllite, siltstone and associated epiclastic rocks. Mafic flows and a felsic tuffaceous rocks also occur within the upper cycle but their relationship with the andesitic tuffs is not always clear. Basaltic flows occur within the andesite tuff in the southwest corner of the property but elsewhere contact relationships do not preclude their occurrence as dykes and sills. Felsic tuffs and rhyolite in the southwest corner of the property appear to lie within the upper intermediate volcanic cycle in the vicinity of high

angle faults. This suggests that the felsic volcanics may be a section of the lower felsic cycle juxtaposed with upper cycle intermediate volcanic rocks by a high angle reverse fault.

The geology of the property is presented on figure 9, appended to this report. The units are assigned on the basis of lithologies and not relative age.

7. GEOCHEMISTRY

Grid soil sampling was carried out with two objectives. The first was to increase the sample density on the west end of the 1996 grid and to sample the east end of the 1996 grid. The second objective was to sample the new claims in the southern half of the property. On the west side of the 1996 grid, additional lines were run between existing soil lines. The 1996 soil lines are not uniformly spaced, resulting in a line spacing which ranges from 100 to 200 metres. Sample lines established at the east end of the 1996 grid were run parallel and perpendicular to the 1996 base line. Sample intervals of 50 metres were used whenever possible.

Sample lines were run in a property grid east-west direction and 50 metre sample interval in the southern half of the property. This line direction was chosen to detect dispersion anomalies on the south-dipping slope. Base-lines and tie-lines were established by nylon chain and compass using 1.2 metre long lath pickets for station markers. Sample lines were established by slope-corrected compass and "hip-chain" surveys and sample stations are marked with 60 centimetre long wood lath pickets and flagging tape.

A total of 314 soil samples were collected at a sample interval of 50 metres. The area is covered by angular rockfall and talus deposits that form aprons at the base of steep outcrops. Samples of talus fines or soliflucted soils were collected where possible, at depths ranging from 20 to 30 cm. Samples were analyzed by Acme Analytical Laboratories Ltd. of Vancouver, employing a standard 32 element Inductively Coupled Argon Plasma (ICP) package, using a specific digestion for Ba and gold analysis by acid leach/AA from a 10 g. sample. Two hundred and twenty-one sample pulps from 1996 samples were reanalyzed for Ba using a specific digestion. Certificates of analyses are appended to this report (Appendix A).

STATISTICAL METHOD

A statistical analysis was carried out on the combined 1996 and 1997 analytical results which

total 535 samples. Analytical data were analyzed statistically using Probplot, a computer program designed to optimally fit multiple normal distributions to exploration geochemical data on probability plots (Stanley 1987). A statistical analysis of Mo, Cu, Pb, Zn, Ba, Ag, and Au analytical data was carried out with the aid of histograms and cumulative probability plots generated by Probplot. The data set for some elements was reduced because Probplot does not include analyses below the analytical detection limit. The data set was further reduced in some cases 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. 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 were chosen for each element by examining how the statistical parameters for each sub-population could be used to distinguish the sub-populations from each other. The statistical parameters that best represented these sub-population boundaries were assigned to up to six symbol classes for plotting. In many cases fewer than six symbol classes were used and the mean value, plus and minus two standard deviations of the highest sub-populations produced the best anomaly definition. Summary statistics, histograms, and probability plots produced by Probplot, are appended to this report (Appendix B).

Trial plots were generated within Autocad and final thresholds were selected by a visual assessment of anomaly and background values. Lower sub-population thresholds are often ignored on symbol plots because they are presumed to represent background concentrations of metals from sources which are not related to mineralization. The final plots classify the analytical data for each element into ranges of increasing concentration which are assigned symbols of increasing size. Both arithmetic and, log cumulative probability plots were examined. Anomaly thresholds were determined from the plots which best fit the data. Analyses and anomaly interpretation for Cu, Pb, Zn, Ag, Ba and Au concentrations in soils are presented on figures 3 to 8, appended to this report. Sample locations for the 1997 program are presented on figure 10.

The following summarizes the chosen anomaly thresholds:

Population Thresholds

$x(1)$ = mean of population 1

$x(2) \pm 2Sx$ = mean of population 2 plus or minus 2 standard deviations

Element Cu ppm

Population	Log	Arithmetic	Threshold
<u>Parameter</u>	<u>Concentration</u>	<u>Value</u>	<u>Used</u>
x-2Sx(2)	0.9720	9.38	9
x(2)	1.4187	26.22	26
x-2Sx(3)	1.9513	89.39	89

Element Pb ppm

Population	Log	Arithmetic	Threshold
<u>Parameter</u>	<u>Concentration</u>	<u>Value</u>	<u>Used</u>
x(1)	1.6782	47.67	48
x+2Sx(1)	2.2828	191.78	192
x+2Sx(2)	2.7089	511.56	512

Element Zn ppm

Population	Log	Arithmetic	Threshold
<u>Parameter</u>	<u>Concentration</u>	<u>Value</u>	<u>Used</u>
x(1)	1.8317	67.9	68
x-2Sx(2)	2.1558	143.2	143
x(2)	2.4718	296.3	296
x+2Sx(2)	2.7877	613.3	613

Element Ag ppm

Population	Log	Arithmetic	Threshold
<u>Parameter</u>	<u>Concentration</u>	<u>Value</u>	<u>Used</u>
x-1Sx(2)		0.65	0.7
x(2)		1.32	1.3
x+1Sx(2)		1.99	2.0
x+2Sx(2)		2.66	2.7

Element Ba ppm

Population	Log	Arithmetic	Threshold
<u>Parameter</u>	<u>Concentration</u>	<u>Value</u>	<u>Used</u>
x(1)	3.0526	1128.76	1129
x+2Sx(2)	3.2019	1591.84	1592
x-2Sx(3)	3.5690	3706.81	3707
x-2Sx(4)	3.9993	9983.89	9984

Element Au ppb

Population	Log	Arithmetic	Threshold
<u>Parameter</u>	<u>Concentration</u>	<u>Value</u>	<u>Used</u>
x-2Sx(2)	0.4707	2.956	3
x-2Sx(3)	0.9335	8.580	9
x+2Sx(3)	1.2430	17.498	178

DISCUSSION OF RESULTS**Copper (Fig. 3)**

Overall copper concentrations are low and range from 3 to 163 ppm. The arithmetic probability plot of the data was divided into three sub-populations, with population breaks selected at 2% and 99% of the data. An anomalous threshold of 89 ppm was selected and three symbol classes were assigned at 9, 26 and 89 ppm Cu. The highest copper analyses occur as isolated sites within areas of anomalous response in Pb, Zn and Ba.

Lead (Fig. 4)

Five hundred and thirty-one samples were included in the data analysis within the truncated range from 4 to 600 ppm Pb. There are no analyses below the detection limit of 4 ppm and there are 4 samples above the maximum value of 600 ppm. The data were sub-divided into two lognormal populations with a population boundary selected at 95% of the data. An anomalous threshold of 192 ppm Pb was chosen. This value is the boundary between the background population 1 and the anomalous population 2 and is defined by the mean plus 2 standard deviations of population 1. This threshold outlines anomaly "A", an irregularly shaped area of anomalous soils

occurring over a length of 1200 metres and a width of up to 300 metres. The length of this anomaly is exaggerated by mechanical dispersion on steep talus slopes at both ends of the anomaly. The anomaly is underlain by black shale and felsic volcanics.

The easternmost grouping of 4 lead values in the range from 220 to 371 ppm are samples of talus fines. The source of this anomaly is located in felsic volcanics and shales, located to the southwest.

Zinc (Fig. 5)

The zinc analytical data ranges from 3 to 5,669 ppm. The data were truncated above 1,000 ppm, eliminating 9 samples from the analysis. Two populations are interpreted in the data with an anomalous threshold of 143 ppm. This value is the boundary between the background population 1 and the anomalous population 2 and is defined by the mean minus 2 standard deviations of population 2. Symbols were assigned values of 68, 143, 296 and 613.

The anomalous Zn values of population 2 define an irregularly shaped area which covers approximately half the property. The anomaly is underlain by intermediate volcanic, minor basic volcanic and thin discontinuous shale horizons. This anomaly has been labelled areas "B" through "E" for descriptive purposes.

Area "C" slightly overlaps and continues south of lead anomaly "A".

The western end of the zinc anomaly, area "B", corresponds with a slightly elevated lead response.

The southern end of the zinc anomaly displays a southeasterly trending dispersion anomaly. To the west, area "D" is a dispersion anomaly underlain by mafic volcanic, black phyllite and intermediate lapilli tuffs.

Area "E" includes clusters and isolated anomalous sites which include the highest concentration found on the property. This area is underlain by intermediate volcanic rocks.

Silver (Fig. 6)

The silver data are divided into 2 populations based on the arithmetic cumulative probability plot. The data were truncated at 5 ppm. Two samples exceeded this threshold and 269 samples were

below the detection limit of 0.3 ppm. A 0.7 ppm anomalous threshold was chosen as the dividing line between populations based on the probability graph. The silver concentrations of population 2 occur in isolated highs or small groups of samples within the larger zinc and lead anomalies.

Barium (Fig. 7)

Barium analyses range from 673 to 28,646 ppm. The cumulative probability plot of the data was divided into 4 sub-populations. The symbol plot (Fig. 7), indicates that the lowest concentrations of population 1 are predominantly associated with intermediate volcanics which crop out at higher elevations and are believed to overlie shales and felsic rocks to the north. Based on this interpretation a threshold of 1,592 ppm was chosen. Populations 2, 3 and 4 are anomalous and may be derived from several sources.

Anomalous barium soils cover most of the north end of the property. Areas of higher concentration within the anomaly are labeled "F" through "I" for discussion purposes.

Area "F" is a cluster of population 3 concentrations in the range from 3927 to 6013. This coincides with lead anomaly "A". Area "G" consists of clusters of population 3 and 4 samples, ranging up to 28,646 ppm.

Area "H" covers the western end of the anomaly. Barium and zinc anomalies overlap but the highest barium samples are located at the northern edge of the zinc anomaly.

Area "I" contains a series of north-south elongated anomalies which are underlain by talus slopes and likely reflect mechanically transported material.

Gold (Fig. 8)

Gold concentrations range from a detection limit of 1 ppb to 36 ppb. The log-probability plot of the data was divided into three sub-populations with a threshold of 3 selected as the boundary between background and anomalous populations. With the exception of two areas, few samples are in the anomalous category. Anomaly "J" is a grouping of seven samples in the range from 4 to 27 ppm Au. This area is underlain by rusty weathering, siliceous, pyritic volcanic rocks. Evidence of hand-trenching and blasting were found at one site within this anomaly. This work precedes exploration carried out by Utah but there is no record of this work in the assessment files. Five sulphide-bearing float samples were taken of this material. Gold analyses were in the

range of 4 to 76 ppb Au. These samples also contain barium concentrations ranging of 1189 to 6360 ppm. Samples are also low in Cu and lead but zinc analyses range from 98 to 6188 and silver ranges from <0.3 to 2.7 ppm.

Three sample sites, ranging from 11 to 36 ppb Au, outline Anomaly "K". The east end of this anomaly is underlain by transported material at the base of a talus slope.

8. CONCLUSIONS

The Tree property is underlain by favourable volcanic and sedimentary stratigraphy of Mississippian age. The geochemical survey of the property, carried out over a two year period, indicates two geochemical signatures. The northern, lower stratigraphy, consists of felsic and intermediate volcanic rocks overlying a basal black shale unit. These lithologies have generated the highest lead backgrounds and an associated overlapping barium anomaly. Barium and lead have a weakly positive correlation coefficient, suggesting that barium mineralization can occur independently from lead. This is evident in overlapping anomalies where the highest barium analyses are not associated with the highest leads.

The geochemical survey of the property has outlined a barium and lead association with the lower felsic volcanic assemblage, at the north end of the property. This is a more favourable exploration target for volcanic hosted massive sulphide deposits because significant zinc-lead-barite massive sulphide deposits have been discovered in this setting, elsewhere in the district.

The overlying, mixed, intermediate volcanic assemblage and associated sedimentary and basic volcanic coincide with elevated zinc backgrounds. These lithologies are well exposed in spectacular, north-facing, cliff-forming outcrops. Exploration to date, has focussed primarily on this area because the ubiquitous, finely disseminated pyrite has produced spectacular, oxidized outcrops. At the southern end of the property, these lithologies are being actively eroded into large talus fans. Excellent exposure of the upper volcanic package, the opportunity for efficient geochemical dispersion and the low lead and barium backgrounds make the upper volcanic assemblage a lower exploration priority.

The present interpretation of anomaly thresholds of all samples collected in 1996 and 1997 has shifted anomaly thresholds reported by R. Kemp in 1996. The 1996 thresholds were based on Utah's 1977 regional geochemical data. The analysis of all the data and the restriction of the data

to the Tree property has increased the copper threshold from 65 to 89 ppm. The lead threshold has increased from 90 to 192 ppm and the zinc threshold has been reduced from 250 to 143 ppm.

Although the copper threshold has been increased it remains a poor target discriminator because only a few samples are statistically anomalous.

9. RECOMMENDATIONS

Mapping and prospecting are recommended in the vicinity of lead anomaly "A" and barium anomalies "F", "G" and "H". Additional grid soil sampling may be warranted on the east end of the property, where the sample density is low.

10. BIBLIOGRAPHY AND REFERENCES

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12. STATEMENT OF EXPENDITURE

I. Field Expenses

1) Labour

U.Schmidt (Project Geologist) July 25-31, Aug. 1-3, 5-10, 1997

16 days @\$360/day \$5,760.00

R.Beauchamp (Field Assistant) July 21-31 ,Aug. 1-2, 1996

16 days @ \$185/day. \$2,960.00

. **\$8,720.00**

2) Consumables and Supplies. \$323.05

3) Camp and Equipment Rental \$1,343.50

4) Room and Board \$1,268.83

5) Transportation

Truck Rental \$1,020.00

Air Fare \$285.59

Helicopter. \$5,208.00

6) Geochemical Analysis

314 soils, 30 element ICP & Au and Ba analysis. \$6,806.95

rock geochem

221 Ba reanalysis of 1996 samples at \$7.88/sample \$1864.99

sample shipment. \$64.20

SUB TOTAL. \$23,360.27

II. OFFICE

Data compilation, Digitizing Statistical Analysis, Plotting, Interpretation, Report Writing

U. Schmidt Dec. 2,8,13,16,18, 1997, Jan. 16,20,23, Feb. 3, 1998

9 days @\$360/day. \$3,240.00

Expenses \$164.00

SUB TOTAL \$3,404.00

PROJECT TOTAL \$26,764.27

Appendix A

CERTIFICATIONS OF ANALYSIS



GEOCHEMICAL ANALYSIS CERTIFICATE

Atna Resources Ltd. PROJECT TREE File # 97-4405 Page 1

1550 - 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	Au*	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppb	ppm
TR97001	5	28	77	40	<.3	13	12	1863	6.24	13	<8	<2	3	13	<.2	<3	<3	9	.30	.100	85	9	.13	315	<.01	7	.71	.01	.16	<2	<1	1970
TR97002	2	13	12	58	<.3	15	16	653	3.95	7	<8	<2	<2	33	<.2	<3	<3	28	.59	.116	29	15	.32	131	.03	6	.69	.01	.09	<2	1	1297
TR97003	<1	38	23	54	<.3	19	26	1832	7.37	6	<8	<2	<2	57	<.2	<3	<3	21	1.15	.157	35	8	.25	207	.01	10	.52	.01	.11	<2	<1	1593
TR97004	2	27	12	45	<.3	14	15	794	4.52	6	<8	<2	<2	38	<.2	<3	3	27	.87	.124	35	11	.26	145	.01	9	.60	.01	.13	<2	1	1429
TR97005	3	25	20	57	.3	12	15	1099	4.79	7	<8	<2	<2	40	.2	<3	<3	24	1.23	.144	37	9	.22	198	.01	10	.65	.01	.14	<2	<1	1152
TR97006	3	14	21	270	<.3	8	17	2811	4.98	6	<8	<2	<2	27	.8	<3	<3	23	.85	.208	44	13	.13	410	<.01	7	.78	.01	.11	<2	<1	1078
TR97007	2	35	20	417	.3	12	18	2107	7.15	4	<8	<2	<2	33	1.1	<3	<3	51	1.74	.127	31	14	.25	157	<.01	12	.44	.01	.13	<2	<1	864
TR97008	2	25	21	280	.3	9	21	1974	6.84	4	<8	<2	<2	43	.4	9	<3	28	1.79	.175	29	7	.21	174	<.01	10	.43	.01	.11	<2	1	780
TR97009	5	24	35	149	<.3	9	13	1075	4.78	7	<8	<2	5	38	.4	<3	3	13	.50	.178	122	8	.08	109	.01	7	.35	.01	.13	<2	<1	1434
TR97010	5	20	41	175	<.3	9	11	574	4.86	6	<8	<2	3	48	.4	<3	<3	12	.45	.150	82	7	.09	144	.01	8	.44	.01	.15	<2	1	1381
TR97011	8	22	34	114	<.3	11	10	701	3.17	6	8	<2	4	21	.5	<3	3	10	.33	.132	84	7	.05	174	<.01	8	.47	<.01	.14	<2	<1	1420
TR97012	5	18	27	74	<.3	8	11	726	4.66	4	<8	<2	3	22	<.2	<3	3	11	.30	.140	68	6	.06	184	<.01	7	.52	<.01	.14	<2	<1	1394
TR97013	4	34	27	42	<.3	12	8	497	2.65	4	10	<2	4	50	.3	<3	3	11	.69	.087	81	7	.10	110	<.01	6	.67	<.01	.08	<2	<1	1251
TR97014	18	34	60	32	<.3	3	3	276	3.16	7	11	<2	17	52	<.2	<3	<3	4	.12	.042	125	3	.06	298	<.01	6	.67	.01	.14	<2	<1	1642
TR97015	18	35	53	98	<.3	15	12	596	4.66	10	<8	<2	7	29	.2	<3	<3	20	.24	.080	41	10	.24	163	.01	8	.61	.01	.30	<2	1	1115
TR97016	8	33	64	95	.5	19	11	635	4.25	16	<8	<2	16	118	.6	<3	<3	25	.29	.106	86	14	.17	151	.01	5	.60	.01	.29	<2	1	1138
TR97017	4	61	32	495	.3	49	35	1720	7.81	8	<8	<2	<2	41	4.6	<3	<3	53	1.13	.177	36	17	.23	97	<.01	7	.71	.01	.09	<2	1	904
TR97018	3	35	17	401	<.3	29	27	1788	8.28	3	<8	<2	<2	44	4.3	<3	<3	58	.79	.160	83	25	.40	111	<.01	6	1.32	.01	.07	<2	2	800
TR97019	1	150	14	127	<.3	35	31	5767	16.37	<2	<8	<2	<2	57	<.2	<3	<3	73	3.72	.117	36	18	1.28	118	<.01	5	.52	.01	.04	<2	1	673
TR97020	5	69	35	1520	<.3	39	29	1368	9.28	6	<8	<2	16	53	3.1	<3	<3	33	.92	.183	55	33	.45	103	<.01	5	1.77	.01	.09	<2	1	1313
TR97021	8	43	23	85	<.3	34	27	1619	6.55	6	<8	<2	5	36	<.2	<3	<3	30	.52	.105	63	36	.41	154	<.01	8	1.34	.01	.11	<2	1	1425
RE TR97025	7	28	37	130	.3	12	8	1596	4.93	11	<8	<2	<2	17	.6	<3	<3	20	.45	.090	74	13	.17	227	.02	6	.63	.01	.10	<2	2	1465
TR97022	13	15	54	30	<.3	2	4	473	3.41	10	10	<2	2	35	<.2	<3	3	6	.50	.049	49	4	.07	110	<.01	9	.24	.01	.32	<2	1	1399
TR97023	8	10	27	146	<.3	5	4	2830	8.13	4	<8	<2	5	7	.4	<3	<3	4	.12	.049	69	4	.12	176	<.01	5	.30	.01	.10	2	1	1175
TR97024	13	25	56	2129	.5	13	8	2304	7.29	18	<8	<2	8	7	17.2	<3	<3	5	.32	.053	105	10	.17	334	<.01	5	.30	<.01	.12	<2	1	2638
TR97025	7	30	32	140	.4	12	8	1632	5.02	10	<8	<2	<2	17	.7	<3	<3	21	.46	.090	76	16	.17	261	.02	7	.63	.01	.10	<2	2	1444
TR97026	4	40	42	85	.3	15	28	1525	7.39	6	<8	<2	<2	26	<.2	<3	<3	38	1.07	.136	33	4	.20	164	<.01	7	.40	.01	.08	<2	2	1313
TR97027	5	28	44	70	.4	17	16	894	4.91	10	<8	<2	<2	26	.2	<3	3	26	1.04	.115	46	12	.20	183	.01	6	.40	.01	.07	<2	2	1163
TR97028	11	43	67	104	.5	18	8	915	6.51	21	<8	<2	30	17	.5	3	<3	7	.06	.034	83	7	.06	311	.01	6	.60	.01	.23	<2	1	1812
TR97029	3	13	26	22	<.3	6	5	1605	3.57	6	<8	<2	19	9	<.2	<3	<3	10	.03	.040	109	6	.07	174	.01	4	.40	.01	.10	<2	1	1836
TR97030	3	13	19	25	<.3	9	7	1464	4.12	5	<8	<2	2	22	<.2	<3	<3	14	.33	.089	58	17	.14	406	.01	6	.63	.01	.14	<2	1	1544
TR97031	8	13	70	26	<.3	6	6	1280	4.66	6	<8	<2	<2	42	<.2	<3	<3	16	.09	.104	51	8	.09	295	.01	6	.61	.02	.34	<2	1	1406
TR97032	17	22	97	64	.9	16	16	2293	6.66	17	<8	<2	<2	27	<.2	<3	<3	23	.12	.144	76	19	.10	372	.01	7	.79	.01	.42	<2	2	1427
TR97033	17	29	75	51	.6	14	9	1235	5.79	22	<8	<2	<2	20	<.2	<3	<3	20	.09	.090	61	18	.11	403	.01	5	.88	.01	.33	<2	2	1530
TR97034	10	41	148	217	.9	17	13	1080	6.49	22	<8	<2	3	16	.9	3	<3	21	.07	.067	58	17	.14	325	.03	5	.81	.02	.19	<2	1	1803
STANDARD C3/AU-S/SO-15	24	64	40	152	5.4	35	12	745	3.46	58	22	4	17	29	22.3	16	20	78	.57	.089	21	163	.63	153	.09	22	1.90	.04	.16	23	48	2181

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 AU* - AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.(10 GM)

BA* .2 GM SAMPLE FUSED WITH 1.2 GM LIBO2, ANALYSIS BY ICP. Samples beginning 'RE' are Retruns and 'RRE' are Reject Retruns.

DATE RECEIVED: AUG 15 1997 DATE REPORT MAILED: Aug 29/97 SIGNED BY: [Signature] D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of the analysis only.

Data FA



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	Au*	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppb	ppm
TR97035	10	42	126	165	1.1	15	13	1469	7.95	28	<8	<2	6	11	.5	3	<3	18	.04	.063	74	13	.13	128	.02	5	.68	.01	.17	<2	1	1799
TR97036	10	34	127	76	1.7	12	9	677	7.19	34	<8	<2	8	8	<2	5	<3	4	.01	.037	65	5	.03	154	<.01	4	.37	.01	.37	<2	1	2098
TR97037	18	25	259	58	2.5	6	6	599	9.41	41	<8	<2	8	31	<2	5	<3	9	.02	.046	52	7	.05	83	.02	5	.40	.02	.84	<2	1	1601
TR97038	5	22	46	94	.4	12	11	779	4.29	10	<8	<2	<2	21	.3	<3	<3	18	.31	.111	40	14	.11	457	<.01	7	.91	.02	.13	<2	<1	1711
TR97039	5	24	43	125	.6	17	13	895	4.44	14	<8	<2	3	38	.6	<3	<3	15	.71	.118	43	5	.13	265	<.01	8	.58	.01	.18	<2	1	1563
TR97040	4	18	22	59	<.3	6	6	1370	4.53	8	<8	<2	<2	15	<.2	<3	<3	13	.30	.099	61	5	.11	112	.01	6	.62	.02	.12	<2	1	1202
TR97041	11	17	36	262	.8	21	8	581	3.58	21	8	<2	<2	29	1.0	4	<3	19	.35	.138	58	6	.06	234	<.01	8	.50	.01	.11	<2	<1	1723
RE TR97041	8	16	38	251	.7	20	7	549	3.39	18	<8	<2	<2	28	.9	3	<3	18	.33	.134	55	5	.06	211	<.01	6	.48	.01	.11	<2	<1	1713
TR97042	14	18	81	404	.6	18	15	626	5.92	23	<8	<2	2	47	1.2	<3	<3	15	.30	.090	54	5	.08	260	<.01	7	.39	.05	.23	<2	<1	1974
TR97043	3	17	30	202	.5	10	19	961	5.75	8	<8	<2	<2	34	.3	<3	<3	20	1.31	.130	31	9	.19	333	<.01	8	.80	.01	.11	<2	1	1172
TR97044	2	13	12	329	<.3	8	21	668	4.27	5	<8	<2	<2	26	.4	<3	<3	22	.88	.140	27	6	.17	145	.01	9	.69	.02	.16	<2	<1	1339
TR97045	3	14	14	473	<.3	7	22	709	5.04	6	<8	<2	<2	22	.3	<3	<3	25	.96	.118	25	2	.19	142	.01	10	.67	.02	.21	<2	<1	933
TR97046	5	15	32	127	<.3	7	13	665	4.30	6	<8	<2	<2	39	.3	<3	<3	20	.47	.158	50	6	.14	182	.01	8	.75	.02	.19	<2	1	1111
TR97047	3	19	26	80	.6	9	24	3510	8.99	9	<8	<2	2	12	.2	<3	<3	20	.33	.180	70	5	.16	185	.01	6	.68	.01	.21	<2	1	1041
TR97048	6	17	63	64	.6	11	12	767	4.59	15	<8	<2	2	25	<.2	<3	<3	16	.25	.133	60	24	.09	791	.01	7	.67	.01	.18	<2	1	2580
TR97049	4	16	25	57	<.3	9	10	755	3.51	5	<8	<2	2	38	.3	<3	<3	13	.63	.132	47	8	.12	157	<.01	8	.65	.01	.10	<2	<1	1116
TR97050	4	20	22	44	<.3	13	11	765	3.66	5	<8	<2	2	32	<.2	<3	<3	17	.53	.132	55	13	.16	151	<.01	7	.74	<.01	.09	<2	<1	1137
TR97051	4	30	25	158	<.3	22	16	516	3.64	8	<8	<2	3	27	1.5	<3	<3	28	.50	.148	62	18	.21	129	.01	7	.85	.01	.10	<2	1	1170
TR97052	6	17	28	129	<.3	14	9	623	3.74	10	<8	<2	2	27	.6	<3	<3	17	.26	.100	73	9	.10	100	<.01	6	.58	.01	.07	<2	1	1276
TR97053	11	24	42	52	.3	13	8	496	4.56	14	<8	<2	2	36	<.2	<3	<3	13	.21	.088	73	5	.06	273	<.01	9	.46	.01	.12	<2	1	2929
TR97054	5	44	50	92	.5	36	29	1574	6.27	19	<8	<2	2	34	<.2	<3	<3	20	.85	.172	40	12	.15	262	<.01	6	.71	.01	.14	<2	1	1208
TR97055	8	29	31	58	<.3	14	14	1140	6.05	12	<8	<2	6	31	<.2	<3	<3	13	.41	.107	60	10	.12	99	<.01	4	.67	.01	.10	<2	<1	1667
TR97056	6	39	33	141	<.3	25	21	1044	7.09	12	<8	<2	4	33	.2	<3	<3	20	.62	.165	39	14	.18	79	<.01	5	.81	.01	.08	<2	<1	1503
TR97057	7	45	38	276	.3	28	22	1352	7.09	14	<8	<2	4	28	.2	<3	<3	30	.52	.161	55	16	.21	84	.01	7	.81	.01	.09	<2	<1	1358
TR97058	9	25	34	207	<.3	6	5	477	3.92	9	<8	<2	8	9	1.5	<3	<3	15	.15	.052	20	7	.08	134	.01	4	.63	.01	.06	<2	<1	2059
TR97059	7	53	24	633	<.3	35	26	1778	7.00	14	<8	<2	6	22	5.0	<3	<3	42	.44	.128	43	22	.27	115	.02	3	1.16	.01	.07	<2	1	1233
TR97060	20	57	50	368	<.3	34	26	1122	6.88	13	<8	<2	8	35	1.9	<3	<3	35	.51	.122	32	27	.34	145	.01	4	1.13	.01	.19	<2	1	2006
TR97061	3	25	20	132	<.3	33	21	1419	4.52	10	<8	<2	<2	20	<.2	<3	<3	71	.26	.117	27	52	.83	176	.02	4	1.94	.01	.05	<2	<1	1039
TR97062	11	44	68	100	<.3	20	16	803	4.74	11	<8	<2	12	96	.3	<3	<3	13	.77	.117	53	6	.13	127	<.01	6	.51	.03	.26	<2	<1	1313
TR97063	5	37	34	46	<.3	17	14	1091	4.62	5	<8	<2	4	48	<.2	<3	<3	17	.55	.129	59	11	.16	101	<.01	6	.66	.01	.10	<2	<1	1233
TR97064	4	21	26	18	<.3	8	10	299	4.91	5	<8	<2	3	24	<.2	<3	<3	12	.40	.134	51	6	.06	178	<.01	6	.44	<.01	.15	<2	<1	1346
TR97065	5	19	28	136	.3	6	9	1534	4.37	6	<8	<2	2	23	<.2	<3	<3	9	.46	.097	71	10	.06	163	<.01	9	.46	<.01	.16	<2	<1	1314
TR97066	6	20	32	146	<.3	7	10	655	4.38	5	<8	<2	4	23	.4	<3	<3	7	.53	.092	84	6	.06	135	<.01	10	.38	<.01	.16	<2	<1	1146
TR97067	5	31	28	254	<.3	10	13	718	4.85	7	<8	<2	<2	34	.3	<3	<3	13	.81	.134	58	7	.13	132	<.01	11	.46	.01	.19	<2	<1	1475
TR97068	2	37	26	404	.4	15	18	1279	5.45	10	<8	<2	<2	22	1.1	<3	<3	26	.48	.132	46	12	.14	138	.01	9	.41	.01	.15	<2	1	2277
STANDARD C3/AU-S/SO-15	23	63	34	152	5.4	35	12	725	3.37	57	17	4	17	29	21.6	15	14	78	.57	.086	20	162	.62	133	.09	20	1.87	.04	.16	22	48	2053

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	Au*	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppb	ppm
TR97069	5	43	26	286	<.3	18	25	2309	7.62	11	<8	<2	<2	21	2.5	<3	<3	39	.64	.136	39	13	.17	170	.01	8	.51	.01	.19	<2	<1	891
TR97070	5	51	29	307	<.3	19	28	1992	7.00	13	<8	<2	<2	25	2.9	<3	<3	40	.71	.111	37	15	.23	157	.01	7	.54	.01	.16	<2	<1	977
TR97071	3	23	23	290	<.3	10	26	2333	8.89	6	<8	<2	<2	31	2.5	<3	<3	34	.81	.181	42	9	.27	299	.01	11	.80	.01	.28	<2	<1	950
TR97072	2	16	20	104	<.3	9	27	1696	7.65	7	<8	<2	<2	52	<.2	<3	<3	31	1.11	.170	35	14	.29	332	<.01	7	.82	.01	.16	<2	<1	1221
TR97101	3	11	19	31	<.3	8	18	1403	6.36	6	<8	<2	2	33	<.2	<3	<3	23	.82	.348	45	23	.18	790	.02	5	.51	.01	.12	<2	1	1857
TR97102	4	14	25	29	.4	7	8	1429	4.89	7	<8	<2	<2	25	<.2	<3	<3	16	.87	.145	35	21	.16	859	.01	5	.61	.01	.06	<2	<1	1659
TR97103	6	17	17	23	.3	10	12	1737	5.20	8	<8	<2	3	18	<.2	<3	<3	10	.58	.127	66	21	.10	739	<.01	7	.37	<.01	.10	<2	<1	1844
TR97104	4	18	369	268	.7	12	20	2102	6.36	10	<8	<2	2	30	4.8	<3	<3	15	.89	.270	55	21	.11	818	<.01	8	.48	.01	.13	<2	<1	2378
TR97105	14	31	51	53	.4	9	10	838	4.71	14	<8	<2	<2	34	.2	<3	<3	21	.16	.152	51	14	.07	334	.01	6	.64	.02	.20	<2	<1	1474
TR97106	3	10	20	26	<.3	5	4	570	2.52	6	12	<2	<2	11	<.2	<3	<3	15	.14	.095	43	8	.06	200	.01	6	.57	.02	.09	<2	<1	1424
TR97107	3	10	12	25	<.3	4	5	1199	3.16	6	<8	<2	2	10	<.2	<3	<3	13	.20	.062	51	6	.07	222	.01	6	.51	.02	.07	<2	<1	1299
TR97108	7	15	29	35	<.3	9	7	390	2.98	10	11	<2	<2	12	<.2	<3	4	18	.04	.103	63	9	.06	138	.01	6	.60	.01	.11	<2	<1	1250
TR97109	1	37	13	41	.4	14	16	873	3.40	6	<8	<2	<2	20	<.2	<3	<3	26	.57	.148	35	34	.24	1124	.01	5	1.19	.01	.07	<2	<1	2162
TR97110	4	40	30	32	.5	14	22	1107	3.59	10	<8	<2	<2	18	.2	<3	<3	22	.60	.147	39	26	.21	870	<.01	6	1.06	.01	.07	<2	<1	1639
TR97111	4	14	20	53	<.3	8	7	557	3.52	11	<8	<2	<2	12	<.2	<3	<3	24	.16	.059	48	20	.12	333	.02	6	.61	.01	.10	<2	3	1604
TR97112	3	12	54	66	.3	8	10	861	4.45	9	<8	<2	2	18	.4	<3	3	14	.41	.187	51	20	.09	613	<.01	6	.68	.01	.08	<2	<1	1709
TR97113	6	16	23	33	<.3	11	9	799	3.71	9	<8	<2	<2	12	<.2	<3	<3	15	.16	.088	70	16	.10	377	.01	5	.52	.01	.09	<2	<1	1599
TR97114	3	19	18	36	<.3	14	10	983	4.90	11	<8	<2	<2	11	<.2	<3	<3	15	.36	.106	53	28	.10	1101	<.01	3	.61	.01	.06	<2	<1	2198
TR97115	3	14	15	15	<.3	10	9	588	3.60	12	9	<2	2	10	<.2	<3	<3	8	.25	.094	69	8	.05	147	<.01	6	.37	.01	.07	<2	<1	1325
TR97116	7	7	11	9	<.3	3	3	178	1.46	4	<8	<2	<2	11	<.2	<3	<3	13	.25	.094	24	5	.06	160	.01	4	.71	.03	.04	<2	<1	1075
RE TR97116	7	7	11	10	<.3	3	3	175	1.46	4	11	<2	<2	11	<.2	<3	<3	13	.25	.098	25	4	.06	165	.01	4	.73	.03	.05	<2	<1	1079
TR97117	3	7	6	3	<.3	2	7	494	1.31	4	9	<2	5	22	<.2	<3	3	2	5.38	.188	66	6	.26	125	<.01	6	.27	.01	.12	<2	<1	1495
TR97118	7	24	17	24	<.3	14	19	1369	5.08	9	<8	<2	<2	23	<.2	<3	3	14	1.25	.142	47	14	.29	357	<.01	7	.43	.01	.09	<2	<1	2289
TR97119	6	12	16	29	<.3	7	13	2080	6.27	6	<8	<2	2	17	<.2	<3	<3	8	.72	.117	59	17	.32	369	<.01	6	.64	.01	.08	<2	<1	1189
TR97120	5	8	14	17	<.3	6	11	1208	4.58	8	<8	<2	<2	16	<.2	<3	4	9	.85	.106	35	10	.27	264	.01	8	.63	.01	.07	<2	<1	854
TR97121	5	27	25	24	.4	17	25	1011	5.52	9	<8	<2	<2	18	<.2	<3	<3	29	1.42	.151	28	9	.37	300	.01	7	.56	.02	.08	<2	<1	1291
TR97122	9	65	125	26	2.3	49	46	941	6.33	25	<8	<2	<2	111	.2	<3	<3	21	.83	.226	27	8	.12	317	<.01	11	.64	.06	.35	<2	<1	1453
TR97123	7	42	53	37	.3	26	38	1497	7.37	12	<8	<2	<2	28	<.2	<3	<3	33	.66	.214	38	13	.24	373	.01	10	.65	.02	.27	<2	<1	1311
TR97124	3	17	24	60	<.3	10	28	1333	4.73	7	<8	<2	2	13	<.2	<3	<3	36	.63	.161	47	19	.39	458	.01	10	1.24	.01	.26	<2	<1	1117
TR97125	12	25	34	74	.6	23	10	2251	6.49	18	<8	<2	<2	15	.3	<3	<3	18	.49	.103	58	23	.22	342	.01	7	.80	.01	.12	<2	2	1179
TR97126	3	50	19	26	<.3	19	53	2298	8.77	6	<8	<2	<2	27	<.2	<3	<3	85	2.13	.203	23	8	.48	131	<.01	7	.36	.01	.11	<2	<1	771
TR97127	5	47	47	56	.3	23	40	1796	7.89	12	<8	<2	<2	27	<.2	<3	<3	73	1.23	.147	32	10	.29	167	<.01	6	.33	.01	.09	<2	<1	1126
TR97128	6	41	58	63	.4	22	38	2214	8.91	10	<8	<2	<2	33	<.2	<3	<3	73	1.25	.142	29	12	.25	294	<.01	7	.42	.01	.09	<2	<1	1416
TR97129	12	48	164	255	.7	16	23	1698	10.32	20	<8	<2	3	34	.4	<3	<3	29	.67	.115	49	6	.15	177	<.01	6	.47	.01	.37	<2	<1	4614
TR97130	4	53	28	66	<.3	15	38	2370	8.54	5	<8	<2	3	48	<.2	<3	<3	22	.69	.232	46	7	.17	166	<.01	7	.41	.01	.13	<2	<1	988
STANDARD C3/AU-S/SO-15	24	61	38	148	5.1	34	12	740	3.30	57	22	5	17	28	21.1	16	22	77	.57	.084	20	160	.62	149	.09	22	1.84	.04	.16	22	46	2102

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	Au*	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppb	ppm	
TR97131	19	63	139	5669	2.2	31	11	1446	7.01	42	<8	<2	9	14	52.9	3	4	4	.13	.057	63	6	.06	141	<.01	4	1.07	.01	.21	<2	1	1050
TR97132	18	34	106	56	1.1	14	5	1117	10.54	70	<8	<2	7	22	<.2	3	<3	8	.02	.043	46	10	.07	91	.01	6	1.07	.01	.99	<2	<1	1132
TR97133	24	19	59	30	.6	9	6	528	4.86	35	<8	<2	10	13	<.2	<3	4	3	<.01	.044	75	5	.02	122	<.01	5	.36	.01	.63	<2	<1	2098
TR97134	26	22	55	46	.4	15	6	305	4.09	21	9	<2	5	16	<.2	<3	<3	27	.07	.051	61	21	.21	183	.04	6	.66	.01	.33	<2	4	1105
TR97135	13	33	57	18	<.3	14	9	738	4.73	13	<8	<2	9	42	<.2	3	<3	5	.01	.070	102	9	.02	155	<.01	6	.35	.01	.28	<2	<1	1022
TR97136	10	27	101	19	.7	7	5	384	7.61	20	<8	<2	5	31	<.2	<3	<3	20	.02	.076	55	14	.08	170	.02	6	.56	.01	.69	<2	<1	816
TR97137	9	38	47	42	.7	18	9	1045	6.37	20	<8	<2	4	26	<.2	<3	<3	18	.23	.052	39	23	.21	376	.02	4	.95	.01	.35	<2	<1	1805
TR97138	7	27	68	76	1.1	22	10	909	5.67	22	<8	<2	4	28	.3	<3	<3	26	.13	.051	57	20	.24	263	.03	5	.91	.02	.37	<2	1	3926
TR97139	13	116	100	817	.6	24	16	1188	8.26	28	<8	<2	9	13	7.2	3	<3	8	.04	.056	63	7	.04	185	.01	5	.40	.01	.30	<2	<1	16460
TR97140	4	43	26	79	.3	28	26	822	4.81	9	<8	<2	<2	24	.3	<3	<3	31	.86	.091	32	22	.27	421	.01	8	.58	.01	.13	<2	1	1367
TR97141	5	13	20	48	<.3	10	37	896	3.34	8	<8	<2	5	41	.2	<3	4	22	4.44	.280	30	3	.27	180	<.01	5	.69	.01	.30	<2	<1	757
TR97142	9	23	45	285	.7	28	12	1062	4.67	22	<8	<2	3	31	1.8	3	<3	23	.34	.123	52	9	.11	302	<.01	6	.53	.01	.20	<2	<1	1598
RE TR97142	10	23	42	287	.7	28	12	1045	4.62	23	<8	<2	3	31	1.8	3	3	23	.34	.122	52	8	.11	304	<.01	7	.53	.01	.19	<2	<1	1591
TR97143	4	19	27	141	.4	13	28	2919	10.85	10	<8	<2	2	51	.5	<3	<3	25	1.07	.212	37	6	.28	194	<.01	8	.47	.01	.16	<2	<1	1261
TR97144	6	28	46	142	.6	28	26	1927	6.53	18	<8	<2	3	47	.7	<3	<3	22	.52	.155	48	10	.18	326	.01	6	.56	.02	.20	<2	<1	1611
TR97145	10	33	54	364	.7	35	29	1637	6.20	22	<8	<2	6	55	2.5	4	<3	32	.44	.139	55	15	.14	371	<.01	6	.66	.01	.24	<2	1	1576
TR97146	5	29	16	129	<.3	15	18	1319	5.68	8	<8	<2	<2	26	.5	<3	4	32	1.10	.133	35	15	.19	133	<.01	7	.48	.01	.11	<2	1	954
TR97147	7	36	27	637	<.3	21	27	1590	6.83	9	<8	<2	<2	44	2.2	<3	<3	32	1.55	.152	31	13	.20	158	<.01	9	.58	.01	.11	<2	<1	724
TR97148	5	36	21	515	<.3	13	19	1194	5.99	8	<8	<2	2	27	.7	<3	<3	22	1.21	.134	43	13	.16	141	<.01	6	.49	.01	.14	<2	<1	707
TR97149	4	19	24	296	<.3	12	33	790	5.17	7	<8	<2	3	26	<.2	<3	3	37	1.11	.195	38	7	.32	132	.01	10	.79	.01	.31	<2	<1	810
TR97150	5	22	74	132	<.3	10	12	575	5.33	8	<8	<2	3	85	<.2	<3	<3	8	.51	.165	53	8	.06	214	<.01	6	.41	.03	.37	<2	<1	1026
TR97151	8	12	37	86	<.3	6	9	602	4.39	7	<8	<2	5	29	<.2	<3	4	12	.28	.108	78	7	.06	243	<.01	8	.51	.01	.14	<2	2	1366
TR97152	6	11	31	68	<.3	5	8	555	3.36	6	<8	<2	6	26	<.2	<3	<3	10	.21	.108	86	8	.04	195	<.01	6	.49	<.01	.12	<2	<1	1349
TR97153	6	16	24	59	<.3	9	10	764	3.91	7	<8	<2	5	28	<.2	<3	<3	14	.35	.129	64	10	.11	169	<.01	7	.59	.01	.10	<2	<1	1199
TR97154	6	33	27	63	<.3	19	14	873	3.86	7	<8	<2	5	30	.3	<3	3	23	.41	.116	64	19	.23	179	.01	6	.82	.01	.09	<2	1	1236
TR97155	6	37	29	159	<.3	22	13	526	4.18	8	<8	<2	5	39	.9	<3	<3	27	.61	.130	53	15	.17	154	.01	6	.75	.01	.11	<2	<1	1148
TR97156	4	32	21	240	.4	31	24	1364	5.02	10	<8	<2	7	20	2.4	<3	<3	26	.48	.142	69	20	.18	116	<.01	5	.85	.01	.07	<2	1	1093
TR97157	6	43	25	369	.3	35	24	1113	6.48	15	<8	<2	6	30	2.2	<3	<3	32	.51	.142	66	25	.23	79	.01	4	.95	.01	.09	<2	1	953
TR97158	8	28	41	140	.3	14	13	908	5.34	14	<8	<2	6	46	.3	<3	<3	20	.25	.115	77	9	.10	109	<.01	5	.56	.01	.11	<2	<1	1287
TR97159	4	12	39	33	.3	8	9	759	3.78	8	<8	<2	2	14	<.2	<3	<3	16	.19	.131	51	36	.06	1583	<.01	6	.59	<.01	.11	<2	<1	3445
TR97160	7	31	26	47	.4	23	15	591	4.41	10	<8	<2	2	13	.3	<3	<3	23	.25	.131	35	25	.08	753	.01	5	.48	.01	.07	<2	1	2235
TR97161	12	16	46	72	<.3	13	9	611	3.46	11	<8	<2	6	22	.4	<3	3	15	.28	.113	65	37	.14	1503	.01	6	.47	.01	.09	<2	<1	6818
TR97162	5	24	90	68	.5	15	13	1190	4.88	9	<8	<2	5	33	.4	<3	<3	13	.57	.157	68	27	.13	931	.01	6	.48	.01	.12	<2	<1	5408
TR97163	4	11	34	50	.3	10	10	923	3.73	8	<8	<2	2	15	.2	<3	<3	19	.30	.092	52	28	.14	1035	.01	6	.72	.01	.08	<2	2	2181
TR97164	3	14	42	61	<.3	12	9	987	2.98	9	<8	<2	<2	25	.3	<3	<3	24	.51	.097	43	36	.22	1002	.01	5	.89	.01	.06	<2	1	2148
STANDARD C3/AU-S/SO-15	25	62	34	149	5.2	34	12	720	3.32	58	21	5	18	28	21.5	17	20	78	.56	.084	21	164	.61	151	.09	21	1.87	.04	.16	23	45	2124

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	Au*	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppb	ppm
TR97165	1	3	10	10	.3	2	2	276	.71	<2	<8	<2	<2	7	<.2	<3	<3	13	.05	.046	9	4	.03	72	.01	6	.33	.03	.04	<2	<1	981
TR97166	6	22	125	43	.4	16	17	1004	5.85	18	<8	<2	<2	26	.7	<3	<3	13	.52	.090	112	13	.08	293	<.01	<3	.40	.01	.18	<2	<1	2977
TR97167	8	32	130	100	.4	17	14	1520	8.49	13	<8	<2	4	28	1.5	<3	<3	12	.44	.133	110	24	.12	605	.01	3	.60	.01	.12	<2	<1	2622
TR97168	8	64	351	34	.7	38	60	793	9.92	34	<8	<2	3	51	1.1	<3	<3	10	.43	.164	47	1	.09	53	<.01	<3	.24	.02	.22	<2	<1	16980
TR97169	8	22	26	23	<.3	12	11	917	3.64	8	<8	<2	2	19	.4	<3	<3	11	.67	.082	54	4	.15	208	<.01	<3	.30	.01	.07	<2	<1	2036
TR97170	5	11	26	38	.5	5	7	468	3.25	5	<8	<2	2	13	.2	<3	<3	13	.30	.055	33	4	.06	245	.01	5	.45	.02	.06	<2	<1	1652
TR97171	11	26	29	37	<.3	8	12	1622	4.65	8	<8	<2	6	14	.5	<3	<3	7	.27	.086	36	3	.09	166	<.01	3	.31	.01	.16	<2	<1	1464
TR97172	12	10	20	27	<.3	2	13	3572	7.96	5	<8	<2	6	57	.7	<3	<3	3	1.90	.092	46	8	.24	339	<.01	<3	.35	.01	.11	<2	1	1621
TR97173	12	16	16	36	<.3	4	5	2103	3.99	6	<8	<2	7	16	.4	<3	<3	3	.82	.048	54	3	.19	160	<.01	<3	.23	.01	.09	<2	<1	1672
TR97174	12	39	30	50	<.3	20	25	1972	5.55	13	<8	<2	7	31	.7	<3	<3	15	1.22	.148	47	3	.34	186	<.01	5	.44	.01	.25	<2	<1	1345
TR97175	21	60	56	247	.5	30	28	2250	7.60	29	<8	<2	13	50	2.5	<3	<3	14	.57	.122	66	2	.18	181	<.01	5	.52	.01	.28	<2	<1	1469
TR97176	17	34	56	242	.4	9	8	1258	5.44	24	<8	<2	10	64	2.0	<3	<3	4	.14	.068	60	3	.05	147	<.01	4	.34	.01	.32	<2	<1	1942
TR97177	14	36	70	358	.3	10	10	1962	5.84	21	<8	<2	8	35	3.1	<3	<3	7	.17	.076	87	4	.08	237	<.01	<3	.38	.01	.17	<2	1	1605
TR97178	15	36	64	142	<.3	19	15	1790	5.50	19	<8	<2	8	24	1.1	<3	<3	11	.20	.080	85	5	.06	147	<.01	<3	.32	.01	.16	<2	<1	1238
TR97179	10	163	160	525	1.3	63	31	1187	8.52	27	<8	<2	10	19	2.2	<3	<3	23	.13	.142	66	9	.12	170	.01	<3	.44	.01	.11	<2	<1	1882
TR97180	11	77	432	100	.6	32	36	1060	10.03	26	<8	<2	16	48	1.1	<3	<3	12	.13	.209	145	6	.03	84	<.01	<3	.42	.02	.34	<2	<1	2392
TR97181	16	74	347	181	.7	46	53	1063	7.57	46	<8	<2	5	95	1.6	10	<3	17	.38	.299	105	10	.06	117	<.01	<3	.41	.01	.27	<2	<1	3219
TR97182	7	74	220	231	1.0	52	21	718	5.81	29	<8	<2	6	41	1.8	<3	<3	20	.28	.154	58	16	.04	301	<.01	3	.30	.01	.21	<2	<1	1769
TR97183	6	44	371	126	.7	30	14	424	5.68	21	<8	<2	12	78	1.1	<3	<3	10	.18	.136	103	7	.02	56	<.01	3	.23	.02	.38	<2	<1	2648
TR97184	13	39	76	184	.3	28	14	975	4.79	18	<8	<2	10	18	1.2	<3	<3	7	.25	.079	72	6	.06	129	<.01	<3	.20	.01	.10	<2	<1	1788
TR97185	4	53	173	109	.7	44	17	593	4.54	20	<8	<2	8	30	1.0	<3	<3	13	.31	.123	45	6	.05	163	<.01	<3	.24	.01	.15	<2	<1	1785
RE TR97185	5	57	181	115	.7	46	18	628	4.77	19	<8	<2	8	31	1.0	<3	<3	13	.32	.127	47	8	.06	174	<.01	4	.25	.01	.15	<2	1	1769
TR97201	2	10	15	32	<.3	6	12	1415	5.56	4	<8	<2	5	17	.5	<3	<3	14	.47	.202	68	17	.14	525	.01	3	.46	.01	.09	<2	<1	1337
TR97202	4	11	16	28	<.3	8	12	1180	5.13	5	<8	<2	4	17	.5	<3	<3	16	.36	.180	64	18	.12	607	.01	<3	.46	.01	.07	<2	1	1972
TR97203	3	13	16	26	<.3	8	8	1185	4.57	5	<8	<2	3	13	.5	<3	<3	10	.38	.100	67	15	.11	424	<.01	<3	.38	.01	.07	<2	<1	1556
TR97204	3	19	378	301	.4	12	16	1759	5.69	8	<8	<2	4	24	7.6	<3	<3	14	.60	.227	57	16	.10	510	.01	<3	.42	.01	.10	<2	<1	1995
TR97205	49	19	93	57	.4	9	7	553	4.07	14	<8	<2	<2	31	.6	<3	<3	13	.09	.114	46	14	.09	290	.01	<3	.52	.01	.20	<2	<1	1793
TR97206	6	11	25	22	<.3	5	5	655	3.86	6	<8	<2	3	16	.4	<3	<3	12	.16	.103	58	4	.07	266	.01	<3	.48	.01	.12	<2	<1	1411
TR97207	6	19	23	29	<.3	15	13	818	3.73	7	<8	<2	<2	14	.4	<3	<3	20	.21	.122	57	17	.14	390	.01	<3	.60	.01	.06	<2	<1	1766
TR97208	16	17	35	35	<.3	10	13	864	4.83	9	<8	<2	<2	18	.6	<3	<3	18	.27	.139	72	14	.11	375	.01	<3	.62	.01	.10	<2	<1	1535
TR97209	4	10	15	12	<.3	7	6	845	2.85	6	<8	<2	9	6	.2	<3	<3	4	.08	.059	125	4	.05	246	<.01	<3	.27	<.01	.07	<2	<1	2073
TR97210	6	15	38	48	.6	9	12	1909	7.19	10	<8	<2	5	18	.8	<3	<3	13	.34	.152	64	15	.11	504	<.01	<3	.46	<.01	.12	<2	<1	1939
TR97211	4	18	68	81	.4	8	7	1481	6.20	8	<8	<2	3	21	.9	<3	<3	9	.52	.095	50	12	.09	326	<.01	<3	.49	.01	.26	<2	<1	1506
TR97212	4	15	34	84	.5	7	7	2230	6.71	12	<8	<2	4	10	.7	<3	<3	7	.31	.100	69	6	.10	265	<.01	<3	.36	.01	.11	<2	<1	1274
TR97213	13	22	491	1852	6.8	10	12	1641	6.97	21	<8	<2	6	16	25.6	<3	<3	8	.23	.100	71	6	.07	259	<.01	<3	.37	.01	.11	<2	<1	1561
STANDARD C3/AU-S/SO-15	25	59	33	142	5.1	33	11	728	3.31	51	22	3	17	27	21.0	13	15	73	.54	.082	20	156	.60	127	.09	19	1.77	.04	.15	20	45	2078

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	Au*	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppb	ppm
TR97214	2	23	26	167	.7	12	10	662	3.03	5	<8	<2	<2	20	3.3	<3	<3	11	.72	.176	60	13	.08	355	.01	<3	.58	.01	.07	<2	<1	1898
TR97215	2	8	10	14	<.3	5	5	419	2.00	4	<8	<2	<2	9	<.2	<3	<3	7	.21	.077	64	4	.05	167	<.01	<3	.40	.01	.05	<2	<1	1385
TR97216	2	7	17	14	<.3	6	5	357	2.49	3	<8	<2	<2	8	<.2	<3	<3	10	.13	.095	63	5	.06	145	<.01	<3	.50	.01	.05	<2	<1	1436
TR97217	3	11	26	12	<.3	8	7	434	2.61	6	<8	<2	2	9	<.2	<3	<3	10	.27	.097	80	8	.08	204	<.01	<3	.45	.01	.06	<2	<1	1998
TR97218	3	11	17	18	<.3	6	9	722	3.89	2	<8	<2	<2	11	<.2	<3	<3	9	.50	.134	35	10	.12	315	<.01	<3	.47	.01	.06	<2	<1	2237
TR97219	5	12	17	19	<.3	8	13	1508	4.84	3	<8	<2	<2	12	<.2	<3	<3	11	.65	.147	52	5	.26	162	.01	<3	.54	.01	.08	<2	1	1284
TR97220	3	24	27	20	<.3	17	26	1042	4.21	3	<8	<2	<2	13	<.2	<3	<3	23	.70	.189	39	4	.15	143	.01	<3	.54	.01	.13	<2	2	1195
TR97221	2	15	22	49	<.3	10	30	1632	4.80	3	<8	<2	<2	12	<.2	<3	<3	32	.69	.190	46	2	.30	187	.01	3	.90	.01	.23	<2	3	1108
TR97222	5	21	35	60	<.3	10	36	2162	7.48	3	<8	<2	<2	15	<.2	<3	<3	45	.59	.174	43	11	.16	366	<.01	<3	.64	.01	.18	<2	2	1966
TR97223	8	21	54	156	<.3	13	25	1556	6.69	7	<8	<2	<2	24	.4	<3	<3	24	.43	.142	41	8	.11	318	<.01	<3	.48	.01	.24	<2	3	1833
TR97224	8	21	119	34	<.3	15	38	1997	5.98	15	<8	<2	4	21	<.2	<3	<3	21	.46	.196	51	10	.10	388	.01	<3	.40	.01	.15	<2	2	1967
TR97225	11	27	73	202	<.3	13	25	1651	7.28	13	<8	<2	5	21	1.1	<3	<3	21	.33	.161	52	11	.11	412	.01	<3	.50	.01	.19	<2	1	2414
RE TR97225	12	26	70	196	<.3	12	24	1601	7.01	12	<8	<2	5	20	1.0	<3	<3	20	.32	.157	53	12	.11	484	.01	<3	.47	.01	.18	<2	2	2329
TR97226	17	41	44	86	.3	12	24	1614	6.73	12	<8	<2	12	23	.2	<3	<3	20	.35	.144	52	12	.10	392	.01	<3	.43	.01	.20	<2	<1	3052
TR97227	10	56	46	62	<.3	16	35	3918	12.66	7	<8	<2	<2	20	<.2	<3	<3	48	.46	.166	44	7	.19	359	<.01	<3	.36	.01	.10	<2	<1	1731
TR97228	63	61	188	462	2.2	19	14	2951	14.03	56	<8	<2	5	16	3.3	7	<3	11	.09	.060	74	6	.10	331	.01	<3	.61	.01	.15	<2	<1	1772
TR97229	26	62	96	441	.8	7	7	1198	6.55	17	<8	<2	6	60	2.9	<3	<3	5	.31	.080	71	2	.15	59	<.01	<3	.92	.01	.54	<2	2	3341
TR97230	3	34	66	219	1.2	8	9	277	4.97	22	<8	<2	<2	52	.5	3	<3	22	.06	.166	117	14	.03	395	<.01	<3	.48	.02	.18	<2	1	3255
TR97231	1	15	25	222	<.3	6	19	2562	7.61	<2	<8	<2	<2	19	2.6	<3	<3	18	2.56	.259	51	2	.34	292	<.01	<3	.37	.01	.10	<2	<1	2106
TR97232	6	31	151	148	.8	12	11	1003	7.27	13	<8	<2	<2	47	.2	3	<3	19	.17	.147	41	6	.09	60	.01	<3	.78	.08	.48	<2	1	3512
TR97233	2	17	32	59	<.3	10	11	2167	5.48	3	<8	<2	<2	26	.2	<3	<3	18	.66	.131	64	22	.16	618	.01	<3	.64	.01	.12	<2	1	1867
TR97234	3	25	38	64	<.3	6	9	2103	4.92	5	<8	<2	5	14	.3	<3	<3	7	.21	.108	89	16	.09	622	<.01	<3	.51	.01	.18	<2	<1	2615
TR97235	5	17	68	63	<.3	8	10	4869	11.97	8	<8	<2	2	16	<.2	<3	<3	8	.44	.078	88	14	.18	588	<.01	<3	.43	.01	.13	<2	1	1650
TR97236	5	11	38	37	<.3	8	8	2165	5.48	8	<8	<2	2	36	<.2	<3	<3	9	.44	.085	66	20	.12	818	<.01	<3	.49	.01	.18	<2	<1	2474
TR97237	11	29	64	27	.3	22	26	3371	7.55	8	<8	<2	<2	39	<.2	<3	<3	14	.42	.124	64	21	.13	814	<.01	<3	.50	.01	.15	<2	1	2593
TR97238	3	24	22	49	<.3	15	21	1701	4.40	2	<8	<2	<2	38	.2	<3	<3	15	1.00	.167	44	20	.20	660	.01	<3	.51	.01	.18	<2	2	2536
TR97239	3	24	16	17	<.3	13	17	1598	3.49	2	<8	<2	<2	33	<.2	<3	<3	13	1.68	.125	29	17	.18	510	.01	3	.46	.01	.08	<2	2	1673
TR97240	2	22	18	19	<.3	12	18	1619	4.99	<2	<8	<2	<2	25	<.2	<3	<3	14	1.18	.119	37	15	.22	389	<.01	<3	.49	.01	.09	<2	2	1780
TR97241	12	30	54	47	<.3	19	13	3265	7.58	12	<8	<2	3	17	<.2	<3	<3	15	.19	.093	59	16	.12	400	.01	<3	.56	.01	.16	<2	2	1486
TR97242	4	13	22	36	<.3	12	7	716	3.21	8	<8	<2	<2	8	<.2	<3	<3	27	.12	.066	41	12	.14	184	.02	3	.71	.01	.07	<2	1	1396
TR97243	4	15	23	40	<.3	14	10	877	3.65	5	<8	<2	<2	9	.2	<3	<3	22	.11	.118	43	18	.16	302	.01	3	.74	.01	.12	<2	1	1550
TR97244	4	18	35	47	<.3	18	13	1078	5.02	3	<8	<2	<2	14	<.2	<3	<3	17	.21	.148	62	22	.12	575	.01	<3	.58	.01	.09	<2	1	2221
TR97245	4	23	47	62	<.3	18	13	999	4.71	7	<8	<2	8	25	<.2	<3	<3	13	.36	.145	67	25	.11	822	.01	3	.32	.01	.10	<2	1	6994
TR97246	6	33	332	81	.8	21	14	1039	6.84	10	<8	<2	9	23	.3	<3	<3	9	.20	.125	64	21	.06	826	<.01	<3	.27	.01	.10	<2	2	18626
TR97247	11	26	98	64	.9	17	11	1427	7.22	13	<8	<2	5	27	<.2	<3	<3	10	.21	.099	63	15	.06	572	<.01	3	.48	.01	.18	<2	3	4459
STANDARD C3/AU-S/SO-15	25	61	34	143	5.3	34	12	722	3.42	52	19	3	15	27	21.4	14	18	76	.55	.086	19	162	.62	132	.09	15	1.83	.04	.15	22	45	2211

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	Au*	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppb	ppm	
TR97248	<1	8	13	17	<.3	3	2	168	1.03	2	<8	<2	<2	14	<.2	<3	<3	12	.27	.085	10	3	.06	166	.02	4	.52	.03	.04	<2	1	1159
TR97249	6	64	70	302	.4	28	27	1297	7.22	13	<8	<2	4	13	1.4	<3	<3	23	.36	.110	61	13	.09	258	<.01	3	.34	.01	.07	<2	2	2288
TR97250	4	18	31	41	<.3	10	8	382	4.07	9	<8	<2	<2	16	<.2	<3	<3	14	.35	.071	41	12	.07	407	<.01	<3	.55	.01	.05	<2	<1	1889
TR97251	26	23	46	35	<.3	12	8	796	4.25	11	<8	<2	10	13	<.2	<3	<3	8	.17	.062	64	14	.07	274	<.01	3	.32	<.01	.07	<2	<1	1672
TR97252	4	28	50	48	<.3	14	13	810	4.37	11	<8	<2	<2	30	.2	<3	<3	8	.57	.094	31	4	.08	241	<.01	4	.50	.01	.07	<2	<1	2056
TR97253	4	42	50	37	<.3	33	23	722	5.26	11	<8	<2	<2	18	<.2	<3	<3	21	.44	.144	31	4	.07	111	<.01	<3	.29	.01	.07	<2	<1	1476
TR97254	4	38	70	46	<.3	22	18	1107	4.51	9	<8	<2	<2	30	<.2	<3	<3	9	.75	.101	51	13	.09	259	<.01	6	.48	.01	.09	<2	<1	2132
TR97255	4	23	72	62	<.3	12	5	212	2.16	9	<8	<2	4	27	.2	<3	<3	7	.51	.055	61	27	.05	877	<.01	3	.35	<.01	.08	<2	1	3308
TR97256	4	38	201	31	.5	17	10	350	3.83	15	<8	<2	3	49	<.2	<3	<3	11	.19	.098	48	10	.04	132	<.01	6	.41	.01	.36	<2	<1	3420
TR97257	3	25	77	113	<.3	21	12	1792	4.82	14	<8	<2	<2	34	.5	<3	<3	19	.28	.092	68	19	.16	425	.01	4	.79	.01	.12	<2	1	2184
TR97258	1	17	54	81	<.3	20	10	1107	3.66	10	<8	<2	2	25	.4	<3	<3	21	.30	.057	62	24	.26	382	.02	5	.79	.01	.09	<2	1	2208
TR97259	8	17	757	198	2.3	10	5	429	5.18	28	<8	<2	<2	15	.2	<3	<3	9	.02	.072	44	5	.03	111	<.01	4	.38	.02	.35	<2	7	1686
TR97260	14	24	243	1832	.7	12	9	1534	5.72	18	<8	<2	5	15	8.6	<3	3	4	.09	.058	114	4	.03	89	<.01	3	.19	<.01	.05	<2	5	2268
TR97261	6	12	29	141	<.3	7	6	404	3.92	6	<8	<2	3	10	<.2	<3	<3	26	.15	.064	19	5	.04	108	<.01	4	.47	<.01	.08	<2	<1	1130
TR97262	8	19	50	222	<.3	14	11	868	4.29	9	<8	<2	9	30	1.5	<3	<3	16	.67	.079	22	3	.10	123	<.01	5	.25	.01	.09	<2	<1	1472
TR97263	9	24	60	246	<.3	17	12	953	5.16	11	<8	<2	3	29	1.3	<3	<3	23	.32	.061	21	2	.08	115	<.01	4	.34	.01	.11	<2	<1	1299
TR97264	6	28	114	135	<.3	23	17	1268	6.27	12	<8	<2	8	31	.7	<3	<3	12	.38	.101	16	2	.07	85	<.01	<3	.21	.01	.08	<2	<1	1436
TR97265	4	42	23	190	<.3	41	7	193	2.06	10	<8	<2	<2	23	1.0	3	<3	22	.19	.105	10	5	.06	86	<.01	3	.37	.01	.05	<2	<1	1189
RE TR97267	4	51	30	126	.4	25	5	166	1.70	9	<8	<2	<2	22	.8	4	<3	19	.10	.084	11	5	.04	89	<.01	3	.28	.01	.05	<2	<1	1431
TR97266	3	44	31	102	.6	35	7	190	1.84	8	<8	<2	<2	28	.4	3	<3	20	.13	.084	5	5	.04	130	<.01	<3	.37	.01	.06	<2	1	1722
TR97267	4	52	29	126	.5	25	5	171	1.71	8	<8	<2	<2	22	.7	4	<3	19	.10	.084	10	4	.04	83	<.01	4	.29	.01	.05	<2	1	1361
TR97268	4	44	31	103	.4	19	4	157	1.71	9	<8	<2	<2	18	.5	<3	<3	23	.06	.078	12	5	.04	94	<.01	4	.40	.01	.06	<2	1	1649
TR97269	13	27	67	176	.5	13	4	256	2.71	22	<8	<2	3	24	1.0	7	<3	37	.23	.094	33	4	.05	111	<.01	<3	.29	.01	.08	<2	1	2746
TR97270	8	27	46	193	.3	17	6	289	2.62	14	<8	<2	2	22	2.1	4	<3	26	.40	.154	30	3	.07	83	<.01	3	.30	<.01	.07	<2	<1	1809
TR97271	13	19	55	153	<.3	9	5	478	3.08	21	<8	<2	<2	16	.7	5	<3	33	.20	.095	32	4	.05	236	<.01	<3	.39	<.01	.05	<2	1	2434
TR97272	8	19	38	96	<.3	11	4	310	1.94	12	<8	<2	<2	13	.7	3	<3	28	.16	.090	24	4	.04	138	<.01	<3	.35	.01	.05	<2	<1	2164
TR97273	6	37	40	301	<.3	33	12	396	5.25	11	<8	<2	3	9	.6	<3	<3	8	.06	.091	31	5	.04	135	<.01	4	.22	<.01	.05	<2	1	2471
TR97274	5	21	42	139	<.3	16	4	244	2.41	12	<8	<2	<2	7	.3	<3	<3	21	.02	.108	19	6	.03	45	<.01	4	.37	<.01	.03	<2	1	3775
TR97275	4	24	54	182	<.3	19	6	465	2.80	10	<8	<2	<2	9	.9	3	<3	16	.08	.120	29	7	.05	211	<.01	4	.40	.01	.05	<2	1	4152
TR97276	3	38	19	101	.6	31	5	126	1.64	6	<8	<2	<2	20	.4	3	<3	21	.17	.085	7	3	.04	121	<.01	4	.39	.01	.05	<2	1	1119
TR97277	5	42	30	148	.5	30	6	140	2.03	11	<8	<2	<2	35	.4	3	<3	29	.12	.085	7	4	.06	113	.01	4	.43	.01	.06	<2	1	1441
TR97278	3	41	28	148	<.3	35	7	187	2.12	10	<8	<2	<2	26	.4	4	<3	21	.12	.084	6	5	.05	100	<.01	<3	.33	<.01	.05	<2	1	1428
TR97279	4	72	19	64	<.3	27	12	562	2.38	9	<8	<2	<2	20	.2	<3	<3	22	.23	.149	11	6	.04	118	<.01	<3	.39	<.01	.04	<2	1	2347
TR97280	3	41	28	69	.5	32	9	181	2.35	11	<8	<2	<2	20	.2	4	<3	19	.11	.096	4	5	.03	68	<.01	3	.24	<.01	.05	<2	1	1403
TR97281	3	36	32	119	.4	22	4	43	1.60	10	<8	<2	<2	36	.4	4	<3	17	.13	.089	4	4	.02	117	<.01	<3	.20	<.01	.08	<2	<1	1087
STANDARD C3/AU-S/SO-15	22	60	34	139	5.1	33	12	707	3.28	51	18	2	16	27	21.1	12	16	73	.53	.082	18	153	.60	112	.08	19	1.78	.04	.15	20	43	2175

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	Au*	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppb	ppm
TR97282	6	23	53	37	.8	10	2	73	1.40	16	9	<2	2	38	<.2	7	3	19	.03	.073	5	12	.02	111	<.01	5	.23	.01	.10	<2	<1	1350
TR97283	8	56	24	217	.7	89	52	1860	8.43	9	<8	<2	5	116	.4	4	<3	27	3.04	.752	26	15	.53	190	<.01	5	.71	.02	.18	<2	<1	1177
TR97284	5	42	19	152	.4	46	19	636	5.91	7	<8	<2	3	68	.7	<3	<3	28	1.31	.415	18	13	.22	179	<.01	5	.77	.01	.08	<2	<1	1240
TR97285	3	25	29	78	.5	18	4	152	1.40	7	8	<2	<2	19	.2	<3	<3	19	.08	.075	8	8	.03	133	<.01	4	.34	.01	.06	<2	<1	1388
TR97286	7	26	44	75	.4	11	3	258	1.65	12	<8	<2	<2	16	.2	3	3	28	.04	.073	24	12	.04	96	<.01	3	.41	.01	.06	<2	<1	1355
TR97287	8	42	50	173	.6	20	4	286	2.52	17	<8	<2	3	31	.8	4	3	21	.23	.100	34	9	.06	125	<.01	4	.39	.01	.08	<2	<1	1648
TR97288	6	88	53	86	.7	153	60	754	4.86	31	<8	<2	5	58	.7	6	<3	28	6.15	.433	11	21	.28	87	<.01	4	.52	.01	.15	<2	<1	732
TR97289	16	33	66	256	.5	15	7	828	3.56	24	<8	<2	14	31	2.7	5	3	47	.41	.161	33	7	.06	127	<.01	<3	.37	.01	.13	<2	1	1609
TR97290	29	34	126	274	1.4	17	4	265	4.26	53	<8	<2	4	37	2.1	12	<3	64	.36	.073	30	5	.06	245	<.01	7	.35	.01	.24	<2	<1	2346
TR97291	49	61	132	233	3.5	17	3	414	6.54	114	<8	<2	6	80	2.8	29	<3	127	.11	.074	40	8	.02	122	<.01	9	.36	.01	.64	<2	<1	3940
TR97292	22	45	121	193	1.3	14	5	993	4.32	72	<8	<2	6	173	1.8	8	<3	19	1.46	.123	73	8	.38	149	<.01	9	.40	.01	.09	<2	<1	2588
TR97293	16	32	72	200	.8	14	7	576	3.74	25	<8	<2	6	26	1.2	7	3	41	.30	.146	48	8	.06	186	<.01	6	.43	.01	.10	<2	<1	2591
RE TR97293	16	34	77	203	1.0	14	7	589	3.89	26	<8	<2	6	27	1.2	7	<3	44	.31	.152	51	7	.06	206	<.01	7	.44	.01	.10	<2	1	2572
TR97294	13	39	58	243	.8	25	9	639	3.55	22	<8	<2	8	28	2.3	6	3	39	.40	.166	35	8	.07	143	<.01	7	.40	.01	.10	<2	1	1722
TR97295	26	33	119	310	1.2	18	5	782	3.90	37	<8	<2	4	25	2.0	10	3	69	.12	.078	38	14	.04	331	<.01	6	.47	.01	.11	<2	1	2366
TR97296	30	23	84	194	1.0	16	3	453	2.66	34	<8	<2	2	28	1.7	8	<3	95	.12	.075	27	9	.04	182	<.01	6	.43	.01	.10	<2	1	1984
TR97297	40	26	100	180	1.2	12	3	275	3.78	43	<8	<2	5	35	1.1	12	<3	91	.03	.072	31	8	.02	128	<.01	7	.30	.01	.12	<2	1	2041
TR97298	22	18	93	521	1.2	17	9	1494	5.65	23	<8	<2	7	15	7.2	10	<3	40	.09	.060	12	7	.05	155	<.01	4	.36	.01	.07	<2	<1	2258
TR97299	36	47	124	349	2.0	20	4	511	5.47	51	<8	<2	7	36	2.4	17	<3	77	.09	.053	22	16	.03	327	<.01	5	.39	.01	.22	<2	<1	3354
TR97300	15	32	69	391	1.1	11	3	1116	5.04	39	<8	<2	8	51	3.2	7	<3	13	.23	.069	103	7	.06	163	<.01	6	.34	.01	.12	<2	1	3107
TR97301	52	35	110	212	1.5	17	4	266	5.09	61	<8	<2	14	42	1.4	21	<3	118	.13	.079	42	12	.03	291	<.01	5	.23	.01	.18	<2	1	2668
TR97302	6	29	29	111	.7	20	5	302	2.03	10	8	<2	<2	18	.7	3	<3	23	.19	.120	23	7	.06	101	<.01	6	.37	.01	.05	<2	<1	1250
TR97303	4	31	30	97	.5	24	6	149	1.69	9	9	<2	<2	25	.4	3	<3	20	.12	.109	7	6	.05	92	<.01	5	.35	.01	.06	<2	<1	1447
TR97304	5	37	30	117	.6	27	7	206	2.09	9	8	<2	<2	34	.4	<3	<3	22	.15	.133	7	10	.06	126	<.01	7	.43	.01	.07	<2	<1	1403
TR97305	4	26	28	87	.6	18	7	267	2.05	7	<8	<2	<2	36	.3	<3	<3	22	.34	.204	12	8	.07	115	<.01	7	.49	.01	.07	<2	<1	1465
TR97306	6	10	52	22	1.0	3	1	58	.97	14	<8	<2	<2	29	<.2	<3	<3	14	.04	.104	10	4	.01	272	<.01	5	.30	.02	.08	<2	1	3653
TR97307	7	29	91	242	1.3	12	4	238	2.74	18	<8	<2	5	37	1.2	5	<3	19	.10	.112	13	6	.12	279	<.01	7	.53	.01	.08	<2	<1	3377
TR97308	3	36	54	202	.7	25	17	416	3.62	6	<8	<2	10	38	.9	<3	3	5	.28	.151	83	30	.03	1145	<.01	7	.31	.01	.10	<2	<1	26487
TR97309	2	44	56	77	.9	27	5	145	2.02	15	<8	<2	2	17	.2	<3	<3	16	.08	.049	17	16	.02	346	<.01	7	.24	<.01	.04	<2	1	6610
TR97310	15	17	56	327	1.0	11	3	356	3.90	19	<8	<2	3	11	1.8	5	<3	30	.21	.059	15	4	.06	105	<.01	5	.51	.01	.05	<2	<1	2175
TR97311	<1	7	7	17	.3	2	1	74	.53	3	<8	<2	<2	11	<.2	<3	<3	15	.12	.043	5	<1	.05	53	.02	4	.35	.04	.03	<2	<1	1110
TR97312	3	45	52	166	.8	27	8	600	3.57	14	<8	<2	<2	5	.7	4	<3	14	.07	.082	34	8	.04	189	<.01	5	.38	.01	.03	<2	<1	3078
TR97313	5	34	49	212	.6	24	7	211	2.37	14	<8	<2	3	16	2.0	<3	<3	26	.27	.111	36	13	.05	344	<.01	5	.43	<.01	.05	<2	<1	2069
TR97314	2	11	24	126	.3	7	2	219	1.49	5	<8	<2	<2	13	.3	<3	<3	13	.17	.057	9	5	.03	286	.01	5	.43	.03	.03	<2	<1	1366
TR97315	1	17	30	75	.4	11	5	134	1.46	6	<8	<2	<2	13	.2	<3	<3	16	.24	.085	15	14	.05	469	.01	5	.70	.03	.03	<2	<1	1802
STANDARD C3/AU-S/SO-15	25	63	39	148	5.4	34	12	723	3.23	56	23	3	16	28	21.8	17	15	77	.55	.084	20	158	.61	130	.09	23	1.86	.04	.16	22	46	2203

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	Au*	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppb	ppm	
TR97316	<1	15	22	33	<.3	6	3	65	1.18	2	<8	<2	<2	12	<.2	<3	<3	27	.21	.075	9	4	.05	142	.03	<3	.56	.03	.02	<2	<1	1560
TR97317	2	27	56	129	.3	26	10	308	3.12	7	<8	<2	<2	17	.5	<3	<3	16	.51	.126	53	16	.04	401	<.01	<3	.37	.01	.09	<2	1	3791
TR97318	3	51	58	102	.4	34	12	256	2.45	8	<8	<2	4	26	.4	<3	3	13	.28	.121	55	38	.03	1437	<.01	<3	.36	.01	.10	<2	<1	12043
TR97319	3	24	18	94	<.3	18	5	134	2.20	8	<8	<2	<2	11	.3	<3	<3	12	.07	.086	28	3	.04	110	<.01	<3	.39	<.01	.04	<2	1	2381
TR97320	21	20	102	184	.9	9	4	491	3.28	23	<8	<2	3	19	1.1	5	<3	46	.10	.053	60	4	.04	151	<.01	<3	.27	.01	.07	<2	1	3246
TR97321	21	19	104	179	1.2	7	2	365	3.43	23	<8	<2	<2	19	.7	5	<3	47	.06	.055	40	4	.03	262	<.01	<3	.45	.01	.06	<2	1	3793
TR97322	19	14	91	152	.6	6	2	501	2.99	17	<8	<2	2	16	.7	4	<3	25	.06	.044	90	4	.02	149	<.01	<3	.25	.01	.06	<2	<1	3009
TR97323	18	16	79	239	.3	10	5	1405	4.07	16	<8	<2	6	15	1.7	<3	<3	15	.09	.050	149	4	.03	94	<.01	<3	.22	.01	.06	<2	<1	2481
TR97324	17	15	70	167	.3	6	3	903	3.96	17	<8	<2	4	14	.8	<3	<3	20	.11	.047	164	6	.04	77	<.01	<3	.28	<.01	.07	<2	1	1675
TR97325	16	17	68	204	.3	8	4	795	3.85	22	<8	<2	4	22	1.1	<3	<3	22	.15	.059	157	8	.04	65	<.01	<3	.33	.01	.06	<2	<1	1301
TR97326	18	46	54	240	1.0	9	8	2750	8.81	24	<8	<2	7	13	1.3	<3	<3	5	.38	.063	89	2	.26	120	<.01	<3	.63	.01	.08	<2	4	1311
TR97327	6	21	39	148	<.3	19	5	276	2.30	12	<8	<2	<2	12	.2	<3	3	23	.14	.087	17	4	.03	80	<.01	<3	.25	.01	.05	<2	<1	3425
TR97328	3	9	27	62	<.3	5	3	264	1.32	6	<8	<2	<2	16	.4	<3	<3	17	.13	.080	15	<1	.05	106	.01	<3	.45	.02	.03	<2	<1	1483
TR97329	2	15	26	54	<.3	9	4	310	1.44	6	<8	<2	<2	8	.4	<3	<3	10	.10	.072	15	1	.03	66	.01	<3	.47	.03	.03	<2	1	1284
TR97330	6	18	32	105	<.3	11	5	496	2.70	10	<8	<2	<2	8	.5	<3	<3	19	.05	.117	33	6	.05	74	<.01	<3	.49	.01	.05	<2	1	1483
TR97331	3	5	21	33	<.3	2	2	138	1.12	3	<8	<2	<2	8	.2	<3	<3	20	.10	.061	14	3	.05	37	.02	<3	.42	.03	.03	<2	<1	1281
TR97332	8	8	28	91	<.3	4	2	386	2.10	10	<8	<2	<2	19	.4	<3	<3	14	.23	.050	68	1	.04	69	.01	<3	.38	.02	.03	<2	1	1360
TR97333	9	32	71	542	.8	5	4	863	4.95	19	<8	<2	2	12	2.8	<3	<3	9	.17	.072	79	2	.08	117	.01	<3	.83	.02	.08	<2	5	1486
TR97334	1	5	6	24	<.3	1	1	115	.79	2	<8	<2	<2	6	<.2	<3	<3	16	.06	.039	13	2	.04	21	.02	<3	.42	.03	.03	<2	<1	969
TR97335	14	60	134	700	1.4	3	5	927	7.47	56	<8	<2	2	42	3.3	<3	<3	4	.04	.083	123	3	.03	137	<.01	<3	.80	.01	.39	<2	10	2044
TR97336	4	28	43	162	.3	22	8	437	2.53	11	<8	<2	<2	14	.9	<3	<3	17	.25	.110	30	12	.06	292	<.01	<3	.32	.01	.05	<2	<1	5171
TR97337	1	15	28	63	.3	15	5	260	1.56	5	<8	<2	<2	10	.2	<3	<3	12	.09	.077	15	4	.03	205	.01	<3	.44	.02	.03	<2	1	2904
RE TR97337	2	16	28	63	.3	15	5	256	1.57	5	<8	<2	<2	10	.2	<3	<3	12	.09	.078	15	4	.03	210	.01	<3	.44	.02	.03	<2	1	2950
TR97338	<1	13	22	35	.7	11	6	342	1.03	3	<8	<2	<2	6	<.2	<3	<3	13	.05	.050	8	2	.04	105	.01	<3	.37	.03	.04	<2	1	1858
TR97339	3	27	81	92	.7	17	8	537	2.48	8	<8	<2	<2	12	.5	<3	<3	13	.14	.114	42	22	.04	741	<.01	<3	.53	.01	.05	<2	<1	3437
TR97340	1	8	47	27	<.3	6	2	137	.92	3	<8	<2	<2	10	<.2	<3	<3	9	.13	.064	20	<1	.04	101	.01	<3	.37	.03	.02	<2	<1	1454
TR97341	2	20	35	45	<.3	18	11	817	1.56	5	<8	<2	17	13	.3	<3	<3	8	.45	.072	171	21	.04	526	<.01	3	.53	.01	.21	<2	1	2346
TR97342	7	20	164	103	.5	11	7	180	5.12	18	<8	<2	<2	23	1.5	<3	<3	25	.13	.206	25	10	.01	339	<.01	<3	.31	.01	.13	<2	<1	9608
TR97343	6	9	41	72	<.3	8	7	206	2.47	11	<8	<2	<2	8	<.2	<3	<3	29	.02	.076	33	1	.02	134	.01	<3	.23	<.01	.06	<2	<1	1772
TR97344	3	24	272	33	.8	15	8	414	2.53	11	<8	<2	4	61	.2	<3	<3	10	.27	.086	75	23	.06	774	<.01	<3	.47	.01	.10	<2	1	4070
TR97345	4	7	423	27	.8	6	3	179	2.44	8	<8	<2	6	24	<.2	<3	<3	6	.03	.047	61	3	.02	166	<.01	<3	.31	.01	.21	<2	<1	7788
TR97346	5	4	178	20	.5	3	2	225	2.79	8	<8	<2	4	17	<.2	<3	<3	10	.01	.054	81	2	.02	84	.01	<3	.29	.01	.37	<2	1	2641
TR97347	5	8	87	39	<.3	7	5	584	2.39	7	<8	<2	<2	13	.2	<3	<3	18	.02	.071	51	10	.02	319	<.01	<3	.33	.01	.12	<2	<1	2208
TR97348	3	24	48	92	<.3	31	23	867	4.50	10	<8	<2	2	19	<.2	<3	<3	14	.24	.116	45	15	.05	529	<.01	<3	.34	<.01	.10	<2	1	2627
TR97349	16	21	444	55	2.0	11	8	1007	7.33	38	<8	<2	<2	33	<.2	<3	<3	7	.24	.091	39	2	.06	45	<.01	<3	.52	.01	.63	<2	<1	3927
STANDARD C3/AU-S/SO-15	25	62	35	145	5.6	34	12	730	3.35	55	24	<2	17	28	22.4	12	17	77	.55	.086	19	163	.63	123	.09	17	1.86	.04	.15	19	44	2232

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	Au*	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppb	ppm
TR97350	7	17	52	201	.4	13	7	536	3.50	12	<8	<2	7	13	1.3	<3	<3	10	.16	.077	55	8	.05	112	<.01	<3	.34	<.01	.08	<2	<1	1384
TR97351	13	22	66	302	<.3	21	9	1427	5.66	14	<8	<2	5	35	2.8	<3	<3	29	.29	.080	17	5	.10	134	<.01	<3	.32	.01	.07	<2	1	1061
TR97352	9	22	36	280	<.3	17	9	569	4.46	8	<8	<2	3	32	1.3	<3	<3	26	.50	.060	31	7	.21	130	<.01	<3	.62	.01	.08	<2	<1	1305
TR97353	13	36	24	59	<.3	8	5	1839	4.03	6	<8	<2	4	43	.7	<3	<3	3	1.15	.083	76	7	.08	186	<.01	<3	.29	.01	.09	<2	1	1143
TR97354	12	28	102	97	.5	19	14	798	6.47	19	<8	<2	4	68	.2	<3	<3	16	.17	.142	46	11	.05	188	<.01	3	.42	.01	.38	<2	<1	832
TR97355	7	27	54	98	.4	27	24	1420	6.18	14	<8	<2	4	55	.6	<3	<3	9	.24	.130	36	10	.07	162	<.01	5	.38	.02	.36	<2	1	809
TR97356	6	39	35	83	.3	24	23	1207	7.84	7	<8	<2	2	71	.2	<3	<3	20	.86	.121	25	7	.25	69	<.01	5	.61	.03	.53	<2	<1	1028
RE TR97356	7	40	40	85	<.3	24	23	1239	8.07	10	<8	<2	<2	73	.2	<3	<3	21	.87	.122	27	9	.26	81	<.01	<3	.63	.03	.55	<2	1	976
TR97357	7	63	47	41	<.3	22	25	1669	7.58	6	<8	<2	<2	85	<.2	<3	<3	22	1.49	.123	35	6	.26	160	<.01	3	.45	.02	.29	<2	<1	789
STANDARD C3/AU-S/SO-15	25	64	33	150	5.2	34	12	738	3.31	54	22	<2	17	28	22.2	11	19	75	.56	.084	19	169	.63	155	.09	20	1.85	.04	.15	16	47	1972

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



GEOCHEMICAL ANALYSIS CERTIFICATE

Atna Resources Ltd. PROJECT TREE File # 97-4404
 1550 - 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	Au*	Ba*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppb	ppm
GR97001	<1	73	9	131	<.3	68	33	664	6.74	26	<8	<2	16	9	<.2	<3	<3	71	.28	.091	57	123	3.86	93	.10	<3	4.07	.02	.61	<2	1	605
GR97002	4	36	5	57	<.3	7	5	203	3.74	<2	<8	<2	9	15	.2	<3	<3	17	.10	.061	20	31	1.39	84	.04	<3	1.88	.05	.43	2	1	1000
GR97003	<1	37	9	75	<.3	40	15	323	4.04	<2	<8	<2	18	9	<.2	<3	<3	45	.14	.044	15	47	1.10	86	.08	<3	1.78	.05	.57	2	<1	527
GR97004	1	6	5	12	<.3	11	7	122	.63	31	<8	<2	9	127	<.2	<3	<3	9	1.22	.058	25	15	.16	2	.13	4	.84	.01	.01	2	<1	13
US97TR001	8	16	35	12	.3	10	7	78	2.50	17	<8	<2	8	20	<.2	<3	<3	2	.91	.468	25	7	.05	145	<.01	12	.67	.01	.41	2	<1	1363
US97TR002	36	79	481	15	1.8	62	74	2160	18.20	138	<8	<2	<2	92	<.2	<3	<3	3	8.32	.048	6	5	2.23	21	<.01	6	.13	.01	.11	<2	<1	835
US97TR003	6	9	13	29	<.3	3	3	287	1.55	3	<8	<2	14	6	.2	<3	<3	1	.09	.021	93	7	.02	167	<.01	<3	.16	<.01	.17	2	<1	4234
US97TR004 -	15	103	74	8188	2.6	3	3	595	12.14	146	<8	<2	<2	9	41.5	3	<3	<1	.60	.006	34	4	.25	17	<.01	<3	.22	<.01	.21	<2	18	1558
US97TR005 -	8	9	13	130	<.3	1	2	242	3.80	8	<8	<2	15	4	.4	<3	<3	1	.02	.011	64	7	.03	82	<.01	<3	.34	<.01	.34	3	4	6360
US97TR006 -	10	15	18	203	<.3	1	2	797	3.05	8	<8	<2	8	34	5.9	<3	<3	<1	1.16	.013	51	4	.25	89	<.01	<3	.26	<.01	.24	<2	5	2651
RE US97TR006	10	15	17	205	<.3	1	2	818	3.11	9	<8	<2	8	34	6.1	<3	<3	<1	1.18	.013	51	4	.26	90	<.01	<3	.25	<.01	.25	<2	15	2669
US97TR007 -	9	31	109	131	1.2	<1	3	66	13.02	308	<8	<2	3	7	.2	6	<3	<1	.26	.005	17	4	.05	9	<.01	<3	.15	<.01	.18	<2	33	4845
US97TR008 -	29	36	192	98	2.7	2	3	186	15.19	374	<8	<2	2	4	<.2	7	<3	<1	.35	.006	9	7	.07	9	<.01	<3	.17	<.01	.18	4	76	1189

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.
 ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
 - SAMPLE TYPE: ROCK AU* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.(10 GM)
 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: AUG 15 1997

DATE REPORT MAILED:

Aug 27/97

SIGNED BY:

D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



WHOLE ROCK ICP ANALYSIS

Atna Resources Ltd. PROJECT TREE File # 96-4306R Page 1
 1550 - 409 Granville St., Vancouver BC V6C 1T2



SAMPLE#

Ba
ppm

T5000N 2200E	2439
T5000N 2250E	3149
T5000N 2300E	2011
T5000N 2400E	2376
T5000N 2450E	2650
T5000N 2500E	2249
T5000N 2550E	3401
T5000N 2600E	3598
T5000N 2650E	3772
T5000N 2700E	3324
T5000N 2750E	3415
T5000N 2800E	3512
T5000N 2850E	3267
T5000N 2900E	1862
T5000N 2950E	1900
T5000N 3000E	1558
RE T5000N 3000E	1539
T5000N 3050E	2040
T5000N 3100E	6013
T5000N 3150E	3696
T5000N 3200E	3346
T5000N 3250E	3544
T5000N 3300E	3180
T5000N 3350E	2175
T5000N 3400E	1425
T5000N 3550E	1813
T5000N 3600E	1981
T5000N 3650E	1666
T5000N 3700E	1709
T5000N 3750E	1741
T5000N 3800E	2195
T5000N 3850E	3923
T5000N 3900E	4521
T5000N 3950E	2280
T5000N 4000E	2452
STANDARD SO-15	2302

.200 GRAM SAMPLES ARE FUSED WITH 1.5 GRAM OF LiBO2 AND ARE DISSOLVED IN 100 MLS 5% HNO3.

- SAMPLE TYPE: SOIL PULP

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

DATE RECEIVED: SEP 22 1997 DATE REPORT MAILED: *Sept 29/97* SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of the analysis only.

Data FA



SAMPLE#	Ba ppm
T5000N 4050E	1953
T5000N 4100E	4029
T5000N 4200E	28646
T5000N 4300E	2754
T5000N 4350E	4594
T5000N 4400E	7133
T5000N 4450E	2013
T5000N 4500E	2639
T5000N 4550E	3016
T5000N 4600E	2557
RE T5000N 4600E	2510
T5000N 4650E	1693
T5000N 4700E	2151
T5000N 4750E	2231
T5000N 4800E	2818
T5000N 4850E	1986
T5000N 4900E	1912
T5000N 4950E	2297
T5000N 5000E	1943
T1250E 5450N	1103
T1250E 5400N	1346
T1250E 5350N	1215
T1250E 5300N	1488
T1250E 5250N	1165
T1250E 5200N	1669
T1250E 5150N	2753
T1250E 5100N	3771
T1250E 5050N	2035
T1250E 5000N	1475
T1250E 4950N	847
T1250E 4900N	1245
T1250E 4850N	1491
T1250E 4800N	1010
T1250E 4750N	1712
T1250E 4700N	991
STANDARD SO-15	2251

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



SAMPLE#	Ba ppm
T1250E 4650N	2427
T1250E 4600N	3152
T1250E 4550N	844
T1700E 5450N	6112
T1700E 5400N	3697
T1700E 5350N	4486
T1700E 5300N	2410
T1700E 5250N	3267
T1700E 5200N	6182
T1700E 5150N	5545
T1700E 5100N	1318
T1700E 5050N	3617
T1700E 5000N	1562
T1700E 4950N	2234
T1700E 4900N	2047
T1700E 4850N	2275
T1700E 4800N	2471
T1700E 4750N	1295
T1700E 4700N	1366
T1700E 4650N	4214
T1700E 4600N	2893
T1700E 4550N	2783
T1900E 5450N	2644
T1900E 5400N	3010
RE T1900E 5400N	3077
T1900E 5350N	3099
T1900E 5300N	2582
T1900E 5250N	10176
T1900E 5200N	5003
T1900E 5150N	8143
T1900E 5100N	2217
T1900E 5050N	1653
T1900E 5000N	2278
T1900E 4950N	3350
T1900E 4900N	2607
STANDARD SO-15	2252

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



SAMPLE#	Ba ppm
T1900E 4850N	1779
T1900E 4800N	1411
T1900E 4750N	1461
T1900E 4700N	2272
T1900E 4650N	1886
T1900E 4600N	2551
T1900E 4550N	1958
T2125E 5450N	2578
T2125E 5400N	2878
T2125E 5350N	2562
T2125E 5300N	3035
T2125E 5250N	5557
T2125E 5200N	1297
T2125E 5150N	2133
T2125E 5100N	2283
T2125E 5050N	3470
T2125E 5000N	3521
T2125E 4950N	1801
T2125E 4900N	2001
T2125E 4850N	1532
RE T2125E 4850N	1524
T2125E 4800N	1319
T2125E 4750N	1277
T2125E 4700N	1328
T2325E 4950N	1349
T2325E 4900N	965
T2325E 4850N	1341
T2325E 4800N	1356
T2325E 4750N	972
T2325E 4700N	1469
T2325E 4650N	1321
T2325E 4600N	1415
T2325E 4550N	1516
T2325E 4500N	1037
T2350E 5450N	2676
STANDARD SO-15	2153

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



SAMPLE#	Ba ppm
T2350E 5400N	2231
T2350E 5350N	2121
T2350E 5300N	2280
T2350E 5250N	1795
T2350E 5200N	2202
T2350E 5150N	2229
T2350E 5100N	1565
T2350E 5050N	1739
T2575E 5450N	2772
T2575E 5400N	3500
T2575E 5300N	4044
T2575E 5250N	2808
T2575E 5200N	5915
T2575E 5150N	3215
T2575E 5100N	4043
T2575E 5050N	4257
T2575E 4950N	1220
T2575E 4900N	1102
T2575E 4850N	1325
T2575E 4800N	1433
T2575E 4750N	1118
RE T2575E 4750N	1168
T2575E 4700N	1219
T2575E 4650N	1149
T2575E 4600N	1147
T2575E 4550N	939
T2575E 4500N	1138
T2800E 5450N	1163
T2800E 5400N	3084
T2800E 5350N	3970
T2800E 5300N N/S	-
T2800E 5250N	1576
T2800E 5200N	3616
T2800E 5150N	4618
T2800E 5100N	3818
STANDARD SO-15	2200

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



SAMPLE#	Ba ppm
T2800E 5050N	5598
RE T2800E 5050N	5662
T2800E 4950N	1618
T2800E 4900N	1123
T2800E 4850N	1453
T2800E 4800N	1449
T2800E 4750N	1254
T2800E 4700N	1246
T2800E 4650N	857
T2800E 4550N	844
T2800E 4500N	934
T2800E 4450N	1578
T3050E 5250N	2960
T3050E 5200N	2006
T3050E 5150N	2425
T3050E 5100N	3029
T3050E 5050N	2367
T3050E 4950N	1506
T3050E 4900N	1171
T3050E 4850N	1405
T3050E 4800N	1122
T3050E 4750N	1352
T3050E 4700N	1314
T3050E 4650N	1395
T3050E 4600N	840
T3050E 4550N	1495
T3050E 4500N	860
T3050E 4450N	1531
T3050E 4400N	1227
T3300E 5450N	1286
T3300E 5400N	1299
T3300E 5350N	1141
T3300E 5250N	2820
T3300E 5200N	1875
T3300E 5150N	2056
STANDARD SO-15	2090

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



SAMPLE#	Ba ppm
T3300E 5100N	2783
T3300E 5050N	2484
T3300E 4950N	2498
T3300E 4900N	1692
T3300E 4850N	1635
T3300E 4800N	1812
T3550E 5450N	2556
T3550E 5400N	2553
T3550E 5350N	1789
T3550E 5300N	1914
T3550E 5250N	1935
T3550E 5200N	1804
T3550E 5150N	2333
T3550E 5100N	1747
T3550E 5050N	1574
T3550E 4950N	2754
T3550E 4900N	1835
RE T3550E 4900N	1868
T3550E 4800N	1742
STANDARD SO-15	2284

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

Appendix B

STATISTICS

COPPER STATISTICS

#####

PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS

Data File Name = TREESOIL.DAT

Variable = Cu Unit = ppm N = 535 N CI = 32

Transform = Logarithmic Number of Populations = 3

of Missing Observations = 0.

=====

Users Visual Parameter Estimates

Population	Mean	Std Dev	Percentage
1	6.416	4.790	2.00
2	26.222	15.679	97.00
3	128.547	107.193	1.00

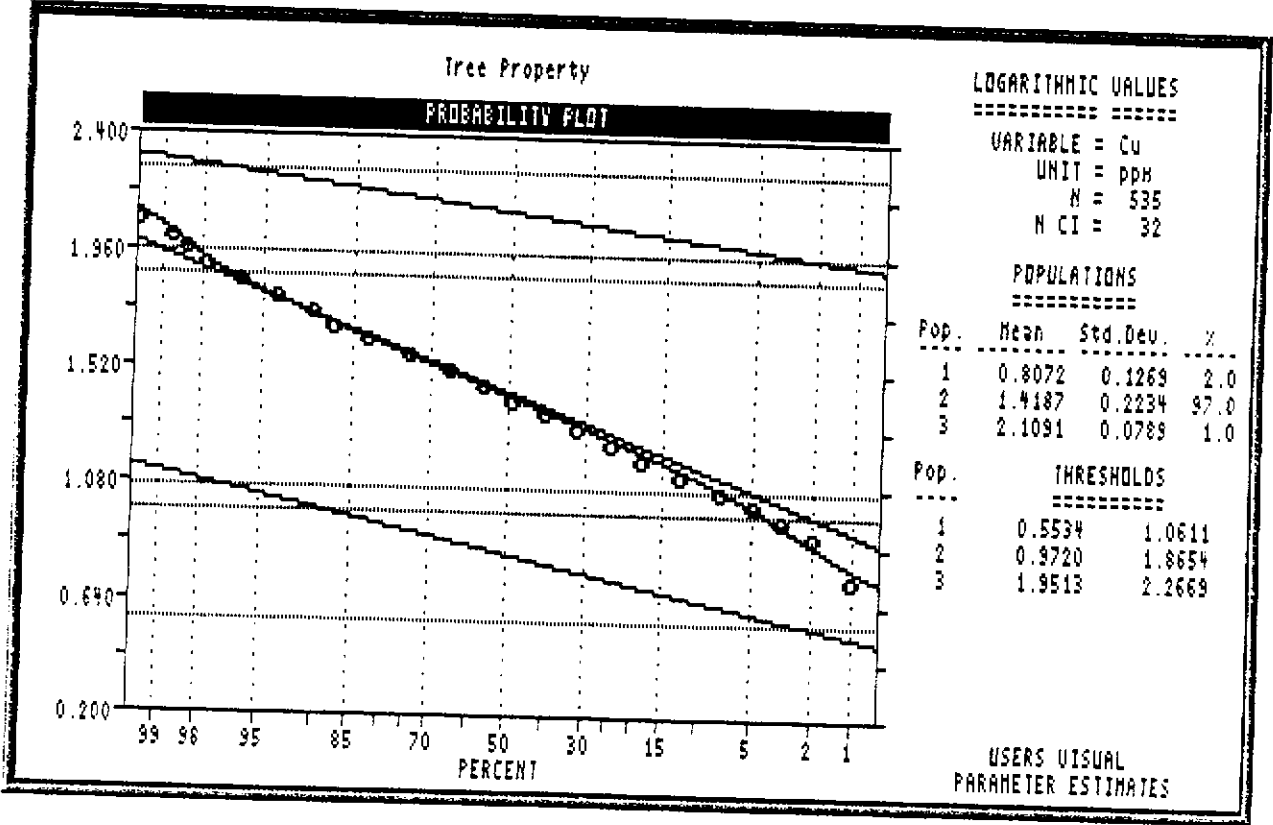
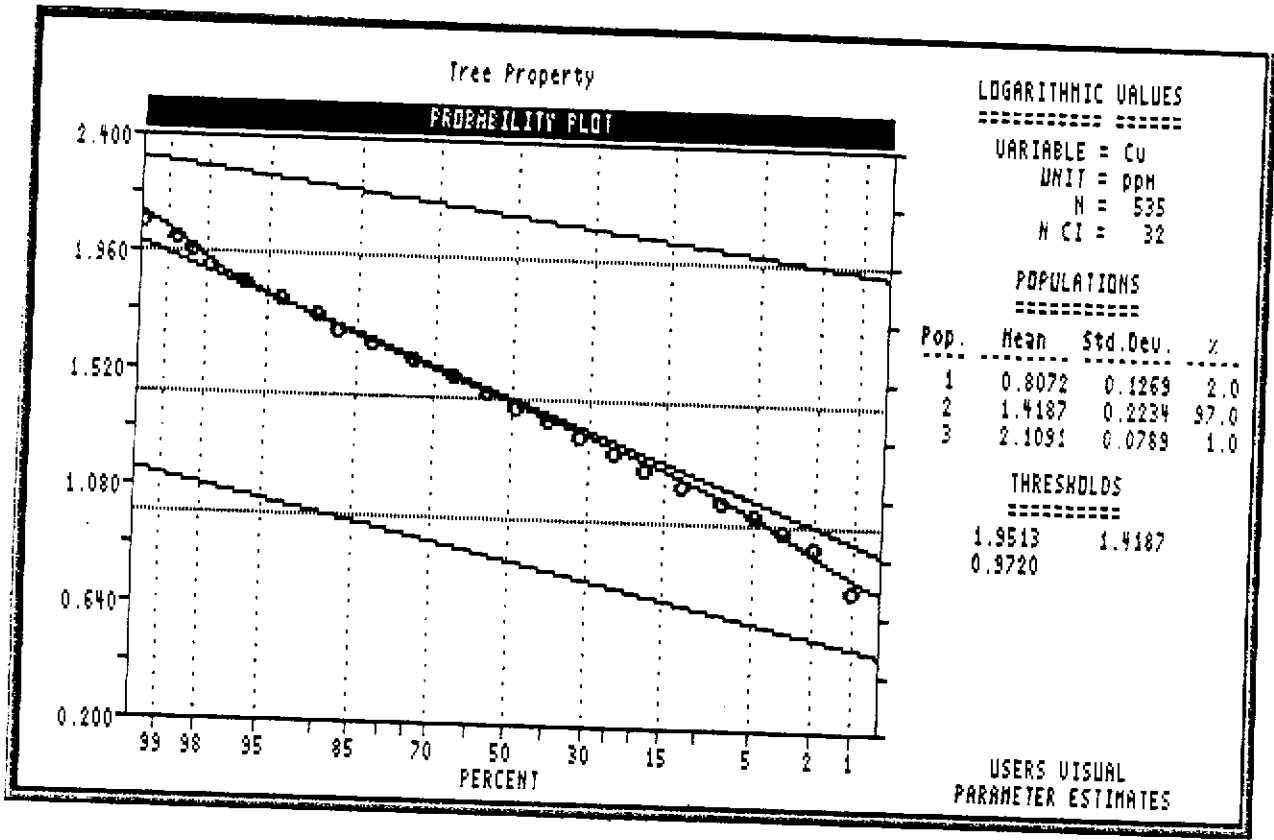
=====

User Defined Thresholds.

Thresholds

89.392
26.224
9.376

#####



LEAD STATISTICS

#####

PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS

Data File Name = TREESOIL.DAT

Variable = Pb Unit = ppm N = 531 N CI = 32

Transform = Logarithmic Number of Populations = 2

of Missing Observations = 0.

0 Observations Were Below the Minimum Value of 0.0001
4 Observations Were Above the Maximum Value of 600.0000

=====

Users Visual Parameter Estimates

Table with 4 columns: Population, Mean, Std Dev, Percentage. It shows data for two populations, including mean values and standard deviation ranges.

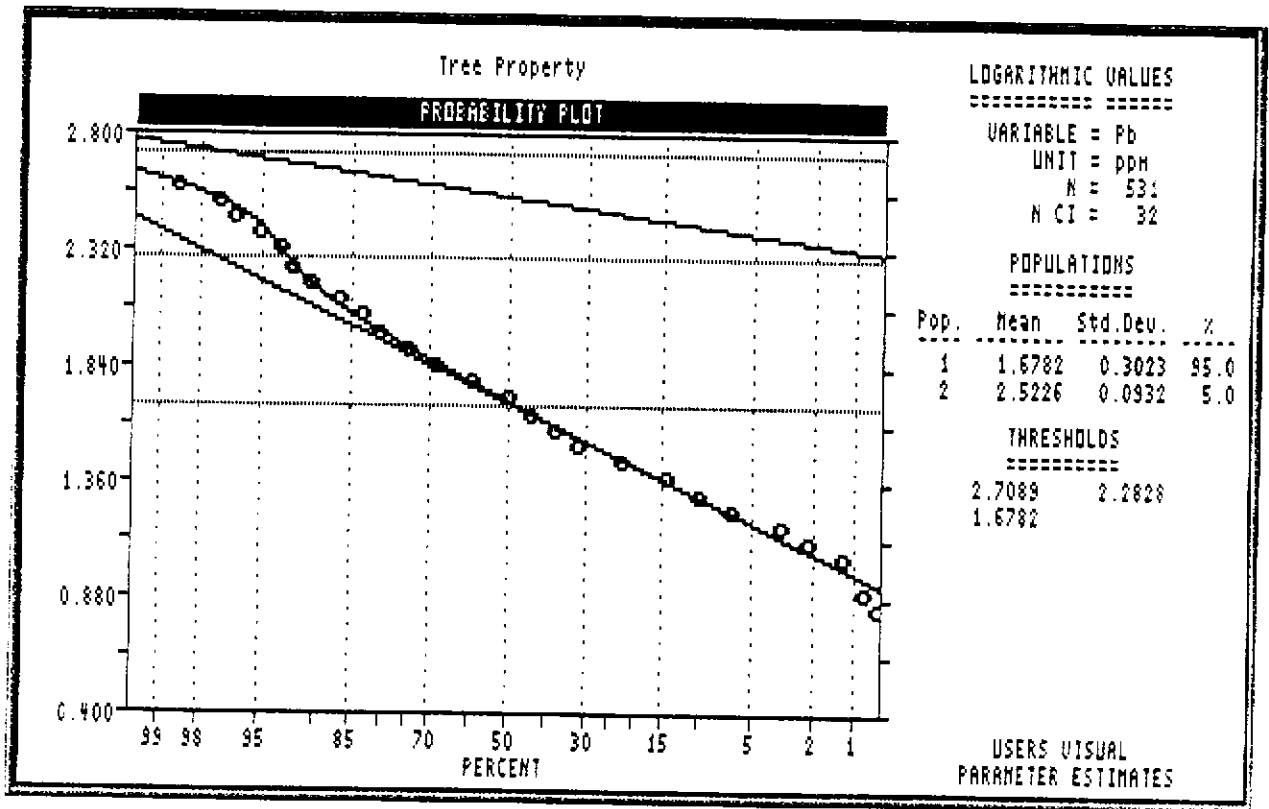
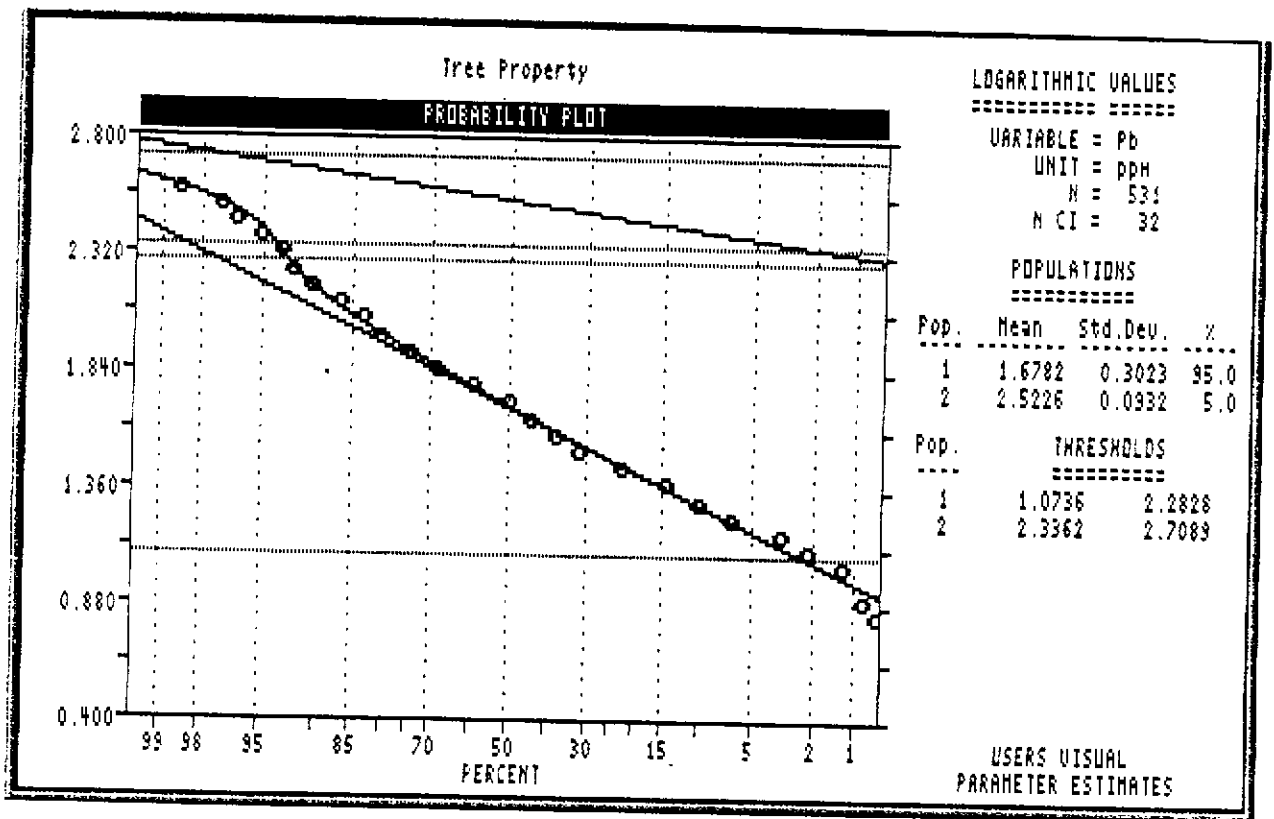
=====

User Defined Thresholds.

Thresholds

511.564
191.779
47.665

#####



ZINC STATISTICS

16:56:27

Tree Property

12/01/97

SUMMARY STATISTICS and HISTOGRAM LOGARITHMIC VALUES

Variable = Zn Unit = ppm N = 526

Mean = 2.0373 Min = 0.4771 1st Quartile = 1.7559
 Std. Dev. = 0.3983 Max = 2.9741 Median = 2.0755
 CV % = 19.5511 Skewness = -0.2797 3rd Quartile = 2.3395

Anti-Log Mean = 108.969 Anti-Log Std. Dev. : (-) 43.550
 (+) 272.659

```

=====
% cum % antilog cls int (# of bins = 32 - bin size = 0.0805)
-----
0.00 0.09 2.734 0.4368
0.19 0.28 3.292 0.5174
0.00 0.28 3.962 0.5979
0.00 0.28 4.770 0.6785
0.00 0.28 5.742 0.7590
0.00 0.28 6.912 0.8396
0.00 0.28 8.320 0.9201
0.38 0.66 10.015 1.0007 *
0.38 1.04 12.056 1.0812 *
0.38 1.42 14.513 1.1618 *
0.95 2.37 17.471 1.2423 **
1.71 4.08 21.031 1.3229 ****
1.90 5.98 25.316 1.4034 ****
3.23 9.20 30.475 1.4839 *****
4.37 13.57 36.685 1.5645 *****
3.99 17.55 44.161 1.6450 *****
5.51 23.06 53.160 1.7256 *****
7.22 30.27 63.993 1.8061 *****
5.89 36.15 77.033 1.8867 *****
5.89 42.03 92.731 1.9672 *****
6.46 48.48 111.627 2.0478 *****
6.84 55.31 134.374 2.1283 *****
7.22 62.52 161.757 2.2089 *****
7.22 69.73 194.719 2.2894 *****
7.60 77.32 234.399 2.3700 *****
7.79 85.10 282.164 2.4505 *****
5.32 90.42 339.662 2.5310 *****
3.61 94.02 408.878 2.6116 *****
2.47 96.49 492.198 2.6921 *****
1.33 97.82 592.496 2.7727 ***
1.33 99.15 713.233 2.8532 ***
0.57 99.72 858.574 2.9338 *
0.19 99.91 1033.532 3.0143
-----

```

0 1 2 3 4

Each "*" represents approximately 2.4 observations.

#####

17:12:09

Tree Property

12/01/97

#####

PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS

Data File Name = TREESOIL.DAT

Variable = Zn Unit = ppm N = 526
N CI = 32

Transform = Logarithmic Number of Populations = 2

of Missing Observations = 0.

0 Observations Were Below the Minimum Value of 0.0001
9 Observations Were Above the Maximum Value of 1000.0000

=====

Users Visual Parameter Estimates

Population	Mean	Std Dev	Percentage
1	67.871	- 34.140	68.00
		+ 134.927	
2	296.330	- 205.967	32.00
		+ 426.338	

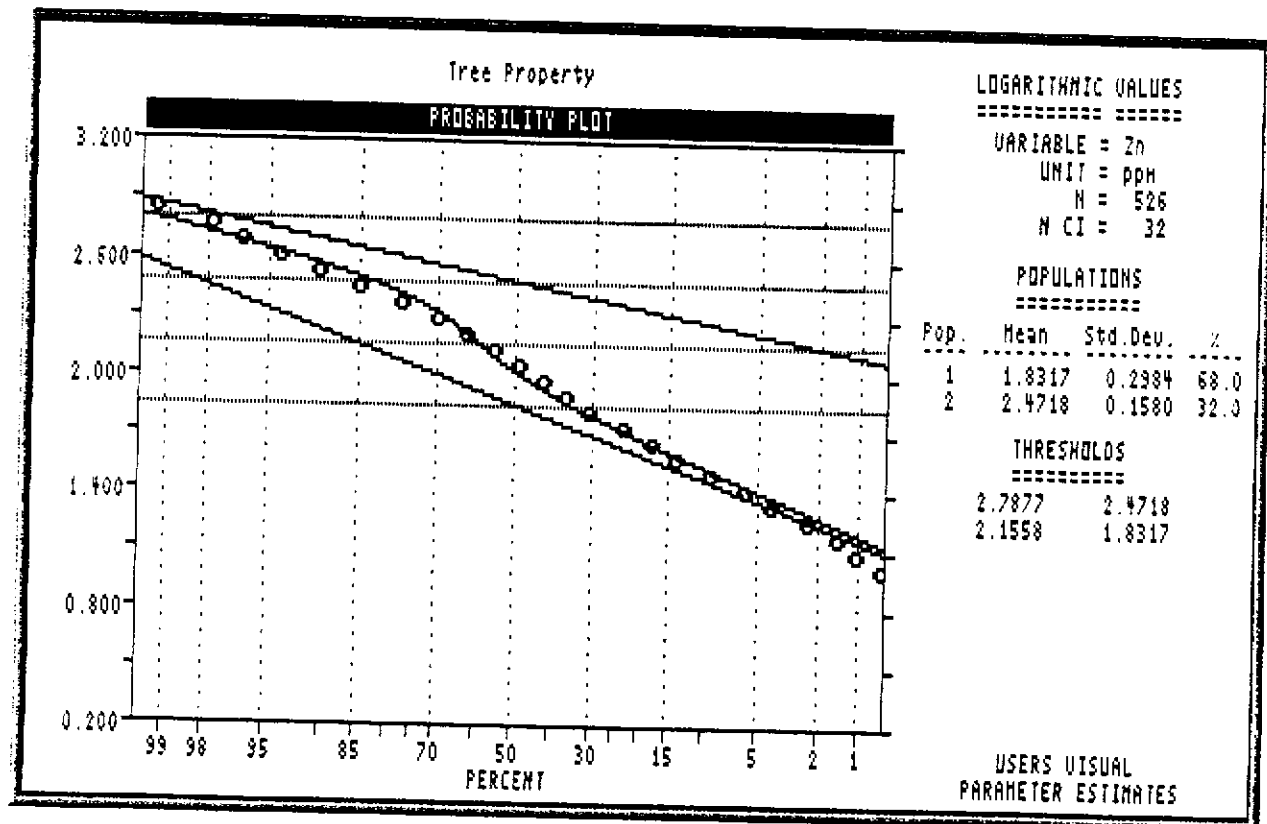
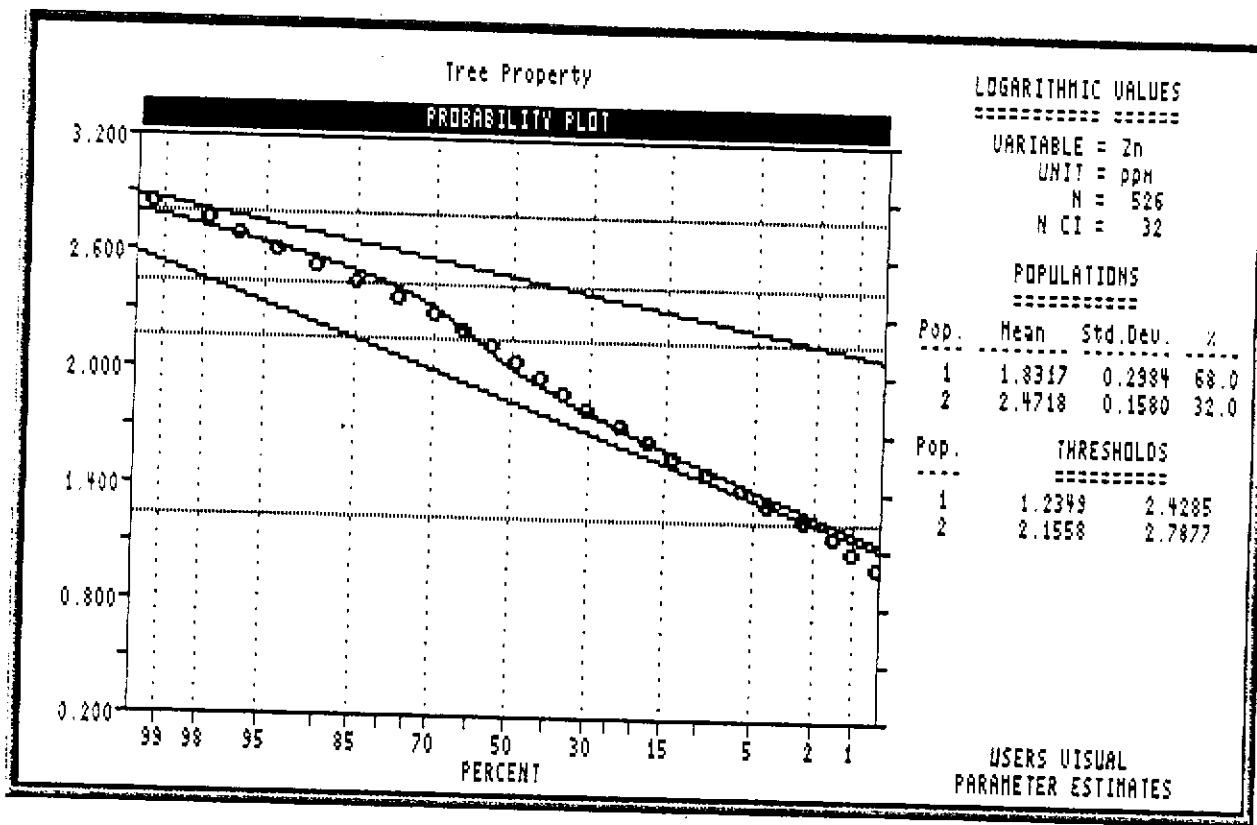
=====

User Defined Thresholds.

Thresholds

613.338
296.347
143.153
67.873

#####



SILVER STATISTICS

09:31:47

Tree Property

12/02/97

SUMMARY STATISTICS and HISTOGRAM, LOGARITHMIC VALUES

Variable = Ag Unit = ppm N = 264

Mean = -0.2425 Min = -0.5229 1st Quartile = -0.3979
 Std. Dev. = 0.2381 Max = 0.6128 Median = -0.3010
 CV % = 98.1998 Skewness = 0.9152 3rd Quartile = -0.0969

Anti-Log Mean = 0.572 Anti-Log Std. Dev. : (-) 0.331
 (+) 0.990

```
=====
```

%	cum %	antilog	cls int	(# of bins = 32 - bin size = 0.0366)
0.00	0.19	0.288	-0.5412	
20.83	20.94	0.313	-0.5046	*****
0.00	20.94	0.340	-0.4679	
0.00	20.94	0.370	-0.4313	
18.56	39.43	0.403	-0.3947	*****
0.00	39.43	0.439	-0.3580	
0.00	39.43	0.477	-0.3214	
11.74	51.13	0.519	-0.2848	*****
0.00	51.13	0.565	-0.2481	
12.50	63.58	0.614	-0.2115	*****
0.00	63.58	0.669	-0.1749	
10.98	74.53	0.727	-0.1382	*****
0.00	74.53	0.791	-0.1016	
7.20	81.70	0.861	-0.0650	*****
1.89	83.58	0.937	-0.0283	***
2.27	85.85	1.019	0.0083	***
2.27	88.11	1.109	0.0450	***
2.27	90.38	1.207	0.0816	***
1.89	92.26	1.313	0.1182	***
1.14	93.40	1.428	0.1549	**
0.76	94.15	1.554	0.1915	*
0.00	94.15	1.691	0.2281	
1.52	95.66	1.840	0.2648	**
0.76	96.42	2.002	0.3014	*
0.00	96.42	2.178	0.3380	
1.52	97.92	2.370	0.3747	**
0.76	98.68	2.578	0.4113	*
0.38	99.06	2.805	0.4479	*
0.00	99.06	3.052	0.4846	
0.00	99.06	3.320	0.5212	
0.38	99.43	3.613	0.5578	*
0.00	99.43	3.931	0.5945	
0.38	99.81	4.277	0.6311	*

```
-----
```

0 1 2 3 4

Each "*" represents approximately 1.7 observations.

#####

09:49:19

Tree Property

12/02/97

#####

PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS

Data File Name = TREESOIL.DAT

Variable = Ag Unit = ppm N = 264
N CI = 32

Transform = Arithmetic Number of Populations = 2

of Missing Observations = 0.

269 Observations Were Below the Minimum Value of 0.0001
2 Observations Were Above the Maximum Value of 5.0000

=====

Users Visual Parameter Estimates

Population	Mean	Std Dev	Percentage
1	0.495	0.165	80.00
2	1.321	0.668	20.00

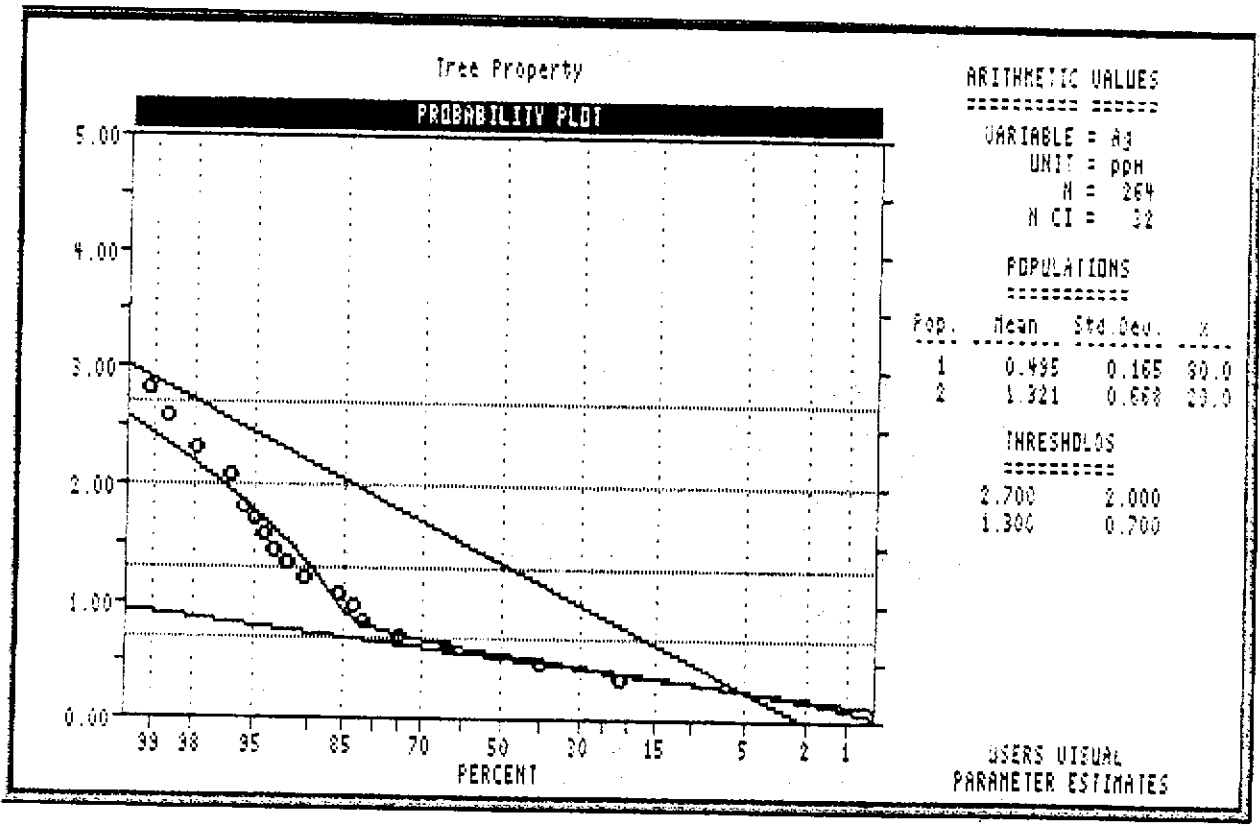
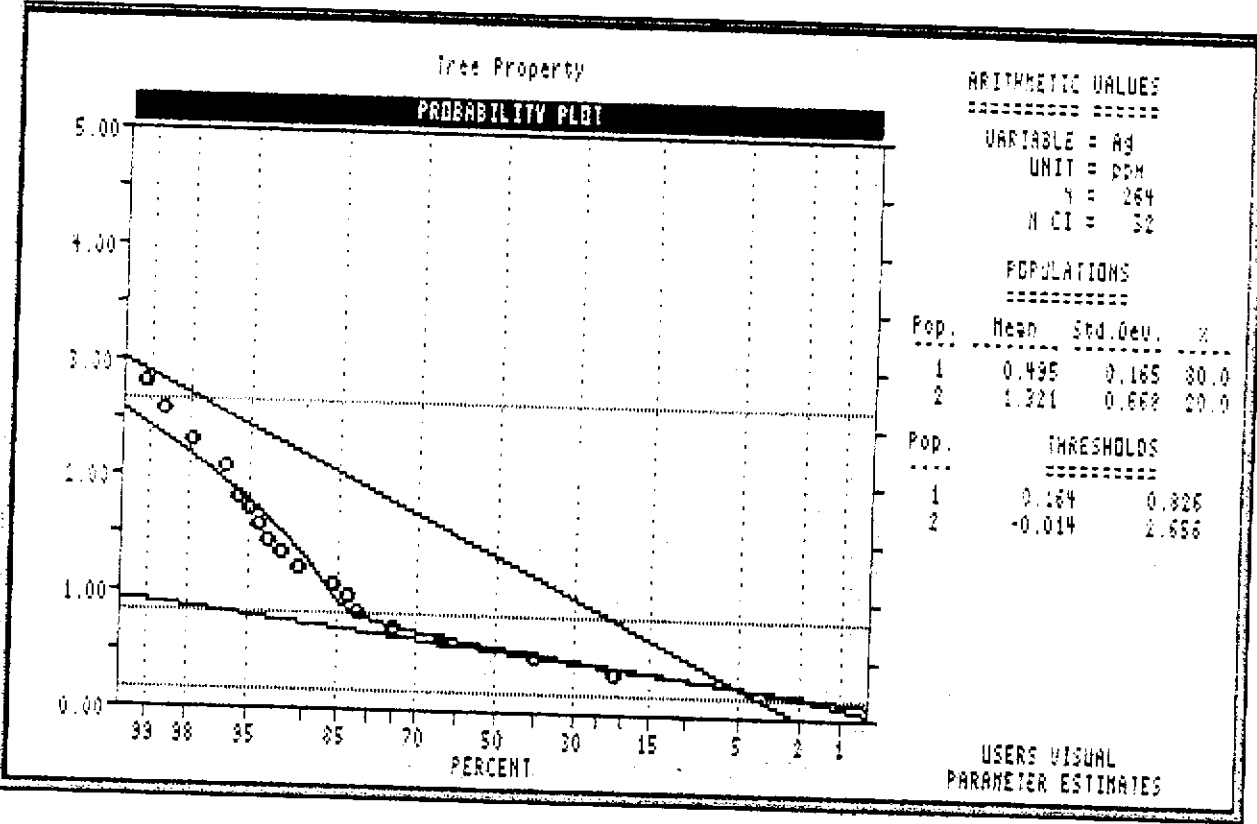
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User Defined Thresholds.

Thresholds

2.700
2.000
1.300
0.700

#####



BARJUM STATISTICS

#####

PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS

Data File Name = TREESOIL.DAT

Variable = Ba Unit = ppm N = 535 N CI = 32

Transform = Logarithmic Number of Populations = 4

of Missing Observations = 0.

=====

Users Visual Parameter Estimates

Population	Mean	Std Dev	Percentage
1	1128.813	- 950.533 + 1340.531	30.00
2	2148.968	- 1576.731 + 2928.885	65.00
3	6298.178	- 4831.684 + 8209.777	4.00
4	19035.009	- 13786.007 + 26282.562	1.00

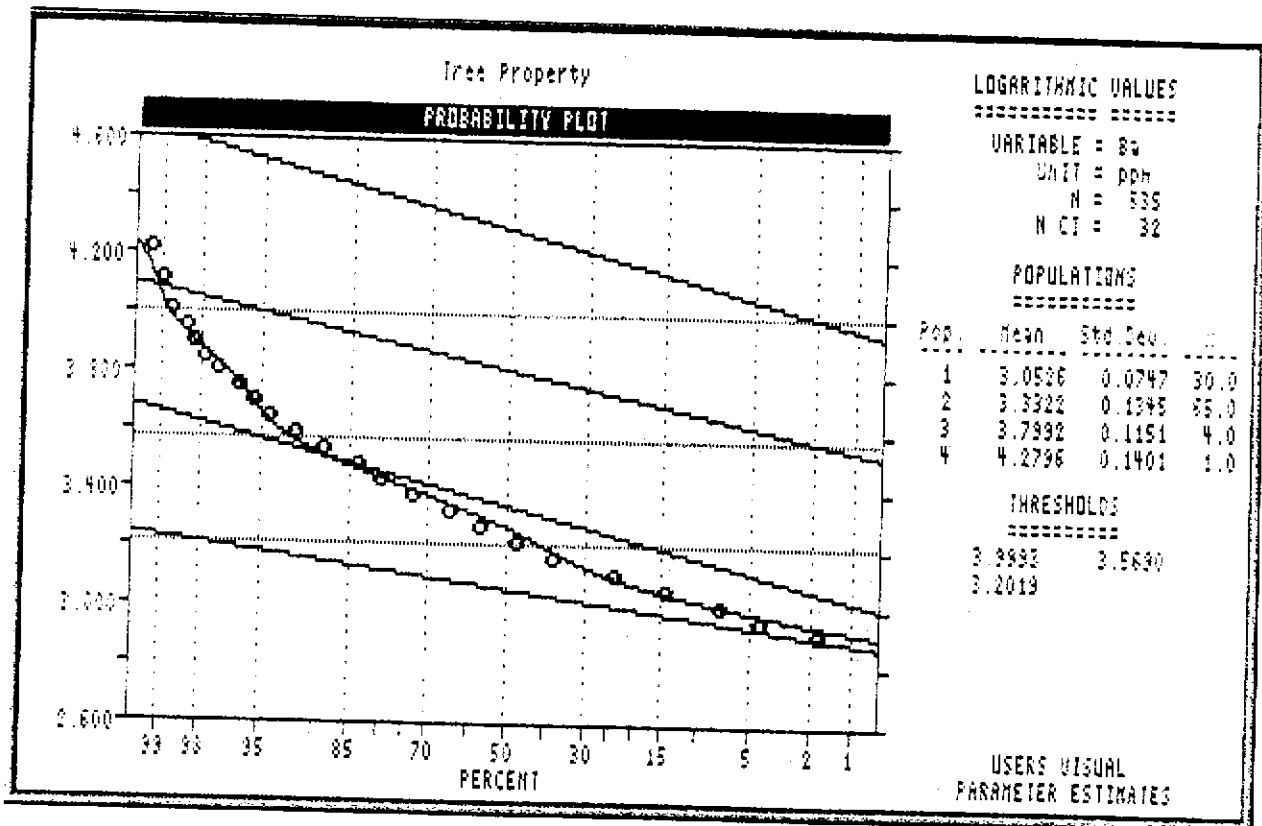
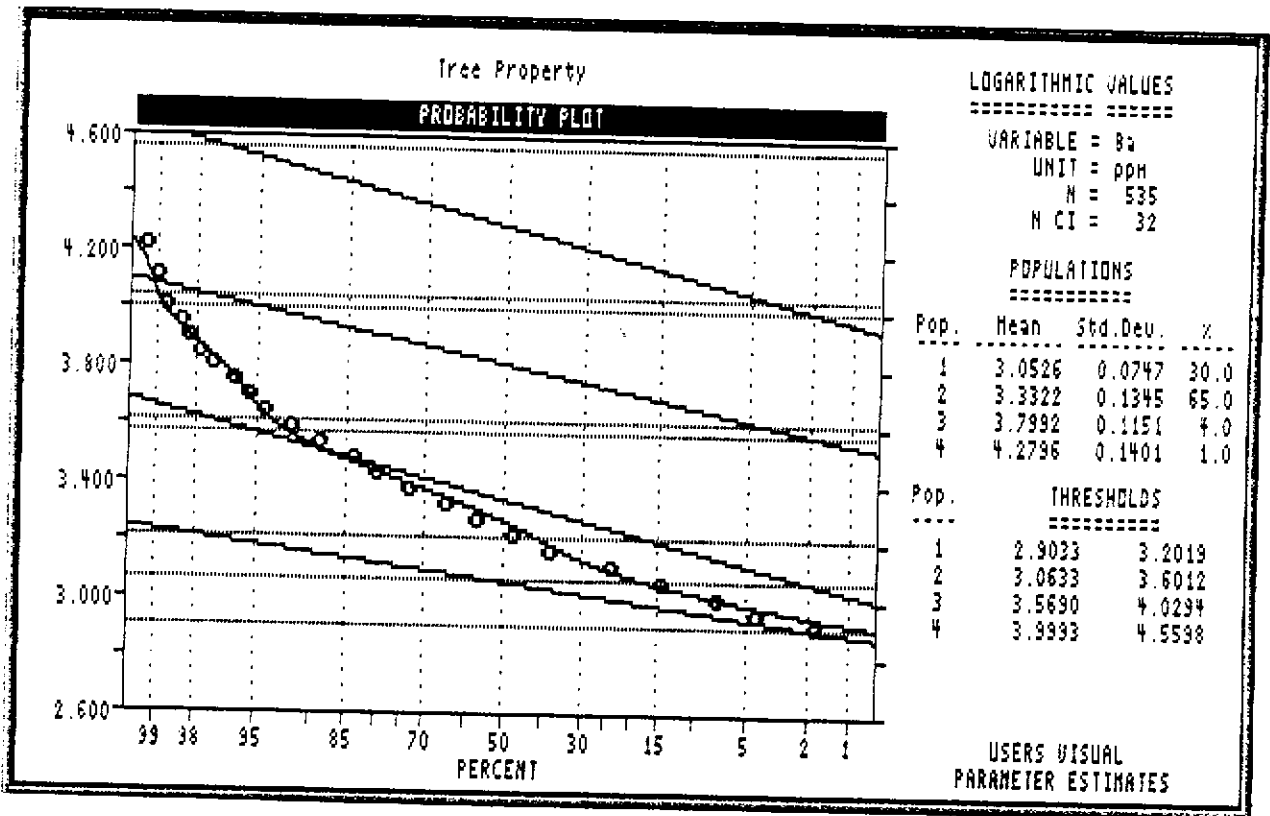
=====

User Defined Thresholds.

Thresholds

9983.895
3706.807
1591.842

#####



GOLD STATISTICS

11:25:19

Tree Property

12/02/97

SUMMARY STATISTICS and HISTOGRAM ARITHMETIC VALUES

Variable = Au	Unit =	ppb	N =	309
Mean = 2.029	Min = 1.000	1st Quartile = 1.000		
Std. Dev. = 2.122	Max = 17.000	Median = 1.000		
CV % = 104.571	Skewness = 3.593	3rd Quartile = 2.000		

```
=====
```

%	cum %	cls int	(# of bins = 26 - bin size = 0.640)
0.00	0.16	0.680	
59.87	59.84	1.320	***** --> 93
0.00	59.84	1.960	
20.39	80.16	2.600	*****
8.09	88.23	3.240	*****
0.00	88.23	3.880	
3.88	92.10	4.520	*****
2.27	94.35	5.160	****
0.00	94.35	5.800	
1.29	95.65	6.440	**
0.65	96.29	7.080	*
0.00	96.29	7.720	
0.97	97.26	8.360	**
0.32	97.58	9.000	*
0.00	97.58	9.640	
0.32	97.90	10.280	*
0.00	97.90	10.920	
0.65	98.55	11.560	*
0.65	99.19	12.200	*
0.00	99.19	12.840	
0.00	99.19	13.480	
0.32	99.52	14.120	*
0.00	99.52	14.760	
0.00	99.52	15.400	
0.00	99.52	16.040	
0.00	99.52	16.680	
0.32	99.84	17.320	*

```
-----
```

	0	1	2	3	4
--	---	---	---	---	---

Each "*" represents approximately 2.0 observations.

#####

#####

PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS

Data File Name = TREESOIL.DAT

Variable = Au Unit = ppb N = 309
N CI = 25

Transform = Logarithmic Number of Populations = 3

of Missing Observations = 0.

224 Observations Were Below the Minimum Value of 0.0001
2 Observations Were Above the Maximum Value of 17.0000

=====

Users Visual Parameter Estimates

Population	Mean	Std Dev	Percentage
1	1.361	0.871	90.00
		2.125	
2	5.242	3.936	8.00
		6.980	
3	12.253	10.254	2.00
		14.642	

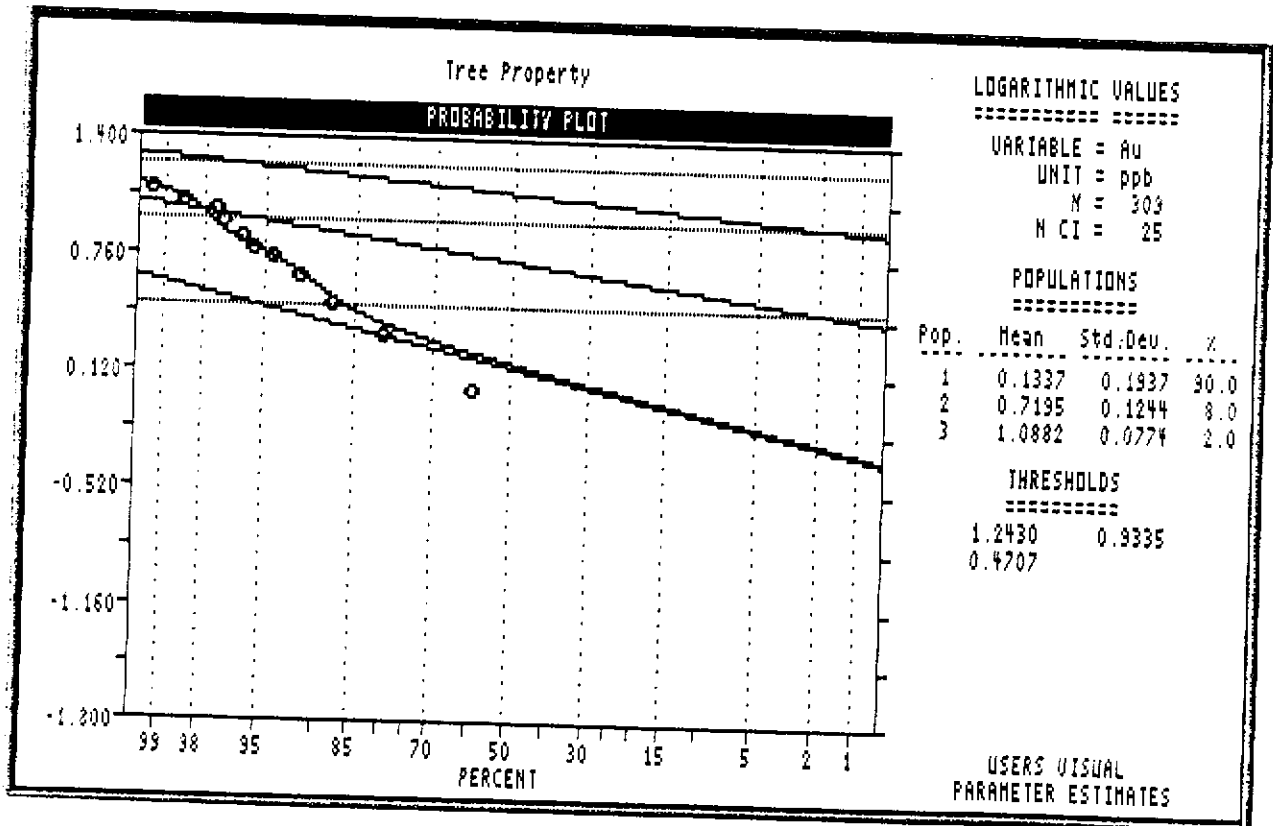
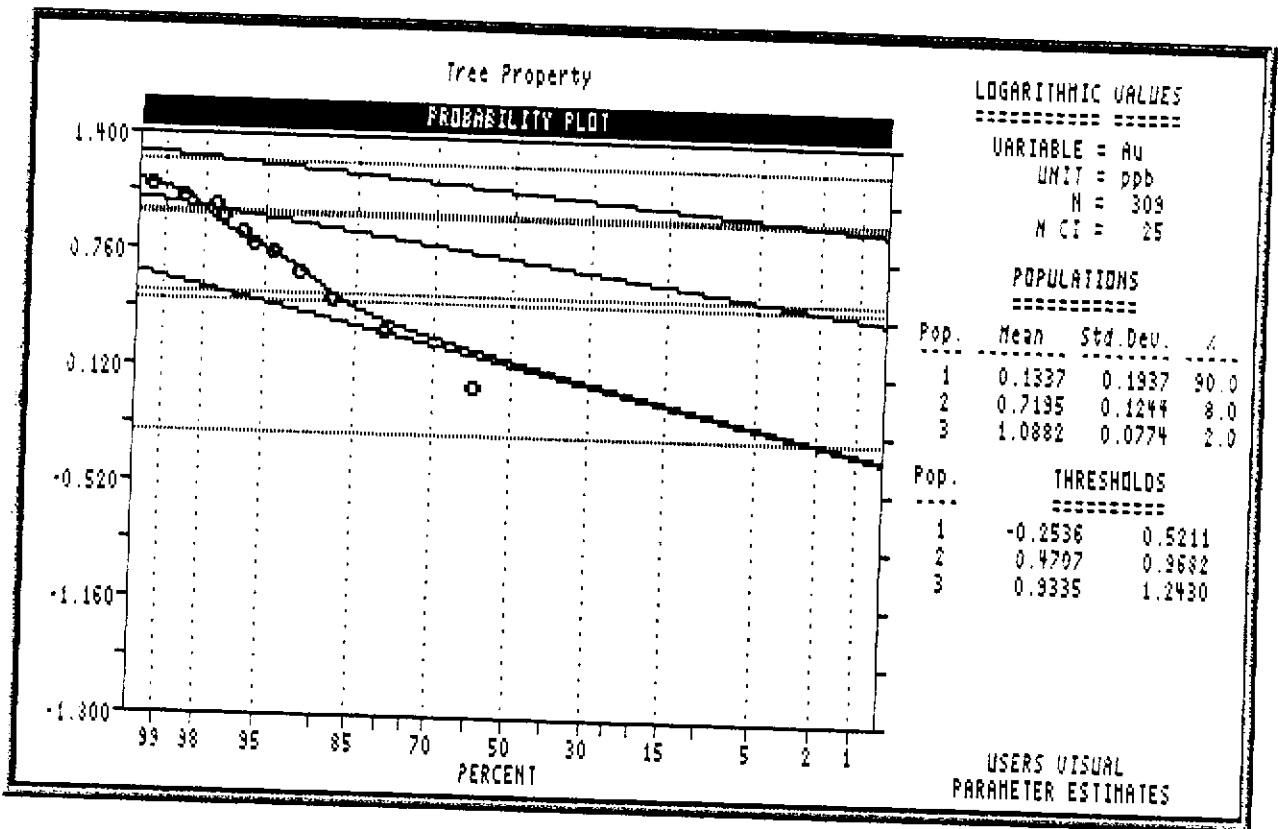
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User Defined Thresholds.

Thresholds

17.498
8.580
2.956

#####



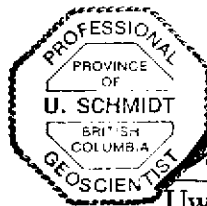
Appendix C

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

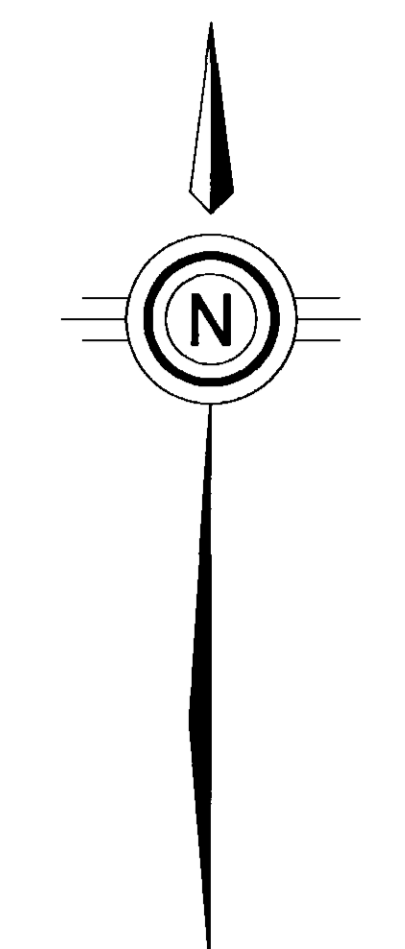
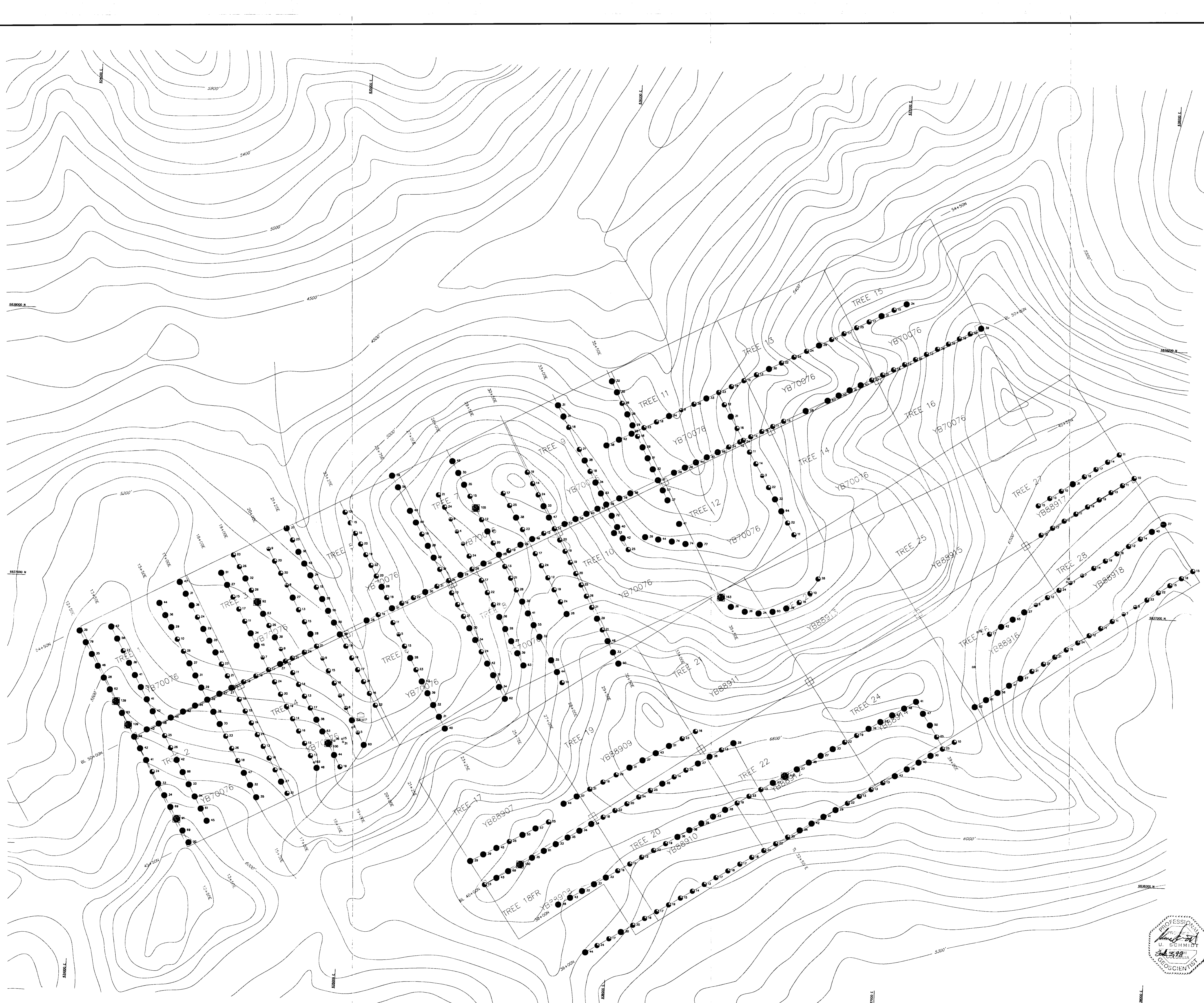
I, Uwe Schmidt, of 656 Foresthill Place, Port Moody, B.C. do hereby declare:

- (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.



Uwe Schmidt
Uwe Schmidt, B. Sc., P. Geo.

Feb. 3, 1998
Vancouver, B.C.



Symbols

□ ROCK - GRAB

Cu Values in ppm

○ 1 - 9
 ● 10 - 26
 ● 27 - 89
 ● 90 >>>>>

093777

Atha Resources Ltd. Dwg 1

Work By
 U.SCHMIDT
 Date Drafted
 12-12-97
 Drafted By
 U.SCHMIDT
 Date Revised
 12-12-97
 Revised By
 U.SCHMIDT

Tree Project
Cu Geochemistry

Northwest Geological Consulting Ltd.

N.T.S. Number
 105773
 File Name
 TRECJFG3

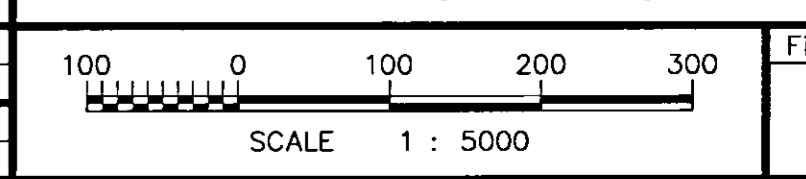
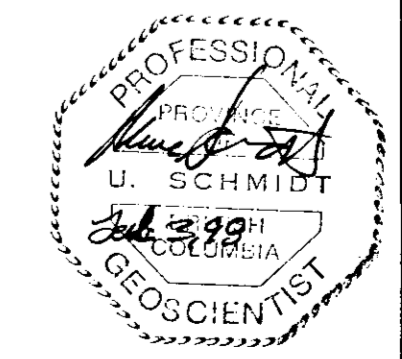
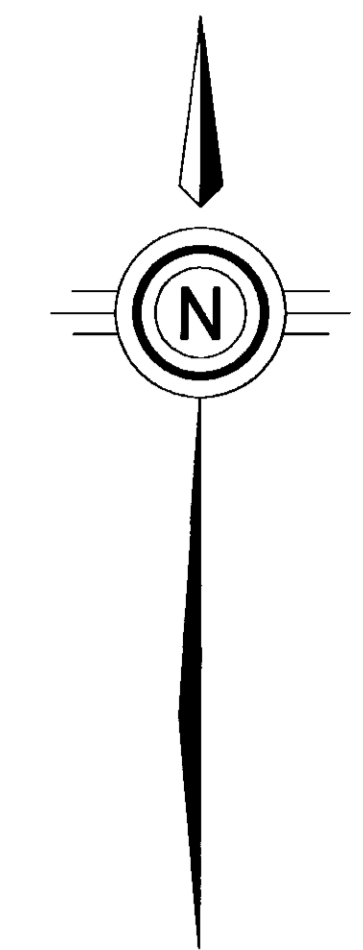
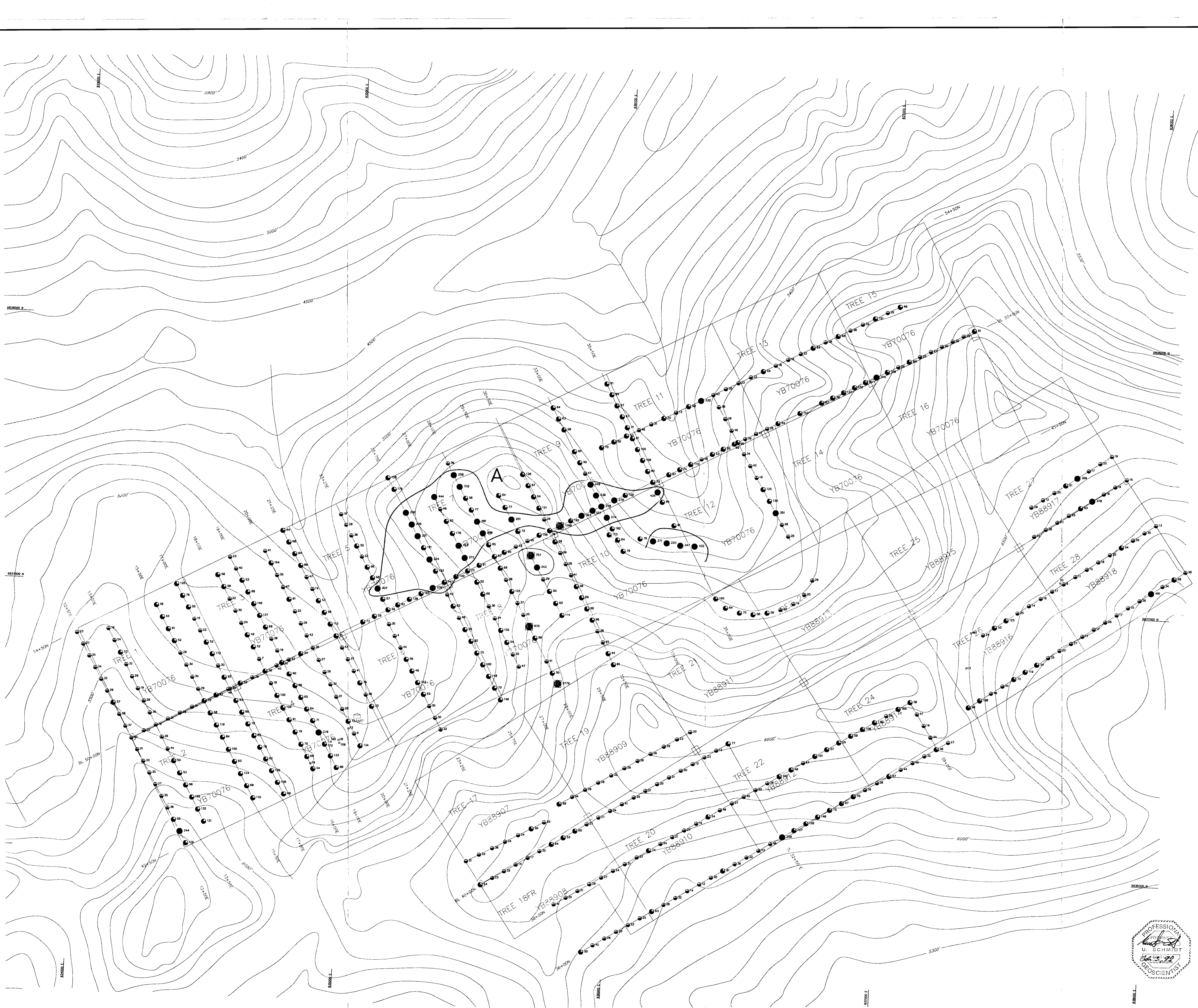


Figure
3





Symbols

□ ROCK - GRAB

Pb Values in ppm

- 1 - 48
- 49 - 192
- 193 - 512
- 513 >>>>>

093777

Atna Resources Ltd. *DUG*

Work By	U.SCHMIDT
Date Drafted	12-12-97
Drafted By	U.SCHMIDT
Date Revised	12-12-97
Revised By	U.SCHMIDT

Tree Project
Pb Geochemistry

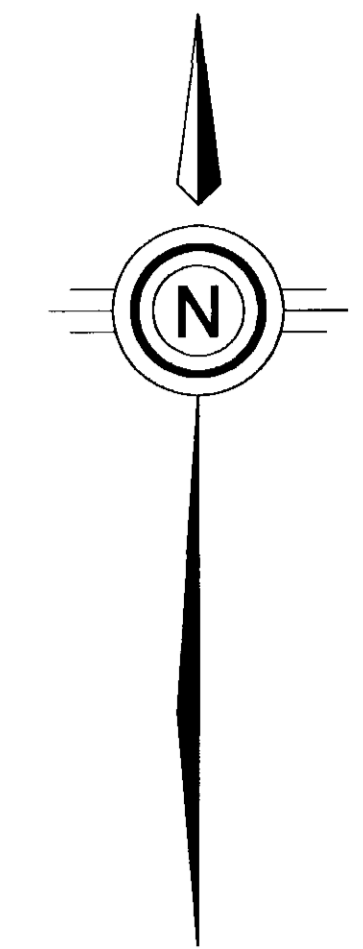
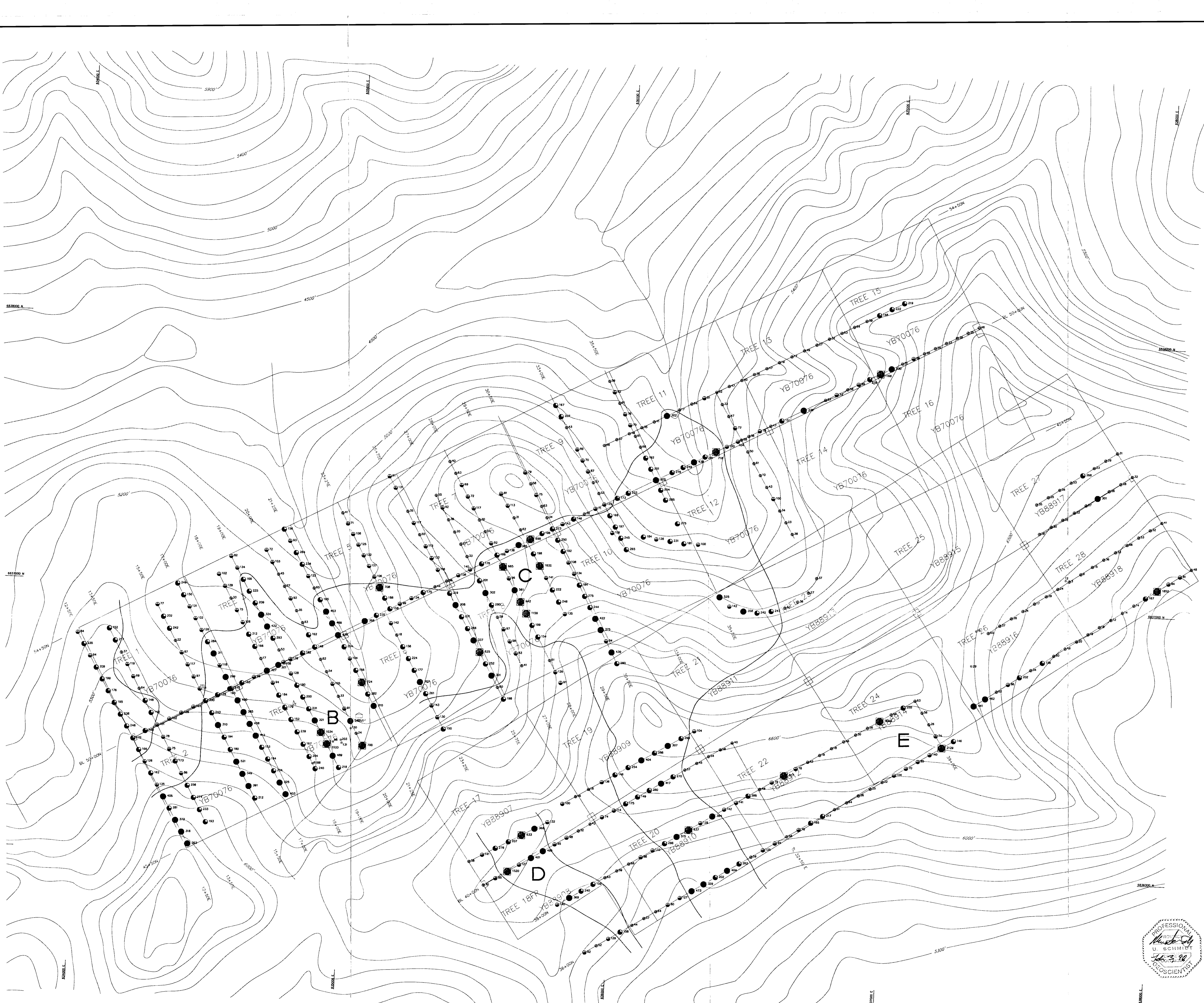
Northwest Geological Consulting Ltd.

N.T.S. Number 105F/9
File Name TREEFG4

SCALE 1 : 5000

Figure 4





Symbols

□ ROCK - GRAB

Zn Values in ppm

- 1 - 68
- 69 - 143
- 144 - 296
- 297 - 613
- 614 >>>>>

Atna Resources Ltd. *twg* (3)

Work By
U. SCHMIDT
Date Drafted
12-12-97
Drafted By
U. SCHMIDT
Date Revised
12-12-97
Revised By
U. SCHMIDT
N.T.S. Number
105F/3
File Name
TREZNF05

**Tree Project
Zn Geochemistry 093777**

Northwest Geological Consulting Ltd.

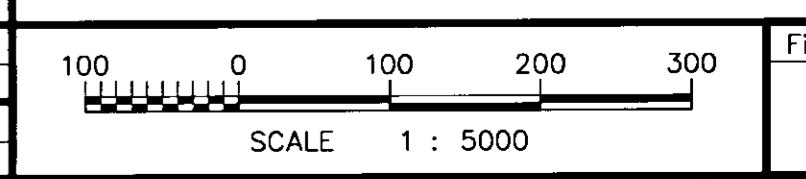
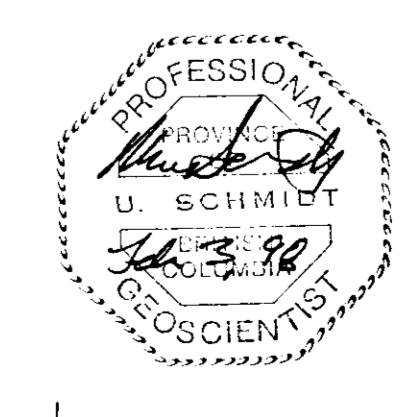
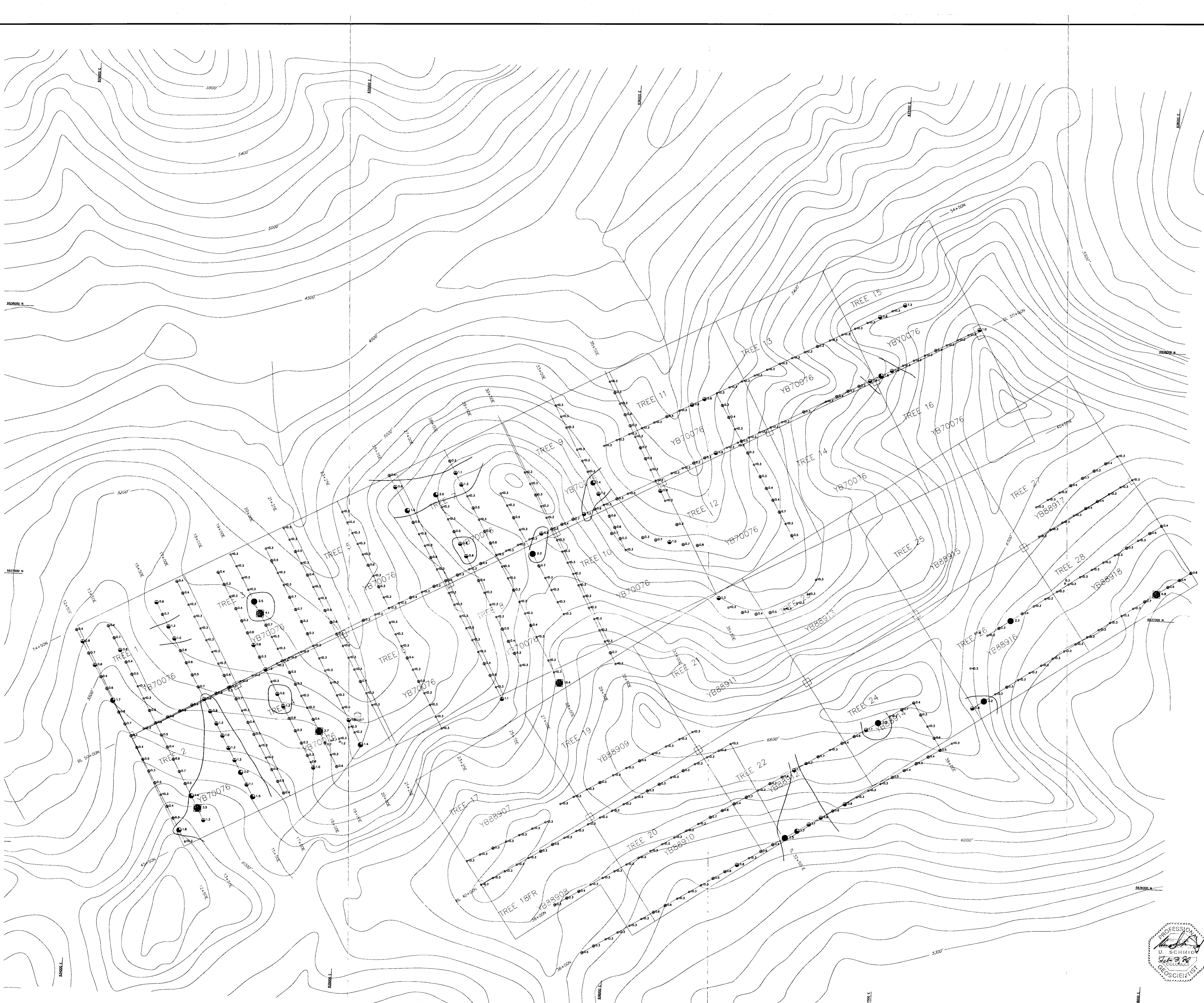
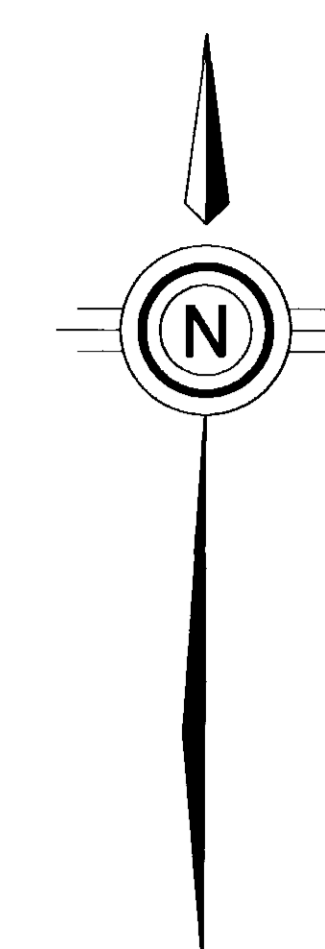


Figure
5





Symbols

□ ROCK - GRAB

Aq Values in ppm

- <0.2
- 0.1 - 0.7
- 0.8 - 1.3
- 1.4 - 2.0
- 2.1 - 2.7
- 2.8 >>>>>

Atna Resources Ltd. DWG 4

Work By
U.SCHMIDT
Date Drafted
12-12-97
Drafted By
U.SCHMIDT
Date Revised
12-12-97
Revised By
U.SCHMIDT

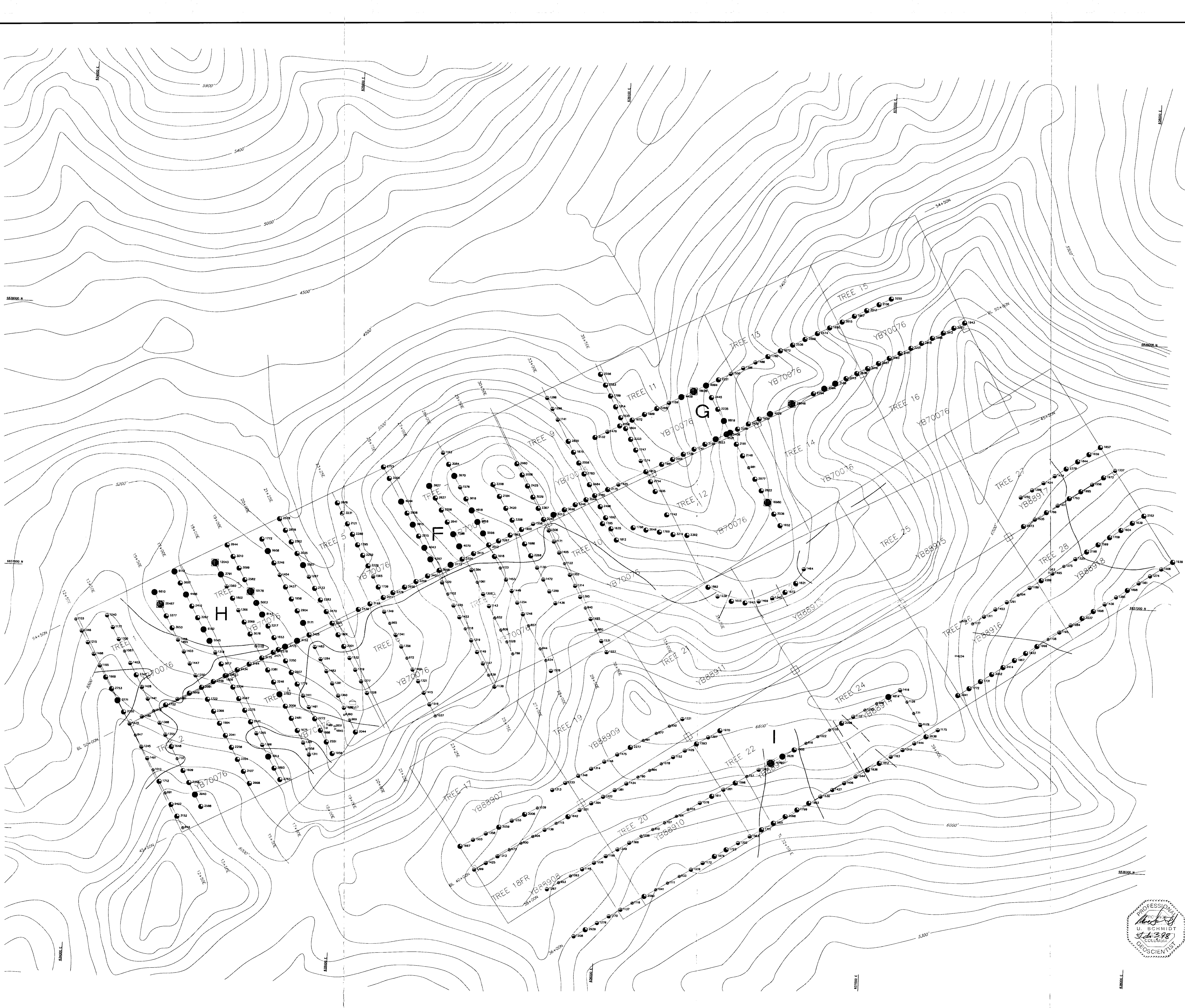
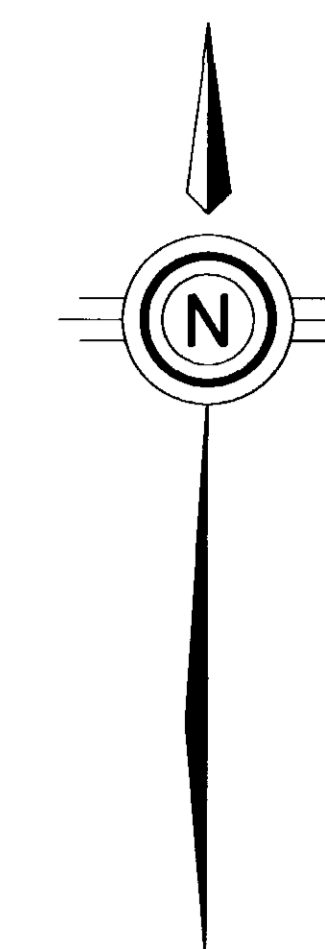
Tree Project
Aq Geochemistry

09377

Northwest Geological Consulting Ltd.

N.T.S. Number	100 0 100 200 300	Figure
105F/9		6
File Name	SCALE 1 : 5000	
TREAGFB		



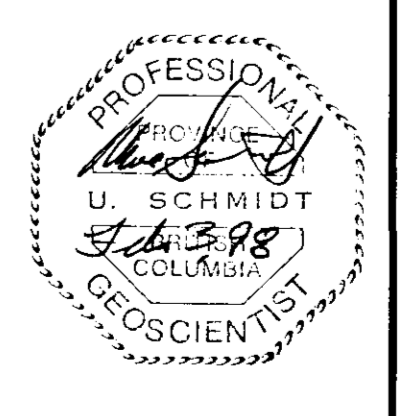


Symbols

- ROCK - GRAB

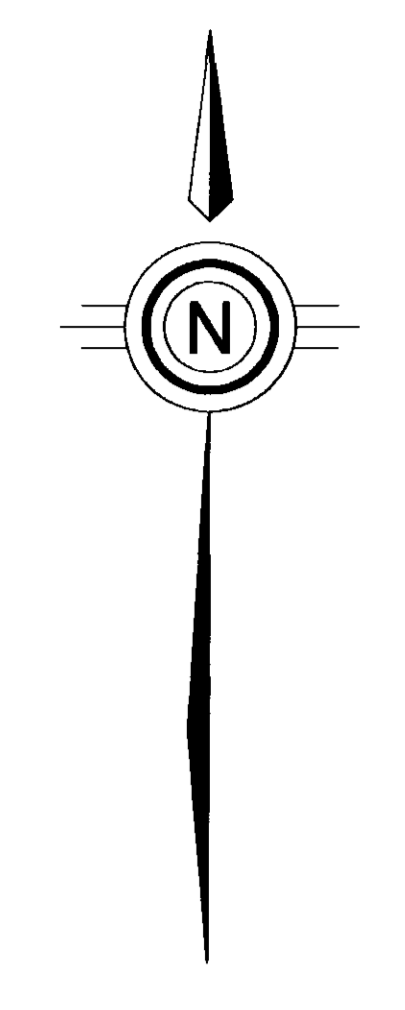
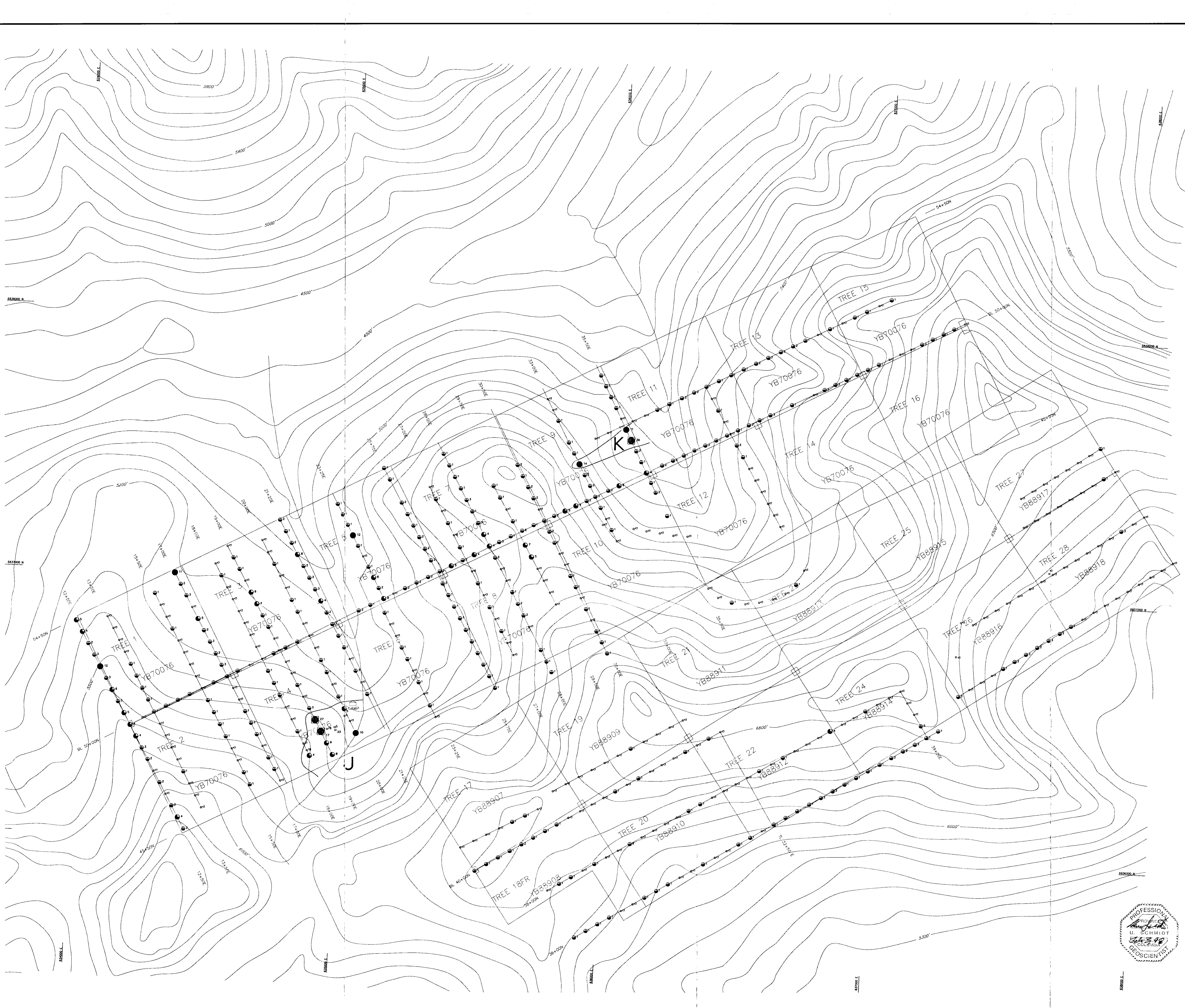
Ba Values in ppm

- 1 - 1129
- 1130 - 1592
- 1593 - 3707
- 3708 - 9984
- 9985 >>>>>



Atra Resources Ltd. DWG(5)

Work By	U. SCHMIDT	Tree Project 099777
Date Drafted	12-12-97	
Drafted By	U. SCHMIDT	Ba Geochemistry
Date Revised	12-12-97	
Revised By	U. SCHMIDT	Northwest Geological Consulting Ltd.
N.T.S. Number	105F/9	Figure 7
File Name	TREBAFG7	SCALE 1 : 5000



Symbols

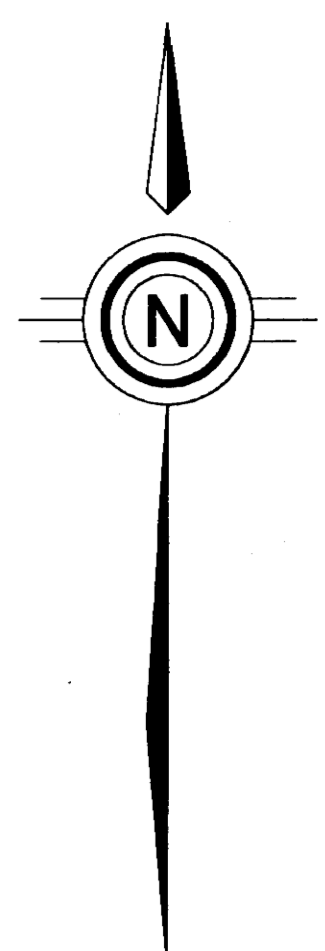
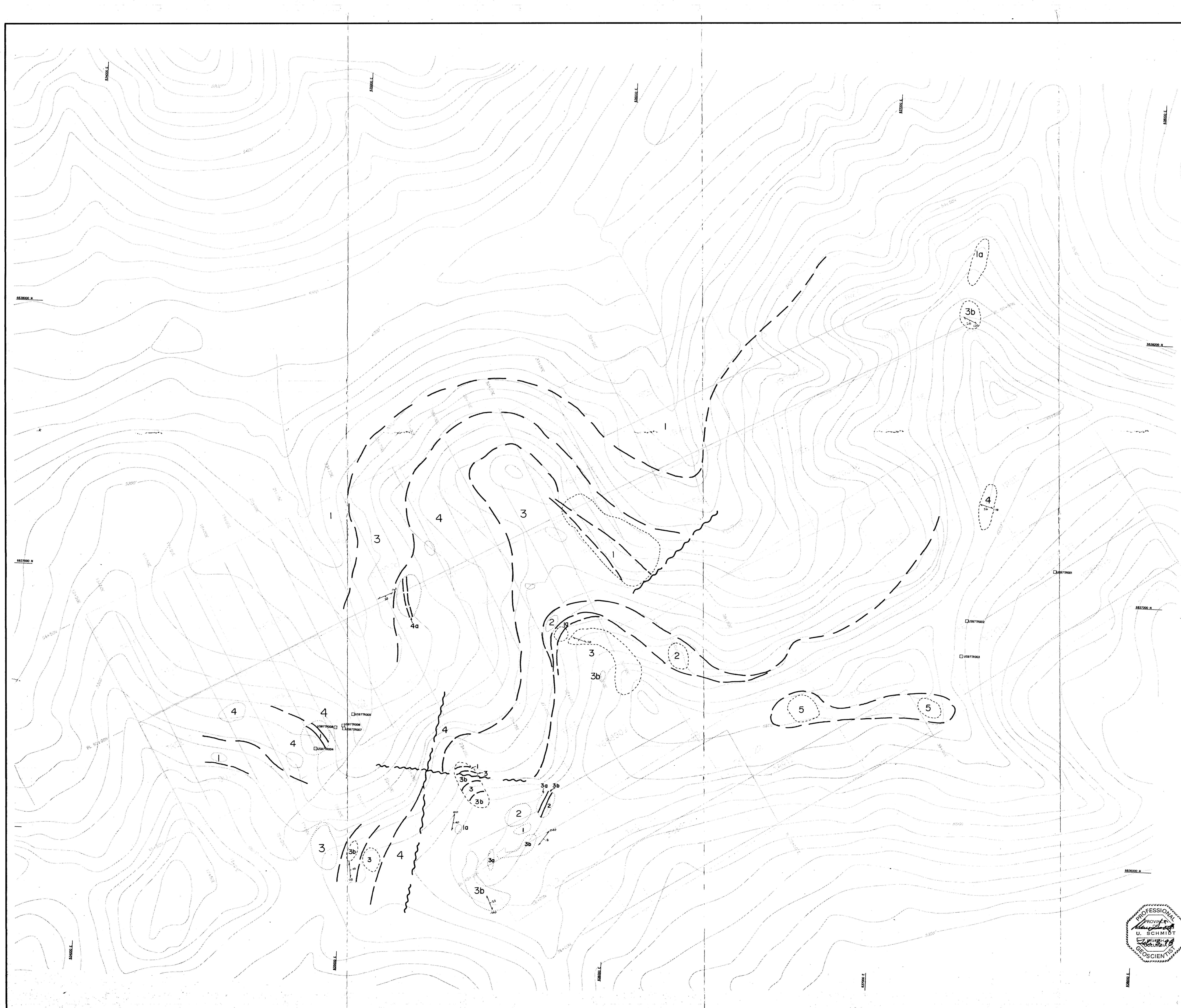
- ROCK - GRAB

- Au Values in ppb**
- <1
- 1 - 3
- 4 - 9
- 10 - 17
- 18 >>>>>

Atna Resources Ltd. DWG 093777

Work By U.SCHMIDT	Tree Project Au Geochemistry	Figure 8
Date Drafted 12-12-97		
Drafted By U.SCHMIDT		
Date Revised 12-12-97		
Revised By U.SCHMIDT	Northwest Geological Consulting Ltd.	
N.T.S. Number 105F/9		
File Name TREAUFGB	SCALE 1 : 5000	





LEGEND

- MISSISSIPPIAN**
- FELSIC VOLCANIC ROCKS**
- 5 Trachyte Silt
 - 4 Rhyolite, Rhodochlorite-tuffs and flows
 - 4a Quartz-Sericite Schist - pyritic
- INTERMEDIATE VOLCANIC ROCKS**
- 3 Andesite - lapilli tuff, tufts and flows
 - 3a Lapilli tuff - pale green
 - 3b Lapilli tuff - pale grey-green with carbonate altered volcanic and silic fragments
- MAFIC VOLCANIC ROCKS**
- 2 Basalt flows, may include dikes and sills
- SEDIMENTARY ROCKS**
- 1 Black Shale, Phyllite, Argillite
 - 1a Siltstone, Shale, Arenite interbedded
- Wilson, Westerman, 1978

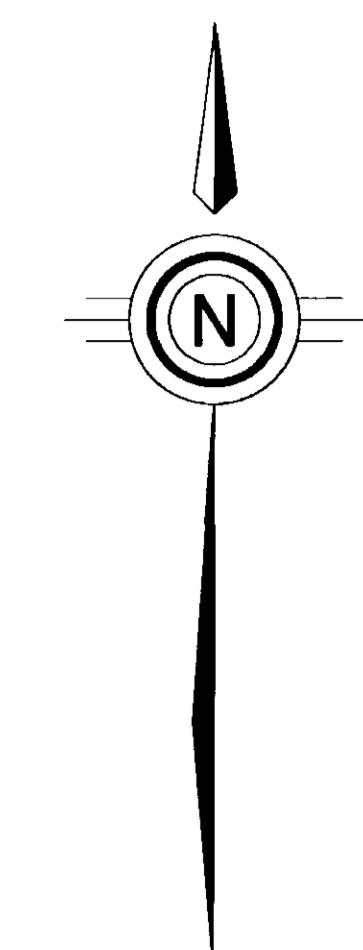
SYMBOLS

- outcrop
- suboutcrop
- geological boundary: assumed, approximate, defined
- fault: approximate, defined
- foliation
- rock sample: grab

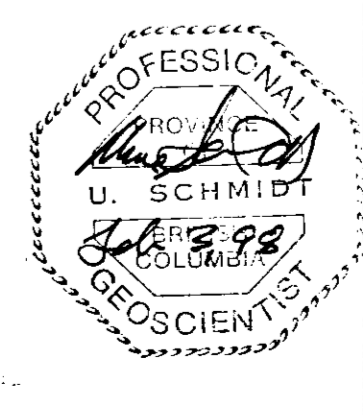


Atna Resources Ltd. DWG ①

Work By	U. SCHMIDT	<p>Tree Project 093777</p> <p>GEOLOGY</p>
Date Drafted	12-12-97	
Drafted By	U. SCHMIDT	
Date Revised	15-01-98	
Revised By	U. SCHMIDT	
N.T.S. Number		Northwest Geological Consulting Ltd.
File Name	TREEGEO	<p>SCALE 1 : 5000</p>
		Figure 9



- Symbol**
- ROCK - GRAB
 - 1997 Soil Sample Location (TR prefix not plotted)



Atna Resources Ltd. DWG 8	
Work By U. SCHMIDT	Tree Project 1997 Sample Location 09377
Date Plotted 12-12-97	
Drafted By U. SCHMIDT	
Date Revised 08-01-98	
Revised By U. SCHMIDT	
N.T.S. Number 105879	Northwest Geological Consulting Ltd.
File Name TRESAM10	100 0 100 200 300 Figure SCALE 1 : 5000 10