REPORT ON

GEOLOGY, GRID SOIL GEOCHEMICAL SURVEY AND DIAMOND DRILLING

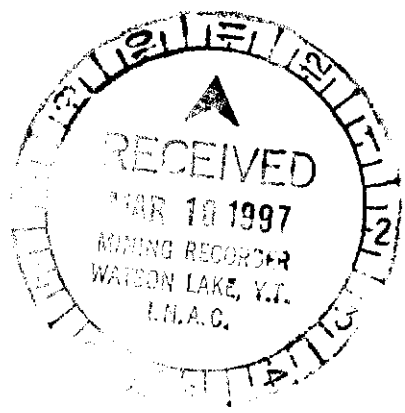
OF THE

WOLF 18 CLAIM, WOLF PROPERTY

WATSON LAKE MINING DISTRICT

NTS 105G 5/6

Lat.: 61° 20' N. Long.: 131° 29' W.



Work Performed
July 21 to Aug. 4 and Sept. 11 to Oct.1, 1996

BY

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

FOR

ATNA RESOURCES LTD.

Jan 27, 1997

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SUMMARY

The Wolf property, in southeast Yukon, is underlain by Mississippian aged, intermediate to felsic volcaniclastic rocks and minor intercalated tuffaceous sediments. The current Wolf claims cover an area which has been explored intermittently during the last 40 years for massive sulphide mineralization. The property has been explored since 1995 by Atna Resources Ltd. under an option agreement with YGC Resources Ltd. The discovery of a previously undocumented galena-bearing barite horizon by Atna in 1995 led to a further evaluation of this target in 1996.

The Wolf project in 1996 was divided in two phases. The first phase, consisted of a program of grid soil sampling, hand-trenching and sampling. This work was carried out on the north end of the property. The initial program, expanded the known limits of the target barite showing from about 2 metres to greater than 5 metres in thickness and revealed a strike length of 27 metres in three trenches. The barite horizon provides a new exploration target because it is hosted by intermediate tuffaceous rocks which lie in footwall lithologies, approximately 180 metres below previously explored massive sulphide horizons.

Encouraging lead assays provided the support to test the down-dip extension of this showing by diamond drilling. Three NQ diamond drill holes, totalling 1310 ft. (399 m), were completed from one site in late September.

A statistical study of seven elements of the soil survey suggests that the barite related Pb-Zn mineralization has a distinct geochemical signature. The anomaly plots suggest that there is a potential to discover more barite lenses at the lower stratigraphic level.

Further exploration of the barite horizon is recommended but additional drilling should be contingent on resolving some of the structural and stratigraphic correlation problems encountered in the drill holes. Better topographic control is also needed before any additional drilling is considered. Drill sites require careful field planning to ensure that they are feasible.

1. INTRODUCTION

The Wolf property, in southeastern Yukon, is underlain by Mississippian aged alkaline, intermediate to felsic volcaniclastic rocks, minor flows and intercalated tuffaceous sediments. This property has been previously explored for massive sulphide mineralization associated with felsic volcanism. Atna Resources Ltd. optioned the property in 1995 from YGC Resources Ltd. and conducted a reconnaissance program. The discovery of a previously undocumented galena-bearing barite horizon by the Atna crew led to a further evaluation of this target in 1996.

The 1996 program was originally intended to further examine the potential of a galena-bearing barite horizon found in 1995. Additional soil sampling was also planned to test the northern limits of previously defined geochemical anomalies. The initial program in July 1996 expanded the known limits of the target barite showing from about 2 metres to greater than 5 metres in thickness. Chip sampling of this horizon in 3 trenches returned encouraging lead assays which provided the encouragement to test the down-dip extension of this showing by diamond drilling later in the season.

The 1996 exploration program included grid soil sampling, four hand-trenches and three diamond drill holes. The program commenced on July 21 with grid soil sampling, hand-trenching, mapping and rock sampling in the northwest corner of the property. This phase ended on August 4, 1996. A follow-up program, including diamond drilling, was carried out during the period from Sept. 11 to Oct. 1, 1996.

The writer was contracted by Atna Resources Ltd. to provide exploration field management and provide field equipment for the project through Northwest Geological Consulting Ltd. The five man crew for the first phase, consisted of the writer, junior geologist Mike Tiedgje and field assistants William Kalhert, Ron Beauchamp and Andrey Schmidt. Mike Tidgje, William Kalhert and Ron Beauchamp were Atna employees.

During the second, drilling phase, the writer was assisted by Ron Beauchamp.

2. PROPERTY, LOCATION AND ACCESS

The Wolf property is located approximately 90 km southeast of Ross River, Yukon and consists of 18 contiguous mineral claims, covering an area of approximately 378 hectares. The property is owned by YGC Resources Ltd. and has been explored since 1995 by Atna Resources Ltd. under an option agreement. The claims are recorded in the Watson Lake Mining District as follows:

Name	**Grant Number**	**Expiry Date**
Wolf 1-18	YB16894-YB16911	March 30, 2001

The property lies within NTS 105G 5/6 map areas and the coordinates of the approximate centre of the property are latitude 62° 20' N and longitude 131° 20' W.

The property is accessible only by helicopter. Helicopters based within flying distance of the property are located at Ross River, Watson Lake and Whitehorse. Mobilization costs were reduced during both phases of exploration by utilizing fixed winged aircraft from Ross River to the Hoole River airstrip, located 22 km north of the property, and helicopter transport from the airstrip to property.

3. PHYSIOGRAPHY

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

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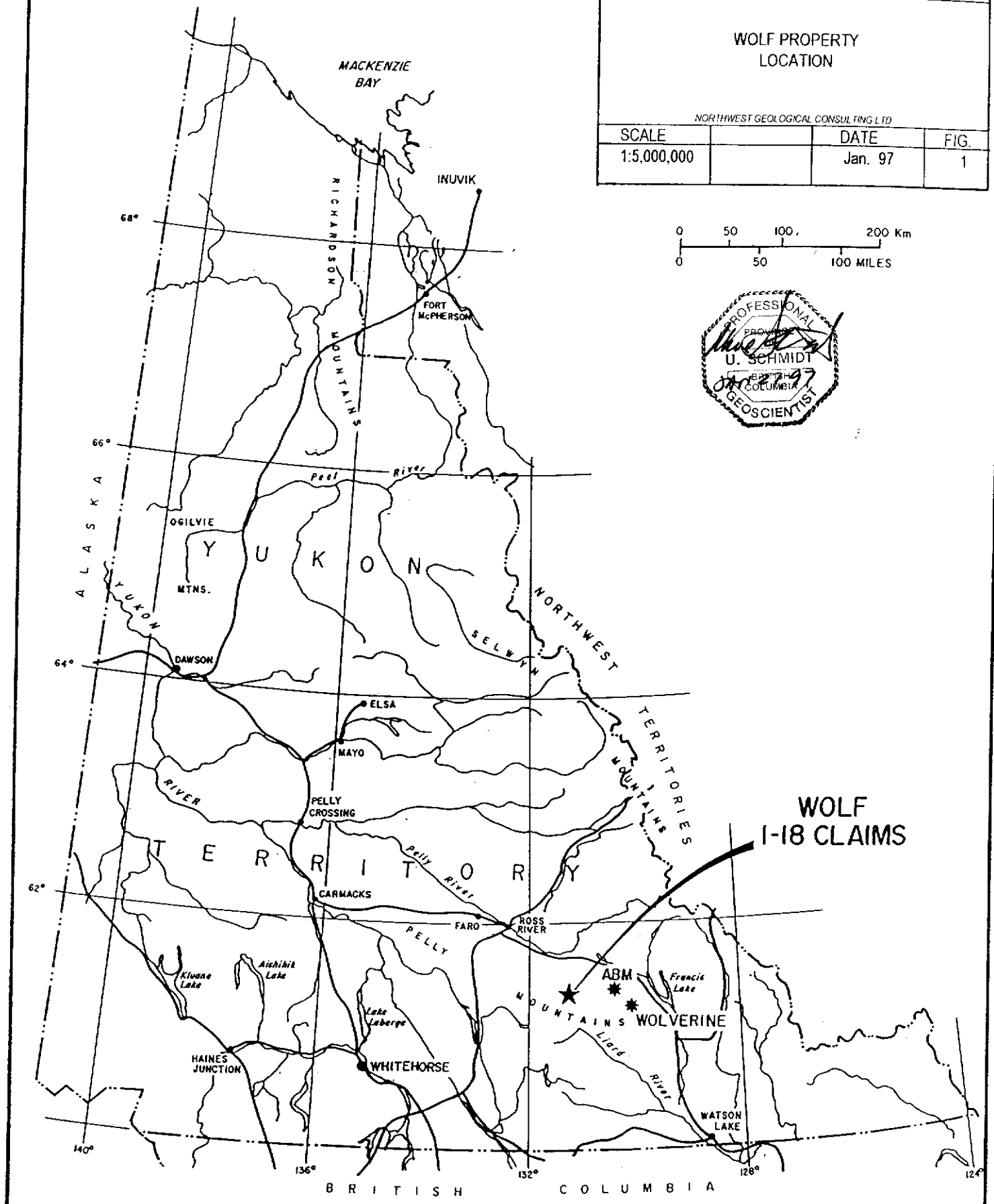
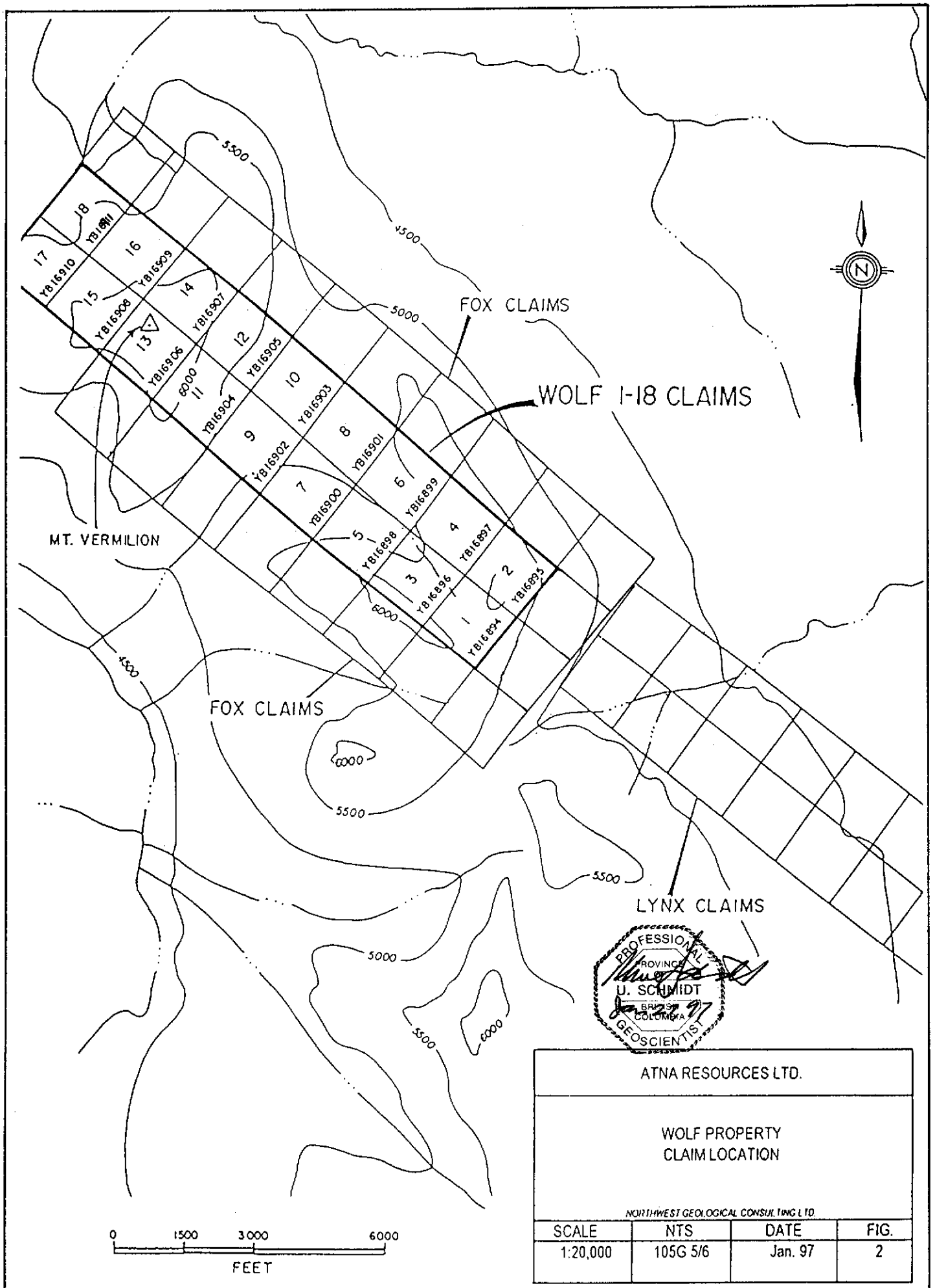
WOLF PROPERTY
LOCATION

NORTHWEST GEOLOGICAL CONSULTING LTD

SCALE		DATE	FIG.
1:5,000,000		Jan. 97	1



PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
U. SCHMIDT
GEOSCIENTIST



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ATNA RESOURCES LTD.			
WOLF PROPERTY CLAIM LOCATION			
NORTHWEST GEOLOGICAL CONSULTING LTD.			
SCALE	NTS	DATE	FIG.
1:20,000	105G 5/6	Jan. 97	2

1970 metres.

The area was covered by McConnell glaciation from 26.5 ka to 10 ka and ice flow directions in the vicinity of the property are northwesterly. Glaciation has produced broad anastomosing valleys surrounding isolated mountains and mountain ranges. Many of these valleys are now occupied by underfit streams and rivers. Valley bottoms are typically underlain by glaciofluvial sediments covered by grassy wetlands and "buckbrush" with patches of black spruce. Lower slopes above the valley floor are draped by colluvial apron sediments. Slopes above the valley floor up to tree line are covered by open black spruce and balsam fir forest. Tree line varies from 1400 to 1500 metres elevation. Work in 1996 was carried out on a north-facing slope of Mount Vermillion between elevations of 1420 to 1800 metres . This area is covered by angular rockfall deposits that form aprons at the bases of steep outcrops. Steep slopes provide excellent bedrock exposures but access to these outcrops is hindered by extreme slopes, unstable outcrop and talus fans.

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

4. HISTORY

The current Wolf claims cover an area which has been explored intermittently during the last 40 years for massive sulphide mineralization associated with felsic and intermediate volcanic rocks.

Mineralization in the area was first discovered by Newmont in 1955, but not staked until 1966. A tote road was constructed from the Campbell highway to the property in 1967.

The property was restaked in 1972 and 1974. In that year, Hesca Resources Ltd. drilled two x-ray holes totalling 61 m without success.

Newmont restaked the area in 1976 and explored the property with a geochemical survey, EM and magnetometer surveys, mapping and hand trenching. Bulldozer Trenching and three drill holes totalling 528 m were completed in 1978.

The area was restaked by Amax in 1982 and explored by mapping and geochemical sampling in 1983.

The property was restaked by YGC resources Ltd. in 1990 and explored by a geochemical survey. Cominco optioned the property from YGC Resources and performed geochemical surveys and mapping in 1991, followed by a UTEM survey in 1992.

Atna Resources Ltd. optioned the Wolf claims from YGC Resources Ltd. in 1995 and evaluated the property with a small reconnaissance prospecting, mapping and sampling program.

5. REGIONAL GEOLOGY

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

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

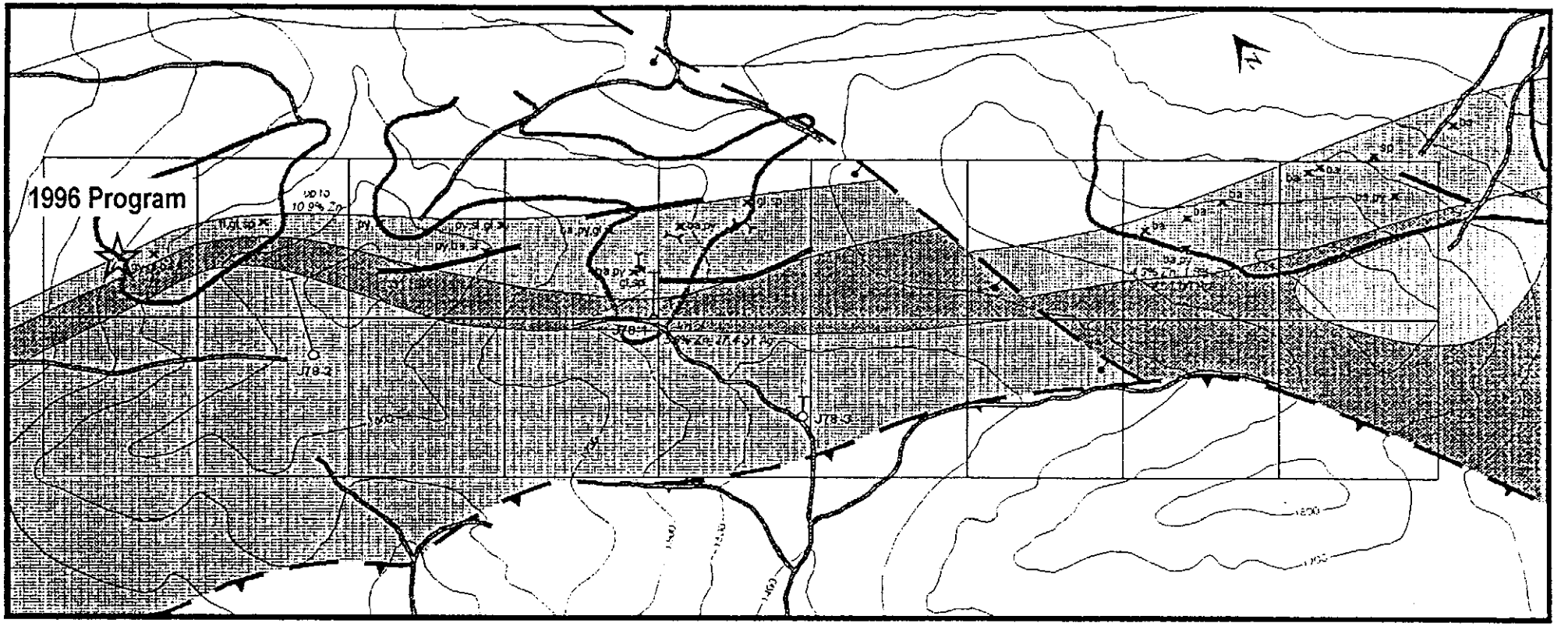
Deeper water sedimentation continued from Upper Paleozoic to Triassic time when calcareous argillites were deposited above the shale-volcanic sequence

A northeasterly directed, late Triassic to early Cretaceous, tectonic event juxtaposed older platformal rocks over Devonian and Mississippian shales and volcanic rocks. Two major thrust faults have been recognized in Pelly Mountains. The metavolcanic rocks are restricted to the lowermost structural package. Intermediate to felsic volcanic rocks, intercalated with tuffaceous mudstone and shale form an arcuate 130 by 5 km belt. Numerous massive sulphide showings are associated with these rocks. The most significant of these is the MM which is located 60 km to the west of the property.

6. PROPERTY GEOLOGY

The property geology has been previously mapped and described by several geologists. Work in 1996 relied primarily on Cominco's work by MacRobbie (1995) which is summarized on Fig. 3. Lithologies mapped by MacRobbie were examined and confirmed but no additional property scale mapping was completed because of extreme slopes on the north face of Mount Vermillion and because of extensive talus cover in the north half of Wolf 18.

Lithologies on the property strike northwesterly and dip moderately to steeply to the southwest. The Wolf claims were staked parallel to this trend and cover the Upper



Upper Devonian to Mississippian

- coarse-grained syenite
- undivided felsic to intermediate volcanic rocks, minor black shale
- felsic lapilli tuff, agglomerate
- felsic lapilli tuff with pyrite, barite, galena and sphalerite
- undivided felsic to intermediate volcanic rocks

Upper Silurian to Middle Devonian

- dolomite, sandy dolomite

- thrust fault
- normal fault
- >100 ppm lead in soils

geology and geochemistry compiled from results of earlier exploration

J78-3 diamond drill hole

bulldozer trench

mineral occurrence

ba - barite fl - fluorite
gl - galena sp - sphalerite
py - pyrite

UTEM conductor

0 500 metres

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Nov 27 1997

after Archer, Cathro & Associates (1990)

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WOLF/LYNX PROPERTY

Watson Lake M.D., Yukon

COMPILATION MAP

NTS : 105-G/5,6 Figure 3

Devonian to Mississippian volcanic succession. To the northeast this sequence is underlain by Upper Silurian to Middle Devonian dolomite. This unit also overlies the volcanic sequence to the south-west where dolomite lies in contact with the volcanic rocks along a north west trending thrust fault.

MacRobbie subdivided the Devono-Mississippian volcanic succession into 11 units, a felsic volcanic flow and tuff unit and 5 hanging wall and five footwall units. Mineralization at Mount Vermillion is hosted by a distinctive light grey, yellow to rusty weathering pyritic felsic unit. Two types of mineralization are described by MacRobbie. One consists of discontinuous bedded barite lenses lying near the top of felsic flow and tuff unit. Fine wispy disseminations of pyrite, sphalerite and galena occur with the barite. Assays up to 4.7% Zn, 1.8% Pb and 41.1 g/t are reported from float samples.

The second style of mineralization lies within the hanging wall sequence on the northeast slope of Mount Vermillion. Three sulphide horizons, up to 3 m thick, with an approximate strike length of 80 metres are reported. This style of mineralization consists of stratabound, massive and brecciated, pyrrhotite, pyrite, sphalerite, chalcopyrite +/1 galena hosted by chlorite altered felsic flows and tuffs. Grab samples ranging from 2.8 - 10.9 % Zn and trace to 0.2 % lead and copper are reported.

The bedded barite lens explored by Atna in 1995-96 is located stratigraphically below these showings within a heterolithic dacite/andesite ash to lapilli tuff sequence in the footwall sequence below the mineralized felsic flow and tuff unit. This unit is exposed in steep outcrops above the trenches as a pale to medium grey-green massive unit with rare mudstone fragments and thin interbeds of mudstone. The upper 2 metres of barite horizon crops out at the base of slope with the lower portion of the horizon covered by talus. Most of the work focussed on exposing and sampling this barite horizon. The locations of these trenches are shown on figures 4 to 10 and assay results are presented on figure 11. Four trenches were excavated in talus, exposing up to 5.8 metres, true thickness, of

mineralized bedded barite. The grey and white, sugary textured, laminated baritic beds are interbedded with and grade into dacitic to andesitic tuffaceous rocks. Mineralization in the barite lens is very fine grained and only pyrite is commonly visible under 15x magnification. Galena, with a few coarse grained exceptions, is also difficult to identify in hand specimen and is assumed to occur in the dark grey laminations within the barite. The barite horizon was exposed along strike, for a distance of 27 metres, in three trenches. A fourth trench, on the east end of the horizon, failed to reach bedrock. True widths of the barite beds range from 1.9 to 5.8 metres. Chip sampling indicates mineralization widths range from 2.8 to 5.8 metres. The best mineralization occurs near the top of trench W96-2 where 20 to 30 cm of massive galena are interbedded with the barite. This irregularly shaped and discontinuous horizon consists of 30-60% galena in an iron oxide, barite and quartz matrix. The significant weighted average assays are as follows:

Trench	Assay
W96-1	1.25% Pb, 2.00 opt Ag / 5.8m
W96-2	3.2% Pb, 3.24 opt Ag / 5.3 m
	(including 48.93 % Pb, 40.01 opt Ag / 0.20m)
W96-3	2.17% Pb , 2.63 opt Ag / 2.8m

The mineralization is low in Zn but geochemically anomalous, with only three samples exceeding 1000 ppm Zn. Barium assays along the barite horizon range from 21.34 % to 58.2 % Ba.

Geochemically anomalous concentrations of these elements were detected above, below and east of the zone.

A line of twenty-one chip samples taken over one metre intervals was laid out along strike on a steep outcrop east of trench 3 and above trench 4. Geochemical analyses detected anomalous concentrations in the range of 92 to 4032 ppm lead, 400 to 1831 Zn, <.3 to 18.4 ppm Ag and 2142 to 7807 ppm Ba. The highest concentrations are all from one 1 metre sample interval.

Diamond Drilling (Fig 12)

Three NQ diamond drill holes, totalling 1310 ft. (399 m), were completed from one site. The drill holes lie along a 100° Az. section which parallels the average strike of barite mineralization in the trenches and is 70 metres south of the surface showing. The diamond drill hole locations are shown on figures 4 to 10. A cross-section of the holes is presented on figure 12 at a scale of 1:500 and diamond drill logs are appended to this report.

Previous mapping by Cominco geologists in the vicinity of the drilling, assigned the baritic host rocks to a heterolithic, medium-thick bedded, dacite/andesite tuff unit comprising ash tuff to lapilli-ash tuff, intercalated with tuffaceous and non-tuffaceous mudstones. This unit was assigned to footwall lithologies, lying approximately 180 metres below the two previously explored massive sulphide horizons. Exposure is poor in the vicinity of the drill sites and most of the drill intercepts cannot be correlated with outcrop. The mineralized horizons explored by Cominco and others is associated with felsic flows and tuffs.

Lithologies in core were divided into 6 mappable units.

Unit 1 Dacite/Andesite Tuff: medium grey, fine grained, weakly foliated siliceous tuff chloritic and carbonate alteration, silicification?, quartz-carbonate veining

Unit 2 Pyritic Tuff: medium grey, mottled texture, 5-10% lapilli, rare porphyritic lapilli, 30- 40% very fine grained pyrite, .1 mm euhedral grains, vfg pyrite in 1 to 2 cm scale fragments and blebs

Unit 3 Heterolithic Lapilli Tuff: medium grey-green, heterolithic fragments, frequent dark grey, pyritic clasts and beige, angular to sub-angular, .5 to 1.5 cm clasts

Unit 3b Baritic Horizon

Unit 4 Thinly Laminated Tuff: beige and grey laminated tuff, interbedded with coarser, beige lapilli rich horizons

Unit 5 Dark Grey Siliceous Breccia: white carbonate and fine grained pyrite in breccia matrix

Unit 6 Breccia/ Agglomerate: dark grey, angular to sub-angular andesite? and andesite porphyry fragments in medium grey matrix

The units are fine grained, tuffaceous volcaniclastic rocks with minor interbedded sediments. Lithologies were distinguished by colour, fragment size, alteration and pyrite content. In some units, very fine grained, disseminated pyrite occurs in concentrations in the 30% to 40% range. Galena and sphalerite are also very fine grained and difficult to identify. These minerals likely occur within a dark brown matrix found in pyritic sections. A total of 30 pyritic intervals in the core were assayed. Of these, 11 exceeded concentrations of 1% combined Pb and Zn. The following are selected assays and weighted averages of the higher assay intervals:

Hole	Starting Depth	Assay Interval
W96 1	65.5m	0.25% Pb, 1.24% Zn / 4.5m
W96 1	80.2m	0.51 %Pb, 1.07 % Zn / 1.1m
W96 1	88.7m	0.45 % Pb, 1.29% Zn / 1.2m
W96 2	68.6m	0.66% Pb, 2.36% Zn / 8.4m
W96 2	94.2m	0.52% Pb, 2.59% Zn / 2.0m
W96 2	131.4m	0.11% Pb, 1.75% Zn / 0.9m
W96 3	118.6m	0.29% Pb, 1.02% Zn / 3.4m

A baritic horizon was encountered in drill hole 2 at a depth of 72 metres. This horizon is most likely the down-dip extension of the surface showing. The baritic mineralization is included in the 8.4 metre interval listed above and shows a change from a lead-dominant surface showing to zinc-dominant mineralization in drill core. Mineralization and lithologies do not correlate well from one hole to the next in this section. Drilling indicates a complex and highly variable depositional history, followed by late block faulting.

Evidence of faulting on surface and in drill core indicates a series of vertical faults have displaced lithologies and mineralization downwards towards the west.

7. GEOCHEMISTRY

A soil sampling grid was established at the northern end of the property to test the limits of known soil geochemical anomalies and to provide survey control for the hand trenching program. Grid soil sampling was carried out over a 32 hectare area within the boundaries of Wolf 16 and 18. A total of 56 soil samples were collected at a line spacing of 100 metres and sample interval of 50 metres.

Sample lines are marked with 1.2 metre long wooded lath pickets and flagging tape and were established by slope-corrected compass and "hip-chain" surveys. This area is covered by angular rockfall and talus deposits that form aprons at the bases of steep outcrops. Samples of talus fines were collected where possible, at depths ranging from 20 to 30 cm.

Grid coordinates were used as sample numbers and samples were analyzed by Acme Analytical Laboratories Ltd. of Vancouver, employing a standard 30 element Inductively Coupled Argon Plasma (ICP) package, using a specific digestion for Ba and gold analysis by acid leach/AA from a 10 g sample. Certificates of analyses are appended to this report (Appendix A).

STATISTICAL METHOD

Analytical data were analyzed statistically using Probplot, a computer program designed to optimally fit multiple normal distributions to exploration geochemical data on probability plots (Stanley 1987). A statistical analysis of Ag, As, Au, Ba, Cu, Pb and Zn, analytical data was carried out with the aid of histograms and cumulative probability plots generated by

Probplot. During data analyses the data set was reduced by eliminating analyses which are at the analytical detection limit. Trial graph plots were modified by eliminating isolated high values until the best resolution of sub-populations in the data was obtained. The degree of data truncation varies with each element. 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. 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 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. In all cases, log probability plots were used to determine thresholds. Analyses and anomaly interpretation for Ag, As, Au, Ba, Cu, Pb and Zn are presented at 1: 5,000 scale on figures 4 to 10.

The following summarizes the chosen 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

Element Ag ppm

Population Parameter	Log Concentration	Arithmetic Value	Threshold Used
$\bar{x}(1)$	-0.1464	0.71	0.7
$\bar{x}$-2Sx(2)	0.2698	1.86	1.9
$\bar{x}(2)$	0.5487	3.54	3.5
$\bar{x}$+2Sx(2)	0.8277	6.73	6.7

Element As ppm

Population Parameter	Log Concentration	Arithmetic Value	Threshold Used
$\bar{x}(1)$	1.0739	11.85	12
$\bar{x}$-2Sx(2)	1.2167	16.47	16
$\bar{x}(2)$	1.4623	28.99	29
$\bar{x}(3)$	1.6884	48.80	49
$\bar{x}$+2Sx(3)	1.8439	69.81	70

Element Au ppb

Population Parameter	Log Concentration	Arithmetic Value	Threshold Used
$\bar{x}(1)$	0.2879	1.94	2
$\bar{x}$-2Sx(2)	0.6513	4.48	5
$\bar{x}(2)$	1.0050	10.12	10
$\bar{x}$+2Sx(2)	1.3587	22.84	23

Element Ba %

Population Parameter	Log Concentration	Arithmetic Value	Threshold Used
$\bar{x}(1)$	-0.5466	0.28%	0.28%
$\bar{x}$-2Sx(2)	-0.3565	0.44%	0.44%
$\bar{x}(2)$	-0.0560	0.88%	0.88%
$\bar{x}$+2Sx(2)	0.2444	1.76%	1.76%

Element Cu ppm

Population Parameter	Log Concentration	Arithmetic Value	Threshold Used
$\bar{x}$-2Sx(2)	1.4997	31.6	32
$\bar{x}$(2)	1.9168	88.57	83
$\bar{x}$-2Sx(3)	2.2473	176.73	177

Element Pb ppm

Population Parameter	Log Concentration	Arithmetic Value	Threshold Used
$\bar{x}$-2Sx(2)	2.0338	108.09	108
$\bar{x}$-2Sx(3)	2.5915	390.39	390
$\bar{x}$(3)	2.8881	772.86	773
$\bar{x}$+2Sx(3)	3.1846	1529.18	1529

Element Zn ppm

Population Parameter	Log Concentration	Arithmetic Value	Threshold Used
$\bar{x}$(1)	1.5953	39.38	39
$\bar{x}$(2)	2.0720	118.03	118
$\bar{x}$(3)	2.3281	212.86	213
$\bar{x}$(4)	2.6296	426.09	426
$\bar{x}$(5)	3.1820	1520.6	1521

Silver (Fig.4)

Silver concentrations range from a detection limit of 0.3 ppm to 24 ppm. The data were truncated at the detection limit and above 7.0 ppm before calculating thresholds. Thirty-one analyses lie within this range. The log probability plot of the data was divided into two sub populations, with population boundary selected at 90% of the data. An anomalous threshold of 0.7 ppm was selected and symbol boundaries were chosen at 0.7, 1.9, 3.5 and 6.7 ppm Ag.

Scaled symbol plots of the data at 1:5,000 scale (Fig. 4) outline two anomalous areas. One lies immediately north of the trenches and the second is located on Wolf 16, down slope from massive sulphide mineralization associated with felsic volcanic rocks.

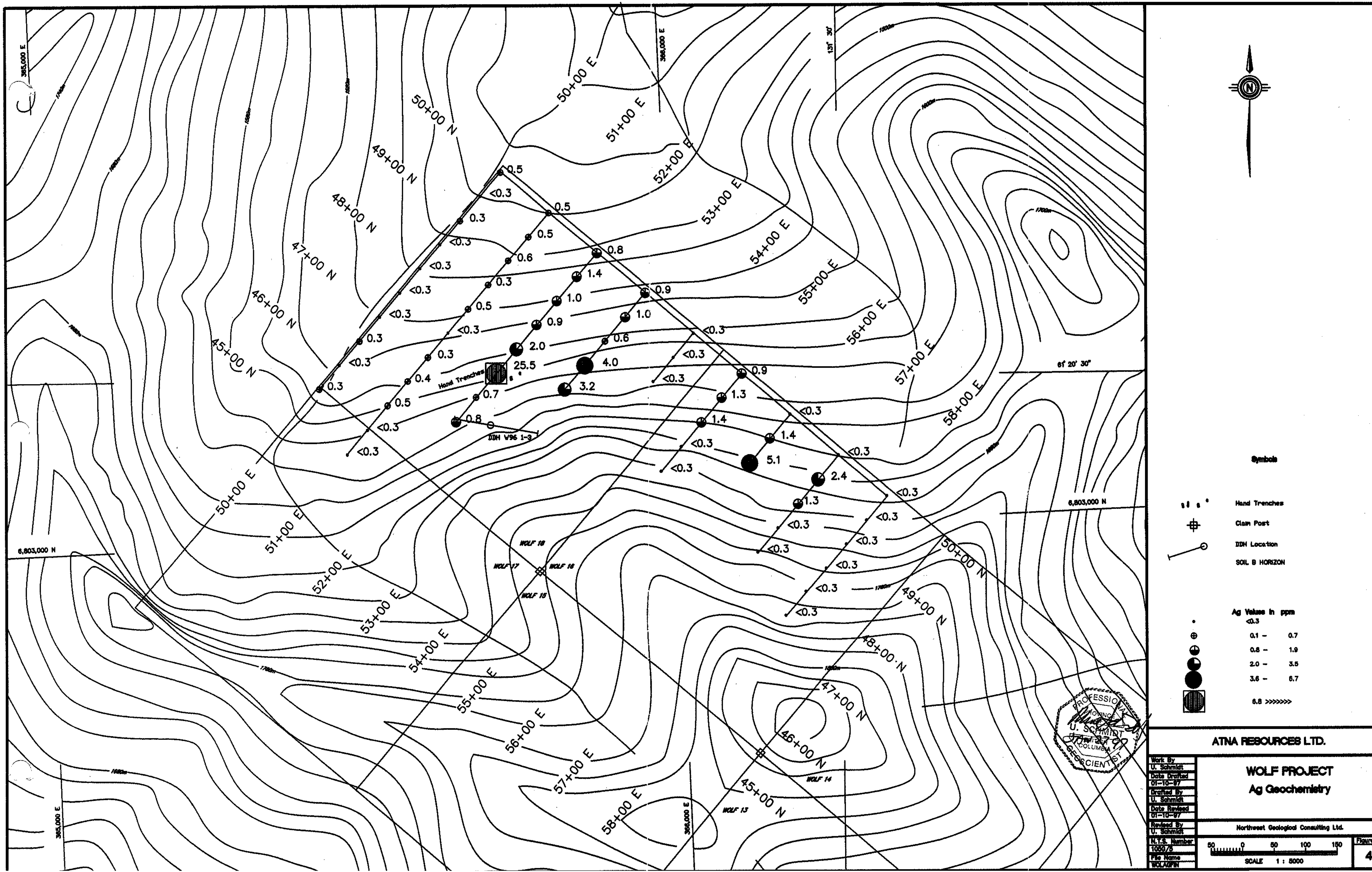
Arsenic (Fig. 5)

The arsenic analytical data ranges from 6 ppm to 146 ppm. Fifty-three analyses were included in a data set which was truncated at 75 ppm. Two samples exceeding this threshold and one sample below the detection limit of 2 ppm and were excluded from the data analysis. The data were divided into 3 sub-populations with population boundaries at 15% and 97%. Arsenic concentrations in talus fines have at least three sources. Concentrations above 49 ppm are considered anomalous. Scaled anomaly symbols are assigned thresholds of 12, 16, 29, 49 and 70 ppm.

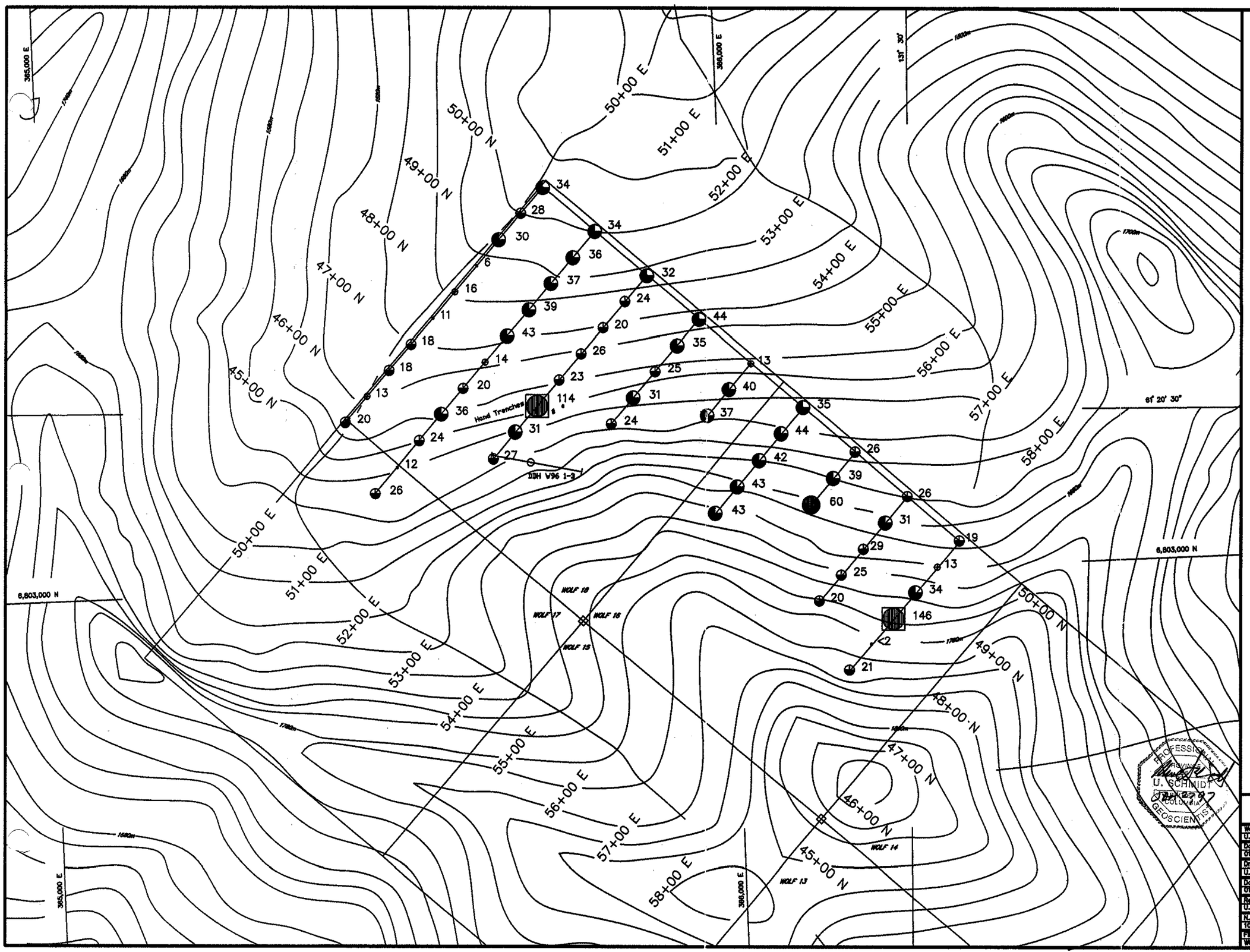
Scaled symbol plots of arsenic concentrations outline two relatively weak anomalous areas centred in the same ares as the silver anomalies.

Gold (Fig. 6)

Gold concentrations range from a detection limit of 1 ppb to 70 ppb. The data were truncated at the detection limit and above 30 ppb before calculating thresholds. Thirty-Seven samples were included in the data analysis, excluding nineteen samples below the



ATNA RESOURCES LTD.
WOLF PROJECT
Ag Geochemistry
Work By U. Schmidt
Date Drafted 01-10-97
Drafted By U. Schmidt
Date Revised 01-10-97
Revised By U. Schmidt
N.T.S. Number 105G/5
File Name WOLAGPIN
Northwest Geological Consulting Ltd.
SCALE 1 : 5000
Figure 4
Symbols
Hand Trenches
Claim Post
DDH Location
SOIL B HORIZON
Ag Values in ppm
<0.3
0.1 – 0.7
0.8 – 1.9
2.0 – 3.5
3.6 – 6.7
6.8 >>>>>>>
Hand Trenches
DDH V96 1-3
WOLF 13
WOLF 14
WOLF 15
WOLF 16
WOLF 17
WOLF 18
6,803,000 N
365,000 E
366,000 E
61° 20' 30"
131° 30'



Symbols

- Hand Trenches
- Claim Post
- DDH Location
- SOIL B HORIZON

As Values in ppm

<1 –	12
13 –	16
17 –	29
30 –	49
50 –	70
71 >>>>>>>	

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U. SCHMIDT
1997

ATNA RESOURCES LTD.

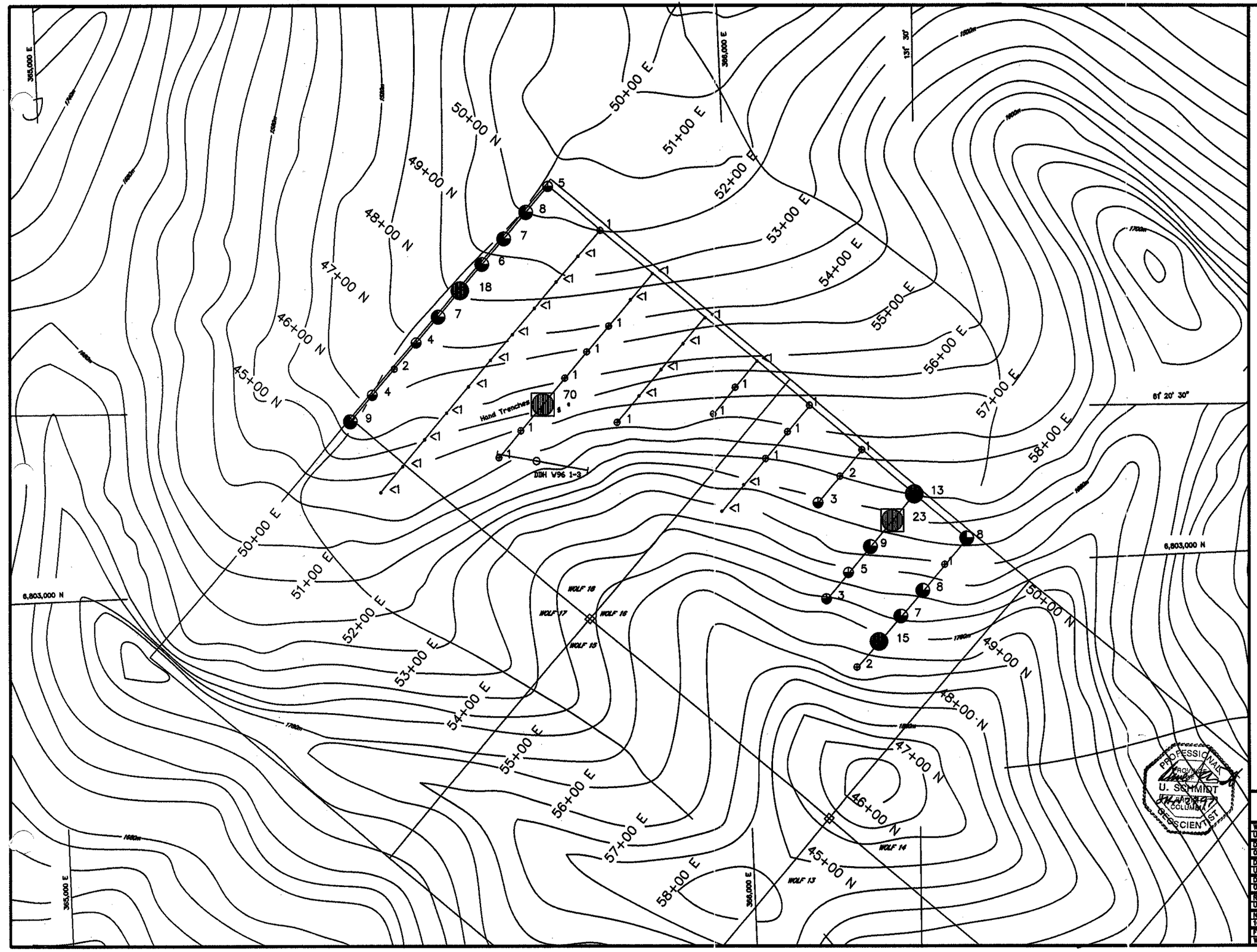
Work By	U. Schmidt
Date Drafted	01-10-97
Drafted By	U. Schmidt
Date Revised	01-10-97
Revised By	U. Schmidt
N.T.S. Number	1050/5
File Name	WOLASPIN

WOLF PROJECT
As Geochemistry

Northwest Geological Consulting Ltd.

50 0 50 100 150
SCALE 1 : 5000

Figure 5



Symbols

- Hand Trenches
- Claim Post
- DDH Location
- SOIL B HORIZON

Au Values in ppb

- 1 – 2
- 3 – 5
- 6 – 10
- 11 – 23
- 24 >>>>>>>

ATNA RESOURCES LTD.

Work By	U. Schmidt
Date Drafted	01-10-97
Drafted By	U. Schmidt
Date Revised	01-10-97
Revised By	U. Schmidt
N.T.S. Number	1060/6
File Name	WOLAUPIN

WOLF PROJECT
Au Geochemistry

Northwest Geological Consulting Ltd.

50 0 50 100 150

SCALE 1 : 5000

Figure 6

detection limit and one above the upper limit. The log probability plot of the data was divided into two sub populations, with a population break selected at 70% of the data. An anomalous threshold of 5 ppm was selected and symbol boundaries were chosen at 2, 5, 10 and 23 ppb Au.

Scaled symbol plots of the data at 1:5,000 scale (Fig. 6) outline three distinct anomalous areas. Two are in the same areas as silver and arsenic and the third follows a sample line which parallels a northwest flowing stream.

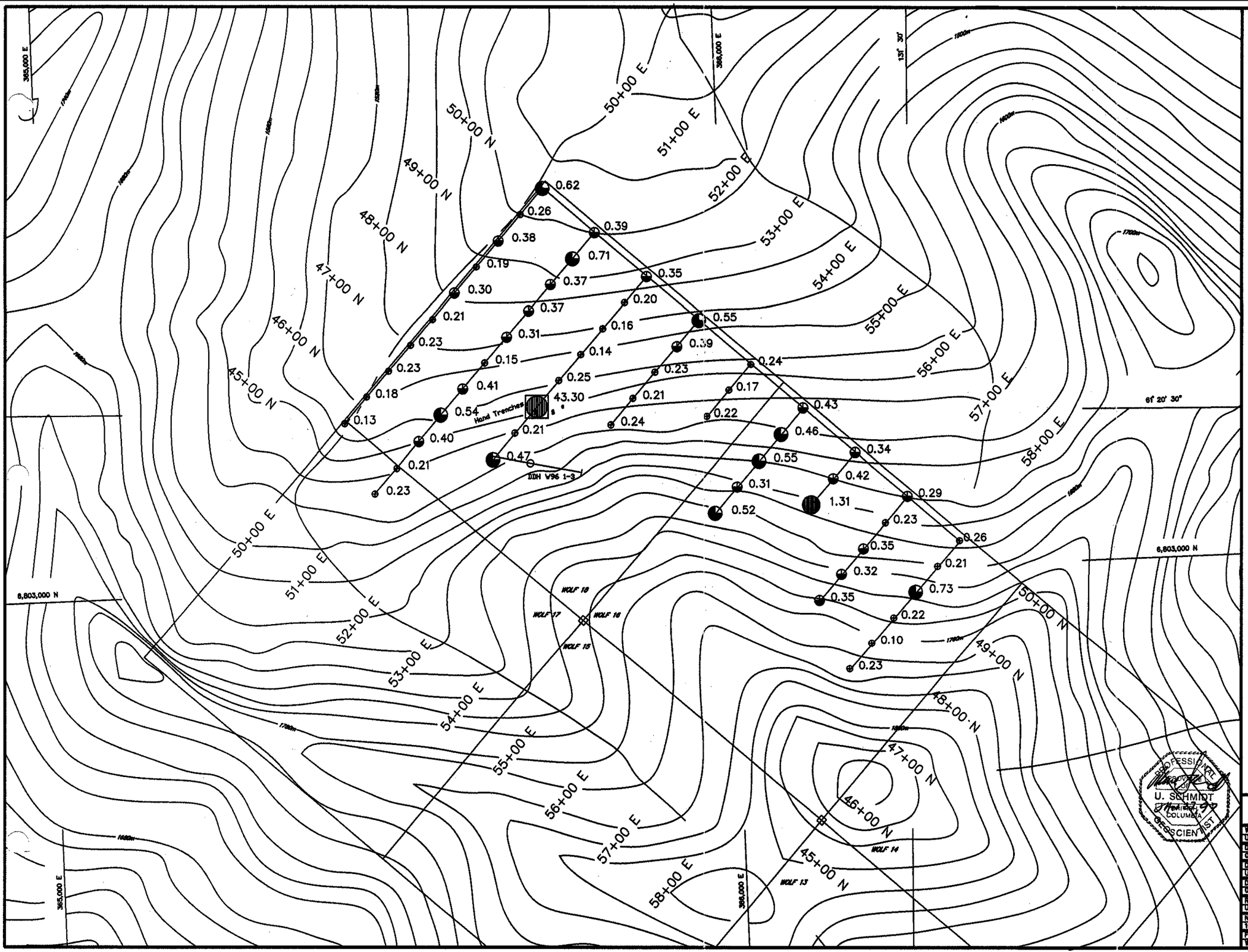
Barium (Fig. 7)

Barium concentrations range from 0.10 % to 43.34%. The data were truncated at above 3.0% before calculating thresholds. Fifty-Five analyses lie within this range. The log probability plot of the data was divided into two sub populations, with population boundary selected at 97% of the data. An anomalous threshold of 0.44% was selected and symbol thresholds were chosen at 0.28%, 0.44%, 0.88%, and 1.76%. Scaled symbol plots of the data at 1:5,000 scale (Fig. 7) again outline two anomalous areas associated with massive sulphide mineralization and the barite horizon on Wolf 18.

Copper (Fig. 8)

Copper concentrations range from 5 to 296 ppm. The data were truncated above 250 ppm before calculating thresholds but only one sample lies above this threshold. The log probability plot of the data was divided into three sub populations, with population breaks selected at 80% and 95% of the data. An anomalous threshold of 83 ppm was selected and symbol boundaries were chosen at 32, 83 and 177 ppm Cu.

A 300 metre by 200 metre copper anomaly is defined by the anomalous threshold down slope from the felsic volcanic-hosted mineralization. The barite showing area stands out if a threshold of 32 ppm Cu is used.



Symbols

- Hand Trenches
- Claim Post
- DDH Location
- SOIL B HORIZON

Ba Values in %

- 0.01 – 0.28
- 0.29 – 0.44
- 0.45 – 0.88
- 0.89 – 1.76
- 1.77 >>>>>>>

U. SCHMIDT
PROFESSIONAL GEOSCIENTIST
PROVINCE OF BRITISH COLUMBIA

ATNA RESOURCES LTD.

Work By	U. Schmidt
Date Drafted	01-10-97
Drafted By	U. Schmidt
Date Revised	01-10-97
Revised By	U. Schmidt
N.T.S. Number	1092/5
File Name	WOLBAFIN

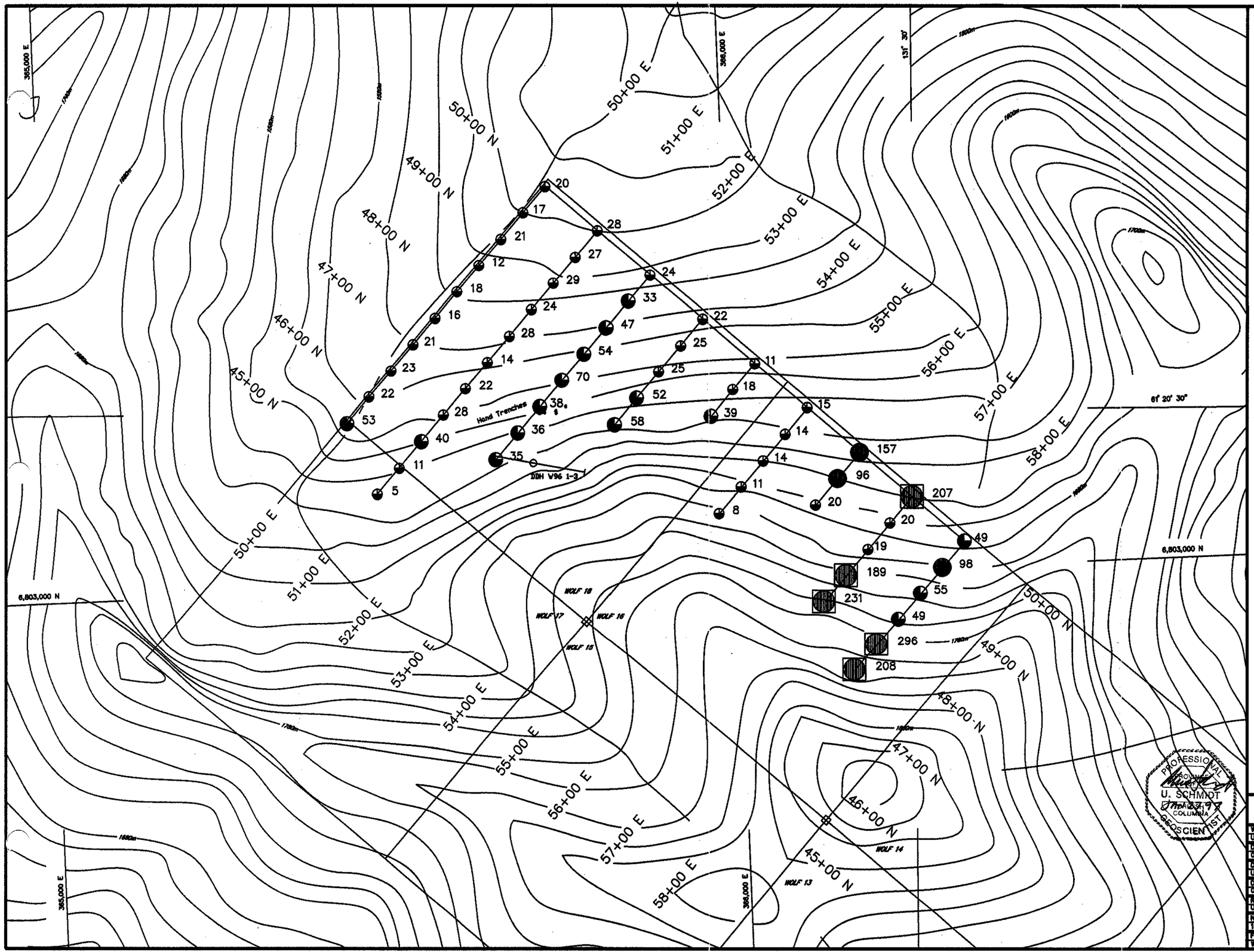
WOLF PROJECT
Ba Geochemistry

Northwest Geological Consulting Ltd.

50 0 50 100 150

SCALE 1 : 5000

Figure 7



Symbols

- Hand Trenches
- Claim Post
- DDH Location
- SOIL B HORIZON

Cu Values in ppm

1 –	32
33 –	83
84 –	177
178 >>>>>>>	

PROFESSIONAL GEOLOGIST
U. SCHMIDT
MARCH 23, 97
BRITISH COLUMBIA
GEOSCIENTIST

ATNA RESOURCES LTD.

Work By	U. Schmidt
Date Drafted	01-10-97
Drafted By	U. Schmidt
Date Revised	01-10-97
Revised By	U. Schmidt
N.T.S. Number	1059/5
File Name	WOLCUPN

WOLF PROJECT
Cu Geochemistry

Northwest Geological Consulting Ltd.

50 0 50 100 150
SCALE 1 : 5000

Figure 8

Lead (Fig. 9)

A total of 54 analyses within the truncated range from 32 to 6209 ppm Pb were included in the data analysis. No analyses are below the detection limit of 4 ppm and two are above the maximum value of 2100 ppm. The data were sub-divided into three lognormal populations with population boundaries selected at 40% and 90%. A concentration of 390 ppm Pb, which represents the lower boundary of population three, was chosen as the anomalous threshold . Scaled symbols were assigned thresholds of 108, 390, 773 and 1529 ppm Pb.

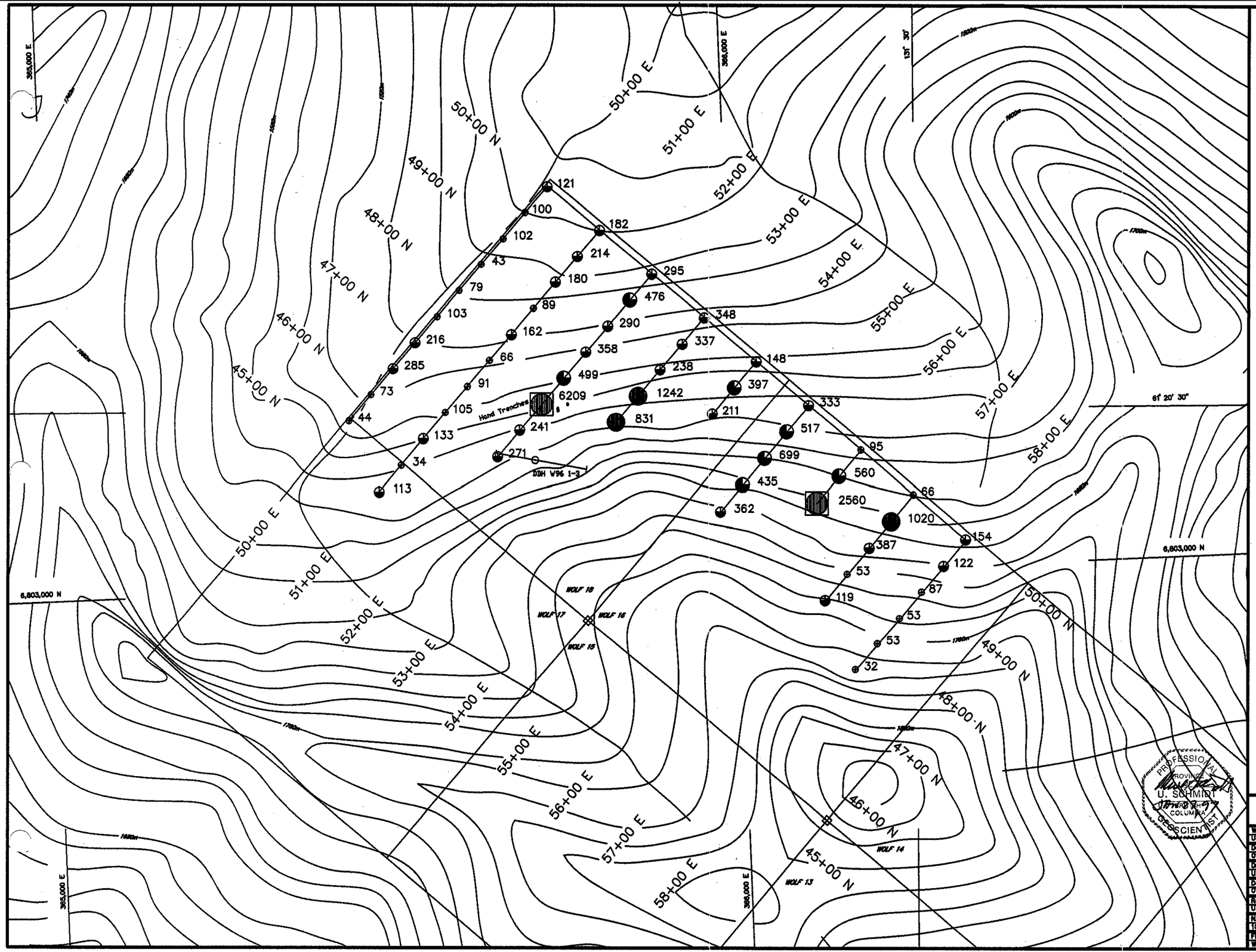
Anomalous lead concentrations occur in the same areas as previous metals.

Zinc (Fig. 10)

The zinc analytical data ranges from 16 to 5059 ppm. Fifty-three analyses were included in a data set which was truncated at 2500 ppm. This excluded 3 samples from the data set. The data were divided into 5 sub-populations with boundaries selected at 10%, 25%, 50% and 85%. An anomalous threshold of 426 was selected which includes a analyses from the highest two populations. Scaled anomaly symbols were assigned thresholds of 39, 118, 213, 426 and 1521 ppm.

The zinc data have a similar distribution as the gold anomalies. The two areas of known massive sulphide mineralization are defined and a third linear anomaly is outlined along the stream.

The calculation of correlation coefficients for the seven elements produced two groups of metals with positive correlation coefficients among elements within the groups but a negative correlation between groups. There is a positive correlation between Cu and Zn. and there is also a positive correlation among Ag, As, Au, Ba and Pb. However the elements in the first group have negative correlation coefficients when compared with elements in the second group.



Symbols

- Hand Trenches
- Claim Post
- DDH Location
- SOIL B HORIZON

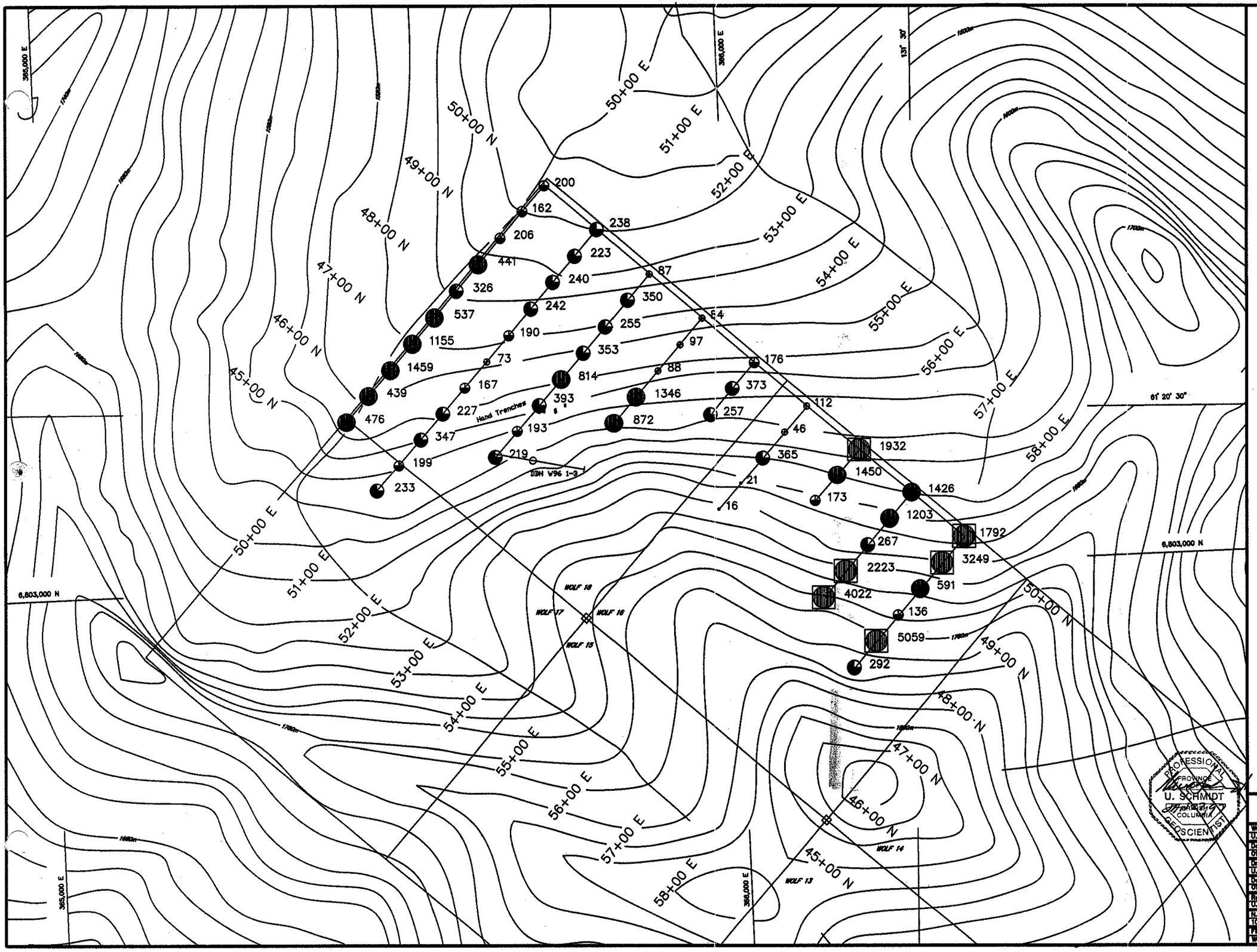
Pb Values in ppm

1 –	108
109 –	390
391 –	773
774 –	1529
1530 >>>>>>>	

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA U. SCHMIDT 1997 GEOSCIENTIST

ATNA RESOURCES LTD.

Work By U. Schmidt	**WOLF PROJECT**
Date Drafted 01-10-97	**Pb Geochemistry**
Drafted By U. Schmidt	
Date Revised 01-10-97	
Revised By U. Schmidt	Northwest Geological Consulting Ltd.
N.T.S. Number 1093/5	SCALE 1 : 5000
File Name WOLFPB	Figure 9



ATNA RESOURCES LTD.

Work By	U. Schmidt
Date Drafted	01-10-97
Drafted By	U. Schmidt
Date Revised	01-10-97
Revised By	U. Schmidt
N.T.S. Number	1050/6
File Name	WOLZNPIN

WOLF PROJECT
Zn Geochemistry

Northwest Geological Consulting Ltd.

80 0 50 100 150
SCALE 1 : 5000

Figure 10

A comparison of Cu and Zn anomaly plots suggests that the positive correlation between these elements is a reflection of the massive sulphide-bearing felsic source rocks on Mount Vermillion. The barite showing in footwall lithologies is also defined by these elements but not as clearly. A third, weak Zn Pb anomaly along the stream, appears to be a hydromorphic anomaly derived from outcrops along the western extension of the felsic volcanic horizon.

Among the other elements, Ba, Pb, and Ag outline two coincident areas. One source area is the footwall barite horizon and the second, on line 56+00E, is offset north of the Cu-Zn anomaly. The negative correlation of Cu and Zn with Ba, Pb and Ag suggests that the anomaly on line 56+00E is caused by an unknown mineralized barite horizon in the footwall lithologies or an extension of the footwall barite horizon.

Gold and arsenic anomalies appear to be derived from both types of mineralization. The distribution of gold along the stream bank is probably caused by mechanical transport and concentration along a meandering drainage system.

8. CONCLUSIONS

The 1996 grid soil sampling program outlined 3 geochemically anomalous areas. Soil samples were primarily of talus fines and the anomalies with the exception of the northernmost zinc anomaly are caused by mechanical dispersion and weathering of mineralization. The zinc anomaly is probably caused by hydromorphic transport. A statistical study of seven elements of the soil survey indicates that mineralization associated with felsic volcanics has a Zn, Cu signature and barite related Pb-Zn mineralization has a Ba, Pb, Ag signature. The known baritic mineralization is outlined by a small Ba, Pb and Ag anomaly. A second, similar anomaly is outlined by these elements along line 56+00E, suggesting that there is a potential to discover more barite lenses.

Hand trenching and diamond drilling have outlined a previously undocumented lead, zinc and silver bearing barite lens hosted by intermediate tuffaceous volcanic rocks approximately 180 metres stratigraphically below mineralization associated with felsic volcanics. The lens has been traced on surface along a strike length of 27 metres and has been extended 70 metres down dip by one drill intersection.

Drilling indicates a complex and highly variable depositional history, followed by late block faulting. Evidence of faulting on surface and in drill core indicates that a series of vertical faults have displaced lithologies and mineralization downwards towards the west.

9. RECOMMENDATIONS

Further exploration of the barite horizon is recommended but additional drilling should be contingent on resolving some of the structural and stratigraphic correlation problems encountered in the drill holes. Detailed mapping is required in the vicinity of the barite lens and drill site to provide information on the structural geology and stratigraphy.

Better topographic control is also needed before any additional drilling is considered. Drill sites require careful field planning to ensure that they are feasible.

Drill core lithologies should be confirmed by petrographic studies and geochemical analyses of drill core should be confirmed by assay.

Detailed prospecting of the Ba, Pb and Ag anomaly on line 56+00E is recommended.

10. BIBLIOGRAPHY AND REFERENCES

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Tempelman-Kluit, D.J.(1977), GSC Open File 486

12. STATEMENT OF EXPENDITURE

* some expenses are incomplete at time of writing

I. Field Expenses (Phase I :trenching sampling)

1) Labour

U.Schmidt (Project Geologist) July 21-31 ,Aug.1-2,5, 1996
14 days @$360/day $5,040.00

M. Tiedgje (Junior Geologist) July 21-31 ,Aug.1-2, 1996
13 days @ $177/day. $2,301.00

R.Beauchamp (Field Assistant) July 21-31 ,Aug.1-2, 1996
13 days @ $177/day. $2,301.00

W. Kalhert (Field Assistant) July 21-31 ,Aug.1-2, 1996
13 days @ $177/day. $2,301.00

$11,943.00

2) Consumables and Supplies $2,155.13
3) Camp and Equipment Rental $1,781.55
4) Transportation
Truck Rental $900.00
Air Charter $4,541.00
5) Geochemical Analysis
soils, 30 element ICP & Au analysis $2,039.59
rock geochem
SUB TOTAL **$23,360.27**

II. Field Expenses (Phase II :Diamond Drilling)

1) Supervision and Labour

U.Schmidt (Project Geologist) Sept. 9, 11-30, Oct.1 1996
22 days @$360/day $7,920.00

R.Beauchamp (Field Assistant) Sept. 11-30, Oct.1 1996
21 days @ $177/day. $3,717.00

$11,637.00

2) Consumables and Supplies $4,829.08
3) Camp and Equipment Rental $1,825.00
4) Transportation
Truck Rental $1,500.00
Air Charter $47,268.95
5) Diamond Drilling $37,445.09
6) Fuel $7,364.86
7) Geochemical Analysis. $1,108.03
8) Room & Board $4,736.41
SUB TOTAL **$117,714.42**

II. OFFICE

Data compilation, Statistical Analysis, Plotting, Interpretation, Report Writing
U. Schmidt Dec. 3,4,5(1/2), 1996
2.5 days @$360/day $1,260.00
for the period from Jan. 2 to 27, 1997
149.5 hours @ $45.00 . . . . . $6,727.50
Expenses $250.00

SUB TOTAL **$8,237.50**

PROJECT TOTAL **$149,312.19**

Appendix A

CERTIFICATIONS OF ANALYSIS

ACME ANALYTICAL

Atna Resources Ltd. PROJECT WOLF FILE # 96-3479

ACME ANALYTICAL

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	Ba* %
W 50+00E 50+00N	22	20	121	200	.5	11	<1	894	9.20	34	<5	<2	19	42	<.2	2	<2	7	.13	.104	85	2	.08	321	<.01	3	.63	.01	.26	<2	5	.62
W 50+00E 49+50N	20	17	100	162	<.3	7	2	667	7.41	28	<5	<2	2	46	<.2	<2	<2	9	.14	.122	67	3	.07	342	<.01	<3	.59	.01	.21	<2	8	.26
W 50+00E 49+00N	20	21	102	206	.3	11	1	1009	8.98	30	<5	<2	10	46	<.2	<2	<2	6	.22	.078	105	3	.12	403	<.01	<3	.66	.01	.25	<2	7	.38
W 50+00E 48+50N	9	12	43	441	<.3	7	1	400	3.66	6	<5	<2	<2	44	.6	<2	<2	16	.71	.096	58	6	.13	159	.01	<3	.76	.01	.08	<2	6	.19
W 50+00E 48+00N	14	18	79	326	<.3	6	2	818	5.38	16	<5	<2	4	28	.3	<2	<2	7	.39	.067	95	2	.14	480	<.01	<3	.83	.02	.11	<2	18	.30
W 50+00E 47+50N	13	16	103	537	<.3	7	2	1362	5.72	11	<5	<2	5	23	.5	<2	<2	5	.30	.066	90	2	.16	241	<.01	<3	.95	.01	.09	<2	7	.21
W 50+00E 47+00N	14	21	216	1155	<.3	6	1	1915	7.09	18	<5	<2	16	15	1.9	<2	<2	2	.20	.044	124	<1	.18	282	<.01	<3	.77	.01	.11	<2	4	.23
W 50+00E 46+50N	12	23	285	1459	.3	8	1	2179	7.02	18	<5	<2	18	16	3.1	<2	<2	3	.23	.041	104	<1	.24	296	<.01	<3	.93	.01	.16	<2	2	.23
W 50+00E 46+00N	17	22	73	439	<.3	12	2	1346	7.28	13	<5	<2	9	38	.3	<2	<2	11	.20	.072	70	3	.12	168	<.01	<3	.70	.01	.13	<2	4	.18
W 50+00E 45+50N	14	53	44	476	.3	37	18	1954	6.51	20	<5	<2	4	48	.8	<2	<2	20	.23	.100	77	4	.18	119	<.01	<3	.96	.01	.14	<2	9	.13
W 51+00E 50+00N	27	28	182	238	.5	9	7	1151	9.57	34	<5	<2	17	73	.3	<2	<2	6	.05	.122	91	2	.07	149	<.01	<3	.61	.01	.42	<2	1	.39
W 51+00E 49+50N	27	27	214	223	.5	10	5	919	9.63	36	<5	<2	17	73	.3	2	<2	6	.06	.125	89	3	.07	146	<.01	<3	.57	.01	.40	<2	<1	.71
W 51+00E 49+00N	28	29	180	240	.6	12	5	1028	9.98	37	<5	<2	17	78	.2	<2	<2	6	.10	.128	98	3	.08	138	<.01	<3	.59	.01	.44	<2	<1	.37
W 51+00E 48+50N	22	24	89	242	.3	10	1	876	9.30	39	<5	<2	20	46	.3	<2	<2	6	.12	.095	97	3	.08	401	<.01	<3	.68	.01	.26	<2	<1	.37
W 51+00E 48+00N	32	28	162	190	.5	14	7	1125	11.59	43	<5	<2	7	75	<.2	<2	<2	9	.15	.142	90	3	.07	262	<.01	<3	.55	.01	.36	<2	<1	.31
W 51+00E 47+50N	11	14	66	73	<.3	6	4	342	4.98	14	<5	<2	<2	42	<.2	<2	<2	14	.20	.110	66	3	.07	283	.01	<3	.76	.03	.13	<2	<1	.15
W 51+00E 47+00N	18	22	91	167	.3	10	4	578	7.74	20	<5	<2	5	69	<.2	<2	<2	8	.54	.135	135	3	.12	355	<.01	<3	.70	.01	.25	<2	<1	.41
W 51+00E 46+50N	26	28	105	227	.4	17	7	1340	8.32	36	<5	<2	22	53	.6	<2	<2	7	.27	.096	142	3	.21	279	<.01	<3	.78	.01	.31	<2	<1	.54
W 51+00E 46+00N	36	40	133	347	.5	25	16	1866	9.68	24	<5	<2	14	51	.3	<2	2	11	.10	.131	148	6	.15	186	.01	<3	.79	.01	.28	<2	<1	.40
W 51+00E 45+50N	11	11	34	199	<.3	12	5	1307	4.99	12	<5	<2	10	25	<.2	<2	<2	5	.20	.061	62	2	.11	114	<.01	<3	.59	<.01	.08	<2	<1	.21
W 51+00E 45+00N	17	5	113	233	<.3	3	1	549	3.81	26	<5	<2	15	11	<.2	5	<2	2	.02	.031	114	1	.02	77	<.01	<3	.20	<.01	.06	<2	<1	.23
W 52+00E 50+00N	33	24	295	87	.8	6	2	393	11.06	32	<5	<2	10	167	<.2	2	<2	10	.02	.191	65	3	.06	79	<.01	<3	.42	.01	.71	<2	<1	.35
W 52+00E 49+50N	38	33	476	350	1.4	6	4	2686	14.15	24	<5	<2	13	128	2.0	<2	<2	8	.06	.134	48	1	.08	89	<.01	<3	.73	.01	.63	<2	<1	.20
W 52+00E 49+00N	40	47	290	255	1.0	18	11	3249	13.69	20	<5	<2	9	120	2.1	<2	<2	11	.08	.138	68	3	.10	104	<.01	<3	.68	.01	.61	<2	1	.16
W 52+00E 48+50N	46	54	358	353	.9	19	13	4119	14.60	26	<5	<2	9	116	2.0	<2	2	13	.03	.143	51	3	.10	108	<.01	<3	.83	.01	.61	<2	1	.14
W 52+00E 48+00N	29	70	499	814	2.0	24	22	5404	15.05	23	<5	<2	11	194	4.6	<2	<2	15	.08	.188	58	2	.10	98	<.01	<3	.87	.01	.51	<2	1	.25
RE W 52+00E 48+00N	30	73	508	833	2.0	26	22	5435	15.29	25	<5	<2	11	198	4.3	<2	2	15	.08	.191	60	2	.11	104	<.01	<3	.88	.01	.52	<2	1	.25
W 52+00E 47+50N	23	38	6209	393	25.5	2	<1	430	5.07	114	<5	<2	9	42	<.2	152	<2	4	.01	.027	23	<1	.02	164	<.01	<3	.14	.01	.17	2	70	43.34
W 52+00E 47+00N	36	36	241	193	.7	14	7	979	11.65	31	<5	<2	5	101	<.2	<2	<2	14	.13	.196	71	7	.12	116	.01	<3	.73	.02	.51	<2	1	.21
W 52+00E 46+50N	37	35	271	219	.8	20	16	1501	10.61	27	<5	<2	16	100	.3	5	<2	8	.15	.190	115	3	.12	154	<.01	<3	.68	.01	.40	<2	1	.47
W 53+00E 50+00N	39	22	348	84	.9	7	2	328	12.18	44	<5	<2	12	223	<.2	<2	<2	9	.04	.216	59	3	.06	65	<.01	<3	.43	.02	.97	<2	<1	.55
W 53+00E 49+50N	37	25	337	97	1.0	4	<1	264	12.67	35	<5	<2	12	193	<.2	<2	<2	10	.01	.204	51	3	.05	79	<.01	<3	.38	.01	.81	<2	<1	.39
W 53+00E 49+00N	43	25	238	88	.6	4	1	604	15.06	25	<5	<2	12	186	<.2	<2	<2	6	.01	.165	37	1	.06	68	<.01	<3	.49	.01	.88	<2	<1	.23
W 53+00E 48+50N	33	52	1242	1346	4.0	5	<1	2675	15.82	31	<5	<2	17	31	4.8	5	2	11	.02	.078	72	1	.08	170	<.01	<3	.78	.01	.18	<2	<1	.21
W 53+00E 48+00N	34	58	831	872	3.2	7	<1	2558	18.38	24	<5	<2	19	18	3.5	3	<2	11	.02	.063	70	1	.07	158	<.01	<3	.79	<.01	.11	<2	1	.24
STANDARD C2/AU-S/SO-15	21	63	40	143	6.4	71	36	1160	3.88	40	18	8	36	51	19.5	17	15	75	.56	.096	40	67	.97	208	.09	27	2.07	.07	.15	12	46	.22

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

ACME ANALYTICAL

Atna Resources Ltd. PROJECT WOLF FILE # 96-3479 Page 3

ACME ANALYTICAL

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	Ba* %
W 54+00E 50+00N	17	11	148	176	<.3	3	1	1418	6.22	13	<5	<2	3	50	<.2	<2	<2	5	.03	.082	78	2	.04	277	<.01	<3	.37	.01	.29	<2	<1	.24
W 54+00E 49+50N	22	18	397	373	<.3	3	<1	1723	12.99	40	<5	<2	16	19	.4	4	2	6	<.01	.077	106	1	.05	65	<.01	<3	.65	.01	.12	<2	1	.17
W 54+00E 49+00N	29	39	211	257	<.3	3	1	1980	16.17	37	<5	<2	16	94	.7	<2	2	5	.01	.105	76	2	.07	216	<.01	<3	.77	.01	.42	<2	1	.22
W 55+00E 50+50N 50+00N	28	15	333	112	.9	5	3	1399	8.56	35	<5	<2	7	115	<.2	3	3	10	.03	.140	53	4	.08	88	<.01	<3	.47	.01	.68	<2	1	.43
W 55+00E 49+50N	42	14	517	46	1.3	4	<1	533	10.46	44	<5	<2	8	207	<.2	2	<2	7	.05	.173	34	2	.04	40	<.01	<3	.25	.02	1.32	<2	1	.46
W 55+00E 48+50N	30	11	435	21	<.3	4	4	254	8.60	43	<5	<2	9	202	<.2	2	4	5	.04	.312	33	2	.06	55	.01	4	.24	.01	1.07	<2	<1	.31
W 55+00E 48+00N	71	8	362	16	<.3	1	<1	100	16.12	43	<5	<2	7	325	<.2	2	<2	12	.01	.226	22	2	.03	44	.01	<3	.18	.03	2.20	<2	<1	.52
55+00E W 55+50E 49+00N	44	14	699	365	1.4	<1	<1	1215	12.02	62	<5	<2	11	154	<.2	<2	<2	7	.01	.155	44	2	.04	52	<.01	<3	.40	.02	1.03	<2	1	.55
W 56+00E 50+00N	14	157	95	1932	<.3	4	4	2174	8.87	26	<5	<2	20	23	7.4	<2	5	2	.29	.042	96	<1	.66	397	<.01	<3	1.26	.01	.16	<2	1	.34
W 56+00E 49+50N	20	96	560	1450	1.4	6	1	1459	9.71	39	<5	<2	17	51	5.7	5	4	4	.11	.072	102	1	.18	301	<.01	<3	.62	.01	.29	<2	2	.42
W 56+00E 49+00N	29	20	2560	173	5.1	1	<1	718	12.51	60	<5	<2	15	177	<.2	24	2	9	.01	.152	66	1	.04	80	<.01	3	.40	.01	.50	<2	3	1.31
RE W 56+00E 49+00N	28	18	2571	171	5.0	4	<1	699	12.45	63	<5	<2	14	175	<.2	20	<2	9	.01	.154	65	1	.04	77	<.01	<3	.40	.01	.50	<2	3	1.32
W 57+00E 50+00N	15	207	66	1426	<.3	3	6	1962	9.31	26	<5	<2	22	32	5.0	<2	2	2	.51	.047	95	1	.78	289	<.01	<3	1.42	.01	.16	<2	13	.29
W 57+00E 49+50N	81	20	1020	1203	2.4	2	<1	7166	10.38	31	<5	<2	17	33	5.6	2	<2	4	.10	.057	142	1	.10	531	<.01	<3	.74	.01	.21	<2	23	.23
W 57+00E 49+00N	19	19	387	267	1.3	7	6	4813	8.34	29	<5	<2	14	112	.6	<2	<2	7	.02	.137	58	2	.07	80	<.01	<3	.66	.01	.83	<2	9	.35
W 57+00E 48+50N	15	189	53	2223	<.3	1	6	2445	8.94	25	<5	<2	22	20	9.1	<2	<2	1	.32	.034	75	1	.92	304	<.01	<3	1.63	.01	.14	<2	5	.32
W 57+00E 48+00N	20	231	119	4022	<.3	6	3	2570	10.83	20	<5	<2	22	17	20.7	<2	2	1	.22	.037	134	<1	.45	225	<.01	<3	1.17	.01	.14	<2	3	.35
W 58+00E 50+00N	14	49	154	1792	<.3	11	6	1578	8.72	19	<5	<2	14	55	6.2	<2	<2	6	.35	.097	84	2	.33	319	<.01	<3	.77	.01	.26	<2	8	.26
W 58+00E 49+50N	16	98	122	3249	<.3	2	5	2476	9.22	13	<5	<2	13	28	11.6	<2	4	1	.52	.033	64	1	.77	252	<.01	<3	1.27	<.01	.20	<2	1	.21
W 58+00E 49+00N	23	55	87	591	<.3	8	4	1168	8.50	34	<5	<2	16	47	2.1	<2	4	7	.27	.089	140	3	.17	247	<.01	3	.53	.01	.20	<2	8	.73
W 58+00E 48+50N	39	49	53	136	<.3	26	1	941	8.09	146	<5	<2	19	41	1.2	2	2	12	2.09	.189	110	8	.84	160	<.01	<3	.69	.01	.19	<2	7	.22
W 58+00E 48+00N	10	296	53	5059	<.3	<1	11	2044	15.07	<2	<5	<2	8	8	16.7	<2	5	<1	.18	.023	24	<1	2.56	65	<.01	<3	6.40	<.01	.12	4	15	.10
W 58+00E 47+50N	8	208	32	292	<.3	<1	8	2551	8.10	21	<5	<2	34	46	.3	<2	<2	<1	1.52	.037	27	<1	1.45	256	<.01	<3	2.88	.01	.16	<2	2	.23
STANDARD C2/AU-S/SO-1S	20	57	39	141	6.2	71	33	1161	3.91	36	21	8	36	51	19.8	15	18	71	.56	.095	40	63	.96	204	.08	28	1.99	.06	.15	11	49	.22

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

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 WOLF File # 96-3479 Page 1

550 - 1600 Granville St., Vancouver BC V6C 1T2 Submitted by: Uwe Schmidt

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	Ba* %
A 70051	11	44	15524	392	66.6	1	<1	18	4.36	116	<5	<2	2	77	1.0	222	<2	1	.56	.008	4	3	.06	101	<.01	11	.65	.05	.51	<2	25	29.48
A 70052	9	34	16452	520	74.6	1	<1	4	3.02	82	<5	<2	2	81	2.7	172	<2	2	.70	.001	5	1	.02	150	<.01	10	.29	.05	.24	<2	32	45.27
A 70053	7	25	24103	517	108.7	1	<1	8	1.17	14	<5	<2	<2	95	2.3	148	<2	2	.72	<.001	3	1	.02	176	<.01	11	.33	.02	.21	<2	25	51.10
A 70054	8	20	18707	382	62.0	1	<1	7	2.48	44	<5	<2	<2	89	2.0	102	<2	1	.21	.004	6	1	.03	151	<.01	10	.27	.01	.24	<2	22	41.91
A 70055	6	56	10612	2354	38.1	2	<1	8	2.19	35	<5	<2	<2	82	10.3	94	2	1	.39	.001	1	<1	.01	111	<.01	11	.21	.02	.16	<2	31	51.15
A 70056	18	18	5537	212	8.9	2	<1	14	4.79	23	<5	<2	11	13	<.2	22	<2	2	<.01	.039	11	1	.01	197	<.01	5	.37	.01	.24	<2	6	.89
A 70057	33	20	40040	460	49.1	2	<1	21	3.90	10	<5	<2	11	65	1.7	54	<2	3	.08	.019	24	6	.02	114	<.01	8	.55	.01	.37	2	41	1.22
A 70058	23	14	3941	210	7.2	2	<1	39	3.84	32	<5	<2	14	22	<.2	35	<2	3	.02	.028	16	1	.01	366	<.01	4	.28	.01	.19	<2	8	1.78
A 70059	7	18	15089	321	48.3	1	<1	10	1.41	21	<5	<2	<2	105	1.4	82	<2	1	.50	.001	7	2	.03	146	<.01	6	.34	.04	.23	<2	29	46.69
A 70060	7	21	16630	373	63.7	<1	<1	8	1.93	37	<5	<2	2	152	2.4	178	<2	1	4.40	<.001	8	<1	.01	263	<.01	682	.24	.13	.14	<2	245	48.20
A 70061	6	22	26316	515	68.0	1	<1	8	1.67	3	<5	<2	<2	107	2.2	146	<2	2	.94	<.001	3	1	.01	212	<.01	50	.23	.01	.16	<2	50	51.04
A 70062	4	12	9915	558	28.3	<1	<1	<2	.53	4	<5	<2	<2	88	2.4	55	<2	<1	.32	<.001	2	<1	.01	276	<.01	54	.01	.01	.01	<2	18	56.45
RE A 70062	4	11	9996	553	28.0	1	<1	2	.53	<2	<5	<2	<2	80	2.2	53	<2	<1	.32	<.001	1	<1	.01	230	<.01	56	.01	.01	.01	<2	20	58.20
A 70063	13	787	29040	13532	212.2	3	<1	65	8.75	45	<5	<2	4	176	69.9	2676	2	4	2.16	<.001	20	2	.03	247	<.01	493	.10	.09	.07	<2	226	10.26
A 70064	6	34	15814	1004	51.3	1	<1	7	2.14	25	<5	<2	<2	111	3.8	146	<2	2	.45	.002	4	1	.01	164	<.01	12	.17	.02	.12	<2	30	51.45
A 70065	13	18	3129	416	11.2	2	<1	183	4.06	11	<5	<2	20	9	<.2	14	<2	2	.01	.024	17	4	.01	1146	<.01	6	.41	.01	.21	<2	6	.73
A 70066	27	38	38761	401	155.2	1	<1	100	2.74	64	<5	<2	4	266	.3	148	<2	1	.01	.017	41	2	.01	128	<.01	4	.19	<.01	.13	<2	191	1.72
A 70067	18	28	11572	399	33.9	2	<1	57	3.29	26	<5	<2	7	67	1.4	62	<2	5	.18	.016	11	3	.08	262	<.01	8	.72	.01	.30	<2	28	21.34
A 70068	8	26	14004	363	46.9	1	<1	31	1.40	28	<5	<2	3	83	1.1	88	<2	1	.72	<.001	8	1	.05	189	<.01	9	.48	.07	.19	<2	34	42.84
A 70069	18	50	2916	918	47.1	1	<1	128	3.24	66	<5	<2	8	94	3.3	120	<2	1	.06	.011	12	4	.10	370	<.01	3	.51	.02	.12	<2	22	27.11
A 70070	20	68	8747	2894	37.1	5	<1	109	8.54	146	<5	<2	5	92	11.5	136	<2	2	.39	.016	6	3	.06	176	<.01	8	.65	.03	.43	<2	25	14.66
A 70071	15	19	2645	236	8.5	3	<1	29	5.66	19	<5	<2	12	18	<.2	22	<2	3	.01	.039	8	3	.01	336	<.01	6	.47	.01	.28	<2	5	1.84
STANDARD C2/AU-R/SO-15	21	60	40	140	6.3	75	37	1190	3.97	37	20	8	36	50	19.7	21	18	75	.53	.105	40	66	.99	207	.08	28	2.02	.06	.15	10	476	.22

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 ROCK P2 TO P3 SOIL AU* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.
BA* .2 GM SAMPLE FUSED WITH 1.2 GM LIBO2, ANALYSIS BY ICP. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: AUG 7 1996 DATE REPORT MAILED: Aug 23/96 SIGNED BY: C. Leong ..D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

> 100 ppm

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

ASSAY CERTIFICATE

Atna Resources Ltd. PROJECT WOLF File # 96-3479R

1550 - 409 Granville St., Vancouver BC V6C 1T2 Submitted by: Uwe Schmidt

SAMPLE#	Pb %	Ag oz/t
A 70051	1.25	2.20
A 70052	1.38	2.57
A 70053	2.05	3.95
A 70054	1.59	2.18
A 70055	.96	1.36
A 70056	.44	.32
A 70057	3.17	1.63
A 70058	.34	.17
A 70059	1.36	1.74
A 70060	1.36	2.31
A 70061	2.24	2.35
A 70062	1.00	1.13
RE A 70062	.96	1.07
A 70063	48.93	40.01
A 70064	1.44	1.86
A 70065	.26	.30
A 70066	4.41	5.08
A 70067	1.05	1.25
A 70068	1.25	1.79
A 70069	.25	1.74
A 70070	.78	1.46
A 70071	.22	.32
STANDARD R-1	1.23	2.93

1 GM SAMPLE LEACHED IN 75 ML AQUA - REGIA, DILUTE TO 250 ML, ANALYSIS BY ICP.
- SAMPLE TYPE: ROCK PULP
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: AUG 21 1996 DATE REPORT MAILED: Aug 27/96 SIGNED BY ..... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

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 WOLF File # 96-3480

1550 - 409 Granville St., Vancouver BC V6C 1T2 Submitted by: Uwe Schmidt

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	Ba* ppm
WT4-01-96	9	35	587	505	1.2	2	<1	464	5.91	7	<5	<2	25	6	.4	2	<2	1	.01	.017	52	1	.01	667	<.01	<3	.35	.01	.25	<2	<1	2142
WT4-02-96	18	30	536	629	1.2	1	1	790	4.97	9	<5	<2	30	6	2.0	2	<2	1	.02	.016	86	1	.01	799	<.01	<3	.34	.01	.22	<2	<1	2390
WT4-03-96	17	34	964	840	2.7	6	1	507	6.02	24	<5	<2	23	8	2.5	5	<2	3	.02	.029	63	1	.01	879	<.01	<3	.36	<.01	.23	<2	<1	3019
WT4-04-96	15	48	1902	1010	10.6	1	<1	276	5.46	34	<5	<2	17	7	2.8	36	<2	3	.01	.024	39	1	.02	628	<.01	3	.36	<.01	.23	<2	3	3246
WT4-05-96	16	49	506	1602	2.7	2	<1	881	6.67	14	<5	<2	16	4	4.4	3	<2	3	.01	.017	48	1	.01	541	<.01	<3	.38	<.01	.24	<2	2	3078
WT4-06-96	12	78	408	1812	1.3	2	<1	479	8.34	4	<5	<2	19	3	3.4	<2	<2	1	.01	.005	37	1	.01	320	<.01	<3	.43	<.01	.24	<2	<1	2934
WT4-07-96	12	65	811	1599	2.2	<1	<1	259	7.80	12	<5	<2	15	2	2.9	<2	<2	2	.01	.014	25	1	.01	296	<.01	<3	.39	<.01	.23	<2	1	3203
WT4-08-96	13	77	920	1424	2.5	<1	<1	357	8.47	8	<5	<2	25	4	1.7	<2	<2	2	.02	.022	72	1	.01	287	<.01	<3	.40	<.01	.24	<2	<1	3777
WT4-09-96	14	79	1878	1093	7.5	2	<1	227	7.64	18	<5	<2	19	8	1.1	8	<2	1	.01	.014	25	2	.01	399	<.01	<3	.35	<.01	.22	<2	6	4496
WT4-10-96	15	72	1391	982	5.9	2	<1	282	5.75	14	<5	<2	22	4	1.3	<2	<2	1	.01	.012	37	2	.01	360	<.01	3	.37	<.01	.22	<2	2	4920
WT4-11-96	26	175	4032	1831	18.4	2	<1	730	10.00	74	<5	<2	17	7	3.1	17	6	5	.01	.023	46	1	.02	516	<.01	3	.43	<.01	.24	<2	19	7807
WT4-12-96	17	109	479	1075	2.8	5	<1	765	7.46	25	<5	<2	17	5	.9	3	3	6	.01	.021	33	<1	.01	428	<.01	3	.38	<.01	.22	<2	4	6768
WT4-13-96	33	115	648	1474	2.4	3	<1	1151	7.16	27	<5	<2	19	11	2.3	2	2	7	.14	.018	58	1	.01	445	<.01	6	.41	<.01	.23	<2	3	6127
WT4-14-96	11	61	717	884	4.2	1	<1	595	5.60	35	<5	<2	18	7	.7	6	<2	1	.03	.010	47	1	.01	465	<.01	5	.37	<.01	.23	<2	5	5376
WT4-15-96	4	58	92	672	<.3	2	1	1610	4.01	<2	<5	<2	21	25	2.3	<2	<2	1	.38	.006	155	2	.02	800	<.01	4	.37	<.01	.22	<2	1	5787
RE WT4-15-96	5	57	92	670	<.3	1	1	1610	4.00	<2	<5	<2	21	25	2.2	<2	4	1	.38	.006	155	2	.02	800	<.01	3	.36	.01	.22	<2	1	5937
WT4-16-96	32	63	137	779	<.3	3	1	2138	4.37	<2	<5	<2	22	18	3.1	<2	<2	1	.34	.005	185	2	.02	976	<.01	3	.38	<.01	.22	<2	<1	5909
WT4-17-96	5	33	117	413	.3	2	<1	1027	4.10	<2	<5	<2	18	11	1.1	<2	<2	<1	.19	.005	104	1	.01	599	<.01	<3	.31	.01	.19	<2	<1	4906
WT4-18-96	6	31	94	426	<.3	3	<1	1335	3.83	2	<5	<2	15	20	1.6	<2	<2	1	.64	.006	171	1	.02	393	<.01	<3	.30	<.01	.19	<2	<1	4092
WT4-19-96	10	53	238	400	.9	2	<1	494	5.23	11	<5	<2	20	6	.3	2	<2	1	.08	.015	55	1	.01	417	<.01	<3	.35	<.01	.21	<2	<1	3971
WT4-20-96	5	43	194	387	.9	2	<1	349	5.46	6	<5	<2	18	4	<.2	2	<2	2	.02	.017	26	1	.01	564	<.01	3	.37	.01	.23	<2	<1	4303
WT4-21-96	14	37	205	450	.5	3	<1	338	6.39	13	<5	<2	25	3	<.2	<2	<2	2	.01	.018	30	<1	.01	341	<.01	<3	.35	<.01	.22	<2	<1	4329
STANDARD C2/AU-R/SO-15	22	61	38	142	6.6	77	37	1237	4.12	43	22	8	38	55	20.4	16	18	77	.56	.099	43	69	1.05	214	.09	27	2.00	.07	.17	11	520	2227

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
- SAMPLE TYPE: ROCK AU* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.
BA* .2 GM SAMPLE FUSED WITH 1.2 GM LIBO2, ANALYSIS BY ICP. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: AUG 7 1996 **DATE REPORT MAILED:** Aug 15/96 **SIGNED BY** C. Leong ..D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

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 NOVEL File # 96-5071 Page 1

1550 - 409 Granville St. Vancouver BC V6C 1T2 Submitted by: Uwe Schmidt

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	Ba* ppm	SAMPLE lb
HOLE 1																																
A 70072	46	20	128	49	2.6	<1	1	207	11.89	33	<5	<2	7	25	<.2	10	7	<1	.52	.008	20	2	.24	<1	<.01	3	.40	.01	.25	2	2	3050	17
A 70073	24	14	141	22	2.0	<1	<1	201	12.83	24	<5	<2	5	17	<.2	10	5	<1	.45	.007	15	2	.19	<1	<.01	<3	.40	<.01	.25	<2	1	10381	20
A 70074	22	11	75	39	.9	<1	<1	232	7.88	22	<5	<2	3	16	<.2	6	2	<1	.52	.011	8	2	.22	3	<.01	3	.37	<.01	.23	<2	<1	47278	16
A 70075	11	7	64	44	.7	<1	<1	536	8.85	17	<5	<2	3	25	.2	5	5	<1	1.35	.005	8	2	.51	3	<.01	<3	.39	<.01	.25	<2	<1	24433	18
A 70076	7	8	426	1710	1.5	1	<1	1050	10.05	38	6	<2	2	89	6.5	10	6	<1	2.57	.003	7	1	1.01	3	<.01	<3	.44	.01	.26	<2	<1	5393	18
A 70077	7	8	2376	5094	6.0	2	<1	1036	8.18	31	<5	<2	2	56	26.6	14	6	<1	2.82	.002	6	2	.88	<1	<.01	<3	.36	.01	.22	<2	1	41225	10
A 70078	13	18	3349	7817	7.8	<1	1	543	5.02	31	<5	<2	12	53	41.8	9	2	<1	1.39	.021	88	3	.20	<1	<.01	<3	.58	<.01	.28	<2	3	45120	7
A 70079	7	103	2143	14656	9.7	3	<1	1180	5.55	58	<5	<2	9	92	78.0	9	5	1	2.34	.020	83	4	.25	<1	<.01	5	.50	<.01	.25	5	4	3104	12
A 70080	14	34	284	908	3.0	3	2	3378	6.64	19	<5	<2	6	72	5.8	4	8	1	2.21	.015	32	4	.88	11	<.01	<3	.44	.01	.28	<2	<1	4968	13
A 70081	22	1312	5114	10729	35.3	8	9	2586	16.91	253	<5	<2	17	80	66.5	156	4	1	1.19	.009	121	3	.25	<1	<.01	<3	.39	<.01	.20	<2	13	4261	7
A 70082	15	125	4481	12851	18.8	13	<1	864	5.70	56	<5	<2	17	103	58.4	58	<2	4	2.35	.016	109	2	.17	16	<.01	<3	.61	<.01	.22	3	6	99999	7
RE A 70082	15	121	4370	12554	18.1	12	<1	843	5.53	53	<5	<2	17	102	56.2	55	5	3	2.25	.016	107	3	.16	13	<.01	<3	.40	<.01	.22	<2	6	99999	-
A 70083	17	43	919	8212	7.2	30	11	1407	7.98	57	7	<2	14	47	38.6	14	10	7	2.89	.047	86	5	.55	10	<.01	<3	.57	.01	.22	<2	9	5889	6
A 70084	12	50	79	89	1.0	49	35	466	7.83	31	<5	<2	3	40	<.2	3	3	10	2.46	.133	8	5	.09	5	<.01	<3	.53	.01	.30	<2	<1	2656	8
A 70085	17	51	152	72	1.4	58	37	702	7.00	45	8	<2	4	78	.5	9	<2	12	3.77	.174	10	6	.08	1	<.01	<3	.55	.01	.35	<2	<1	2333	8
HOLE 2 A 70086	13	36	527	309	3.1	9	1	860	5.96	32	<5	<2	6	53	1.2	4	8	2	1.21	.015	34	4	.31	11	<.01	<3	.40	<.01	.28	<2	1	2525	8
A 70087	13	21	227	161	1.9	1	1	2698	7.51	14	<5	<2	6	58	.8	2	3	1	1.89	.012	34	3	.75	18	<.01	<3	.38	.01	.27	<2	<1	2394	18
A 70088	1	6	58	52	.7	<1	1	3077	7.87	5	<5	<2	6	26	<.2	<2	6	<1	.94	.013	36	4	.52	18	<.01	<3	.31	<.01	.23	2	<1	2511	4
A 70089	17	100	3699	14661	20.2	8	1	1686	7.35	72	<5	<2	10	37	72.8	26	<2	2	.84	.015	58	2	.29	10	<.01	<3	.38	.01	.25	6	6	97797	18
A 70090	8	29	5584	23344	18.4	<1	<1	50	2.20	40	<5	<2	10	48	102.4	25	<2	<1	.35	.006	50	2	.02	3	<.01	7	.33	<.01	.16	15	8	99999	11
A 70091	11	82	16959	45580	50.4	2	<1	68	1.59	23	<5	<2	9	35	182.5	77	3	<1	1.04	.004	14	2	.06	11	.01	11	1.10	.01	.51	<2	5	99999	12
A 70092	20	41	373	13234	5.3	6	<1	2311	7.90	40	<5	<2	12	28	82.4	6	3	4	.71	.011	81	2	.53	6	<.01	<3	.42	<.01	.23	3	3	10645	7
A 70093	10	33	986	3564	7.6	4	<1	985	5.48	76	<5	<2	9	65	14.5	17	6	3	1.66	.009	47	4	.50	7	<.01	3	.44	.01	.25	<2	3	10283	13
A 70094	11	125	5209	25858	20.6	7	1	873	4.84	21	<5	<2	9	26	161.3	71	<2	2	2.76	.006	33	3	.37	9	.01	8	1.12	<.01	.56	<2	19	99999	12
A 70095	76	90	1094	17512	7.4	150	12	328	12.29	183	<5	<2	9	10	91.0	23	9	13	.35	.035	28	4	.11	1	<.01	<3	.46	<.01	.27	<2	8	3697	7
A 70096	8	23	103	167	3.4	5	1	309	5.42	50	<5	<2	4	61	.6	9	3	<1	1.23	.012	21	8	.34	2	<.01	<3	.28	<.01	.20	2	2	6712	14
A 70097	17	21	91	2102	1.8	4	1	417	4.76	34	<5	<2	4	69	10.0	8	4	1	1.86	.015	25	6	.70	<1	<.01	<3	.27	<.01	.23	<2	3	7496	17
A 70098	3	26	108	106	3.3	6	<1	526	3.61	37	<5	<2	7	140	.3	7	3	1	1.58	.023	62	8	.28	26	<.01	3	.37	.01	.28	9	4	5376	16
A 70099	30	60	1879	6079	8.0	3	1	737	5.69	49	<5	<2	8	233	27.6	26	3	1	3.07	.031	83	8	.48	4	.01	5	.81	<.01	.47	4	4	4884	17
A 70100	12	145	2913	10156	8.8	4	4	1280	5.57	57	<5	<2	2	156	32.9	49	<2	<1	3.43	.020	15	5	.99	8	<.01	<3	.38	<.01	.27	2	6	4983	17
A 70351	10	21	427	1479	1.7	<1	<1	3876	4.88	21	<5	<2	9	70	5.9	5	6	<1	1.01	.016	55	4	.34	36	<.01	<3	.68	<.01	.36	<2	1	3036	9
STANDARD C	20	62	41	146	7.5	76	37	1167	3.92	43	24	8	35	52	20.8	16	25	73	.53	.104	40	64	1.01	195	.08	24	2.05	.07	.15	12	478	2252	-

Standard is STANDARD C2/AU-R/SO-15.

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: CORE AU* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.
BA* .2 GM SAMPLE FUSED WITH 1.2 GM LIBO2, ANALYSIS BY ICP. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: OCT 5 1996 DATE REPORT MAILED: Oct 15/96. SIGNED BY..... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

Assay Ba recommended for > 10%.

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

WHOLE ROCK ICP ANALYSIS

Atna Resources Ltd. PROJECT WOLF File # 96-5071R Page 1

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

SAMPLE#	Ba %
A 70073	1.04
A 70074	4.77
A 70075	2.55
A 70077	4.30
A 70078	4.55
A 70082	12.46
A 70089	9.46
A 70090	29.07
A 70091	26.97
A 70092	1.01
A 70093	1.02
A 70094	16.00
RE A 70094	16.00

BA BY LIBO2 FUSION, ANALYSIS BY ICP.
- SAMPLE TYPE: CORE PULP
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: OCT 22 1996 **DATE REPORT MAILED:** Nov 4/96 **SIGNED BY.....** D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

ACME ANALYTICAL

Atna Resources Ltd. PROJECT WOLF FILE # 96-5071

ACME ANALYTICAL

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
W96-1-19	18	21	47	74	.8	7	4	83	3.43	13	<5	<2	5	82	<.2	6	<2	1	.41	.053	30	5	.05	22	<.01	<3	.35	.01	.27	2
W96-1-160	5	14	55	31	.5	2	2	259	1.81	12	<5	<2	4	371	<.2	4	<2	<1	1.68	.036	31	2	.24	49	<.01	3	.39	.02	.24	<2
W96-1-307	16	50	5387	22028	10.5	6	3	1343	6.14	42	<5	<2	23	37	127.9	19	<2	2	2.00	.018	204	5	.47	13	<.01	<3	.56	.01	.32	<2
W96-1-350	6	346	200	1465	5.0	39	31	1765	10.21	57	<5	<2	<2	85	5.8	28	<2	10	2.95	.131	12	7	.48	15	<.01	<3	.45	.01	.26	<2
W96-2-49	6	33	72	171	2.1	8	4	135	2.88	11	<5	<2	4	145	.8	5	<2	2	.62	.057	26	4	.09	21	<.01	3	.37	<.01	.26	<2
W96-2-201	8	26	141	62	2.6	3	3	710	9.72	25	<5	<2	7	11	<.2	8	<2	1	.44	.020	41	2	.19	7	<.01	<3	.40	<.01	.26	<2
RE W96-2-201	8	24	130	55	2.6	3	3	677	9.41	23	<5	<2	6	11	<.2	6	<2	1	.42	.019	41	1	.18	7	<.01	<3	.38	<.01	.25	<2
W96-2-478	11	10	29	25	.3	11	1	574	3.51	10	<5	<2	6	35	<.2	2	<2	1	1.03	.011	33	2	.25	32	<.01	<3	.36	<.01	.28	<2
W96-2-490	23	39	345	27	4.4	165	4	45	9.34	269	17	<2	34	8	<.2	24	<2	8	.11	.020	24	2	.02	9	<.01	<3	.50	<.01	.33	<2
W96-3-281	19	36	2132	3051	4.2	4	3	292	5.29	26	<5	<2	7	34	15.0	9	<2	1	.79	.029	33	5	.23	14	<.01	<3	.30	<.01	.26	<2
W96-3-447	1	23	54	30	2.9	1	2	62	5.13	31	<5	<2	4	16	<.2	7	<2	1	.14	.044	49	1	.02	13	<.01	4	.38	<.01	.28	<2
STANDARD C2	21	62	45	152	7.3	78	39	1187	3.98	40	23	8	38	54	21.3	18	21	78	.56	.107	41	66	1.02	204	.09	27	2.06	.06	.15	15

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

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

WHOLE ROCK ICP ANALYSIS

Atna Resources Ltd. PROJECT WOLF File # 96-5071R Page 2

1550 - 409 Granville St., Vancouver BC V6C 1T2 Submitted by: Uwe Schmidt

SAMPLE#	Ba ppm
W96-1-19	3173
W96-1-160	2668
W96-1-307	10779
W96-1-350	1807
W96-2-49	4299
W96-2-201	4171
RE W96-2-201	4063
W96-2-478	1602
W96-2-490	1647
W96-3-281	5792
W96-3-447	5983

GEOCHEM BA BY FUSION, ANALYSIS BY ICP.
- SAMPLE TYPE: CORE PULP
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: OCT 22 1996 **DATE REPORT MAILED:** Nov 4/96 **SIGNED BY.....** D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

Appendix B

STATISTICS

SILVER STATISTICS

SUMMARY OF STATISTICS

Element Ag Units: ppm Number of Samples: 31

Truncation

	Number of Samples Excluded
Lower: <.3	24
Upper: 7	1

Arithmetic Range: Min.: <.3 Max.: 25.5

Mean: 1.925 Standard Deviation: 4.442

Population Boundaries (%) : 90

Populations: Log values

Population	Mean	SD	%Population
1	-0.1464	0.2618	90
2	0.5487	0.1395	10

Population Thresholds

Population Parameter	Log Concentration	Arithmetic Value	Threshold Used
$\bar{x}(1)$	-0.1464	0.71	0.7
$\bar{x}$-2Sx(2)	0.2698	1.86	1.9
$\bar{x}(2)$	0.5487	3.54	3.5
$\bar{x}$+2Sx(2)	0.8277	6.73	6.7

Wolf Property

SUMMARY STATISTICS and HISTOGRAM — LOGARITHMIC VALUES

Variable = Ag Unit = ppm N = 32

Mean =	-0.0274	Min =	-0.5229	1st Quartile =	-0.3010
Std. Dev. =	0.4221	Max =	1.4065	Median =	-0.0458
CV % =	1537.8731	Skewness =	1.3262	3rd Quartile =	0.1461

Anti-Log Mean = 0.939 Anti-Log Std. Dev. : (-) 0.355
(+) 2.481

%	cum %	antilog	cls int	(# of bins = 16 - bin size = 0.1286)
0.00	1.52	0.259	-0.5872	
15.63	16.67	0.348	-0.4586	*****
3.13	19.70	0.468	-0.3299	*
21.88	40.91	0.629	-0.2013	*******
9.38	50.00	0.846	-0.0727	***
15.63	65.15	1.137	0.0559	*****
15.63	80.30	1.530	0.1846	*****
3.13	83.33	2.057	0.3132	*
3.13	86.36	2.766	0.4418	*
3.13	89.39	3.719	0.5705	*
3.13	92.42	5.001	0.6991	*
3.13	95.45	6.725	0.8277	*
0.00	95.45	9.044	0.9563	
0.00	95.45	12.161	1.0850	
0.00	95.45	16.353	1.2136	
0.00	95.45	21.990	1.3422	
3.13	98.48	29.570	1.4709	*

0 1 2 3 4

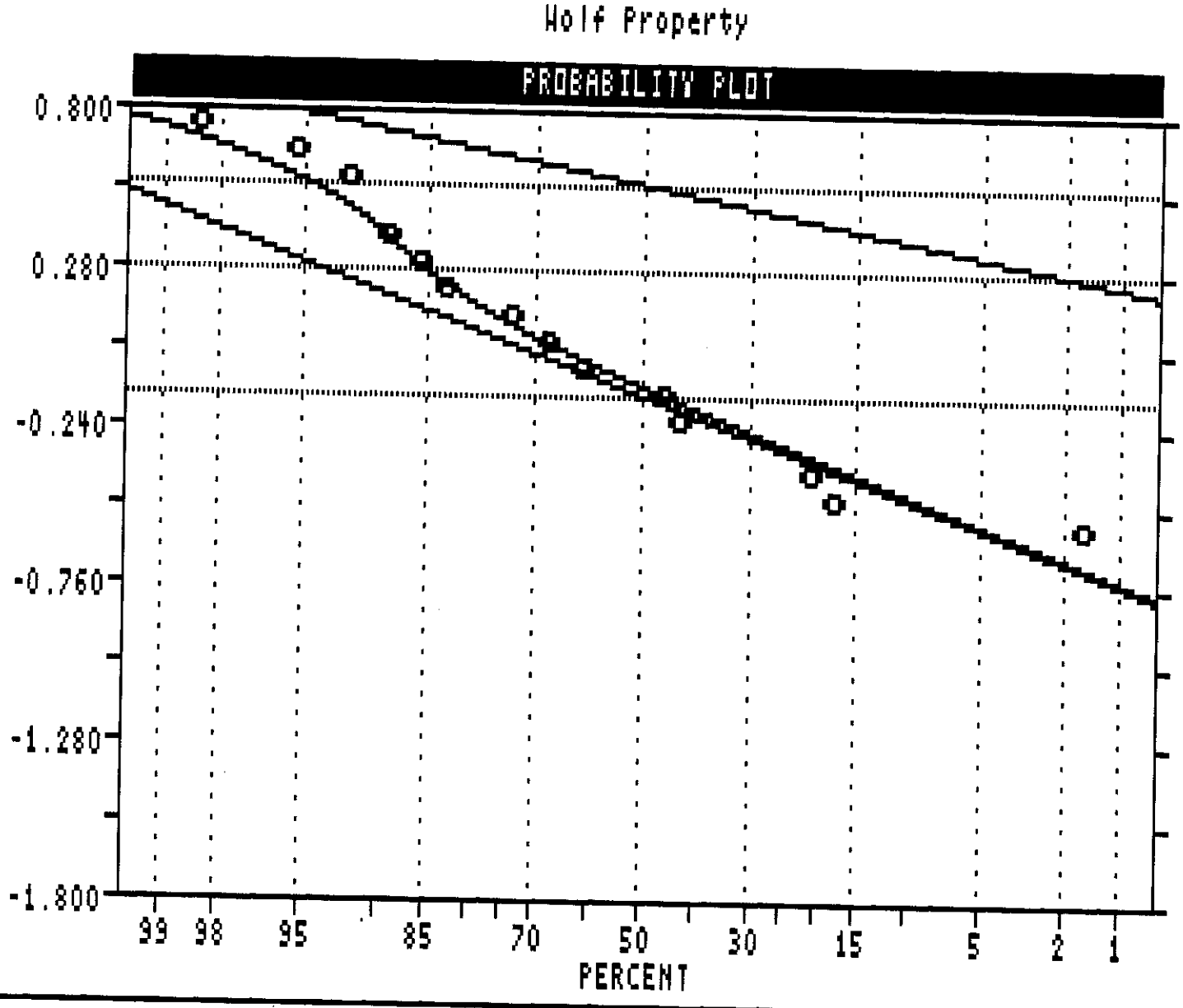
Wolf Property

SUMMARY STATISTICS and HISTOGRAM — ARITHMETIC VALUES

Variable = Ag		Unit =	ppm	N =	32
Mean =	1.925	Min =	0.300	1st Quartile =	0.500
Std. Dev. =	4.442	Max =	25.500	Median =	0.900
CV % =	230.762	Skewness =	4.818	3rd Quartile =	1.400

%	cum %	cls int	(# of bins = 16 - bin size = 1.680)
0.00	1.52	-0.540	
65.63	65.15	1.140	**********
21.88	86.36	2.820	*******
6.25	92.42	4.500	**
3.13	95.45	6.180	*
0.00	95.45	7.860	
0.00	95.45	9.540	
0.00	95.45	11.220	
0.00	95.45	12.900	
0.00	95.45	14.580	
0.00	95.45	16.260	
0.00	95.45	17.940	
0.00	95.45	19.620	
0.00	95.45	21.300	
0.00	95.45	22.980	
0.00	95.45	24.660	
3.13	98.48	26.340	*

0 1 2 3 4



LOGARITHMIC VALUES

VARIABLE = Ag
UNIT = ppm
N = 31
N CI = 15

POPULATIONS

Pop.	Mean	Std.Dev.	%
1	-0.1464	0.2618	90.0
2	0.5487	0.1395	10.0

THRESHOLDS

0.8277	0.5487
0.2698	-0.1464

USERS VISUAL
PARAMETER ESTIMATES

ARSENIC STATISTICS

SUMMARY OF STATISTICS

Element As Units: ppm Number of Samples: 53

Truncation

	Number of Samples Excluded
Lower: ≤2	1
Upper: 75	2

Arithmetic Range: Min.: 6 Max.: 146

Mean: 31.95 Standard Deviation: 22.17

Population Boundaries (%) :15,97

Populations: Log values

Population	Mean	SD	%Population
1	1.0739	0.1285	15
2	1.4623	0.12228	82
3	1.6884	0.0778	3

Population Thresholds

Population Parameter	Log Concentration	Arithmetic Value	Threshold Used
$\bar{x}(1)$	1.0739	11.85	12
$\bar{x}$-2Sx(2)	1.2167	16.47	16
$\bar{x}(2)$	1.4623	28.99	29
$\bar{x}(3)$	1.6884	48.80	49
$\bar{x}$+2Sx(3)	1.8439	69.81	70

Wolf Property

SUMMARY STATISTICS and HISTOGRAM — LOGARITHMIC VALUES

Variable = As Unit = ppm N = 53

Mean =	1.4145	Min =	0.7782	1st Quartile =	1.3010
Std. Dev. =	0.1910	Max =	1.7782	Median =	1.4232
CV % =	13.5052	Skewness =	-0.8821	3rd Quartile =	1.5471

Anti-Log Mean = 25.969 Anti-Log Std. Dev. : (-) 16.728 (+) 40.317

%	cum %	antilog	cls int	(# of bins = 36 - bin size = 0.0286)
0.00	0.00	5.806	0.7639	
1.89	1.89	6.201	0.7924	*
0.00	1.89	6.622	0.8210	
0.00	1.89	7.073	0.8496	
0.00	1.89	7.554	0.8782	
0.00	1.89	8.067	0.9067	
0.00	1.89	8.616	0.9353	
0.00	1.89	9.205	0.9639	
0.00	1.89	9.832	0.9924	
0.00	1.89	10.496	1.0210	
1.89	3.77	11.209	1.0496	*
0.00	3.77	11.972	1.0782	
1.89	5.66	12.786	1.1067	*
5.66	11.32	13.655	1.1353	***
1.89	13.21	14.584	1.1639	*
0.00	13.21	15.575	1.1924	
1.89	15.09	16.634	1.2210	*
0.00	15.09	17.766	1.2496	
3.77	18.87	18.974	1.2782	**
9.43	28.30	20.264	1.3067	*****
1.89	30.19	21.642	1.3353	*
1.89	32.08	23.113	1.3639	*
5.66	37.74	24.685	1.3924	***
11.32	49.06	26.364	1.4210	******
3.77	52.83	28.157	1.4496	**
3.77	56.60	30.071	1.4782	**
7.55	64.15	32.116	1.5067	****
5.66	69.81	34.300	1.5353	***
7.55	77.36	36.632	1.5639	****
7.55	84.91	39.123	1.5924	****
1.89	86.79	41.784	1.6210	*
11.32	98.11	44.625	1.6496	******
0.00	98.11	47.660	1.6782	
0.00	98.11	50.901	1.7067	
0.00	98.11	54.362	1.7353	
0.00	98.11	58.058	1.7639	
1.89	100.00	62.006	1.7924	*

0 1 2 3 4

Wolf Property

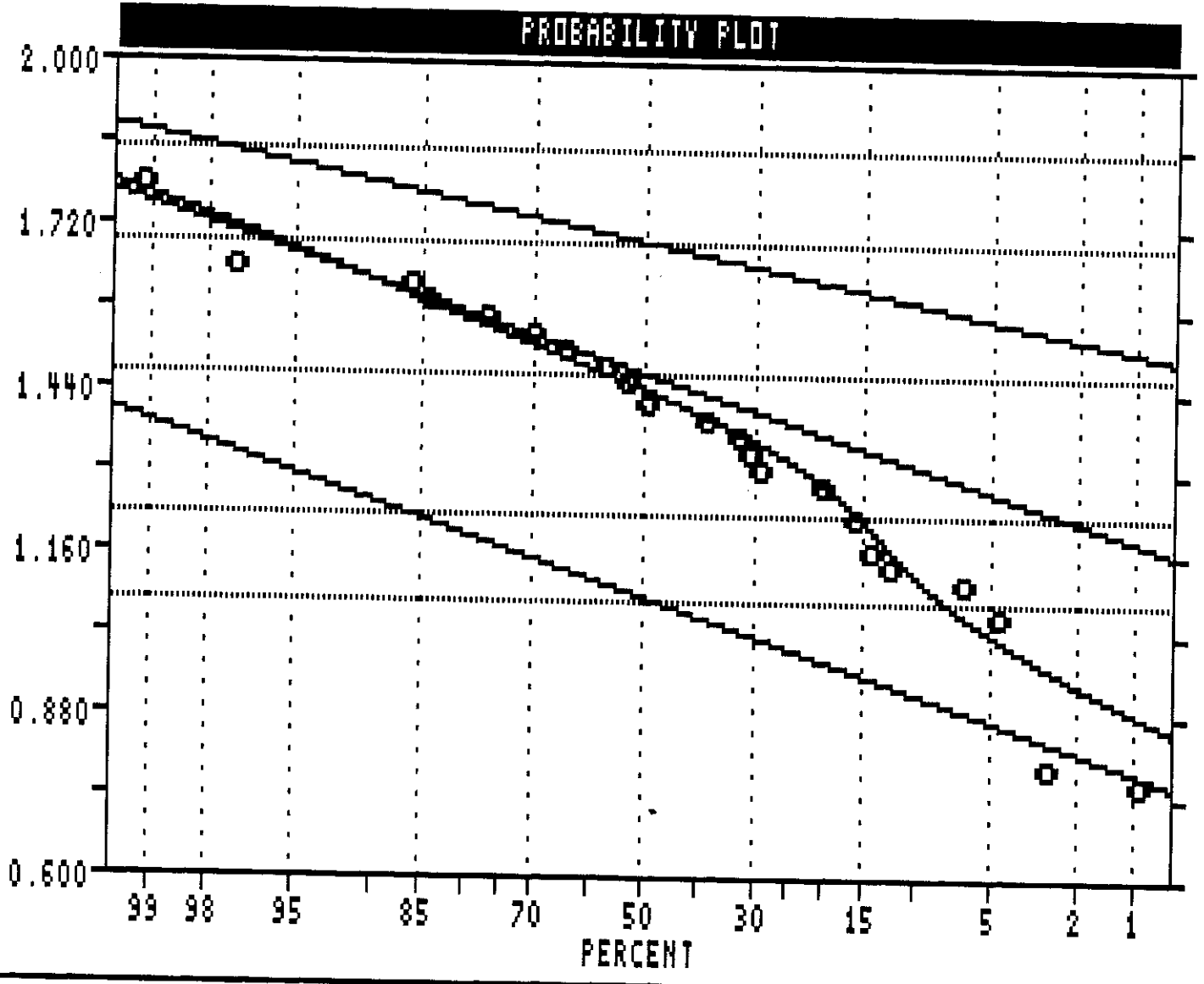
SUMMARY STATISTICS and HISTOGRAM — ARITHMETIC VALUES

Variable = As Unit = ppm N = 53

Mean =	28.245	Min =	6.000	1st Quartile =	20.000
Std. Dev. =	10.806	Max =	60.000	Median =	26.500
CV % =	38.257	Skewness =	0.273	3rd Quartile =	35.250

%	cum %	cls int	(# of bins = 36 - bin size = 1.549)
0.00	0.93	5.229	
1.89	2.78	6.771	*
0.00	2.78	8.314	
0.00	2.78	9.857	
1.89	4.63	11.400	*
1.89	6.48	12.943	*
7.55	13.89	14.486	****
1.89	15.74	16.029	*
0.00	15.74	17.571	
5.66	21.30	19.114	***
7.55	28.70	20.657	****
1.89	30.56	22.200	*
1.89	32.41	23.743	*
9.43	41.67	25.286	*****
7.55	49.07	26.829	****
3.77	52.78	28.371	**
1.89	54.63	29.914	*
7.55	62.04	31.457	****
1.89	63.89	33.000	*
5.66	69.44	34.543	***
7.55	76.85	36.086	****
3.77	80.56	37.629	**
3.77	84.26	39.171	**
1.89	86.11	40.714	*
1.89	87.96	42.257	*
5.66	93.52	43.800	***
3.77	97.22	45.343	**
0.00	97.22	46.886	
0.00	97.22	48.429	
0.00	97.22	49.971	
0.00	97.22	51.514	
0.00	97.22	53.057	
0.00	97.22	54.600	
0.00	97.22	56.143	
0.00	97.22	57.686	
0.00	97.22	59.229	
1.89	99.07	60.771	*

0 1 2 3 4



LOGARITHMIC VALUES

VARIABLE = As
UNIT = ppm
N = 53
N CI = 36

POPULATIONS

Pop.	Mean	Std.Dev.	%
1	1.0739	0.1285	15.0
2	1.4623	0.1228	82.0
3	1.6884	0.0778	3.0

THRESHOLDS

1.8439 1.6884
1.4623 1.2167
1.0739

USERS VISUAL
PARAMETER ESTIMATES

GOLD STATISTICS

SUMMARY OF STATISTICS

Element Au Units: ppb Number of Samples: 37

Truncation

	Number of Samples Excluded
Lower: ≤1	19
Upper: 30	1

Arithmetic Range: Min.: ≤1 Max.: 70

Mean: 6.811 Standard Deviation: 11.895

Population Boundaries (%) :70

Populations: Log values

Population	Mean	SD	%Population
1	0.2879	0.3362	70
2	1.0050	0.1769	30

Population Thresholds

Population Parameter	Log Concentration	Arithmetic Value	Threshold Used
$\bar{x}(1)$	0.2879	1.94	2
$\bar{x}$-2Sx(2)	0.6513	4.48	5
$\bar{x}(2)$	1.0050	10.12	10
$\bar{x}$+2Sx(2)	1.3587	22.84	23

Wolf Property

SUMMARY STATISTICS and HISTOGRAM — LOGARITHMIC VALUES

Variable = Au Unit = ppb N = 36

Mean =	0.4805	Min =	0.0000	1st Quartile =	0.0000
Std. Dev. =	0.4532	Max =	1.3617	Median =	0.4771
CV % =	94.3156	Skewness =	0.2472	3rd Quartile =	0.9031

Anti-Log Mean = 3.023 Anti-Log Std. Dev. : (-) 1.065 (+) 8.584

%	cum %	antilog	cls int	(# of bins = 16 - bin size = 0.0908)
0.00	1.35	0.901	-0.0454	
38.89	39.19	1.110	0.0454	**********
0.00	39.19	1.368	0.1362	
0.00	39.19	1.686	0.2270	
8.33	47.30	2.078	0.3177	***
0.00	47.30	2.560	0.4085	
5.56	52.70	3.157	0.4993	**
0.00	52.70	3.891	0.5901	
5.56	58.11	4.796	0.6809	**
5.56	63.51	5.911	0.7716	**
11.11	74.32	7.285	0.8624	****
8.33	82.43	8.979	0.9532	***
5.56	87.84	11.066	1.0440	**
2.78	90.54	13.639	1.1348	*
2.78	93.24	16.810	1.2256	*
2.78	95.95	20.717	1.3163	*
2.78	98.65	25.534	1.4071	*

0 1 2 3 4

Wolf Property

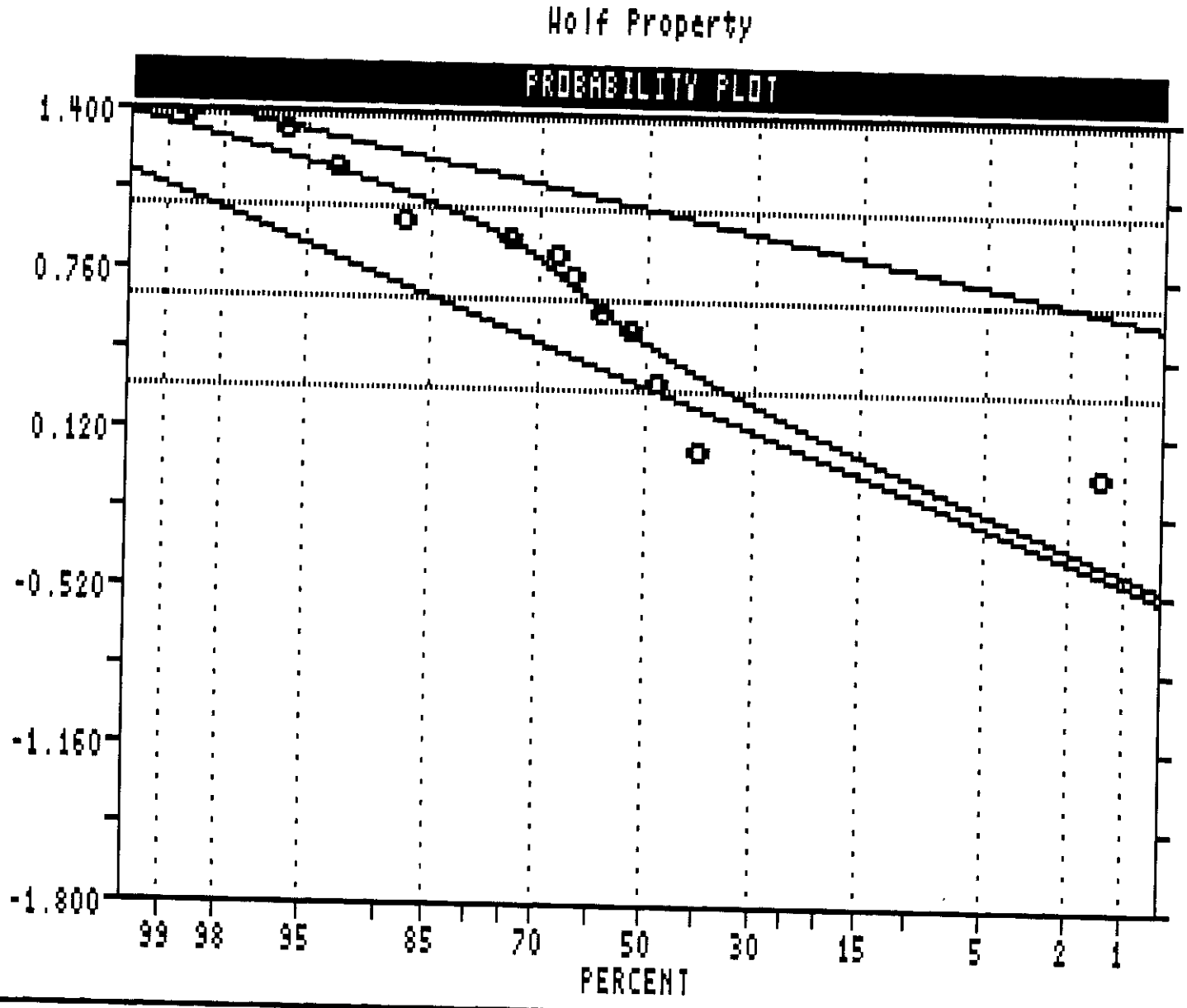
SUMMARY STATISTICS and HISTOGRAM — ARITHMETIC VALUES

Variable = Au Unit = ppb N = 36

Mean =	5.056	Min =	1.000	1st Quartile =	1.000
Std. Dev. =	5.318	Max =	23.000	Median =	3.000
CV % =	105.194	Skewness =	1.636	3rd Quartile =	8.000

%	cum %	cls int	(# of bins = 16 - bin size = 1.467)
0.00	1.35	0.267	
38.89	39.19	1.733	**********
13.89	52.70	3.200	*****
5.56	58.11	4.667	**
8.33	66.22	6.133	***
8.33	74.32	7.600	***
13.89	87.84	9.067	*****
0.00	87.84	10.533	
0.00	87.84	12.000	
2.78	90.54	13.467	*
0.00	90.54	14.933	
2.78	93.24	16.400	*
0.00	93.24	17.867	
2.78	95.95	19.333	*
0.00	95.95	20.800	
0.00	95.95	22.267	
2.78	98.65	23.733	*

0 1 2 3 4



LOGARITHMIC VALUES

VARIABLE = Au
UNIT = ppb
N = 36
N CI = 20

POPULATIONS

Pop.	Mean	Std.Dev.	%
1	0.2879	0.3362	70.0
2	1.0050	0.1769	30.0

THRESHOLDS

1.3587	1.0050
0.6513	0.2879

USERS VISUAL
PARAMETER ESTIMATES

BARIUM STATISTICS

SUMMARY OF STATISTICS

Element Ba Units: % Number of Samples: 55

Truncation

	Number of Samples Excluded
Lower:	
Upper: 3.00%	1

Arithmetic Range: Min.: .10% Max.: 43.34%

Mean: 0.336% Standard Deviation: 0.196%

Population Boundaries (%) : 97

Populations: Log values

Population	Mean	SD	%Population
1	-0.5466	0.1849	97
2	-0.0560	0.1502	3

Population Thresholds

Population Parameter	Log Concentration	Arithmetic Value	Threshold Used
$\bar{x}(1)$	-0.5466	0.28%	0.28%
$\bar{x}$-2Sx(2)	-0.3565	0.44%	0.44%
$\bar{x}(2)$	-0.0560	0.88%	0.88%
$\bar{x}$+2Sx(2)	0.2444	1.76%	1.76%

Wolf Property

SUMMARY STATISTICS and HISTOGRAM — LOGARITHMIC VALUES

Variable = Ba Unit = % N = 55

Mean =	-0.5271	Min =	-1.0000	1st Quartile =	-0.6778
Std. Dev. =	0.2093	Max =	0.1173	Median =	-0.5619
CV % =	39.7030	Skewness =	0.4386	3rd Quartile =	-0.4007

Anti-Log Mean = 0.297 Anti-Log Std. Dev. : (-) 0.183 (+) 0.481

%	cum %	antilog	cls int	(# of bins = 36 - bin size = 0.0319)
0.00	0.89	0.096	-1.0160	
1.82	2.68	0.104	-0.9840	*
0.00	2.68	0.112	-0.9521	
0.00	2.68	0.120	-0.9202	
0.00	2.68	0.129	-0.8883	
1.82	4.46	0.139	-0.8564	*
1.82	6.25	0.150	-0.8244	*
3.64	9.82	0.161	-0.7925	**
1.82	11.61	0.174	-0.7606	*
1.82	13.39	0.187	-0.7287	*
3.64	16.96	0.201	-0.6967	**
9.09	25.89	0.216	-0.6648	*****
14.55	40.18	0.233	-0.6329	*********
5.45	45.54	0.251	-0.6010	***
3.64	49.11	0.270	-0.5691	**
1.82	50.89	0.290	-0.5371	*
5.45	56.25	0.312	-0.5052	***
1.82	58.04	0.336	-0.4733	*
7.27	65.18	0.362	-0.4414	****
5.45	70.54	0.390	-0.4094	***
7.27	77.68	0.419	-0.3775	****
3.64	81.25	0.451	-0.3456	**
3.64	84.82	0.486	-0.3137	**
1.82	86.61	0.523	-0.2818	*
5.45	91.96	0.563	-0.2498	***
0.00	91.96	0.605	-0.2179	
1.82	93.75	0.652	-0.1860	*
0.00	93.75	0.701	-0.1541	
3.64	97.32	0.755	-0.1221	**
0.00	97.32	0.812	-0.0902	
0.00	97.32	0.874	-0.0583	
0.00	97.32	0.941	-0.0264	
0.00	97.32	1.013	0.0055	
0.00	97.32	1.090	0.0375	
0.00	97.32	1.173	0.0694	
0.00	97.32	1.263	0.1013	
1.82	99.11	1.359	0.1332	*

0 1 2 3 4

Wolf Property

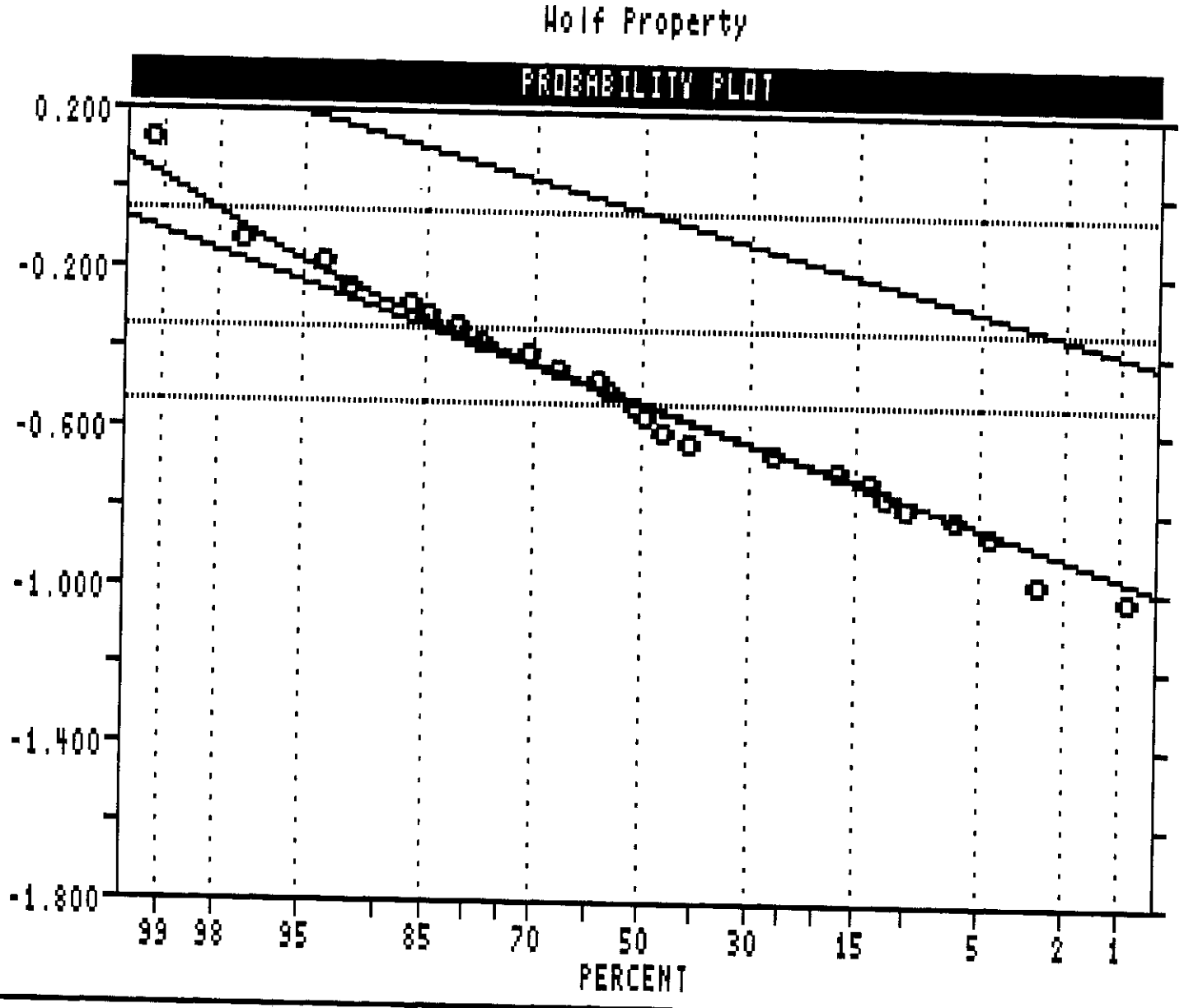
SUMMARY STATISTICS and HISTOGRAM — ARITHMETIC VALUES

Variable = Ba Unit = % N = 55

Mean =	0.336	Min =	0.100	1st Quartile =	0.210
Std. Dev. =	0.196	Max =	1.310	Median =	0.275
CV % =	58.283	Skewness =	2.521	3rd Quartile =	0.398

%	cum %	cls int	(# of bins = 36 — bin size = 0.035)
0.00	0.89	0.083	
1.82	2.68	0.117	*
5.45	8.04	0.152	***
5.45	13.39	0.186	***
16.36	29.46	0.221	**********
16.36	45.54	0.256	**********
5.45	50.89	0.290	***
7.27	58.04	0.325	****
7.27	65.18	0.359	****
9.09	74.11	0.394	******
5.45	79.46	0.428	***
3.64	83.04	0.463	**
1.82	84.82	0.498	*
1.82	86.61	0.532	*
5.45	91.96	0.567	***
0.00	91.96	0.601	
1.82	93.75	0.636	*
0.00	93.75	0.670	
0.00	93.75	0.705	
3.64	97.32	0.740	**
0.00	97.32	0.774	
0.00	97.32	0.809	
0.00	97.32	0.843	
0.00	97.32	0.878	
0.00	97.32	0.912	
0.00	97.32	0.947	
0.00	97.32	0.982	
0.00	97.32	1.016	
0.00	97.32	1.051	
0.00	97.32	1.085	
0.00	97.32	1.120	
0.00	97.32	1.154	
0.00	97.32	1.189	
0.00	97.32	1.224	
0.00	97.32	1.258	
0.00	97.32	1.293	
1.82	99.11	1.327	*

0 1 2 3 4



LOGARITHMIC VALUES

VARIABLE = Ba
UNIT = %
N = 55
N CI = 36

POPULATIONS

Pop.	Mean	Std.Dev.	%
1	-0.5466	0.1849	97.0
2	-0.0560	0.1502	3.0

THRESHOLDS

0.2444 -0.0560
-0.3565 -0.5466

USERS VISUAL
PARAMETER ESTIMATES

COPPER STATISTICS

SUMMARY OF STATISTICS

Element Cu Units: ppm Number of Samples: 55

Truncation

	Number of Samples Excluded
Lower:	
Upper: 250	1

Arithmetic Range: Min.: 5 Max.: 296

Mean: 45.9 Standard Deviation: 52.9

Population Boundaries (%) :80, 95

Populations: Log values

Population	Mean	SD	%Population
1	1.3467	0.2237	80
2	1.9168	0.2085	15
3	2.3185	0.0356	5

Population Thresholds

Population Parameter	Log Concentration	Arithmetic Value	Threshold Used
$\bar{x}$-2Sx(2)	1.4997	31.6	32
$\bar{x}$(2)	1.9168	88.57	83
$\bar{x}$-2Sx(3)	2.2473	176.73	177

Wolf Property

SUMMARY STATISTICS and HISTOGRAM — LOGARITHMIC VALUES

Variable = Cu Unit = ppm N = 55

Mean =	1.4869	Min =	0.6990	1st Quartile =	1.2553
Std. Dev. =	0.3630	Max =	2.3636	Median =	1.3979
CV % =	24.4159	Skewness =	0.6888	3rd Quartile =	1.6902

Anti-Log Mean = 30.685 Anti-Log Std. Dev. : (-) 13.301 (+) 70.791

%	cum %	antilog	cls int	(# of bins = 36 - bin size = 0.0476)
0.00	0.89	4.734	0.6752	
1.82	2.68	5.281	0.7228	*
0.00	2.68	5.893	0.7703	
0.00	2.68	6.575	0.8179	
0.00	2.68	7.336	0.8654	
1.82	4.46	8.185	0.9130	*
0.00	4.46	9.132	0.9606	
0.00	4.46	10.189	1.0081	
5.45	9.82	11.368	1.0557	***
1.82	11.61	12.684	1.1032	*
5.45	16.96	14.151	1.1508	***
1.82	18.75	15.789	1.1984	*
3.64	22.32	17.617	1.2459	**
5.45	27.68	19.656	1.2935	***
9.09	36.61	21.930	1.3410	*****
10.91	47.32	24.469	1.3886	******
5.45	52.68	27.300	1.4362	***
7.27	59.82	30.460	1.4837	****
1.82	61.61	33.985	1.5313	*
3.64	65.18	37.919	1.5789	**
5.45	70.54	42.307	1.6264	***
1.82	72.32	47.204	1.6740	*
5.45	77.68	52.667	1.7215	***
7.27	84.82	58.762	1.7691	****
0.00	84.82	65.563	1.8167	
1.82	86.61	73.151	1.8642	*
0.00	86.61	81.617	1.9118	
0.00	86.61	91.063	1.9593	
3.64	90.18	101.602	2.0069	**
0.00	90.18	113.361	2.0545	
0.00	90.18	126.481	2.1020	
0.00	90.18	141.119	2.1496	
1.82	91.96	157.452	2.1971	*
0.00	91.96	175.675	2.2447	
1.82	93.75	196.006	2.2923	*
3.64	97.32	218.691	2.3398	**
1.82	99.11	244.002	2.3874	*

0 1 2 3 4

Wolf Property

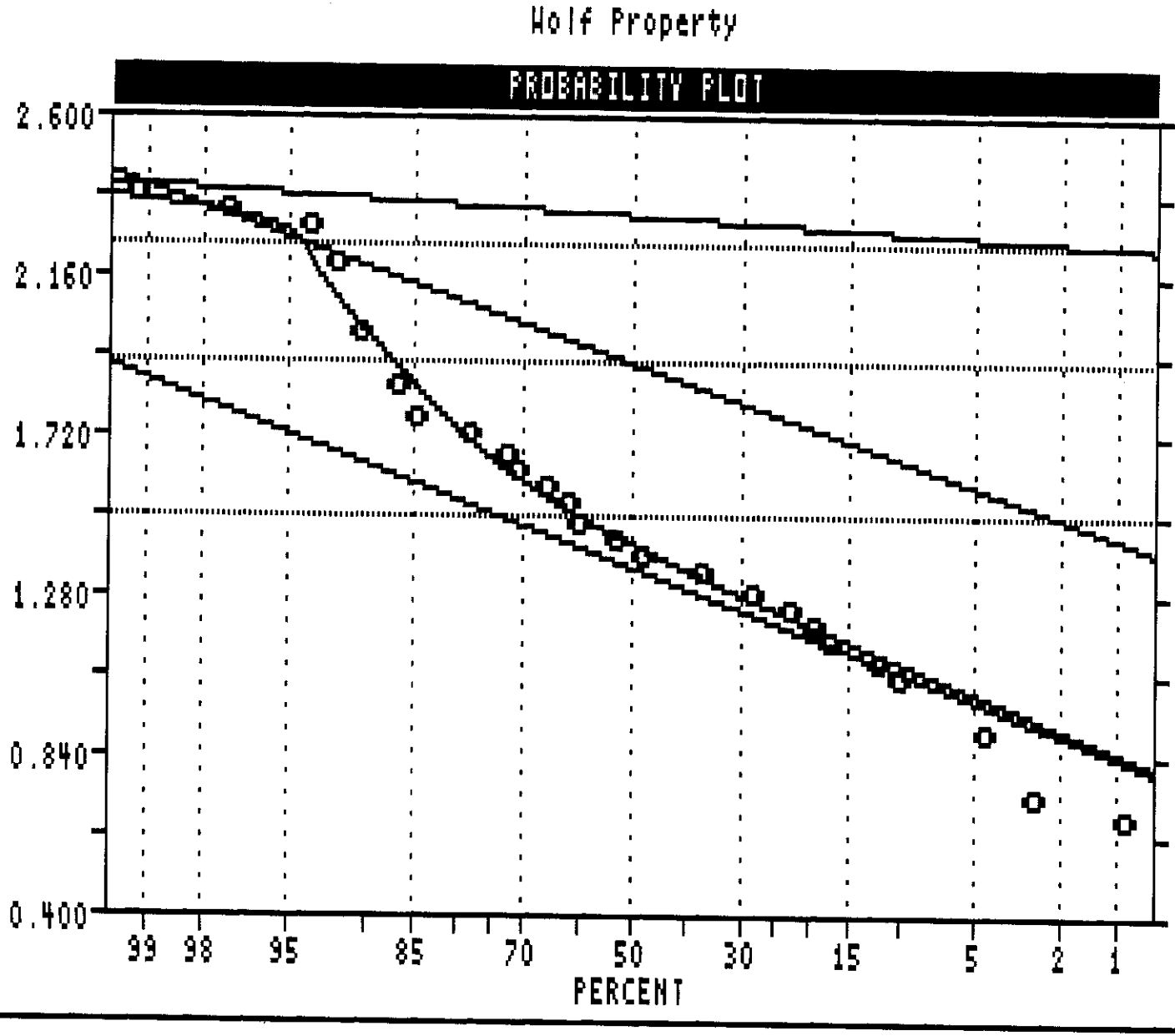
SUMMARY STATISTICS and HISTOGRAM — ARITHMETIC VALUES

Variable = Cu Unit = ppm N = 55

Mean =	45.927	Min =	5.000	1st Quartile =	18.000
Std. Dev. =	52.864	Max =	231.000	Median =	25.000
CV % =	115.103	Skewness =	2.334	3rd Quartile =	49.000

%	cum %	cls int	(# of bins = 36 - bin size = 6.457)
0.00	0.89	1.771	
3.64	4.46	8.229	**
12.73	16.96	14.686	*******
20.00	36.61	21.143	**********
16.36	52.68	27.600	*********
9.09	61.61	34.057	*****
9.09	70.54	40.514	*****
0.00	70.54	46.971	
9.09	79.46	53.429	*****
5.45	84.82	59.886	***
0.00	84.82	66.343	
1.82	86.61	72.800	*
0.00	86.61	79.257	
0.00	86.61	85.714	
0.00	86.61	92.171	
3.64	90.18	98.629	**
0.00	90.18	105.086	
0.00	90.18	111.543	
0.00	90.18	118.000	
0.00	90.18	124.457	
0.00	90.18	130.914	
0.00	90.18	137.371	
0.00	90.18	143.829	
0.00	90.18	150.286	
0.00	90.18	156.743	
1.82	91.96	163.200	*
0.00	91.96	169.657	
0.00	91.96	176.114	
0.00	91.96	182.571	
1.82	93.75	189.029	*
0.00	93.75	195.486	
0.00	93.75	201.943	
3.64	97.32	208.400	**
0.00	97.32	214.857	
0.00	97.32	221.314	
0.00	97.32	227.771	
1.82	99.11	234.229	*

0 1 2 3 4



LOGARITHMIC VALUES

VARIABLE = Cu
UNIT = ppm
N = 55
N CI = 36

POPULATIONS

Pop.	Mean	Std.Dev.	%
1	1.3467	0.2237	80.0
2	1.9168	0.2085	15.0
3	2.3185	0.0356	5.0

THRESHOLDS

2.2473 1.9168
1.4997

USERS VISUAL
PARAMETER ESTIMATES

LEAD STATISTICS

SUMMARY OF STATISTICS

Element Pb Number of Samples: 54

Truncation

	Number of Samples Excluded
Lower:	
Upper: 2100	2

Arithmetic Range: Min.: 32 Max.: 6209

Mean: 404.2 Standard Deviation: 881.9

Population Boundaries (%) :40, 90

Populations: Log values

Population	Mean	SD	%Population
1	1.8621	0.1765	40
2	2.4129	0.1895	50
3	2.8881	0.1483	10

Population Thresholds

Population Parameter	Log Concentration	Arithmetic Value	Threshold Used
$\bar{x}$-2Sx(2)	2.0338	108.09	108
$\bar{x}$-2Sx(3)	2.5915	390.39	390
$\bar{x}$(3)	2.8881	772.86	773
$\bar{x}$+2Sx(3)	3.1846	1529.18	1529

Wolf Property

SUMMARY STATISTICS and HISTOGRAM — LOGARITHMIC VALUES

Variable = Pb Unit = ppm N = 54

Mean =	2.2419	Min =	1.5051	1st Quartile =	1.9542
Std. Dev. =	0.3881	Max =	3.0941	Median =	2.2553
CV % =	17.3130	Skewness =	0.1028	3rd Quartile =	2.5346

Anti-Log Mean = 174.524 Anti-Log Std. Dev. : (-) 71.404 (+) 426.566

%	cum %	antilog	cls int	(# of bins = 36 - bin size = 0.0454)
0.00	0.91	30.370	1.4825	
1.85	2.73	33.717	1.5278	*
1.85	4.55	37.432	1.5732	*
0.00	4.55	41.557	1.6186	
3.70	8.18	46.137	1.6640	**
0.00	8.18	51.221	1.7094	
5.56	13.64	56.865	1.7548	***
0.00	13.64	63.131	1.8002	
3.70	17.27	70.088	1.8456	**
1.85	19.09	77.811	1.8910	*
1.85	20.91	86.386	1.9364	*
7.41	28.18	95.905	1.9818	****
7.41	35.45	106.473	2.0272	****
1.85	37.27	118.206	2.0726	*
5.56	42.73	131.232	2.1180	***
1.85	44.55	145.693	2.1634	*
3.70	48.18	161.747	2.2088	**
1.85	50.00	179.571	2.2542	*
3.70	53.64	199.359	2.2996	**
5.56	59.09	221.327	2.3450	***
3.70	62.73	245.716	2.3904	**
1.85	64.55	272.793	2.4358	*
5.56	70.00	302.853	2.4812	***
1.85	71.82	336.226	2.5266	*
7.41	79.09	373.277	2.5720	****
3.70	82.73	414.410	2.6174	**
1.85	84.55	460.076	2.6628	*
3.70	88.18	510.774	2.7082	**
3.70	91.82	567.058	2.7536	**
0.00	91.82	629.545	2.7990	
0.00	91.82	698.918	2.8444	
1.85	93.64	775.935	2.8898	*
1.85	95.45	861.439	2.9352	*
0.00	95.45	956.365	2.9806	
1.85	97.27	1061.751	3.0260	*
0.00	97.27	1178.751	3.0714	
1.85	99.09	1308.643	3.1168	*

0 1 2 3 4

Wolf Property

SUMMARY STATISTICS and HISTOGRAM — ARITHMETIC VALUES

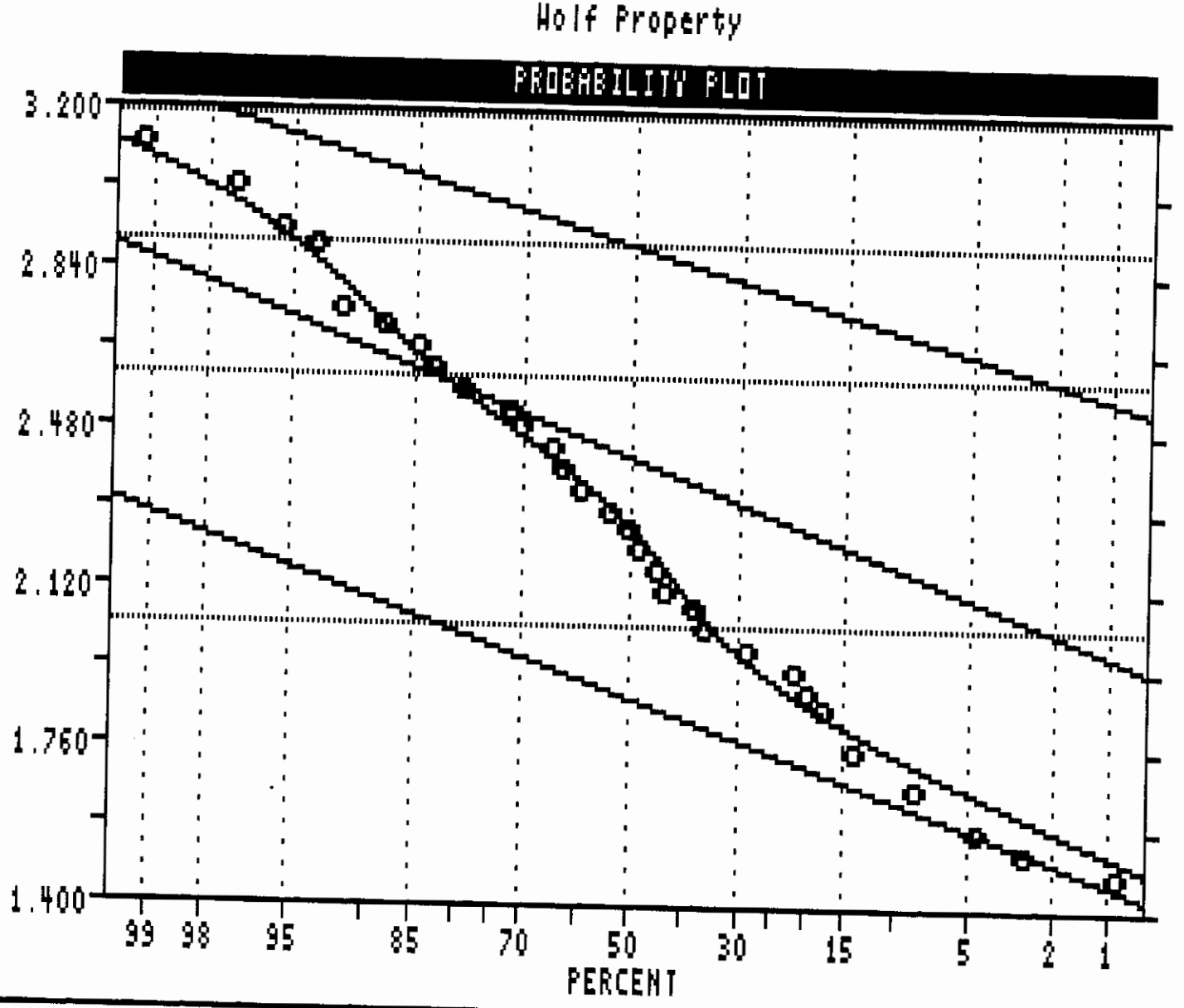
Variable = Pb — Unit = ppm — N = 54

Mean =	256.741	Min =	32.000	1st Quartile =	90.000
Std. Dev. =	247.974	Max =	1242.000	Median =	180.000
CV % =	96.586	Skewness =	2.004	3rd Quartile =	342.500

(# of bins = 36 - bin size = 34.571)

%	cum %	cls int	
0.00	0.91	14.714	
7.41	8.18	49.286	****
12.96	20.91	83.857	*******
16.67	37.27	118.429	*********
9.26	46.36	153.000	*****
7.41	53.64	187.571	****
5.56	59.09	222.143	***
3.70	62.73	256.714	**
5.56	68.18	291.286	***
1.85	70.00	325.857	*
7.41	77.27	360.429	****
3.70	80.91	395.000	**
1.85	82.73	429.571	*
1.85	84.55	464.143	*
1.85	86.36	498.714	*
3.70	90.00	533.286	**
1.85	91.82	567.857	*
0.00	91.82	602.429	
0.00	91.82	637.000	
0.00	91.82	671.571	
1.85	93.64	706.143	*
0.00	93.64	740.714	
0.00	93.64	775.286	
0.00	93.64	809.857	
1.85	95.45	844.429	*
0.00	95.45	879.000	
0.00	95.45	913.571	
0.00	95.45	948.143	
0.00	95.45	982.714	
0.00	95.45	1017.286	
1.85	97.27	1051.857	*
0.00	97.27	1086.429	
0.00	97.27	1121.000	
0.00	97.27	1155.571	
0.00	97.27	1190.143	
0.00	97.27	1224.714	
1.85	99.09	1259.286	*

0 1 2 3 4



LOGARITHMIC VALUES

VARIABLE = Pb
UNIT = ppm
N = 54
N CI = 36

POPULATIONS

Pop.	Mean	Std.Dev.	%
1	1.8621	0.1765	40.0
2	2.4129	0.1895	50.0
3	2.8881	0.1483	10.0

THRESHOLDS

3.1846	2.8881
2.5915	2.0338

USERS VISUAL
PARAMETER ESTIMATES

ZINC STATISTICS

SUMMARY OF STATISTICS

Element Zn Units: ppm Number of Samples: 53

Truncation

	Number of Samples Excluded
Lower:	
Upper: 2500	3

Arithmetic Range: Min.: 16 Max.: 5059

Mean: 680.57 Standard Deviation: 5059

Population Boundaries (%) :10,25,50,85

Populations: Log values

Population	Mean	SD	%Population
1	1.5953	0.3210	10
2	2.0720	0.1306	15
3	2.3281	0.0522	25
4	2.6296	0.1836	35
5	3.1820	0.949	15

Population Thresholds

Population Parameter	Log Concentration	Arithmetic Value	Threshold Used
$\bar{x}(1)$	1.5953	39.38	39
$\bar{x}(2)$	2.0720	118.03	118
$\bar{x}(3)$	2.3281	212.86	213
$\bar{x}(4)$	2.6296	426.09	426
$\bar{x}(5)$	3.1820	1520.6	1521

SUMMARY STATISTICS and HISTOGRAM — LOGARITHMIC VALUES

Variable = Zn Unit = ppm N = 53

Mean =	2.4625	Min =	1.2041	1st Quartile =	2.2496
Std. Dev. =	0.4632	Max =	3.3469	Median =	2.3952
CV % =	18.8083	Skewness =	-0.2227	3rd Quartile =	2.6527

Anti-Log Mean = 290.086 Anti-Log Std. Dev. : (-) 99.854
(+) 842.724

%	cum %	antilog	cls int	(# of bins = 36 - bin size = 0.0612)
0.00	0.93	14.911	1.1735	
1.89	2.78	17.168	1.2347	*
0.00	2.78	19.768	1.2960	
1.89	4.63	22.760	1.3572	*
0.00	4.63	26.206	1.4184	
0.00	4.63	30.173	1.4796	
0.00	4.63	34.742	1.5408	
0.00	4.63	40.001	1.6021	
1.89	6.48	46.057	1.6633	*
0.00	6.48	53.030	1.7245	
0.00	6.48	61.058	1.7857	
0.00	6.48	70.302	1.8470	
1.89	8.33	80.945	1.9082	*
5.66	13.89	93.199	1.9694	***
1.89	15.74	107.309	2.0306	*
1.89	17.59	123.555	2.0919	*
1.89	19.44	142.260	2.1531	*
1.89	21.30	163.797	2.2143	*
5.66	26.85	188.595	2.2755	***
9.43	36.11	217.147	2.3368	*****
13.21	49.07	250.021	2.3980	*******
5.66	54.63	287.872	2.4592	***
3.77	58.33	331.454	2.5204	**
9.43	67.59	381.634	2.5816	*****
3.77	71.30	439.410	2.6429	**
3.77	75.00	505.934	2.7041	**
1.89	76.85	582.528	2.7653	*
1.89	78.70	670.719	2.8265	*
0.00	78.70	772.261	2.8878	
3.77	82.41	889.175	2.9490	**
0.00	82.41	1023.790	3.0102	
1.89	84.26	1178.784	3.0714	*
3.77	87.96	1357.243	3.1327	**
5.66	93.52	1562.719	3.1939	***
1.89	95.37	1799.303	3.2551	*
1.89	97.22	2071.704	3.3163	*
1.89	99.07	2385.345	3.3776	*

0 1 2 3 4

Wolf Property

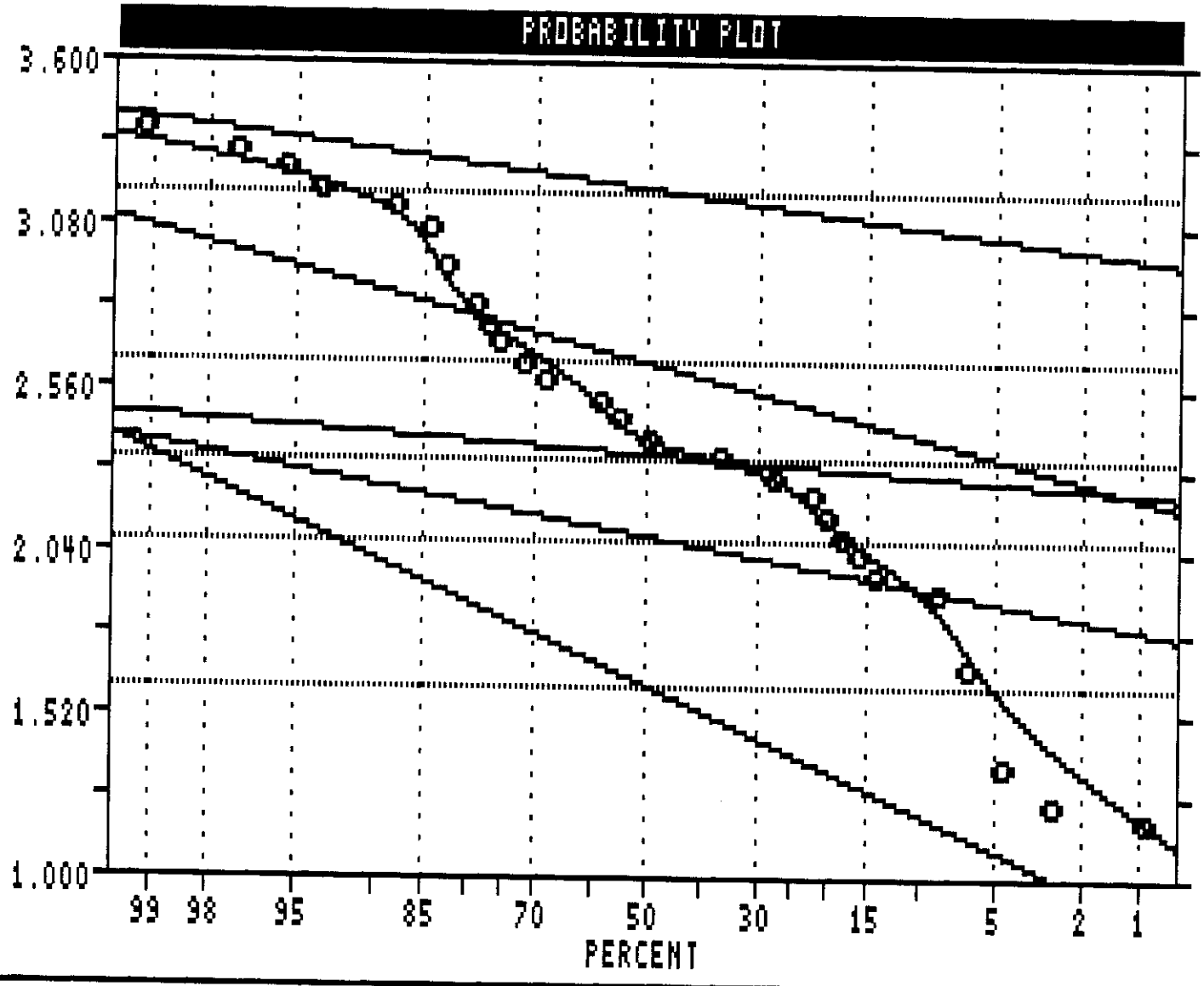
SUMMARY STATISTICS and HISTOGRAM — ARITHMETIC VALUES

Variable = Zn		Unit =	ppm	N =	53
Mean =	486.453	Min =	16.000	1st Quartile =	175.250
Std. Dev. =	533.887	Max =	2223.000	Median =	248.500
CV % =	109.751	Skewness =	1.692	3rd Quartile =	449.750

%	cum %	cls int	(# of bins = 36 - bin size = 63.057)
0.00	0.93	-15.529	
5.66	6.48	47.529	***
9.43	15.74	110.586	*****
9.43	25.00	173.643	*****
18.87	43.52	236.700	**********
13.21	56.48	299.757	*******
7.55	63.89	362.814	****
5.66	69.44	425.871	***
5.66	75.00	488.929	***
1.89	76.85	551.986	*
1.89	78.70	615.043	*
0.00	78.70	678.100	
0.00	78.70	741.157	
0.00	78.70	804.214	
1.89	80.56	867.271	*
1.89	82.41	930.329	*
0.00	82.41	993.386	
0.00	82.41	1056.443	
0.00	82.41	1119.500	
1.89	84.26	1182.557	*
1.89	86.11	1245.614	*
0.00	86.11	1308.671	
1.89	87.96	1371.729	*
1.89	89.81	1434.786	*
3.77	93.52	1497.843	**
0.00	93.52	1560.900	
0.00	93.52	1623.957	
0.00	93.52	1687.014	
0.00	93.52	1750.071	
1.89	95.37	1813.129	*
0.00	95.37	1876.186	
1.89	97.22	1939.243	*
0.00	97.22	2002.300	
0.00	97.22	2065.357	
0.00	97.22	2128.414	
0.00	97.22	2191.471	
1.89	99.07	2254.529	*

0 1 2 3 4

Wolf Property



LOGARITHMIC VALUES

VARIABLE = Zn
UNIT = ppm
N = 53
N CI = 36

POPULATIONS

Pop.	Mean	Std.Dev.	%
1	1.5953	0.3210	10.0
2	2.0720	0.1306	15.0
3	2.3281	0.0522	25.0
4	2.6296	0.1836	35.0
5	3.1820	0.0949	15.0

THRESHOLDS

3.1820	2.6296
2.3281	2.0720
1.5953	

USERS VISUAL
PARAMETER ESTIMATES

DATA CORRELATION ANALYSIS

DATE : 01-08-97
TIME : 10:05:12

NORTHWEST GEOLOGICAL CONSULTING LTD.

WOLF PROJECT

LOG-TRANSFORMED DATA CORRELATION ANALYSIS

PRIMARY FIELDS

SLOPE AND INTERCEPT PARAMETERS

ALL DATA

Y-AXIS ==>		Cu Acme	Pb Acme	Zn Acme	Ag Acme	Mn Acme	Fe Acme	As Acme	Au Acme	Ba Acme	Mo Acme
X-AXIS											
M--->	Cu	0.000									
B--->	Cu	1.000									
M--->	Pb	4.267	0.000								
B--->	Pb	-0.152	1.000								
M--->	Zn	0.508	5.873	0.000							
B--->	Zn	0.509	-0.103	1.000							
M--->	Ag	3.391	5.823	5.628	0.000						
B--->	Ag	0.096	0.991	0.228	1.000						
M--->	Mn	-0.515	5.358	-1.433	-0.075	0.000					
B--->	Mn	0.561	-0.012	1.020	0.002	1.000					
M--->	Fe	1.654	2.535	5.718	-0.093	5.967	0.000				
B--->	Fe	0.810	1.226	0.042	0.013	0.507	1.000				
M--->	As	3.282	1.997	8.057	-0.153	8.249	1.378	0.000			
B--->	As	0.043	0.996	-0.692	0.026	-0.349	0.256	1.000			
M--->	Au	3.705	5.406	6.030	0.053	7.514	2.431	3.256	0.000		
B--->	Au	-0.001	-0.100	0.165	0.112	-0.121	-0.167	0.040	1.000		
M--->	Ba	3.362	6.040	5.547	0.128	6.721	2.173	3.665	1.445	0.000	
B--->	Ba	-0.091	0.681	-0.235	0.207	-0.337	-0.054	0.317	0.225	1.000	
M--->	Mo	4.683	1.265	8.911	-0.125	7.586	0.784	1.937	1.276	-2.038	0.000
B--->	Mo	-0.387	1.272	-0.984	0.018	-0.154	0.460	0.435	-0.028	0.290	1.000

DATE : 01-08-97
TIME : 10:05:12

NORTHWEST GEOLOGICAL CONSULTING LTD.

WOLF PROJECT

NORMAL DATA CORRELATION ANALYSIS

PRIMARY FIELDS

SLOPE AND INTERCEPT PARAMETERS

ALL DATA

Y-AXIS ==>		Cu Acme	Pb Acme	Zn Acme	Ag Acme	Mn Acme	Fe Acme	As Acme	Au Acme	Ba Acme	Mo Acme
X-AXIS											
M--->	Cu	1.000									
B--->	Cu	0.000									
M--->	Pb	-0.007	1.000								
B--->	Pb	53.288	0.000								
M--->	Zn	0.050	-0.063	1.000							
B--->	Zn	16.589	446.737	0.000							
M--->	Ag	0.392	248.066	8.041	1.000						
B--->	Ag	32.371	129.316	390.210	0.000						
M--->	Mn	0.012	-0.017	0.237	-0.000	1.000					
B--->	Mn	30.241	432.716	293.529	2.139	0.000					
M--->	Fe	2.880	1.908	35.100	-0.037	104.960	1.000				
B--->	Fe	21.775	385.200	331.823	2.331	591.110	0.000				
M--->	As	-0.206	21.608	-7.926	0.046	-12.634	0.010	1.000			
B--->	As	52.523	-279.745	854.165	0.336	2030.110	9.526	0.000			
M--->	Au	-0.011	72.063	1.670	0.264	-6.700	-0.098	0.995	1.000		
B--->	Au	64.483	-16.080	899.598	0.678	2014.550	10.529	26.230	0.000		
M--->	Ba	-0.356	138.658	-8.080	0.567	-30.773	-0.114	1.976	1.505	1.000	
B--->	Ba	50.786	251.191	689.485	0.944	1667.914	10.061	29.730	4.571	0.000	
M--->	Mo	-1.338	8.945	-19.271	-0.005	22.292	0.136	0.460	0.005	-0.011	1.000
B--->	Mo	85.855	167.128	1191.251	2.089	1043.240	6.325	19.616	6.695	1.404	0.000

DATE : 01-08-97
TIME : 10:05:12

NORTHWEST GEOLOGICAL CONSULTING LTD.

WOLF PROJECT

LOG-TRANSFORMED DATA CORRELATION ANALYSIS

BASED ON PEARSON CORRELATION MATRIX

using data for years >> 96,
using all traverses

PRIMARY FIELDS

ALL DATA

	Cu	Pb	Zn	Ag	Mn	Fe	As	Au	Ba	Mo
	Acme	Acme	Acme	Acme	Acme	Acme	Acme	Acme	Acme	Acme
Cu	1.000									
# SAMPLES	56									
Pb	-0.183	1.000								
# SAMPLES	56	56								
Zn	0.691	-0.117	1.000							
# SAMPLES	56	56	56							
Ag	0.028	0.227	0.040	1.000						
# SAMPLES	32	32	32	32						
Mn	0.525	-0.009	0.704	0.011	1.000					
# SAMPLES	56	56	56	32	56					
Fe	0.335	0.423	0.013	0.024	0.224	1.000				
# SAMPLES	56	56	56	32	56	56				
As	0.020	0.444	-0.224	0.074	-0.139	0.261	1.000			
# SAMPLES	55	55	55	32	55	55	55			
Au	-0.000	-0.029	0.049	0.190	-0.029	-0.114	0.019	1.000		
# SAMPLES	37	37	37	19	37	37	36	37		
Ba	-0.084	0.527	-0.161	0.343	-0.334	-0.121	0.523	0.255	1.000	
# SAMPLES	56	56	56	32	56	56	55	37	56	
Mo	-0.222	0.608	-0.415	0.048	-0.094	0.638	0.485	-0.059	0.179	1.000
# SAMPLES	56	56	56	32	56	56	55	37	56	56

DATE : 01-08-97
TIME : 10:05:11

NORTHWEST GEOLOGICAL CONSULTING LTD.

WOLF PROJECT

NORMAL DATA CORRELATION ANALYSIS

BASED ON PEARSON CORRELATION MATRIX

using data for years >> 96,
using all traverses

PRIMARY FIELDS

ALL DATA

	Cu Acme	Pb Acme	Zn Acme	Ag Acme	Mn Acme	Fe Acme	As Acme	Au Acme	Ba Acme	Mo Acme
Cu	1.000									
# SAMPLES	56									
Pb	-0.102	1.000								
# SAMPLES	56	56								
Zn	0.790	-0.070	1.000							
# SAMPLES	56	56	56							
Ag	0.017	0.968	0.023	1.000						
# SAMPLES	32	32	32	32						
Mn	0.263	-0.026	0.318	-0.058	1.000					
# SAMPLES	56	56	56	32	56					
Fe	0.159	0.007	0.122	-0.074	0.272	1.000				
# SAMPLES	56	56	56	32	56	56				
As	-0.069	0.539	-0.167	0.391	-0.205	0.056	1.000			
# SAMPLES	55	55	55	32	55	55	55			
Au	-0.002	0.779	0.017	0.818	-0.047	-0.137	0.344	1.000		
# SAMPLES	37	37	37	19	37	37	36	37		
Ba	-0.033	0.903	-0.047	0.970	-0.133	-0.190	0.517	0.895	1.000	
# SAMPLES	56	56	56	32	56	56	55	37	56	
Mo	-0.304	0.143	-0.276	-0.028	0.238	0.560	0.294	0.011	-0.028	1.000
# SAMPLES	56	56	56	32	56	56	55	37	56	56

Appendix C

DIAMOND DRILL LOGS

DIAMOND DRILL CORE LEGEND

1 ❑ Dacite/Andesite Tuff:
med grey, fine grained, weakly foliated siliceous tuff
chloritic and carbonate alteration, silicification?,
quartz-carbonate veining

2 ❑ Pyritic Tuff:
med grey, mottled texture, 5-10% lapilli, rare porphyritic
lapilli, 30- 40% very fine grained pyrite, .1 mm euhedral
grains, vfg pyrite in 1 to 2 cm scale fragments and blebs

3 ❑ Heterolithic Lapilli Tuff:
medium grey-green, heterolithic fragments, frequent dark
grey, pyritic clasts and beige, angular to sub-angular,
.5 to 1.5 cm clasts
❑ 3b Baritic Horizon

4 ❑ Thinly Laminated Tuff:
Beige and grey laminated tuff, interbedded with coarser
beige lapilli rich horizons

5 ❑ Dark Grey Siliceous Breccia:
white carbonate and fine grained pyrite in breccia matrix

6 ❑ Breccia/ Agglomerate
dark grey, angular to sub-angular andesite? and andesite
porphyry fragments in medium grey matrix

Symbols

geological boundary : — — — geological boundary : gradational

vein

30 joint : angle to core axis, location of measurement

tectonic breccia

60 foliation : angle to core

major fault

20 minor fault : angle to core axis

assay interval :sample number

■ rock geochemical sample : □ reference sample

py = pyrite, po = pyrrhotite, sp = sphalerite, gn = galena, qtz = quartz, arg. = argillite, carb. = carbonate

NORTHWEST GEOLOGICAL CONSULTING LTD.

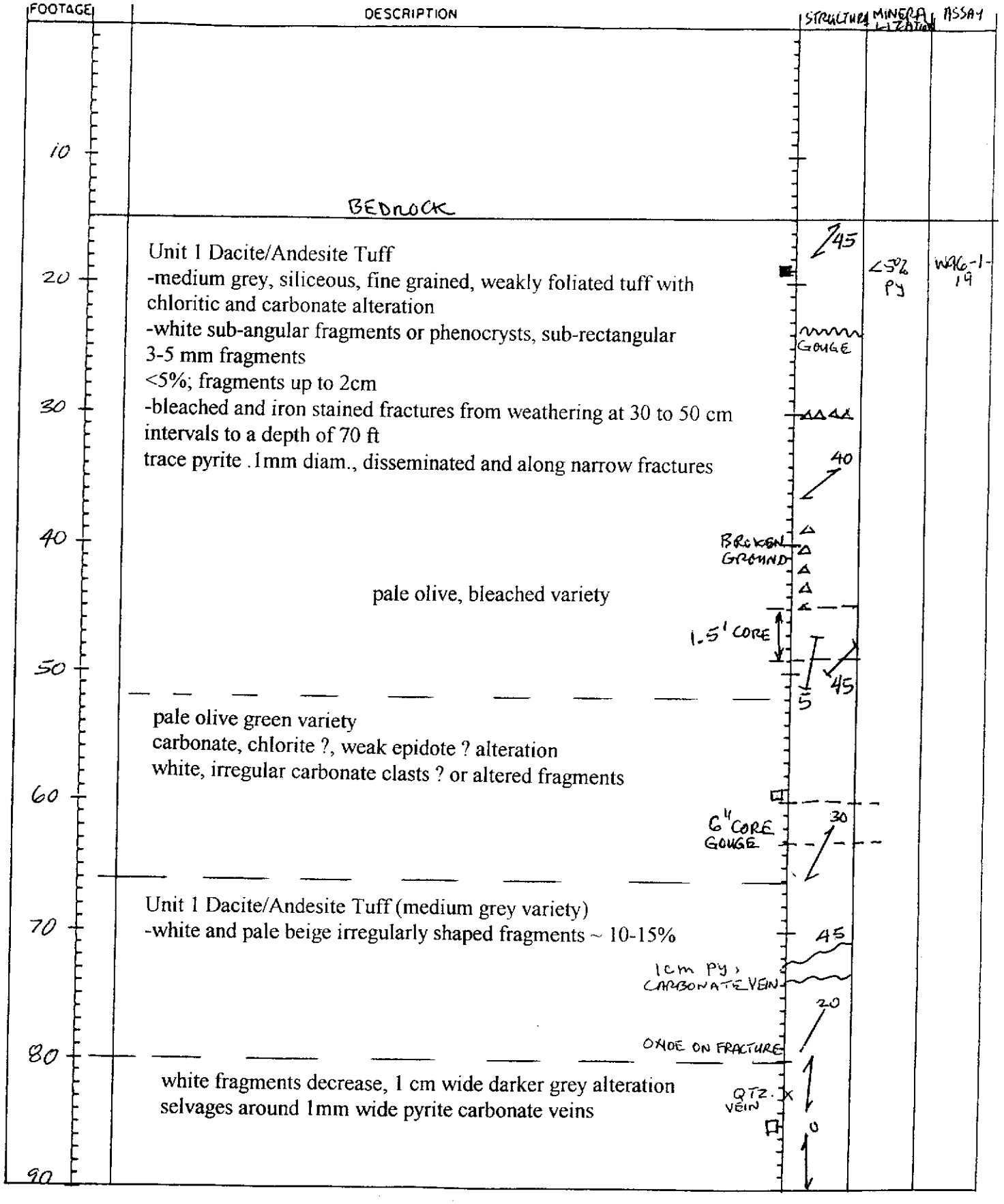
DIAMOND DRILL CORE LOG

HOLE W96-1 Page 1 of 4

Project WOLF Property WOLF Claim WOLF 18 Location 52+44E - 96+80N

Started SEP. 16, 96 Finished SEP. 17, 96 Total Length 360 FT. Core Size NQ

Angle -90° Azimuth _____ Collar Elevation 1590 m Logged By U. SCHMIDT



DIAMOND DRILL CORE LOG

HOLE W96-1 PAGE 2 OF 4

FOOTAGE | DESCRIPTION | ASSAYS AND ANALYSES

90

Unit 1 Dacite/Andesite Tuff continued with minor lapilli

dark green chloritized fragments

100

-medium grey-olive green tuff with minor lapilli
-cut by mm scale quartz-carbonate and pyritic veinlets ~ 45° to core, pyritic veinlets dark grey (chloritic ?) selvages
-lapilli fragments increasing with depth but still a minor component
-weak foliation, bedding ? outlined by carbonate-rich fragments

110

120

3cm QTZ VEIN

QTZ.-CARB CHLORITE PY VEIN 1cm.

130

5cm QTZ VEIN

1cm py QTZ VEIN?

140

150

pale olive bleached variety

medium grey variety of tuff

160

Unit 2 Pyritic Tuff
-medium grey, mottled texture with 5 to 10 % lapilli and rare porphyritic lapilli
-30 to 50 % very fine grained, 0.1mm euhedral pyrite
-<5% irregularly shaped carbonate blebs, baritic?, sphalerite?
-sulphides become less laminated and more blebby and fragments of semi-massive sulphides increase with depth

30-50% py 1mm A70072

15-20% py A70073

170

laminated sulphides and tuff

180

-very fine grained sulphides in blebs and fragments up to 1.5 cm long axis

20-30% py A70074

190

DIAMOND DRILL CORE LOG

HOLE W96-1 PAGE 3 OF 4

FOOTAGE | DESCRIPTION | ASSAYS AND ANALYSES: STRUCTURE | MINERALIZATION | ASSAY

190

Unit 2 Pyritic Tuff continued
-medium grey, mottled texture with 15 to 20 % beige fragments or mineral segregations, weak colour banding/foliation
-30 % blebby and disseminated, very fine grained, 0.1mm euhedral pyrite, often in grey earthy matrix which may contain galena and sphalerite, weight of core suggests barite in the matrix
-<5% irregularly shaped carbonate blebs, baritic?, sphalerite?
-sulphides become less laminated and more blebby and fragments of semi-massive sulphides increase with depth

30% py, 2-1mm; 20-30% py; A70075

200

15 / 30

9cm PORPH FRAGMENT; 4cm py LAMINATED FRAGMENT; A70076

40 / 35

210

weak banding

40 / 40

A70077

40° CONTACT; 15-20% py; A70078

SHEARED & DEFORMED

220

Unit 1 Dacite/Andesite Tuff
-medium grey, lower concentrations of sulphides

5-10% py; A70079

GOUGE

230

GOUGE

-pale olive-coloured equivalent of Unit 1
-alteration or bleaching related to fault zone
white fragment alignment 40°to core

WHITE FRAGMENT ALLIGNMENT 40°

40° CONTACT; 1-2% py VFG

45 / 20 / 40

240

Unit 3 Heterolithic Lapilli Tuff
-medium grey-green, heterolithic fragmental unit
-frequent dark grey pyritic clasts and beige, angular to sub-angular clasts ranging from .5 to 1.5 cm diameter

40 / 45

5-10% VFG py DISS. & IN FRAGMENTS; A70080

250

BROKEN CORE

260

GOUGE 40°

-laminated sulphides, 30-60 % thinly laminated sulphides, very fine grained, earthy matrix could contain sphalerite, trace chalcopyrite

30-60% SULPHIDE; A70081

270

Unit 4 Thinly Laminated Tuff
-beige and grey laminated tuff interbedded with coarser, beige lapilli-rich sections

TR. py <.1mm

-beige lapilli tuff in grey-green matrix; coarser variety of Unit 4

BROKEN CORE

280

40

-thinly laminated, grey and beige tuff

vein along vertical fracture 1-2 cm qtz.-carb. vein

290

DIAMOND DRILL CORE LOG

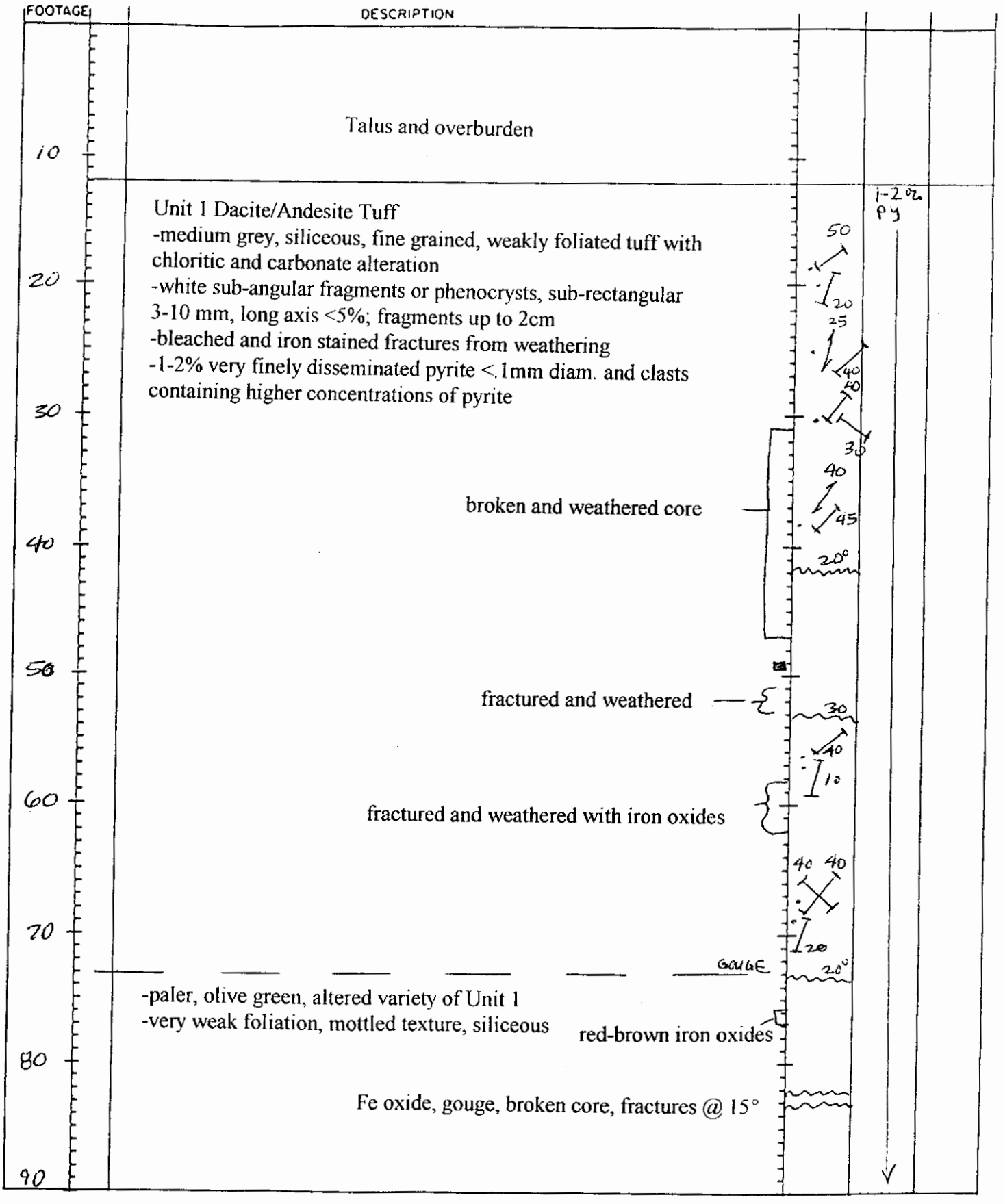
HOLE W96-1 PAGE 4 OF 4

FOOTAGE	DESCRIPTION	ASSAYS AND ANALYSES
290	Unit 4 Thinly Laminated Tuff -continued	10-15% py .1mm A70082
	Unit 3 Heterolithic Lapilli Tuff -beige, angular to sub-angular fragments ranging from .5 to 2 cm diameter, 15-20% -dark grey, pyritic fragments, .5-1 cm (long axis), 10-15% in grey-green matrix	45
300		5-10% VFG PY IN FRAGMENTS
	-sulphide-rich fragments more frequent,	40
310	-pale, olive-green altered variety of unit -finer grained interval	20% LAMINATED PY
		20% LAMINATED PY A70083
320	40°	
	Unit 4 Thinly Laminated Tuff -medium grey, thinly laminated tuff with white carbonate fragments or carbonate altered fragments -5-10% pyrite in thin laminations and in fragments	1cm. FOLDED SULPHIDE BAND 5-10% PY IN FRAGMENTS
330	sheared core sulphide bands	A70084
	-bands of black pellitic, tuffaceous sediments appear up to 30 cm thickness and 10 -15 % of the core	40
340		A70085
	-medium grey, thinly laminated tuff with white calcareous fragments and infrequent, thin pellitic bands -thin pyritic layers and veinlets associated with carbonate at 30 cm intervals	5% PY
350		
		GOUGE
360	E.O.H.	
370		
380		
390		

NORTHWEST GEOLOGICAL CONSULTING LTD.

DIAMOND DRILL CORE LOG HOLE W96-2

Project WOLF Property WOLF Claim WOLF 18 Location 52+44E -46+80N
Started SEP. 17, 96 Finished SEP. 18, 96 Total Length 500 FT. Core Size NQ
Angle -60° Azimuth 100° Collar Elevation 1590 Logged By U. SCHMIDT



DIAMOND DRILL CORE LOG

FOOTAGE | DESCRIPTION | ASSAYS AND ANALYSES

90

-olive-green, altered variety of Unit 1 continued
-white and beige angular calcareous fragments .5-1.5 cm, long axis, 10 to 20% of core

60% CORE RECOVERY

TR - PY <.1mm

100

1cm qtz.-carb. chl. vein

broken core, oxidized

30

1cm qtz.-carb. chl. vein

110

15°

135°

120

25

fragments decrease in abundance

broken ground 75% core recovery

GOUGE

130

-olive green mottled texture, very weak foliation

15

1cm QTZ-CARB. VEIN

20

50

140

40

150

160

GOUGE

Unit 3 Heterolithic Lapilli Tuff
-medium grey-green, heterolithic fragmental unit, mottled texture
-frequent black, lithic and dark grey porphyritic lapilli, .5cm long axis
-beige, calcareous clasts < .5 cm diameter in matrix
-pyritic clasts, .5-3 cm, abundant at upper contact, diminishing in frequency with depth
-very fine grained (, .1mm) pyrite in matrix; most of the pyrite occurs in sub-angular fragments, .5 - 2 cm, long axis; laminated pyrite in some of the fragments

GOUGE

45°

15-25% VFG PY

A70086

1cm GOUGE

30

170

20

5-10% PY

A70087

180

QTZ CARB VEIN

1-2% DISS PY <.1mm

30

20

190

DIAMOND DRILL CORE LOG

HOLE W96-2 PAGE 3 OF 6

FOOTAGE | DESCRIPTION | ASSAYS AND ANALYSES

190

Unit 3 Heterolithic Lapilli Tuff continued

higher number of pyritic fragments

35

1-20% PY

50% PY A70088

200

-pyrite increasing in matrix and in fragments

5% PY

-thinly laminated grey tuffaceous horizons

30

2-5% PY

210

BROKEN CORE

15

-thinly laminated variety of Unit 3; pale grey colour

220

Unit 3 Heterolithic Lapilli Tuff continued; sulphide fragments increase

BROKEN CORE

5-10% A70089

230

-large, light grey clasts appear; pyrite in angular clasts, .5-3 cm

Baritic Horizon

-light grey to white, with beige and olive green foliation planes; very fine grained, pyritic and very fine grained bluish aggregates (galena, sphalerite?) 2-5%

20

25

5% A70090 A70091

240

Unit 3 Heterolithic Lapilli Tuff

250

1-2% VFG PY A70092

Unit 4 Thinly Laminated Tuff

-beige and grey laminated tuff interbedded with coarser, beige lapilli-rich sections and black argillite

BROKEN CORE

argillite

coarse lapilli argillite fragments

50

-pellitic component increasing with depth

argillite

ARGILLITE

260

270

BROKEN CORE

-beige lapilli in black tuffaceous pellitic sediment, 20-30 % lapilli, .5 - 1 cm diameter, interbanded with beige ash layers

35

280

ARGILLITE

-dark grey tuff; weakly foliated with minor thinly laminated sections, white mm scale fragments or crystals

5-10% VFG PY A70093

30

290

DIAMOND DRILL CORE LOG

HOLE W96-2 PAGE 4 OF 6

FOOTAGE	DESCRIPTION	ASSAYS AND ANALYSES
290	Unit 3 Heterolithic Tuff and Lapilli Tuff -medium grey-green, heterolithic fragmental unit -beige, calcareous clasts predominate, < .5 cm diameter in matrix -variable content of pyritic clasts, .5-3 cm, increasing in abundance with depth	1-5% VFG PY
300		
310	-pale grey and green interbanded lapilli tuff with baritic bands and fragments -chlorite and epidote alteration, very fine grained, (.1mm) pyrite in coarse, sub-angular fragments, .5 - 3 cm, long axis	10 to 20% PY IN FRAGMTS A700944
320	-pale grey-green, epidote alteration of some fragments, chloritic alteration in matrix; beige lapilli, .5-2 cm	30 2-5% VFG. PY
330	Unit 1 Dacite/Andesite Tuff - altered -pale olive green tuff and lapilli tuff -weakly foliated, white fragments, smaller fragments (.1-.5 cm) are rounded while larger fragments (1 - 2 cm) are angular -weak epidote alteration or bleaching throughout -quartz-carbonate veins cut core at 5-10 cm intervals; veins are ~ 1-5mm width at 40°to 60° to core axis	25 TR DISS. VFG PY
340		30°
350		35
360	-grading to medium grey variety with narrow, olive-green sections, suggesting lighter coloured variety is alteration	
370	pale olive-green bleaching -pale grey variety	
380	-fragment size decreasing; rare 2 cm fragments -intermittent darker grey unaltered sections	25 10 5
390		

DIAMOND DRILL CORE LOG

HOLE W96-2 PAGE 5 OF 6

FOOTAGE | DESCRIPTION | ASSAYS AND ANALYSES

390

Unit 1 Dacite/Andesite Tuff - continued
-pale olive-green tuff continued

20 — TR. VFG PY

darker fragments and matrix

40

400

410

-rare mariposite in fragments

darker grey variety

420

35

430

Unit 2 Pyritic Tuff :-med. to dark grey, v.f.g. diss. pyrite — 30-50% VFG PY A70095

15

Unit 4 Tuffaceous Pellitic Sediments
-medium to dark grey, thinly laminated tuffaceous, pellitic sediments with beige lapilli; very fine grained, pyrite in some laminations — 5-10% VFG PY

10

440

30

medium grey tuffaceous sediments

slickensides parallel to foliation

450

-black sheared tuffaceous sediments

-pale grey-green, tectonic breccia Unit 3 Heterolithic Lapilli Tuff

460

broken core

-medium grey-green, heterolithic lapilli tuff
-very fine grained disseminated pyrite and pyritic lapilli with 50% pyrite — 5-10% VFG PY

470

gouge — BROKEN CORE

large pyritic clasts

10

480

broken core

30

490

UNIT 4 — ARGILLITE

DIAMOND DRILL CORE LOG

HOLE W96-2 PAGE 6 OF 6

FOOTAGE	DESCRIPTION	ASSAYS AND ANALYSES
490	Unit 4 Tuffaceous Pellitic Sediments - continued -coarse pyritic fragments; laminated pyrite in argillite broken core	25 10-15% PY
500	Unit 1 Dacite/Andesite Tuff :-pale olive green, f.g., altered variety	
	End of Hole	
510		
520		
530		
540		
550		
560		
570		
580		
590		

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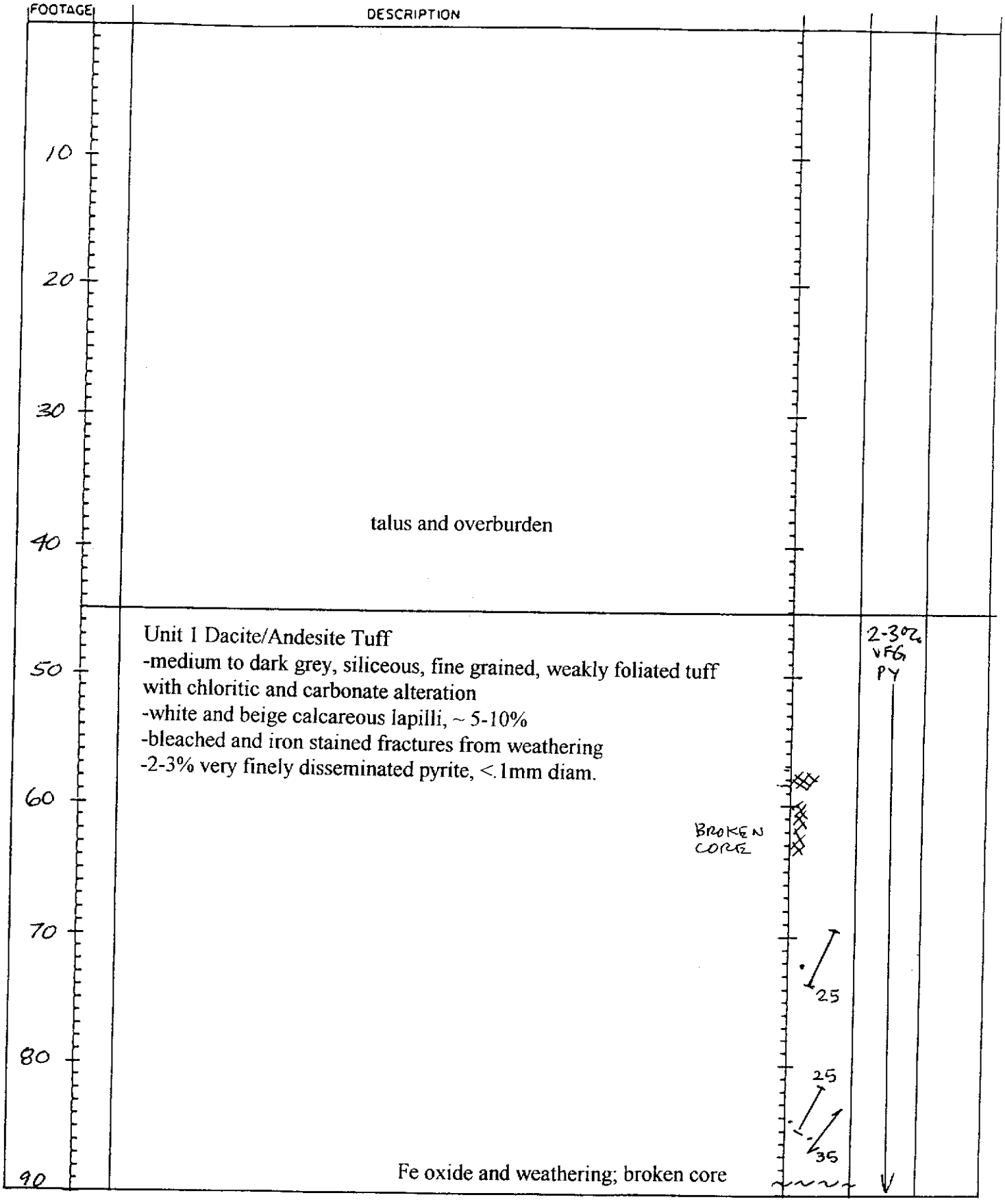
DIAMOND DRILL CORE LOG HOLE W96 - 3

Project WOLF Property WOLF Claim WOLF 18 Location 52+44E - 46+80N
Started SEP. 19 96 Finished SEP. 20, 96 Total Length 450 FT. Core Size NQ
Angle -65° Azimuth 280° Collar Elevation 1590 Logged By U. SCHMIDT



DIAMOND DRILL CORE LOG

HOLE W96-3 PAGE 2 OF 5

FOOTAGE	DESCRIPTION	ASSAYS AND ANALYSES
90	Unit 1 Dacite/Andesite Tuff - continued	2-5% DISS. VFG PY
100	broken core with Fe oxides; 50% RECOVERY; BROKEN CORE; FRACTURED CORE; 40	
110	Unit 5 Dark Grey Siliceous Breccia -white carbonate and fine grained pyrite in breccia matrix -limited fragment rotation and displacement; CAVE	10-15% PY; A70096
120	BROKEN CORE; broken core; 25	5% PY
130	quartz-carbonate veining 10-15%; 20; 40	5-10% PY; A70097
140	Unit 1 Dacite/Andesite Tuff -medium to dark grey, siliceous, f.g., weakly foliated tuff -breccia texture diminishes to medium to dark grey mottled texture with rare lapilli -2-3% very finely disseminated pyrite, <.1mm diam.; 30; 20; 80	3-5% PY; 1-3% PY
150	quartz-carbonate veining diminishes; 15	
	RARE LAPILLI; 45; 30	
160	45; 1cm PY VEIN; .5cm PY QTZ CARB VEIN; 15	
170	PY QTZ VEIN; 25	
180	FRACTURED & WEATHERED CORE	
190		

DIAMOND DRILL CORE LOG

HOLE W96-3 PAGE 3 OF 5

FOOTAGE	DESCRIPTION	ASSAYS AND ANALYSES
190	Unit 1 Dacite/Andesite Tuff - continued -medium to dark grey, siliceous, fine grained, weakly foliated tuff -medium to dark grey mottled texture with rare lapilli -fragments have sub-rounded corroded fragment boundaries	5-50% VFG PY PY BROKEN CORE
200	-foliation is defined by light coloured crystals or fragments -1 - .4mm pyrite veins cut core at irregular intervals	45 FRACTURED & BLEACHED PY PY
210	-pale olive-green variety of Unit 1 -mottled texture; weak foliation	1-2% VFG PY 5 15
220	fractured and broken core	0 0
230	Fe oxide along weathered joints at 5 to 15 cm intervals quartz-carbonate veins	QTZ-CARB VEIN 20
240	rare crystals and lapilli visible returns to medium grey mottled texture cut by widely spaced mm scale pyrite-carbonate veins	PY PY PY 3-5% VFG PY
250	returns to pale olive-green colour frequency of 1-3mm quartz-carbonate veins increases increased abundance of qtz.-carbonate, angular lapilli	1-3% VFG PY 15 30 15
260	-medium to light grey equivalent -quartz-carbonate replaced fragments or shards ~10%	
270	qtz.-carbonate-K-feldspar? veins; 40-60° to core	
280	medium grey variety, disseminated pyrite increases medium olive-green variety	10-15% PY
290		

DIAMOND DRILL CORE LOG

FOOTAGE | DESCRIPTION | ASSAYS AND ANALYSES

240

Unit 1 Dacite/Andesite Tuff - continued
-medium olive-green; mottled texture; 10% lapilli, white to beige angular quartz-carbonate altered fragments

30

1-3% VFG PY

300

40

TR. SP. IN 5mm QTZ VEIN

5

310

PY

320

larger beige fragments evident; sub-rounded, redeposited tuff?
-rare white carbonate altered clasts

330

30

340

medium olive-green 1-2mm altered mafic crystals

350

white, sub-angular, carbonate altered clasts increasing ↓

360

Unit 6 Breccia/Agglomerate
-medium grey matrix, dark grey angular to sub-angular fragments of andesite? and andesite? porphyry; fragments range from 2-15 cm diameter
-variable concentrations of very fine grained pyrite in matrix
-feldspar porphyritic fragments increase in size with depth
-dark grey to black fragments are cut by 1-2mm white carbonate veins which rarely penetrate the matrix

10-15% VFG WISPY PY IN MATRIX

A70098

FAULT GOUGE

370

irregular carbonate veins +/- fluorite occur in matrix

A70099

380

Unit 1 Dacite/Andesite Tuff - altered
-medium olive-green, altered variety; mottled texture, sub-rounded to breccia texture, limited fragment rotation

390

Unit 6

A70100

DIAMOND DRILL CORE LOG

HOLE W96-3 PAGE 5 OF 5

FOOTAGE	DESCRIPTION	ASSAYS AND ANALYSES
390	Unit 6 - continued -medium grey breccia, gradational from olive-green Unit 1 -sub-rounded fragments; white, irregular carbonate-quartz veining in matrix, rimmed by blue-grey mineral aggregates, (galena-sphalerite?)	40 / 20; 10-15% VFGPY TR SP gn; A70100
400	beige lapilli appear; dark grey fragments are smaller and less frequent; carbonate-qtz. veining decreases	40; 5-10% PY; A70351
	BROKEN CORE	
410	Unit 3 Heterolithic Lapilli Tuff - gradational contact -larger fragments (5-10 cm), about 20%, decreasing in abundance with depth	1-5% VFG DICS PY; 20
420		
430	BROKEN CORE BROKEN CORE	
	BROKEN CORE	
440	fault contact GOUGE Unit 1 Dacite/Andesite Tuff medium grey, massive, fine grained to thinly laminated pyritic tuff	GOUGE; 25
450	End of Hole	
460		
470		
480		
490		

Appendix D

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

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

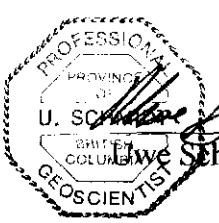
(1) I am a consulting geologist and controlling shareholder of Northwest Geological Consulting Ltd.

(2) I am a 1971 graduate of the University of British Columbia with a B.Sc. degree in Geology.

(3) I am a member of The Association of Professional Engineers and Geoscientists of British Columbia and a Fellow of the Geological Association of Canada.

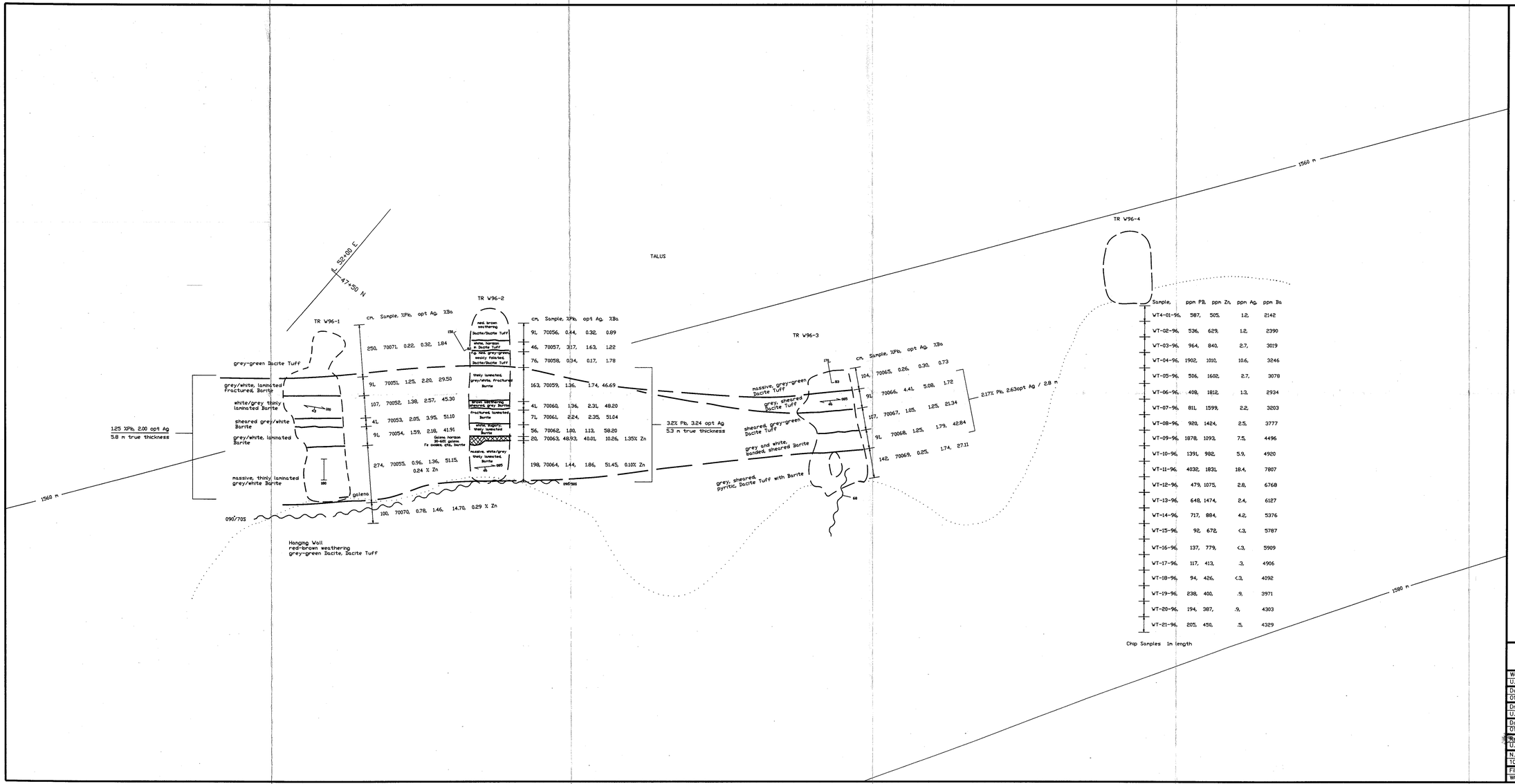
(4) I have practised my profession continuously since graduation.

(5) This report is based on work carried out by me or by workers under my supervision.



January 27, 1997
Vancouver, B.C.

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



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Work By	WOLF PROJECT
U. Schmidt	Hand Trench Plan
Date Drafted	093648 (1)
01-20-97	
Drafted By	
U. Schmidt	
Date Revised	
01-20-97	
Revised By	Northwest Geological Consulting Ltd.
U. Schmidt	
N.T.S. Number	Figure
105G/5	11
File Name	SCALE 1 : 75
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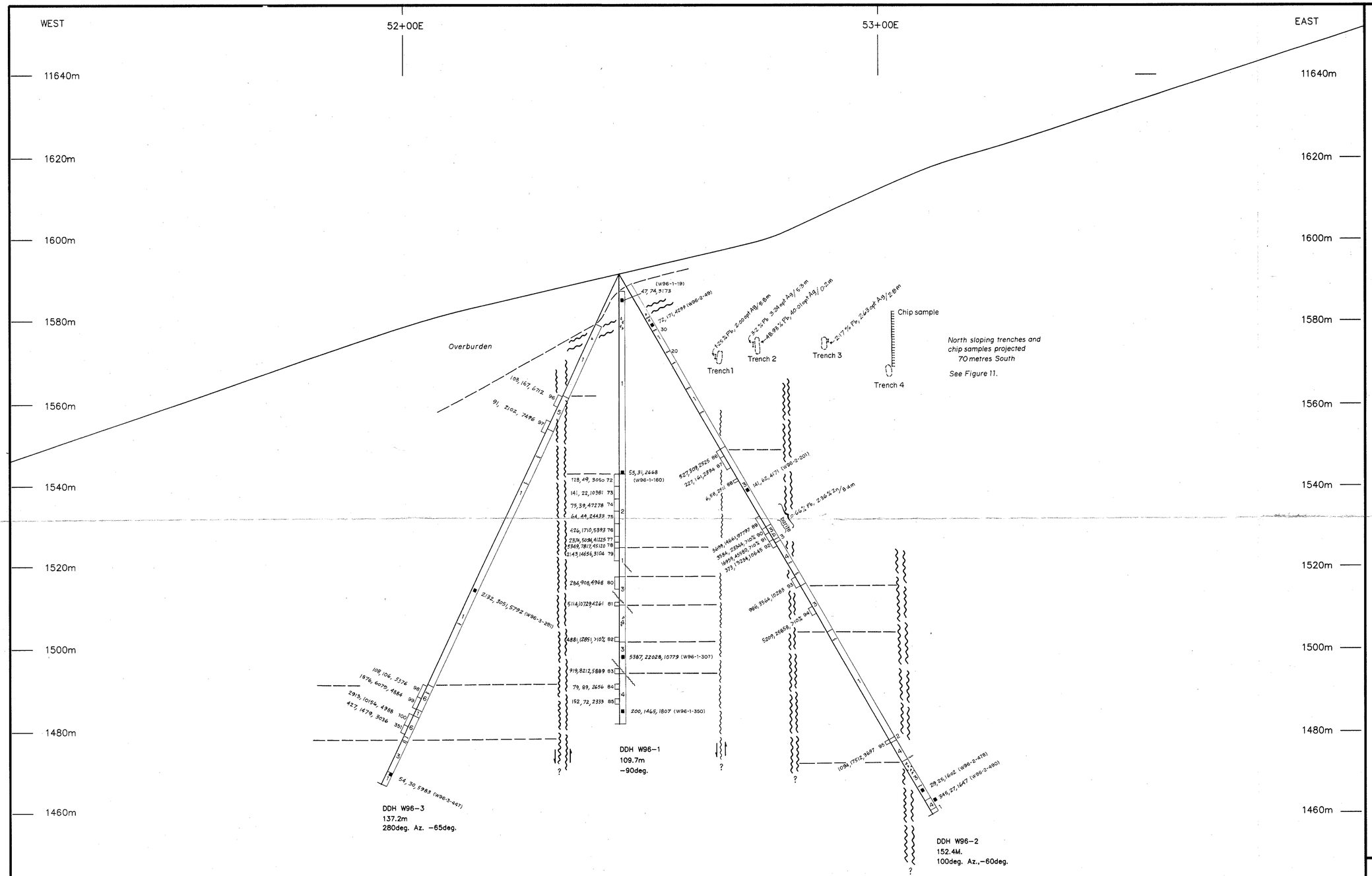

LEGEND

1 ❑ Dacite/Andesite Tuff:
med grey, fine grained, weakly foliated siliceous tuff chloritic and carbonate alteration, silicification?, quartz-carbonate veining

2 ❑ Pyritic Tuff:
med grey, mottled texture, 5-10% lapilli, rare porphyritic lapilli, 30-40% very fine grained pyrite, .1 mm euhedral grains, vfg pyrite in 1 to 2 cm scale fragments and blebs

3 ❑ Heterolithic Lapilli Tuff:
medium grey-green, heterolithic fragments, frequent dark grey, pyritic clasts and beige, angular to sub-angular, .5 to 1.5 cm clasts
❑ 3b Baritic Horizon

4 ❑ Thinly Laminated Tuff:
Beige and grey laminated tuff, interbedded with coarser beige lapilli rich horizons

5 ❑ Dark Grey Siliceous Breccia:
white carbonate and fine grained pyrite in breccia matrix

6 ❑ Breccia/ Agglomerate
dark grey, angular to sub-angular andesite? and andesite porphyry fragments in medium grey matrix

Symbols

- geological boundary : interpreted
- tectonic breccia
- 30 — minor fault : angle to core axis
- major fault
- 6, 58, 211 88 — assay interval : ppm Pb, ppm Zn, Ba ppm or %, sample number prefix : A700##, or A70####
- ■ 47, 74, 3173 (W96-1-19) — geochemical sample : ppm Pb, ppm Zn, ppm Ba, sample no.

PROFESSIONAL GEOSCIENTIST
PROVINCE OF BRITISH COLUMBIA
U. SCHMIDT
June 22 1997

ATNA RESOURCES LTD.

Work By: U. Schmidt	WOLF PROJECT (2)
Date Drafted	DDH W96 1-3 Cross-Section
Drafted By: dlp	100° Azimuth 093648
Date Revised	
Revised By	Northwest Geological Consulting Ltd.
N.T.S. Number: 105G/6	10 0 10 20 30 SCALE 1 : 500
File Name: WOLFDDH	Figure 12