BRENDA MINES LTD.
EXPLORATION GROUP

REPORT on

GRID LINES and GEOCHEMICAL SOIL SURVEY

on the

TROUT CREEK PROPERTY

Similkameen Mining District

Lat. 49° 47', Long. 120° 09'

N.T.S. 92H/16

A.R. Pollmer
Chief Geologist

January, 1982

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I INTRODUCTION

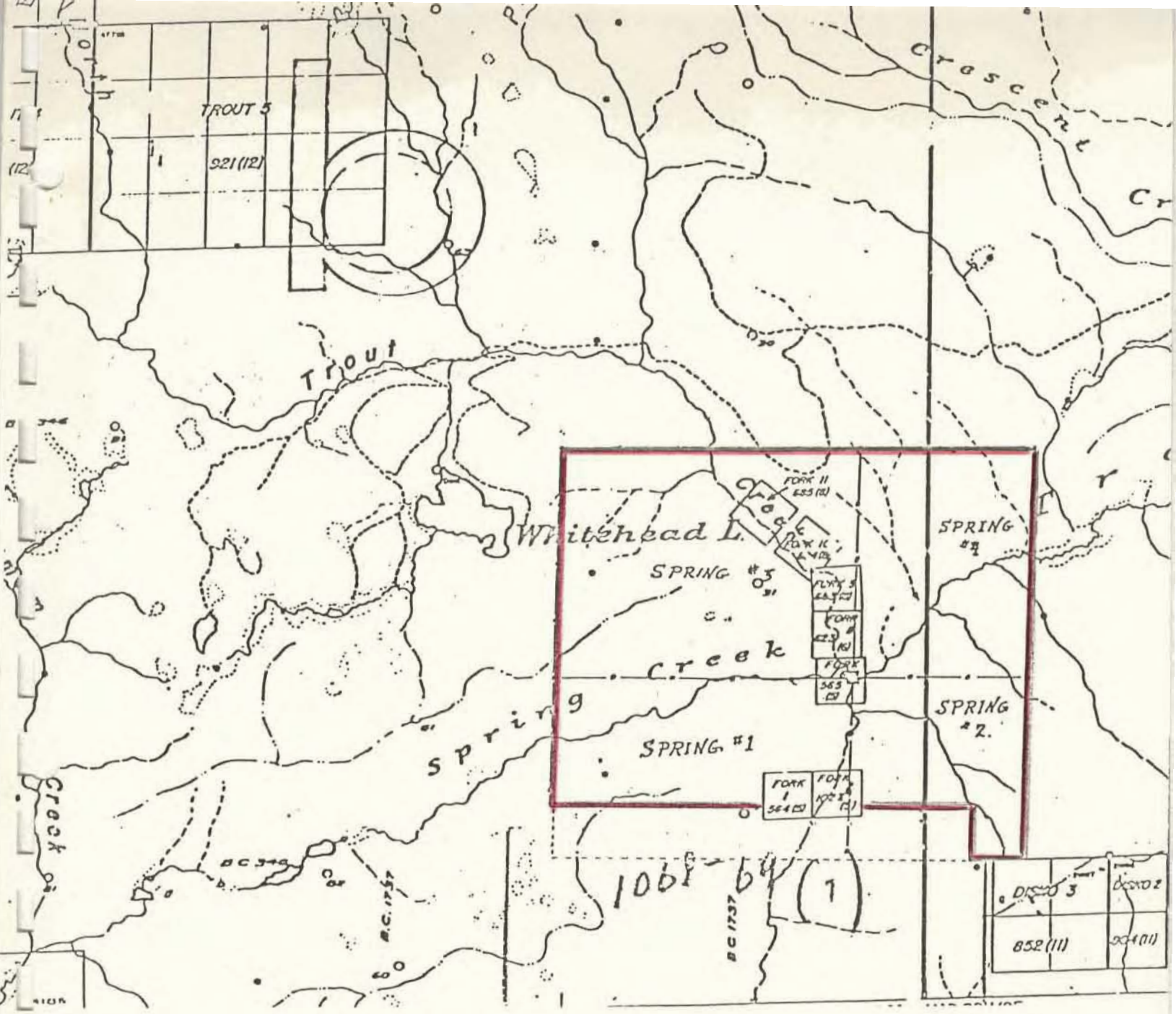
Based on past records the Trout Creek property has had little exploration work done on the area it covers. The presence of several small adits and hand trenches suggest that the area underwent some prospecting, probably for precious metals during the early 1900's.

Brenda Mines optioned the property for D. Agur in 1981 and a grass roots exploration program was conducted during that year. The initial claim blocks which had been staked during January, 1981, were abandoned and restaked so that all the location posts, corner posts and location lines could be placed.

II PROPERTY DESCRIPTION

a) Location and Access

The Trout Creek property is centered on the convergence of North Trout Creek, Trout Creek (from the east) and Spring Creek. The property can be reached via a good all weather gravel logging road in the following sequence: from Peachland, Princeton Ave. to the Peachland Main (6 km); Peachland Main to Headwaters Main (20 km); Headwaters to 34 km, turn left and follow new logging road for 4 km to the center of the property.



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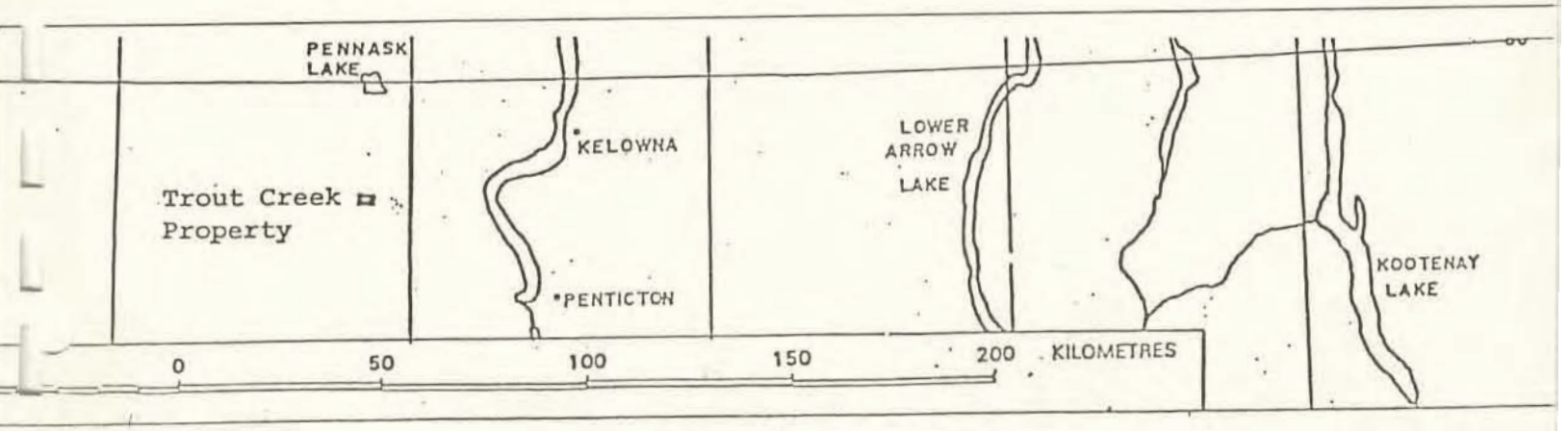


Location Map - Figure 1

b) Topography and Vegetation

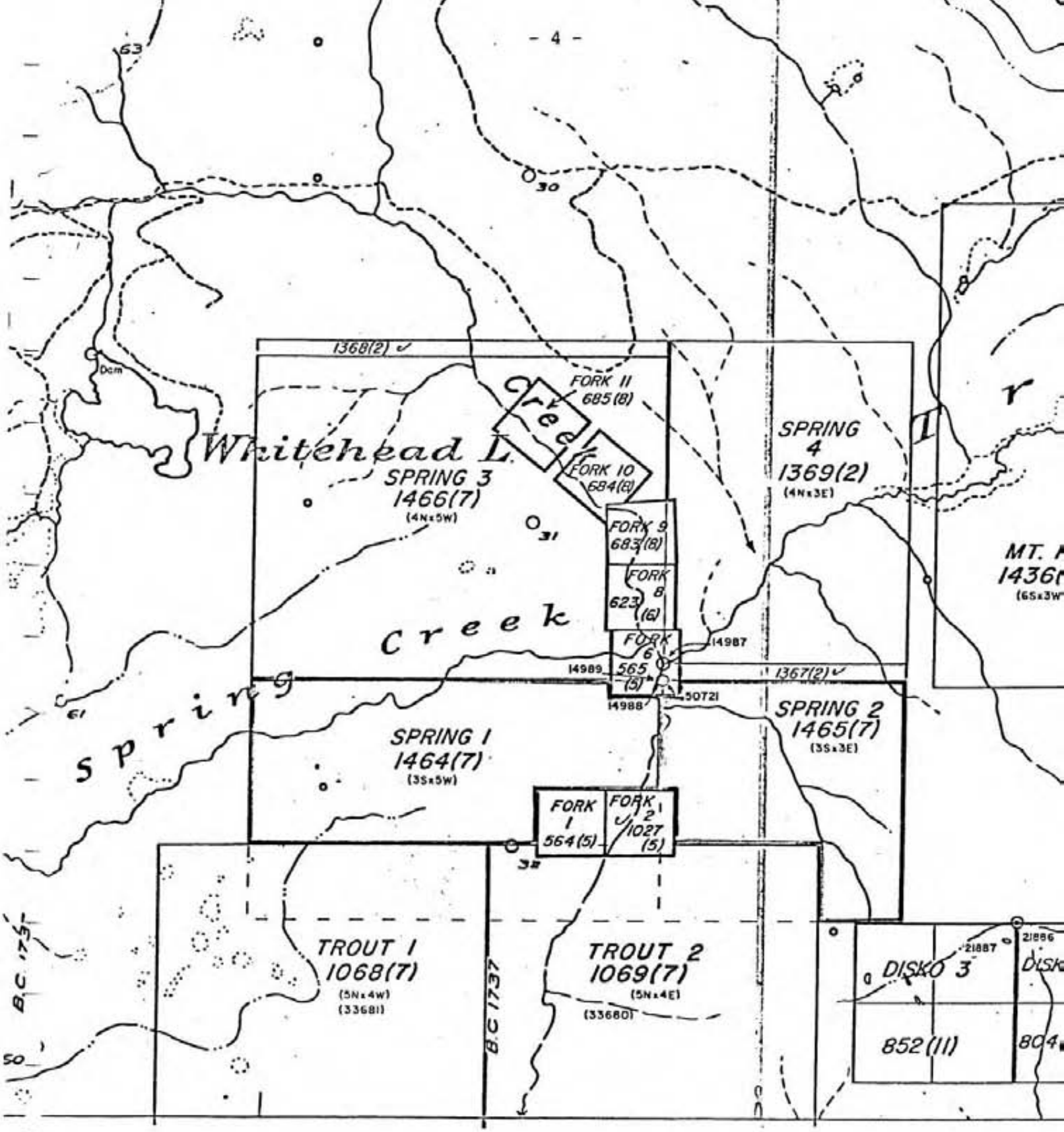
Much of the property is relatively flat, with exception to the North Trout Creek valley which is a steep sided ravine, often occurring as rock cliffs or talus slopes. Along Trout Creek (east) occur terraces and to the south of the creek the north slope of Mt. Kathleen rises steeply.

The vegetation over much of the property consists of well spaced spruce, pine and fir stands. On the north slope, the foliation is considerably more dense and difficult to navigate.

c) Claim Inventory

Claim Name	Record No.	Units	Staking Date	Record Date
SPRING #1	1464 (7)	15 MG	July 8/81	July 13/81
SPRING #2	1465 (7)	9 MG	July 8/81	July 13/81
SPRING #3	1466 (7)	20 MG	July 10/81	July 13/81
SPRING #4	1369 (2)	12 MG	Feb. 4/81	Feb. 25/81

Total claims = 56



Claim Map - Figure 2

Scale: 1:31,680

III GEOLOGIC SETTING

The property covers much of the "Otter" intrusive, described by H.M. Rice, 1960, where it intrudes granodiorites associated with the Pennask Batholith. The "Otter" intrusive consists of two rock types: a) a quartz-eye porphyry and b) a quartz feldspar porphyry within which the K-feldspar phenocrysts are as large as 6 cm in length. These units are identical to the "Otter" intrusive situated on Siwash Creek 14 kilometers to the west. In both cases the quartz feldspar porphyry unit intrudes the central portion of the quartz-eye porphyry unit. It is also common to find the quartz-eye porphyry unit as a diatreme, especially in areas where it comes in contact with the Pennask.

a) Mineralization

Chalcopyrite, malachite and molybdenite mineralization is hosted within the quartz-eye porphyry unit, in areas adjacent to the north and south contact of the quartz feldspar porphyry. In most cases, the mineralization occurs in wide spaced veins and fractures. In two occurrences disseminated molybdenite mineralization has been found. At this time, insufficient mapping has been done to fully understand the distribution and frequency of the mineralization present.

IV WORK DONE

a) Grid Lines

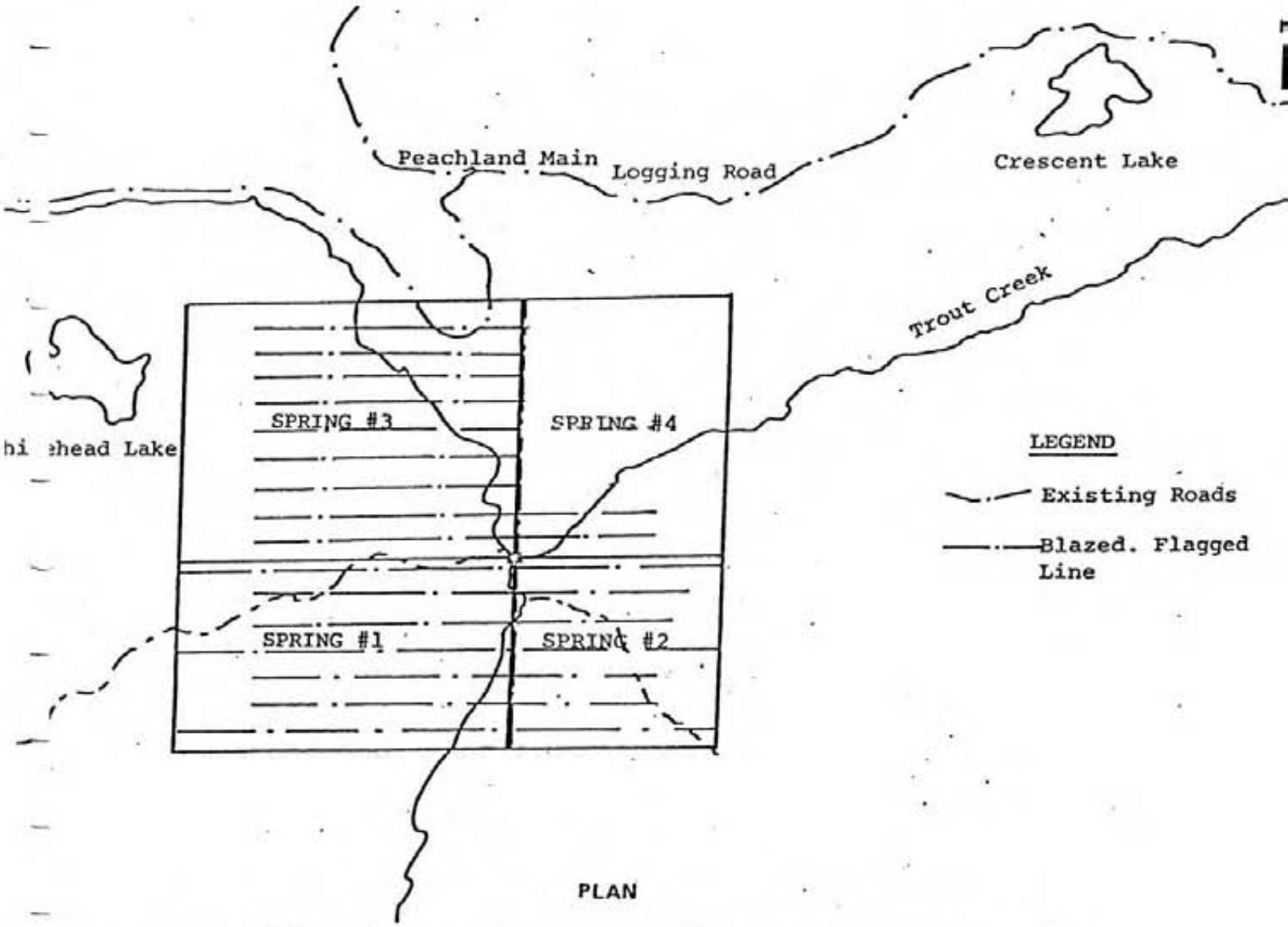
A north-south 3,500 meter picket baseline was cut on the east side of North Trout Creek. From the baseline, grid lines were blazed and flagged mainly to the west. Line spacing was at 100 meter intervals in the central portion of the claim group, and line spacing was increased to 200 meters toward the northern and southern extremeties. Sample stations on all lines were placed at 50 meter intervals. A 3,500 meter tie line was cut along the western boundary. Line location shown on figure .

V SOIL GEOCHEMICAL SURVEY

a) Introduction

Soil samples were taken at each line station and analysed at Brenda Mines assay facilities. Samples of the B(f) soil horizon were taken and determinations were made for the following elements: copper, molybdenite, lead, zinc and silver. A total of 1,380 soil samples and 85 silt samples were taken.

A stream silt survey was conducted along the three major stream channels which bisect the property in four directions. This survey was done as a preliminary to establish the range and type of minerals present. As part of this survey, soil samples were taken on both sides of the channel slopes at 100 meter intervals.



Indicate claim boundaries, permanent watercourses, access road and distance to nearest town, proposed roads, test pits, trenches, adits, drill sites, and camp sites.

Grid Location Map - Figure 3

b) Soil Cover

Much of the area surveyed is covered with glacial till. Outcrop exposures are largely limited to the steeper valley slopes and only occassional outcrops occur on the plateau surfaces. The predominant soil type is glacial till typical for the area, largely grey clay intermixed with sand, gravel and boulders. Soil development is poor to moderate, with a thin veneer of humus and a slightly leached "B" horizon.

Flanking the main stream channels are terraces composed of largely alluvial sand and gravel. These appear quite thick, exceeding 20 meters. Several small swamps occur along the creeks in areas of lower gradient and on the plateau toward the northwest.

VI TREATMENT of RESULTS

A statistical presentation of copper, lead and zinc were made so as to better compare bulk characteristics of the geochemical data. Both Mo and Ag values were extremely low and fail to display adequate continuity, apart from the odd sporadic high. These two elements were not tabulated or plotted.

1) Statistical Analysis

Statistical presentation of the various sample types were made so as to better compare bulk characteristics of the geochemical data. The two statistical formats used in this report are cumulative frequency distribution and histogram frequency. The histogram is the more obvious of the two, enabling the reader to make quantitative observations regarding data grouping made etc., while the cumulative frequency plot may be used to graphically derive qualitative information such as standard deviations, background values, low anomalous values and threshold values.

The following is not meant to be a definitive treatment of the statistical analysis of geochem data, but rather a guide to the more important statistical parameters considered in this report.

2) Distribution

In beginning the treatment of a large body of geochemical data, it is necessary to determine the distribution which best fits the data. It has been determined (by concentration vs. frequency plots) that most geochemical data follows a lognormal distribution often referred to as the bell-shaped curve. Natural geochemical values often tend to form negatively skewed distribution curves when plotted. This results from the fact that it

is more common to have low values in geochemical data, than high values. If, instead of the actual value itself, its logarithm is plotted in the abscissa, the frequency curve takes a symmetrical, bell-shaped form, typical of the normal distribution. Plotting the actual geochemical values on a logarithmic graph will achieve the same results. This is the procedure used for the data considered.

3) Histogram

The histogram used in preparing this report is a plot of the interval frequency vs. interval (see Figure 5). Several important statistical parameters may be determined such as the total range of data in sample, modes, and the range with the highest frequency of values. Finally, the general form of the density distribution of the data can be determined quickly.

4) Cumulative Frequency

Cumulative frequency paper is generally constructed with a probability scale as the ordinate and a logarithmic scale as the abscissa (Figure 6). By replacing the arithmetic ordinate scale of the histogram with a probability scale, the cumulative frequency curve is represented by a straight line or a line of "best fit". This line joins points calculated from frequencies, cumulated from the highest to the lowest values; thus the 100% will correspond

to the lowest class and can be eliminated.

There are essentially three parameters defining the geochemical population, which may be obtained graphically, using the cumulative probability plots. These are:

a) Geometric mean or background value (b) located by the intersection of the cumulative frequency curve at the population mean (50%). Trace intersection down to ppm scale.

b) Low anomalous value (l) located by the intersection of the cumulative frequency curve at the 16%. Trace intersection down to ppm scale. The 16% line expresses the scatter of the values around the population mean, incorporating the addition of one standard deviation (s) to the mean.

c) Anomalous or threshold value (t) located by the intersection of the cumulative frequency curve at the 2.5%. Trace intersection down to ppm scale. The threshold value is a fairly complex geochemical parameter and is supposed to be the upper limit of the background fluctuation (b). This incorporates the addition of two standard deviations (2s) to the mean.

Geochemical results for each element have been plotted on accompanying maps and contoured to correspond with element distributions.

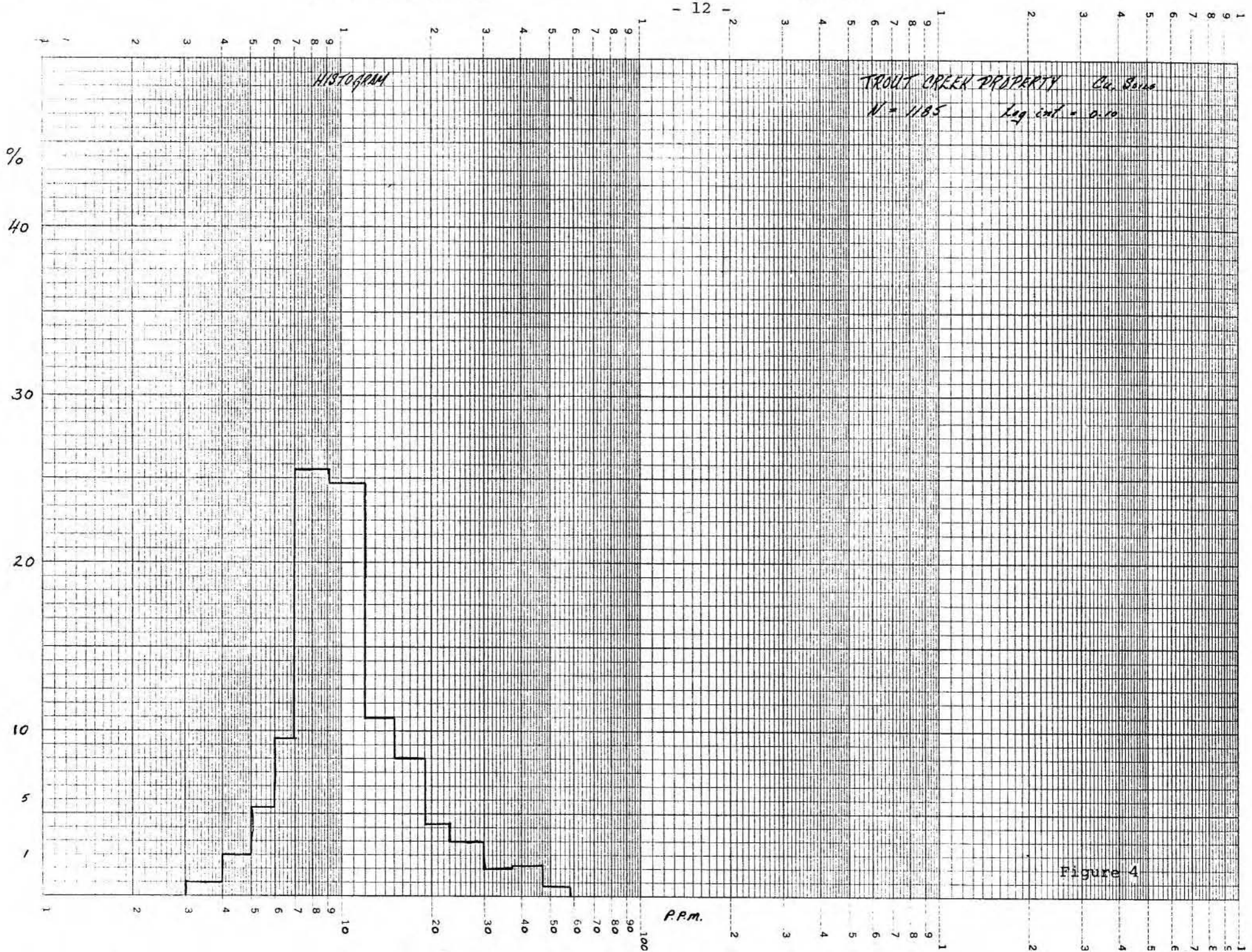

HISTOGRAM
TROUT CREEK PROPERTY Cu. Soils
N = 1185 Log int. = 0.10
%
40
30
20
10
5
1
P.P.M.
10
20
30
40
50
60
70
80
90
100

Figure 4

46 8080

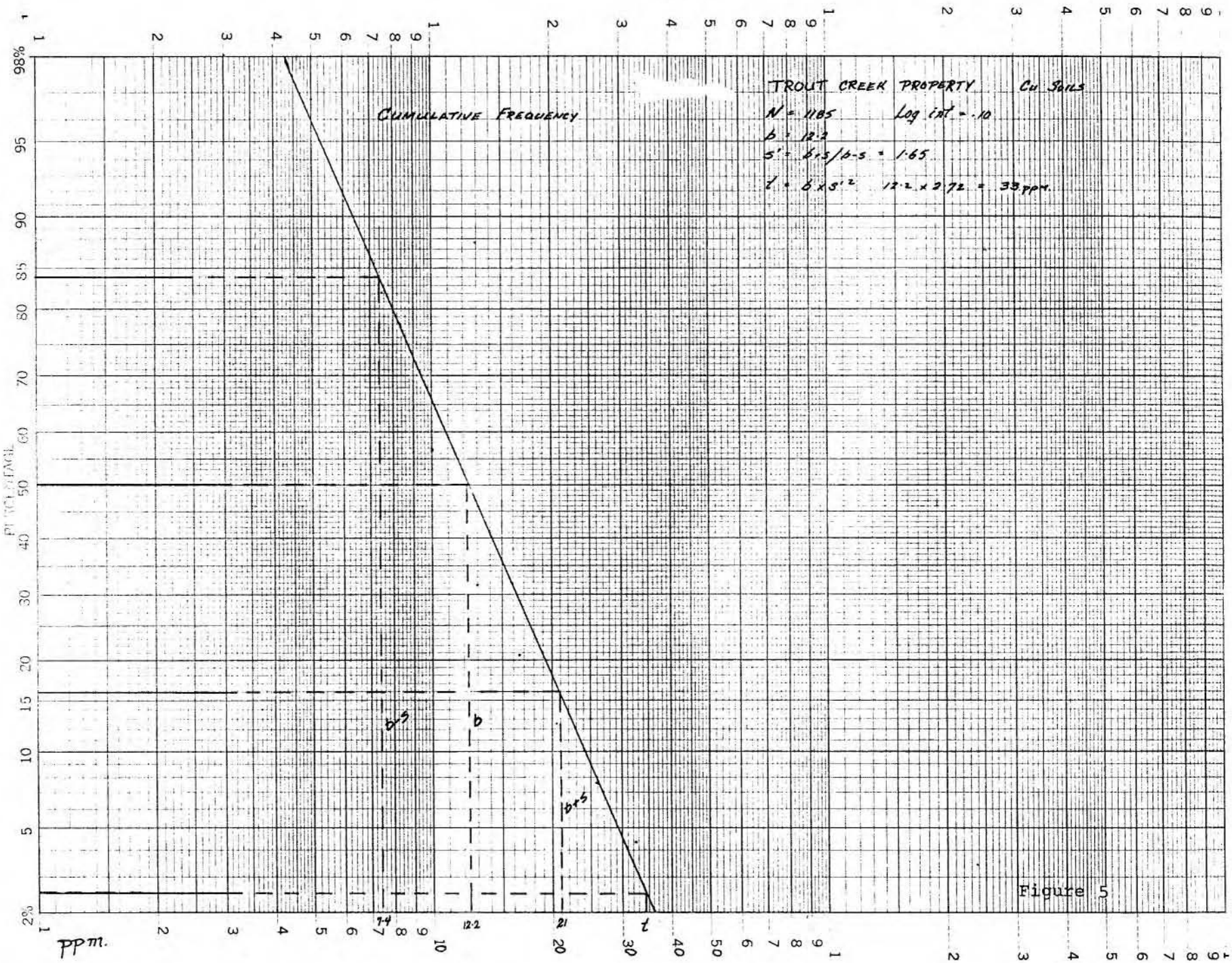


Figure 5

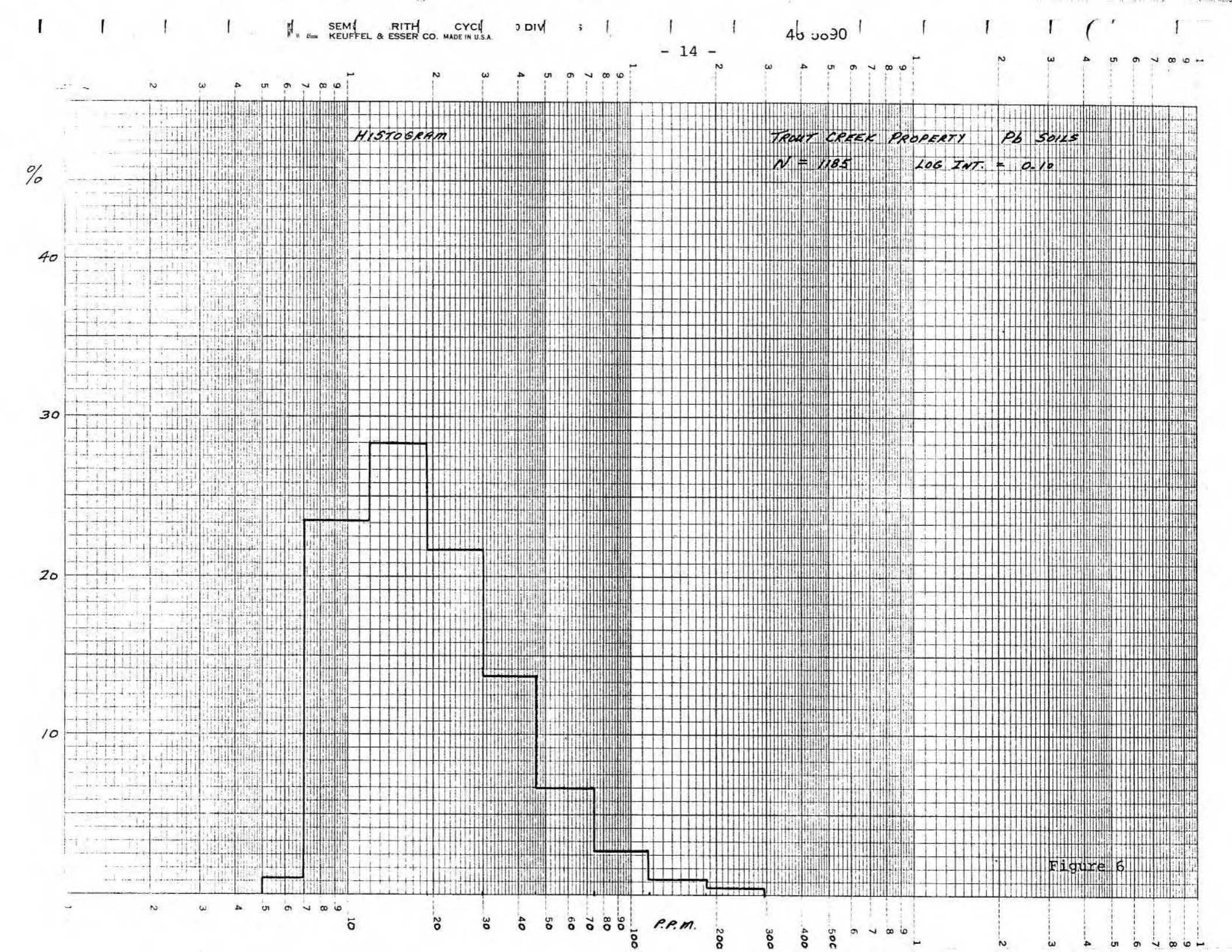

HISTOGRAM
TROUT CREEK PROPERTY Pb SOILS
N = 1185
LOG INT. = 0.10
%
40
30
20
10
P.P.M.

Figure 6

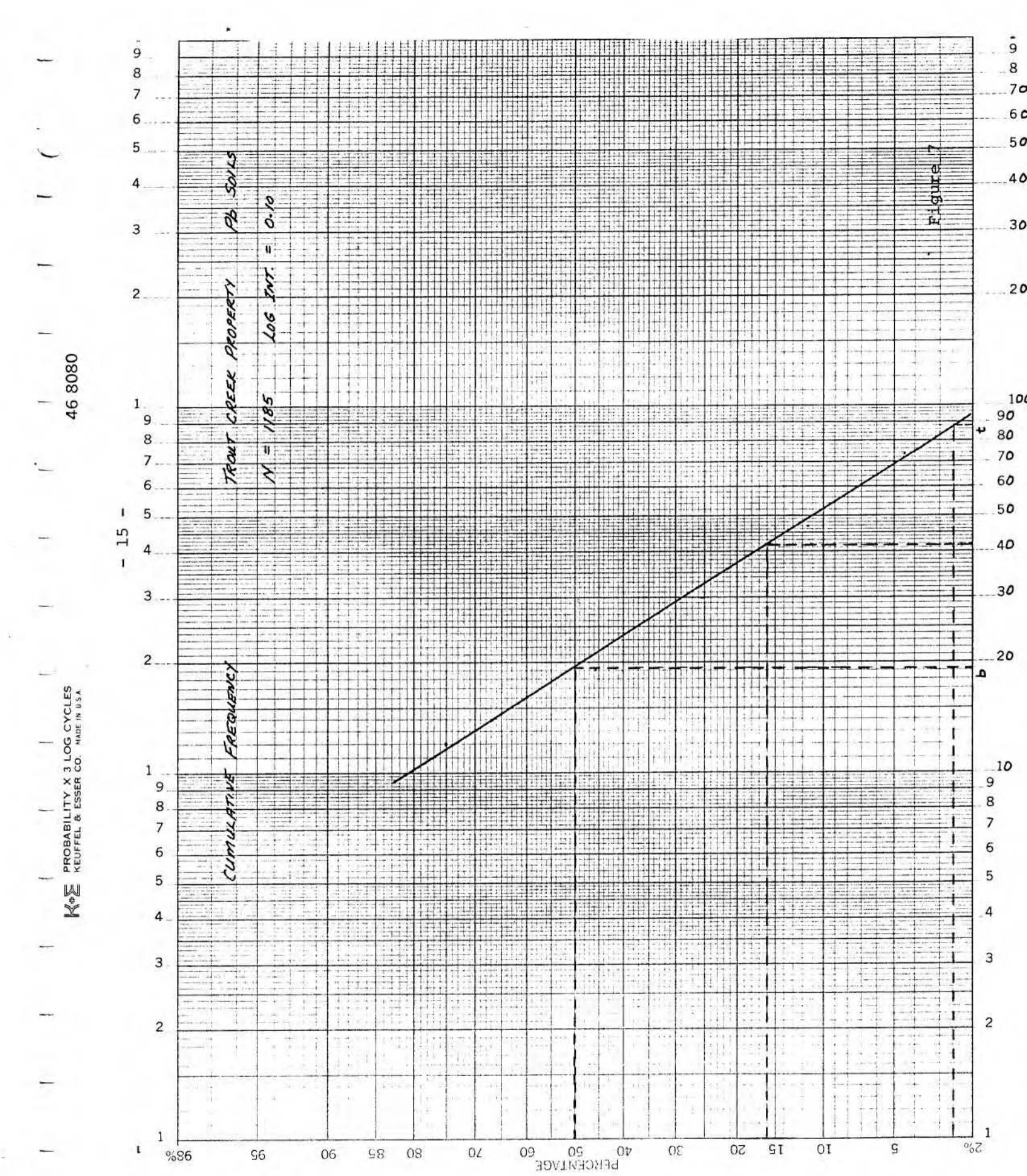


Figure 7
TROUT CREEK PROPERTY Pb SOILS
N = 1185 LOG INT. = 0.10
CUMULATIVE FREQUENCY
PERCENTAGE
98% 95 90 85 80 70 60 50 40 30 20 15 10 5 2%
t
b
PROBABILITY X 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.
46 8080

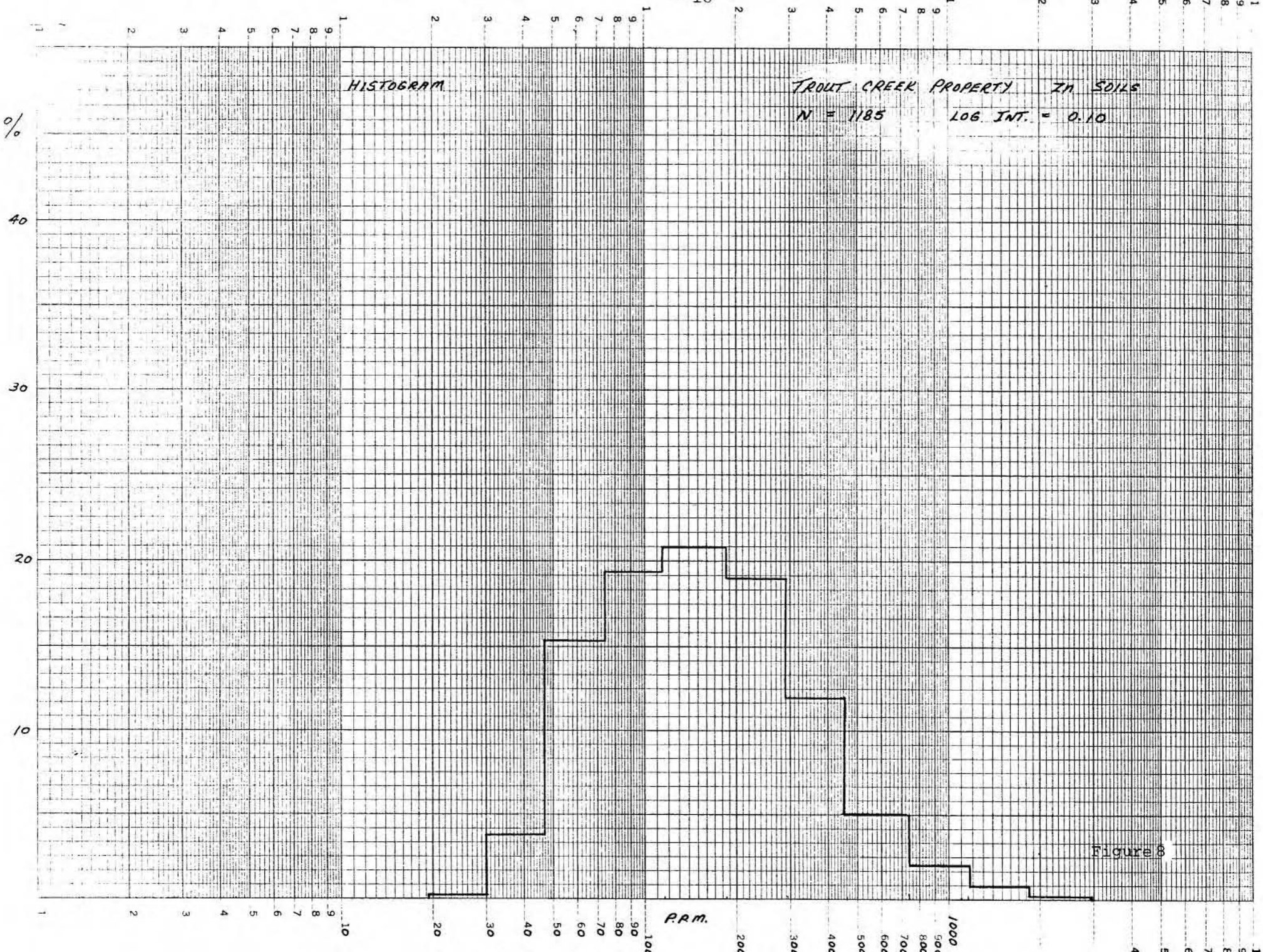
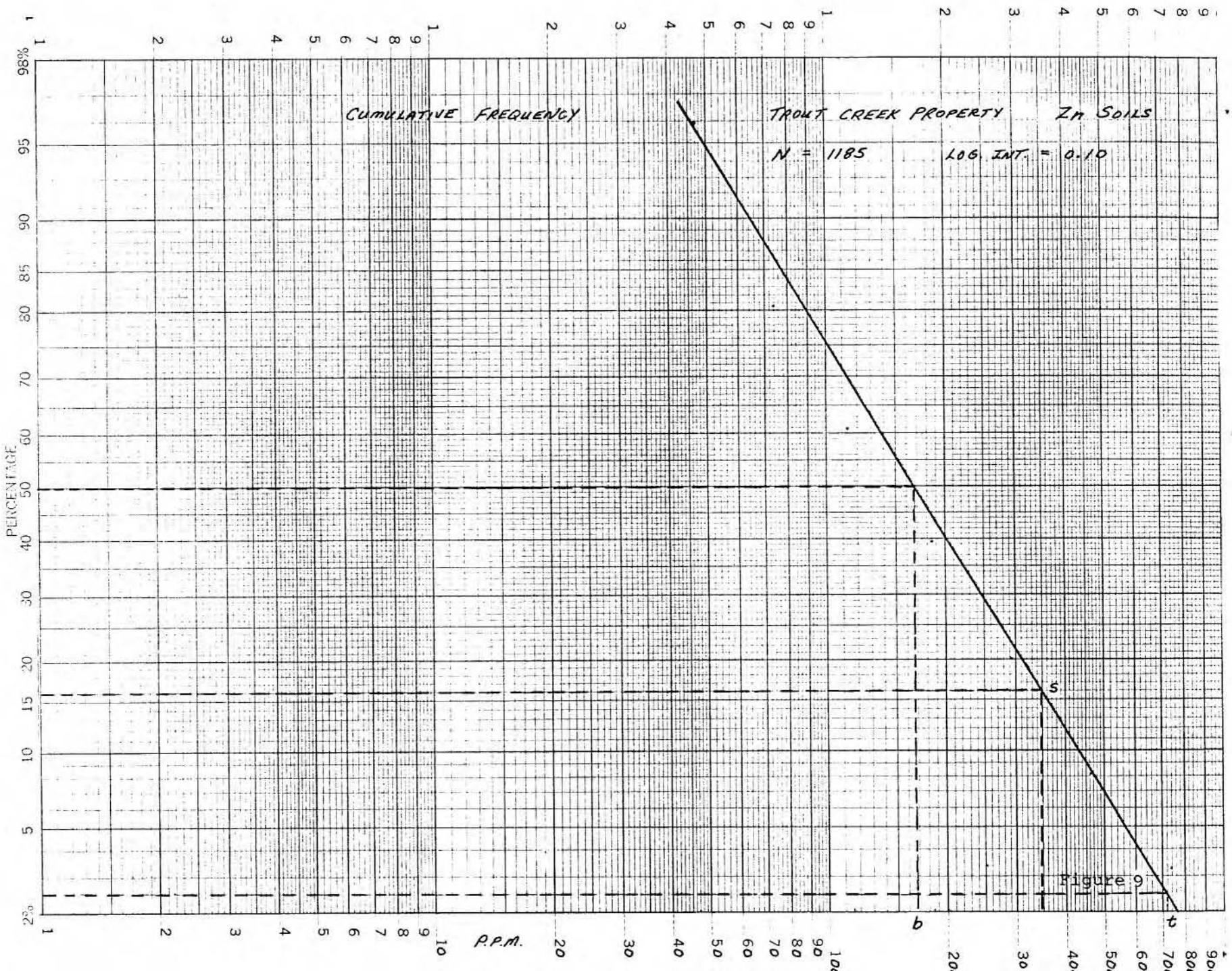

HISTOGRAM
TROUT CREEK PROPERTY Zn SOILS
N = 1185
LOG INT. = 0.10
%
40
30
20
10
P.P.M.

Figure 8


K+E PROBABILITY X 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.
CUMULATIVE FREQUENCY
TROUT CREEK PROPERTY Zn SOILS
N = 1185
LOG. INT. = 0.10
PERCENTAGE
98%
95
90
85
80
70
60
50
40
30
20
15
10
5
2%
P.P.M.
b
s
t

VII DISCUSSION of RESULTS

Based on the cumulative frequency curves established on the Cu, Pb and Zn elements, the following values are anomalous:

	Low Anomalous	Anomalous	High Anomalous
Copper	20	34	70
Lead	41	90	140
Zinc	350	750	1,100

The copper values obtained on the property clearly fall below what would be considered of interest. Both lead and zine are anomalous when compared to the regional soil value surveys, although it should be noted that these two elements are commonly high in the vicinity of the "Otter" intrusives.

One explanation for the lack of soil anomalies is the masking effect of thick sequences of either glacial or alluvial overburden. In areas where Cu and/or Mo mineralization was found, the soils failed to respond. These occurrences however, were located on the bottom of the steep sided stream valleys, and the overlying sediments exceeded 30 meters in thickness.

VIII CONCLUSION

The geochemical survey did produce several small Pb-Zn anomalies, the largest of which occurred just south of Spring Creek. The two minerals for which this property is being evaluated, mainly Cu-Mo, failed to respond in what would be considered anomalous. Although several mineralized occurrences have been located on the property, it would appear these showings fail to have continuity or be of economic size. There is however, the possibility that the extreme thick layer of overburden is masking the true extent of this mineralization.

IX RECOMMENDATION

A detailed mapping of the available geology would be the only survey to quantify the possibility of further work on this property.

APPENDIX I

PREPARATION of SOILS and SILTS for GEOCHEMICAL ANALYSIS

1. Empty soil sample into the pan and then place the sample packet into the pan with the sample.
2. Place the pan containing the sample into the oven (Temp=105 C) and leave until dry approx. 2 hours.
3. Remove from the oven when dry and remove rocks and twigs etc.
4. Break up the clay lumps with a rubber bung and then transfer the sample to an 80 mesh screen.
5. Screen approx. 50 - 100 grams of sample through the screen and transfer to the original packet and seal.
6. Discard the +80 mesh fraction of the sample.

ANALYSIS by A.A. for Cu, Pb, Zn, Ag and Mo.

1. Weigh 2.00 GM on the top pan balance into a 150 ML beaker (check that beaker No. is the same as written on work sheets)
2. Add 15 MLS Nitric Acid, cover with watchglass and heat on low heat until brown Nitrous fumes are gone.
3. Remove beakers from hot plate, cool for 5 minutes.
4. Add 10 ML Hydrochloric Acid. Place on hot plate. When all brown Nitrous fumes are gone, remove watchglasses and take just to dryness on a low plate.
5. Remove from plate, cool, add 20 MLS distilled water, 5 MLS Conc. Hydrochloric Acid and boil salts into solution.
6. Cool in water bath, when cold transfer to 100 MLS Volumetric flask, add 1 MLS Superfloc solution and dilute to 100 MLS with distilled water.
7. Mix thoroughly and then transfer to original beaker.
8. When all samples ready, transfer to A.A. room for reading.
9. If Mo is required, 10.00 MLS of this solution is transfered to a test tube and 1.00 MLS of ALC_3 solution added.

APPENDIX II

STATEMENT of QUALIFICATIONS

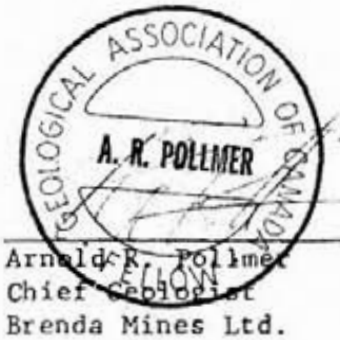
I, Arnold R. Pollmer of Peachland, Province of British Columbia, do certify that:

1) I have been employed as a geologist by Noranda Mines Limited from December 1973 to June 1977; I am presently employed as the chief geologist by Brenda Mines Ltd.

2) I am a graduate of the University of Wisconsin with a Bachelor of Science Degree in Geology (1972).

3) I am a member of the Canadian Institute of Mining and Metallurgy.

4) I am a fellow of the Geological Association of Canada.



Arnold R. Pollmer
Chief Geologist
Brenda Mines Ltd.

APPENDIX III

Statement of Costs

Labour		$3,466.45
Line Cutting		910.00
Supervision		920.45
Transportation		
Truck and radio rental		1,260.00
Fuel and repairs		714.00
Accommodation and Meals		1,663.76
Assaying		8,797.60
Supplies		559.23
Report Preparation		200.00
	Total	$18,491.49

Ferguson Road

North Trout Creek

Trout Creek

Spring Creek

20+00N

15+00N

10+00N

5+00N

0+00N

5+00S

10+00S

N

LEGEND

- ROADS
- STREAMS
- INTERMITTENT STREAMS
- SWAMPS
- GRID LINES
- 20-33 LOW ANOMALOUS
- 34-69 ANOMALOUS
- < 70 HIGH ANOMALOUS

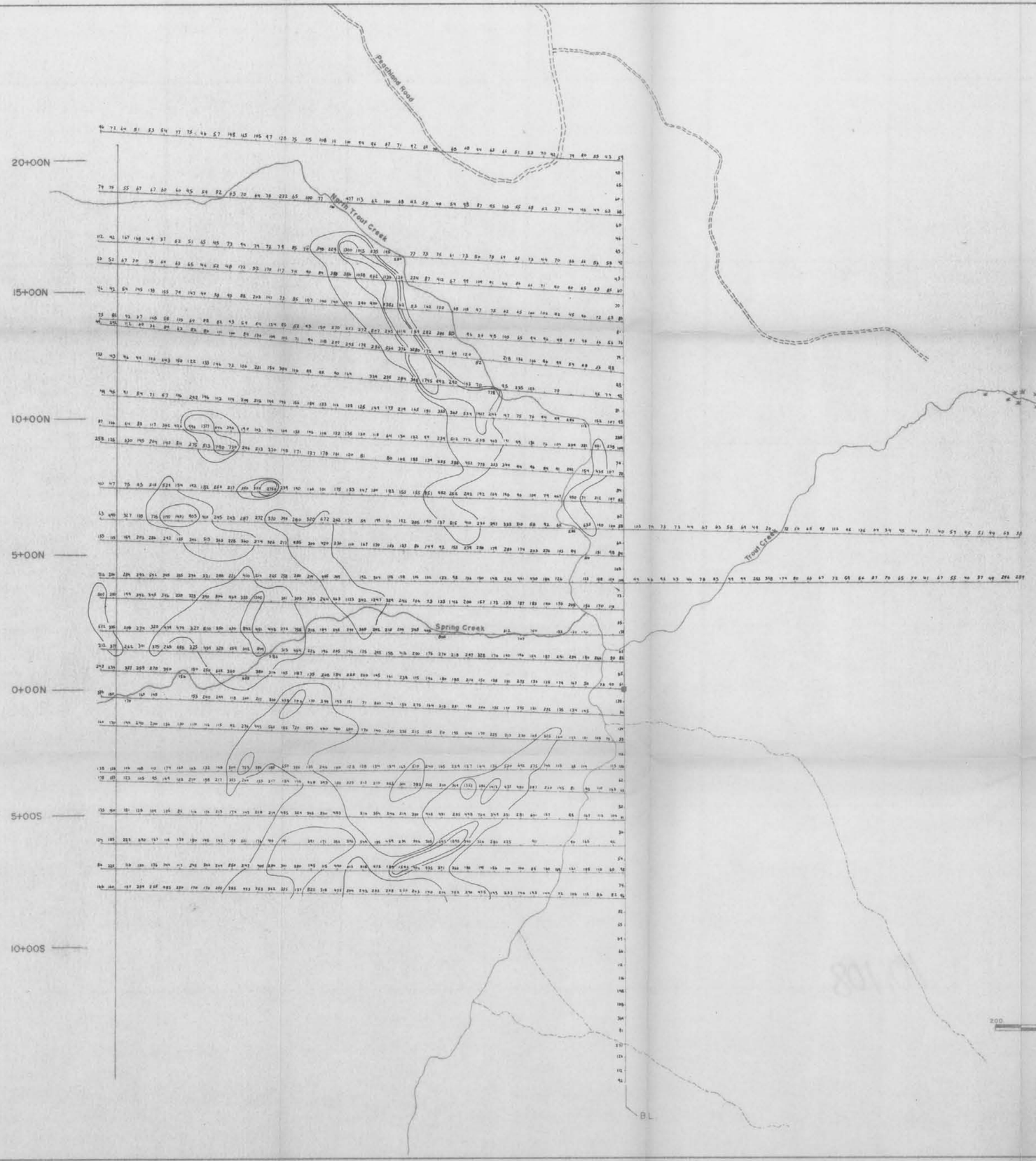
CONTOUR INTERVAL PPM

CONTOUR INTERVAL PPM

200 0 400 800 1200 1600 METRES

BRENDA MINES LTD.
EXPLORATION GROUP

Trout Creek Project
Cu Soils
SCALE 1:7,500
FILE NO.



LEGEND

- ROADS
- STREAMS
- INTERMITTENT STREAMS
- SWAMPS
- GRID LINES
- 350-749 LOW ANOMALOUS
- 750-1099 ANOMALOUS
- < 1100 HIGH ANOMALOUS

CONTOUR INTERVAL PPM

CONTOUR INTERVAL PPM

200 0 200 400 600 800 1000 METRES

BRENDA MINES LTD.
EXPLORATION GROUP

Drawn	Trout Creek Project	
Check	Zn Soils	
Approv.	SCALE 1:7,500	FILE No.

20+00N

15+00N

10+00N

5+00N

0+00N

5+00S

10+00S

Spring Creek

Trout Creek

BL

N

LEGEND

ROADS

STREAMS

INTERMITTENT STREAMS

SWAMPS

GRID LINES

41 - 89 LOW ANOMALOUS

90 - 139 ANOMALOUS

> 140 HIGH ANOMALOUS

CONTOUR INTERVAL PPM

CONTOUR INTERVAL PPM

200 0 200 400 600 800 1,000 METRES

BRENDA MINES LTD.
EXPLORATION GROUP

Drawn
Check
Approved

Trout Creek Project
Pb Soils
SCALE 1:7,500
FILE NO