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82-335-10395

GEOPHYSICAL-GEOCHEMICAL REPORT

on

TYBER MINERAL CLAIM
(Independent Showing)

49°12'N, 124°32'W NTS 92F/2E

for

TYBER RESOURCES LIMITED

in the

NANAIMO MINING DIVISION
BRITISH COLUMBIA
CANADA

by

W.S.Read, B.Sc., P.Eng.
Cobble Hill, B.C.
Canada

October 1981

WAYLAND S. READ, B.SC., P.ENG.
CONSULTING GEOLOGIST

AREA CODE 604-TELEPHONE 743-2279

851 CHERRY POINT ROAD, COBBLE HILL, B.C. V0R 1L0 CANADA

Mr. Earl Stevens,
President,
Tyber Resources Limited,
R. R. #3,
Nanaimo, B.C.
V9R 5K3

Dear Mr. Stevens:

Please find attached my report and maps covering the line cutting, geochemical and magnetometer surveys on the Tyber mineral claim.

Appendixed to my report is the report from C.P.U. Geodata Processing on the computer processing of the 199 four-element soil samples.

Anomalies have been indicated that will be targets for further examination and prospecting when the geological mapping is completed.

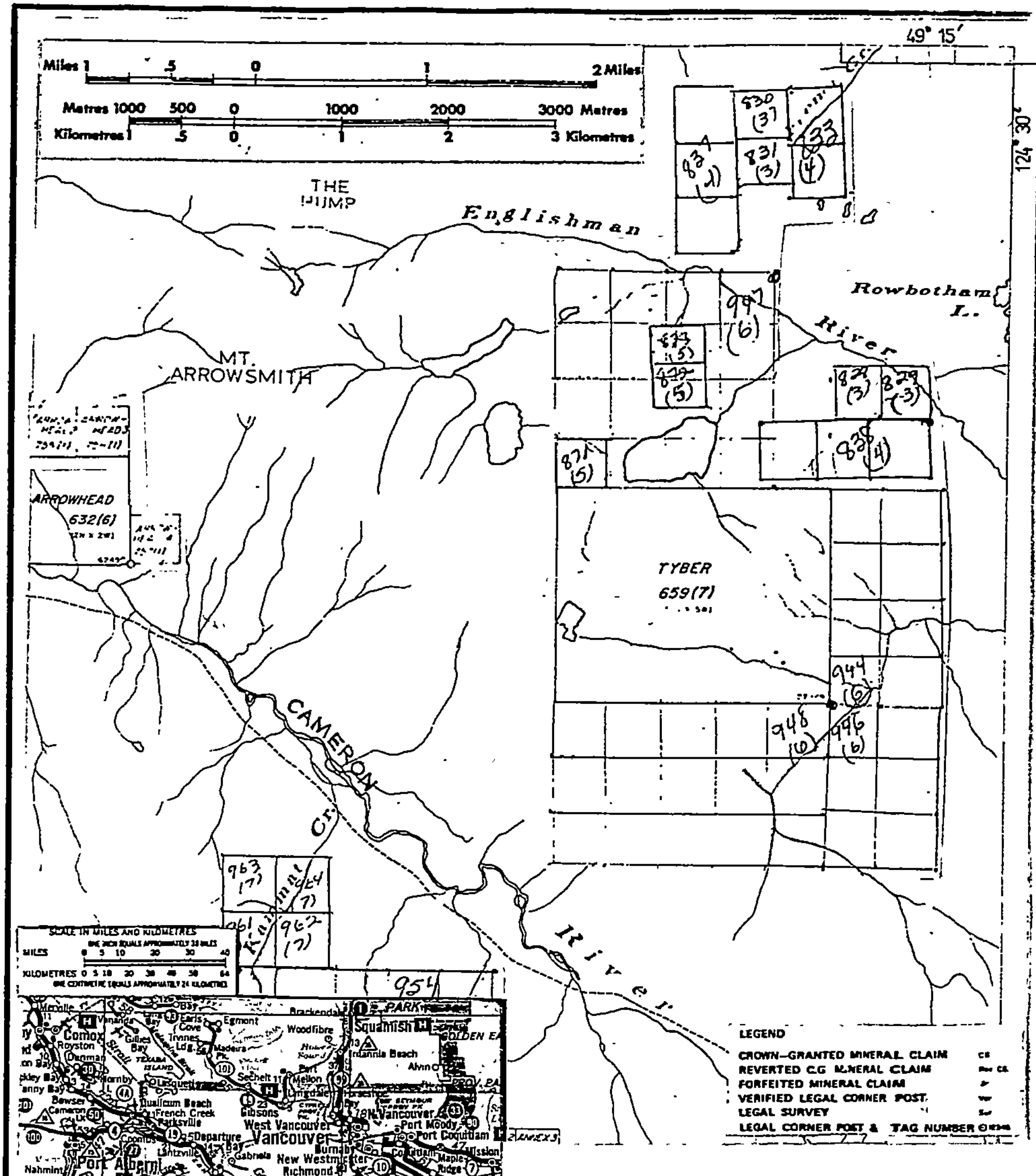
Yours very truly,

W. S. Read

W.S.Read, P.Eng.

WSR:mer

TABLE OF CONTENTS:



TYBER RESOURCES LIMITED

LOCATION MAP

TYBER CLAIM

92F/2E

OCTOBER 1981

WAYLAND S. READ P.ENG. Consulting Geologist
Cobble Hill B.C.

LOCATION:

The Tyber 659 Claim of 20 units, on which this work has been done, is located in the Nanaimo Mining Division, Vancouver Island, British Columbia, Canada, about twenty kilometers southwest of Parksville. In addition, there are the Tyber 2 - Tyber 5 claims composed of forty-five units. The showings on the Tyber claim, to the nearest degree, are at latitude 49°12'N, and longitude 124°32'W on map sheet 92F/2E of the National Topographic System.

This area is about five kilometers east-southeast from Mount Arrowsmith, and about 300 metres south of the boundary between the Cameron and Dunsmuir Land Districts. It is near the western boundaries of the E. & N. Railway. Elevations on the property vary from about 1800 feet to about 4200 feet above sea level. The showings range from about 3000 to 3500 feet elevations.

The Tyber Claim is about 6 kilometers north-northwest from the Villalta property being explored by Canamin Resources Limited.

ACCESS:

The property is reached from B.C. Highway 19 just north of Nanoose, by turning west at the MacMillan Northwest Bay logging camp. The main logging road is followed south of the Englishman River to the headwaters of the south fork, on industrial road 143, a distance of about 26 kilometers. A short branch road to the property presently requires four-wheel-drive due to sections of erosion, but could easily be repaired to two-wheel-drive standards.

Tyber Resources extended the logging road 550-600 metres up through a difficult section of steep slopes and cliffs to a bench about 60 metres east of the lower adit and the mineralized veins in the creek.

Steep slopes and cliffs make traversing the property difficult.

Water is available from creeks crossing the property and the south branch of the Englishman River. The remains of a cabin from former projects was found east of the creek near the lower adit. There is, however, no usable plant or equipment on the property.

TOPOGRAPHY:

Much of the property consists of heavily timbered slopes with some rock bluffs. In the area of the upper adit the hill slopes southward at about 35°.

Elevations on the property vary from about 1800 feet to about 4200 feel above sea level. Mount Arrowsmith, some 5 kilometers west-northwest from the claims, with an elevation of 5962 feet, is the highest peak in the area.

CLIMATE:

Being located on Vancouver Island at moderate elevation, the area has hot, dry summers and cool, wet winters. Although there are no weather records, it is assumed that the rain is heavy during winter months, with some snowfall in late winter. Because of the moderate elevation, this should not be a problem, and mining could be carried on throughout the year.

There was no snow on the property when visited on 21 January 1981, and temperatures were well above freezing.

CLAIMS HELD BY COMPANY:

The company advises that it holds the following mineral claims:

Claim Names	Reg. No.	Number Units	Expiry Dates
Tyber	659	20	15 July 1984

Claim Names	Reg. No.	Number Units	Expiry Dates
(Continued)			
Tyber 2	944	8	17 June 1982
Tyber 3	946	6	19 June 1982
Tyber 4	947	16	19 June 1982
Tyber 5	948	15	19 June 1982
Total:		65	

Each unit is 25 hectares in area.

It is believed that the company retains counsel to ensure title to the claims.

The writer has personally inspected the legal corner post of the Tyber 659 (7) mineral claim.

It is understood that three years assessment work was filed on the Tyber 659 claim to bring the expiry date to July 1984, and the filing is still being processed at the time of this report.

The claims are located within the area of the original Esquimalt and Nanaimo Railway land grant. The coverage of this grant has been reduced in recent years, but it is left to legal opinion as to the standing of the area covered by the Tyber Claim.

HISTORY:

The mineral occurrence is referred to as the 'Independent' showing, which goes back to the Independent, Eureka and Albion mineral claims described in the B.C. Minister of Mines Annual Report for 1916, page K326. The report discusses methods of access and mentions that several open cuts have been made and two adits have been driven, one 30 feet long and the other over 100 feet long.

Veins are described as mineralized with pyrite and chalcopyrite six to eighteen inches wide, striking in a north-westerly direction and dipping about 66° northeast.

Claims are reported to have been held on the showings sporadically for many years, and are described in more detail in my report of 9 March 1981.

The company did some hand trenching in 1980. In 1981 the company extended the logging road up a steep area to within about 60 metres of the lower adit.

Field work consisting of line cutting, soil sampling and the magnetometer survey were conducted under the direction of the writer from 29 June to 30 July 1981.

GEOLOGY:

The claims lie within an area mapped by J.E. Muller and D.G.T. Carson in Geological Survey of Canada Paper 68-50 as Karmutsen Formation, Upper Triassic and older, composed of pillow-basalt and pillow-breccia, basaltic lava and minor tuff. A sequence of limestone beds generally less than 30 feet thick, are described as having been found in several places between lavas of the upper part of the Karmutsen Formation, but are not shown as a separate unit on the geological map.

During preliminary grid surveys relatively flat-lying, narrow limestone outcrops were observed. This indicates that the volcanics are also relatively flat-lying and the drainages are cutting down through a series of flows. The vein zones, where observed, cut across the flows in a northwest direction.

The mineralized shear zone crossed by line 100N at 10E in the creek at the lower adit, contains quartz and erratically distributed pyrite, chalcopyrite, sphalerite and calcite. The strike is from 320 - 325^{o} and dips from 57^{o} - 75^{o} N.E., and width varies from about 0.2 to 0.8 metres.

Sample 74813 of 0.37 metre (true) width across a weaker mineralized section assayed copper 0.02%, silver 0.01 oz/ton and gold 0.003 oz/ton.

Samples from higher mineralized sections along the vein have in the past returned much higher assays as reported in 9 March 1981 report. A quartz vein observed in the creek at 137N-13W contained approximately 10% pyrite. Sample 74812 across 1.0 metre of this vein assayed silver 0.78 oz/ton, and gold 0.003 oz/ton. This vein had a strike of az.330^{o} and dipped 80^{o}E. Farther up the creek at line 200N-150W, the survey crew reported mineralized quartz veins in the creek.

Quartz veins are reported parallelling Knife Creek (that flows in an easterly direction crossing the baseline at 520N) at baseline 540N and about 10 metres south of line 500N-60W. Other poorly exposed mineralized quartz veins were observed northwest from the upper adit.

Quartz float is reported from line 00N-200W and about 300W, line 200N-10W-20W and 50E-60E and near the baseline south of line 300N.

LINECUTTING:

Due to extreme variations in topography, heavy timber cover and widly distrubuted mineral showings, it was deemed necessary to establish a control grid in the area of immediate concern.

A 600 metre baseline was cut on a compass bearing of true north with stations consisting of cedar pickets chained and slope-corrected at 20 metre intervals.

The baseline picket BL100N is located on the south edge of the main creek southwest and across from the lower adit.

Crosslines, except where made impossible by cliffs, were turned off overy 100 metres using a sighting board to establish right angles, and varied in length up to 400 metres east and west from the baseline. As with the baseline, cedar pickets were chained and slope-corrected at 20 metre intervals.

Crosslines completed in this program totalled 3,490 metres in length, plus the 600 metre baseline, giving a total of 4,090 metres of slope-corrected lines.

Slope correction was achieved by measuring the slope of the line to the nearest station with a clinometer, then comparing that angle to a supplied chart that shows the length of chain on the slope that will be required to place the picket at a distance 20 metres horizontal from the previous picket. For example, a line sloping 30° would require the crew to chain 23.09 metres between the stations so that the horizontal or map distance between the stations is 20 metres.

(See GRID DATA)

GRID DATA

LINES	INTERVAL (m)	LENGTH (m)	
Baseline	0-600N		600
L 0	0-300W	300	
L 0	0-400E	400	
L 100N	0-300W	300	
L 100N	0-400E	400	
L 200N	0-300W	300	
L 200N	0-100E	100	
L 300N	0-400W	400	
L 310N	0-100E	100	
L 400N	0-120W	120	
L 430N	0- 60E	60	
L 500N	0-300W	300	
L 500N	0-120E	120	
L 600N	0-300W	300	
L 600N	0-230E	230	
Crossline Total:			3,490
Total Lines:			4,090

MAGNETOMETER SURVEY:

Several mineralized quartz veins and shear zones had been found in the Karmutsen volcanics on the Tyber claim. Since some samples had, in addition to the economic minerals, contained varying amounts of pyrrhotite and magnetite which were weakly to strongly magnetic, and there was considerable light overburden, it was felt that a magnetometer would be an appropriate exploration tool in combination with geochemistry.

Type of Magnetometer:

A Sharpe Fluxgate magnetomer Model MF-1, serial number 803331, was used for this survey. This is a hand-held instrument requiring only coarse leveling, and is not significantly affected by orientation.

The magnetometer measures the vertical component of the earth's magnetic field to 5 gammas on the lowest scale range. The full scale ranges vary progressively from a minimum of plus or minus 1,000 gammas to a maximum of plus or minus 100,000 gammas. The values can be read directly from the scale.

Temperature compensations have been built into the instrument and the only necessary correction to the readings is for the diurnal variation. The variation in each survey loop is assumed to be linear and is determined by subtracting the initial and final readings at any given point. The correction added to each reading in the loop is the product of the total diurnal variation of the loop and the ratio of time elapsed up to the time of reading over the total time elapsed for the loop.

Field Procedure:

The instrument was set or zeroed for the area and station BL 140N on the grid was given a value of 100 gammas, The baseline was surveyed, corrections in the readings made for diurnal variation, and the stations at the junction of the crosslines with the baseline were used as control points for each survey loop.

Readings were taken at every 20 metre station and at an estimated mid point giving readings along baseline and crosslines at 10 metre intervals, FOR A TOTAL OF 4.09 KIOMETRES Diurnal variation was normal and corrections, where necessary, were treated linearly in respect to elapsed time.

Magnetometer Results:

The corrected readings were plotted on a base map to a scale of 1:1000. Readings were plotted as gammas relative to BL140N on the grid. The readings varied from a high of 2650 gammas to a low of minus 1005 gammas, for a range of 3655 gammas.

When contoured at 500 gamma intervals, a northwest trend developed that is approximately parallel to the surface trace of observed veins and shear zones. There is considerable variation and intermediate lines would be necessary for a more concise interpretation and to possibly trace anomalous zones along strike.

The low magnetic relief indicates that no large magnetite rich bodies were crossed by the lines, but the low variations indicate that there is a small change when crossing areas of known mineralization. This could be expected in crossing a shear zone, fault or vein, but does not preclude the possibility of other non-magnetic mineralization.

The present data will aid in follow-up prospecting and geological mapping, in conjunction with the geochemical survey.

GEOCHEMICAL SURVEY:

199 soil samples were taken along the baseline and crosslines at 20 metre intervals. A shovel or a mattock was used for digging the sample holes. The upper part of the 'B' soil horizon was sampled.

The samples were collected in brown Kraft soil sample bags, marked as to grid location, arranged in line order, and forwarded directly to the assayers in Vancouver as each shipment lot was collected. The samples were analysed for copper, lead, zinc and silver by Chemex Laboratories Ltd., Vancouver, with metal determination by the Atomic Absorption Process.

The results were plotted on a base plan at a scale of 1:1000. The analytical data was forwarded to C.P.U. Geodata processing in Calgary for statistical evaluation, which has been used in contouring and interpretation.

A copy of the C.P.U. Geodata Processing report with 22 figures and analytical sheets is appendixed to this report.

Results - Geochemical Survey:

Descriptive Statistics - Values in parts per million:

Element	No.Samples	Minimum	Maximum	Range	Mean
Copper	199	16	650	634	135.015
Lead	199	1	405	404	5.9196
Zinc	199	24	3100	3076	124.668
Silver	200	0.1	27.0	26.9	0.286

The sample distribution of copper, lead, zinc and silver is found on figures 5-8 on pages 9-12 of the appendixed report.

The Histogram plot, Fig.1, for copper indicates that copper is log normally distributed, and Fig.9 determines the background for copper to be 110 ppm and the threshold to be 137 ppm. All values above 137 ppm can therefore be considered anomalous. For interpretative purposes the writer selected and contoured the highest 10% of the copper samples that ranged from 240 to 650 ppm.

The Histogram plot, Fig.3 for zinc indicates that zinc is log normally distributed and Fig.10 determines the background of 88 ppm and a threshold value of 154 ppm. All values above 154 ppm zinc can be considered anomalous. The writer selected and contoured the highest 4% of the zinc samples that ranged from 400 to 3076 ppm.

The Histograms for lead and silver do not plot in a log normal distribution and would require further mathematical stimulation of the data for a statistical approach due in part to a high percentage of very low numbers for both elements.

There is a wide northwest trending zone of anomalous copper extending from line 00 North to line 400 North. Line 400 North was stopped at 120W due to very steep terrain while still in the zone, and should be reexamined for possibility of extension. Within this zone are several single and adjoining double samples above 240 ppm. The longest linear zone extends from line 200N - 40E across the baseline at BL280N and BL300N to line 400N-60W. This clearly correlates with a high zinc anomaly and a single point high for silver and lead at the southern end of this anomaly.

This zone encompasses and has a similar strike to the Upper Adit. Additional fill-in lines at 50 metre centres would aid in delimiting this zone. The strong multi-element anomaly at line 200N-40E, below the Upper Adit, will require close testing for it could either represent ion migration from the adit area or a possible higher-grade downslope extension of the mineral zone.

Additional zinc highs occur on lines 200N and 300N west of the baseline. Fill-in lines would greatly assist in determining how these zones may connect and aid in mapping control.

Additional anomalous copper zones are found to the west on line 300N and on line 00N at 340E.

CONCLUSIONS:

The computer interpretation described copper and zinc as being statistically well-distributed and appearing to be derived from one source. This is partially confirmed by the plotting and contouring of the geochemical laboratory results. Closer line spacing would aid interpretation.

A wide northwest trending zone of anomalous copper extends from line 00N to line 400N with a zinc anomaly of smaller area overlaying the copper anomaly. There is close correlation of the high copper and zinc with a long linear high extending in the area of the Upper Adit from line 200N - 40E across the baseline at BL280N and BL300N to line 400N - 60W. The above linear crosses the Karmutsen formation and is believed to be caused by vein-type structures.

In the steep terrain of the survey area the Karmutsen volcanic flows are separated in places by thin beds of relatively flat-lying limestone. Erosion has cut down through the succession.

Since in geochemistry zinc is normally more mobile than copper, one would expect in steep country to find zinc anomalies of larger area than copper. Since this is not the case, additional sources of copper are expected that could have as a source copper mineralized veins or horizons in the volcanics that may contain disseminated copper.

Lead and silver laboratory results are erratic and mostly very low. The few higher readings are associated with copper and zinc anomalies. The best example of this is at station 200N - 40E, below the Upper Adit.

CONCLUSIONS: (Cont'd)

The magnetic trend was northwest, similar to that of the geochemistry. Magnetic relief was low and only changes weakly in the areas of known mineralization. It is more indicative of a structural change such as a fault or shear zone. There does not appear to be ahy large magnetite-rich areas covered by the survey lines. The significance of the subtle magnetic changes should become more obvious during prospecting and mapping.

Geochemistry is a useful tool in this area and could be expanded to cover the claim area on a reconnaissance basis, using logging roads for control.

RECOMMENDATIONS:

1. Extend line 400N to the west if practical (cliffs) and add selected intermediate lines for additional soil samples and mapping control.
2. Prospect and geologically map the grid area, carefully plotting mineral occurrences and the limestone beds that may be useful as marker horizons. The mineral occurrences could occur as both vein deposits and disseminated copper in the Karmutsen volcanics.
3. The company should consider extending the geochemical coverage on a reconnaissance basis in the claims area that can be reached from the network of logging roads.

REFERENCES

1. B.C. Minister of Mines Annual Report for 1916, Page K326

2. B.C. Department of Energy, Mines and Resources, Claim Map M92/F2E, Scale 1:50,000

3. B.C. Department of Energy, Mines and Resources, Topographic Map 92F/2, Alberni Inlet, Scale 1:50,000

4. Fyles, James T. 1955 Geology of the Cowichan Lake Area, Vancouver Island, British Columbia, B.C. Dept. Mines Bul. 37

5. Laanela, H. Report for Gunnex Limited - Mineral Occurrence #20, -Independent Showing, February 1965/66

6. Mineral Inventory File No. 236, Independent (Cu)

7. Muller, J.E. and Carson, D.J.T., Paper 68-50 Geology and Mineral Deposits of Alberni Map Area, British Columbia (92F), Geological Survey of Canada.

8. Read, W.S. Report on Tyber Mineral Claim (Independent Showing), 9 March 1981

9. Hawkes, H.E., & Webb, J.S. Geochemistry in Mineral Exploration, 1962.

CERTIFICATE OF QUALIFICATIONS

I, Wayland Stuart Read of Cherry Point Road, Cobble Hill, B.C.,

do hereby certify that:

1. I am a practising Mining Geologist and my address is Cherry Point Road, Cobble Hill, B.C.

2. I am a graduate in Geology from Acadia University, Wolfville, Nova Scotia, and have been granted the degree of Bachelor of Science in Geology, and have engaged in practising my profession for the past twenty years.

3. I am a member of the Association of Professional Engineers of British Columbia and the Yukon Territory and a Member of the Canadian Institute of Mining and Metallurgy.

4. This report is based on my personal examinations, work on the property and direction of an exploration crew of Gary Thorsen, prospector and graduate of B.C. Ministry of Mines short course - Mineral Exploration for Prospectors- and Bradley Riffal who has assisted the writer with other surface and underground technical work.

5. I have no direct or indirect interest in the property or securities of Tyber Resources Limited.

Respectfully submitted,

W. S. Read

Wayland S. Read, B.Sc.P.Eng.

Cherry Point Road,
Cobble Hill, B.C.

23 October 1981

FIGURE 1.

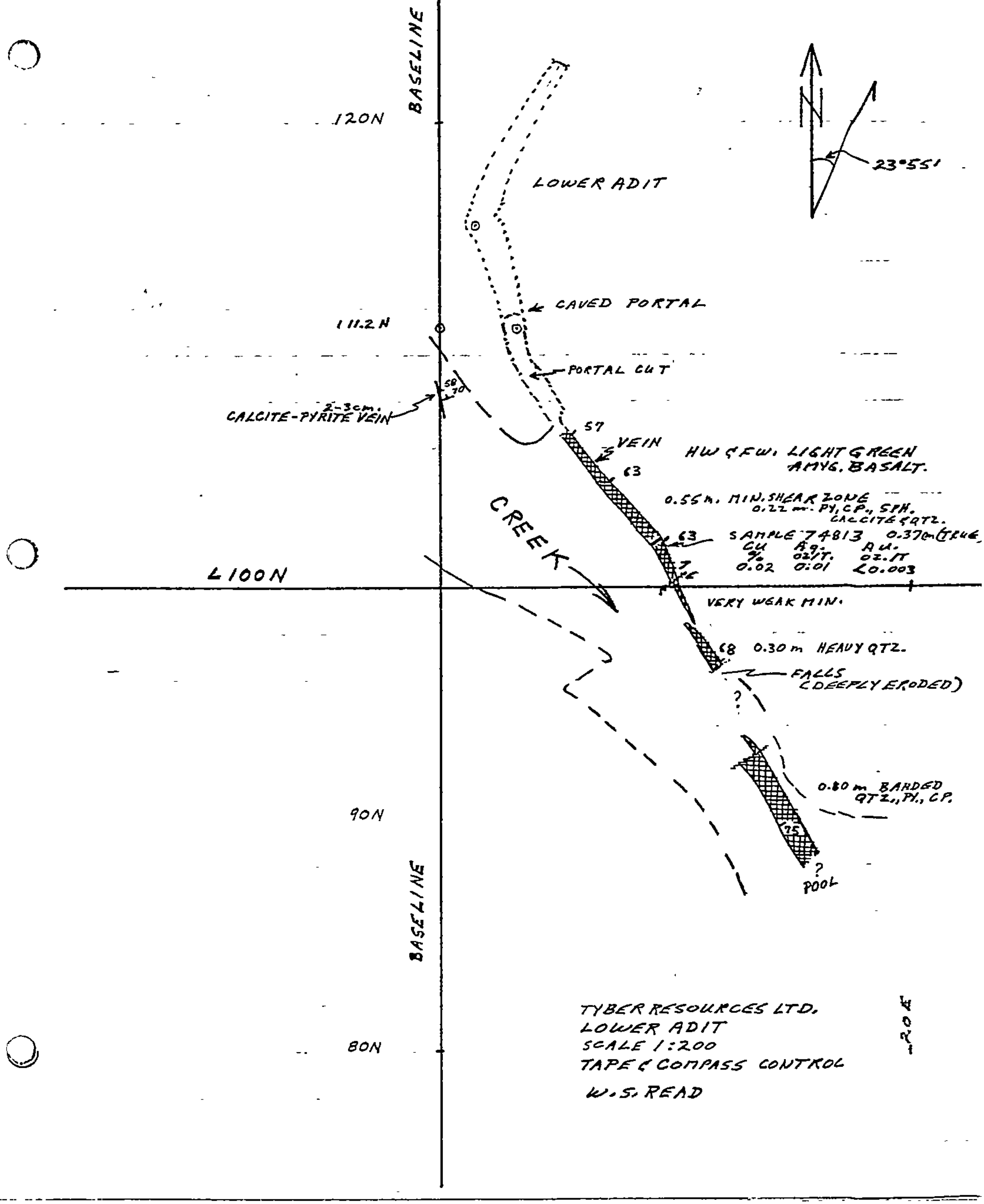
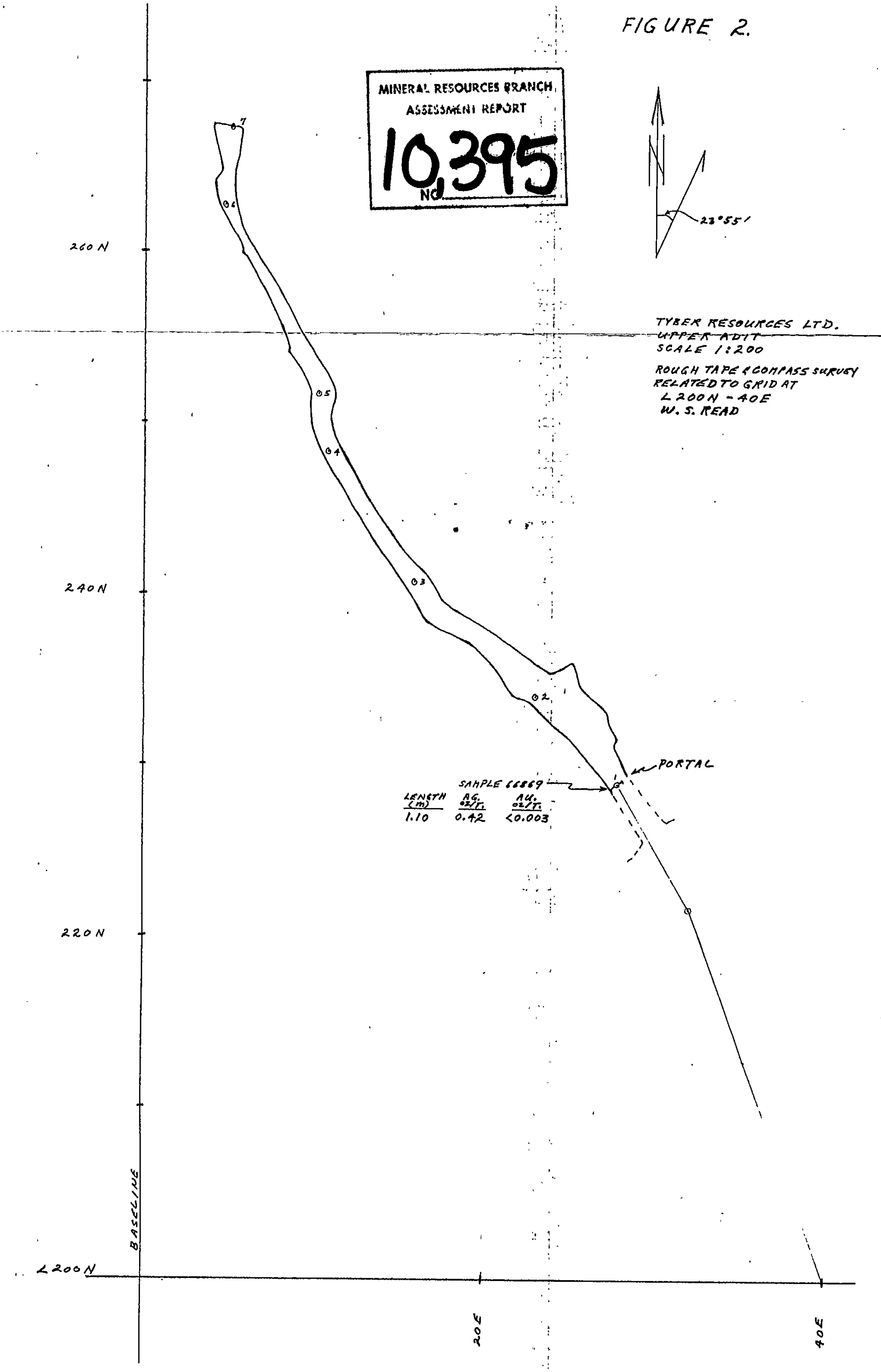

BASELINE
120N
LOWER ADIT
23°55'
CAVED PORTAL
111.2N
PORTAL CUT
2-3cm.
CALCITE-PYRITE VEIN
58
70
57
VEIN
HW & FW. LIGHT GREEN
AMYG. BASALT.
63
0.55m. MIN. SHEAR ZONE
0.22 m. PY, CP., SPH.
CALCITE & QTZ.
63
SAMPLE 74813 0.37m (TRUE)
Cu % 0.02
Ag. oz/T. 0.01
Au. oz./T <0.003
CREEK
L100N
VERY WEAK MIN.
68 0.30m HEAVY QTZ.
FALLS
(DEEPLY ERODED)
?
0.80 m BANDED
QTZ., PY., CP.
75
?
POOL
90N
BASELINE
80N
TYBER RESOURCES LTD.
LOWER ADIT
SCALE 1:200
TAPE & COMPASS CONTROL
W. S. READ

FIGURE 2.


TYBER RESOURCES LTD.
~~UPPER ADIT~~
SCALE 1:200
ROUGH TAPE & COMPASS SURVEY
RELATED TO GRID AT
L200N - 40E
W. S. READ
23°55'
260 N
240 N
220 N
L200N
BASELINE
20E
40E
7
6
5
4
3
2
PORTAL
SAMPLE 66869
LENGTH (m) 1.10
AG. oz/T. 0.42
AU. oz/T. <0.003

APPENDIX 1

CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER, B C
CANADA V7J 2C1
TELEPHONE (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : Read, W. S.
851 Cherry Point Road
Cobble Hill, B.C.

CERT. # : A8112947-001-A
INVOICE # : I8112947
DATE : 16-AUG-81
P.O. # : NONE
TYBER

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
L 300N 320 W	201	142	2	93	0.1	--	--
L 300N 340 W	201	176	1	85	0.1	--	--
L 300N 360 W	201	266	10	83	0.1	--	--
L 300N 380 W	201	126	7	85	0.2	--	--
L 300N 400 W	201	149	7	86	0.4	--	--

CTA MEMBER CANADIAN TESTING ASSOCIATION

Certified by HartBichler

APPENDIX 2

TYBER PROJECT

GEOCHEMICAL REPORT

COMPUTER STIMULATED

CPU GEODATA PROCESSING

R. Buckley, P. Eng (BC)

September 1981

INDEX

PROSPECTING WITH GEOCHEMISTRY

Before discussing the methods by which geochemical data is processed and anomalous regions determined, a short presentation on why a soil analysis is undertaken during a mineral survey is in order.

Soil is derived from rock through a combination of mechanical and chemical breakdown of that rock. It will, therefore, be representative of the rock from which it was derived, including any metalliferous concentrations occurring in the original rock.

If the breakdown was of a chemical nature without lateral movement of the resulting soil or chemical dispersion of the metallic ions, then sampling of the soil will effectively be a sample of the underlying rock. However, in nature, this does not occur since erosion, glaciation, chemical dispersion, along with river and stream action will have transported the soil and the metallic ions from their origin.

For this reason field observations are recorded taking note of the sampling horizon, whether the sample is taken from the "A", "B" or "C" horizon, direction of drainage and the nature of the drainage. Stream silt sampling techniques are quite different in that it is recognized that stream silt is transported by water action. Anomalous samples will have, therefore, originated upstream from the sample site.

"A" zone sampling is unreliable since this is the organic portion of the soil profile. Metal content varies in this horizon due to organic acids, etc., associated with decaying vegetable matter. The "B" horizon soil sample on the other hand will reflect the nearby metal content of the bedrock as a result of ground water circulation and natural leaching. Since the distribution of metal ions follow the laws of dispersion the metal content of the soil will in most cases probably be representative of the underlying bedrock. Slight modifications will exist due to topography and ground water migration trends.

These are the variables that complicate the interpretation of a geochemical survey, but techniques employing statistics and Gauss's laws of log-normal distribution can be used to assist in the interpretation of the field data.

GEOCHEMICAL REPORT

DATA INTERPRETATION

Unless certain parameters are established, an isolated data point or chemical assay has little meaning in geochemical surveys, even if such laboratory data is contoured.

The laboratory data must be evaluated statistically. The most meaningful geochemical maps may be constructed when the data has been derived from a high, homogeneous population. Trace elements in soils will disperse from the source according to fixed distribution laws (Gauss' Law of Lognormal Distribution, ie, the bell-shaped curve). Therefore, sampling must be done over a large area in order that the whole population will be represented and so that the source of the trace elements may be recognized. Such parameters as background and threshold value are two of the most important values to be determined for each survey. Other parameters such as confidence limits, correlation factors, etc., are of secondary importance.

Before the graphs and the various parameters are discussed, some background to the application of statistics to geochemistry should be presented.

Geochemical maps are most useful if the data is obtained from a large homogeneous population. Two questions arise; one is, 'is the population large enough', and two, 'is the population homogeneous', that is, does the data come from one source? The first question can be answered in the affirmative if the sampling frequency or traverse passes over a postulated mineralized body a number of times. Less prospective country should also be sampled using the same sampling density, thereby establishing a background value.

In a practical sense, this can be determined by constructing histograms of the various metals. A bell-shaped outline, probably skewed to the higher values, indicates a normal distribution of the data. If the histogram is relatively smooth and symetrical about the mode, then by inspection it can be concluded that sufficient sampling has been done to define the data population.

Data Interpretation (con't)

In determining the answer to the second question, the second derivitive of a curve enclosing the histogram can be plotted. If this curve is a bell-shaped curve, then the data occurs in a log-normal distribution mode and is probably derived from one source. A rough approximation of the mode and standard deviation can also be determined from this plot.

The data can then be plotted on probability-log graph paper, which consists of plotting the metal content on the ordinate log scale and the cumulative percentage frequency distribution on the abscissa. If the resulting plot is a straight line, then the data can be considered as being derived from one source. If there is a break in the curve, ie., a change in a slope, then two populations of data are contributing to the curve.

The background value in a perfect frequency distribution curve is the mode (most frequent) and is the same number as the median (50% of the values above and 50% of the values below). The background value of the laboratory data, therefore, is the geometric mean of the data. The next parameter obtained from this plot is the standard deviation. The threshold of that value above which all samples can be considered to be anomalous is one standard deviation above the median. The background is, therefore, found on the abscissa at the 50% mark of the cumulative percentage plot, while the threshold value is at one standard deviation above the background at the 97.5% mark.

THRESHOLD

By definition, 97.5% of the individual values fall between two standard deviations from background in the case of symmetrical distribution, either normal or log-normal. That is, 2.5% of the population exceeds the upper limit of two standard deviations. This upward limit is conventionally taken as the threshold level above which the data is considered as being anomalous.

Practically, background and threshold are read directly on the cumulative frequency graph. Figure 9 shows these parameters for copper while Figure 10 illustrates the value for zinc, Figure 11, lead and Figure 12 silver follow in this report.

COMPUTER PROGRAM

The statistical calculations were done using The Radio Shack TRS 80 Computer and The Radio Shack software "Advanced Statistical Analysis, Catalogue #26-1705".

The laboratory data was entered into the computer memory and a file built using the disk data file program. This same file was used in all succeeding programs and calculations. There is provision to add, delete and update this file if required.

The data was then computer plotted for each metal as a histogram, using the histogram program. The histograms are printed out as Figure 1 (copper) Figure 2 (lead) Figure 3 (zinc) and Figure 4 (silver). This program provides both frequency of occurrence and percentage occurrence.

In a similar manner the Frequency Distribution program created the tables of Figure 5 (copper) and Figure 6 (zinc), Figure 7 (lead) and Figure 8 (silver). The cumulative percentage from this calculation was plotted on probability-log paper to produce the curve of Figure 9 (copper) and Figure 10 (zinc), Figure 11 (lead) and Figure 12 (silver). The Appendix contains a copy of the laboratory analysis and is included as a reference.

The Descriptive Analysis program was then programmed into the computer which calculated the various parameters as printed in Figure 13 (copper) and Figure 15 (zinc), Figure 4 (lead) and Figure 16 (silver). The Correlation and Linear Regression program calculates correlation parameters Figure 17 (copper, lead), Figure 19 (lead, zinc) Figure 21 (copper, zinc) and in addition posts a x-y plot of the correlating elements, Figure 18 (copper, lead), Figure 20, (lead, zinc), Figure 22 (copper, zinc).

```
                  H I S T O G R A M

FREQUENCY                                           PERCENT
        I                                                I
    74  +                  *****                         + 37.2
        I                  *****                         I
        I                  *****                         I
        I                  *****                         I
        I                  *****                         I
        I                  *****                         I
    62  +                  *****                         I
        I                  ***** *****                   I
        I                  ***** *****                   I
        I                  ***** *****                   + 27.9
        I                  ***** *****                   I
        I                  ***** *****                   I
    50  +            ***** ***** *****                   I
        I            ***** ***** *****                   I
        I            ***** ***** *****                   I
        I            ***** ***** *****                   I
        I            ***** ***** *****                   I
        I            ***** ***** *****                   I
    37  +            ***** ***** *****                   + 18.6
        I            ***** ***** *****                   I
        I            ***** ***** *****                   I
        I            ***** ***** *****                   I
        I            ***** ***** *****                   I
        I            ***** ***** *****                   I
    25  +            ***** ***** *****                   I
        I            ***** ***** *****                   I
        I            ***** ***** *****                   I
        I            ***** ***** *****                   +  9.3
        I            ***** ***** *****                   I
        I            ***** ***** *****                   I
    13  +            ***** ***** *****                   I
        I      ***** ***** ***** *****                   I
        I      ***** ***** ***** *****                   I
        I      ***** ***** ***** ***** *****             I
        I      ***** ***** ***** ***** *****             I
        I***** ***** ***** ***** ***** ***** *****       I
     0  +***** ***** ***** ***** ***** ***** *****       +  0.0
         ------------------------------------------------
        10.0  20.0  40.0  80.0 160.0 320.0 640.01280.01280.0

                     C O P P E R
```

FIG. 1

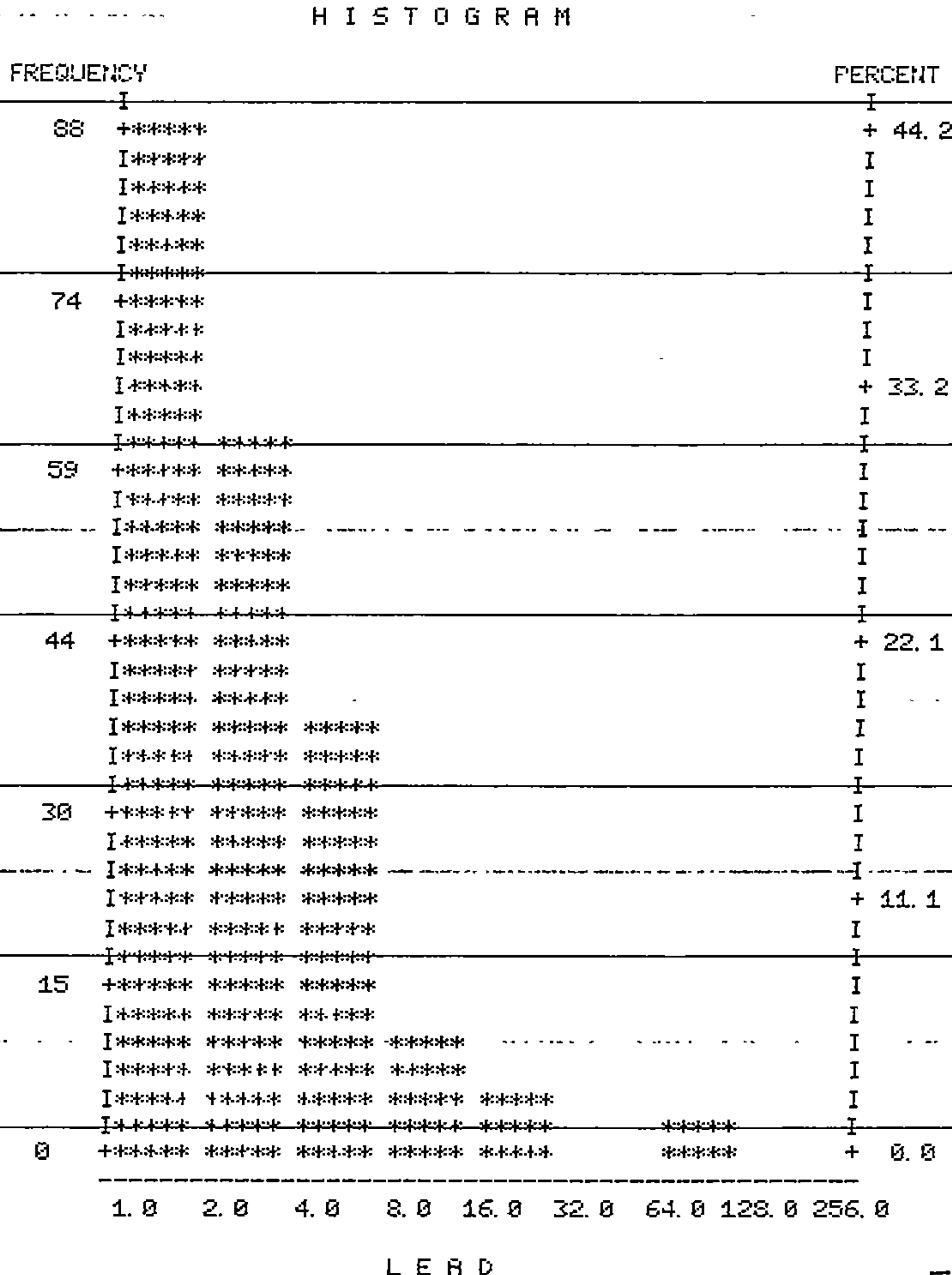

HISTOGRAM
FREQUENCY
PERCENT
88
74
59
44
30
15
0
44.2
33.2
22.1
11.1
0.0
1.0
2.0
4.0
8.0
16.0
32.0
64.0
128.0
256.0
LEAD

FIG. 2

```
                           H I S T O G R A M

   FREQUENCY                                                   PERCENT
         I                                                I
      98 +           *****                                + 49.2
         I           *****                                I
         I           *****                                I
         I           *****                                I
         I           *****                                I
         I           *****                                I
      82 +           *****                                I
         I           *****                                I
         I           *****                                I
         I           *****                                + 36.9
         I           *****                                I
         I     ***** *****                                I
      66 +     ***** *****                                I
         I     ***** *****                                I
         I     ***** *****                                I
         I     ***** *****                                I
         I     ***** *****                                I
         I     ***** *****                                I
      49 +     ***** *****                                + 24.6
         I     ***** *****                                I
         I     ***** *****                                I
         I     ***** *****                                I
         I     ***** *****                                I
         I     ***** *****                                I
      33 +     ***** *****                                I
         I     ***** *****                                I
         I     ***** *****                                I
         I     ***** *****                                + 12.3
         I     ***** *****                                I
         I     ***** *****                                I
      17 +     ***** *****                                I
         I***** ***** ***** *****                         I
         I***** ***** ***** *****                         I
         I***** ***** ***** ***** *****                   I
         I***** ***** ***** ***** *****                   I
         I***** ***** ***** ***** ***** ***** ***** ***** I
       0 +***** ***** ***** ***** ***** ***** ***** ***** +  0.0
         ------------------------------------------------
         20.0  40.0  80.0 160.0 320.0 640.01280.02500.05000.0

                            Z I N C
```

FIG. 3

```
                              H I S T O G R A M

FREQUENCY                                                      PERCENT
           I                                                      I
   22      +*****                                                 + 11.0
           I*****                                                 I
           I*****                                                 I
           I*****                                                 I
           I*****                                                 I
           I*****                                                 I
   19      +*****                                                 I
           I*****                                                 I
           I*****                                                 I
           I*****                                                 +  8.3
           I*****                                                 I
           I*****                                                 I
   15      +*****                                                 I
           I*****                                                 I
           I***** *****                                           I
           I***** *****                                           I
           I***** *****                                           I
           I***** *****                                           I
   11      +***** *****                                           +  5.5
           I***** *****                                           I
           I***** *****                                           I
           I***** *****                                           I
           I***** *****                                           I
           I***** *****                                           I
    8      +***** ***** *****                                     I
           I***** ***** *****                                     I
           I***** ***** *****                                     I
           I***** ***** *****                                     +  2.8
           I***** ***** *****                                     I
           I***** ***** *****                                     I
    4      +***** ***** *****                                     I
           I***** ***** *****                                     I
           I***** ***** *****                                     I
           I***** ***** *****                                     I
           I***** ***** *****       *****              ***** I
           I***** ***** *****       *****              ***** I
    0      +***** ***** *****       *****              ***** +  0.0
           ----------------------------------------------------
            0.1   0.2   0.4   0.8   1.6   3.2   6.4   12.0  30.0

                           S I L V E R
```

FIG. 4

F R E Q U E N C Y   D I S T R I B U T I O N

DISTRIBUTION OF VARIABLE: COPPER

INTERVAL			FREQUENCY	PERCENT	CUMULATIVE %
16.000	TO	19.999	2	1.0	1.0
20.000	TO	39.999	10	5.0	6.0
40.000	TO	59.999	23	11.6	17.6
60.000	TO	119.999	64	32.2	49.7
120.000	TO	239.999	80	40.2	89.9
240.000	TO	479.999	18	9.0	99.0
480.000	TO	499.999	0	0.0	99.0
500.000	TO	549.999	1	0.5	99.5
550.000	TO	599.999	0	0.0	99.5
600.000	TO	650.000	1	0.5	100.0
T O T A L			199	100.0	

FIG. 5

F R E Q U E N C Y   D I S T R I B U T I O N

DISTRIBUTION OF VARIABLE: ZINC

INTERVAL	FREQUENCY	PERCENT	CUMULATIVE %
20.000 TO 39.999	12	6.0	6.0
40.000 TO 59.999	29	14.6	20.6
60.000 TO 79.999	38	19.1	39.7
80 000 TO 99 999	49	24.6	64.3
100.000 TO 149.999	47	23.6	87.9
150.000 TO 199.999	9	4.5	92.5
200.000 TO 399.999	7	3.5	96.0
400.000 TO 799.999	6	3.0	99.0
800.000 TO 1599.999	1	0.5	99.5
1600.000 TO 3200.000	1	0.5	100.0
T O T A L	199	100.0	

FIG. 6

****

F R E Q U E N C Y   D I S T R I B U T I O N

DISTRIBUTION OF VARIABLE: LEAD

INTERVAL	FREQUENCY	PERCENT	CUMULATIVE %
1.000 TO 1.999	88	44.2	44.2
2.000 TO 3.999	61	30.7	74.9
4.000 TO 7.999	35	17.6	92.5
8.000 TO 9.999	5	2.5	95.0
10.000 TO 19.999	5	2.5	97.5
20.000 TO 39.999	2	1.0	98.5
40.000 TO 79.999	0	0.0	98.5
80.000 TO 159.999	2	1.0	99.5
160.000 TO 319.999	0	0.0	99.5
320.000 TO 450.000	1	0.5	100.0
T O T A L	199	100.0	

FIG. 7

****
****

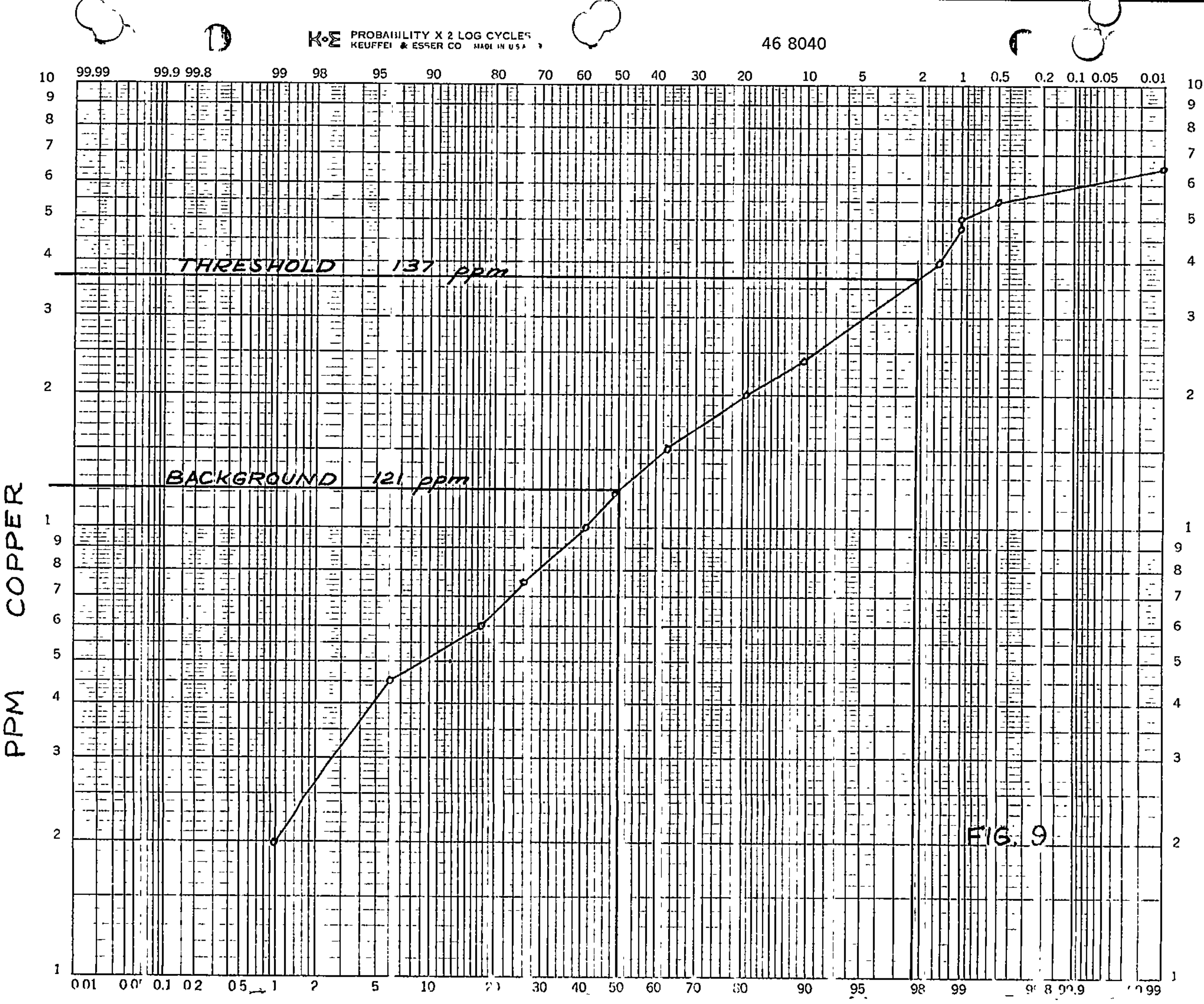
****
****

F R E Q U E N C Y   D I S T R I B U T I O N

DISTRIBUTION OF VARIABLE: SILVER

INTERVAL			FREQUENCY	PERCENT	CUMULATIVE %
0.100	TO	0.199	156	78.0	78.0
0.200	TO	0.299	22	11.0	89.0
0.300	TO	0.399	12	6.0	95.0
0.400	TO	0.499	1	0.5	95.5
0.500	TO	0.599	3	1.5	97.0
0.600	TO	0.699	0	0.0	97.0
0.700	TO	0.799	3	1.5	98.5
0.800	TO	0.899	1	0.5	99.0
0.900	TO	14.999	1	0.5	99.5
15.000	TO	27.000	1	0.5	100.0
T O T A L			200	100.0	

FIG. 8


K+E PROBABILITY X 2 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.
46 8040
THRESHOLD 137 ppm
BACKGROUND 121 ppm
PPM COPPER
FIG. 9

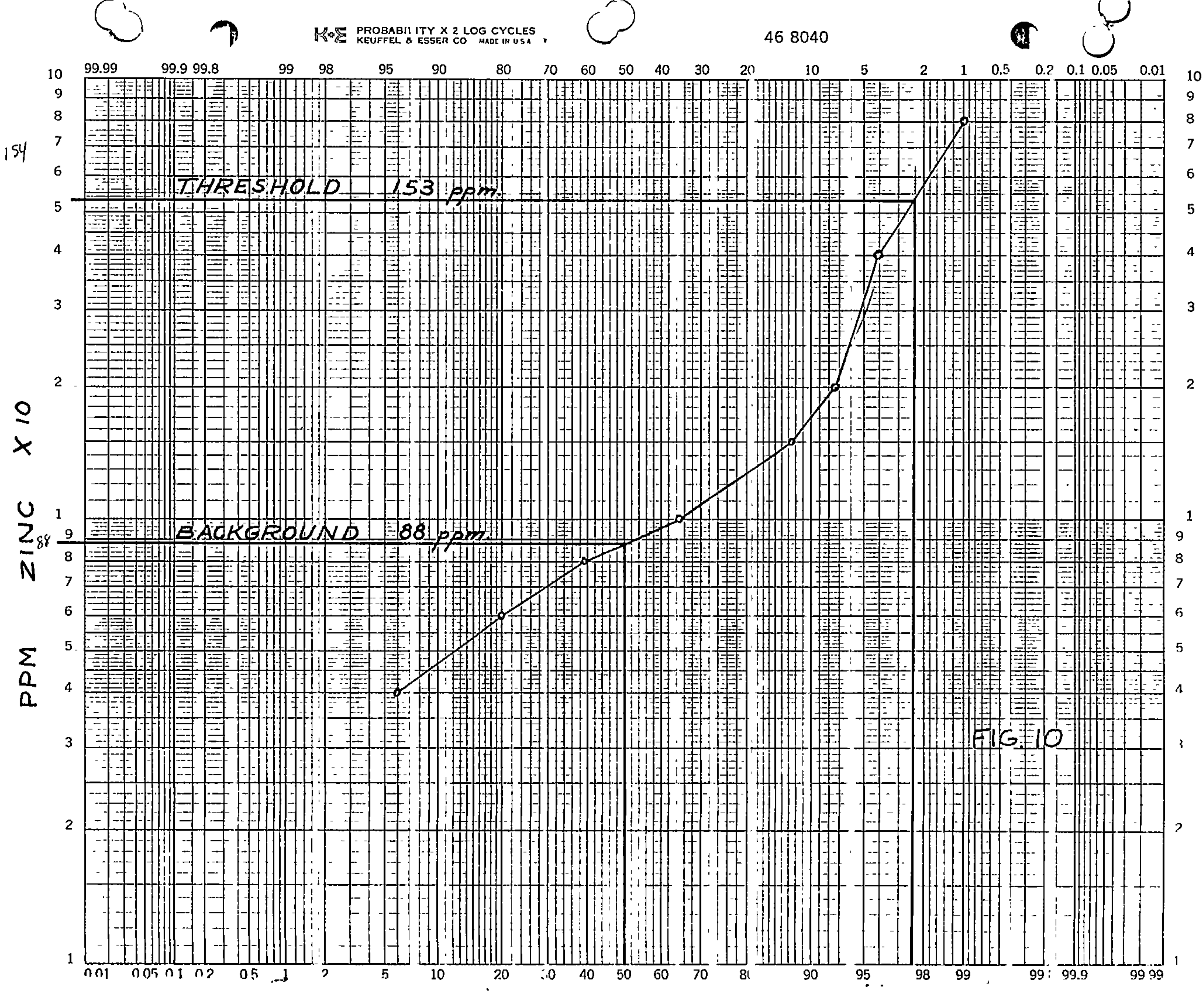

K+E PROBABILITY X 2 LOG CYCLES
KEUFFEL & ESSER CO MADE IN USA
46 8040
THRESHOLD 153 ppm.
BACKGROUND 88 ppm.
PPM ZINC X 10
154
88

FIG. 10

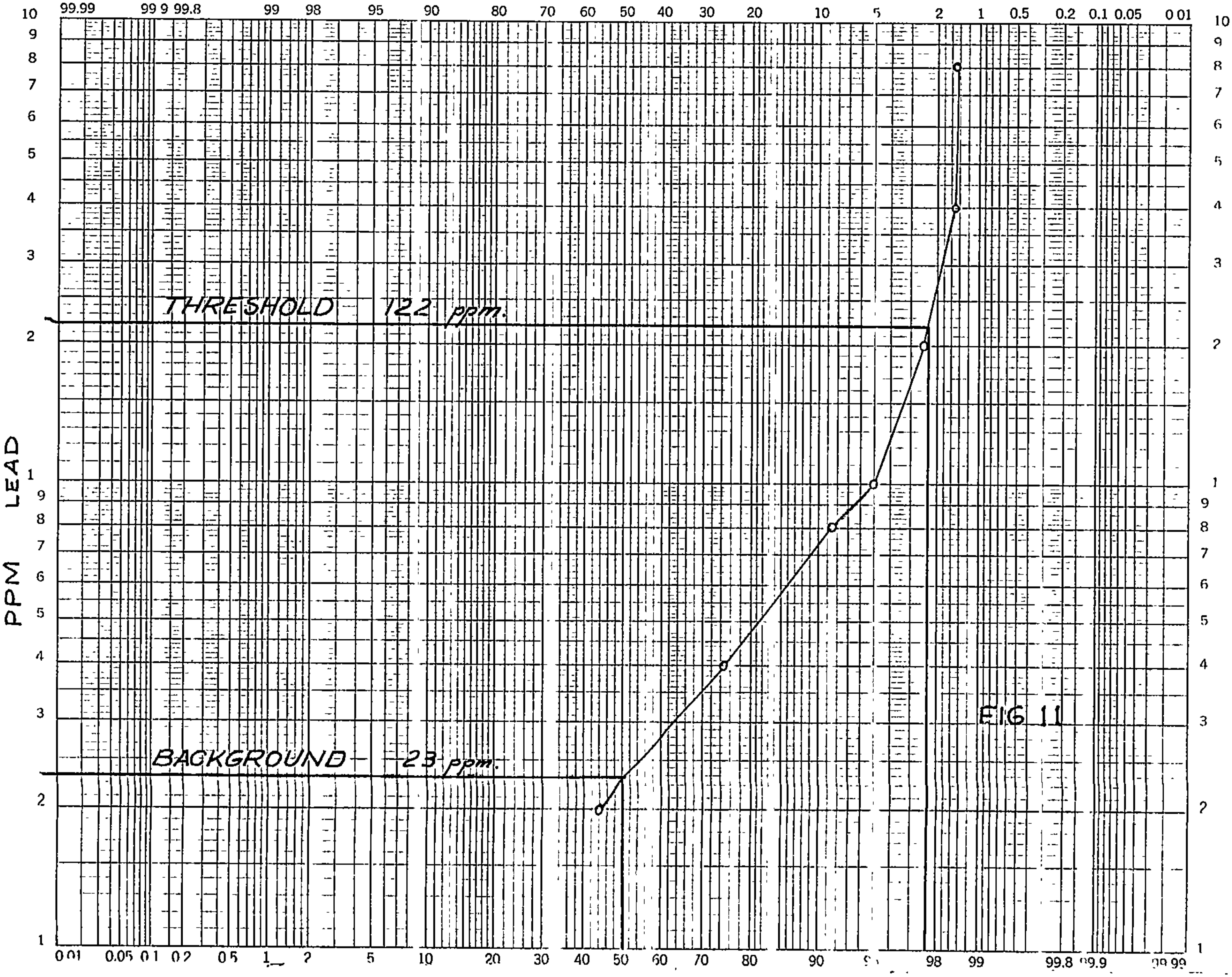


FIG 11

K∘Σ PROBABILITY X 2 LOG CYCLES
KEUFFEL & ESSER CO MADE IN U.S.A.

46 8040

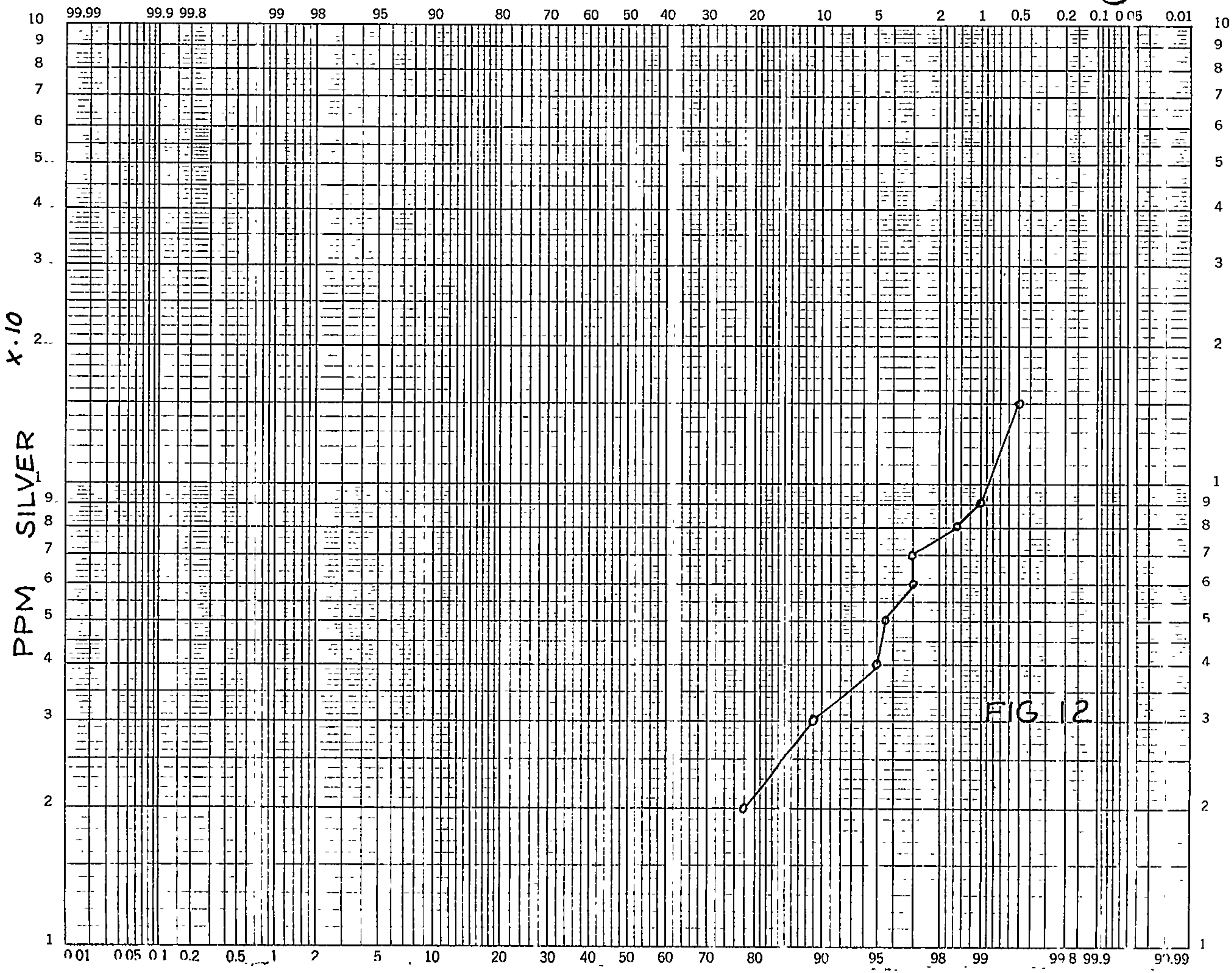


FIG 12

****

****

D E S C R I P T I V E   S T A T I S T I C S

VARIABLE: COPPER SAMPLE_SIZE (N) = 199

SAMPLE STATISTICS:

MEAN	= 135.015	RANGE	= 634
VARIANCE	= 7753.51	MINIMUM	= 16
STD. DEV.	= 88.054	MAXIMUM	= 650

UNBIASED ESTIMATES OF POPULATION PARAMETERS:

VARIANCE	= 7792.67	STD. DEV.	= 88.2761

DATA DISTRIBUTION COEFFICIENTS:

FIG 13

SKEWNESS	= 1.94165	KURTOSIS	= 6.90522

****

DESCRIPTIVE STATISTICS

VARIABLE: LEAD SAMPLE SIZE (N) = 199

SAMPLE STATISTICS:

MEAN	= 5.9196	RANGE	= 404
VARIANCE	= 907.582	MINIMUM	= 1
STD. DEV.	= 30.1261	MAXIMUM	= 405

UNBIASED ESTIMATES OF POPULATION PARAMETERS:

VARIANCE	= 912.166	STD. DEV.	= 30.2021

DATA DISTRIBUTION COEFFICIENTS:

SKEWNESS	= 11.98	KURTOSIS	= 152 673

FIG. 14

****

D E S C R I P T I V E   S T A T I S T I C S

VARIABLE: ZINC   SAMPLE SIZE (N) = 199

SAMPLE STATISTICS:

MEAN =	124.668	RANGE =	3076
VARIANCE =	59005.2	MINIMUM =	24
STD. DEV. =	242.91	MAXIMUM =	3100

UNBIASED ESTIMATES OF POPULATION PARAMETERS:

VARIANCE =	59303.2	STD. DEV. =	243.522

DATA DISTRIBUTION COEFFICIENTS:

SKEWNESS =	9.98299	KURTOSIS =	113.555

FIG. 15

****

D E S C R I P T I V E   S T A T I S T I C S

VARIABLE: SILVER   SAMPLE SIZE (N) = 200

SAMPLE STATISTICS:

MEAN	= .286	RANGE	= 26.9
VARIANCE	= 3.6121	MINIMUM	= .1
STD. DEV.	= 1.90055	MAXIMUM	= 27

UNBIASED ESTIMATES OF POPULATION PARAMETERS:

VARIANCE	= 3.63026	STD. DEV.	= 1.90532

DATA DISTRIBUTION COEFFICIENTS:

SKEWNESS	= 13.8871	KURTOSIS	= 192.169

FIG. 16

****

****

C O R R E L A T I O N & L I N E A R R E G R E S S I O N

VARIABLE X: COPPER VARIABLE Y: LEAD

MEAN OF X = 134.528 MEAN OF Y = 5.9196

S.D. OF X = 87.6383 S.D. OF Y = 30.1261

NUMBER OF PAIRS (N) = 199

CORRELATION COEFFICIENT (R) = .492

DEGREES OF FREEDOM (DF) = 197

SLOPE (M) OF REGRESSION LINE = .169107

Y INTERCEPT (B) FOR THE LINE = -16.83

FIG. 17

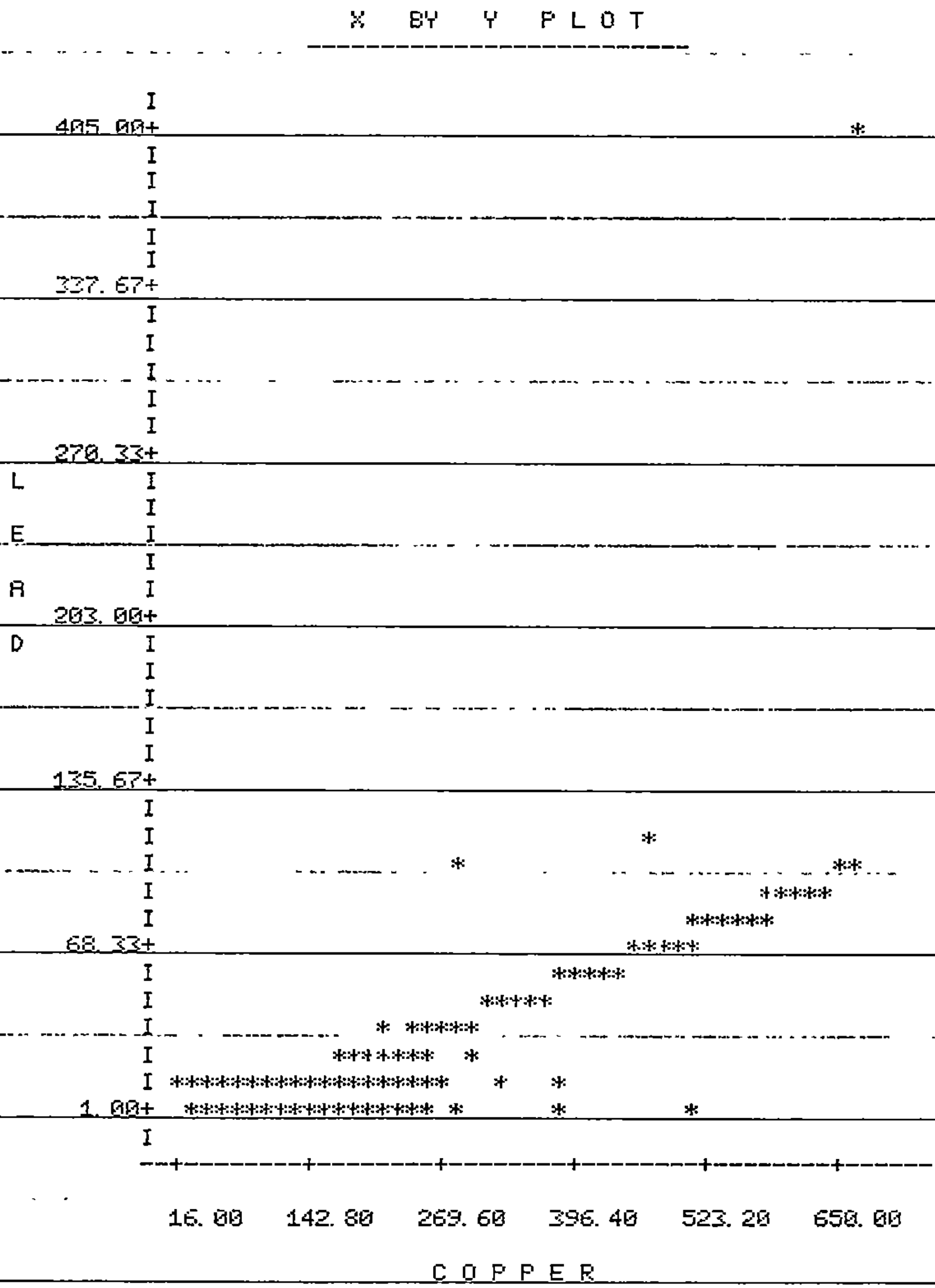

X BY Y PLOT
LEAD
405.00
337.67
270.33
203.00
135.67
68.33
1.00
16.00
142.80
269.60
396.40
523.20
650.00
COPPER

FIG. 18

CORRELATION & LINEAR REGRESSION

VARIABLE X: LEAD VARIABLE Y: ZINC

MEAN OF X = 5.9196 MEAN OF Y = 124.668

S.D. OF X = 30 1261 S.D. OF Y = 242.91

NUMBER OF PAIRS (N) = 199

CORRELATION COEFFICIENT (R) = .881

DEGREES OF FREEDOM (DF) = 197

SLOPE (M) OF REGRESSION LINE = 7.10267

FIG. 19

Y INTERCEPT (B) FOR THE LINE = 82.6234

X BY Y PLOT

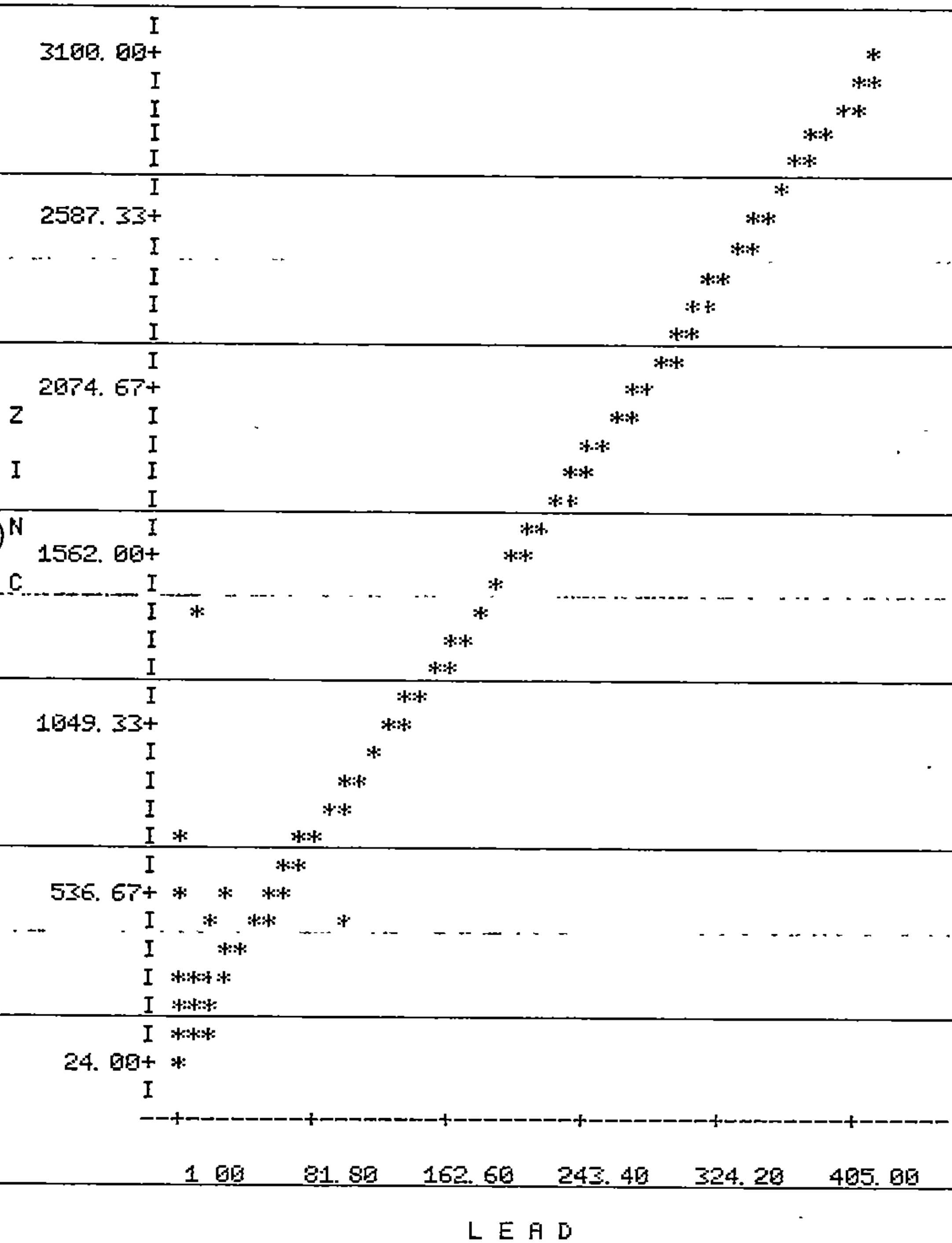


FIG. 20

****
****

C O R R E L A T I O N & L I N E A R R E G R E S S I O N

VARIABLE X: COPPER VARIABLE Y: ZINC

MEAN OF X = 134.518 MEAN OF Y = 124.668

S.D. OF X = 87.6485 S.D. OF Y = 242.91

NUMBER OF PAIRS (N) = 199

CORRELATION COEFFICIENT (R) = .554

DEGREES OF FREEDOM (DF) = 197

FIG. 21

SLOPE (M) OF REGRESSION LINE = 1.5355

Y INTERCEPT (B) FOR THE LINE = -81.8831

X BY Y PLOT

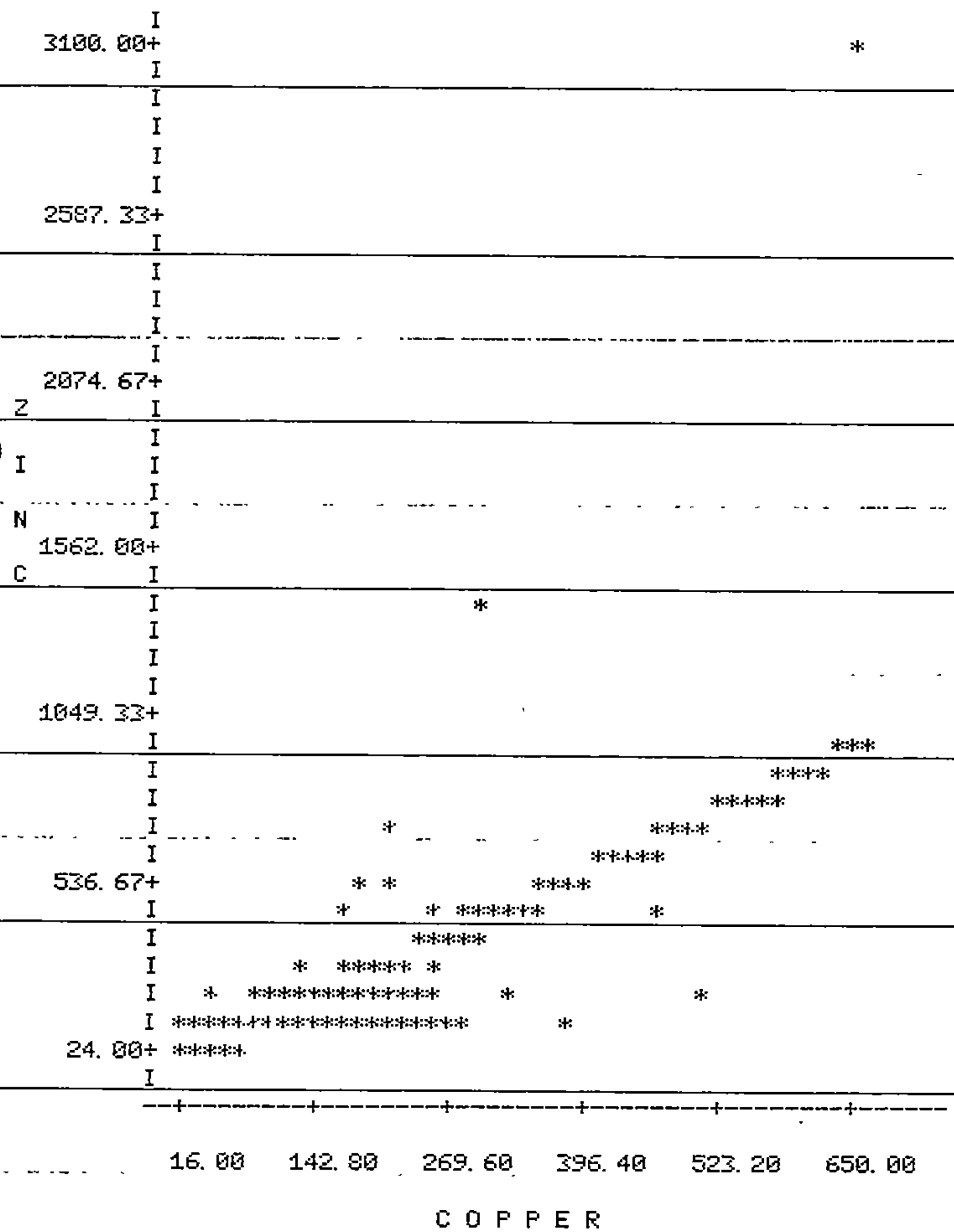


FIG. 22

DISCUSSION OF RESULTS

Figures 1, 2, 3 and 4 are respectively the plots of the copper Lead, Zinc and Silver laboratory results. By choosing a geometric abscissa a skewed bell shaped plot of the copper and zinc data is obtained indicated a probable log normal distribution. The lead and silver values, on the other hand, plots differently, and while indicating a distribution of some description, does not appear to be log normally distributed. Several reasons are presented to account for this.

1. Insufficient sampling.

2. Predominance of low undefined values, eg., laboratory reporting of less than .1 ppm silver and 1 ppm lead.

3. Silver and lead are not distributed log normally over the prospect area. Silver and lead probably occur in one area of the prospect associated in a vein environment and therefore can not be expected to be log normally distributed over a wide area.

Figures 5, 6, 7 and 8 are tables of the Frequency of Distribution for copper, zinc, lead and silver respectively. In other words, how often does each value occur in the surveyed area? After the operator has selected the various intervals of metallic concentrations, the computer tables the number of occurrences in each interval, then calculates the percent in each interval of the total population. A summation of the percentages' for each interval is then cumulated and the cumulative percentage calculated and posted. The cumulative percentage when plotted on log probably paper plots a straight line if the metal is log normally distributed and originates from one source.

Probability plots can be used to determine certain parameters important in the field of geochemical exploration, namely the background, threshold and anomalous values of the analyzed elements.

The Histogram plot, Fig 1 for Copper indicates that copper is log normally distributed. Fig 9 determines the background for copper to be 110 ppm and the threshold to be 137 ppm. All values above 137 can therefore be considered anomalous.

Discussion of Results (Con't)

Zinc values when plotted on a histogram Fig 3 appears to be log normally distributed and when posted on a log probability plot Fig 10 appears to come from one source having a background of 88 ppm and a threshold value of 154. Therefore, all values exceeding 154 ppm zinc can be considered to be anomalous.

Lead values when plotted in the histogram configuration, Fig 2 indicates a non log normal distribution. Many of the lead determinations as reported from the laboratory were reported as 1 ppm, providing an abundance of extremely low values. It is suspected that if 1 ppm lead was considered to be zero then the remaining values could be reworked and a statistical approach could be applied to the remaining values. In any case, the area around L 200N and 40E should be carefully prospected as a corresponding high zinc and silver sample occurs at this station.

The probability plot, Fig 11, because of the predominance of 1 ppm lead can not be used to determine background or anomalous lead values.

In a similiar manner to lead,the values for silver also are not log normally distributed. However, in the case of silver it is acknowledged that small quantities of silver are all reported as .1 ppm. This provides an abnormal number of low values consequently biasing the statistical results by positively skewing the data. The resulting probability plot, Fig 12 is therefore of no use to determine such parameters as background and anomalous values.

A summary of the Descriptive Statisics for each mineral assayed is contained in the following figures;

Figure 13 Copper
Figure 14 Lead
Figure 15 Zinc
Figure 16 Silver

The next question that arises in a geochemical survey is whether there is a correlation or mineralogical association between 2 elements or among a suite of metallic elements. The Correlation and Linear Regression program was run correlating 3 different pairs of metals being copper - lead, Lead - zinc and the copper - zinc pair. Figures 17, 19 and 21 respectively are mathematical calculation of these elements while Figures 18, 20, and 22 are the x, y plotting of these pairs. A line of regression was then calculated and plotted through the maximum cloud of data points.

Discussion of Results (Con't)

The Copper - Lead x-y plot, Fig 18 indicates some correlation of the two metals. If the two metals were completely correlatable the correlation coefficient would be 1.0 instead of the calculated value of .492 as posted on Fig 17.

The Lead - Zinc plot Fig 20 on the other hand has a high correlation coefficient of .881 indicating that these two metals occur together.

The Copper - Zinc plot Fig 22 indicates a high degree of correlation (.554) somewhere between the high correlation of Lead - Zinc (.881) and the lower correlation coeficient of Copper - Lead (.492)

CONCLUSIONS

1. Copper and zinc is statistically well distributed and appears to be derived from one source.

2. Lead and silver although not well distributed statistically has been detected in large amounts over relatively small areas and should be followed up by ground prospecting.

3. All values should be plotted and contoured with special attention being paid to those values greater than the thresh-hold values as calculated.

4. Exploration should be directed to two types of deposits, one being Lead-Zinc-Silver vein occurence and the other being a more wide spread copper occurrence that appears to be associated with zinc.

RECOMMENDATIONS

1. The geochemical laboratory results be plotted and contoured using the computer derived values for background and thresh-hold values, with special attention being paid to the areas where the metal content exceeds the threshold values.

2. Prospect any linear geochemical Lead-Silver values for vein structures.

3. Prospect those areas demonstrating above threshold values for copper to locate outcropping horizons of Karmutsen volcanics that are mineralized with desiminated copper.

4. If above threshold values of copper and zinc occur in a linear trend and if these trends do not conform to regional Karmutsen bedding, then the area should be prospected for copper-zinc vein structures.

Respectively Submitted

R.A. Buckley, P. Eng. (BC)

PROFESSIONAL
PROVINCE OF
R. A. BUCKLEY
BRITISH COLUMBIA
ENGINEER

Q U A L I F I C A T I O N S

R.A. BUCKLEY

A. I, Ronald A. Buckley, am by profession a Geologist residing at R.R. #2, Cochrane, TOL OWO, in the Province of Alberta.

B. I graduated in the year 1957 from Acadia University, Wolfville, Nova Scotia, with a Bachelor of Science Degree in Geology, with a minor in Chemistry and Physics.

C. I graduated in the year 1959 from McGill University, Montreal, in the Province of Quebec, with a Master of Science Degree in Geology.

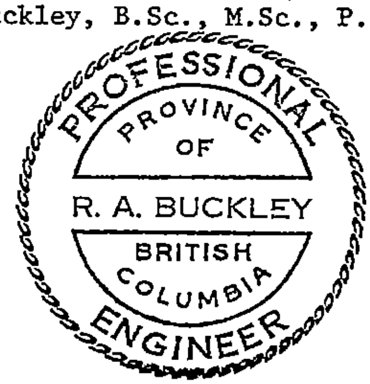
D. Since graduation I have taken updating courses through the Department of Continuing Education at the University of Calgary in Structural Geology (PhD credit course), Sedimentary Geology (PhD credit course), Geochemical Surveying, Property Evaluation, Geology of Stratabound Lead Zinc Deposits, Geology of Reefs (2 courses), Air Photo Interpretation. Course on Decision Making in Mineral Exploration, course in Sampling Designs for Geochemcical Surveys, Seminar on Basin Mapping with High Resolution Aeromagnetics. Symposium on Geology and Mineral deposits of Western Cordillera, course on Economic Evaluation of Non-Renewable Resources, course on Tectonic Plates and Mineralization.

E. Since graduation, I have been employed by a Mining Company, a Provincial Department of Mines, and Four Oil Companies in the search for oil, gas and metallic minerals.

F. I am a member:

The Alberta Association of Petroleum Geologists
Mineralogical Association of Canada
Society of The Sigma XI
Canadian Institute of Mining and Metallurgy
Association of Professional Engineers of Alberta
Professional Engineers of British Columbia

R.A. Buckley, B.Sc., M.Sc., P. Geol.(Alberta), P. Eng. (BC)



A P P E N D I X

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TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : Read, W. S.
851 Cherry Point Road
Cobble Hill, B.C.

CERT. # : A8112499-001-A
INVOICE # : I8112499
DATE : 05-AUG-81
P.O. # : NONE
TYBER

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
L 00N 20E	201	218	4	105	0.3	--	--
L 00N 40E	201	63	8	85	0.5	--	--
L 00N 60E	201	185	6	164	0.5	--	--
L 00N 80E	201	41	8	42	0.1	--	--
L 00N 100E	201	41	6	53	0.1	--	--
L 00N 120E	201	155	7	72	0.1	--	--
L 00N 140E	201	130	4	74	0.1	--	--
L 00N 160E	201	85	3	72	0.1	--	--
L 00N 180E	201	34	6	73	0.1	--	--
L 00N 200E	201	62	10	82	0.2	--	--
L 00N 220E	201	35	8	30	0.1	--	--
L 00N 240E	201	104	8	100	0.1	--	--
L 00N 260E	201	195	2	110	0.1	--	--
L 00N 280E	201	99	6	78	0.1	--	--
L 00N 300E	201	225	2	75	0.1	--	--
BL 00N	201	139	5	116	0.1	--	--
L 00N 20W	201	145	4	105	0.1	--	--
L 00N 40W	201	145	4	110	0.7	--	--
L 00N 60W	201	61	3	58	0.1	--	--
L 00N 80W	201	113	5	80	0.1	--	--
L 00N 100W	201	114	7	105	0.1	--	--
L 00N 120W	201	49	6	55	0.1	--	--
L 00N 140W	201	16	2	25	0.1	--	--
L 00N 160W	201	37	1	95	0.1	--	--
L 00N 180W	201	88	1	80	0.1	--	--
L 00N 200W	201	48	1	39	0.1	--	--
L 00N 220W	201	91	6	32	0.1	--	--
L 00N 240W	201	64	5	27	0.1	--	--
L 00N 260W	201	72	1	46	0.1	--	--
L 00N 280W	201	78	1	28	0.1	--	--
L 00N 300W	201	152	2	125	0.1	--	--
BL 20N	201	120	1	145	0.1	--	--
BL 40N	201	140	3	83	0.1	--	--
BL 60N	201	172	2	85	0.1	--	--
BL 80N	201	104	1	60	0.1	--	--
BL 100N	201	102	4	102	0.1	--	--
L 100N 20E	201	175	4	90	0.1	--	--
L 100N 40E	201	164	1	120	0.1	--	--
L 100N 60E	201	138	3	110	0.1	--	--
L 100N 80E	201	176	1	140	0.1	--	--

Certified by .... Hart Bichler

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CANADA V7J 2C1
TELEPHONE (604)984-0221
TELEX 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : Read, W. S.
851 Cherry Point Road
Cobble Hill, B.C.

CERT. # : A8112499-002-A
INVOICE # : I8112499
DATE : 05-AUG-81
P.O. # : NONE
TYBER

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
L 100N 100E	201	83	6	110	0.1	--	--
L 100N 120E	201	133	5	105	0.1	--	--
L 100N 140E	201	118	5	135	0.2	--	--
L 100N 160E	201	220	3	106	0.1	--	--
L 100N 180E	201	139	3	92	0.1	--	--
L 100N 200E	201	225	2	80	0.1	--	--
L 100N 220E	201	225	6	115	0.1	--	--
L 100N 240E	201	250	5	95	0.1	--	--
L 100N 260E	201	260	2	92	0.2	--	--
L 100N 280E	201	125	2	90	0.1	--	--
L 100N 300E	201	61	6	93	0.1	--	--
L 100N 20W	201	102	2	70	0.2	--	--
L 100N 40W	201	120	3	75	0.3	--	--
L 100N 60W	201	245	1	65	0.1	--	--
L 100N 80W	201	94	2	60	0.2	--	--
L 100N 100W	201	33	5	45	0.1	--	--
L 100N 120W	201	47	5	66	0.1	--	--
L 100N 140W	201	108	2	66	0.1	--	--
L 100N 160W	201	31	3	40	0.2	--	--
L 100N 180W	201	40	4	42	0.1	--	--
L 100N 200W	201	54	3	44	0.1	--	--
L 100N 220W	201	112	1	55	0.2	--	--
L 100N 240W	201	57	3	40	0.3	--	--
L 100N 260W	201	54	3	30	0.2	--	--
L 100N 280W	201	275	1	65	0.2	--	--
L 100N 300W	201	41	3	28	0.1	--	--
BL 120N	201	168	3	112	0.1	--	--
BL 140N	201	180	1	93	0.1	--	--
BL 200N	201	255	5	150	0.2	--	--
L 200N 20E	201	153	1	135	0.2	--	--
L 200N 40E	201	550	405	3100	27.0	--	--
L 200N 60E	201	210	3	142	0.2	--	--
L 200N 80E	201	220	1	98	0.3	--	--
L 200N 100E	201	102	1	105	0.2	--	--
L 200N 120E	201	180	1	115	0.3	--	--
L 200N 140E	201	185	1	100	0.1	--	--
L 200N 160E	201	245	1	130	0.1	--	--
L 200N 20W	201	215	7	230	0.5	--	--
L 200N 40W	201	285	95	450	1.8	--	--
L 200N 60W	201	160	2	105	0.2	--	--

Certified by HartBichler

MEMBER CANADIAN TESTING ASSOCIATION

CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER, B C
CANADA V7J 2C1
TELEPHONE (604)984-0221
TELEX 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : Read, W. S.
851 Cherry Point Road
Cobble Hill, B.C.

CERT. # : A8112499-003-A
INVOICE # : I8112499
DATE : 05-AUG-81
P.O. # : NONE
TYBER

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
L 200N 80W	201	162	2	160	0.1	--	--
L 200N 100W	201	159	1	145	0.1	--	--
L 200N 120W	201	200	2	178	0.1	--	--
L 200N 140W	201	141	1	80	0.1	--	--
L 200N 160W	201	52	2	40	0.1	--	--
L 200N 180W	201	59	3	35	0.1	--	--
L 200N 200W	201	50	1	36	0.1	--	--
L 200N 220W	201	151	1	50	0.1	--	--
L 200N 240W	201	97	1	58	0.1	--	--
L 200N 260W	201	35	1	24	0.1	--	--
L 200N 280W	201	65	3	38	0.1	--	--
L 200N 300W	201	84	1	55	0.1	--	--
BL 300N	201	250	1	120	0.1	--	--
L 300N 20W	201	125	2	135	0.1	--	--
L 300N 40W	201	210	26	480	0.2	--	--
L 300N 60W	201	130	5	200	0.1	--	--
L 300N 80W	201	175	3	205	0.1	--	--
L 300N 100W	201	235	1	180	0.1	--	--
L 300N 120W	201	210	1	640	0.1	--	--
L 300N 140W	201	120	1	112	0.1	--	--
L 300N 160W	201	168	3	88	0.1	--	--
L 300N 180W	201	132	2	84	0.1	--	--
L 300N 200W	201	97	2	75	0.3	--	--
L 300N 220W	201	254	1	102	0.4	--	--
L 300N 240W	201	320	2	128	0.2	--	--
L 300N 260W	201	160	1	74	0.3	--	--
L 300N 280W	201	235	2	86	0.2	--	--
L 300N 300W	201	385	3	98	0.1	--	--
L 600N 20W	201	178	1	90	0.1	--	--
L 600N 40W	201	103	2	80	0.1	--	--
L 600N 60W	201	146	1	100	0.1	--	--
L 600N 80W	201	70	3	88	0.1	--	--
L 600N 100W	201	48	2	46	0.2	--	--
L 600N 120W	201	60	3	42	0.1	--	--
L 600N 140W	201	96	2	66	0.1	--	--
L 600N 160W	201	32	4	32	0.1	--	--
L 600N 180W	201	59	2	64	0.1	--	--
L 600N 200W	201	76	1	72	0.1	--	--
L 600N 220W	201	71	1	68	0.3	--	--
L 600N 240W	201	49	3	56	0.1	--	--

Certified by .....Hart Bichler.....

CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE (604)984-0221
TELEX 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : Read, W. S.
851 Cherry Point Road
Cobble Hill, B.C.

CERT. # : A8112499-004-A
INVOICE # : I8112499
DATE : 05-AUG-81
P.O. # : NONE
TYBER

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
L 600N 260W	201	47	1	55	0.3	--	--
L 600N 300W	201	45	2	56	0.1	--	--

Certified by .... HartBichler

CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER, B C
CANADA V7J 2C1

TELEPHONE (604)984-0221
TELEX 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : Read, W. S.
851 Cherry Point Road
Cobble Hill, B.C.

CERT. # : A8112569-001-A
INVOICE # : I8112569
DATE : 05-AUG-81
P.O. # : NONE
TYBER

ATTN: GARY THORSEN

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
L00N 320E	201	94	1	82	0.1	--	--
L00N 340E	201	250	2	240	0.7	--	--
L010N 360E	201	205	1	120	0.2	--	--
L010N 380E	201	172	1	95	0.1	--	--
L010N 400E	201	145	1	110	0.1	--	--
L100N 320E	201	121	1	180	0.7	--	--
L100N 340E	201	65	2	100	0.3	--	--
L100N 360E	201	106	1	90	0.2	--	--
L100N 380E	201	167	1	280	0.1	--	--
L100N 400E	201	183	1	88	0.1	--	--
L310N 80E	201	90	2	70	0.1	--	--
L310N 100E	201	136	1	98	0.1	--	--
L400N 020W	201	128	1	120	0.3	--	--
L400N 040W	201	150	6	130	0.2	--	--
L400N 060W	201	300	13	1350	0.2	--	--
L400N 080W	201	205	1	90	0.1	--	--
L400N 100W	201	260	3	80	0.1	--	--
L400N 120W	201	375	1	92	0.1	--	--
L430N 020E	201	69	1	55	0.1	--	--
L430N 040E	201	211	1	82	0.1	--	--
L430N 060E	201	70	2	78	0.1	--	--
L500N 020E	201	46	2	44	0.1	--	--
L500N 040E	201	79	1	54	0.1	--	--
L500N 060E	201	80	1	62	0.1	--	--
L500N 080E	201	510	1	115	0.1	--	--
L500N 100E	201	159	1	76	0.1	--	--
L500N 120E	201	183	1	55	0.1	--	--
L500N 020W	201	75	1	86	0.1	--	--
L500N 040W	201	50	3	124	0.1	--	--
L500N 060W	201	45	2	75	0.1	--	--
L500N 080W	201	19	2	45	0.1	--	--
L500N 100W	201	86	1	70	0.1	--	--
L500N 120W	201	64	1	78	0.1	--	--
L500N 140W	201	113	1	65	0.1	--	--
L500N 160W	201	75	1	86	0.1	--	--
L500N 180W	201	50	1	65	0.1	--	--
L500N 200W	201	152	1	90	0.1	--	--
L500N 220W	201	72	1	66	0.1	--	--
L500N 240W	201	30	2	44	0.1	--	--
L500N 260W	201	86	8	54	0.1	--	--

Certified by .... Hart Bichler

CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER B C
CANADA V7J 2C1
TELEPHONE (604)984-0221
TELEX 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : Read, W. S.
851 Cherry Point Road
Cobble Hill, B.C.

CERT. # : A8112569-002-A
INVOICE # : I8112569
DATE : 05-AUG-81
P.O. # : NONE
TYBER

ATTN: GARY THORSEN

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
L500N 280W	201	58	4	82	0.1	--	--
L500N 300W	201	83	5	80	0.1	--	--
L600N 020E	201	100	1	90	0.1	--	--
L600N 040E	201	137	1	85	0.1	--	--
L600N 060E	201	87	1	72	0.1	--	--
L600N 080E	201	80	1	75	0.1	--	--
L600N 100E	201	86	1	80	0.1	--	--
L600N 120E	201	103	1	78	0.1	--	--
L600N 140E	201	79	1	80	0.1	--	--
L600N 160E	203	91	1	82	0.1	--	--
L600N 180E	203	64	1	58	0.1	--	--
L600N 200E	201	38	1	78	0.1	--	--
L600N 220E	201	168	1	120	0.1	--	--
BL 160 N	201	175	5	230	0.1	--	--
BL 180 N	201	73	1	80	0.1	--	--
BL 200 N	203	235	1	155	0.1	--	--
BL 220 N	201	205	2	170	0.1	--	--
BL 240 N	203	250	22	410	0.1	--	--
BL 260 N	201	172	15	410	0.1	--	--
BL 280 N	201	465	103	370	0.1	--	--
BL 300 N	201	189	4	465	0.8	--	--
BL 320 N	201	99	2	120	0.1	--	--
BL 340 N	201	152	2	175	0.1	--	--
BL 360 N	201	112	1	72	0.1	--	--
BL 380 N	201	199	15	102	0.1	--	--
BL 400 N	201	174	17	120	0.1	--	--
BL 420 N	201	134	1	98	0.1	--	--
BL 430 N	201	200	1	115	0.1	--	--
BL 440 N	201	163	1	105	0.1	--	--
BL 460 N	201	63	3	82	0.1	--	--
BL 480 N	201	124	1	96	0.1	--	--
BL 500 N	201	65	1	58	0.1	--	--
BL 520 N	203	30	1	78	0.1	--	--
BL 540 N	203	64	1	75	0.1	--	--
BL 560 N	201	93	1	88	0.1	--	--
BL 580 N	201	157	1	105	0.1	--	--
BL 600 N	201	128	1	70	0.1	--	--

Certified by ....

STATEMENT OF EXPENDITURES

FOR

GEOPHYSICAL - GEOCHEMICAL REPORT

A - LABOUR

W. S. Read P. Eng. 18 3/4 days @ $400.00 a day -------- $ 7,450.00

G. Thorsen 29 days @ $80.00 a day -------------------- 2,320.00

B. Riffal 30 days @ $80.00 a day -------------------- 2,400.00

E. Stevens 30 days @ $80.00 a day -------------------- 2,400.00

B. Reid 5 days @ $80.00 a day -------------------- 400.00

B - Report and Drafting ----------------------------------- 1,476.51

C - Geochemical Analyses ---------------------------------- 1,005.13

D - TRANSPORTATION

Truck rental 30 days @ $20.00 a day ------------------ 600.00

Vehical operation 4 weeks @ $105.00 a week ----------- 420.00

E - Accomodation

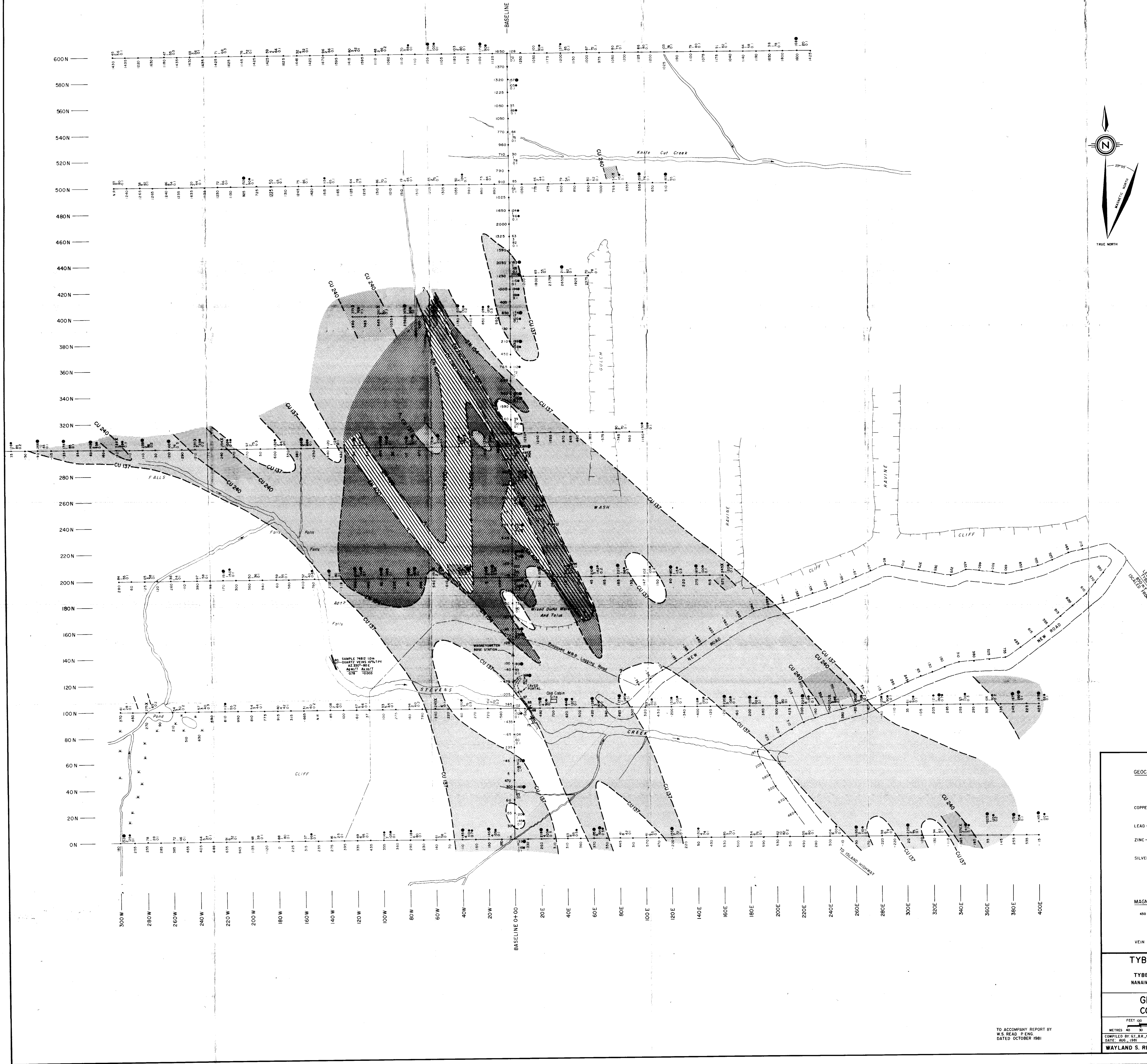
61 days @ $35.00 a day -------------------------------- 2,135.00

F - SUPPORT

Pickets, flaggings, equipment rental, sample bags,

shipping, excetra ------------------------------------ 718.00

$ 21,324.64



MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 10,395

GEOCHEMICAL ANALYSIS BY ATOMIC ABSORPTION

285 COPPER (Parts Per Million)
95 LEAD (Parts Per Million)
450 ZINC (Parts Per Million)
1.8 SILVER (Parts Per Million)

COPPER - BACKGROUND - BELOW 110 PPM
● THRESHOLD - 110-137 PPM
● ANOMALOUS - ABOVE 137 PPM
X HIGH ANOMALOUS - ABOVE 240 PPM

LEAD - BACKGROUND - BELOW 23 PPM
● THRESHOLD - 23-122 PPM
● ANOMALOUS - ABOVE 122 PPM

ZINC - BACKGROUND - BELOW 88 PPM
● THRESHOLD - 88-154 PPM
● ANOMALOUS - ABOVE 154 PPM
X HIGH ANOMALOUS - ABOVE 400 PPM

SILVER - BACKGROUND
● THRESHOLD - 0.4-0.7
● ANOMALOUS - ABOVE 0.7 PPM

MAGNETOMETER SURVEY

430 MAGNETOMETER READINGS (Gammas)

INSTRUMENT USED: SCINTREX MF-1

VEIN 63

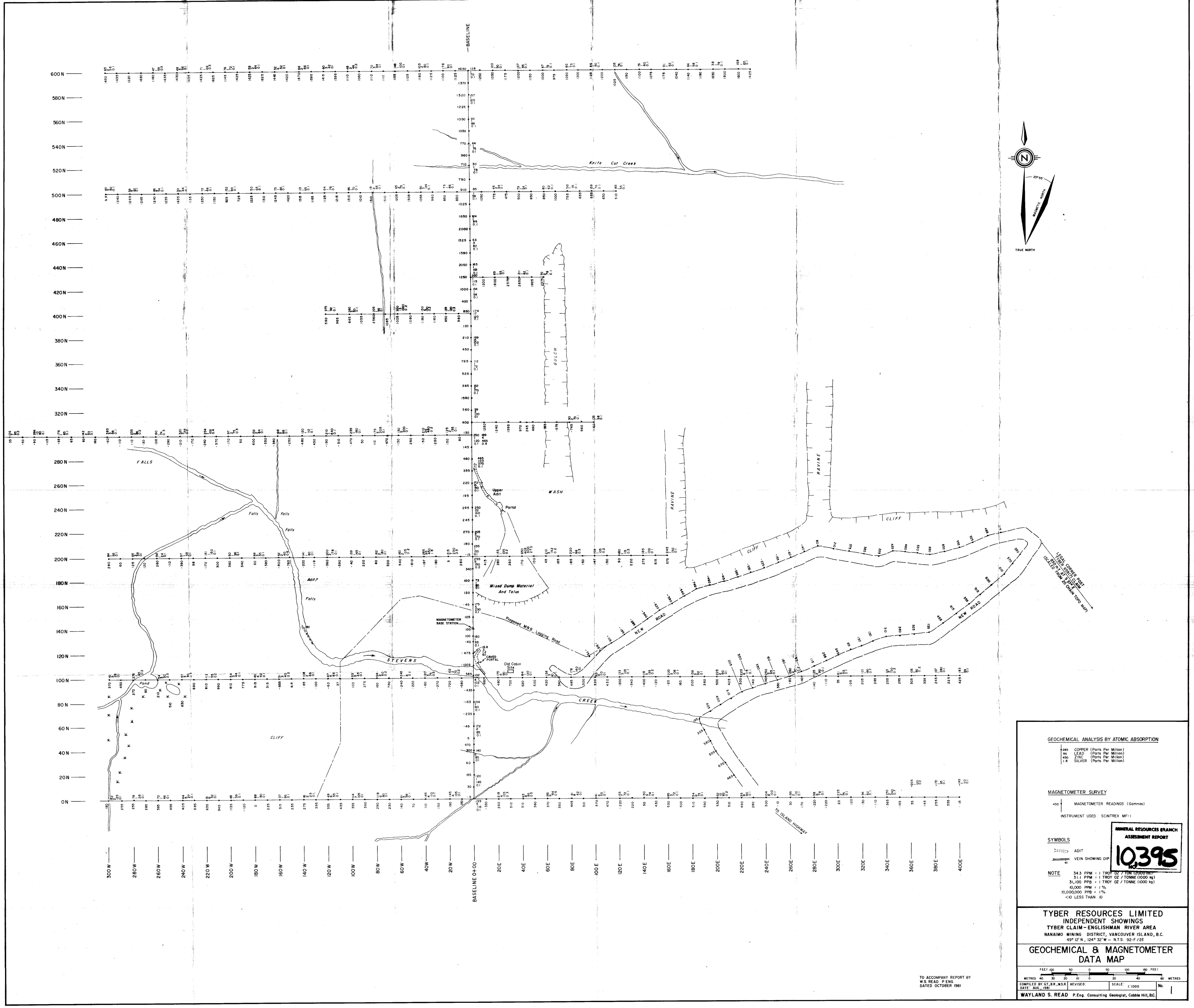
TYBER RESOURCES LIMITED
INDEPENDENT SHOWINGS
TYBER CLAIM - ENGLISHMAN RIVER AREA
NANAIMO MINING DISTRICT, VANCOUVER ISLAND, B.C.
49° 12' N, 124° 32' W — N.T.S. 92-F/2E

GEOCHEMICAL SURVEY
COPPER-ZINC COMPOSITE

FEET 100 50 0 50 100 150 FEET
METRES 40 30 20 10 0 20 40 60 METRES

COMPILED BY: G.T., B.R., W.S.R. DATE: AUG., 1981	REVISED:	SCALE: 1:1000	No. 3

WAYLAND S. READ P.Eng. Consulting Geologist, Cobble Hill, B.C.



BASELINE
BASELINE 0+00
Knife Cut Creek
GULCH
WASH
RAVINE
CLIFF
FALLS
Falls
Adit?
Upper Adit
Portal
Mixed Dump Material And Talus
MAGNETOMETER BASE STATION
Proposed MBB Logging Road
NEW ROAD
STEVENS
CREEK
CAVED PORTAL
Old Cabin Site
Pond
TO ISLAND HIGHWAY
LEGAL CORNER POST TYBER CLAIM
TRUE NORTH
MAGNETIC NORTH
TO ACCOMPANY REPORT BY W.S. READ P.ENG. DATED OCTOBER 1981
GEOCHEMICAL ANALYSIS BY ATOMIC ABSORPTION
285 COPPER (Parts Per Million)
95 LEAD (Parts Per Million)
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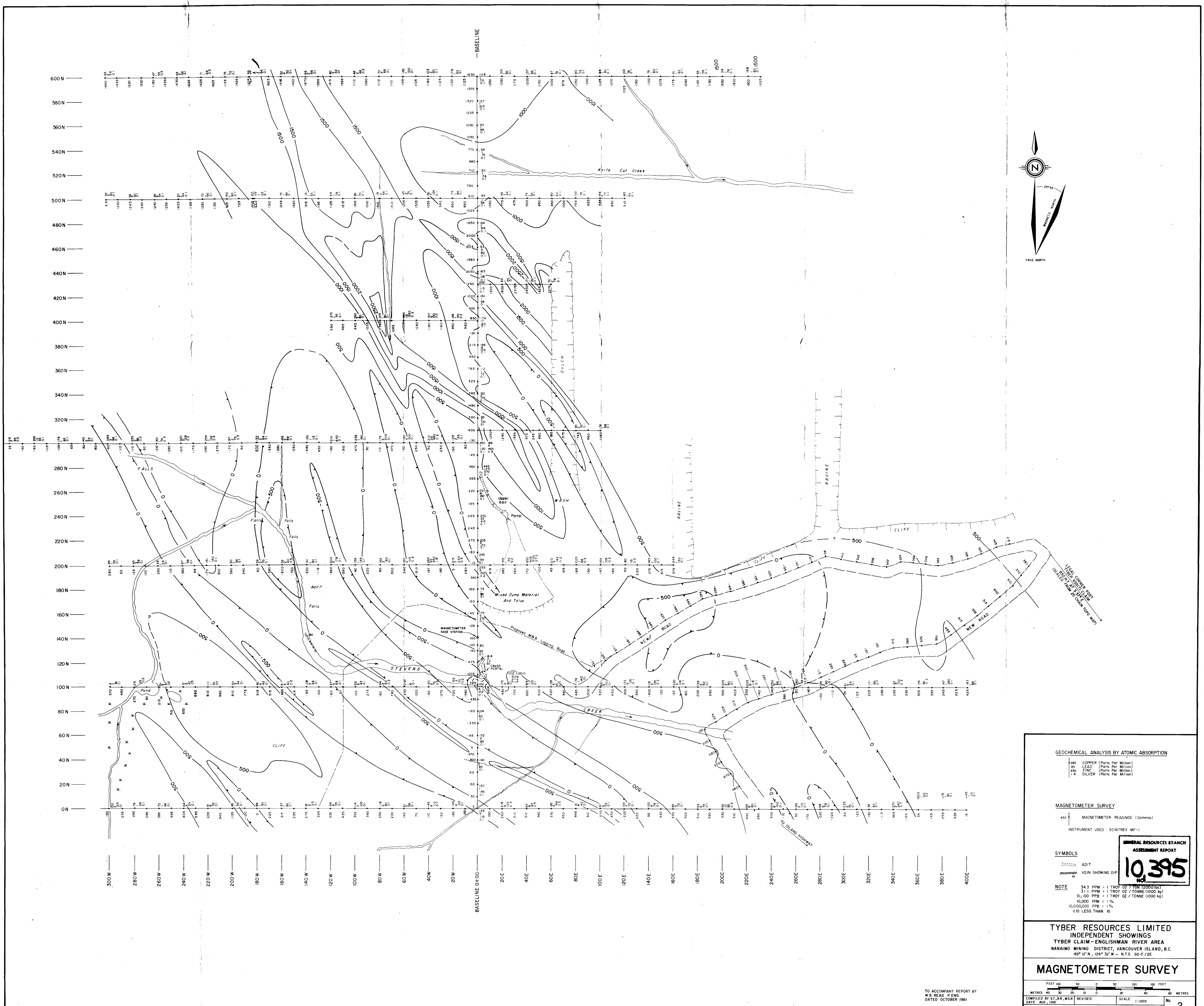
MAGNETOMETER SURVEY
430 MAGNETOMETER READINGS (Gammas)
INSTRUMENT USED: SCINTREX MF-1
MINERAL RESOURCES BRANCH ASSESSMENT REPORT
10,395
SYMBOLS
ADIT
VEIN SHOWING DIP
NOTE
34.3 PPM = 1 TROY OZ / TON (2000 lbs)
31.1 PPM = 1 TROY OZ / TONNE (1000 kg)
31,100 PPB = 1 TROY OZ / TONNE (1000 kg)
10,000 PPM = 1 %
10,000,000 PPB = 1%
<10 LESS THAN 10
TYBER RESOURCES LIMITED
INDEPENDENT SHOWINGS
TYBER CLAIM – ENGLISHMAN RIVER AREA
NANAIMO MINING DISTRICT, VANCOUVER ISLAND, B.C.
49° 12' N, 124° 32' W – N.T.S. 92-F/2E
GEOCHEMICAL & MAGNETOMETER DATA MAP
FEET 100 50 0 50 100 150 FEET
METRES 40 30 20 10 0 20 40 60 METRES
COMPILED BY: G.T., B.R., W.S.R. DATE: AUG., 1981
REVISED:
SCALE: 1:1000
No. 1
WAYLAND S. READ P.Eng. Consulting Geologist, Cobble Hill, B.C.



BASELINE
BASELINE 0+00
Knife Cut Creek
GULCH
WASH
RAVINE
CLIFF
FALLS
Falls
Adit?
Upper Adit
Portal
Mixed Dump Material And Talus
MAGNETOMETER BASE STATION
Proposed MB&B Logging Road
STEVENS
CREEK
CAVED PORTAL
Old Cabin Site
Pond
NEW ROAD
TO ISLAND HIGHWAY
TRUE NORTH
MAGNETIC NORTH
23°55'
GEOCHEMICAL ANALYSIS BY ATOMIC ABSORPTION
285 COPPER (Parts Per Million)
95 LEAD (Parts Per Million)
450 ZINC (Parts Per Million)
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MAGNETOMETER SURVEY
430 MAGNETOMETER READINGS (Gammas)
INSTRUMENT USED: SCINTREX MF-1
SYMBOLS
ADIT
VEIN SHOWING DIP
MINERAL RESOURCES BRANCH ASSESSMENT REPORT
10,395
NOTE
34.3 PPM = 1 TROY OZ / TON (2000 lbs)
31.1 PPM = 1 TROY OZ / TONNE (1000 kg)
31,100 PPB = 1 TROY OZ / TONNE (1000 kg)
10,000 PPM = 1 %
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<10 LESS THAN 10
TYBER RESOURCES LIMITED
INDEPENDENT SHOWINGS
TYBER CLAIM – ENGLISHMAN RIVER AREA
NANAIMO MINING DISTRICT, VANCOUVER ISLAND, B.C.
49° 12' N, 124° 32' W – N.T.S. 92-F/2E
MAGNETOMETER SURVEY
FEET 100 50 0 50 100 150 FEET
METRES 40 30 20 10 0 20 40 60 METRES
COMPILED BY: G.T., B.R., W.S.R.
DATE: AUG., 1981
REVISED:
SCALE: 1:1000
No. 2
WAYLAND S. READ P.Eng. Consulting Geologist, Cobble Hill, B.C.
TO ACCOMPANY REPORT BY W.S. READ P.ENG DATED OCTOBER 1981