REPORT ON

STREAM SEDIMENT AND SOIL GEOCHEMICAL SURVEY

OF THE

HORN PROPERTY

LIARD MINING DIVISION

NTS 104I/16

Lat.: 58° 48' N. Long.: 128° 25' W.

BY

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

FOR

ATNA RESOURCES LTD.

Sept. 30, 1997

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SUMMARY

During late June to early July, 1997, Atna Resources Ltd. explored their wholly owned Horn property in the Turnagain River area of north-central British Columbia by stream sediment and soil geochemical sampling, prospecting and reconnaissance mapping.

The Horn property is underlain by Upper Devonian to Lower Mississippian Earn Group and allochthonous oceanic rocks of the Mississippian to Permian Slide Mountain Terrane. Earn Group shales are favourable host rocks for SEDEX Pb-Zn-Ba mineralization.

Exploration of the Horn property has outlined highly anomalous multi-element stream sediment anomalies which may indicate that Earn Group lithologies are more extensive than present mapping indicates.

A program of mapping and additional reconnaissance or grid soil sampling is recommended.

1. INTRODUCTION

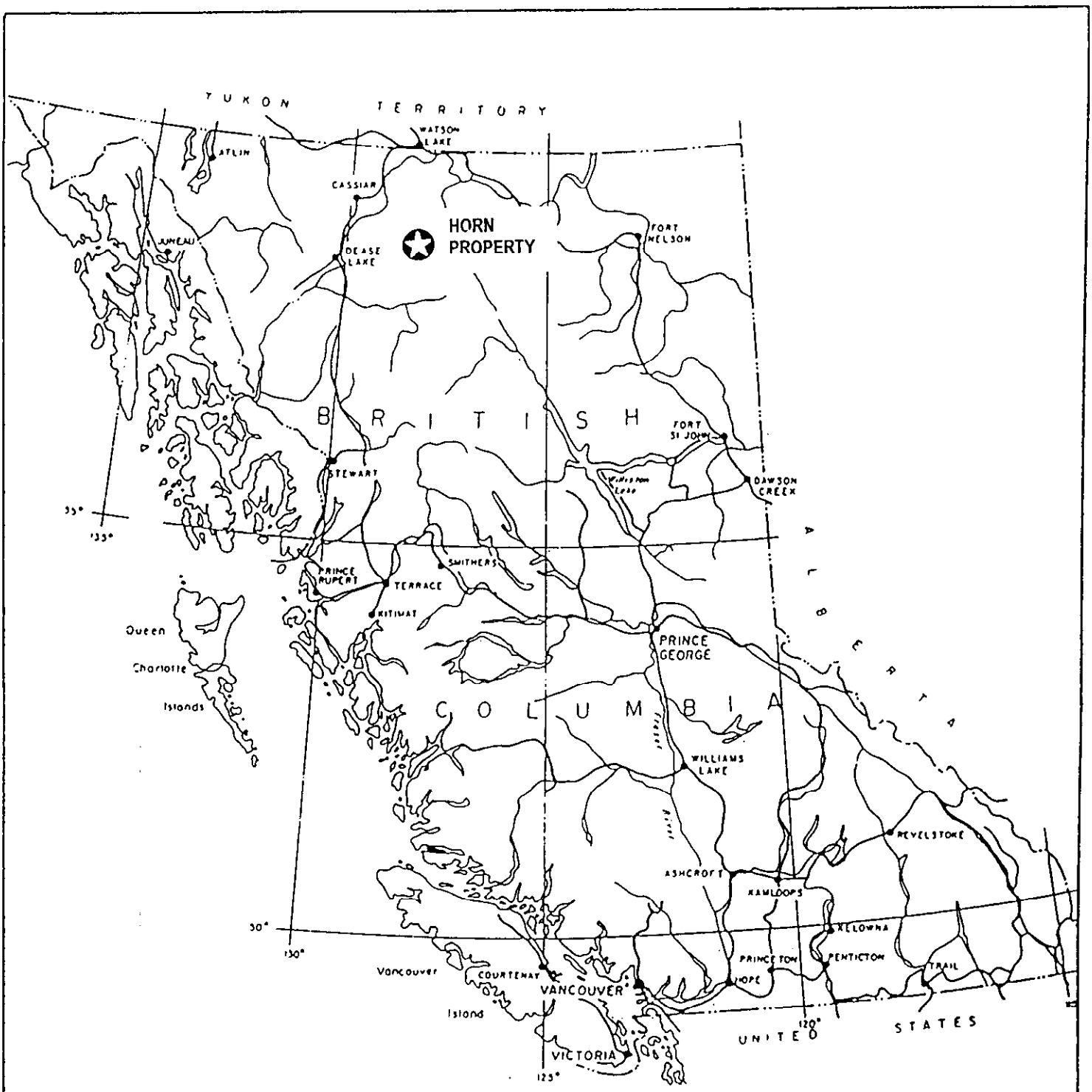
During the period from June 20 to July 2, 1997, Atna Resources Ltd. explored their wholly owned Horn property in the Turnagain River area of north-central British Columbia. The Horn property was staked by Atna in 1996 following the release of a regional geochemical survey by the B. C. government. The 1997 program evaluated these stream sediment anomalies for the first time. Exploration included stream sediment and soil geochemical sampling, prospecting and reconnaissance mapping. A total of 146 silt, 161 soil and 44 rock samples were collected.

Work was carried out by a four man crew based at Kutcho Creek airstrip, 65 km south of the property. The crew consisted of the writer, geologist and project manager Rick Kemp and field assistants Ron Beauchamp and Duncan Macrae. The writer was employed under contract by Atna Resources, the other crew members are Atna employees.

2. PROPERTY, LOCATION AND ACCESS

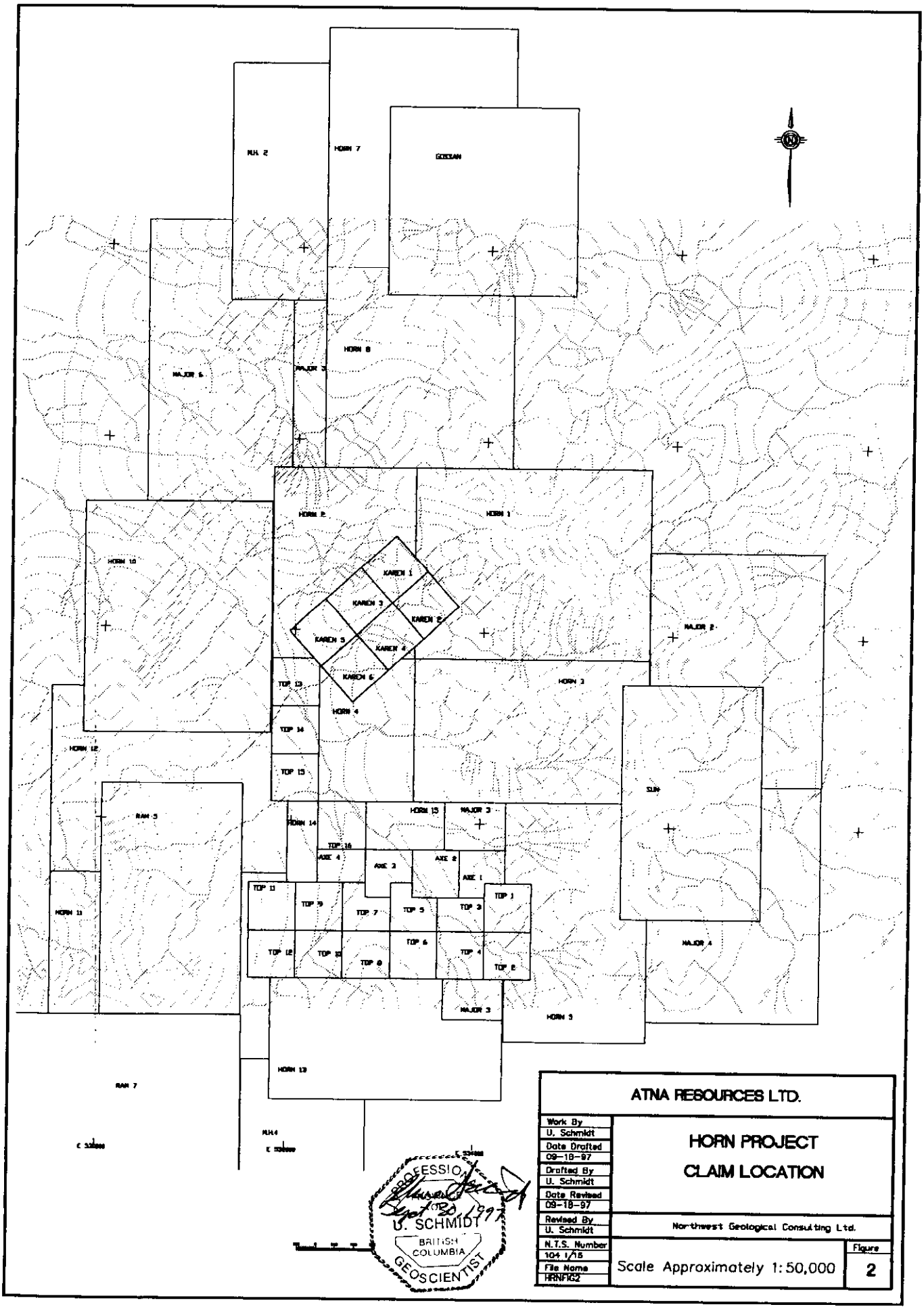
The Horn property is located approximately 100 km northeast of Dease Lake, B.C. and is accessible by helicopter based at Dease Lake or from Watson Lake, Yukon located approximately 160 km to the north. The property consists of 254 units of contiguous two-post and four-post mineral claims, covering an area of approximately 6350 hectares. The property was staked in 1996 and is wholly owned by Atna Resources Ltd. Two claims, Horn 1 and Horn 3, were overstaked and the ownership is being contested under section 35 of the Mineral Tenure Act.

The coordinates of the approximate centre of the property are latitude 58° 48' N and longitude 128° 25' W.



ATNA RESOURCES LTD.			
HORN PROPERTY LOCATION			
NORTHWEST GEOLOGICAL CONSULTING LTD.			
SCALE		DATE	FIG.
1:7,000,000		Sep. 97	1

PROFESSIONAL GEOSCIENTIST
PROVINCE OF BRITISH COLUMBIA
U. SCHMIDT
Sept 20, 1997



ATNA RESOURCES LTD.		
Work By: U. Schmidt	HORN PROJECT CLAIM LOCATION	
Date Drafted: 09-18-97		
Drafted By: U. Schmidt		
Date Revised: 09-18-97		
Revised By: U. Schmidt	Northwest Geological Consulting Ltd.	
N.T.S. Number: 104 I/15	Scale Approximately 1:50,000	Figure: 2
File Name: HRNFIG2		

PROFESSIONAL ENGINEER
U. SCHMIDT
BRITISH COLUMBIA
GEOSCIENTIST

The claims are located within NTS map area 104I/16 and are recorded in the Liard Mining Division as follows:

Name	Record Number	Units	Expiry Date
Horn 1	348491	20	July 6, 1997
Horn 2	348492	12	July 7, 1997
Horn 3	348493	15	July 6, 1997
Horn 4	348494	6	July 8, 1997
Horn 5	348495	15	July 7, 1997
Horn 7	348496	20	July 8, 1997
Horn 8	348497	20	July 8, 1997
Horn 10	348498	20	July 10, 1997
Horn 11	348491	20	July 10, 1997
Horn 12	348491	20	July 10, 1997
Horn 13	348491	20	July 10, 1997
Horn 14	348491	20	July 12, 1997
Horn 15	348491	20	July 12, 1997
Top 1-10	348508-17	10	July 4, 1997
Top 11-12	348518-19	2	July 5, 1997
Top 13-15	348520-22	3	July 10, 1997
Top 16	348523	1	July 12, 1997
Axe 1-3	348530-32	3	July 4, 1997
Axe 4	348533	1	July 5, 1997
Karen 1-6	348524-29	6	July 4, 1997
	Total	**254**	

Base camp for exploration in 1997 was located 65 km south of the property at the Kutcho Creek airstrip. The crew was flown to the property daily by chartered helicopter.

3. PHYSIOGRAPHY

The property is located in rugged terrain along the eastern edge of the Stikine Ranges of the Cassiar Mountains. The property is situated between the Major Hart and Turnagain River systems. Elevations in the vicinity of the claims range from 800 to 2200 metres.

Bedrock exposure in the area is variable, depending on slope and lithology. The best exposures occur along the ridge crests and valley bottoms along tributaries of the main creek. In the main north-trending valley glaciofluvial deposits are up to 5 metres thick. At higher elevations, colluvial deposits become more common.

Vegetation cover varies from dense mature coniferous forest in the valleys to alpine vegetation at higher elevations.

4. HISTORY

The only record of previous work on the property is a soil sampling program carried out by Amoco Canada Petroleum Company Ltd. in 1982. The claim on which the survey was carried out partly overlies the west side of Horn 11. Evidence of previous staking was observed at the south end of the property on Horn 13.

5. REGIONAL GEOLOGY

The geology of Cry Lake map area is divisible into six fault bounded terranes. The northeast corner of the map area, in the vicinity of the property, is underlain by the Ancestral North America Terrane which includes Late Proterozoic to Mississippian miogeoclinal sedimentary rocks, which are intruded by Cretaceous granitic rocks and overlain by allochthonous oceanic rocks of the Mississippian to Permian Slide Mountain Terrane.

6. PROPERTY GEOLOGY

The aim of this project was to evaluate geochemical anomalies reported in the 1996 B.C.

Regional Geochemical Survey release. The work concentrated on stream sediment, soil sampling and prospecting. Mapping was carried out to a limited extent along sampling traverses.

The core are of the property is underlain by dark grey to black shale, argillite and siltstone. Lithologies generally strike northwest and dip moderately to the northeast. At the south end of the property, black shale and argillite, underlying the Horn 13 and Top 1-12 claims are assigned to the Upper Devonian to Lower Mississippian Earn Group. North of the Top 1-12 claims, similar rocks are assigned to structurally overlying allochthonous rocks of the Mississippian to Permian Slide Mountain Terrane. Contacts between these terranes are not exposed.

Mafic metavolcanic rocks of the Slide Mountain Terrane form prominent cliffs along a ridge on the east side of the property on Horn 1 and 3. Mafic volcanics are also a significant component of the undifferentiated Slide Mountain Terrane, underlying Horn 11 and 12 on the west side of the property.

Mineralization

Black shales and argillites commonly contain finely disseminated pyrite in the range of 5 to 10%. Often the pyrite has been removed by weathering and is indicated by small cubic boxwork structures. Rare chalcopyrite and malachite were observed in altered mafic volcanic rocks.

7. GEOCHEMISTRY

Sampling of the property began with a stream sediment survey and prospecting traverses along all drainages. Silt samples were taken at 200 to 300 metre intervals along main drainages and samples were taken from side drainages as they were encountered. In some areas, which lacked

silt because of coarse gravel deposits, silt samples were taken from moss mat deposits on stream banks.

Soil sampling was carried out along side-hill traverses within drainage basins and along ridges between drainage basins. Samples were taken at 200 metre sample intervals when possible. Sample sites are marked with flagging tape and were established by slope-corrected "Hip-Chain" surveys.

Soil development in general is poor. Samples include glacial deposits at lower elevations and colluvium at higher elevations which often consisted of talus fines. Organic-rich samples were avoided. Soil, stream sediment and rock sample sites are presented on figure 3, appended to this report.

Samples were analyzed by Acme Analytical Laboratories Ltd. of Vancouver, employing a standard 31 element Inductively Coupled Argon Plasma (ICP) package and Au analysis by acid leach/AA from a 10 g sample. Certificates of analyses are appended to this report (Appendix A).

STATISTICAL METHOD

Analytical data for stream sediments and soil were separated and 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 Cu, Pb, Zn, Ag, As, Ba 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. Thresholds from lower sub-populations were often eliminated because they represent background metal concentrations. 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 definition and contrast with 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, As, Ba and Au concentrations in silts and soils are presented on figures 4 to 10, appended to this report. Stream sediment data from the B.C. Regional Geochemical Survey are also included for reference. Anomaly thresholds determined for silt samples were applied to these data.

The following summarizes the selected anomaly thresholds:

Population Thresholds

$\bar{x}$ (1) = mean of population 1

$\bar{x}$ (2)+/- 2Sx = mean of population 2 plus or minus 2 standard deviations

Table I: Selected geochemical thresholds for soils

Element	Population Parameter	Log Concentration	Concentration	Selected Threshold
Mo	$\bar{x}$+2Sx(1)		13.705	14
Mo	$\bar{x}$+2Sx(2)		37.453	37
Cu	$\bar{x}$+2Sx(1)	1.4580	28.71	29
Cu	$\bar{x}$+2Sx(2)	2.0635	115.74	116
Cu	$\bar{x}$+2Sx(3)	2.6594	456.46	456
Pb	$\bar{x}$-2Sx(2)		10.417	10
Pb	$\bar{x}$+2Sx(2)		31.583	32
Zn	$\bar{x}$-2Sx(2)	2.3863	243.39	243
Zn	$\bar{x}$(2)	2.8155	653.88	654
Zn	$\bar{x}$+2Sx(2)	3.2447	1756.71	1757
Ag	$\bar{x}$-2Sx(2)		2.626	2.6
Ag	$\bar{x}$(2)		4.360	4.4
Ag	$\bar{x}$+2Sx(2)		6.094	6.1
As	$\bar{x}$-2Sx(2)		14.887	15
As	$\bar{x}$+2Sx(2)		56.960	57
As	$\bar{x}$+2Sx(3)		125.731	126
Cd	$\bar{x}$(1)	0.0047	1.01	1
Cd	$\bar{x}$-2Sx(2)	0.6795	6.80	7
Cd	$\bar{x}$(2)	1.2472	17.7	18

Table I: Selected geochemical thresholds for soils continued

Element	Population Parameter	Log Concentration	Concentration	Selected Threshold
Sb	$\bar{x}$-2Sx(1)		2.341	2
Sb	$\bar{x}$+2Sx(1)		5.325	5
Sb	$\bar{x}$+2Sx(3)		8.000	8
Sb	$\bar{x}$(3)		16.000	16
Mn	$\bar{x}$-2Sx(2)	1.9605	91.31	91
Mn	$\bar{x}$(2)	2.5934	392.1	392
Mn	$\bar{x}$-2Sx(3)	3.0467	1113.53	1114
Mn	$\bar{x}$-2Sx(4)	3.4088	2563.30	2563
Mn	$\bar{x}$+2Sx(4)	3.8052	6385.57	6386
Fe	$\bar{x}$-2Sx(2)	0.1880	1.54	1.54
Fe	$\bar{x}$-2Sx(3)	0.7160	5.20	5.20
Ba	$\bar{x}$-2Sx(2)		392.918	393
Ba	$\bar{x}$+2Sx(2)		1674.477	1674
Au	$\bar{x}$-2Sx(2)	0.5349	3.4.	3
Au	$\bar{x}$+2Sx(2)	1.2426	17.48	17
Hg	$\bar{x}$-2Sx(1)	1.0907	12.32	12
Hg	$\bar{x}$(1)	1.8678	73.76	74
Hg	$\bar{x}$+2Sx(1)	2.6449	441.47	441

Table II: Selected geochemical thresholds for stream sediments

Element	Population Parameter	Log Concentration	Concentration	Selected Threshold
Mo	$\bar{x}(1)$	0.586	3.85	4
Mo	$\bar{x}$-2Sx(2)	1.0036	10.08	10
Mo	$\bar{x}$+2Sx(2)	1.308	20.32	20
Cu	$\bar{x}$-2Sx	1.5082	32.23	32
Cu	$\bar{x}$	1.9469	88.49	88
Cu	$\bar{x}$+2Sx	2.3856	243	243
Pb	$\bar{x}$-2Sx(2)	0.8762	7.52	8
Pb	$\bar{x}(2)$	1.0945	12.43	12
Pb	$\bar{x}$+2Sx(2)	1.3128	20.55	21
Zn	$\bar{x}$+2Sx(1)	2.141	138.36	138
Zn	$\bar{x}(2)$	2.6533	450.09	450
Zn	$\bar{x}$-2Sx(3)	3.2642	1837.38	1837
Zn	$\bar{x}$+2Sx(3)	3.5507	3553.86	3554
Ag	$\bar{x}$-2Sx(2)	-0.1854	0.65	0.7
Ag	$\bar{x}$+2Sx(2)	0.3115	2.05	2
As	$\bar{x}$-2Sx(2)	0.9736	9.41	9
As	$\bar{x}(2)$	1.2921	19.59	20
As	$\bar{x}$+2Sx(2)	1.6106	40.79	41
Cd	$\bar{x}$-2Sx(2)	-0.3113	.49	.5
Cd	$\bar{x}(2)$	0.3776	2.39	2.4
Cd	$\bar{x}$-2Sx(3)	0.8659	7.34	7.3
Cd	$\bar{x}$+2Sx(3)	1.7115	51.46	51.5

Table II: Selected geochemical thresholds for stream sediments continued

Element	Population Parameter	Log Concentration	Concentration	Selected Threshold
Sb	$\bar{x}$-2Sx(2)		6.112	6
Sb	$\bar{x}$(2)		10.200	10
Mn	$\bar{x}$+2Sx(1)	2.4787	301.09	301
Mn	$\bar{x}$-2Sx(3)	2.8754	750.59	750
Mn	$\bar{x}$(3)	3.6147	4118.13	4118
Mn	$\bar{x}$+2Sx(3)	4.3539	22589.16	22589
Fe	$\bar{x}$-2Sx(2)	0.5507	3.55	3.55
Fe	$\bar{x}$(2)	1.0048	10.11	10.11
Ba	$\bar{x}$-2Sx(2)	2.3706	234.75	235
Ba	$\bar{x}$-2Sx(3)	2.6213	418.12	418
Ba	$\bar{x}$+2Sx(3)	3.1000	1258.93	1259
Au	$\bar{x}$-2Sx(2)	0.3336	2.16	2
Au	$\bar{x}$+2Sx(2)	0.7555	5.70	6
Hg	$\bar{x}$-2Sx(2)	1.6537	45.05	45
Hg	$\bar{x}$(2)	2.0028	100.65	101
Hg	$\bar{x}$+2Sx(2)	2.3519	224.85	225

DISCUSSION OF RESULTS

Copper (Fig.4)

Silt

Copper concentrations range from 19 to 553 ppm in silt. The data indicate a single log-normal distribution. Symbol boundaries of 32, 88 and 243 were chosen which correspond to the mean minus two standard deviations, the mean and the mean plus two standard deviations respectively. The mean value of 88 ppm and above outlines higher backgrounds of copper found in stream sediments in the southeast area of the property. Highly anomalous concentrations above 243 ppm occur at four sample sites in these drainages.

Soil

Copper concentrations in soils range from 9 to 664 ppm. The data were separated into 3 mixed log-normal populations with population boundaries at 10% and 85%. Symbol thresholds of 29, 116 and 456 ppm were chosen to separates these sub-populations. These values correspond to the mean plus two standard deviations of each sub-population.

Concentrations of 116 ppm Cu or less which correspond to population 2, are widespread. Analyses above this level occur in soils and talus fines in the headwaters of two drainages on the east side of the property. Two highly anomalous samples of greater than 457 ppm Cu are associated with these samples. Concentrations above 116 ppm Cu belong to population 3 which is associated with the occurrence of mafic volcanics.

Lead (Fig. 5)

Silt

Lead concentrations in stream sediments range from 3 to 34 ppm. The data was divided into 3 log-normal sub-populations. symbol boundaries of 8, 12 and 21 were chosen to separate the sub-populations. Although overall lead concentrations are low, concentrations above 21 ppm define areas predominantly underlain by mafic volcanics and associated sediments of the Slide Mountain Terrane.

Soil

Lead concentrations in soils and talus fines are also uniformly low. The analyses rang from 4 to 99 ppm. Two symbol boundaries of 10 and 32 were chosen based on 3 normal mixed populations. Most analyses are within the range of population 2. Anomalous concentrations above 32 ppm, which corresponds to the mean plus 2 standard deviations of population 2, are associated with mafic volcanic rocks on eastern and northern limits of the property.

Zinc (Fig. 6)

Silt

Zinc analyses in silts range from 46 to 11,572 ppm. The data were divided into 3 log-normal sub-populations with population boundaries of 10% and 95%. Symbol thresholds of 138, 450, 1837 and 3554 were chosen based on an analysis of data which were truncated at 4000 ppm. An anomalous threshold of 3554 ppm, which corresponds to the mean plus 2 standard deviations of population 3, outlines two drainages in the southeast corner of the property.

Soil

Zinc analyses of soils range from 40 to 1954 ppm. The data were divided into two log-normal sub-populations with a population boundary of 85% of the data. Symbol thresholds of 243, 654 and 1757 were chosen from population 2. Higher zinc backgrounds are indicated by analyses above 654 ppm. This threshold is the mean of population 2. The highest zinc concentrations, which correspond to the mean plus two standard deviations of population 2, occur at the south end of the property. This area is underlain by Earn Group black shales.

Soil samples taken in one anomalous drainage do not indicate a source for the silt anomalies. No soil sampling has been carried out in the second anomalous drainage.

Silver (Fig.7)

Silt

Silver in stream sediments rang from 0.3 to 2.6 ppm. Two log-normal populations were interpreted in the data with a population boundary of 50%. The upper and lower limits of

population 2, defined by the mean plus or minus two standard deviations, were chosen as symbol thresholds. Samples within this range of 0.7 and 2.0 ppm occur in drainages on the east side of the property. Highly anomalous concentrations of > 2.1 ppm occur at 3 sites.

Soil

Silver concentrations in soil range from 0.3 to 5.9 ppm. The data is interpreted as two normal populations having 93% of the data in the lower population. Symbol boundaries of 2.6, 4.4 and 6.1 ppm were chosen from the higher sub-population. Sample sites belonging to population 2 occur at isolated sites.

Arsenic (Fig. 8)

Silt

The arsenic analytical data ranges from 3 ppm to 72 ppm in silt samples. A mixed log-normal population is indicated in the data. An anomalous thresholds of 42 ppm was chosen, which corresponds to the mean plus two standard deviations of population 2. Five anomalous stream sediment samples are located near the southern end of the property and six are located near the northern limits of the property.

Soil

Arsenic concentrations in soils define a mixed normal population. Anomalous thresholds were chosen at 57 and 126 ppm. This corresponds to the mean plus two standard deviations of population 2 and the mean plus two standard deviations of population 3, respectively. Three anomalous sample sites are located at the north end of the property.

Barium (Fig. 9)

Silt

Barium analyses range from 36 to 1829. Analyses are from a standard ICP acid leach which is only partial for Ba. Three log-normal mixed sub-populations were interpreted in the data

with population boundaries of 15% and 50%. Symbol boundaries of 235, 418 and 1259 ppm were chosen from population 2 and 3.

Analyses below 236 (population 2) occur in drainages from the west side of the property. This area is underlain by Slide Mountain Terrane.

Population 3 analyses outline drainages from the east side of the property. These drainages are underlain by both Slide Mountain Terrane metasediments, Earn Group black shales and minor carbonate. Four highly anomalous samples, exceeding 1260 ppm, occur in these drainages.

Soil

Barium concentrations in soil range from 87 to 4918 ppm. A mixed normal statistical distribution was interpreted. Three sub-populations with population boundaries of 70% and 96% were chosen. Symbol boundaries of 393 and 1674 represent the limits of population 2 defined by the mean plus or minus two standard deviations.

The distribution of population 2 samples, representing higher backgrounds, is similar to the silt analyses. Higher backgrounds occur on the east side of the property. The highest concentrations (belonging to population 3) occur within this area of elevated background. Elevated and anomalous barium concentrations occur in areas underlain by Earn Group black shales, shales, siltstones and mafic volcanics of Slide Mountain Terrane.

Gold (Fig. 10)

Silt

Gold concentrations in silt range from <1 to 69 ppb. Fourteen samples were below detection limit. The data were divided into 3 log-normal sub-populations with population boundaries of 70% and 95%. Symbol boundaries of 2 and 6 ppb were chosen based on the limits of population 2. Analyses of 6 or greater are interpreted as anomalous. Samples taken on the west side of the property have a slightly lower background. The highest silts occur at isolated sites and are not organized in any clear pattern.

Soil

Gold in soils range from concentrations of <1 to 137 ppb. The data consist of a mixed log-normal distribution with 3 sub-populations. Symbol boundaries of 3 and 17 were chosen, based on the limits of population 2. The anomalous threshold is 17 ppb. Three isolated sample sites exceeded this threshold. Most of the property is covered by population 1 background sample sites which range from 1 to 3 ppb. Elevated backgrounds of population 2 occur in small groups in 5 areas of the property. These areas are underlain by Earn Group shales and Slide Mountain Terrane mafic volcanics.

8. CONCLUSIONS

Exploration of the Horn property confirms highly anomalous multi-element stream sediment anomalies obtained in a 1996 regional geochemical survey release. The south end of the property is underlain by Earn Group shales which are favourable host rocks for SEDEX Pb-Zn-Ba mineralization. The distribution of various anomalies in silts and soils reflect different lithologies on the west and east sides of the main drainage. Tributaries from the southwest are outlined by Pb and As while tributaries from the east and north-east are outlined by Zn, Ag and Ba. The Zn, Ag and Ba anomalies are located in areas mapped as Slide Mountain Terrane but the geochemistry may indicate that Earn Group lithologies extend farther north than mapping indicates and may be exposed at lower elevations.

Low levels of lead in silts and soils indicate a reduced possibility that economic shale-hosted SEDEX Pb-Zn-Ba mineralization has been detected by the present survey. However, the sample density is quite low and additional reconnaissance or grid soil sampling is required before the possibility of isolating mineralized source rocks by geochemistry can be eliminated.

Highly anomalous zinc values obtained in silt samples in some drainages are likely caused by the weathering of metal rich pyritic shales and argillites.

9. RECOMMENDATIONS

A program of mapping and additional reconnaissance or grid soil sampling is recommended in the southeast area of the property where favourable Earn Group rocks are mapped.

A re-examination of high zinc silt sample sites on Horn 3 and 4 is recommended. Additional soil sampling in these areas is also recommended because present sample lines are at the height of land and may have missed possible low lying source rocks.

Further soil sampling is recommended at the south end of the property, on Horn 13, Top 1-12 and Horn 5. This area is underlain by Earn Group and has elevated to anomalous soil sample sites in Cu, Zn, Ag and Ba.

Contour soil sample lines are recommended in the drainage basin covered by Top 1-4 and Horn 5. This area has the second highest concentration of anomalous zinc values in silt but no soil sampling has been carried out.

10. BIBLIOGRAPHY AND REFERENCES

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2. STATEMENT OF EXPENDITURE

I. Field Expenses

1) Labour

U.Schmidt June 20- July 2, 1997

13 days @$360/day	$4,680.00	
R. Kemp June 20- July 2, 1997		
13 days @ $330/day	$4,290.00	
R.Beauchamp (Field Assistant) June 20- July 2, 1997		
13 days @ $185/day	$2,405.00	
D. MacRae (Field Assistant) June 22-June28, June30-July 2, 1997		
10 days @ $175/day	$1,750.00	
		$13,125.00
2) Camp and Equipment Rental		$2,629.29
3) Room and Board:		$5186.70
4) Transportation		
Truck Rental		$1,940.00
Fuel		$434.00
Helicopter: 17.7 hr.@ $678/hr.		$12,000.60
Air Charter: Northern Lights		$1,100.00
Air Charter: Summit Air		$1,000.00
5) Geochemical Analysis		
161 soils, 31 element ICP & Au analysis		$2,898.00
154 silts, 31 element ICP & Au analysis		$2,772.00
37 rocks, 31 element ICP & Au analysis		$666.00
SUB TOTAL		**$30,626.59**

II. OFFICE

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

U. Schmidt Sept. 1,2,6,13,16-18,22,24,29,30, 1997

11 days @$360/day	$3,960.00	
Expenses	$250.00	
		$4,210.00
	SUB TOTAL	**$47,961.59**
	GST	**$1,462.34**
	PROJECT TOTAL	**$49,423.93**

Appendix A

CERTIFICATIONS OF ANALYSIS

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

Atna Resources Ltd. PROJECT HORN File # 97-3431 Page 1

1550 - 409 Granville St., Vancouver BC V6C 1T2

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	Hg ppb
70101	4	54	10	65	.5	30	6	89	2.13	8	<8	<2	2	70	<.2	3	<3	20	.15	.057	6	37	.50	38	<.01	7	.77	.01	.19	5	3	65
70103	1	35	11	14	<.3	11	2	82	.79	<2	<8	<2	<2	15	<.2	<3	<3	10	.02	.014	4	18	.11	316	.01	3	.25	.01	.10	5	1	20
70609	3	26	9	36	2.3	21	3	44	1.63	3	9	<2	4	50	<.2	<3	<3	22	.06	.049	9	32	.29	71	<.01	7	.70	.01	.27	3	4	150
70610	4	391	5	12	.3	16	3	170	2.56	3	<8	<2	2	4	.2	<3	<3	38	.16	.017	6	38	.26	66	.10	15	.39	.03	.01	2	1	30
70611	<1	12	4	34	<.3	7	3	105	.92	2	<8	<2	2	191	.2	<3	<3	4	.83	.014	6	17	.49	453	<.01	3	.14	.01	.07	6	<1	20
70612	2	23	5	38	<.3	10	1	31	1.08	3	<8	<2	<2	30	<.2	<3	<3	5	.03	.039	6	14	.03	859	<.01	3	.16	<.01	.07	3	1	35
70613	1	22	5	24	.3	10	4	596	.85	4	<8	<2	2	50	.2	4	<3	3	.21	.037	4	16	.11	811	<.01	5	.19	<.01	.09	6	<1	15
70614	1	27	3	34	<.3	31	20	980	2.73	6	<8	<2	2	147	.5	<3	<3	15	23.76	.240	16	11	.49	32	<.01	<3	.37	.01	.12	<2	<1	30
70616	97	52	10	88	1.5	147	6	41	1.34	30	<8	<2	3	10	1.6	10	<3	127	.14	.021	4	29	.05	52	<.01	6	.30	<.01	.16	6	4	220
70647	3	26	7	24	.7	26	3	64	2.42	8	<8	<2	3	9	<.2	3	<3	8	.35	.020	3	13	.08	26	<.01	4	.26	.01	.15	4	2	105
70751	47	29	9	174	.7	78	4	43	1.49	48	<8	<2	2	14	3.1	3	<3	194	.49	.088	5	27	.08	71	<.01	10	.43	<.01	.22	8	3	210
70752	46	8	6	30	.9	8	1	25	.42	11	<8	<2	2	4	.4	5	<3	107	.04	.008	7	14	.05	139	<.01	4	.22	.01	.15	5	3	165
70753	6	10	6	17	1.0	5	<1	27	.52	7	9	<2	3	8	.3	<3	<3	17	.03	.018	10	18	.03	394	<.01	10	.24	<.01	.15	4	2	80
70754	41	43	6	170	.8	59	12	185	4.70	219	<8	<2	2	68	1.4	11	<3	30	1.01	.292	5	25	.07	86	<.01	4	.34	.01	.13	2	1	120
70755	4	49	8	232	1.0	67	6	60	2.19	15	<8	<2	6	5	.3	4	<3	12	.07	.039	10	15	.08	234	<.01	5	.44	<.01	.21	2	3	275
70756	3	47	12	94	.9	45	6	25	2.19	16	<8	<2	7	34	<.2	3	<3	16	.14	.110	7	18	.11	95	<.01	7	.49	<.01	.25	2	5	190
RE 70756	3	45	12	93	.7	43	6	24	2.08	15	9	<2	6	32	<.2	3	<3	15	.13	.106	7	17	.10	100	<.01	6	.47	<.01	.25	2	4	235
70757	2	34	5	94	.4	27	3	34	1.17	6	<8	<2	4	8	.5	4	<3	11	.09	.085	11	13	.05	74	<.01	4	.27	<.01	.16	4	3	40
70758	2	14	5	107	<.3	32	5	737	.84	<2	<8	<2	2	46	3.5	<3	<3	4	.20	.018	5	16	.15	556	<.01	<3	.34	<.01	.05	6	1	20
70759	1	16	4	73	<.3	23	4	747	1.11	2	<8	<2	2	151	.8	<3	<3	7	.69	.014	6	23	.40	1312	<.01	3	.26	.01	.09	6	1	15
70760	143	41	15	340	3.4	71	2	29	2.36	54	<8	<2	3	19	7.0	13	<3	165	.31	.201	6	30	.03	716	<.01	4	.35	<.01	.16	5	3	405
70761	84	47	15	155	1.1	49	4	44	1.17	19	15	<2	3	30	3.4	3	<3	411	.38	.178	17	38	.19	489	.01	13	.65	<.01	.34	6	3	195
70762	72	77	8	179	1.8	43	6	49	2.19	20	23	<2	3	81	1.9	3	<3	176	1.65	.844	14	47	.11	383	.01	13	.64	.01	.31	5	2	195
70763	3	55	4	74	.6	28	6	201	5.30	14	<8	<2	4	33	1.1	4	<3	22	.26	.051	9	23	.18	284	<.01	9	.35	<.01	.14	4	1	110
70764	18	9	7	17	.6	4	<1	21	.42	6	<8	<2	2	5	<.2	<3	<3	8	.03	.010	12	13	.04	467	<.01	6	.19	<.01	.12	3	4	120
70765	1	22	4	18	.5	8	1	59	.70	5	<8	<2	<2	68	<.2	<3	<3	6	.31	.018	3	20	.15	259	<.01	5	.12	<.01	.06	8	2	45
70766	3	22	6	43	.5	18	3	176	1.26	19	<8	<2	3	134	<.2	4	<3	7	.51	.012	5	25	.29	114	<.01	4	.18	<.01	.08	9	1	35
70767	2	21	4	42	.3	30	5	265	1.55	18	<8	<2	2	125	<.2	4	<3	11	.59	.018	6	19	.32	78	<.01	7	.20	<.01	.08	5	2	55
70768	55	28	12	36	2.5	138	8	42	2.37	30	<8	<2	3	10	.5	7	<3	106	.25	.132	6	23	.04	53	<.01	5	.29	<.01	.17	4	3	225
70769	4	12	6	12	.7	5	1	21	1.49	8	<8	<2	5	8	<.2	<3	<3	11	.02	.021	8	14	.04	139	<.01	4	.28	.02	.25	3	1	70
70770	3	24	6	29	<.3	16	5	1062	1.00	37	<8	<2	<2	104	<.2	<3	<3	6	.38	.018	4	16	.21	2957	<.01	3	.37	<.01	.07	6	<1	10
70772	1	80	21	42	<.3	76	16	5455	2.43	33	<8	<2	3	96	.2	<3	<3	49	4.64	.083	14	23	.35	1062	.05	160	.71	.01	.13	4	2	20
70773	3	16	7	16	.6	14	2	66	1.12	3	<8	<2	3	19	<.2	<3	<3	26	.02	.026	10	32	.14	78	.01	10	.53	.01	.28	2	3	80
70774	<1	81	<3	69	<.3	29	21	826	5.63	<2	<8	<2	<2	15	<.2	<3	<3	124	1.99	.105	1	44	1.78	220	.42	3	3.29	.04	.10	<2	<1	<10
STANDARD C3/AU-R	27	68	38	164	6.0	38	12	813	4.00	55	26	<2	20	31	26.0	20	24	84	.67	.104	19	174	.73	155	.10	21	2.03	.04	.18	22	442	930

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: P1 -P2 ROCK P3 MOSS MAT P4-P12 SOIL/SILT AU* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.(10 GM)
HG ANALYSIS BY FLAMELESS AA. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: JUL 7 1997 DATE REPORT MAILED: July 16/97 SIGNED BY .D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

 Data___ FA ___

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	Hg ppb
70775	1	50	5	37	<.3	17	6	303	1.20	3	<8	<2	4	4	.3	<3	<3	16	.06	.012	9	15	.48	510	.16	7	.67	.01	.15	2	1	10
70776	2	772	6	41	.5	15	8	570	4.99	<2	<8	<2	2	5	.4	<3	<3	103	.79	.042	5	72	1.31	116	.37	4	1.82	.04	.05	2	1	<10
70777	1	98	19	31	2.3	15	27	655	7.15	17	<8	<2	<2	3	<.2	<3	5	67	.93	.096	3	6	1.85	26	.32	4	1.62	.02	.23	3	2	105
70778	2	48	13	86	.5	21	5	45	2.18	9	<8	<2	4	11	<.2	<3	<3	13	.07	.083	12	10	.07	210	<.01	7	.38	<.01	.21	2	2	110
RE 70778	2	49	11	89	.7	28	4	49	2.32	8	<8	<2	5	11	<.2	<3	<3	14	.07	.084	13	12	.07	207	<.01	3	.39	<.01	.21	2	2	110

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

Data___ FA ___

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	Hg ppb
70111	11	129	10	927	1.2	390	13	443	2.29	17	11	<2	<2	319	11.3	3	<3	18	8.69	.123	5	9	.24	491	<.01	7	.44	.01	.08	<2	1	85
70115	1	53	4	1164	.4	138	3	149	.57	6	<8	<2	<2	497	9.8	<3	<3	5	36.75	.032	2	5	.24	324	<.01	4	.20	.01	.05	<2	1	45
70555	5	132	17	755	1.1	232	18	821	3.36	20	8	<2	2	67	9.5	4	<3	44	1.61	.155	11	46	.71	572	.03	6	1.16	.02	.12	<2	2	130
70560	1	108	28	250	.5	273	28	925	3.79	23	10	<2	2	34	3.6	<3	<3	71	.83	.089	12	142	2.17	330	.07	4	1.99	.04	.07	<2	3	50
70563	2	159	30	524	.6	326	31	964	3.64	20	60	<2	<2	39	6.3	<3	3	62	1.21	.117	16	163	2.36	295	.06	5	1.86	.03	.07	<2	2	50
70628	2	127	19	146	.5	97	30	1011	5.38	31	<8	<2	4	23	1.2	<3	<3	55	.46	.106	24	71	1.52	434	.05	4	2.13	.01	.14	<2	3	80
70814	15	58	10	763	1.0	123	9	283	1.77	19	<8	<2	2	53	12.6	5	<3	36	.34	.116	12	12	.15	654	.01	3	.37	.01	.08	<2	3	125
70817	14	49	12	484	.7	101	9	226	1.89	19	<8	<2	<2	57	9.3	5	<3	34	.28	.130	15	14	.13	718	.01	3	.42	.01	.08	<2	3	145
70818	15	135	10	892	1.4	164	11	267	1.96	20	<8	<2	4	54	13.0	6	<3	39	.29	.120	16	20	.12	917	.01	3	.46	.01	.08	<2	5	145
70826	8	50	15	268	.9	64	10	450	1.41	15	<8	<2	<2	87	3.3	4	<3	25	.30	.099	14	9	.10	398	<.01	<3	.33	<.01	.07	<2	4	145
70827	19	96	15	873	1.5	178	22	662	3.13	27	<8	<2	3	74	10.9	6	<3	31	.18	.141	16	17	.19	725	.01	3	.66	.01	.08	<2	5	160
70830	23	75	18	520	1.2	131	14	470	2.73	37	<8	<2	4	83	7.6	10	<3	47	1.38	.131	15	24	.74	551	.01	3	.57	.01	.05	<2	3	255
70833	18	68	16	333	1.0	95	13	430	2.74	35	<8	<2	2	80	4.3	7	<3	42	1.78	.122	15	24	.84	586	.01	4	.63	.01	.06	<2	4	225
70836	15	48	13	398	.6	178	10	351	1.93	24	12	<2	<2	69	9.7	6	<3	30	1.67	.134	10	19	.54	474	.01	6	.45	.01	.06	<2	2	170
70840	6	66	25	215	.4	91	21	712	3.83	41	<8	<2	3	25	3.0	6	<3	38	1.58	.154	18	33	1.05	533	.02	3	.76	.01	.04	<2	3	130
70842	8	82	27	225	.4	102	26	781	4.31	50	<8	<2	4	24	2.9	6	<3	43	.73	.158	17	34	.55	275	.02	<3	.80	<.01	.04	<2	3	110
70847	15	70	11	1403	1.2	269	21	1158	2.06	21	<8	<2	3	64	25.2	7	<3	40	.53	.108	16	17	.29	936	.01	<3	.54	.01	.07	<2	3	150
70851	8	188	5	6594	.9	1504	171	12205	6.16	23	<8	<2	4	64	68.5	<3	<3	29	.51	.146	14	18	.36	652	.03	<3	1.18	<.01	.06	<2	3	110
70856	7	100	9	708	1.0	205	8	364	1.60	12	12	<2	<2	78	14.0	4	<3	31	.66	.124	9	18	.21	320	.01	3	.58	.01	.11	<2	3	145
RE 70856	7	103	9	719	1.2	212	8	371	1.62	11	21	<2	2	78	14.3	6	<3	31	.68	.127	9	18	.21	289	.01	4	.58	.01	.11	<2	2	145
70857	9	243	5	11572	.7	2477	329	23878	9.74	25	<8	<2	3	75	100.4	<3	<3	32	.63	.173	16	30	.38	535	.03	<3	1.64	.01	.09	<2	3	105
70861	16	72	11	660	1.0	123	10	320	1.95	21	9	<2	2	60	12.3	3	<3	40	.34	.125	12	13	.15	391	.01	<3	.37	.01	.10	<2	3	150
70862	18	171	11	5603	.7	635	31	1189	1.92	23	45	<2	2	57	42.4	4	<3	36	.34	.155	12	9	.14	219	.01	<3	1.52	.01	.10	<2	4	125
70867	40	83	18	1148	1.5	271	14	306	2.84	36	12	<2	<2	62	23.4	13	<3	67	.51	.191	14	19	.17	289	.01	3	.53	<.01	.10	<2	3	185
70873	21	203	15	780	1.0	164	28	666	2.53	24	13	<2	3	59	15.8	9	<3	45	.24	.148	15	16	.11	389	.01	3	.95	<.01	.10	<2	4	130
70875	14	83	20	493	.9	125	21	931	2.77	21	<8	<2	<2	80	23.2	6	<3	54	.57	.127	13	21	.48	1774	.02	3	.94	<.01	.11	<2	2	130
70880	6	75	19	632	.5	156	22	1137	4.59	42	<8	<2	3	33	10.8	4	<3	63	.76	.158	21	85	1.13	263	.04	3	1.53	.01	.07	<2	2	55
70881	4	75	18	394	.4	133	22	1269	4.62	40	<8	<2	4	34	9.4	6	<3	61	.81	.154	20	85	1.14	260	.04	3	1.57	.01	.06	<2	7	50
70883	2	115	19	239	.3	146	34	1306	6.47	38	<8	<2	3	39	2.8	<3	<3	58	1.06	.188	20	93	1.23	210	.04	3	1.46	.01	.06	<2	2	60
70884	2	80	26	132	.3	127	24	1595	4.58	46	9	<2	2	39	1.9	<3	<3	70	.85	.129	19	110	1.56	256	.05	3	1.82	.02	.08	<2	3	50
70886	3	89	29	129	.6	114	23	1898	3.52	47	17	<2	2	54	1.7	3	<3	58	1.51	.161	16	101	1.17	300	.05	5	1.73	.02	.11	<2	2	65
70887	5	68	25	105	<.3	110	13	859	2.85	24	<8	<2	<2	31	1.0	3	<3	58	.63	.079	14	102	1.08	185	.08	3	1.74	.02	.06	<2	1	75
70891	17	106	12	2218	.9	341	26	1086	2.72	28	<8	<2	2	61	27.7	5	<3	40	1.31	.155	13	23	.55	511	.01	<3	.79	.01	.09	<2	3	160
70892	16	84	14	1608	.7	268	19	701	2.53	27	9	<2	<2	58	22.6	6	<3	41	.92	.144	12	22	.47	564	.01	3	.65	.01	.08	<2	4	140
70893	15	75	12	1667	.7	342	28	1606	2.48	25	12	<2	2	59	27.2	5	<3	38	.94	.134	12	19	.51	517	.01	<3	.60	.01	.08	<2	3	140
70894	15	145	7	2698	.6	534	87	3922	7.70	29	12	<2	3	49	32.1	<3	<3	34	.69	.107	13	22	.41	375	.02	<3	2.24	.01	.06	<2	3	100
STANDARD C3/AU-S	25	62	34	150	5.4	36	14	739	3.51	70	16	<2	19	28	24.3	17	22	77	.59	.095	18	160	.67	141	.10	21	1.83	.04	.14	23	44	910

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

Data___ FA ___

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	Hg ppb
70102	14	62	13	189	1.0	63	7	411	2.00	19	9	<2	2	59	2.6	6	<3	69	.24	.105	15	22	.27	590	.01	3	.74	.01	.12	<2	2	75
70201	7	33	17	115	.4	31	17	1643	3.48	19	<8	<2	2	20	.8	3	<3	63	.09	.096	14	35	.24	469	.09	<3	.81	.01	.08	<2	1	45
70202	5	23	8	103	1.0	31	10	770	6.24	18	<8	<2	4	11	.6	<3	<3	68	.17	.106	16	49	.61	187	.24	<3	3.21	.02	.05	<2	1	95
70203	6	41	12	183	1.3	55	6	358	3.80	22	<8	<2	5	11	.5	<3	<3	57	.08	.082	16	36	.33	263	.06	<3	1.58	.01	.07	<2	2	125
70204	7	20	12	76	.4	19	3	91	1.77	12	<8	<2	3	12	<.2	3	<3	78	.04	.073	15	23	.09	227	.05	<3	.67	<.01	.06	<2	1	10
70205	14	51	13	254	2.1	54	9	524	4.17	27	<8	<2	6	24	3.7	5	<3	114	.08	.129	22	39	.36	487	.16	<3	2.02	.01	.10	<2	1	100
70206	27	33	12	307	.9	74	7	313	2.80	25	<8	<2	2	26	5.4	5	<3	147	.13	.120	16	29	.29	430	.08	<3	1.12	.01	.12	<2	1	60
70207	20	25	9	154	.4	43	5	211	2.93	29	<8	<2	3	21	1.8	5	<3	121	.08	.106	14	26	.23	276	.07	<3	.72	.01	.08	<2	4	20
70208	29	33	12	436	.4	163	82	3828	2.06	14	<8	<2	<2	20	6.7	5	<3	153	.08	.056	14	29	.29	869	.02	3	.92	.01	.10	<2	2	75
70209	14	9	13	103	<.3	31	3	87	1.87	15	<8	<2	<2	5	.5	<3	<3	209	.03	.062	16	26	.13	221	.05	<3	.77	<.01	.07	<2	<1	10
70210	9	54	17	264	.7	87	14	673	3.01	25	<8	<2	2	27	3.3	4	<3	40	1.74	.090	14	27	.86	579	.03	3	.88	<.01	.05	<2	2	190
70211	17	16	19	112	<.3	31	5	201	3.04	17	<8	<2	2	8	1.4	<3	<3	89	.12	.066	19	29	.11	319	.13	<3	.90	.01	.03	<2	1	35
70212	9	37	9	169	.3	57	8	362	1.53	16	<8	<2	2	83	2.7	5	<3	20	12.71	.054	7	10	1.50	270	.02	<3	.34	<.01	.03	<2	1	170
70213	5	26	10	93	.3	33	3	102	2.00	14	<8	<2	<2	9	.2	<3	<3	33	.11	.064	18	13	.07	190	.02	<3	.41	<.01	.03	<2	2	35
70214	24	12	15	40	1.5	13	1	22	1.18	23	<8	<2	2	25	.2	5	<3	98	.02	.112	18	14	.04	194	<.01	3	.39	<.01	.07	<2	1	190
70215	5	10	4	47	<.3	16	2	37	.72	6	<8	<2	<2	3	<.2	<3	<3	33	.03	.023	18	7	.03	87	.02	<3	.20	<.01	.05	<2	<1	20
RE 70215	5	11	4	47	.3	17	2	38	.73	8	<8	<2	2	3	.2	3	<3	34	.03	.024	19	7	.03	89	.02	<3	.20	<.01	.05	<2	<1	15
70216	13	49	15	378	<.3	106	12	330	2.28	15	8	<2	4	32	2.1	4	<3	77	.28	.083	18	35	.52	693	.04	3	.95	.01	.11	<2	1	80
70217	17	33	16	1410	2.1	230	9	354	3.05	20	9	<2	2	64	10.1	4	<3	72	.80	.213	21	33	.30	581	.02	3	1.27	.01	.08	<2	1	335
70218 HORN	14	65	8	1248	.8	290	5	172	1.81	11	11	<2	<2	110	27.5	<3	<3	21	1.79	.137	6	9	.21	526	.01	4	.32	.01	.06	<2	2	100
70218A HORN	10	58	11	406	1.3	103	13	246	2.28	16	<8	<2	2	31	2.6	4	<3	37	.35	.140	19	19	.17	579	.03	<3	.78	.01	.05	<2	1	105
70220	2	41	11	188	.3	56	11	477	2.59	8	<8	<2	3	26	.7	<3	<3	31	.35	.073	19	25	.55	480	.07	<3	1.04	.01	.10	<2	2	55
70221	11	14	12	132	.7	26	4	213	1.58	17	13	<2	<2	42	.7	3	<3	35	.24	.088	15	12	.11	412	.01	<3	.40	<.01	.07	<2	1	105
70222	13	44	11	248	.5	57	10	326	2.07	16	<8	<2	<2	64	5.8	3	<3	30	.24	.104	14	15	.19	739	.01	<3	.49	.01	.09	<2	1	75
70223	15	71	14	392	.6	114	12	250	2.35	23	12	<2	<2	36	7.0	4	<3	44	.22	.121	17	20	.20	659	.01	3	.59	.01	.10	<2	1	115
70224	56	200	26	1231	3.2	382	45	1511	3.38	108	12	<2	3	306	25.7	22	<3	211	6.11	.172	11	27	2.14	991	<.01	4	.31	.02	.09	<2	1	380
70225	21	78	13	443	1.1	113	13	378	3.00	51	<8	<2	<2	46	6.8	9	<3	52	.49	.216	13	23	.18	419	.01	3	.49	.01	.07	<2	1	130
70226	20	68	24	568	4.8	131	29	1458	4.22	45	9	<2	<2	75	25.3	8	<3	77	.62	.202	12	27	.15	774	.02	<3	.76	.01	.12	<2	1	155
70227	1	99	28	81	<.3	93	26	1668	4.13	17	<8	<2	<2	15	.3	<3	<3	98	.31	.082	9	83	1.25	422	.08	<3	2.93	.03	.09	<2	1	55
70228	1	60	20	86	<.3	64	17	1099	4.06	16	<8	<2	2	19	.4	<3	<3	96	.50	.083	13	81	1.13	322	.12	<3	2.23	.02	.06	<2	1	35
70229	1	82	25	93	<.3	147	22	821	3.63	18	<8	<2	4	24	.5	4	<3	80	.44	.043	11	106	1.54	551	.10	<3	2.07	.03	.09	<2	2	25
70230	2	36	18	64	.4	61	12	523	3.90	15	<8	<2	2	9	.4	<3	<3	65	.17	.072	14	65	.85	184	.15	<3	2.65	.02	.04	<2	2	40
70231	2	44	19	75	.4	64	13	892	4.41	15	<8	<2	<2	7	.4	<3	<3	88	.17	.056	8	96	.82	183	.09	<3	1.79	.01	.04	<2	137	50
70232	3	22	24	87	.3	26	7	620	4.74	11	<8	<2	2	11	.4	<3	<3	106	.21	.063	11	59	.30	239	.28	<3	1.08	.01	.05	<2	2	40
70233	3	24	18	71	<.3	33	7	487	5.70	14	<8	<2	2	8	<.2	<3	<3	123	.13	.061	10	69	.43	138	.23	<3	1.61	.01	.05	<2	2	25
STANDARD C3/AU-S	25	66	34	152	5.6	35	11	755	3.61	63	22	2	20	30	25.0	16	25	79	.60	.098	18	163	.67	154	.10	20	1.92	.04	.16	18	47	910

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

Data___ FA ___

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	Hg ppb
70234	4	21	15	54	.3	26	5	297	4.83	13	<8	<2	2	6	.4	<3	<3	113	.09	.061	9	52	.29	131	.22	<3	.97	.01	.04	<2	1	25
70235_	4	20	23	72	.3	19	5	421	6.85	12	<8	<2	2	6	<.2	<3	3	109	.07	.070	13	45	.23	131	.35	<3	1.28	.01	.04	<2	2	35
70236	14	59	20	712	1.8	170	15	563	3.54	17	<8	<2	3	46	10.6	<3	<3	58	1.60	.135	25	38	.37	307	.13	<3	2.12	.02	.05	<2	2	210
70237	32	48	8	1152	2.2	252	43	3247	7.09	19	<8	<2	<2	61	39.3	4	<3	34	2.36	.360	15	11	.20	314	.01	<3	.83	.01	.06	<2	2	105
70238	15	35	13	400	1.0	100	20	779	4.61	17	<8	<2	3	36	7.1	4	<3	49	1.17	.217	16	27	.42	319	.03	<3	1.27	.01	.07	<2	2	85
70239	12	57	10	129	1.7	39	3	124	2.55	16	<8	<2	3	102	1.2	3	<3	42	.06	.197	19	27	.10	595	.05	<3	.87	.01	.10	<2	2	80
70240	8	16	11	106	.6	32	4	52	1.40	10	9	<2	<2	26	.4	6	<3	36	.02	.063	14	9	.07	212	.01	<3	.29	<.01	.12	<2	2	20
70241	16	24	19	288	.3	42	7	714	3.62	17	<8	<2	2	11	8.9	<3	<3	127	.04	.045	16	25	.19	507	.11	<3	.78	.01	.08	<2	2	30
70572	2	80	16	103	.3	54	16	705	3.77	15	<8	<2	<2	32	.4	<3	<3	40	.27	.102	22	42	.86	823	.01	<3	1.45	<.01	.08	<2	3	75
70573	3	83	24	137	.4	68	23	981	4.72	20	<8	<2	3	44	.5	3	<3	43	.24	.099	27	46	.96	939	.02	<3	1.70	.01	.10	<2	2	35
RE 70573	3	81	23	134	.3	67	22	956	4.62	18	<8	<2	2	43	.3	<3	<3	41	.24	.097	26	45	.96	924	.02	<3	1.67	.01	.09	<2	2	35
70574	2	48	18	151	<.3	75	11	408	2.91	11	<8	<2	4	45	.8	<3	<3	29	.13	.046	22	42	1.44	2231	.01	<3	1.89	<.01	.09	<2	1	35
70575	7	41	8	46	1.2	19	2	68	2.62	11	<8	<2	4	105	<.2	3	<3	16	<.01	.045	8	11	.05	282	<.01	<3	.61	.02	.13	<2	1	185
70576	2	164	8	113	.5	108	51	1430	6.12	15	<8	<2	4	40	.5	<3	<3	104	1.09	.067	12	116	2.16	519	.19	12	2.84	.01	.04	<2	1	35
70577	2	194	15	140	.6	98	41	1451	5.43	19	<8	<2	7	37	.7	3	<3	71	.63	.110	34	76	1.98	262	.10	3	2.17	.01	.04	<2	3	70
70578	3	163	24	188	.3	123	45	1843	5.82	30	<8	<2	8	32	.6	<3	3	53	.33	.130	43	56	1.28	245	.05	<3	1.86	.01	.06	<2	3	100
70579	2	35	9	85	<.3	46	21	1328	5.72	16	<8	<2	3	13	.3	<3	<3	51	.26	.141	30	37	.93	111	.21	<3	3.05	.04	.05	<2	2	90
70580	3	106	32	169	.7	98	35	1225	5.83	24	<8	<2	7	52	.7	<3	<3	39	.23	.147	39	49	1.03	224	.02	<3	1.95	.01	.09	<2	3	105
70581	1	124	29	164	.3	86	20	1189	4.34	16	<8	<2	6	36	.3	<3	3	22	.08	.092	27	23	.29	277	<.01	<3	.77	<.01	.12	<2	5	120
70582	1	116	4	87	<.3	61	28	1037	5.40	16	<8	<2	3	39	.5	<3	3	132	1.34	.070	9	44	1.96	903	.24	<3	3.12	.01	.02	<2	1	10
70583	1	96	22	120	.5	64	15	744	3.27	23	<8	<2	6	66	.2	<3	<3	19	.17	.079	17	17	.22	189	<.01	<3	.57	<.01	.10	<2	4	185
70584	3	193	19	226	1.7	103	24	2484	4.50	26	<8	<2	6	13	1.0	<3	<3	22	.21	.061	36	22	.53	1829	.05	<3	.94	<.01	.03	<2	5	65
70585	3	664	30	234	1.7	154	75	3805	9.62	23	<8	<2	6	11	<.2	<3	<3	38	.11	.094	39	25	.62	796	.14	<3	1.59	<.01	.03	<2	41	55
70586	3	553	24	273	.5	84	63	2292	9.89	26	11	<2	3	26	.4	<3	<3	122	.72	.126	26	30	1.33	652	.16	4	3.18	.01	.07	<2	6	50
70587	1	92	8	96	<.3	50	24	1367	4.11	13	<8	<2	3	14	.4	<3	<3	87	.70	.053	8	43	1.34	391	.20	3	1.95	.01	.03	<2	3	25
70588	2	68	7	95	<.3	56	19	871	3.65	14	<8	<2	4	21	.4	<3	<3	77	.78	.071	14	44	1.20	584	.14	<3	1.73	.01	.04	<2	2	40
70589	2	269	12	247	<.3	107	38	1494	5.34	13	<8	<2	3	22	.7	<3	<3	94	.93	.063	16	82	1.77	814	.18	<3	2.49	.01	.02	<2	2	35
70590	2	271	14	390	.8	94	28	1420	5.57	20	<8	<2	5	17	1.3	4	<3	53	.56	.060	27	66	1.37	1251	.11	<3	1.70	.01	.04	<2	3	110
70591	2	200	12	182	1.3	63	17	843	3.66	14	<8	<2	6	19	.8	3	<3	26	.83	.041	20	14	.51	123	.08	<3	.77	<.01	.04	<2	2	145
70592	3	150	10	170	.9	82	19	923	3.55	12	<8	<2	5	17	.8	3	<3	39	.32	.064	20	23	.64	236	.11	<3	.96	<.01	.03	<2	2	75
70593	6	92	14	141	1.8	63	12	504	3.39	18	<8	<2	2	42	.4	3	<3	18	.11	.087	15	19	.51	1455	.01	<3	1.04	<.01	.07	<2	4	135
70594	11	70	18	101	3.0	39	6	303	5.05	26	<8	<2	2	44	.2	<3	<3	48	.06	.131	15	37	.46	498	.07	<3	1.47	.01	.10	<2	3	185
70595	11	52	16	78	2.0	28	5	196	4.85	35	<8	<2	3	33	<.2	<3	3	50	.05	.112	11	35	.36	571	.08	<3	.86	.01	.08	<2	2	210
70596	3	81	10	609	1.7	324	55	1272	3.17	11	50	<2	<2	69	4.0	4	<3	14	.80	.246	14	17	.20	656	.01	<3	.63	<.01	.09	<2	1	205
70597	10	129	14	229	1.1	76	12	549	5.01	21	12	<2	3	28	.5	4	<3	35	.07	.095	16	27	.36	535	.04	<3	1.06	.01	.07	<2	2	90
STANDARD C3/AU-S	25	64	35	152	5.4	36	11	736	3.47	56	14	<2	18	28	22.6	15	22	77	.58	.091	18	159	.67	144	.09	18	1.81	.04	.14	18	53	935

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

Data___ FA ___

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	Hg ppb
70598	6	65	14	143	<.3	48	9	486	3.26	23	<8	<2	2	25	.3	<3	<3	39	.12	.078	20	28	.51	491	.05	<3	1.13	.01	.09	<2	1	85
70599	8	63	13	194	<.3	74	10	537	2.84	18	<8	<2	2	26	.5	<3	<3	49	.17	.061	21	36	.56	775	.05	<3	1.15	.01	.08	<2	3	60
70600	5	118	17	140	.7	78	17	1040	3.42	30	<8	<2	<2	51	1.2	<3	<3	36	.67	.091	16	34	.60	1114	.02	<3	1.10	.01	.09	<2	2	70
70615	7	152	11	5143	.9	1205	120	8065	3.99	16	<8	<2	2	67	42.1	<3	4	27	.45	.119	14	18	.49	908	.03	<3	1.03	<.01	.08	<2	1	80
70622	5	76	16	422	<.3	143	22	1184	3.35	29	<8	<2	4	33	2.3	<3	<3	27	.26	.089	19	29	.71	564	.01	<3	1.03	.01	.08	<2	1	65
70623	3	81	15	360	<.3	136	23	1242	3.68	35	<8	<2	5	35	.9	<3	<3	28	.28	.091	22	32	.78	547	.01	<3	1.15	.01	.07	<2	1	65
70624	3	87	16	200	<.3	90	22	1057	3.80	36	<8	<2	5	35	.6	<3	3	28	.30	.093	20	31	.78	479	.01	<3	1.13	.01	.07	<2	<1	75
70625	3	78	17	139	<.3	74	20	1072	3.78	35	<8	<2	5	33	.4	<3	<3	28	.28	.093	21	32	.80	374	.01	<3	1.14	<.01	.07	<2	<1	70
70626	2	80	16	125	.3	72	18	738	3.82	50	<8	<2	7	34	.3	<3	3	27	.25	.084	26	33	.76	367	.01	<3	1.18	.01	.07	<2	1	65
70627	2	84	18	122	.6	74	20	800	3.87	46	<8	<2	9	37	.4	6	4	28	.24	.082	28	35	.78	317	.01	<3	1.22	.01	.07	<2	1	75
70628 NOT RECEIVED	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RE 70629	10	48	15	253	4.7	87	13	559	4.03	25	<8	<2	6	26	.2	<3	4	53	.10	.099	19	36	.49	593	.06	<3	2.08	.02	.10	<2	3	210
70629	10	50	16	263	5.0	88	13	578	4.17	25	<8	<2	6	28	.3	3	<3	55	.10	.101	20	38	.50	608	.06	<3	2.18	.01	.09	<2	3	215
70630	6	46	16	95	3.7	25	7	644	5.58	16	<8	<2	<2	17	<.2	<3	4	75	.05	.106	19	43	.26	520	.19	<3	2.10	.01	.07	<2	1	165
70631	13	68	17	164	2.5	59	7	237	4.19	31	<8	<2	2	73	<.2	5	<3	36	.02	.103	15	28	.19	449	.02	<3	1.18	.02	.16	<2	1	170
70632	9	29	15	123	1.1	37	4	262	3.31	16	<8	<2	<2	25	.7	<3	<3	63	.03	.121	16	25	.15	257	.03	<3	1.02	.01	.10	<2	1	85
70633	9	58	12	114	1.1	40	6	455	2.48	17	<8	<2	<2	96	<.2	3	<3	35	.06	.148	16	25	.22	459	.01	<3	.83	.01	.13	<2	2	70
70634 TB	9	29	12	97	1.3	28	3	247	2.17	18	<8	<2	<2	27	.3	3	3	50	.03	.068	16	22	.12	255	.04	<3	.77	.01	.07	<2	1	75
70635 TB	5	42	20	122	<.3	33	8	840	4.06	18	<8	<2	<2	54	.2	<3	<3	49	.06	.142	21	34	.32	506	.05	<3	1.36	.01	.11	<2	2	50
70636 TB	10	94	99	193	.4	61	12	1031	5.90	31	<8	<2	<2	122	.2	<3	<3	58	.07	.166	22	36	.40	545	.03	<3	1.63	.02	.22	<2	3	90
70637 TB	12	115	16	165	<.3	74	26	4140	5.01	24	<8	<2	<2	19	.6	<3	<3	65	.18	.085	17	45	.70	654	.10	3	2.02	.01	.06	<2	3	45
70638 TB	7	84	16	122	.5	55	14	900	3.26	16	<8	<2	2	26	.6	<3	<3	51	.28	.090	18	33	.76	284	.09	3	1.36	.01	.08	<2	2	55
70639 TB	4	89	12	107	<.3	53	14	698	3.27	11	<8	<2	2	18	.3	<3	<3	59	.22	.060	15	37	.74	411	.10	3	1.52	.01	.07	<2	11	30
70640 TB	1	521	53	288	.3	102	52	6520	4.93	18	<8	<2	2	46	1.0	<3	<3	39	.13	.080	16	31	.50	1825	.02	<3	1.84	<.01	.04	<2	15	55
70641 TB	15	288	30	372	.8	151	50	3413	4.93	29	<8	<2	3	70	2.8	<3	3	69	.08	.172	21	44	.73	583	.04	<3	1.90	.01	.17	<2	5	95
70642 TB	2	88	23	133	<.3	62	19	1138	2.88	11	<8	<2	6	35	<.2	<3	<3	22	.15	.063	25	24	.81	908	.01	<3	1.07	<.01	.09	<2	2	55
70642 TR.P	4	18	9	109	<.3	32	6	284	1.82	3	<8	<2	4	32	.7	<3	<3	39	.13	.034	21	24	.68	592	.03	3	1.05	<.01	.15	<2	2	20
70643 TB	1	130	40	165	<.3	73	26	1484	3.35	14	<8	<2	7	48	<.2	<3	<3	22	.19	.055	22	27	.93	1185	<.01	<3	1.19	<.01	.07	<2	1	20
70643 TR.P	8	43	7	202	<.3	65	4	70	1.80	9	<8	<2	3	11	.4	3	<3	40	.05	.083	20	15	.20	341	.02	<3	.53	<.01	.10	<2	1	15
70644 TB	1	87	34	137	<.3	57	25	721	2.79	10	<8	<2	6	25	<.2	<3	3	17	.12	.054	22	19	.78	394	.01	<3	.97	<.01	.07	<2	1	40
70644 TR.P	4	19	5	96	.4	21	1	63	.90	3	<8	<2	2	11	1.3	<3	<3	32	.06	.038	16	13	.10	295	.01	<3	.47	<.01	.07	<2	1	15
70645 TB	3	83	30	198	<.3	70	21	593	3.36	11	<8	<2	6	42	.5	<3	<3	25	.11	.056	24	35	.87	1586	.01	<3	1.20	<.01	.08	<2	2	40
70645 TR.P	7	67	19	457	2.6	129	24	1923	2.48	6	12	<2	2	167	9.7	<3	<3	42	1.84	.140	13	32	.51	1222	.02	3	1.26	.01	.08	<2	1	235
70646	12	67	12	126	1.8	35	4	153	3.09	16	<8	<2	3	55	<.2	<3	<3	14	.02	.078	14	10	.10	516	.01	<3	.69	.01	.09	<2	1	100
70647	5	29	9	80	1.1	23	3	178	2.75	9	<8	<2	<2	16	<.2	<3	<3	38	.02	.059	15	25	.15	404	.06	<3	1.07	.01	.08	<2	1	70
STANDARD C3/AU-S	25	61	35	152	5.6	35	11	736	3.46	57	17	<2	19	29	22.8	18	21	77	.59	.091	18	162	.68	144	.10	18	1.84	.04	.16	20	44	930

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

Data___ FA ___

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	Hg ppb
70771	<1	93	27	105	.3	89	24	757	4.89	20	<8	<2	8	68	1.8	4	<3	35	.31	.096	24	48	1.08	125	.01	3	1.51	.01	.11	<2	13	350
70779	5	106	16	396	2.2	102	9	282	4.16	24	<8	<2	2	51	1.9	4	3	35	.41	.170	20	32	.36	920	.02	3	1.32	.01	.07	<2	4	335
70780	3	25	15	92	<.3	44	9	174	1.45	13	<8	<2	5	117	1.7	<3	<3	9	28.89	.025	17	7	.39	87	.01	<3	.25	<.01	.03	<2	<1	35
70781	37	287	18	1954	<.3	577	39	714	6.14	66	9	<2	3	165	50.0	14	3	171	2.05	.355	19	23	.13	1318	.01	5	2.91	<.01	.06	<2	5	530
70782	84	111	23	1170	2.2	308	15	298	3.80	49	9	<2	2	73	19.9	14	<3	213	.49	.188	20	48	.17	433	.02	4	.98	.01	.09	<2	4	390
70783	7	70	12	129	1.7	43	5	152	1.87	23	<8	<2	<2	118	1.3	9	<3	24	.08	.108	17	15	.08	562	<.01	4	.48	.03	.10	<2	2	195
70784	27	61	12	204	1.5	59	6	176	1.70	19	<8	<2	<2	67	2.9	10	<3	55	.07	.103	18	18	.16	938	.01	4	.63	.01	.07	<2	2	345
70785	16	39	11	45	2.1	14	1	12	.88	9	<8	<2	<2	57	.4	4	<3	46	.04	.096	20	14	.08	409	<.01	3	.44	<.01	.05	<2	3	255
70786	10	92	10	108	3.9	44	3	53	2.19	14	<8	<2	<2	106	2.2	4	<3	30	.06	.196	12	21	.11	1729	.01	4	1.46	.01	.09	<2	1	140
70787	7	39	10	68	1.8	20	2	32	1.34	9	<8	<2	<2	138	.2	<3	<3	17	.05	.074	22	12	.13	946	.01	3	.54	.01	.11	<2	4	120
70788	2	51	12	107	.4	45	11	369	2.25	8	<8	<2	2	42	.8	<3	<3	11	.30	.084	14	10	.30	538	.01	3	.43	<.01	.10	<2	1	50
70789	10	44	10	211	.9	63	8	270	2.17	15	<8	<2	<2	49	2.0	4	<3	36	.05	.094	15	19	.29	1518	.01	3	.73	.01	.08	<2	1	105
70790	26	56	13	594	1.0	140	8	139	1.96	23	<8	<2	<2	66	5.1	9	<3	59	.28	.192	17	30	.26	1342	.02	4	.68	.01	.08	<2	2	220
70791	26	57	20	268	1.4	97	10	150	2.31	32	<8	<2	2	37	3.1	10	<3	51	.50	.110	17	13	.06	631	<.01	5	.35	<.01	.07	<2	2	435
70792	32	79	19	399	1.5	171	15	219	2.98	41	<8	<2	<2	37	4.7	12	<3	62	1.56	.118	15	16	.16	565	<.01	6	.44	<.01	.07	<2	3	350
RE 70792	33	79	19	403	1.5	173	15	223	3.02	41	<8	<2	<2	38	4.8	12	<3	64	1.59	.120	15	15	.16	567	<.01	6	.45	<.01	.08	<2	2	370
70793	37	63	21	433	1.0	149	11	184	2.47	47	<8	<2	2	50	8.3	14	<3	83	.66	.159	16	17	.09	570	.01	6	.47	<.01	.08	<2	2	855
70794	8	44	16	126	.3	65	12	456	2.46	83	<8	<2	2	112	1.2	5	<3	11	14.20	.074	14	7	.23	695	<.01	5	.38	<.01	.06	<2	1	345
70795	8	52	20	144	.3	73	13	501	2.79	42	<8	<2	2	45	1.5	4	<3	17	5.75	.078	19	12	.66	298	.02	3	.55	.01	.05	<2	1	365
70796	1	67	22	146	<.3	65	24	993	4.04	33	<8	<2	4	35	.7	<3	<3	19	.17	.063	27	28	.63	3571	<.01	<3	1.60	<.01	.08	<2	1	20
70797	5	95	35	149	<.3	55	21	712	4.78	23	<8	<2	<2	27	1.1	3	<3	31	.05	.079	21	30	.55	2188	.01	<3	1.61	.01	.09	<2	2	15
70798	95	86	20	124	5.4	33	6	157	6.73	42	<8	<2	5	92	.8	6	<3	28	.03	.154	14	25	.23	209	.01	<3	.97	.05	.17	<2	8	215
70799	3	66	16	128	<.3	53	16	1245	3.12	11	<8	<2	<2	16	.8	<3	<3	22	.10	.067	17	21	.54	1326	.01	<3	1.09	<.01	.10	<2	3	20
70800	1	68	14	134	<.3	52	15	307	3.02	11	<8	<2	2	20	.3	<3	<3	16	.14	.041	16	19	.62	1455	<.01	3	.88	<.01	.09	<2	2	30
73563	2	36	4	66	.6	27	3	94	1.33	5	<8	<2	5	23	.2	<3	<3	13	.03	.019	17	12	.15	673	.01	<3	.51	.01	.07	<2	2	85
73564	6	28	12	114	2.3	33	6	279	4.20	15	<8	<2	4	26	.7	<3	<3	43	.04	.069	14	31	.32	281	.12	<3	1.63	.01	.09	<2	1	110
73565	7	26	17	145	5.9	41	7	381	5.89	21	<8	<2	4	28	.9	<3	3	64	.05	.069	14	41	.31	252	.24	<3	2.00	.01	.07	<2	1	145
73566	9	36	20	106	.6	32	8	345	3.79	12	<8	<2	2	33	.9	<3	<3	40	.11	.070	14	29	.23	1118	.07	<3	.90	.01	.07	<2	<1	50
73567	6	38	12	144	.8	47	11	424	3.60	14	<8	<2	2	25	.8	<3	3	49	.10	.087	20	37	.37	618	.09	<3	1.35	.01	.05	<2	1	90
73568	7	38	12	162	.9	61	5	174	3.38	15	<8	<2	5	24	.8	<3	<3	57	.13	.188	18	44	.39	256	.07	<3	1.21	.01	.08	<2	1	170
73569	6	30	18	197	1.2	29	6	272	4.95	13	<8	<2	5	11	1.5	<3	<3	84	.07	.144	18	40	.19	262	.37	<3	1.23	.01	.04	<2	<1	45
73570	7	69	12	281	1.6	106	8	323	6.20	23	<8	<2	5	9	1.7	3	<3	65	.07	.112	22	47	.35	258	.17	<3	1.93	.01	.04	<2	1	190
73571	19	55	16	927	1.8	306	26	1861	2.94	16	<8	<2	6	17	2.7	4	<3	50	.23	.113	14	38	.56	212	.06	<3	1.24	.01	.05	<2	2	65
73572	17	57	12	269	.4	95	12	394	2.24	63	<8	<2	4	89	1.8	6	<3	27	5.38	.082	8	13	.32	808	.01	4	.45	.01	.09	<2	3	100
73573	10	35	13	305	.3	84	9	346	1.61	47	9	<2	2	103	2.2	8	<3	30	11.45	.065	7	14	1.19	517	.01	4	.46	.01	.12	<2	1	60
STANDARD C3/AU-S	25	63	34	154	5.6	36	11	748	3.52	59	17	<2	19	29	23.7	18	22	78	.59	.092	18	164	.69	148	.10	20	1.87	.04	.15	19	42	915

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

Data___ FA ___

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	Hg ppb
73574	3	148	19	122	1.3	64	18	325	3.89	35	<8	<2	7	77	.2	6	<3	42	.31	.054	20	40	1.45	1089	.07	5	1.19	.01	.24	<2	6	40
73575	7	81	17	208	1.2	83	15	453	3.31	111	9	<2	2	81	.7	9	<3	19	.58	.085	9	15	.37	1090	<.01	5	.60	.01	.08	<2	6	140
73576	10	134	26	319	1.2	138	34	1049	5.90	179	<8	<2	6	49	2.5	9	<3	37	.34	.114	15	22	.59	1797	.01	6	1.13	.01	.11	<2	14	115
73577	42	132	29	584	1.9	167	32	969	6.14	250	<8	<2	5	52	4.5	12	<3	79	.51	.152	15	17	.28	627	<.01	5	.48	<.01	.09	<2	10	460
73578	6	100	35	331	<.3	163	35	685	7.27	168	8	<2	<2	55	<.2	6	<3	30	.73	.070	8	16	.59	763	<.01	4	.80	.01	.09	<2	7	100
73579	5	102	21	387	.4	155	32	501	4.48	76	9	<2	2	118	.8	4	3	22	1.01	.171	16	18	.16	753	<.01	4	.69	.01	.12	<2	9	145
73580	2	49	33	123	.6	84	44	2361	5.63	95	<8	<2	2	102	.7	7	<3	16	7.36	.156	22	15	.40	414	<.01	3	.54	<.01	.07	<2	6	160
73581	3	51	24	248	<.3	103	38	2800	5.57	48	<8	<2	2	74	2.2	4	<3	33	5.27	.102	32	31	.25	605	.05	<3	1.34	.01	.06	<2	2	140
73901	9	32	12	85	2.5	31	4	116	3.64	17	<8	<2	2	26	.3	<3	<3	64	.08	.056	14	33	.18	671	.04	<3	1.19	.01	.07	<2	3	135
73902	6	91	10	80	1.8	50	6	82	1.68	14	8	<2	6	33	<.2	6	<3	29	.05	.036	14	24	.22	538	.02	3	.91	.01	.10	<2	4	140
73903	9	31	11	204	.4	59	9	398	3.79	20	<8	<2	4	33	1.5	4	<3	79	.34	.081	14	36	.48	526	.11	3	1.14	.01	.19	<2	1	20
73904	13	65	16	299	.5	129	14	437	6.87	41	<8	<2	4	72	.5	8	<3	82	.25	.349	12	36	.22	600	.03	<3	1.01	.02	.11	<2	2	50
73905	12	18	15	554	.8	62	9	368	6.50	28	<8	<2	5	18	8.8	5	<3	131	.11	.160	15	49	.42	699	.24	<3	1.73	.02	.07	<2	2	25
73906	10	10	20	168	.9	19	4	288	5.37	18	<8	<2	3	16	2.9	<3	<3	135	.11	.176	16	37	.17	393	.37	<3	.83	.01	.06	<2	1	20
73907	13	52	14	320	<.3	108	14	380	2.56	18	<8	<2	3	33	5.2	7	4	66	.62	.123	16	42	.69	1300	.05	3	.96	.01	.10	<2	2	80
73908	8	38	13	142	.6	44	5	178	2.52	16	<8	<2	<2	50	.4	5	<3	46	.03	.078	20	23	.13	412	.03	<3	.84	.01	.11	<2	2	45
73909	7	65	13	162	1.7	54	7	221	2.82	18	10	<2	2	65	1.2	7	<3	19	.03	.091	16	13	.08	567	.01	<3	.63	.01	.15	<2	3	125
73910	19	27	14	177	.9	52	6	259	1.68	21	23	<2	2	33	.5	9	<3	64	.06	.111	18	12	.09	220	<.01	<3	.45	.01	.09	<2	6	55
RE 73910	18	28	10	169	.7	48	5	246	1.60	20	<8	<2	<2	33	.5	8	<3	63	.05	.104	17	12	.08	227	.01	3	.45	<.01	.07	<2	4	70
73911	22	71	11	264	1.4	58	4	96	.96	23	14	<2	4	43	5.6	12	<3	71	.09	.074	18	9	.05	381	<.01	4	.24	<.01	.08	<2	5	155
73912	8	23	15	83	1.9	21	2	90	1.60	7	16	<2	<2	10	1.3	<3	<3	75	.04	.100	18	24	.14	177	.04	<3	1.12	.01	.07	<2	2	75
73913	11	31	14	904	1.6	82	11	498	3.26	17	<8	<2	3	23	7.2	6	<3	58	.26	.205	22	29	.33	290	.05	<3	1.62	.01	.06	<2	1	120
73914	7	32	17	124	2.1	33	5	298	6.83	22	<8	<2	6	13	<.2	4	<3	89	.06	.327	18	49	.26	96	.22	<3	1.88	.01	.06	<2	1	95
73915	4	24	14	194	.8	48	11	291	2.82	11	<8	<2	<2	31	1.5	<3	<3	40	.88	.164	17	24	.26	427	.03	<3	1.22	.01	.07	<2	3	75
73916	7	50	18	160	.4	48	4	116	3.31	16	15	<2	2	34	.8	<3	<3	56	.14	.343	20	35	.24	255	.03	<3	.85	.01	.10	<2	1	30
73917	6	19	19	183	1.1	27	5	310	5.69	16	<8	<2	5	11	3.8	<3	<3	98	.05	.226	16	44	.23	375	.29	<3	1.58	.01	.05	<2	2	75
STANDARD C3/AU-S	26	61	36	158	5.4	37	12	749	3.62	59	23	3	19	28	24.6	19	22	79	.62	.097	17	167	.73	142	.10	20	1.87	.04	.16	20	48	895

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

Data___ FA ___

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	Hg ppb
70104	4	30	17	85	1.2	19	3	119	4.62	12	<8	<2	4	16	1.5	<3	<3	58	.03	.082	14	29	.10	266	.12	<3	.73	.01	.05	<2	<1	20
70105	12	47	13	189	1.1	59	7	279	2.15	21	<8	<2	<2	62	2.3	4	<3	41	.21	.124	16	17	.10	929	.01	4	.55	<.01	.09	<2	2	60
RE 70105	12	44	11	177	1.0	55	7	261	2.00	19	<8	<2	<2	58	2.1	4	<3	38	.19	.116	14	16	.09	864	.01	4	.51	<.01	.09	<2	2	65
70106	3	22	12	114	.6	63	12	219	3.92	11	<8	<2	4	14	1.5	<3	<3	59	.13	.026	13	43	.35	456	.19	<3	1.92	.01	.07	<2	5	30
70107	3	23	14	193	.5	48	14	369	3.50	8	<8	<2	4	21	1.9	<3	<3	63	.11	.048	13	42	.33	772	.13	<3	1.34	.01	.05	<2	2	15
70108	4	31	10	105	.5	60	8	604	2.55	11	<8	<2	2	44	1.0	<3	<3	31	.26	.066	11	21	.13	1056	.03	<3	.76	.01	.04	<2	<1	15
70109	2	78	13	279	4.1	69	12	1382	1.63	5	15	<2	<2	323	4.9	<3	<3	14	2.38	.223	4	12	.22	2929	.01	5	.62	.01	.07	<2	1	200
70110	3	77	16	793	3.9	145	41	4070	1.81	3	<8	<2	<2	216	44.6	3	<3	25	1.41	.202	7	19	.20	4918	.02	4	.58	.01	.08	<2	17	55
70112	8	33	12	146	.8	36	10	608	2.06	11	<8	<2	<2	56	2.6	3	<3	37	.14	.090	11	16	.10	1126	<.01	<3	.53	<.01	.08	<2	1	15
70113	11	152	22	291	3.7	136	20	670	7.99	25	8	<2	2	149	1.4	3	<3	18	.49	.175	8	13	.07	103	<.01	<3	.84	.03	.23	<2	2	120
70114	6	90	16	652	1.4	80	20	1956	4.33	12	<8	<2	<2	114	22.3	<3	<3	45	.91	.185	8	28	.20	1612	.02	<3	1.00	.01	.08	<2	<1	35
70116	5	15	15	216	.6	35	7	246	3.46	10	<8	<2	2	19	7.6	<3	<3	73	.12	.061	13	34	.18	538	.13	<3	.95	.01	.07	<2	<1	<10
70117	6	24	12	342	.8	61	7	201	3.38	15	<8	<2	3	37	13.9	<3	<3	72	.21	.136	14	35	.26	497	.10	3	1.23	.01	.10	<2	1	15
70118	5	14	4	61	<.3	13	2	25	.69	3	<8	<2	<2	9	.5	<3	<3	48	.03	.032	17	12	.05	227	.01	4	.35	<.01	.06	<2	<1	<10
70119	11	52	16	133	1.6	36	4	129	3.09	18	<8	<2	<2	51	.7	4	<3	53	.02	.081	16	19	.10	361	.01	3	.79	.01	.09	<2	2	95
70551	6	53	15	175	.7	93	13	383	2.50	11	<8	<2	15	29	2.9	3	<3	57	.50	.106	17	46	.57	527	.05	3	.92	.03	.10	<2	3	70
70552	5	50	14	249	.5	103	12	382	2.46	10	<8	<2	5	32	4.9	<3	<3	54	.65	.113	16	50	.68	587	.05	<3	.98	.03	.09	<2	1	60
70553	14	95	13	1393	.8	282	41	1838	4.86	23	8	<2	4	68	16.5	5	<3	37	.82	.089	12	18	.43	722	.01	<3	1.27	.01	.07	<2	3	85
70554	5	49	11	142	.3	82	10	361	1.97	12	<8	<2	5	32	1.5	3	<3	40	.44	.094	14	39	.54	822	.04	<3	.72	.02	.07	<2	1	75
70556	12	78	11	1071	.8	233	34	1351	3.21	20	8	<2	4	59	12.5	6	<3	38	.62	.095	13	20	.45	809	.02	3	.88	.01	.07	<2	11	85
70557	13	79	12	951	.9	235	28	1092	2.82	20	<8	<2	3	68	10.8	5	<3	38	.58	.101	14	20	.46	955	.02	<3	.86	.01	.08	<2	3	110
70558	3	127	17	362	.8	135	18	662	3.02	15	18	<2	2	81	1.5	<3	<3	33	.54	.081	10	35	.55	1010	.03	<3	1.01	.02	.08	<2	4	65
70559	10	70	10	1040	.7	231	35	1623	2.77	17	11	<2	3	64	12.0	5	<3	30	.87	.086	8	17	.42	264	.02	<3	.66	.01	.07	<2	2	60
70561	1	114	24	325	.4	271	26	1020	3.40	15	<8	<2	<2	36	5.4	<3	<3	62	.78	.088	11	134	1.91	358	.06	4	2.03	.04	.08	<2	2	50
70562	1	111	28	245	.5	314	33	1298	4.04	18	<8	<2	<2	31	2.2	<3	<3	73	.58	.081	11	167	2.36	369	.07	3	2.21	.04	.08	<2	5	40
70564	1	109	28	160	.4	319	30	808	3.84	16	<8	<2	<2	35	1.5	4	<3	77	.59	.066	12	200	2.53	353	.08	3	2.23	.03	.07	<2	2	30
70565	<1	82	27	78	<.3	412	42	1000	3.89	12	<8	<2	<2	22	.8	<3	<3	75	.33	.045	7	254	4.87	316	.08	4	1.44	.03	.05	<2	2	10
70566	1	86	24	86	<.3	255	27	830	3.51	14	8	<2	<2	22	.7	3	<3	75	.41	.050	10	182	2.70	286	.08	3	1.80	.03	.07	<2	2	20
70567	<1	85	34	87	<.3	385	37	903	4.11	16	<8	<2	2	21	1.0	<3	<3	82	.34	.049	8	266	4.39	325	.08	4	1.50	.03	.06	<2	1	15
70568	<1	107	29	103	<.3	365	32	814	3.95	16	<8	<2	<2	22	.8	<3	<3	83	.38	.052	8	248	3.43	372	.08	4	2.14	.03	.07	<2	4	20
70569	<1	85	26	72	<.3	349	36	816	3.92	15	8	<2	2	19	.8	3	<3	83	.29	.035	8	244	3.52	325	.08	4	1.65	.03	.07	<2	1	20
70570	<1	87	23	78	<.3	273	29	869	3.99	13	<8	<2	3	19	.9	3	<3	84	.34	.052	10	193	3.04	347	.09	3	1.42	.03	.08	<2	3	10
70571	<1	118	34	96	<.3	450	41	1014	4.52	19	<8	<2	2	22	.8	<3	<3	90	.27	.052	9	273	4.59	393	.09	4	2.14	.03	.08	<2	3	10
70617	3	102	17	137	.4	83	24	950	4.66	72	<8	<2	3	65	.9	<3	<3	37	.63	.115	17	45	.85	763	.01	<3	1.33	.01	.09	<2	7	85
70618	2	108	22	165	.5	96	27	2370	4.59	55	<8	<2	4	47	.7	3	<3	38	.38	.102	20	47	.93	1332	.01	3	1.61	.01	.10	<2	6	115
STANDARD C3/AU-S	24	61	33	148	5.2	33	11	711	3.34	55	20	<2	17	28	23.4	15	20	75	.56	.091	17	157	.63	144	.09	20	1.83	.04	.16	19	49	905

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

Data___ FA ___

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	Hg ppb
70619	2	63	10	114	.4	71	18	1921	3.88	31	<8	<2	3	30	.4	<3	<3	42	.49	.087	20	48	.93	564	.02	3	1.53	.01	.11	<2	3	95
70620	2	60	13	114	.6	62	13	498	3.60	28	<8	<2	3	27	.3	<3	<3	42	.42	.085	17	47	.86	582	.01	<3	1.53	.01	.10	<2	4	90
70621	5	118	7	526	2.3	143	25	1189	1.72	<2	20	<2	2	24	3.1	<3	<3	12	.10	.118	4	15	.23	36	.01	3	11.71	.01	.05	<2	2	40
70801	20	265	4	2051	1.7	384	117	4353	19.04	<2	15	<2	4	28	11.0	<3	<3	23	.22	.051	18	26	.23	95	.02	<3	6.32	<.01	.04	<2	1	50
70802	13	174	7	1008	1.5	223	50	1609	15.92	3	12	<2	4	28	3.5	<3	<3	34	.26	.072	11	28	.34	106	.03	<3	3.52	.01	.06	<2	3	70
70803	10	147	10	779	1.5	177	43	1368	14.21	12	18	<2	4	30	2.1	<3	<3	39	.31	.082	10	29	.40	106	.04	<3	2.72	.01	.08	<2	6	70
70804	9	134	8	630	1.3	155	41	1282	13.89	10	<8	<2	3	30	1.5	<3	<3	36	.32	.074	9	26	.37	107	.04	<3	2.16	.01	.06	<2	3	65
70805	9	120	10	523	1.1	138	36	1219	11.33	14	16	<2	4	31	1.3	<3	<3	43	.36	.079	9	27	.40	167	.05	<3	1.71	.01	.08	<2	2	80
70806	7	120	10	416	1.6	115	26	978	12.72	15	9	<2	4	26	.4	4	<3	39	.25	.077	9	27	.35	150	.04	<3	1.71	.01	.07	<2	2	80
70807	8	108	8	346	1.4	97	19	770	11.93	13	<8	<2	4	27	<.2	<3	<3	39	.29	.069	8	24	.34	138	.04	<3	1.31	.01	.06	<2	3	80
70808	4	97	12	217	1.1	87	14	582	3.62	20	<8	<2	4	53	.8	5	<3	33	.30	.087	17	30	.51	867	.03	<3	1.08	.01	.10	<2	4	95
70809	4	50	12	227	1.3	89	15	826	2.87	14	11	<2	<2	70	.9	<3	<3	29	.37	.100	18	34	.43	1297	.02	<3	1.17	.01	.08	<2	2	80
RE 70810	9	113	9	257	1.6	66	13	593	19.03	6	<8	<2	4	19	<.2	<3	<3	35	.12	.058	7	27	.27	63	.03	<3	1.59	<.01	.05	<2	2	65
70810	9	114	7	260	1.5	67	13	599	19.11	5	<8	<2	4	19	<.2	<3	<3	36	.12	.059	7	28	.28	67	.03	<3	1.60	<.01	.05	<2	2	65
70811	5	149	3	407	2.0	79	16	758	28.57	10	<8	<2	5	17	.7	<3	<3	25	.10	.054	7	32	.29	42	.03	<3	2.12	<.01	.02	<2	2	65
70812	5	143	9	270	2.3	63	15	813	28.69	7	12	<2	5	15	<.2	<3	<3	27	.13	.059	8	37	.37	38	.03	<3	2.23	<.01	.04	2	2	80
70813	2	181	15	478	1.5	124	42	1261	10.22	23	<8	<2	3	54	<.2	3	<3	52	.81	.090	23	38	.83	477	.07	<3	1.51	.01	.05	<2	4	100
70815	14	95	8	2597	1.0	324	20	888	2.04	20	12	<2	2	54	26.8	6	<3	33	1.05	.117	13	15	.33	715	.01	3	.68	.01	.07	<2	3	120
70816	13	77	10	2063	1.1	259	15	529	1.92	20	13	<2	2	51	23.8	7	<3	33	.72	.114	12	15	.29	726	.01	<3	.57	.01	.07	<2	3	105
70819 HORN	6	42	9	660	.6	142	9	322	1.94	13	<8	<2	3	24	4.0	4	<3	23	.39	.112	20	17	.27	253	.02	3	.63	.01	.07	<2	3	70
70819 HORN-C	14	78	10	1661	1.0	226	13	494	1.89	18	10	<2	2	55	21.0	5	<3	37	1.12	.111	12	14	.39	854	.01	3	.56	.01	.08	<2	4	130
70820	8	73	12	1609	.9	201	15	444	2.44	16	17	<2	2	62	21.8	5	<3	27	.48	.119	15	19	.32	706	.01	<3	.63	.01	.10	<2	3	105
70821	13	87	11	1363	1.6	364	16	230	3.55	24	26	<2	4	86	16.7	7	<3	28	.47	.235	15	19	.21	531	.01	<3	1.25	.01	.08	<2	3	170
70822	7	89	11	1641	1.0	209	16	404	2.50	15	<8	<2	3	52	19.4	6	<3	30	.37	.109	16	22	.42	593	.02	<3	.76	.01	.08	<2	3	105
70823	8	61	13	1490	.6	210	13	417	2.24	15	10	<2	2	61	22.5	6	<3	29	.41	.098	15	19	.36	626	.01	<3	.66	.01	.11	<2	3	135
70824	7	56	10	538	.8	101	8	285	2.10	15	<8	<2	3	47	5.6	4	<3	20	.23	.099	15	16	.21	407	.01	<3	.51	.01	.08	<2	3	120
70825	9	52	10	2132	.5	317	17	459	2.36	11	10	<2	4	35	14.3	4	<3	38	.29	.061	17	27	.66	390	.03	<3	.92	.01	.11	<2	3	65
70829	18	58	12	488	.6	104	11	400	2.27	30	<8	<2	2	67	6.9	7	<3	40	1.73	.119	12	21	.71	572	.01	<3	.48	.01	.05	<2	3	160
70831	21	61	14	400	.5	94	9	310	1.95	26	11	<2	<2	71	5.6	6	<3	41	.95	.099	15	17	.55	568	.01	<3	.44	.01	.06	<2	4	215
70832	15	63	13	401	.7	95	13	492	2.53	30	<8	<2	3	56	6.0	7	<3	38	1.40	.115	16	22	.85	497	.01	<3	.54	.01	.04	<2	3	175
70834	5	44	12	262	.9	128	10	391	1.98	22	<8	<2	2	46	2.4	7	<3	20	5.37	.083	10	17	1.44	797	.02	<3	.44	<.01	.05	<2	2	155
70835	6	35	10	1129	.6	285	8	261	1.79	14	<8	<2	2	49	30.9	6	<3	26	6.14	.094	9	31	.64	805	.03	<3	.67	.01	.05	<2	1	85
70837	8	33	13	160	.5	69	11	297	2.28	16	<8	<2	3	22	1.8	3	<3	28	1.13	.094	15	27	.44	318	.04	<3	.79	.01	.04	<2	2	110
70838	8	48	15	518	.9	198	13	317	2.41	19	<8	<2	3	34	10.5	7	<3	36	.97	.107	17	30	.66	675	.04	3	.77	.01	.04	<2	3	145
70839	35	77	10	402	1.4	94	5	97	1.36	33	11	<2	3	102	7.8	13	4	54	.24	.113	18	13	.06	503	<.01	3	.31	.01	.08	<2	4	295
STANDARD C3/AU-S	23	60	38	148	5.8	33	11	702	3.29	52	17	<2	19	29	21.0	17	20	75	.57	.084	18	155	.64	142	.09	18	1.82	.04	.15	17	44	960

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

Data___ FA ___

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	Hg ppb
70841	7	35	14	180	.3	68	10	506	1.72	18	<8	<2	2	67	1.5	9	<3	18	9.73	.070	7	13	2.18	435	.02	3	.41	.01	.05	<2	<1	110
70843	5	57	19	396	.4	94	15	587	2.72	25	<8	<2	<2	30	6.9	6	<3	28	2.07	.105	11	27	.98	603	.02	4	.80	.01	.05	<2	<1	115
70844	7	31	11	160	.3	58	10	444	1.60	19	<8	<2	3	74	1.2	9	<3	15	10.51	.063	6	11	2.45	371	.02	<3	.34	<.01	.04	<2	<1	120
70845	17	54	16	307	.8	119	12	225	2.03	25	<8	<2	<2	47	4.1	8	<3	29	1.73	.119	10	12	.36	728	.01	4	.31	<.01	.07	<2	1	350
RE 70846	15	59	11	373	.7	73	7	185	1.60	18	<8	<2	2	53	5.5	6	<3	33	.39	.099	12	13	.22	862	.01	<3	.35	.01	.08	<2	<1	135
70846	15	57	10	372	.8	73	8	186	1.60	18	<8	<2	3	54	5.6	6	<3	34	.38	.100	12	14	.23	923	.01	<3	.34	.01	.07	<2	<1	140
70848	4	63	16	178	<.3	138	18	585	3.09	12	<8	<2	2	28	3.4	3	<3	57	.64	.120	13	81	1.20	338	.06	<3	1.27	.03	.08	<2	69	35
70849	14	108	10	1409	.7	271	47	2136	6.14	23	<8	<2	3	43	16.5	5	<3	32	.53	.088	12	21	.38	483	.02	<3	1.54	.01	.06	<2	1	95
70852	11	207	10	11175	.9	2151	269	18272	6.07	18	<8	<2	2	73	96.1	<3	<3	26	.57	.147	14	25	.31	778	.02	<3	1.26	<.01	.06	<2	2	95
70853	7	165	10	1841	.8	474	26	1683	1.79	11	<8	<2	<2	58	39.5	6	<3	20	1.19	.125	8	20	.33	627	.01	5	.51	.01	.07	<2	1	95
70854	13	220	9	9896	1.0	2099	279	18891	6.94	18	<8	<2	2	80	98.6	<3	<3	29	.64	.173	14	26	.33	763	.02	<3	1.25	<.01	.06	<2	<1	100
70855	10	71	10	1772	.5	298	9	512	1.60	8	<8	<2	<2	53	38.5	3	<3	40	.68	.113	10	18	.29	907	.01	4	.66	.01	.10	<2	1	115
70858	19	88	13	464	1.0	118	11	614	1.98	20	<8	<2	<2	78	8.1	5	<3	75	.26	.109	14	22	.27	697	.01	3	.73	<.01	.09	<2	1	150
70859	8	146	12	1814	.8	417	49	3353	2.82	14	<8	<2	2	53	19.5	4	<3	39	.43	.108	14	20	.47	726	.04	4	1.38	.01	.08	<2	1	75
70860	4	234	13	2723	1.8	668	136	10845	2.65	12	<8	<2	3	41	21.4	<3	<3	29	.27	.111	15	20	.53	550	.06	<3	3.66	.01	.06	<2	1	45
70863	15	82	10	1137	.9	186	14	458	2.20	19	<8	<2	<2	54	15.2	7	<3	38	1.99	.135	11	18	.68	662	.01	4	.54	.01	.09	<2	<1	135
70864	16	185	10	6176	.7	656	29	1105	1.65	16	16	<2	2	55	42.6	6	<3	31	.31	.133	13	9	.12	575	.01	<3	1.60	.01	.09	<2	<1	125
70865	18	95	13	861	1.4	198	13	289	2.20	20	14	<2	2	71	10.4	8	<3	38	.46	.133	12	17	.16	960	.01	5	.53	.01	.09	<2	<1	290
70866	17	157	9	4923	.7	485	27	1191	1.64	16	8	<2	3	57	38.9	6	<3	31	.30	.145	15	9	.12	624	.01	<3	1.55	.01	.09	2	1	110
70869	16	176	10	4121	.6	486	24	811	1.64	15	<8	<2	2	54	30.4	5	<3	33	.23	.129	13	8	.11	677	.01	<3	1.40	.01	.09	2	<1	115
70870	15	71	11	727	.9	139	11	254	1.90	18	<8	<2	<2	84	11.6	5	<3	36	.33	.131	12	14	.16	652	.01	4	.45	.01	.09	<2	1	110
70871	27	286	17	7138	1.0	1367	93	2616	2.84	28	<8	<2	3	67	41.9	10	<3	59	.21	.139	16	14	.12	239	.01	4	2.92	.01	.10	2	1	110
70872	18	144	11	1379	1.2	148	20	463	1.90	16	<8	<2	3	62	29.0	6	<3	38	.24	.132	12	12	.11	780	.01	<3	.86	.01	.09	<2	1	150
70874	14	136	7	1211	.9	119	16	278	1.48	13	<8	<2	3	50	32.7	4	<3	30	.18	.114	10	10	.07	1024	.01	<3	.75	.01	.08	<2	<1	120
70876	13	129	9	793	1.2	93	9	184	1.53	14	<8	<2	3	52	14.9	4	<3	27	.13	.109	8	14	.05	350	<.01	<3	1.44	.01	.07	<2	<1	115
70877	39	86	13	841	1.4	137	18	653	1.77	26	<8	<2	3	44	33.8	13	<3	63	.17	.106	15	12	.09	615	.01	<3	.31	<.01	.07	<2	1	225
70878	13	58	10	253	.9	72	5	96	1.46	15	<8	<2	<2	86	4.4	4	<3	39	.24	.114	17	14	.13	855	.01	<3	.38	<.01	.09	<2	24	100
70879	11	94	18	1123	.6	228	28	1580	4.43	35	<8	<2	2	44	25.0	5	<3	63	.90	.170	19	72	.94	284	.03	3	1.42	.01	.07	<2	1	115
70882	2	76	16	135	.3	105	24	996	4.41	24	<8	<2	3	31	2.4	<3	<3	59	.74	.166	22	91	1.09	231	.04	<3	1.64	.01	.05	<2	2	25
70885	1	46	19	136	.6	99	20	1015	4.45	20	<8	<2	<2	82	2.2	<3	<3	59	1.37	.124	23	89	1.07	219	.08	3	2.19	.03	.06	<2	1	30
70888	1	55	20	150	.3	108	17	438	3.16	19	<8	<2	<2	45	1.6	<3	<3	53	.83	.088	20	90	1.26	258	.11	<3	2.06	.02	.05	<2	1	35
70889	1	39	18	154	.4	95	16	832	4.28	23	<8	<2	2	50	2.4	<3	<3	54	.95	.088	21	79	1.12	236	.15	3	2.18	.02	.06	<2	1	35
70890	12	60	10	455	.7	113	9	223	1.87	20	<8	<2	3	54	6.4	5	<3	32	.33	.121	15	16	.20	804	.01	3	.46	.01	.06	<2	1	95
70895	15	127	8	3256	.7	639	122	6226	5.72	20	<8	<2	4	49	38.2	<3	<3	32	.71	.095	13	24	.50	556	.03	<3	1.75	.01	.05	<2	1	85
70896	14	66	10	642	.6	153	16	529	2.34	18	<8	<2	4	91	8.4	5	<3	40	1.04	.083	10	15	.44	948	.01	<3	.59	.01	.08	<2	<1	80
STANDARD C3/AU-S	24	60	33	151	5.5	35	11	716	3.33	54	<8	2	18	28	23.9	17	23	74	.55	.090	17	153	.63	141	.09	20	1.80	.04	.15	19	50	915

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

Data___ FA ___

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	Hg ppb
70897	17	76	14	629	1.0	169	20	602	2.50	21	<8	<2	6	86	7.5	6	<3	60	.85	.087	13	18	.46	1042	.01	4	.67	.01	.10	<2	<1	80
70898	13	78	12	951	1.1	200	27	1105	3.15	19	<8	<2	6	72	11.3	6	<3	43	.94	.083	13	18	.48	673	.01	3	.80	.01	.08	<2	1	75
70899	14	134	13	3000	.9	706	113	4803	5.01	24	<8	<2	5	61	33.1	7	<3	40	.68	.091	16	23	.47	672	.02	<3	1.76	.01	.07	2	1	80
70900	13	91	11	1943	.7	421	61	3021	3.27	17	<8	<2	5	69	22.3	3	<3	41	.76	.086	13	19	.51	605	.02	<3	1.02	.01	.07	<2	1	65
73551	4	166	32	148	.7	166	62	1643	9.97	16	<8	<2	2	24	<.2	<3	<3	64	.35	.220	34	83	.59	169	.02	<3	1.69	.01	.07	<2	1	40
73552	3	46	20	96	.8	53	13	453	4.34	19	<8	<2	<2	11	.5	<3	<3	51	.13	.199	22	50	.41	166	.01	<3	1.28	.01	.06	<2	8	55
73553	10	100	18	228	.8	110	40	1041	10.11	13	11	<2	3	27	.5	3	<3	44	.57	.245	23	35	.25	200	<.01	<3	1.07	<.01	.06	<2	1	120
73554	6	65	26	110	.9	76	25	1259	9.46	21	<8	<2	2	15	<.2	3	<3	76	.19	.280	22	67	.52	117	.02	<3	1.65	.01	.06	<2	2	55
73555	5	40	15	91	.4	43	12	911	4.75	22	<8	<2	<2	8	.5	<3	<3	90	.11	.149	20	52	.51	139	.02	<3	1.44	<.01	.06	<2	3	25
73556	6	67	20	154	.4	90	28	749	8.23	21	<8	<2	2	24	.4	<3	<3	68	.28	.221	30	65	.63	176	.02	<3	1.87	.01	.06	<2	1	45
73557	12	30	14	123	.9	39	9	392	3.71	15	<8	<2	<2	17	1.4	<3	<3	65	.21	.158	20	44	.38	316	.02	<3	1.32	.01	.04	<2	1	80
73558	8	36	16	95	.4	41	10	539	3.45	17	<8	<2	2	12	1.2	<3	3	78	.25	.086	17	55	.62	190	.08	<3	1.35	.01	.04	<2	<1	30
73559	4	22	9	55	.4	25	6	243	1.90	7	<8	<2	2	7	.5	<3	<3	65	.26	.041	16	37	.50	170	.10	<3	1.12	.01	.04	<2	1	20
73560	15	66	18	352	1.4	122	17	727	3.87	26	<8	<2	2	43	6.8	<3	<3	71	.97	.143	22	54	.66	486	.05	<3	1.77	.01	.07	<2	1	190
RE 73560	15	67	18	349	1.4	122	17	738	3.86	25	<8	<2	3	44	7.1	4	<3	69	.98	.143	21	53	.65	492	.05	<3	1.75	.01	.07	<2	1	185
73561	18	27	8	199	1.0	77	4	157	1.38	12	8	<2	2	19	2.6	4	<3	28	.24	.051	15	19	.20	195	.02	<3	.49	<.01	.05	<2	<1	50
73562	20	41	14	293	.7	92	15	619	2.78	17	<8	<2	2	19	3.1	5	<3	61	.27	.091	19	40	.44	267	.06	<3	1.23	.01	.05	<2	<1	130
STANDARD C3/AU-S	25	63	35	152	5.9	35	11	747	3.52	56	12	<2	20	31	23.6	14	23	80	.60	.088	19	168	.67	152	.10	18	1.93	.04	.15	19	46	915

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

Data___ FA ___

Appendix B

STATISTICS

COPPER STATISTICS

SUMMARY STATISTICS and HISTOGRAM ARITHMETIC VALUES

Variable = Cu Unit = ppm N = 146

Mean =	101.144	Min =	19.000	1st Quartile =	63.000
Std. Dev. =	61.852	Max =	553.000	Median =	85.000
CV % =	61.153	Skewness =	3.238	3rd Quartile =	122.000

%	cum %	cls int	(# of bins = 22 ~ bin size = 25.429)
0.00	0.34	6.286	
1.37	1.70	31.714	*
16.44	18.03	57.143	**********
29.45	47.28	82.571	**********
17.81	64.97	108.000	**********
14.38	79.25	133.429	**********
8.22	87.41	158.857	********
4.79	92.18	184.286	*****
3.42	95.58	209.714	****
1.37	96.94	235.143	*
0.68	97.62	260.571	*
0.68	98.30	286.000	*
0.68	98.98	311.429	*
0.00	98.98	336.857	
0.00	98.98	362.286	
0.00	98.98	387.714	
0.00	98.98	413.143	
0.00	98.98	438.571	
0.00	98.98	464.000	
0.00	98.98	489.429	
0.00	98.98	514.857	
0.00	98.98	540.286	
0.68	99.66	565.714	*

0 1 2 3 4

SUMMARY STATISTICS and HISTOGRAM LOGARITHMIC VALUES

Variable = Cu Unit = ppm N = 146

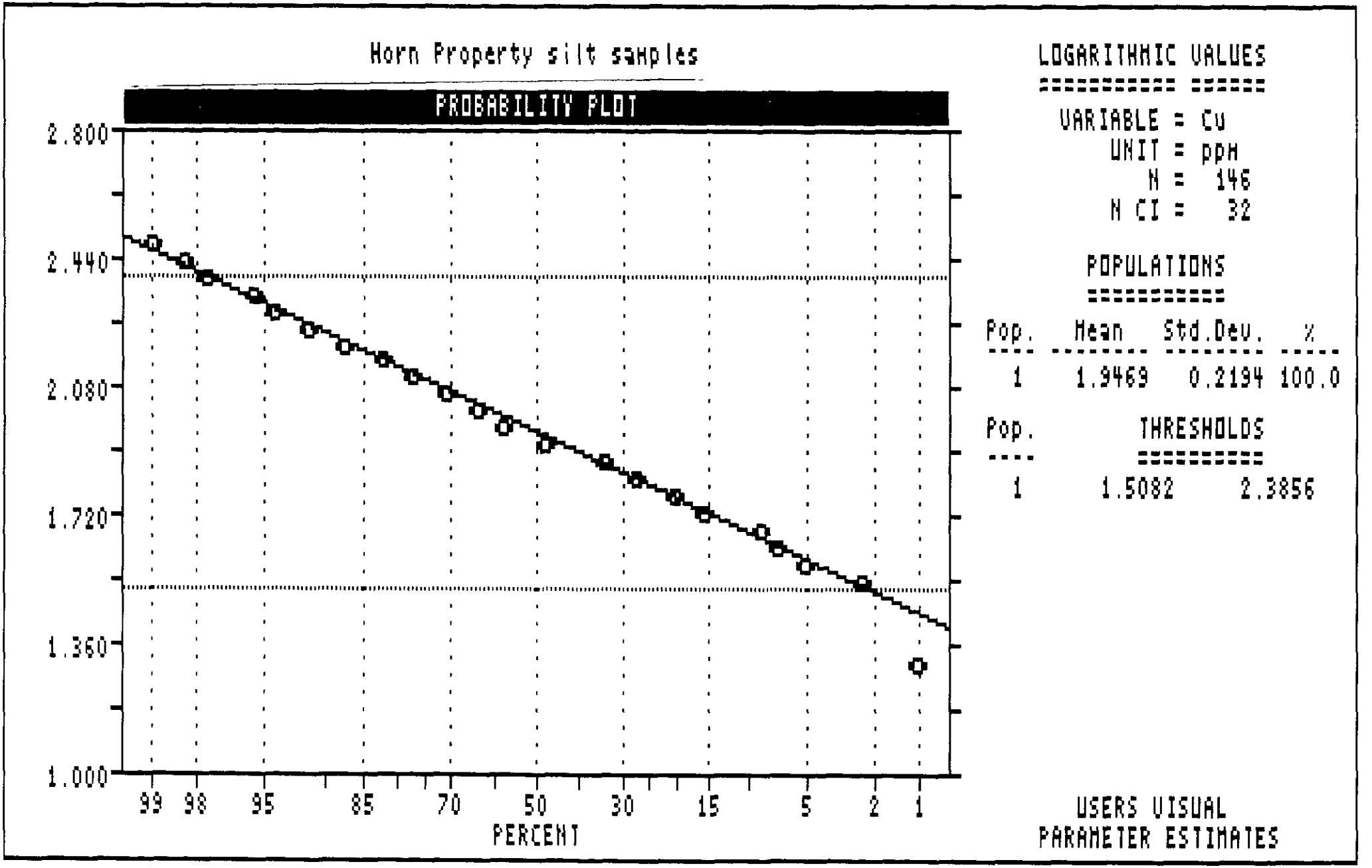
Mean =	1.9469	Min =	1.2788	1st Quartile =	1.7993
Std. Dev. =	0.2194	Max =	2.7427	Median =	1.9294
CV % =	11.2673	Skewness =	0.2237	3rd Quartile =	2.0863

Anti-Log Mean = 88.486 Anti-Log Std. Dev. : (-) 53.397
(+) 146.634

(# of bins = 22 - bin size = 0.0697)

%	cum %	antilog	cls int	
0.00	0.34	17.535	1.2439	
0.68	1.02	20.588	1.3136	*
0.00	1.02	24.173	1.3833	
0.00	1.02	28.382	1.4530	
1.37	2.38	33.323	1.5227	*
3.42	5.78	39.126	1.5925	****
2.05	7.82	45.938	1.6622	**
7.53	15.31	53.937	1.7319	********
10.27	25.51	63.329	1.8016	**********
8.22	33.67	74.356	1.8713	********
21.23	54.76	87.302	1.9410	**********
8.90	63.61	102.504	2.0107	*********
10.96	74.49	120.352	2.0805	**********
7.53	81.97	141.308	2.1502	********
7.53	89.46	165.912	2.2199	********
4.79	94.22	194.801	2.2896	*****
2.05	96.26	228.720	2.3593	**
2.05	98.30	268.545	2.4290	**
0.68	98.98	315.304	2.4987	*
0.00	98.98	370.205	2.5684	
0.00	98.98	434.666	2.6382	
0.00	98.98	510.351	2.7079	
0.68	99.66	599.214	2.7776	*

0 1 2 3 4


Horn Property silt samples
PROBABILITY PLOT
2.800
2.440
2.080
1.720
1.360
1.000
99 98 95 85 70 50 30 15 5 2 1
PERCENT
LOGARITHMIC VALUES
VARIABLE = Cu
UNIT = ppm
N = 146
N CI = 32
POPULATIONS
Pop. Mean Std.Dev. %
1 1.9469 0.2194 100.0
Pop. THRESHOLDS
1 1.5082 2.3856
USERS VISUAL
PARAMETER ESTIMATES

SUMMARY STATISTICS and HISTOGRAM — ARITHMETIC VALUES

Variable = Cu Unit = ppm N = 161

Mean =	71.950	Min =	9.000	1st Quartile =	31.750
Std. Dev. =	78.220	Max =	664.000	Median =	52.000
CV % =	108.715	Skewness =	4.409	3rd Quartile =	82.250

%	cum %	cls int	(# of bins = 32 - bin size = 21.129)
0.00	0.31	-1.565	
6.83	7.10	19.565	********
29.81	36.73	40.694	**********
21.12	57.72	61.823	**********
16.77	74.38	82.952	**********
11.18	85.49	104.081	**********
3.11	88.58	125.210	****
2.48	91.05	146.339	***
3.11	94.14	167.468	****
0.00	94.14	188.597	
1.86	95.99	209.726	**
0.00	95.99	230.855	
0.00	95.99	251.984	
1.24	97.22	273.113	*
1.24	98.46	294.242	*
0.00	98.46	315.371	
0.00	98.46	336.500	
0.00	98.46	357.629	
0.00	98.46	378.758	
0.00	98.46	399.887	
0.00	98.46	421.016	
0.00	98.46	442.145	
0.00	98.46	463.274	
0.00	98.46	484.403	
0.00	98.46	505.532	
0.62	99.07	526.661	*
0.00	99.07	547.790	
0.00	99.07	568.919	
0.00	99.07	590.048	
0.00	99.07	611.177	
0.00	99.07	632.306	
0.00	99.07	653.435	
0.62	99.69	674.565	*

0 1 2 3 4

Horn Property

SUMMARY STATISTICS and HISTOGRAM — LOGARITHMIC VALUES

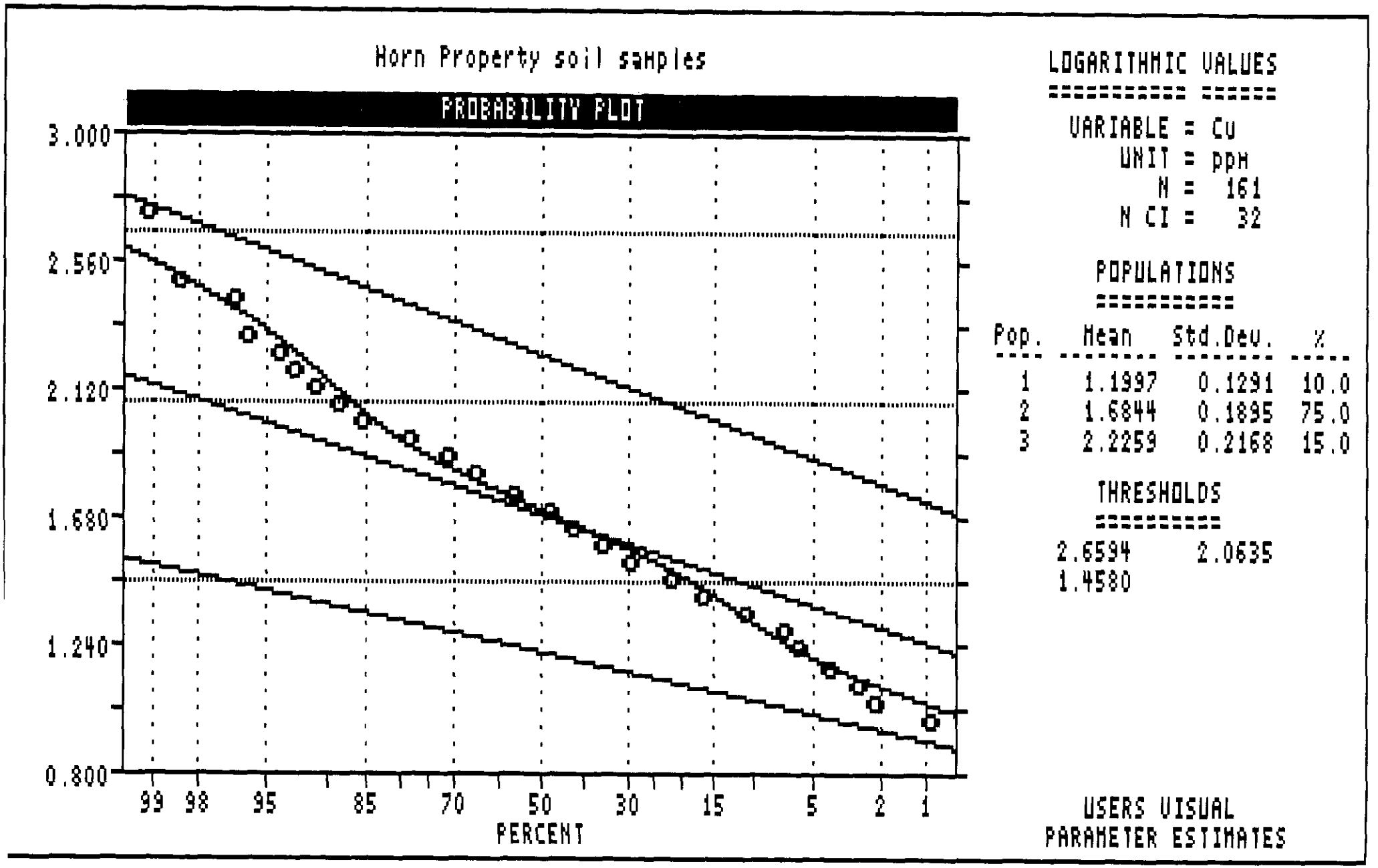
Variable = Cu Unit = ppm N = 161

Mean =	1.7231	Min =	0.9542	1st Quartile =	1.5017
Std. Dev. =	0.3226	Max =	2.8222	Median =	1.7160
CV % =	18.7208	Skewness =	0.3731	3rd Quartile =	1.9151

Anti-Log Mean = 52.862 Anti-Log Std. Dev. : (-) 25.151 (+) 111.103

%	cum %	antilog	cls int	(# of bins = 32 - bin size = 0.0603)
0.00	0.31	8.397	0.9241	
0.62	0.93	9.647	0.9844	*
1.24	2.16	11.082	1.0446	*
0.62	2.78	12.732	1.1049	*
1.24	4.01	14.626	1.1651	*
1.86	5.86	16.803	1.2254	**
1.24	7.10	19.304	1.2856	*
3.73	10.80	22.177	1.3459	****
5.59	16.36	25.478	1.4062	******
4.97	21.30	29.270	1.4664	******
8.07	29.32	33.626	1.5267	*********
5.59	34.88	38.630	1.5869	******
6.83	41.67	44.380	1.6472	********
5.59	47.22	50.985	1.7074	******
8.70	55.86	58.573	1.7677	**********
9.32	65.12	67.290	1.8279	**********
5.59	70.68	77.305	1.8882	******
7.45	78.09	88.810	1.9485	********
7.45	85.49	102.027	2.0087	********
3.11	88.58	117.212	2.0690	****
2.48	91.05	134.657	2.1292	***
1.86	92.90	154.698	2.1895	**
1.24	94.14	177.721	2.2497	*
1.86	95.99	204.171	2.3100	**
0.00	95.99	234.558	2.3703	
0.62	96.60	269.467	2.4305	*
1.86	98.46	309.572	2.4908	**
0.00	98.46	355.646	2.5510	
0.00	98.46	408.576	2.6113	
0.00	98.46	469.385	2.6715	
0.62	99.07	539.243	2.7318	*
0.00	99.07	619.498	2.7920	
0.62	99.69	711.698	2.8523	*

0 1 2 3 4


Horn Property soil samples
PROBABILITY PLOT
3.000
2.560
2.120
1.680
1.240
0.800
99 98 95 85 70 50 30 15 5 2 1
PERCENT
LOGARITHMIC VALUES
VARIABLE = Cu
UNIT = ppm
N = 161
N CI = 32
POPULATIONS
Pop. Mean Std.Dev. %
1 1.1997 0.1291 10.0
2 1.6844 0.1895 75.0
3 2.2259 0.2168 15.0
THRESHOLDS
2.6594 2.0635
1.4580
USERS VISUAL
PARAMETER ESTIMATES

LEAD STATISTICS

SUMMARY STATISTICS and HISTOGRAM ARITHMETIC VALUES

Variable = Pb Unit = ppm N = 146

Mean =	14.274	Min =	3.000	1st Quartile =	10.000
Std. Dev. =	6.406	Max =	34.000	Median =	13.000
CV % =	44.882	Skewness =	1.036	3rd Quartile =	17.000

%	cum %	cls int	(# of bins = 22 - bin size = 1.476)
0.00	0.34	2.262	
0.68	1.02	3.738	*
3.42	4.42	5.214	****
0.00	4.42	6.690	
8.22	12.59	8.167	********
4.79	17.35	9.643	*****
24.66	41.84	11.119	**************************
8.22	50.00	12.595	********
12.33	62.24	14.071	************
4.79	67.01	15.548	*****
8.22	75.17	17.024	********
4.11	79.25	18.500	****
4.79	84.01	19.976	*****
1.37	85.37	21.452	*
0.68	86.05	22.929	*
3.42	89.46	24.405	****
1.37	90.82	25.881	*
2.74	93.54	27.357	***
2.05	95.58	28.833	**
2.74	98.30	30.310	***
0.00	98.30	31.786	
0.00	98.30	33.262	
1.37	99.66	34.738	*

0 1 2 3 4

SUMMARY STATISTICS and HISTOGRAM LOGARITHMIC VALUES

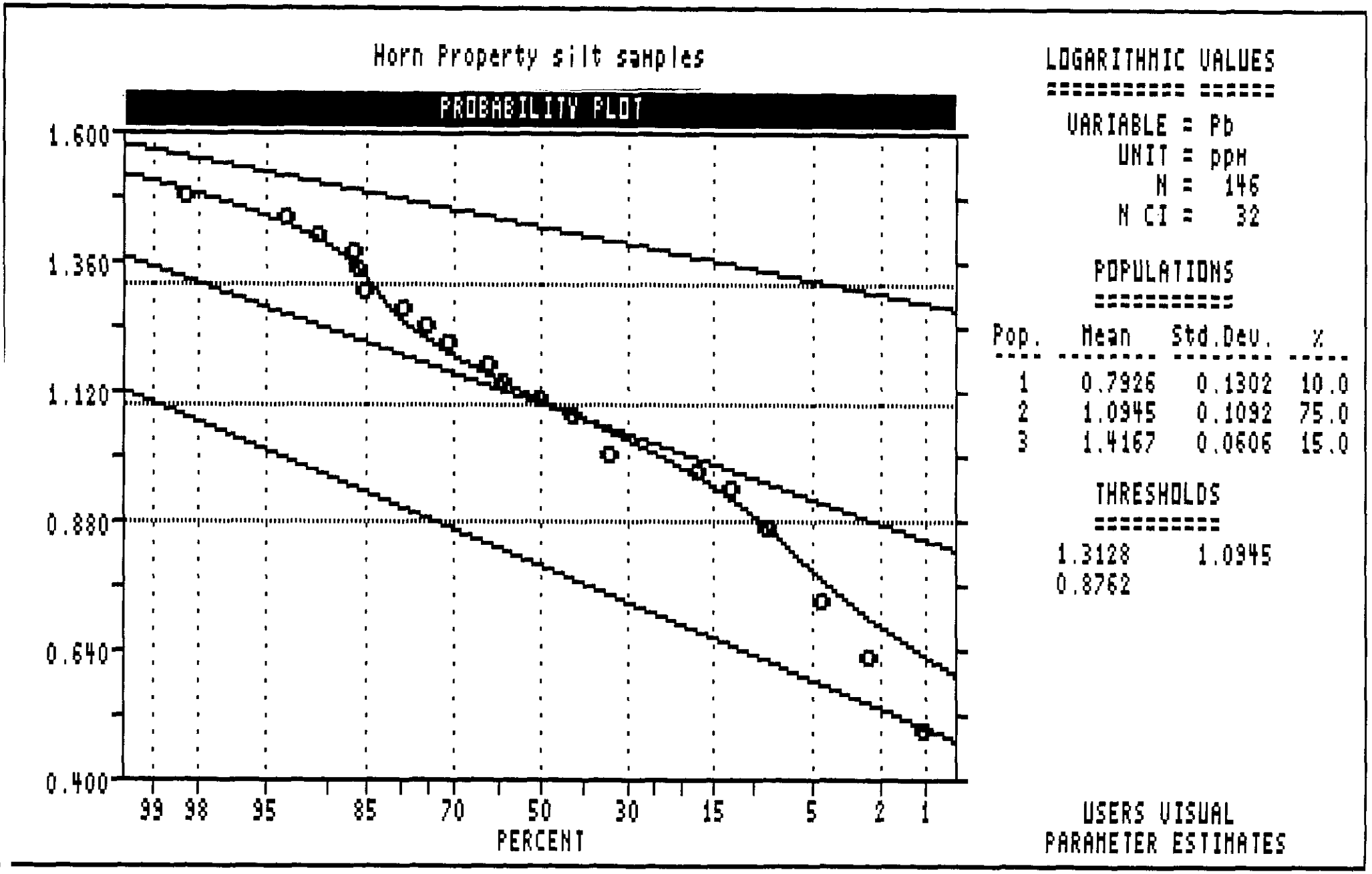
Variable = Pb Unit = ppm N = 146

Mean =	1.1131	Min =	0.4771	1st Quartile =	1.0000
Std. Dev. =	0.1925	Max =	1.5315	Median =	1.1139
CV % =	17.2984	Skewness =	-0.1872	3rd Quartile =	1.2304

Anti-Log Mean = 12.975 Anti-Log Std. Dev. : (-) 8.328
(+) 20.214

%	cum %	antilog	cls int	(# of bins = 22 - bin size = 0.0502)
0.00	0.34	2.832	0.4520	
0.68	1.02	3.179	0.5022	*
0.00	1.02	3.568	0.5524	
1.37	2.38	4.005	0.6026	*
0.00	2.38	4.496	0.6528	
2.05	4.42	5.047	0.7031	**
0.00	4.42	5.666	0.7533	
0.00	4.42	6.360	0.8035	
4.11	8.50	7.140	0.8537	****
4.11	12.59	8.015	0.9039	****
0.00	12.59	8.997	0.9541	
21.23	33.67	10.100	1.0043	**********
8.22	41.84	11.337	1.0545	********
8.22	50.00	12.727	1.1047	********
12.33	62.24	14.286	1.1549	**********
8.90	71.09	16.037	1.2051	*********
8.22	79.25	18.003	1.2553	********
6.16	85.37	20.209	1.3055	******
0.68	86.05	22.686	1.3558	*
4.79	90.82	25.466	1.4060	*****
4.79	95.58	28.587	1.4562	*****
2.74	98.30	32.090	1.5064	***
1.37	99.66	36.023	1.5566	*

0 1 2 3 4


Horn Property silt samples
PROBABILITY PLOT
1.600
1.360
1.120
0.880
0.640
0.400
99 98 95 85 70 50 30 15 5 2 1
PERCENT
LOGARITHMIC VALUES
VARIABLE = Pb
UNIT = ppm
N = 146
N CI = 32
POPULATIONS
Pop. Mean Std.Dev. %
1 0.7926 0.1302 10.0
2 1.0945 0.1092 75.0
3 1.4167 0.0606 15.0
THRESHOLDS
1.3128 1.0945
0.8762
USERS VISUAL
PARAMETER ESTIMATES

Horn Property soil samples

SUMMARY STATISTICS and HISTOGRAM — ARITHMETIC VALUES

Variable = Pb Unit = ppm N = 161

Mean =	17.031	Min =	4.000	1st Quartile =	12.000
Std. Dev. =	9.575	Max =	99.000	Median =	15.000
CV % =	56.221	Skewness =	4.477	3rd Quartile =	19.000

(# of bins = 23 - bin size = 4.318)

%	cum %	cls int	
0.00	0.31	1.841	
2.48	2.78	6.159	***
10.56	13.27	10.477	**********
32.30	45.37	14.795	**********
29.81	75.00	19.114	**********
11.18	86.11	23.432	**********
4.97	91.05	27.750	******
4.35	95.37	32.068	*****
2.48	97.84	36.386	***
0.62	98.46	40.705	*
0.00	98.46	45.023	
0.00	98.46	49.341	
0.62	99.07	53.659	*
0.00	99.07	57.977	
0.00	99.07	62.295	
0.00	99.07	66.614	
0.00	99.07	70.932	
0.00	99.07	75.250	
0.00	99.07	79.568	
0.00	99.07	83.886	
0.00	99.07	88.205	
0.00	99.07	92.523	
0.00	99.07	96.841	
0.62	99.69	101.159	*

0 1 2 3 4

Horn Property soil samples

SUMMARY STATISTICS and HISTOGRAM — LOGARITHMIC VALUES

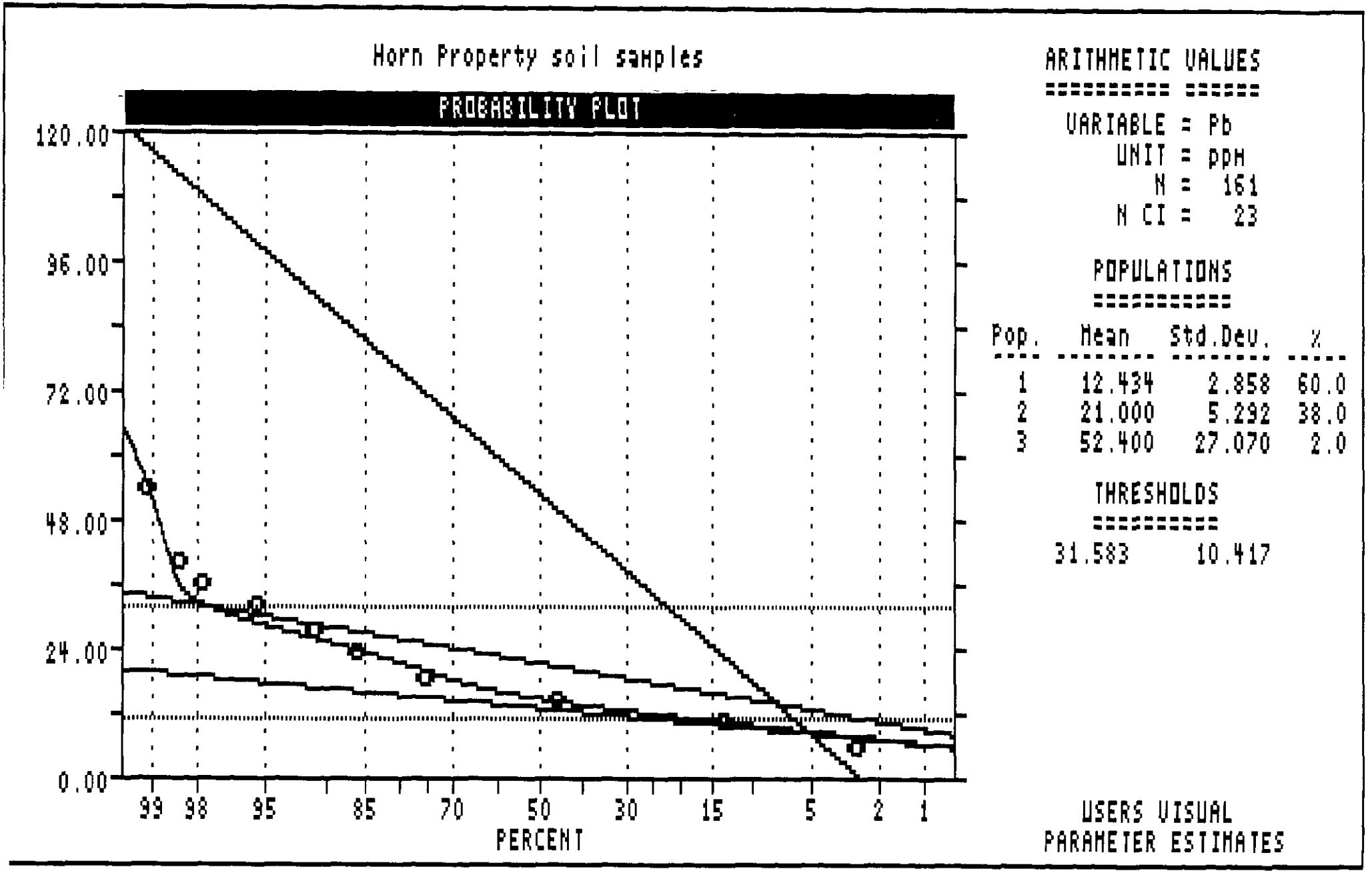
Variable = Pb Unit = ppm N = 161

Mean =	1.1874	Min =	0.6021	1st Quartile =	1.0792
Std. Dev. =	0.1893	Max =	1.9956	Median =	1.1761
CV % =	15.9467	Skewness =	0.1391	3rd Quartile =	1.2788

Anti-Log Mean = 15.394 Anti-Log Std. Dev. : (-) 9.954 (+) 23.806

%	cum %	antilog	cls int	(# of bins = 23 - bin size = 0.0633)
0.00	0.31	3.719	0.5704	
2.48	2.78	4.303	0.6337	***
0.00	2.78	4.978	0.6971	
0.00	2.78	5.760	0.7604	
0.00	2.78	6.664	0.8238	
0.00	2.78	7.711	0.8871	
3.11	5.86	8.922	0.9505	****
7.45	13.27	10.323	1.0138	********
4.35	17.59	11.944	1.0771	*****
19.88	37.35	13.819	1.1405	**********
14.29	51.54	15.989	1.2038	**********
19.88	71.30	18.500	1.2672	**********
11.18	82.41	21.405	1.3305	**********
6.21	88.58	24.766	1.3939	*******
3.11	91.67	28.656	1.4572	****
4.35	95.99	33.155	1.5206	*****
1.86	97.84	38.362	1.5839	**
0.62	98.46	44.386	1.6472	*
0.00	98.46	51.355	1.7106	
0.62	99.07	59.420	1.7739	*
0.00	99.07	68.750	1.8373	
0.00	99.07	79.546	1.9006	
0.00	99.07	92.037	1.9640	
0.62	99.69	106.490	2.0273	*

0 1 2 3 4


Horn Property soil samples
PROBABILITY PLOT
120.00
96.00
72.00
48.00
24.00
0.00
99 98 95 85 70 50 30 15 5 2 1
PERCENT
ARITHMETIC VALUES
VARIABLE = Pb
UNIT = ppm
N = 161
N CI = 23
POPULATIONS
Pop. Mean Std.Dev. %
1 12.434 2.858 60.0
2 21.000 5.292 38.0
3 52.400 27.070 2.0
THRESHOLDS
31.583 10.417
USERS VISUAL
PARAMETER ESTIMATES

ZINC STATISTICS

SUMMARY STATISTICS and HISTOGRAM ARITHMETIC VALUES

Variable = Zn Unit = ppm N = 146

Mean =	1127.705	Min = 46.000	1st Quartile = 184.000
Std. Dev. =	1909.338	Max = 11572.000	Median = 478.000
CV % =	169.312	Skewness = 3.513	3rd Quartile = 1133.000

(# of bins = 32 - bin size = 371.806)

%	cum %	cls int	
0.00	0.34	-139.903	
30.14	30.27	231.903	**********
26.71	56.80	603.710	*********
14.38	71.09	975.516	*****
6.16	77.21	1347.323	**
6.85	84.01	1719.129	**
4.11	88.10	2090.935	*
1.37	89.46	2462.742	*
2.05	91.50	2834.548	*
0.68	92.18	3206.355	*
0.68	92.86	3578.161	
0.00	92.86	3949.968	
0.68	93.54	4321.774	*
0.00	93.54	4693.581	
0.68	94.22	5065.387	*
0.68	94.90	5437.194	*
0.68	95.58	5809.000	*
0.68	96.26	6180.806	*
0.00	96.26	6552.613	
0.68	96.94	6924.419	*
0.68	97.62	7296.226	*
0.00	97.62	7668.032	
0.00	97.62	8039.839	
0.00	97.62	8411.645	
0.00	97.62	8783.452	
0.00	97.62	9155.258	
0.00	97.62	9527.065	
0.68	98.30	9898.871	*
0.00	98.30	10270.677	
0.00	98.30	10642.484	
0.00	98.30	11014.290	
0.68	98.98	11386.097	*
0.68	99.66	11757.903	*

0 1 2 3 4

SUMMARY STATISTICS and HISTOGRAM LOGARITHMIC VALUES

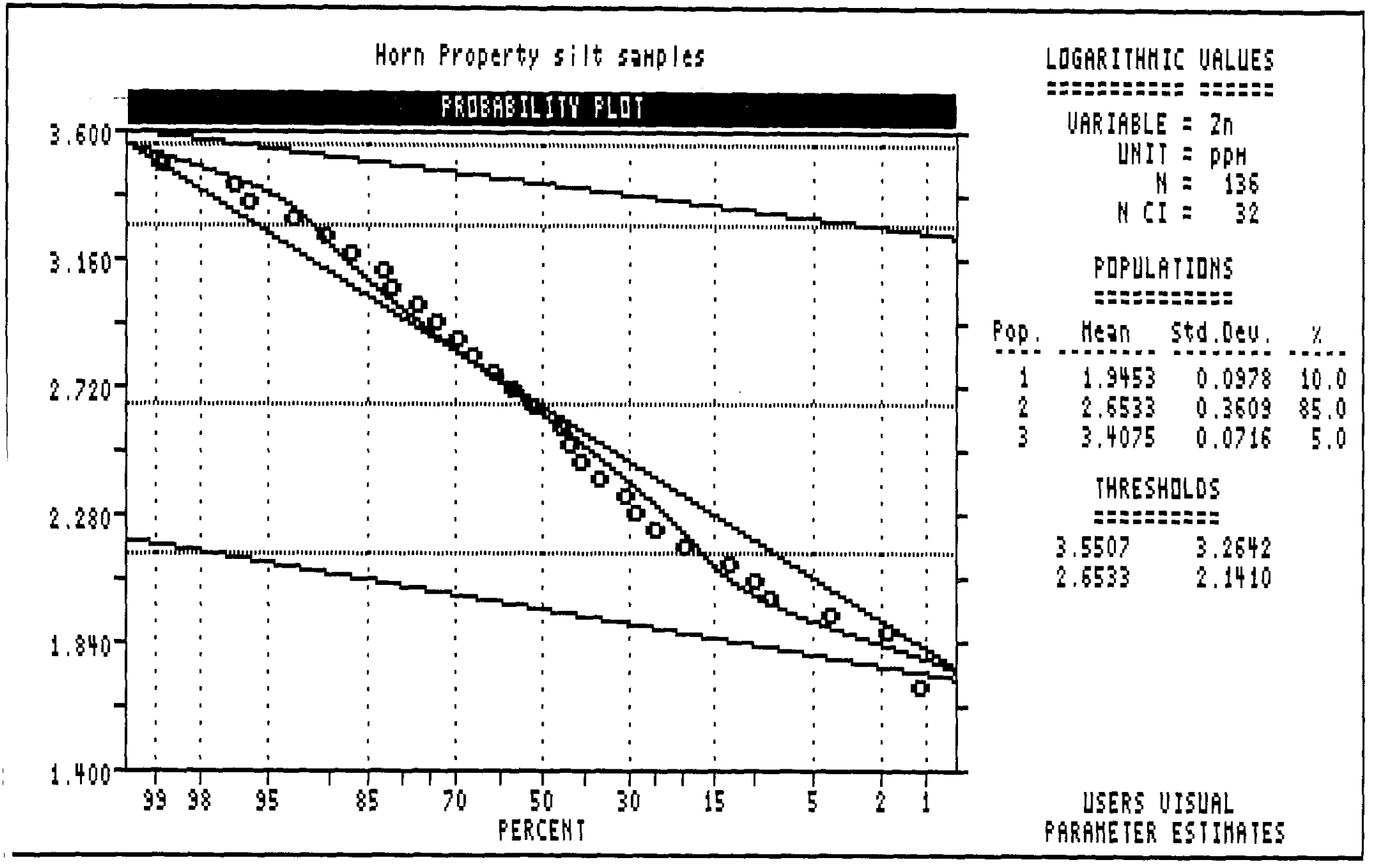
Variable = Zn Unit = ppm N = 146

Mean =	2.7064	Min =	1.6628	1st Quartile =	2.2647
Std. Dev. =	0.5240	Max =	4.0634	Median =	2.6794
CV % =	19.3606	Skewness =	0.4474	3rd Quartile =	3.0542

Anti-Log Mean = 508.575 Anti-Log Std. Dev. : (-) 152.191
(+) 1699.499

%	cum %	antilog	cls int	(# of bins = 32 - bin size = 0.0774)
0.00	0.34	42.076	1.6240	
0.68	1.02	50.290	1.7015	*
0.00	1.02	60.106	1.7789	
0.00	1.02	71.839	1.8564	
2.74	3.74	85.862	1.9338	***
4.11	7.82	102.622	2.0112	****
3.42	11.22	122.653	2.0887	****
6.85	18.03	146.595	2.1661	*******
5.48	23.47	175.211	2.2436	******
3.42	26.87	209.412	2.3210	****
6.16	32.99	250.289	2.3984	******
4.79	37.76	299.145	2.4759	*****
2.74	40.48	357.538	2.5533	***
7.53	47.96	427.329	2.6308	********
4.79	52.72	510.743	2.7082	*****
4.79	57.48	610.440	2.7856	*****
5.48	62.93	729.597	2.8631	******
4.79	67.69	872.014	2.9405	*****
4.79	72.45	1042.231	3.0180	*****
4.79	77.21	1245.673	3.0954	*****
3.42	80.61	1488.828	3.1728	****
4.11	84.69	1779.446	3.2503	****
3.42	88.10	2126.793	3.3277	****
1.37	89.46	2541.941	3.4052	*
2.74	92.18	3038.127	3.4826	***
0.68	92.86	3631.167	3.5600	*
0.68	93.54	4339.968	3.6375	*
1.37	94.90	5187.127	3.7149	*
1.37	96.26	6199.651	3.7924	*
1.37	97.62	7409.819	3.8698	*
0.00	97.62	8856.210	3.9472	
0.68	98.30	10584.936	4.0247	*
1.37	99.66	12651.109	4.1021	*

0 1 2 3 4


Horn Property silt samples
PROBABILITY PLOT
3.600
3.160
2.720
2.280
1.840
1.400
99 98 95 85 70 50 30 15 5 2 1
PERCENT
LOGARITHMIC VALUES
VARIABLE = Zn
UNIT = ppm
N = 136
N CI = 32
POPULATIONS
Pop. Mean Std.Dev. %
1 1.9453 0.0978 10.0
2 2.6533 0.3609 85.0
3 3.4075 0.0716 5.0
THRESHOLDS
3.5507 3.2642
2.6533 2.1410
USERS VISUAL
PARAMETER ESTIMATES

Horn Property soil samples

SUMMARY STATISTICS and HISTOGRAM — ARITHMETIC VALUES

Variable = Zn Unit = ppm N = 161

Mean =	248.460	Min =	40.000	1st Quartile =	107.750
Std. Dev. =	274.360	Max =	1954.000	Median =	152.500
CV % =	110.424	Skewness =	3.280	3rd Quartile =	265.000

%	cum %	cls int	(# of bins = 23 - bin size = 87.000)
0.00	0.31	-3.500	
11.18	11.42	83.500	**********
45.96	57.10	170.500	********** --> 52
15.53	72.53	257.500	**********
9.94	82.41	344.500	**********
6.21	88.58	431.500	*******
1.86	90.43	518.500	**
2.48	92.90	605.500	***
0.62	93.52	692.500	*
0.62	94.14	779.500	*
0.62	94.75	866.500	*
1.24	95.99	953.500	*
0.00	95.99	1040.500	
0.00	95.99	1127.500	
1.24	97.22	1214.500	*
1.24	98.46	1301.500	*
0.00	98.46	1388.500	
0.62	99.07	1475.500	*
0.00	99.07	1562.500	
0.00	99.07	1649.500	
0.00	99.07	1736.500	
0.00	99.07	1823.500	
0.00	99.07	1910.500	
0.62	99.69	1997.500	*

0 1 2 3 4

Horn Property soil samples

SUMMARY STATISTICS and HISTOGRAM — LOGARITHMIC VALUES

Variable = Zn Unit = ppm N = 161

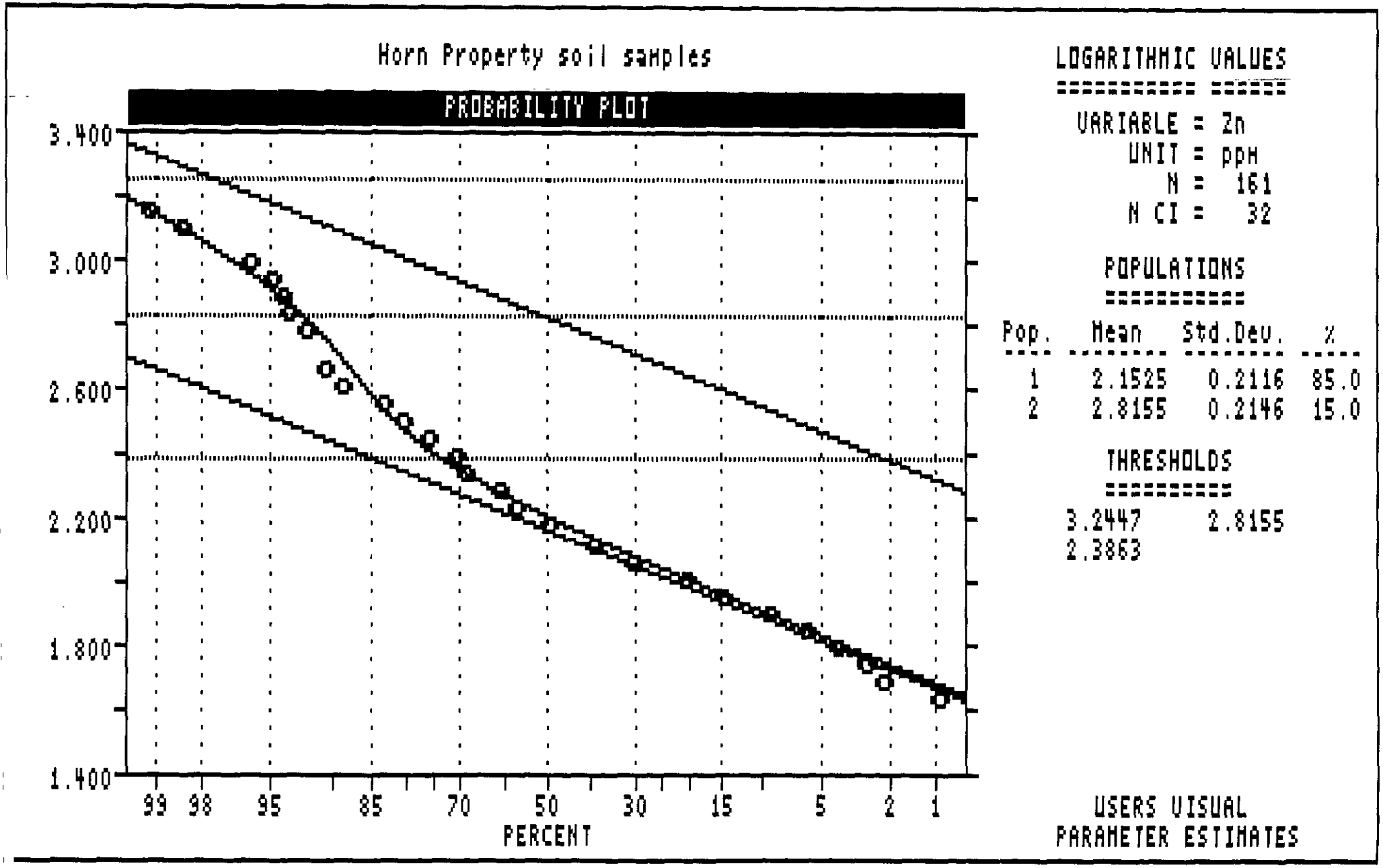
Mean =	2.2527	Min =	1.6021	1st Quartile =	2.0324
Std. Dev. =	0.3199	Max =	3.2909	Median =	2.1832
CV % =	14.2007	Skewness =	0.8378	3rd Quartile =	2.4232

Anti-Log Mean = 178.949 Anti-Log Std. Dev. : (-) 85.669 (+) 373.795

(# of bins = 23 - bin size = 0.0768)

%	cum %	antilog	cls int	
0.00	0.31	36.616	1.5637	
0.62	0.93	43.696	1.6404	*
1.24	2.16	52.145	1.7172	*
1.86	4.01	62.227	1.7940	**
3.11	7.10	74.258	1.8707	****
7.45	14.51	88.615	1.9475	********
8.07	22.53	105.749	2.0243	*********
14.29	36.73	126.195	2.1010	**********
12.42	49.07	150.595	2.1778	**********
8.70	57.72	179.711	2.2546	**********
9.94	67.59	214.458	2.3313	**********
4.97	72.53	255.923	2.4081	******
6.83	79.32	305.405	2.4849	********
3.73	83.02	364.454	2.5616	****
6.21	89.20	434.919	2.6384	*******
1.24	90.43	519.009	2.7152	*
2.48	92.90	619.358	2.7919	***
1.24	94.14	739.109	2.8687	*
0.62	94.75	882.013	2.9455	*
1.24	95.99	1052.547	3.0222	*
2.48	98.46	1256.053	3.0990	***
0.62	99.07	1498.907	3.1758	*
0.00	99.07	1788.716	3.2525	
0.62	99.69	2134.557	3.3293	*

0 1 2 3 4


Horn Property soil samples
PROBABILITY PLOT
3.400
3.000
2.600
2.200
1.800
1.400
99 98 95 85 70 50 30 15 5 2 1
PERCENT
LOGARITHMIC VALUES
VARIABLE = Zn
UNIT = ppm
N = 161
N CI = 32
POPULATIONS
Pop. Mean Std.Dev. %
1 2.1525 0.2116 85.0
2 2.8155 0.2146 15.0
THRESHOLDS
3.2447 2.8155
2.3863
USERS VISUAL
PARAMETER ESTIMATES

SILVER STATISTICS

SUMMARY STATISTICS and HISTOGRAM ARITHMETIC VALUES

Variable = Ag Unit = ppm N = 130

Mean =	0.872	Min =	0.300	1st Quartile =	0.500
Std. Dev. =	0.456	Max =	2.600	Median =	0.800
CV % =	52.311	Skewness =	1.150	3rd Quartile =	1.100

%	cum %	cls int	(# of bins = 22 - bin size = 0.110)
0.00	0.38	0.245	
8.46	8.78	0.355	********
9.23	17.94	0.464	********
8.46	26.34	0.574	********
10.77	37.02	0.683	**********
11.54	48.47	0.793	**********
16.15	64.50	0.902	***************
9.23	73.66	1.012	********
3.85	77.48	1.121	****
4.62	82.06	1.231	****
1.54	83.59	1.340	*
3.85	87.40	1.450	****
4.62	91.98	1.560	****
1.54	93.51	1.669	*
2.31	95.80	1.779	**
0.77	96.56	1.888	*
0.00	96.56	1.998	
0.77	97.33	2.107	*
0.00	97.33	2.217	
1.54	98.85	2.326	*
0.00	98.85	2.436	
0.00	98.85	2.545	
0.77	99.62	2.655	*

0 1 2 3 4

SUMMARY STATISTICS and HISTOGRAM LOGARITHMIC VALUES

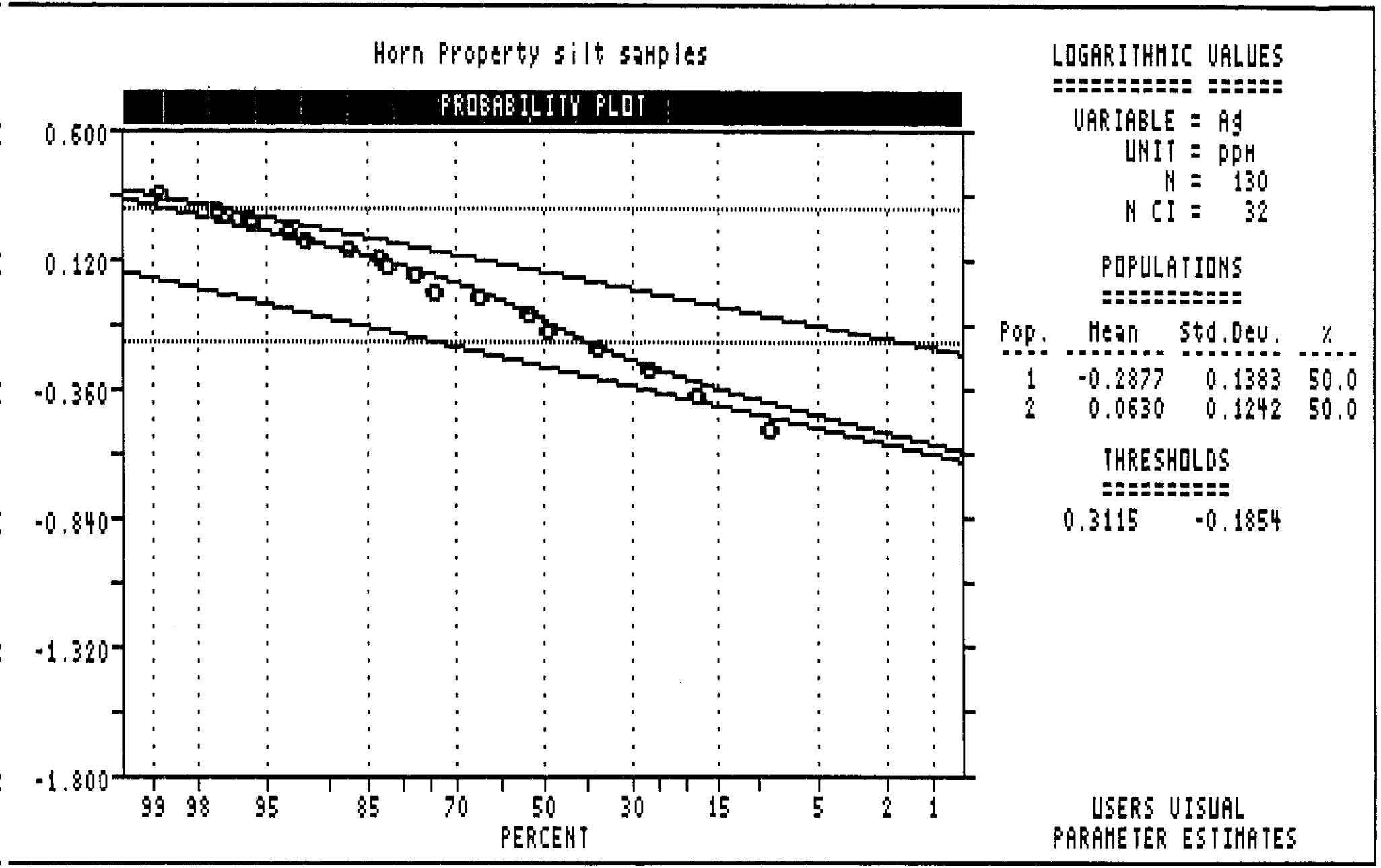
Variable = Ag Unit = ppm N = 130

Mean =	-0.1157	Min =	-0.5229	1st Quartile =	-0.3010
Std. Dev. =	0.2244	Max =	0.4150	Median =	-0.0969
CV % =	193.9360	Skewness =	-0.0471	3rd Quartile =	0.0414

Anti-Log Mean = 0.766 Anti-Log Std. Dev. : (-) 0.457
(+) 1.284

%	cum %	antilog	cls int	(# of bins = 22 - bin size = 0.0447)
0.00	0.38	0.285	-0.5452	
8.46	8.78	0.316	-0.5005	********
0.00	8.78	0.350	-0.4559	
0.00	8.78	0.388	-0.4112	
9.23	17.94	0.430	-0.3666	********
0.00	17.94	0.477	-0.3219	
8.46	26.34	0.528	-0.2773	********
0.00	26.34	0.585	-0.2326	
10.77	37.02	0.649	-0.1879	**********
11.54	48.47	0.719	-0.1433	**********
0.00	48.47	0.797	-0.0986	
4.62	53.05	0.883	-0.0540	****
11.54	64.50	0.979	-0.0093	**********
9.23	73.66	1.085	0.0354	********
8.46	82.06	1.202	0.0800	********
1.54	83.59	1.333	0.1247	*
3.85	87.40	1.477	0.1693	****
6.15	93.51	1.637	0.2140	******
3.08	96.56	1.814	0.2587	***
0.77	97.33	2.011	0.3033	*
0.00	97.33	2.228	0.3480	
1.54	98.85	2.470	0.3926	*
0.77	99.62	2.737	0.4373	*

0 1 2 3 4


Horn Property silt samples
PROBABILITY PLOT
0.600
0.120
-0.360
-0.840
-1.320
-1.800
99 98 95 85 70 50 30 15 5 2 1
PERCENT
LOGARITHMIC VALUES
VARIABLE = Ag
UNIT = ppm
N = 130
N CI = 32
POPULATIONS
Pop. Mean Std.Dev. %
1 -0.2877 0.1383 50.0
2 0.0630 0.1242 50.0
THRESHOLDS
0.3115 -0.1854
USERS VISUAL
PARAMETER ESTIMATES

Horn Property soil samples

SUMMARY STATISTICS and HISTOGRAM — ARITHMETIC VALUES

Variable = Ag Unit = ppm N = 131

Mean =	1.286	Min =	0.300	1st Quartile =	0.500
Std. Dev. =	1.092	Max =	5.900	Median =	0.900
CV % =	84.923	Skewness =	2.012	3rd Quartile =	1.700

%	cum %	cls int	(# of bins = 22 - bin size = 0.267)
0.00	0.38	0.167	
20.61	20.83	0.433	**********
12.21	32.95	0.700	******
17.56	50.38	0.967	********
12.21	62.50	1.233	******
6.87	69.32	1.500	***
7.63	76.89	1.767	****
6.87	83.71	2.033	***
5.34	89.02	2.300	***
2.29	91.29	2.567	*
0.00	91.29	2.833	
0.76	92.05	3.100	*
0.76	92.80	3.367	*
0.00	92.80	3.633	
1.53	94.32	3.900	*
2.29	96.59	4.167	*
0.00	96.59	4.433	
0.00	96.59	4.700	
0.76	97.35	4.967	*
0.76	98.11	5.233	*
0.76	98.86	5.500	*
0.00	98.86	5.767	
0.76	99.62	6.033	*

0 1 2 3 4

Horn Property soil samples

SUMMARY STATISTICS and HISTOGRAM — LOGARITHMIC VALUES

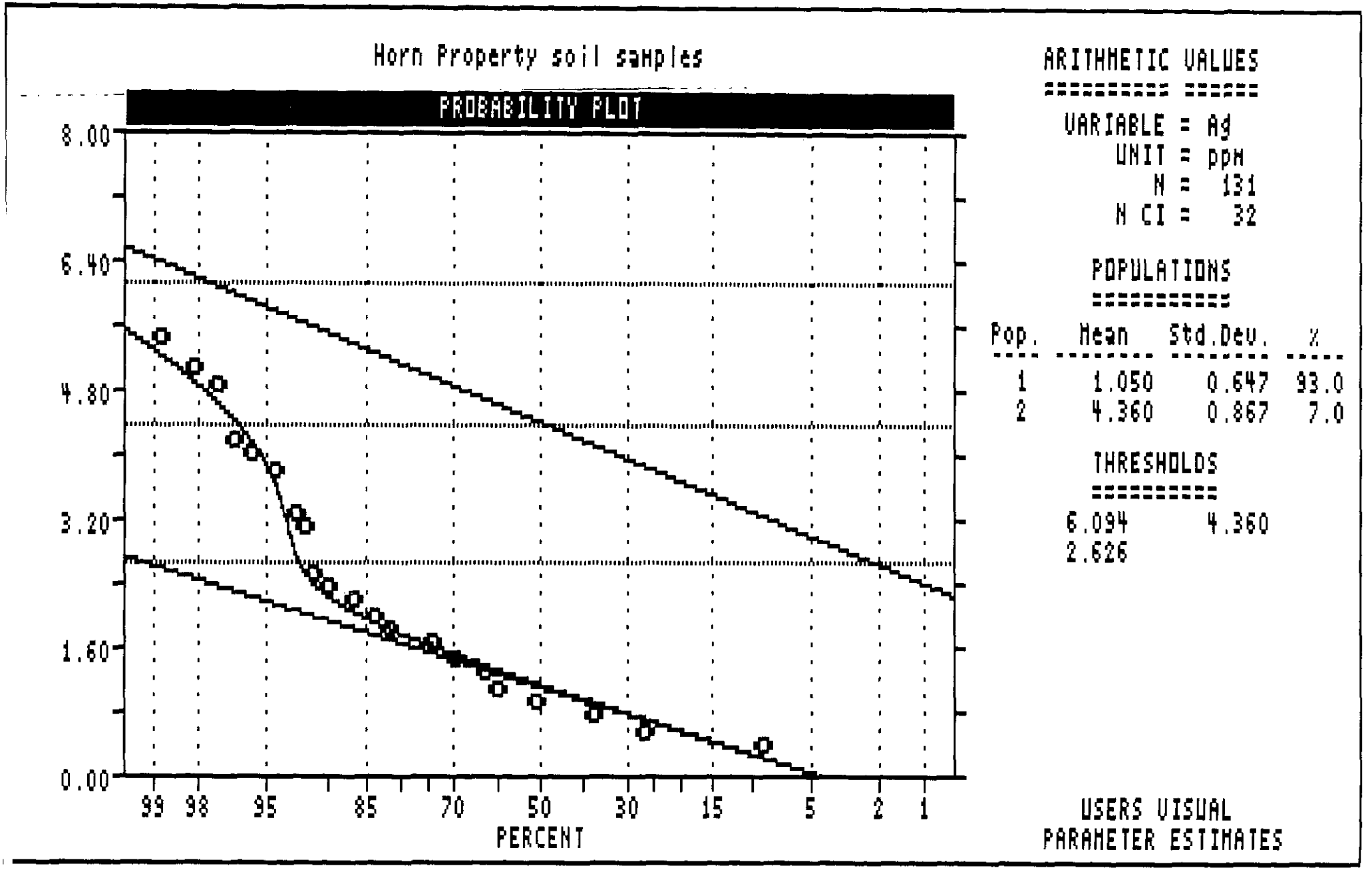
Variable = Ag Unit = ppm N = 131

Mean =	-0.0141	Min =	-0.5229	1st Quartile =	-0.3010
Std. Dev. =	0.3232	Max =	0.7709	Median =	-0.0458
CV % =	2290.8364	Skewness =	0.2607	3rd Quartile =	0.2304

Anti-Log Mean = 0.968 Anti-Log Std. Dev. : (-) 0.460
(+) 2.037

%	cum %	antilog	cls int	(# of bins = 22 - bin size = 0.0616)
0.00	0.38	0.279	-0.5537	
8.40	8.71	0.322	-0.4921	********
0.00	8.71	0.371	-0.4305	
12.21	20.83	0.428	-0.3689	**********
0.00	20.83	0.493	-0.3073	
5.34	26.14	0.568	-0.2457	*****
6.87	32.95	0.655	-0.1840	******
3.82	36.74	0.754	-0.1224	****
7.63	44.32	0.869	-0.0608	*******
9.92	54.17	1.002	0.0008	*********
5.34	59.47	1.154	0.0624	*****
6.87	66.29	1.330	0.1240	******
5.34	71.59	1.533	0.1856	*****
5.34	76.89	1.767	0.2472	*****
6.87	83.71	2.036	0.3088	******
6.11	89.77	2.346	0.3704	******
1.53	91.29	2.704	0.4320	*
0.76	92.05	3.116	0.4936	*
0.76	92.80	3.591	0.5552	*
3.82	96.59	4.138	0.6168	****
0.00	96.59	4.769	0.6784	
2.29	98.86	5.496	0.7400	**
0.76	99.62	6.334	0.8017	*

0 1 2 3 4


Horn Property soil samples
PROBABILITY PLOT
8.00
6.40
4.80
3.20
1.60
0.00
99 98 95 85 70 50 30 15 5 2 1
PERCENT
ARITHMETIC VALUES
VARIABLE = Ag
UNIT = ppm
N = 131
N CI = 32
POPULATIONS
Pop. Mean Std.Dev. %
1 1.050 0.647 93.0
2 4.360 0.867 7.0
THRESHOLDS
6.094 4.360
2.626
USERS VISUAL
PARAMETER ESTIMATES

ARSENIC STATISTICS

SUMMARY STATISTICS and HISTOGRAM ARITHMETIC VALUES

Variable = As Unit = ppm N = 144

Mean =	21.951	Min =	3.000	1st Quartile =	15.000
Std. Dev. =	11.349	Max =	72.000	Median =	20.000
CV % =	51.701	Skewness =	1.529	3rd Quartile =	26.000

%	cum %	cls int	(# of bins = 32 - bin size = 2.226)
0.00	0.34	1.887	
1.39	1.72	4.113	*
2.08	3.79	6.339	**
1.39	5.17	8.565	*
2.08	7.24	10.790	**
11.11	18.28	13.016	**********
11.81	30.00	15.242	**********
9.72	39.66	17.468	*********
10.42	50.00	19.694	**********
11.81	61.72	21.919	**********
9.72	71.38	24.145	*********
4.86	76.21	26.371	*****
3.47	79.66	28.597	****
4.17	83.79	30.823	****
2.08	85.86	33.048	**
2.78	88.62	35.274	***
2.08	90.69	37.500	**
0.69	91.38	39.726	*
1.39	92.76	41.952	*
0.69	93.45	44.177	*
1.39	94.83	46.403	*
1.39	96.21	48.629	*
1.39	97.59	50.855	*
0.00	97.59	53.081	
0.69	98.28	55.306	*
0.00	98.28	57.532	
0.00	98.28	59.758	
0.00	98.28	61.984	
0.69	98.97	64.210	*
0.00	98.97	66.435	
0.00	98.97	68.661	
0.00	98.97	70.887	
0.69	99.66	73.113	*

0 1 2 3 4

SUMMARY STATISTICS and HISTOGRAM LOGARITHMIC VALUES

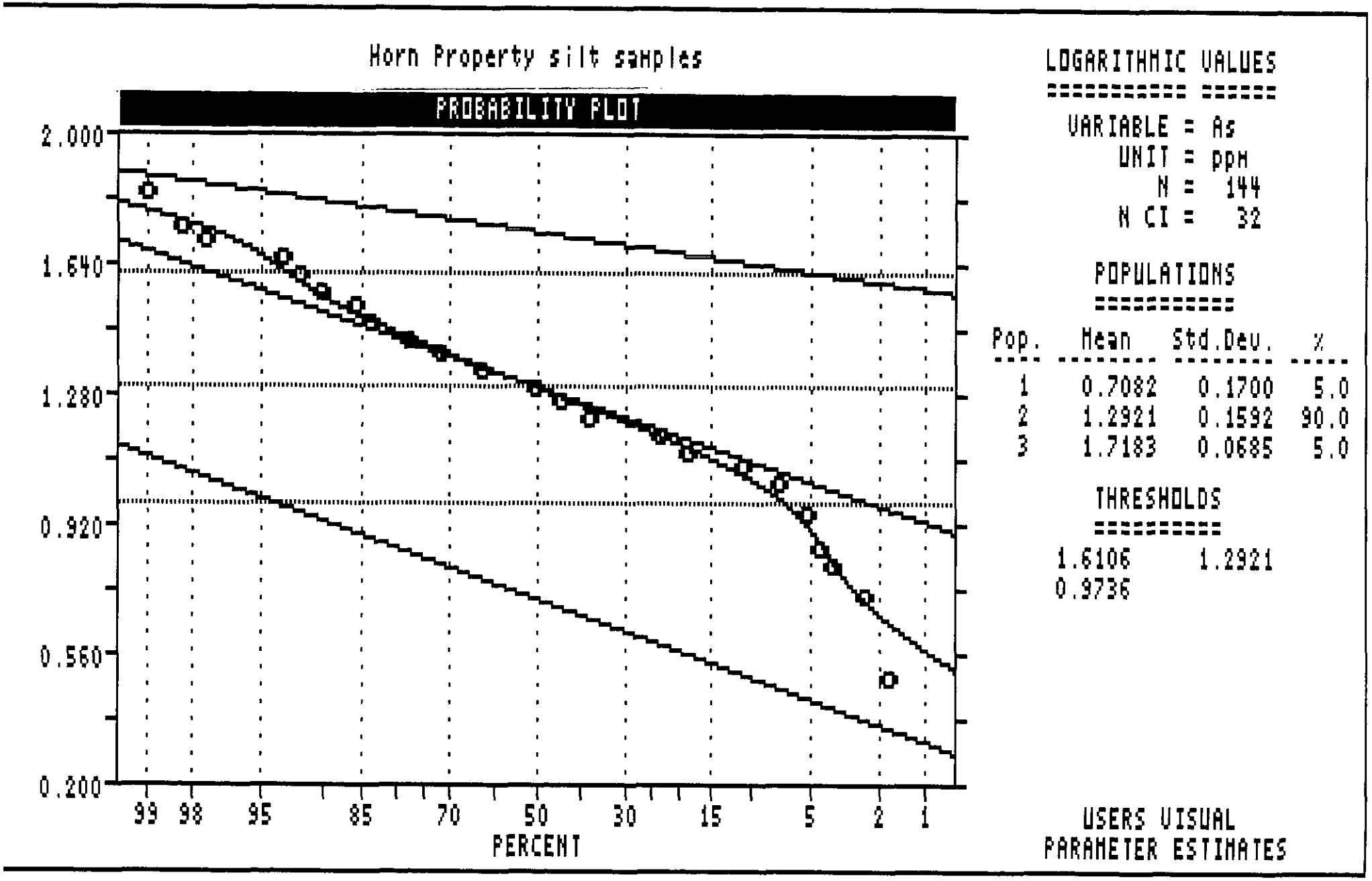
Variable = As Unit = ppm N = 144

Mean =	1.2879	Min =	0.4771	1st Quartile =	1.1761
Std. Dev. =	0.2228	Max =	1.8573	Median =	1.3010
CV % =	17.3008	Skewness =	-0.5173	3rd Quartile =	1.4150

Anti-Log Mean = 19.405 Anti-Log Std. Dev. : (-) 11.617
(+) 32.415

%	cum %	antilog	cls int	(# of bins = 32 - bin size = 0.0445)
0.00	0.34	2.850	0.4549	
1.39	1.72	3.158	0.4994	*
0.00	1.72	3.499	0.5439	
0.00	1.72	3.876	0.5884	
0.00	1.72	4.295	0.6330	
0.00	1.72	4.759	0.6775	
0.69	2.41	5.272	0.7220	*
0.00	2.41	5.841	0.7665	
1.39	3.79	6.472	0.8110	*
0.69	4.48	7.171	0.8556	*
0.00	4.48	7.945	0.9001	
0.69	5.17	8.803	0.9446	*
0.00	5.17	9.753	0.9891	
2.08	7.24	10.806	1.0337	**
3.47	10.69	11.972	1.0782	****
7.64	18.28	13.265	1.1227	********
4.86	23.10	14.697	1.1672	*****
14.58	37.59	16.284	1.2117	**********
6.25	43.79	18.042	1.2563	******
6.25	50.00	19.989	1.3008	******
12.50	62.41	22.147	1.3453	**********
9.03	71.38	24.538	1.3898	*********
6.25	77.59	27.187	1.4344	******
6.25	83.79	30.122	1.4789	******
2.08	85.86	33.374	1.5234	**
4.17	90.00	36.977	1.5679	****
2.08	92.07	40.969	1.6125	**
1.39	93.45	45.392	1.6570	*
4.17	97.59	50.292	1.7015	****
0.69	98.28	55.722	1.7460	*
0.00	98.28	61.737	1.7905	
0.69	98.97	68.402	1.8351	*
0.69	99.66	75.787	1.8796	*

0 1 2 3 4


Horn Property silt samples
PROBABILITY PLOT
2.000
1.640
1.280
0.920
0.560
0.200
99 98 95 85 70 50 30 15 5 2 1
PERCENT
LOGARITHMIC VALUES
VARIABLE = As
UNIT = ppm
N = 144
N CI = 32
POPULATIONS
Pop. Mean Std.Dev. %
1 0.7082 0.1700 5.0
2 1.2921 0.1592 90.0
3 1.7183 0.0685 5.0
THRESHOLDS
1.6106 1.2921
0.9736
USERS VISUAL
PARAMETER ESTIMATES

Horn Property soil samples

SUMMARY STATISTICS and HISTOGRAM — ARITHMETIC VALUES

Variable = As Unit = ppm N = 161

Mean =	24.677	Min =	3.000	1st Quartile =	13.750
Std. Dev. =	29.592	Max =	250.000	Median =	17.000
CV % =	119.915	Skewness =	4.810	3rd Quartile =	23.000

%	cum %	cls int	(# of bins = 32 - bin size = 7.968)
0.00	0.31	-0.984	
3.11	3.40	6.984	****
26.71	29.94	14.952	**********
40.99	70.68	22.919	********** --> 47
14.29	84.88	30.887	**********
3.73	88.58	38.855	****
3.11	91.67	46.823	****
2.48	94.14	54.790	***
0.00	94.14	62.758	
0.62	94.75	70.726	*
0.62	95.37	78.694	*
0.62	95.99	86.661	*
0.00	95.99	94.629	
0.62	96.60	102.597	*
0.62	97.22	110.565	*
0.62	97.84	118.532	*
0.00	97.84	126.500	
0.00	97.84	134.468	
0.00	97.84	142.435	
0.00	97.84	150.403	
0.00	97.84	158.371	
0.00	97.84	166.339	
0.62	98.46	174.306	*
0.62	99.07	182.274	*
0.00	99.07	190.242	
0.00	99.07	198.210	
0.00	99.07	206.177	
0.00	99.07	214.145	
0.00	99.07	222.113	
0.00	99.07	230.081	
0.00	99.07	238.048	
0.00	99.07	246.016	
0.62	99.69	253.984	*

0 1 2 3 4

Horn Property soil samples

SUMMARY STATISTICS and HISTOGRAM — LOGARITHMIC VALUES

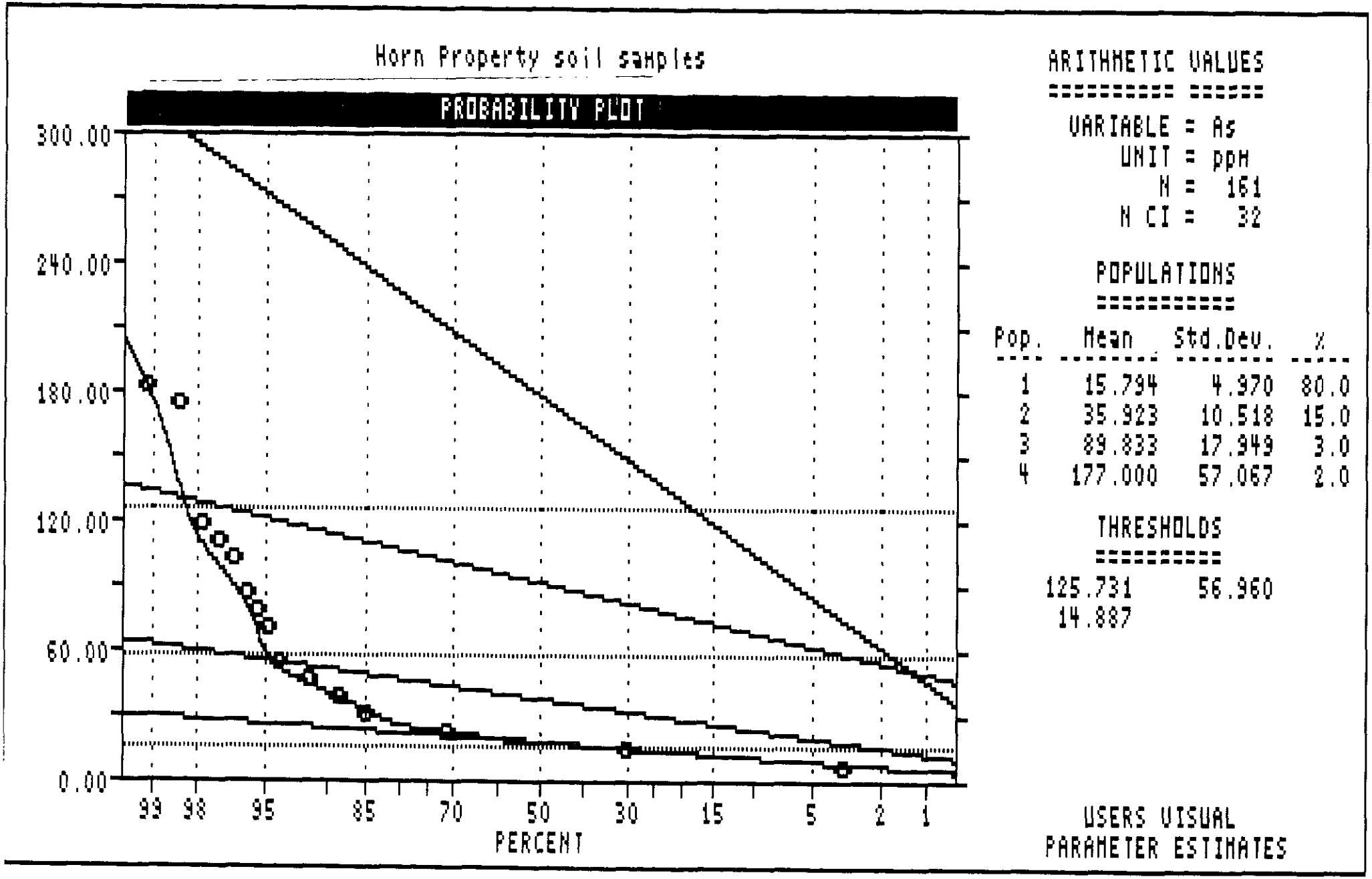
Variable = As Unit = ppm N = 161

Mean =	1.2707	Min =	0.4771	1st Quartile =	1.1381
Std. Dev. =	0.2825	Max =	2.3979	Median =	1.2304
CV % =	22.2284	Skewness =	1.0090	3rd Quartile =	1.3617

Anti-Log Mean = 18.652 Anti-Log Std. Dev. : (-) 9.734 (+) 35.744

%	cum %	antilog	cls int	(# of bins = 32 - bin size = 0.0620)
0.00	0.31	2.793	0.4461	
1.24	1.54	3.222	0.5081	*
0.00	1.54	3.716	0.5701	
0.00	1.54	4.286	0.6320	
0.00	1.54	4.943	0.6940	
1.24	2.78	5.701	0.7559	*
0.62	3.40	6.575	0.8179	*
1.24	4.63	7.584	0.8799	*
1.86	6.48	8.747	0.9418	**
3.73	10.19	10.088	1.0038	****
7.45	17.59	11.635	1.0658	********
7.45	25.00	13.419	1.1277	********
11.80	36.73	15.477	1.1897	**********
16.15	52.78	17.850	1.2516	**********
12.42	65.12	20.588	1.3136	**********
11.80	76.85	23.745	1.3756	**********
6.21	83.02	27.386	1.4375	*******
3.11	86.11	31.586	1.4995	****
2.48	88.58	36.430	1.5615	***
2.48	91.05	42.016	1.6234	***
1.86	92.90	48.459	1.6854	**
1.24	94.14	55.891	1.7473	*
0.00	94.14	64.462	1.8093	
0.62	94.75	74.347	1.8713	*
1.24	95.99	85.748	1.9332	*
0.62	96.60	98.898	1.9952	*
1.24	97.84	114.064	2.0571	*
0.00	97.84	131.556	2.1191	
0.00	97.84	151.731	2.1811	
0.62	98.46	174.999	2.2430	*
0.62	99.07	201.835	2.3050	*
0.00	99.07	232.787	2.3670	
0.62	99.69	268.486	2.4289	*

0 1 2 3 4


Horn Property soil samples
PROBABILITY PLOT
300.00
240.00
180.00
120.00
60.00
0.00
99 98 95 85 70 50 30 15 5 2 1
PERCENT
ARITHMETIC VALUES
VARIABLE = As
UNIT = ppm
N = 161
N CI = 32
POPULATIONS
Pop. Mean Std.Dev. %
1 15.794 4.970 80.0
2 35.923 10.518 15.0
3 89.833 17.949 3.0
4 177.000 57.067 2.0
THRESHOLDS
125.731 56.960
14.887
USERS VISUAL
PARAMETER ESTIMATES

BARIUM STATISTICS

##
SUMMARY STATISTICS and HISTOGRAM ARITHMETIC VALUES

Variable = Ba Unit = ppm N = 146

Mean =	533.747	Min =	36.000	1st Quartile =	316.500
Std. Dev. =	304.384	Max =	1829.000	Median =	527.000
CV % =	57.028	Skewness =	1.223	3rd Quartile =	676.000

(# of bins = 22 - bin size = 85.381)

%	cum %	cls int	
0.00	0.34	-6.690	
2.74	3.06	78.690	***
4.79	7.82	164.071	*****
6.16	13.95	249.452	******
15.75	29.59	334.833	**********
12.33	41.84	420.214	**********
6.16	47.96	505.595	******
15.75	63.61	590.976	**********
10.96	74.49	676.357	**********
6.16	80.61	761.738	******
6.85	87.41	847.119	*******
3.42	90.82	932.500	****
3.42	94.22	1017.881	****
1.37	95.58	1103.262	*
0.68	96.26	1188.643	*
0.68	96.94	1274.024	*
1.37	98.30	1359.405	*
0.00	98.30	1444.786	
0.00	98.30	1530.167	
0.00	98.30	1615.548	
0.00	98.30	1700.929	
0.68	98.98	1786.310	*
0.68	99.66	1871.690	*

0 1 2 3 4

##

SUMMARY STATISTICS and HISTOGRAM LOGARITHMIC VALUES

Variable = Ba Unit = ppm N = 146

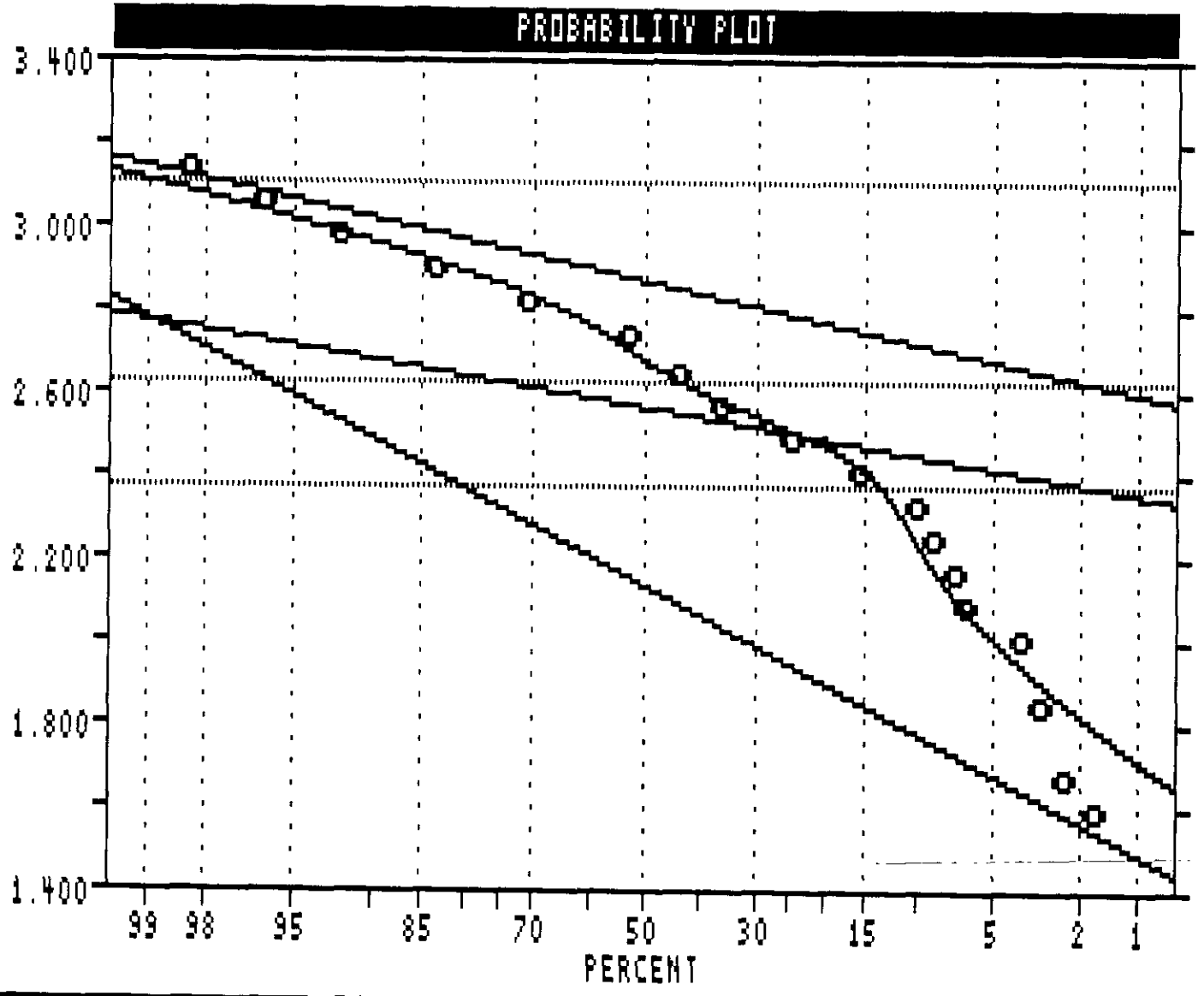
Mean =	2.6459	Min =	1.5563	1st Quartile =	2.5004
Std. Dev. =	0.2973	Max =	3.2622	Median =	2.7218
CV % =	11.2380	Skewness =	-1.1725	3rd Quartile =	2.8299

Anti-Log Mean = 442.499 Anti-Log Std. Dev. : (-) 223.133
(+) 877.525

%	cum %	antilog	cls int	(# of bins = 22 ~ bin size = 0.0812)
0.00	0.34	32.786	1.5157	
1.37	1.70	39.529	1.5969	*
0.68	2.38	47.660	1.6782	*
0.00	2.38	57.463	1.7594	
0.68	3.06	69.282	1.8406	*
0.00	3.06	83.532	1.9219	
0.68	3.74	100.714	2.0031	*
2.74	6.46	121.429	2.0843	***
0.68	7.14	146.405	2.1656	*
1.37	8.50	176.519	2.2468	*
1.37	9.86	212.826	2.3280	*
5.48	15.31	256.601	2.4093	******
8.90	24.15	309.380	2.4905	*********
11.64	35.71	373.015	2.5717	**********
7.53	43.20	449.738	2.6530	********
9.59	52.72	542.243	2.7342	**********
17.81	70.41	653.774	2.8154	**********
13.01	83.33	788.245	2.8967	**********
8.90	92.18	950.375	2.9779	*********
4.11	96.26	1145.853	3.0591	****
2.05	98.30	1381.538	3.1404	**
0.00	98.30	1665.700	3.2216	
1.37	99.66	2008.309	3.3028	*

0 1 2 3 4

Horn Property silt samples



LOGARITHMIC VALUES

VARIABLE = Ba
UNIT = ppm
N = 146
N CI = 22

POPULATIONS

Pop.	Mean	Std.Dev.	%
1	2.1279	0.2754	15.0
2	2.5534	0.0914	35.0
3	2.8606	0.1197	50.0

THRESHOLDS

3.1000 2.6213
2.3706

USERS VISUAL
PARAMETER ESTIMATES

SUMMARY STATISTICS and HISTOGRAM ARITHMETIC VALUES

Variable = Ba Unit = ppm N = 161

Mean =	634.062	Min =	87.000	1st Quartile =	261.000
Std. Dev. =	618.478	Max =	4918.000	Median =	489.000
CV % =	97.542	Skewness =	3.430	3rd Quartile =	742.500

%	cum %	cls int	(# of bins = 23 - bin size = 219.591)
0.00	0.31	-22.795	
14.29	14.51	196.795	**********
27.95	42.28	416.386	**********
27.33	69.44	635.977	**********
9.94	79.32	855.568	**********
6.21	85.49	1075.159	*******
3.73	89.20	1294.750	****
3.73	92.90	1514.341	****
2.48	95.37	1733.932	***
1.24	96.60	1953.523	*
0.00	96.60	2173.114	
1.24	97.84	2392.705	*
0.00	97.84	2612.295	
0.00	97.84	2831.886	
0.62	98.46	3051.477	*
0.00	98.46	3271.068	
0.00	98.46	3490.659	
0.62	99.07	3710.250	*
0.00	99.07	3929.841	
0.00	99.07	4149.432	
0.00	99.07	4369.023	
0.00	99.07	4588.614	
0.00	99.07	4808.205	
0.62	99.69	5027.795	*

0 1 2 3 4

##
SUMMARY STATISTICS and HISTOGRAM LOGARITHMIC VALUES

Variable = Ba Unit = ppm N = 161

Mean =	2.6687	Min =	1.9395	1st Quartile =	2.4166
Std. Dev. =	0.3319	Max =	3.6918	Median =	2.6893
CV % =	12.4382	Skewness =	0.2300	3rd Quartile =	2.8707

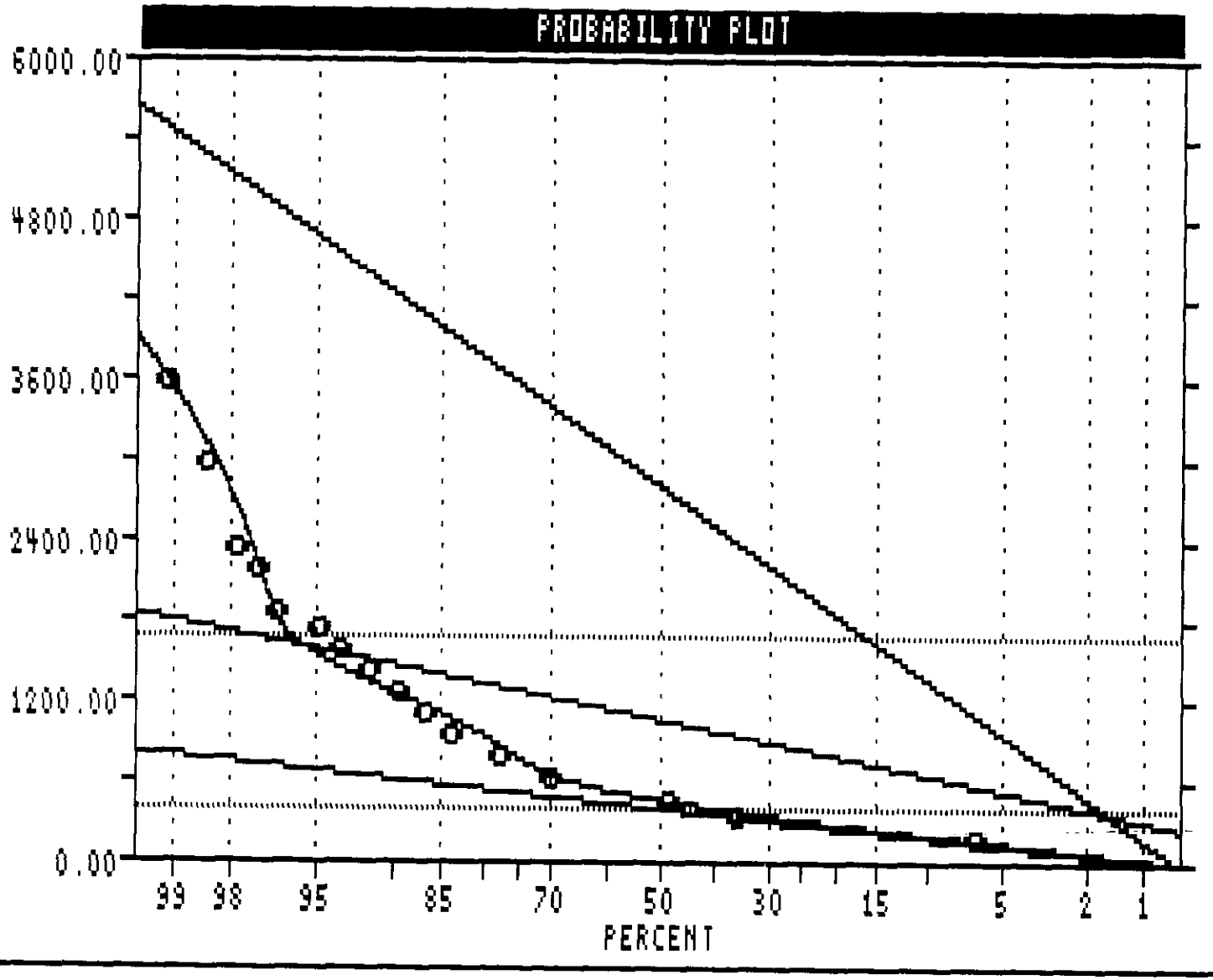
Anti-Log Mean = 466.366 Anti-Log Std. Dev. : (-) 217.162
(+) 1001.542

%	cum %	antilog	cls int	(# of bins = 23 - bin size = 0.0796)
0.00	0.31	79.377	1.8997	
1.24	1.54	95.355	1.9793	*
1.24	2.78	114.549	2.0590	*
2.48	5.25	137.607	2.1386	***
1.24	6.48	165.306	2.2183	*
8.07	14.51	198.581	2.2979	*********
6.21	20.68	238.554	2.3776	*******
9.94	30.56	286.573	2.4572	**********
4.97	35.49	344.258	2.5369	******
6.21	41.67	413.554	2.6165	*******
8.70	50.31	496.799	2.6962	**********
15.53	65.74	596.801	2.7758	**********
8.07	73.77	716.932	2.8555	*********
5.59	79.32	861.245	2.9351	******
5.59	84.88	1034.607	3.0148	******
3.73	88.58	1242.865	3.0944	****
4.35	92.90	1493.044	3.1741	*****
2.48	95.37	1793.582	3.2537	***
1.24	96.60	2154.616	3.3334	*
1.24	97.84	2588.323	3.4130	*
0.62	98.46	3109.331	3.4927	*
0.62	99.07	3735.215	3.5723	*
0.00	99.07	4487.084	3.6520	
0.62	99.69	5390.299	3.7316	*

0 1 2 3 4

##

Horn Property soil samples



ARITHMETIC VALUES

VARIABLE = Ba
UNIT = ppm
N = 161
N CI = 32

POPULATIONS

Pop.	Mean	Std.Dev.	%
1	359.531	160.351	70.0
2	1033.698	320.390	26.0
3	2779.857	1136.450	4.0

THRESHOLDS

1674.477 392.918

USERS VISUAL
PARAMETER ESTIMATES

GOLD STATISTICS

SUMMARY STATISTICS and HISTOGRAM ARITHMETIC VALUES

Variable = Au Unit = ppb N = 131

Mean =	2.718	Min =	1.000	1st Quartile =	1.000
Std. Dev. =	2.431	Max =	24.000	Median =	2.000
CV % =	89.472	Skewness =	5.538	3rd Quartile =	3.000

%	cum %	cls int	(# of bins = 22 - bin size = 1.095)
0.00	0.38	0.452	
29.77	29.92	1.548	******************************
20.61	50.38	2.643	********************
31.30	81.44	3.738	******************************
9.16	90.53	4.833	********
3.82	94.32	5.929	****
3.82	98.11	7.024	****
0.00	98.11	8.119	
0.00	98.11	9.214	
0.00	98.11	10.310	
0.76	98.86	11.405	*
0.00	98.86	12.500	
0.00	98.86	13.595	
0.00	98.86	14.690	
0.00	98.86	15.786	
0.00	98.86	16.881	
0.00	98.86	17.976	
0.00	98.86	19.071	
0.00	98.86	20.167	
0.00	98.86	21.262	
0.00	98.86	22.357	
0.00	98.86	23.452	
0.76	99.62	24.548	*

0 1 2 3 4

SUMMARY STATISTICS and HISTOGRAM LOGARITHMIC VALUES

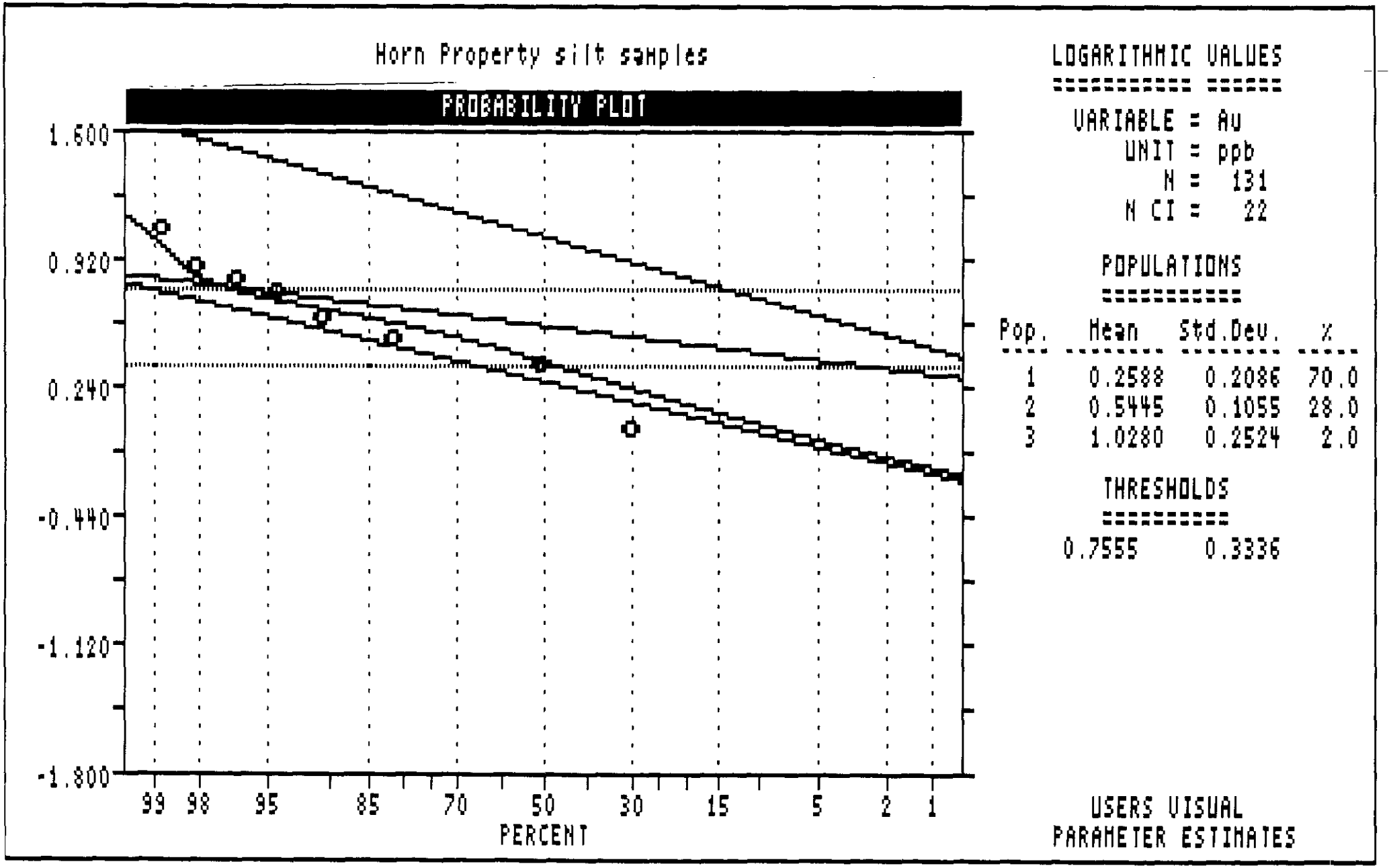
Variable = Au Unit = ppb N = 131

Mean =	0.3424	Min =	0.0000	1st Quartile =	0.0000
Std. Dev. =	0.2696	Max =	1.3802	Median =	0.3010
CV % =	78.7327	Skewness =	0.3655	3rd Quartile =	0.4771

Anti-Log Mean = 2.200 Anti-Log Std. Dev. : (-) 1.183
(+) 4.093

%	cum %	antilog	cls int	(# of bins = 22 - bin size = 0.0657)
0.00	0.38	0.927	-0.0329	
29.77	29.92	1.079	0.0329	**********
0.00	29.92	1.255	0.0986	
0.00	29.92	1.460	0.1643	
0.00	29.92	1.698	0.2300	
0.00	29.92	1.976	0.2958	
20.61	50.38	2.299	0.3615	*******
0.00	50.38	2.674	0.4272	
31.30	81.44	3.111	0.4929	**********
0.00	81.44	3.620	0.5587	
9.16	90.53	4.211	0.6244	***
0.00	90.53	4.899	0.6901	
3.82	94.32	5.699	0.7558	*
2.29	96.59	6.631	0.8216	*
1.53	98.11	7.714	0.8873	*
0.00	98.11	8.974	0.9530	
0.00	98.11	10.441	1.0187	
0.76	98.86	12.147	1.0845	*
0.00	98.86	14.131	1.1502	
0.00	98.86	16.440	1.2159	
0.00	98.86	19.126	1.2816	
0.00	98.86	22.251	1.3473	
0.76	99.62	25.887	1.4131	*

0 1 2 3 4


Horn Property silt samples
PROBABILITY PLOT
1.600
0.920
0.240
-0.440
-1.120
-1.800
99 98 95 85 70 50 30 15 5 2 1
PERCENT
LOGARITHMIC VALUES
VARIABLE = Au
UNIT = ppb
N = 131
N CI = 22
POPULATIONS
Pop. Mean Std.Dev. %
1 0.2588 0.2086 70.0
2 0.5445 0.1055 28.0
3 1.0280 0.2524 2.0
THRESHOLDS
0.7555 0.3336
USERS VISUAL
PARAMETER ESTIMATES

SUMMARY STATISTICS and HISTOGRAM ARITHMETIC VALUES

Variable = Au Unit = ppb N = 148

Mean =	3.730	Min =	1.000	1st Quartile =	1.000
Std. Dev. =	11.761	Max =	137.000	Median =	2.000
CV % =	315.331	Skewness =	10.133	3rd Quartile =	3.000

%	cum %	cls int	(# of bins = 22 - bin size = 6.476)
0.00	0.34	-2.238	
87.16	86.91	4.238	********** --> 91
8.78	95.64	10.714	*********
2.70	98.32	17.190	***
0.00	98.32	23.667	
0.00	98.32	30.143	
0.00	98.32	36.619	
0.68	98.99	43.095	*
0.00	98.99	49.571	
0.00	98.99	56.048	
0.00	98.99	62.524	
0.00	98.99	69.000	
0.00	98.99	75.476	
0.00	98.99	81.952	
0.00	98.99	88.429	
0.00	98.99	94.905	
0.00	98.99	101.381	
0.00	98.99	107.857	
0.00	98.99	114.333	
0.00	98.99	120.810	
0.00	98.99	127.286	
0.00	98.99	133.762	
0.68	99.66	140.238	*

0 1 2 3 4

SUMMARY STATISTICS and HISTOGRAM LOGARITHMIC VALUES

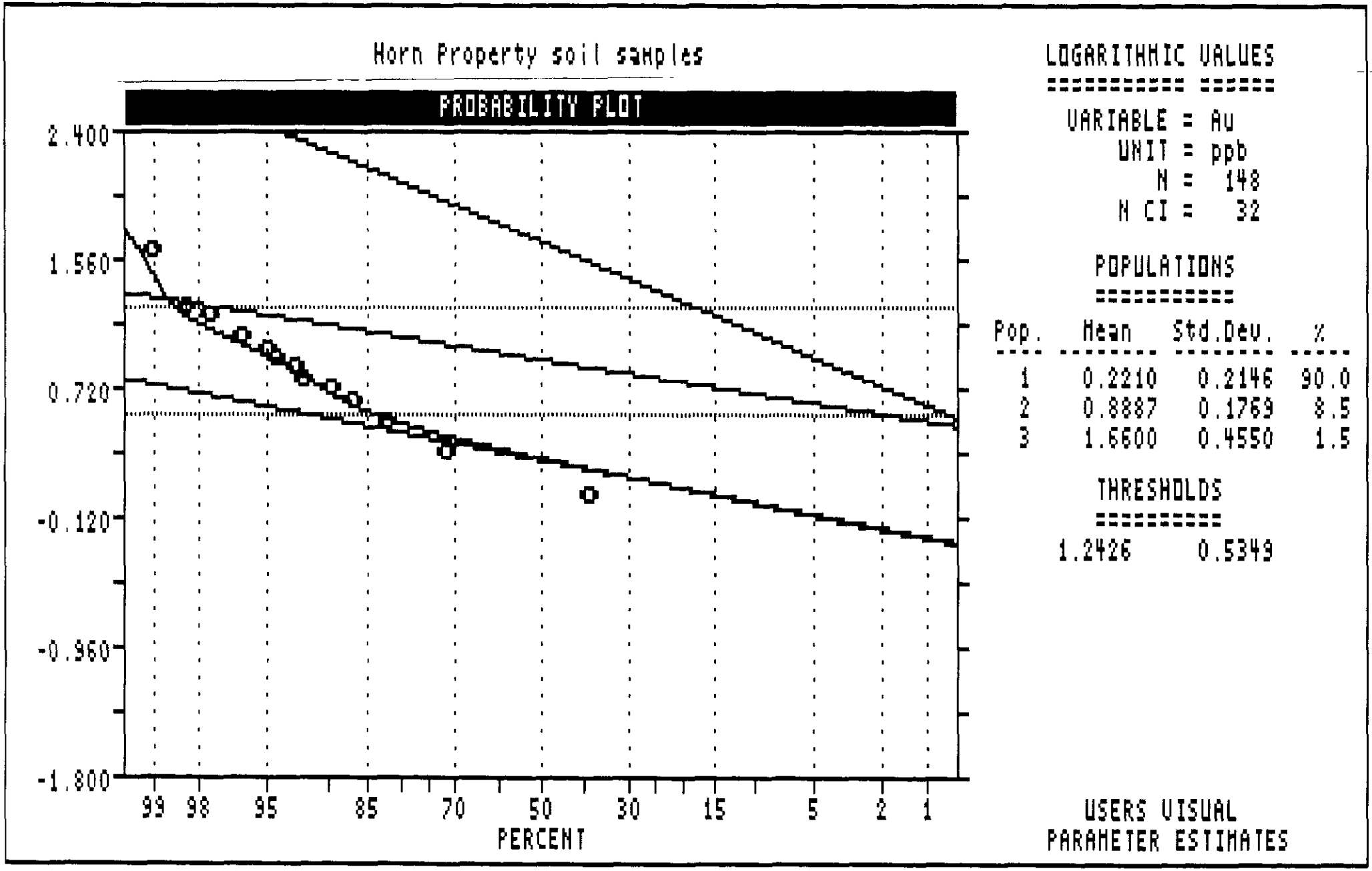
Variable = Au Unit = ppb N = 148

Mean =	0.3071	Min =	0.0000	1st Quartile =	0.0000
Std. Dev. =	0.3475	Max =	2.1367	Median =	0.3010
CV % =	113.1465	Skewness =	1.8199	3rd Quartile =	0.4771

Anti-Log Mean = 2.028 Anti-Log Std. Dev. : (-) 0.911
(+) 4.515

%	cum %	antilog	cls int	(# of bins = 22 - bin size = 0.1017)
0.00	0.34	0.889	-0.0509	
38.51	38.59	1.124	0.0509	********** --> 40
0.00	38.59	1.421	0.1526	
0.00	38.59	1.796	0.2544	
33.11	71.48	2.270	0.3561	**********
0.00	71.48	2.870	0.4579	
10.81	82.21	3.628	0.5596	***
4.73	86.91	4.585	0.6614	**
2.70	89.60	5.796	0.7631	*
3.38	92.95	7.326	0.8649	*
2.03	94.97	9.260	0.9666	*
1.35	96.31	11.705	1.0684	*
0.68	96.98	14.795	1.1701	*
1.35	98.32	18.701	1.2719	
0.00	98.32	23.638	1.3736	
0.00	98.32	29.878	1.4754	
0.00	98.32	37.766	1.5771	*
0.68	98.99	47.737	1.6789	
0.00	98.99	60.339	1.7806	
0.00	98.99	76.269	1.8823	
0.00	98.99	96.405	1.9841	
0.00	98.99	121.856	2.0858	
0.68	99.66	154.026	2.1876	*

0 1 2 3 4


Horn Property soil samples
PROBABILITY PLOT
2.400
1.560
0.720
-0.120
-0.960
-1.800
99 98 95 85 70 50 30 15 5 2 1
PERCENT
LOGARITHMIC VALUES
VARIABLE = Au
UNIT = ppb
N = 148
N CI = 32
POPULATIONS
Pop. Mean Std.Dev. %
1 0.2210 0.2146 90.0
2 0.8887 0.1769 8.5
3 1.6600 0.4550 1.5
THRESHOLDS
1.2426 0.5349
USERS VISUAL
PARAMETER ESTIMATES

DATA CORRELATION ANALYSIS

HORN — NORMAL CORRELATION MATRIX SOIL AND TALUS FINES

ALL DATA

	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au	Hg
Mo	1																														
#PRS	161																														
Cu	0.017	1																													
#PRS	161	162																													
Pb	0.009	0.354	1																												
#PRS	161	162	162																												
Zn	0.491	0.21	0.033	1																											
#PRS	161	162	162	162																											
Ag	0.332	0.044	-0.029	0.183	1																										
#PRS	131	132	132	132	132																										
Ni	0.454	0.403	0.155	0.881	0.109	1																									
#PRS	161	162	162	162	132	162																									
Co	0.025	0.663	0.362	0.291	-0.033	0.527	1																								
#PRS	161	162	162	162	132	162	162																								
Mn	-0.065	0.612	0.369	0.198	0.011	0.3	0.787	1																							
#PRS	161	162	162	162	132	162	162	162																							
Fe	-0.012	0.396	0.395	0.068	0.057	0.219	0.505	0.338	1																						
#PRS	161	162	162	162	132	162	162	162	162																						
As	0.319	0.17	0.275	0.252	0.079	0.362	0.283	0.072	0.252	1																					
#PRS	161	162	162	162	132	162	162	162	162	162																					
U	-0.032	-0.063	-0.028	-0.143	-0.035	-0.157	-0.079	-0.01	-0.073	-0.124	1																				
#PRS	24	24	24	24	21	24	24	24	24	24	24																				
Th	-0.066	0.195	0.07	-0.028	0.078	0.017	0.134	0.05	0.085	0.045	-0.007	1																			
#PRS	114	115	115	115	94	115	115	115	115	115	16	115																			
Sr	0.254	0.173	0.151	0.412	0.357	0.416	0.178	0.159	-0.097	0.245	0.007	-0.023	1																		
#PRS	161	162	162	162	132	162	162	162	162	162	24	115	162																		
Cd	0.372	0.118	-0.017	0.808	0.227	0.662	0.243	0.246	0.03	0.11	-0.12	-0.035	0.45	1																	
#PRS	142	143	143	143	119	143	143	143	143	143	22	101	143	143																	
Sb	0.547	0.121	0.071	0.389	0.082	0.419	0.084	-0.041	-0.029	0.443	0.037	-0.032	0.295	0.31	1																
#PRS	80	81	81	81	74	81	81	81	81	81	20	57	81	74	81																
Bi	0.006	-0.049	-0.017	-0.031	0.017	-0.039	-0.042	-0.021	-0.011	-0.028	0	0	-0.039	-0.001	0.001	1															
#PRS	15	15	15	15	11	15	15	15	15	15	2	12	15	11	5	15															
V	0.393	-0.015	0.007	0.296	-0.02	0.291	0.096	0.015	0.179	0.071	0.002	-0.094	-0.1	0.229	0.266	0.004	1														
#PRS	161	162	162	162	132	162	162	162	162	162	24	115	162	143	81	15	162														
Ca	0	-0.023	0	0.065	-0.037	0.101	0.077	0.038	-0.103	0.136	-0.001	-0.036	0.33	0.085	0.083	-0.004	-0.134	1													
#PRS	161	162	162	162	132	162	162	162	162	162	24	115	162	143	81	15	162	162													
P	0.302	0.071	0.122	0.497	0.17	0.436	0.179	0.115	0.41	0.153	0.021	-0.044	0.33	0.408	0.109	-0.006	0.174	-0.055	1												
#PRS	161	162	162	162	132	162	162	162	162	162	24	115	162	143	81	15	162	162	162												
La	-0.086	0.315	0.263	-0.058	-0.085	0.034	0.305	0.145	0.277	-0.077	0.016	0.158	-0.222	-0.118	-0.041	0.003	-0.102	-0.062	0.09	1											
#PRS	161	162	162	162	132	162	162	162	162	162	24	115	162	143	81	15	162	162	162	162											
Cr	-0.183	0.126	0.154	-0.117	-0.098	0.037	0.267	0.171	0.485	-0.148	-0.021	0.052	-0.309	-0.124	-0.061	0.021	0.413	-0.189	0.036	0.139	1										
#PRS	161	162	162	162	132	162	162	162	162	162	24	115	162	143	81	15	162	162	162	162	162										
Mg	-0.172	0.359	0.148	-0.031	-0.094	0.177	0.447	0.266	0.237	0.044	-0.014	0.236	0.029	-0.091	0.042	-0.011	0.146	0.121	-0.189	0.149	0.591	1									
#PRS	161	162	162	162	132	162	162	162	162	162	24	115	162	143	81	15	162	162	162	162	162	162									
Ba	-0.088	0.215	0.109	0.192	0.195	0.156	0.24	0.329	-0.123	0.08	0.004	0.033	0.456	0.311	0.03	0.038	-0.21	-0.034	0.028	-0.1	-0.152	0.097	1								
#PRS	161	162	162	162	132	162	162	162	162	162	24	115	162	143	81	15	162	162	162	162	162	162	162								
Ti	-0.165	-0.05	-0.026	-0.15	-0.018	-0.175	-0.061	-0.038	0.291	-0.057	0.002	0.042	-0.265	-0.119	-0.035	0.008	0.388	-0.094	-0.083	-0.086	0.404	0.128	-0.2	1							
#PRS	140	141	141	141	115	141	141	141	141	141	16	99	141	124	64	14	141	141	141	141	141	141	141	141							
B	0.051	0.111	0.007	0.046	0.004	0.123	0.139	0.018	0.068	0.202	0.006	0.016	0.092	0.046	0.123	-0.003	0.062	0.049	0.018	-0.046	0.121	0.153	0.064	0.043	1						
#PRS	48	49	49	49	41	49	49	49	49	49	13	30	49	47	38	4	49	49	49	49	49	49	49	35	49						
Al	-0.218	0.271	0.174	0.012	0.038	0.128	0.306	0.265	0.535	-0.123	-0.035	0.129	-0.242	-0.036	-0.075	-0.001	0.293	-0.193	0.084	0.231	0.748	0.531	-0.01	0.387	0.077	1					
#PRS	161	162	162	162	132	162	162	162	162	162	24	115	162	143	81	15	162	162	162	162	162	162	162	141	49	162					
Na	0.308	0.058	0.137	-0.015	0.196	0.052	0.002	-0.012	0.121	0.056	-0.014	0.02	0.177	-0.032	0.045	0	0.012	0.01	0.036	-0.074	0.108	0.097	-0.076	0.011	0.002	0.107	1				
#PRS	120	121	121	121	104	121	121	121	121	121	18	87	121	108	59	12	121	121	121	121	121	121	121	114	34	121	121				
K	0.197	-0.007	0.292	0.008	0.161	0.025	-0.031	-0.072	0.011	0.153	-0.045	0.057	0.32	-0.011	0.023	0.016	-0.122	-0.175	0.125	-0.042	-0.178	-0.107	0.097	-0.223	-0.03	-0.138	0.221	1			
#PRS	161	162	162	162	132	162	162	162	162	162	24	115	162	143	81	15	162	162	162	162	162	162	162	141	49	162	121	162			
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
#PRS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Au	-0.041	0.203	0.093	-0.024	-0.045	0.04	0.143	0.188	0.101	0.064	-0.003	0.064	-0.03	0.006	0.027	-0.005	0.018	-0.021	-0.067	-0.041	0.199	0.072	0.024	0.007	0.011	0.073	-0.019	-0.076	0	1	
#PRS	148	149	149	149	123	149	149	149	149	149	23	106	149	131	79	14	149	149	149	149	149	149	149	128	48	149	113	149	0	149	
Hg	0.531	0.107	0.063	0.431	0.262	0.46	0.026	-0.107	-0.046	0.406	-0.072	-0.049	0.347	0.28	0.527	-0.012	0.083	0.144	0.256	0.018	-0.236	-0.119	-0.002	-0.175	0.143	-0.158	0.06	0.044	0	-0.027	1
#PRS	159	160	160	160	131	160	160	160	160	160	24	114	160	141	81	15	160	160	160	160	160	160	160	139	48	160	120	160	0	149	160
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au	Hg

HORN --- NORMAL CORRELATION MATRIX STREAM SEDIMENTS

ALL DATA

	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au	Hg
Mo	1																														
#PRS	138																														
Cu	0.057	1																													
#PRS	138	144																													
Pb	-0.213	0.004	1																												
#PRS	138	144	144																												
Zn	0.257	0.469	-0.328	1																											
#PRS	138	144	144	144																											
Ag	0.007	0.059	-0.04	-0.02	1																										
#PRS	128	128	128	128	128																										
Ni	0.145	0.46	-0.148	0.938	-0.05	1																									
#PRS	138	144	144	144	128	144																									
Co	0.035	0.53	-0.14	0.833	-0.034	0.923	1																								
#PRS	138	144	144	144	128	144	144																								
Mn	-0.012	0.455	-0.174	0.822	-0.041	0.905	0.975	1																							
#PRS	138	144	144	144	128	144	144	144																							
Fe	-0.136	0.372	-0.169	0.037	0.157	0.063	0.221	0.174	1																						
#PRS	138	144	144	144	128	144	144	144	144																						
As	0.041	-0.046	0.315	-0.1	-0.037	-0.096	-0.03	-0.012	-0.142	1																					
#PRS	136	142	142	142	126	142	142	142	142	142																					
U	-0.069	0.039	0.035	0.061	-0.149	0.064	0.036	0.008	-0.051	-0.017	1																				
#PRS	43	44	44	44	42	44	44	44	44	42	44																				
Th	-0.132	-0.024	0.015	-0.182	0	-0.156	-0.067	-0.074	0.151	0.033	-0.006	1																			
#PRS	109	113	113	113	101	113	113	113	113	111	33	113																			
Sr	0.132	-0.086	-0.254	0.116	-0.1	0.081	-0.012	0.016	-0.25	-0.057	-0.002	-0.066	1																		
#PRS	138	144	144	144	128	144	144	144	144	142	44	113	144																		
Cd	0.338	0.36	-0.364	0.934	0.002	0.877	0.767	0.774	0.004	-0.133	0.024	-0.177	0.128	1																	
#PRS	132	138	138	138	122	138	138	138	138	136	42	108	138	138																	
Sb	0.572	0.02	-0.025	0.068	0.004	0.034	-0.001	-0.016	-0.048	0.153	-0.018	-0.037	0.047	0.098	1																
#PRS	89	91	91	91	86	91	91	91	91	91	31	71	91	89	91																
Bi	0.026	0.021	-0.052	0.001	0.993	-0.035	-0.029	-0.038	0.108	-0.043	-0.228	-0.002	-0.048	0.003	0	1															
#PRS	9	9	9	9	8	9	9	9	9	9	3	7	9	8	2	9															
V	-0.014	0.177	0.614	-0.219	-0.004	-0.083	-0.056	-0.114	0	0.057	-0.038	-0.03	-0.316	-0.218	0.007	0	1														
#PRS	137	143	143	143	127	143	143	143	143	141	43	113	143	138	91	8	143														
Ca	-0.104	-0.168	-0.141	-0.046	-0.036	-0.063	-0.103	-0.076	-0.15	-0.027	-0.02	-0.072	0.795	-0.056	0.098	-0.007	-0.258	1													
#PRS	137	143	143	143	127	143	143	143	143	141	44	112	143	138	90	9	142	143													
P	0.015	0.067	-0.06	-0.001	0.998	-0.038	-0.026	-0.031	0.143	-0.02	-0.134	-0.007	-0.09	0.017	0.006	0.989	-0.004	-0.037	1												
#PRS	138	144	144	144	128	144	144	144	144	142	44	113	144	138	91	9	143	143	144												
La	-0.21	0.142	0.257	-0.056	-0.144	-0.067	0.055	0.069	-0.058	0.375	0.023	0.254	-0.26	-0.117	0.014	-0.121	0.113	-0.293	-0.166	1											
#PRS	138	144	144	144	128	144	144	144	144	142	44	113	144	138	91	9	143	143	144	144											
Cr	-0.274	-0.041	0.757	-0.226	-0.049	0.006	-0.004	-0.059	0.028	-0.028	0.048	-0.069	-0.26	-0.273	-0.166	-0.055	0.681	-0.11	-0.08	-0.055	1										
#PRS	138	144	144	144	128	144	144	144	144	142	44	113	144	138	91	9	143	143	144	144	144										
Mg	-0.028	0.054	0.015	-0.042	0.992	-0.054	-0.038	-0.049	0.15	-0.03	-0.144	-0.009	-0.115	-0.032	-0.008	0.989	0.06	-0.025	0.992	-0.186	0.024	1									
#PRS	138	144	144	144	128	144	144	144	144	142	44	113	144	138	91	9	143	143	144	144	144	144									
Ba	0.133	-0.001	-0.102	0.104	0	0.065	0.028	0.083	-0.363	0.066	-0.025	-0.004	0.122	0.186	0.027	0.002	-0.167	-0.042	0.004	0.099	-0.285	-0.023	1								
#PRS	137	143	143	143	127	143	143	143	143	141	43	113	143	138	91	8	143	142	143	143	143	143	143								
Ti	-0.38	0.127	0.311	-0.203	-0.003	-0.077	0.022	0.005	0.141	-0.185	-0.009	-0.016	-0.183	-0.257	-0.123	-0.001	0.609	-0.039	-0.012	0.138	0.511	0.05	-0.285	1							
#PRS	130	136	136	136	120	136	136	136	136	134	41	109	136	132	86	6	136	136	136	136	136	136	136	136							
B	-0.012	0.081	0.041	0.03	-0.123	0.083	0.016	0.006	-0.039	-0.03	0.03	-0.018	0.255	0.031	-0.022	-0.055	-0.06	0.185	-0.22	-0.072	0.06	-0.215	0.004	-0.008	1						
#PRS	60	66	66	66	57	66	66	66	66	65	22	42	66	65	47	3	65	66	66	66	66	66	65	52	66						
Al	-0.194	0.371	0.046	0.052	-0.071	0.095	0.214	0.152	0.32	-0.029	0.073	-0.029	-0.249	-0.059	-0.064	-0.054	0.125	-0.164	-0.094	0.035	0.202	-0.076	-0.365	0.291	-0.042	1					
#PRS	138	144	144	144	128	144	144	144	144	142	44	113	144	138	91	9	143	143	144	144	144	144	143	136	66	144					
Na	-0.178	-0.021	0.335	-0.149	0.484	-0.027	-0.031	-0.057	0.089	-0.149	-0.009	0.016	-0.192	-0.15	-0.072	0.33	0.317	-0.079	0.586	-0.105	0.556	0.645	-0.145	0.397	-0.059	0.081	1				
#PRS	116	122	122	122	107	122	122	122	122	121	39	97	122	118	80	7	121	121	122	122	122	122	121	116	62	122	122				
K	0.115	-0.016	0.056	0.067	-0.002	0.013	-0.099	-0.081	-0.333	0.075	-0.001	-0.006	0.106	0.067	-0.047	0	0.032	-0.104	0.008	0.008	-0.089	-0.017	0.217	-0.221	0.04	-0.21	-0.011	1			
#PRS	137	143	143	143	127	143	143	143	143	141	43	113	143	138	91	8	143	142	143	143	143	143	143	136	65	143	121	143			
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
#PRS	5	5	5	5	5	5	5	5	5	5	2	5	5	4	4	0	5	5	5	5	5	5	5	5	1	5	4	5	5		
Au	-0.025	0.015	-0.017	-0.053	0.667	-0.075	-0.06	-0.06	0.071	-0.039	-0.103	-0.043	-0.093	-0.05	-0.056	0.616	0.047	-0.053	0.682	-0.086	-0.03	0.679	0.013	0.022	-0.11	-0.092	0.465	0.027	0	1	
#PRS	124	130	130	130	116	130	130	130	130	128	42	101	130	124	80	8	129	129	130	130	130	130	129	123	61	130	111	129	4	130	
Hg	0.663	-0.124	-0.294	0.093	-0.053	-0.028	-0.112	-0.082	-0.241	0.134	0.036	-0.091	0.173	0.188	0.396	-0.024	-0.325	-0.048	-0.025	0.007	-0.534	-0.094	0.255	-0.426	0.018	-0.4	-0.269	0.174	0	-0.056	1
#PRS	138	144	144	144	128	144	144	144	144	142	44	113	144	138	91	9	143	143	144	144	144	144	143	136	66	144	122	143	5	130	144
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au	Hg

Appendix C

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

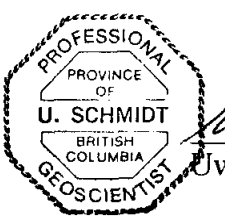
I, Uwe Schmidt, of 656 Foresthill Place, Port Moody, B.C. do hereby declare:

(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.



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

Sept. 30, 1997
Port Moody, B.C.

E 528000 | E 530000 | E 532000 | E 534000 | E 536000 | E 538000

N 6524000 | N 6522000 | N 6520000 | N 6518000 | N 6516000

HORN 7 | OOSSAN | HORN 3 | HORN 2 | HORN 1 | HORN 10 | HORN 9 | HORN 14 | HORN 12 | HORN 15 | HORN 5 | MAJOR 2 | MAJOR 5 | RAM 5 | RAM 7 | MH 4

LEGEND

- B.C. ROS 44 SR
- silt
- soil
- rock

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25,163

ATNA RESOURCES LTD.

Work By U. Schmidt	HORN PROJECT Sample Location
Date Drafted 09-18-97	
Drafted By U. Schmidt	
Date Plotted 09-19-97	
Revised By U. Schmidt	Northwest Geological Consulting Ltd.
N.T.S. Number 104 I/16	200 0 200 400 600 METRES SCALE 1 : 15,000
File Name HRNSAMPL	Figure 3

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
U. A. SCHMIDT
GEOSCIENTIST

E 528000 E 530000 E 532000 E 534000 E 536000 E 538000

N 6524000 N 6522000 N 6520000 N 6518000 N 6516000

HORN 7 COSSAN M-1, 2 HORN 3 MAJOR 6 HORN 2 HORN 1 HORN 10 KAREN 4 KAREN 5 KAREN 6 HORN 4 HORN 12 TOP 15 RAM 5 AXE 2 TOP 5 TOP 4 TOP 3 MAJOR 3 MAJOR 2 HORN 5 HORN 13 RAM 7 MAJOR 4

N

B.C. RGS 44

ppm Cu in silt (Thresholds modified)

1 –	32
33 –	88
89 –	243
244 >>>>>>>	

ppm Cu in silt

1 –	32
33 –	88
89 –	243
244 >>>>>>>	

ppm Cu in soil

1 –	29
30 –	116
117 –	456
457 >>>>>>>	

ppm Cu in rock

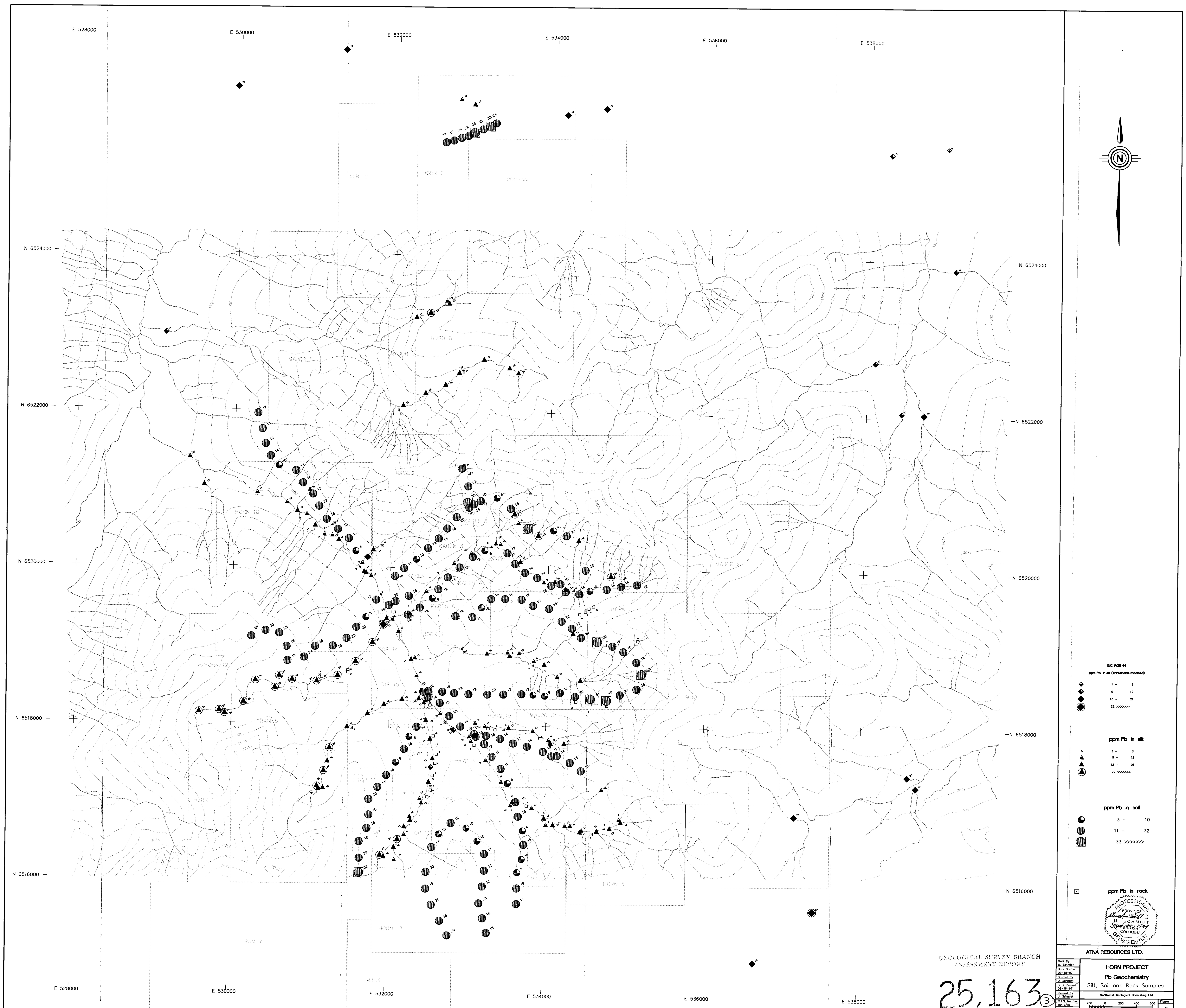
PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA Sept 30 1997 GEOSCIENTIST

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25,163 (2)

ATNA RESOURCES LTD.

Work By: M. Salmon	HORN PROJECT
Date Drafted: 09-18-97	Cu Geochemistry
Drafted By: M. Salmon	Silt, Soil and Rock Samples
Date Revised: 09-18-97	Northwest Geological Consulting Ltd.
Revised By: M. Salmon	
N.T.S. Number: 104 I/16	200 0 200 400 600 metres
File Name: HRNGEO1.4	SCALE 1 : 15,000 — Figure 4


E 528000
E 530000
E 532000
E 534000
E 536000
E 538000
N 6524000
N 6522000
N 6520000
N 6518000
N 6516000
HORN 7
GOSSAN
HORN 8
MAJOR 6
HORN 2
HORN 1
HORN 10
KAREN
MAJOR 2
HORN 12
RAM 5
HORN 13
HORN 5
RAM 7
B.C. RGS 44
ppm Pb in silt (Thresholds modified)
1 – 8
9 – 12
13 – 21
22 >>>>>>>
ppm Pb in silt
3 – 8
9 – 12
13 – 21
22 >>>>>>>
ppm Pb in soil
3 – 10
11 – 32
33 >>>>>>>
ppm Pb in rock
PROFESSIONAL
PROVINCE OF
U. SCHMIDT
BRITISH COLUMBIA
GEOSCIENTIST
Sept 20, 1997
ATNA RESOURCES LTD.
Work By U. Schmidt
Date Drafted 09-18-97
Drafted By U. Schmidt
Date Revised 09-18-97
Revised By U. Schmidt
N.T.S. Number 104 I/16
File Name HRNPBF5
HORN PROJECT
Pb Geochemistry
Silt, Soil and Rock Samples
Northwest Geological Consulting Ltd.
SCALE 1 : 15,000
Figure 5
GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT
25,163

E 528000 E 530000 E 532000 E 534000 E 536000 E 538000

N 6524000 N 6522000 N 6520000 N 6518000 N 6516000

M.H. 2 HORN 7 GOSSAN

HORN 8 MAJOR 6 MAJOR 4 MAJOR 2 MAJOR 3 MAJOR 5

HORN 1 HORN 2 HORN 10 HORN 11 HORN 12 HORN 13 HORN 14 HORN 15

KAREN 1 KAREN 2 KAREN 3 KAREN 4 KAREN 5 KAREN 6 KAREN 7 KAREN 8

TOP 1 TOP 2 TOP 3 TOP 4 TOP 5 TOP 6 TOP 7 TOP 8 TOP 9 TOP 10 TOP 11 TOP 12 TOP 13 TOP 14 TOP 15

LAKE 1 LAKE 2 LAKE 3 LAKE 4 LAKE 5 LAKE 6 LAKE 7 LAKE 8

RAM 1 RAM 2 RAM 3 RAM 4 RAM 5 RAM 6 RAM 7 RAM 8

SUN 1 SUN 2 SUN 3 SUN 4 SUN 5

M.H. 4

ppm ZN in silt (Threshold Modified)

1 –	138
139 –	450
451 –	1837
1838 –	3554

ppm ZN in silt

1 –	138
139 –	450
451 –	1837
1838 –	3554
3555	>>>>>>>

ppm ZN in soil

1 –	243
244 –	654
655 –	1757
1758	>>>>>>>

ppm ZN in Rock

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GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

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ATNA RESOURCES LTD.

Work By: H. Schmidt	HORN PROJECT
Date Drafted: 05-18-97	Zn Geochemistry
Drafted By: H. Schmidt	Silt, Soil and Rock Samples
Date Revised: 05-18-97	
Revised By: H. Schmidt	Northwest Geological Consulting Ltd.
N.T.S. Number: 104/7W	SCALE 1 : 15,000
File Name: HRZNSTN	Figure 6

E 528000 | E 530000 | E 532000 | E 534000 | E 536000 | E 538000

N 6524000 — —N 6524000

N 6522000 — —N 6522000

N 6520000 — —N 6520000

N 6518000 — —N 6518000

N 6516000 — —N 6516000

E 528000 | E 530000 | E 532000 | E 534000 | E 536000 | E 538000

HORN 7 | GOSSAN | HORN 8 | MAJOR 6 | HORN 1 | HORN 10 | KAREN 3 | KAREN 5 | KAREN 4 | MAJOR 2 | HORN 4 | HORN 14 | TOP 16 | HORN 12 | TOP 15 | HORN 15 | MAJOR 3 | RAM 5 | KAREN 2 | TOP 7 | TOP 8 | TOP 9 | MAJOR 4 | HORN | HORN 13 | RAM 7 | MAJOR 5 | HORN 5

B.C. ROB 44
ppm Ag in silt (Thresholds modified)

0.1 –	0.7
0.8 –	2.0

ppm Ag in silt

	<0.3
0.3 –	0.7
0.8 –	2.0
2.1 >>>>>>>	

ppm Ag in soil

	<.3
0.3 –	2.6
2.7 –	4.4
4.5 –	6.1

ppm Ag in rock

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U. SCHMIDT
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GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25,163 (5)

ATNA RESOURCES LTD.

Work By	
U. Schmidt	
Date Drafted	
08-15-97	
Drafted By	
U. Schmidt	
Date Revised	
09-15-97	
Revised By	
U. Schmidt	
N.T.S. Number	
104.1/16	
File Name	
HRNAG97	

HORN PROJECT
Ag Geochemistry
Silt, Soil and Rock Samples

Northwest Geological Consulting Ltd.

200 0 200 400 600
METRES
SCALE 1 : 15,000

Figure 7

E 528000 | E 530000 | E 532000 | E 534000 | E 536000 | E 538000

N 6524000 — | N 6522000 — | N 6520000 — | N 6518000 — | N 6516000 —

HORN 7 | GOSSAN | HORN 6 | MAJOR 6 | HORN 5 | HORN 2 | HORN 1 | KAREN 3 | KAREN 2 | KAREN 1 | HORN 4 | TOP 12 | TOP 13 | TOP 14 | TOP 15 | MAJOR 3 | MAJOR 2 | MAJOR 1 | HORN 10 | HORN 11 | HORN 12 | NAM 5 | NAM 7 | M.H. 2 | M.H. 4

B.C. RGS 44
ppm As in silt (Thresholds modified)

1 – 9
10 – 20
21 – 41
42 >>>>>>>

ppm As in silt

1 – 9
10 – 20
21 – 41
42 >>>>>>>

ppm As in soil

1 – 15
16 – 57
58 – 126
127 >>>

ppm As in rock

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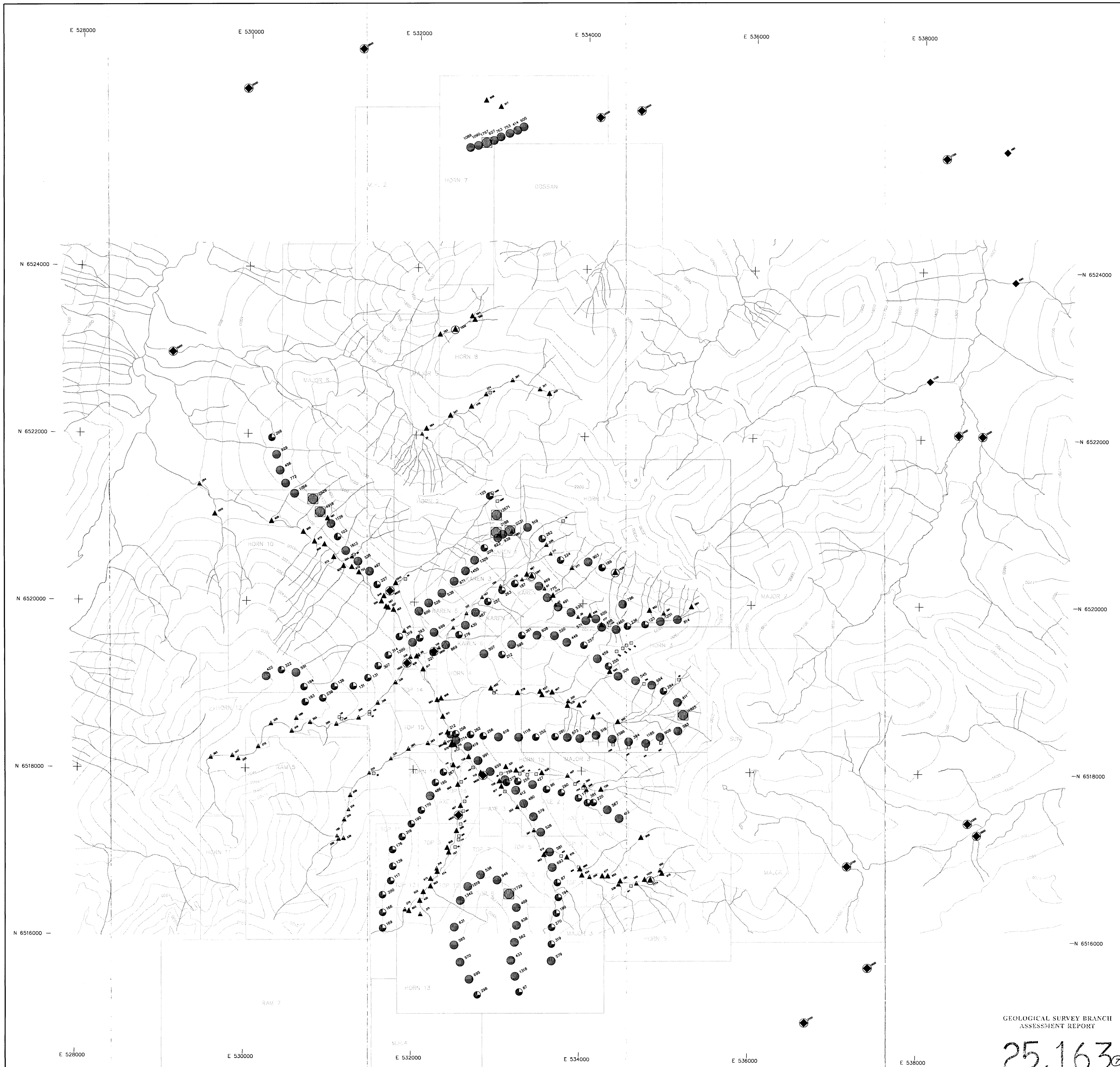
C. SCHMIDT
GEOSCIENTIST

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25,163 (6)

ATNA RESOURCES LTD.

Work By: C. Schmidt	HORN PROJECT
Date Drafted: 09-16-97	As Geochemistry
Drafted By: C. Schmidt	Silt, Soil and Rock Samples
Date Revised: 09-16-97	
Project By: C. Schmidt	Northwest Geological Consulting Ltd.
N.T.S. Number: 104 I/7E	200 0 200 400 600
File Name: HRNAS1P	METRES SCALE 1 : 15,000
	Figure: 8



BA Values in ppm

B.C. RGS 44
ppm Ba in silt (Thresholds modified)

1 –	235
236 –	418
419 –	1259
1260 >>>>>>>	

ppm Ba in silt

1 –	235
236 –	418
419 –	1259
1260 >>>>>>>	

ppm Ba in soil

1 –	393
394 –	1674
1675 >>>>>>>	

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ppm Ba in rock

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25,163 (7)

ATNA RESOURCES LTD.

HORN PROJECT

Ba Geochemistry

Silt, Soil and Rock Samples

Northwest Geological Consulting Ltd.

Work By	U. Schmidt
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Drafted By	U. Schmidt
Date Revised	09-18-97
Revised By	U. Schmidt
N.T.S. Number	104 I/16
File Name	HRNBAF9

200 0 200 400 600
SCALE 1 : 15,000

Figure 9

E 528000 | E 530000 | E 532000 | E 534000 | E 536000 | E 538000

N 6524000 — —N 6524000

N 6522000 — —N 6522000

N 6520000 — —N 6520000

N 6518000 — —N 6518000

N 6516000 — —N 6516000

E 528000 | E 530000 | E 532000 | E 534000 | E 536000 | E 538000

B.C. RGS 44
ppb Au in silt (Thresholds modified)

1 – 2
3 – 4
5 – 6
7 >>>>>>>

ppb Au in silt

<1
1 – 2
3 – 6
7 >>>>>>>

ppb Au in soil

<1
1 – 3
4 – 17
18 >>>>>>>

ppb Au in rock

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25,163

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
U. SCHMIDT
GEOSCIENTIST

ATNA RESOURCES LTD.

Work By	U. Schmidt
Date Drafted	08-18-97
Drafted By	U. Schmidt
Date Revised	08-18-97
Revised By	U. Schmidt
N.T.S. Number	104 I/16
File Name	HORNAU.PRO

HORN PROJECT
Au Geochemistry
Silt, Soil and Rock Samples

Northwest Geological Consulting Ltd.

200 0 200 400 600
METRES
SCALE 1 : 15,000

Figure 10