GEOCHEMICAL ASSESSMENT REPORT

ON THE

ZAP CLAIMS

090800

BEMA
Industries Ltd.

This report has ~~been examined by the~~ Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

$ 5,204.55

Resident Geologist or
Resident Mining Engineer

Considered as representation work under Section 53 (a) Yukon Quartz Mining Act.

B. R. BAXTER
Supervising Mining Recorder

for Commissioner of Yukon Territory

Vol. 1 of 3

INDIAN and NORTHERN AFFAIRS

TRANSMITTAL FORM

M.R. File No. _____

S.M.R. File No. _____

Date Fwd. 8/4/81

FROM: Mining Recorder at ..... Mayo .....

TO: Supervising Mining Recorder at Whitehorse, Y.T.

Office Of The Supervising Mining Recorder
APR 10 1981
WHITEHORSE
Yukon Territory

FOR ACTION ARE:

☐ NEW APPL'N for PLACER LEASE to PROSPECT: Name:

☐ RENEWAL APPL'N PLACER LEASE to PROSPECT: Name: Lease No. .....

☐ AFFIDAVIT of EXPENDITURE on PLACER LEASE. Name: Lease No. .....

☐ ASSIGNMENT of PLACER LEASE No. .....
From: To:

☐ GROUPING APPL'N UNDER SEC. 52(2) PLACER MINING ACT.
Owner:

☐ DIAMOND DRILL LOGS:
Claims: Claim sheet no.:

☑ QUARTZ ASSESSMENT REPORT
Claims: "ZAP" Claim sheet no. 105-M-13
Type of report: GEOCHEM. Submitted by: BEMA INDUSTRIES LTD
Cls. work performed on: $ Req. for ren application 5204.55

Signature

REPLY ACTION Date Ret.

Signature

GEOCHEMICAL ASSESSMENT REPORT

ON THE

ZAP CLAIMS

Mayo Mining Division

N.T.S.: 105 M/13

63°55' Latitude, 135°45' Longitude

Owned by:

CANADA TUNGSTEN MINING CORPORATION LIMITED
Executive Office
Box 12525, Oceanic Plaza
Ste. 1600-1066 W. Hastings Street
Vancouver, B.C. V6E 3X1

Work by:

BEMA INDUSTRIES LTD.
19945-56th Avenue
Langley, B.C. V3A 3Y2

M.D. Philpot, B.Sc.

March, 1981

BEMA
Industries Ltd.

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SUMMARY

Bema Industries Ltd. was engaged by Canada Tungsten Mining Corporation Limited to carry out a geochemical program on the ZAP mineral claims. Canada Tungsten Mining Corporation Limited owns six hundred and twenty-seven (627) ZAP claims and eighty-eight (88) ZAP fractions within the McQuesten Valley. This geochemical report concerns only thirty-four (34) ZAP claims and fourteen (14) ZAP fractions located north of Elsa's water reservoir.

The study area is suspected to be underlain by the Central Quartzite formation which forms the northern limb of the McQuesten anticline. The southern limb of the McQuesten anticline within the Central Quartzite formation is the host of the majority of silver producers in the Keno Hill Silver Camp. Surface soil geochemistry and lake sediment geochemistry were used to initially assess the potential of the area.

Several significant geochemical anomalies in both 'A' and 'B' soil horizons delineated areas of interest in which follow up work is required. The orientation lake sediment geochemical survey outlined several anomalous areas. The depth of overburden must be determined in order to test the validity of the surface and lake sediment geochemistry.

GEOCHEMICAL ASSESSMENT REPORT

ON THE

ZAP CLAIMS

1.0 INTRODUCTION

Bema Industries Ltd. was contracted by Canada Tungsten Mining Corporation Limited to carry out a geological exploration program on the ZAP claims. Canada Tungsten Mining Corporation Limited owns six hundred and twenty-seven (627) ZAP claims and eighty-eight (88) ZAP fractions within the McQuesten Valley. This geochemical report concerns only thirty-four (34) ZAP claims and fourteen (14) ZAP fractions located north of Elsa's water reservoir.

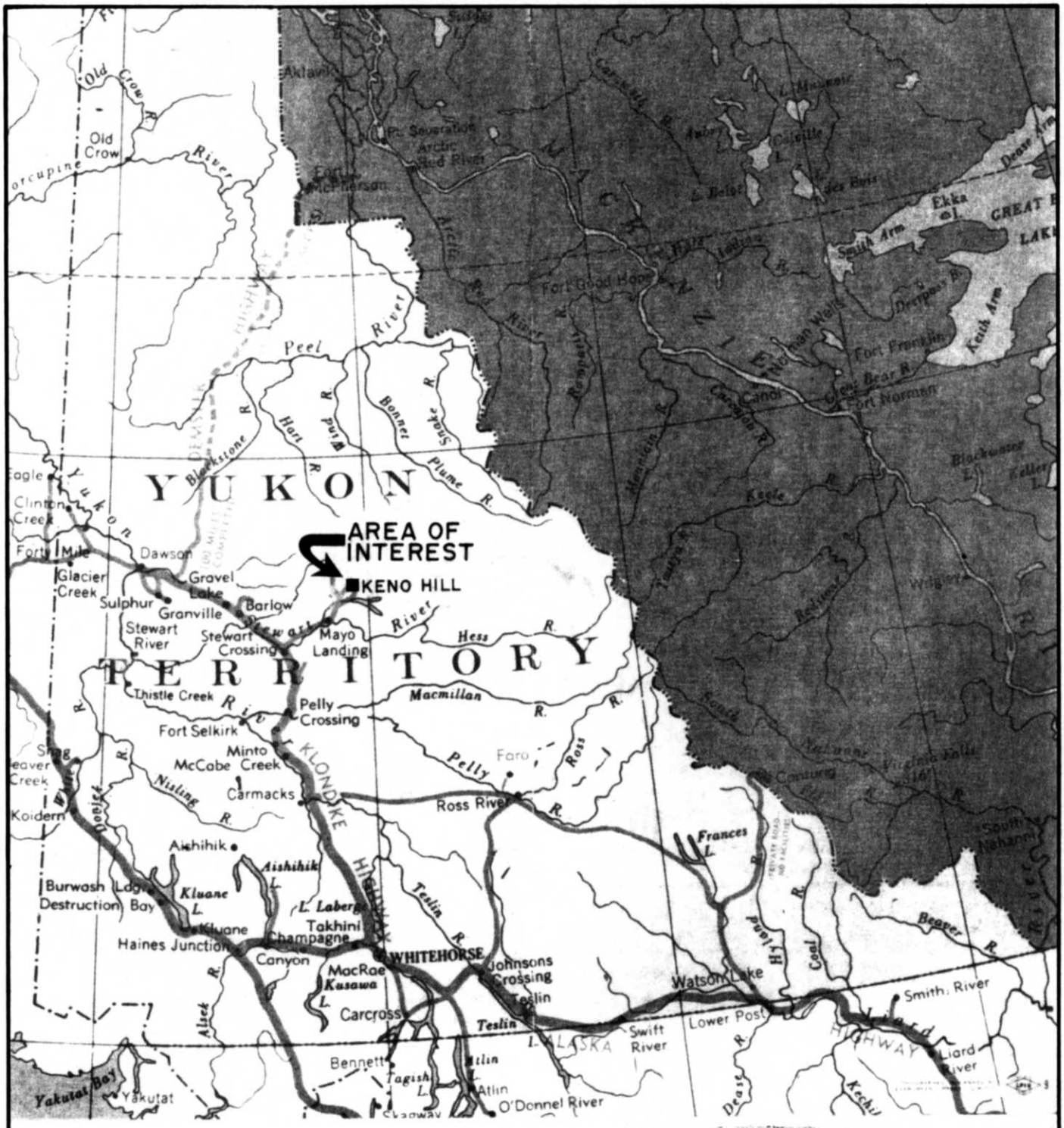
The exploration program was conducted during the period of May to September, 1980 and consisted of a rotary overburden drilling program, soil and lake geochemical surveys and a transit survey.

This assessment report documents the 1980 soil and lake geochemistry program within a four (4) square kilometre area located north of Elsa's water reservoir and within the ZAP claims.

1.1 LOCATION AND ACCESS

The ZAP claims are situated in the Yukon Territory, forty (40) kilometres northeast of Mayo. See Figure 1. The claims are located on N.T.S. map sheet 105 M/13 and are centered on latitude 63°56' and longitude 135°34'. See Figure 2.

The area of interest is located just north of Elsa townsite water reservoir. An all weather gravel road allows access to the water reservoir, however a boat is required to cross the McQuesten River and only foot access is possible from this point onto the claims.



CANADA TUNGSTEN MINING CORPORATION

KENO HILL Y·T·

1980 GEOLOGICAL EXPLORATION PROGRAMME

ZAP, SINISTER AND CONE CLAIMS

KEY MAP

DATE: *FEBRUARY 1981*	JOB NO.: **80-09-A**
REVISED BY:	FIG. NO.: 1

BEMA INDUSTRIES LTD.

1.2 CLAIM STATUS

The ZAP claims are owned by Canada Tungsten Mining Corporation Limited and consist of six hundred and twenty-seven (627) claims and eighty-eight (88) ZAP fractional claims. This assessment report discusses the 1980 geochemical program on thirty-four (34) ZAP claims and fourteen (14) ZAP fractions.

A renewal period of one (1) year is requested for the ZAP claims and fractions. See Table 1 for the following claim data.

TABLE 1

CLAIM NAME	GRANT NUMBER	EXPIRY DATE	REQUESTED RENEWAL PERIOD
ZAP 184	YA 38523	March 2, 1984	March 2, 1985
ZAP 185	YA 38524	March 2, 1984	March 2, 1985
ZAP 186	YA 38525	March 2, 1984	March 2, 1985
ZAP 197	YA 38536	March 2, 1984	March 2, 1985
ZAP 198	YA 38537	March 2, 1984	March 2, 1985
ZAP 199	YA 38538	March 2, 1984	March 2, 1985
ZAP 200	YA 38539	March 2, 1984	March 2, 1985
ZAP 209	YA 38548	March 2, 1984	March 2, 1985
ZAP 210	YA 38549	March 2, 1984	March 2, 1985
ZAP 211	YA 38550	March 2, 1984	March 2, 1985
ZAP 212	YA 38551	March 2, 1984	March 2, 1985
ZAP 213	YA 38552	March 2, 1984	March 2, 1985
ZAP 214	YA 38553	March 2, 1984	March 2, 1985
ZAP 223	YA 38562	March 2, 1984	March 2, 1985
ZAP 224	YA 38563	March 2, 1984	March 2, 1985
ZAP 225	YA 38564	March 2, 1984	March 2, 1985
ZAP 226	YA 38565	March 2, 1984	March 2, 1985
ZAP 227	YA 38566	March 2, 1984	March 2, 1985
ZAP 228	YA 38567	March 2, 1984	March 2, 1985

CLAIM NAME	GRANT NUMBER	EXPIRY DATE	REQUESTED RENEWAL PERIOD
ZAP 239	YA 38578	March 2, 1984	March 2, 1985
ZAP 240	YA 38579	March 2, 1984	March 2, 1985
ZAP 241	YA 38580	March 2, 1984	March 2, 1985
ZAP 242	YA 38581	March 2, 1984	March 2, 1985
ZAP 243	YA 38582	March 2, 1984	March 2, 1985
ZAP 244	YA 38583	March 2, 1984	March 2, 1985
ZAP 257	YA 38596	March 2, 1984	March 2, 1985
ZAP 258	YA 38597	March 2, 1984	March 2, 1985
ZAP 259	YA 38598	March 2, 1984	March 2, 1985
ZAP 260	YA 38599	March 2, 1984	March 2, 1985
ZAP 261	YA 38600	March 2, 1984	March 2, 1985
ZAP 262	YA 38601	March 2, 1984	March 2, 1985
ZAP 281	YA 38620	March 2, 1984	March 2, 1985
ZAP 283	YA 38622	March 2, 1984	March 2, 1985
ZAP 285	YA 38624	March 2, 1984	March 2, 1985
ZAP 1049 Fr	YA 41104	March 2, 1985	March 2, 1986
ZAP 1050 Fr	YA 41105	March 2, 1985	March 2, 1986
ZAP 1055 Fr	YA 41110	March 2, 1985	March 2, 1986
ZAP 1056 Fr	YA 41111	March 2, 1985	March 2, 1986
ZAP 1060 Fr	YA 41115	March 2, 1985	March 2, 1986
ZAP 1061 Fr	YA 41116	March 2, 1985	March 2, 1986
ZAP 1062 Fr	YA 41117	March 2, 1985	March 2, 1986
ZAP 1066 Fr	YA 41121	March 2, 1985	March 2, 1986
ZAP 1067 Fr	YA 41122	March 2, 1985	March 2, 1986
ZAP 1068 Fr	YA 41123	March 2, 1985	March 2, 1986
ZAP 1073 Fr	YA 41128	March 2, 1985	March 2, 1986

CLAIM NAME	GRANT NUMBER	EXPIRY DATE	REQUESTED RENEWAL PERIOD
ZAP 1080 Fr	YA 41135	March 2, 1985	March 2, 1986
ZAP 1081 Fr	YA 41136	March 2, 1985	March 2, 1986
ZAP 1082 Fr	YA 41137	March 2, 1985	March 2, 1986

1.3 HISTORY

During February 1979, Canada Tungsten Mining Corporation Limited contracted Bema Industries Ltd. to stake nine hundred and ten (910) mineral claims adjacent to the historic Keno Hill - Galena Hill silver mining camp which is owned predominantly by United Keno Hill Mines Limited.

The ZAP-SINISTER baseline which was established in 1979 transects the study area and serves as control for the 1980 geochemical surveys.

1.4 BIBLIOGRAPHY

Bema Industries Ltd.,
1979; Keno Hill Geological Report, Canada Tungsten Mining Corporation Limited (Map Sheets 105 M/13, 14.)

1980; Overburden Drilling Program - Western ZAP Claims, Canada Tungsten Mining Corporation Limited.

Gleeson, C.F.,
1980; Addendum to Geochemical Report on Western ZAP Claim.

1.5 PRESENT WORK

The 1980 exploration program consisted of a rotary overburden drilling program, soil and lake geochemical surveys and a transit survey. This assessment report discusses only the soil and lake geochemical surveys. Field work on the ZAP claims was conducted during the period, August 1 to September 20, 1980. The work was confined to the area believed to be underlain by Central Quartzite formation which forms the northern limb of the McQuesten anticline.

Nineteen (19) lake sediment samples were collected from seven kettle lakes and geochemically analysed for silver, lead, zinc, copper and mercury.

One hundred and twenty-seven (127) soil samples were collected from the 'A' and 'B' soil horizons at one hundred (100) metre intervals along lines spaced one hundred and fifty (150) metres apart. All soil samples were geochemically analysed for silver, lead, zinc and mercury.

1.6 PHYSIOGRAPHY

The ZAP claims are situated within the South McQuesten River Valley, a broad, swampy, gravel and till filled valley. The meandering McQuesten River contained within the broad McQuesten Valley is the main drainage system for all lakes and creeks in the Galena Hill - Keno Hill area. Many kettle lakes and swampy areas are scattered throughout the study area. There are minor fluctuations in elevation which ranges from 635 to 665 metres.

The area is covered by deep moss, "buckbrush" and sparse "stunted" spruce. There is no rock exposure in the area which is covered by a varied thickness of overburden.

2.0 SOIL GEOCHEMISTRY

It was anticipated that surface geochemistry would help delineate areas of interest which are underlain by the Central Quartzite formation.

Sampling and Analytical Procedures

One hundred and twenty-seven (127) 'A' horizon, and one hundred and five (105) 'B' horizon soil samples were obtained from sample stations at one hundred (100) metre intervals along lines spaced one hundred and fifty (150) metres apart. See Figures 3 to 6.

Soil samples were taken with the aid of a mattock, placed in Kraft paper bags, air-dried and shipped to Bondar-Clegg and Company, Whitehorse, for lead, zinc, silver and mercury geochemical analysis.

The soil sample was pulverized to -80 mesh, and a 0.5 gram portion of the sample was digested for 2 hours by a concentrated solution of perchloric-nitric acid ($HClO_4$-HNO_3). The digested sample was then cooled and made up to twenty-five (25 millilitres with deionized water. The solution was analysed for silver, lead and zinc by standard atomic absorption techniques. The specialized method of analysis for mercury involves extraction by aqua regia and analysis by closed cell, flameless atomic absorption.

Statistical Analysis

The statistical evaluation of the soil geochemical results were done primarily by a graphical method which was outlined by consulting geochemist, C.F. Gleeson. This method attempts to normalize the data by separating most of the anomalous values from background values. Mean and standard deviation were determined by use of frequency and cumulative frequency plots. See Figures 7 to 26. The mean was taken from the fifty (50) percentile and the standard deviation was calculated by taking half of the difference between the eighty-four (84) and sixteen (16) percentiles. Values greater than the mean plus three (3) times standard deviation are considered probably anomalous.

Samples collected from an area located one (1) kilometre west of the study area are also included in the statistical analysis. The sample population analysed is two hundred and forty-three (243) and the data is considered statistically reliable.

Statistical parameters for the two areas are tabulated in Table 2. With the exception of lead, from the 'B' soil horizon, all other elements from both the 'A' and 'B' soil horizons demonstrate an uneven distribution of values.

TABLE 2

Statistical Summary for Soil Geochemistry

Metal	Soil Horizon	m	m+a	m+2a	m+3a
Ag	B	.2	.3	.4	.6
Zn	B	78	115	152	188
Pb	B	13	19	25	31
Hg	B	39	62	85	108
Ag	A	.2	.5	.8	1.1
Zn	A	43	72	100	129
Pb	A	8	13	19	24
Hg	A	69	108	142	179

m = Mean

a = Standard Deviation

m+a = Trend

m+2a = Threshold

>m+2a <m+3a = Possibly Anomalous

>m+3a = Probably Anomalous

All Values in ppm

Results and Interpretations

The Hg, Ag, Pb, Zn soil geochemically anomalous areas are outlined in Table 3. Mercury and silver have higher values in the 'A' soil horizon, while zinc and lead have higher values in the 'B' soil horizon.

Three areas with coincident anomalous geochemical values are outlined; (1) L19+250 to L20+300N at 0+600N, (2) L17+500N at 0+000N and (3) L18+950 at 0+800N. From L19+550, 0+600N to 120+300, 0+600N a northeast trending mercury anomaly in the 'A' soil horizon exists. This anomaly coincides with anomalies in silver, lead, zinc and mercury in the 'B' soil horizon. Mercury geochemistry is reliable for delineating fault structures in relatively shallow overburden environments which do not contain clay layers. The second anomaly in the 'B' soil horizon, at location L17+500, 0+000N, contains highly anomalous values of silver, lead, zinc and mercury. This sample is located close to the McQuesten River and may be affected by contamination. The third anomaly, L18+950 at 0+800N contains anomalous values of lead and silver. The other anomalies are sporadic and show little continuity with other elements. Though significant anomalies occur in both soil horizons and with other elements, caution must be exercised because the depth of overburden is unknown.

TABLE 3

Soil Geochemistry Highlights

Element	Soil Horizon	Location	Comments
Hg	A	18+800,0+200N	1350 (ppb) adjacent to lake 18
Hg	A	19+550,0+600N 19+700,0+700N	540 (ppb) 598 (ppb) anomaly trends N45E and is adjacent to lake 19, which is considered anomalous - correlates with a high Hg value in 'B' soil horizon.

Element	Soil Horizon	Location	Comments
Zn	A	19+250,0+100N	305 (ppm) 310 (ppm)
Hg	B	17+500	station located along the river bank 330 (ppb)
Hg	B	19+250 through to 20+300, ~0+600N	large anomaly with values that range from 105 to 140 (ppb) good correlation with Pb, Zn and Ag values from the 'B' soil horizon
Hg	B	19+550,0+600N	370 (ppb) coincides with a Hg anomaly in the 'A' soil horizon
Pb	B	17+500	7400 (ppm)
Pb	B	18+950,0+800N	77 (ppm) coincides with a Ag anomaly in the 'B' soil horizon
Pb	B	19+550 through to 20+300, ~0+600N	coincident with Ag, Hg and Zn anomalies within same soil horizon
Zn	B	20+000 through to 20+300, ~0+600N	values range from 188 to 215 (ppm)
Ag	B	17+500, 17+900,0+600N	100 (ppm) 0.7 (ppm)
Ag	B	18+950,0+800N	1.8 (ppm)
Ag	B	19+750,0+900N	3.0 (ppm)
Ag	B	20+000 through to 20+300, (0+400-0+500N)	0.6 to 0.7 (ppm)

3.0 LAKE SEDIMENT GEOCHEMISTRY

Lake sediment sampling is an efficient method of determining if metal ions have been transported mechanically and/or chemically into a lake basin from a local source. The purpose of this survey was to determine background and anomalous geochemical values and investigate the possible causes for any anomalies.

Small lakes located within the McQuesten Valley are called "kettle lakes". See Figure 27. They formed as a result of voids left by melting of large blocks of ice incorporated in glacial sediments during glaciation. A depression is formed which acts like a catch basin for surface and subsurface groundwater. Metal ions dissolved in the groundwater migrate into these depressions and concentrate in lake sediment. Geochemical analysis of lake bottom sediments should indicate whether the drainage basin for that area contains anomalous silver, lead and zinc.

Sampling and Analytical Procedures

Seventy-four (74) lake sediment samples were collected from various positions in twenty-four (24) kettle lakes within the ZAP claims. Within the assessment report area nineteen (19) lake sediment samples were collected from seven (7) lakes. The samples were collected and retrieved with the aid of a Hornbrook sampler, a torpedo shaped sample catcher, one metre long and ten centimetres in diameter. The lower portion of the lake sediment samples were placed in Kraft paper bags, air-dried and shipped to Bondar-Clegg and Company, Vancouver, for geochemical analysis. A 0.5 gram portion of the pulverized -80 mesh samples was digested in a concentrated solution of perchloric-nitric acid ($HClO_4$ - HNO_3) for two (2) hours. The digested sample was then cooled and made up to twenty-five (25) millilitres of deionized water. The method of extraction was by hot Lefort aqua regia. This solution was later analysed for silver, lead, zinc and copper by standard atomic absorption techniques. Mercury was extracted by an aqua regia solution and analysed by closed cell, flameless atomic absorption.

Statistical Analyses, Results and Interpretations

Statistical evaluation of the lake sediment values was done using the method outlined in the Section "Soil Geochemistry" - "Statistical Analysis". See Figures 28 to 37 for Cumulative Frequency and Frequency Plot Graphs. The statistical analysis included values from all the lake sediment samples collected within the McQuesten Valley. The reliability of the statistical data is questionable because of the small sample population used, only 74 values. The skewed curve shown on the zinc histogram indicates that the sample population was definitely too small for reliable interpretation. Summary of the statistical parameters are shown in Table 4 below.

TABLE 4

Statistical Summary for Lake Sediment Geochemistry

Metal	m	m+a	m+2a	m+3a
Zn	105	135	165	195
Pb	10	16	23	29
Ag	.34	50	70	80
Cu	22	33	44	55
Hg	118	166	215	260

m = Mean

a = Standard Deviation

m+a = Trend

m+2a = Threshold

>m+2a <m+3a = Possibly Anomalous

>m+3a = Probably Anomalous

All Values in ppm

Of the seven lakes sampled in the study area, two lakes sixteen (16) and nineteen (19) contain anomalous geochemical values. Lake number sixteen (16) contains anomalous lead and copper values. Lake number nineteen (19) contains anomalous zinc, lead and copper values. It is of interest to note that the Central Quartzite formation extrapolates into this area. The source of these anomalies is unknown and they require follow up work.

4.0 CONCLUSIONS

Though several significant anomalies occur in both soil horizons and with different elements, caution must be exercised because the depth of overburden is unknown. Surface soil geochemistry is not an effective mineral exploration method for use in areas covered by deep overburden. The effectiveness of mercury soil geochemistry in interpreting fault structures has been proven in other areas covered by deep overburden. However, thick clay horizons, present in the ZAP claims area, are barriers to mercury dispersion.

From the regional survey, background and anomalous values were determined from twenty-three (23) kettle lakes. The orientation lake sediment geochemical survey outlined several anomalous areas and this survey may be effective in detecting anomalies below the glacial overburden cover. Anomalous values in lake numbers sixteen (16) and nineteen (19) required follow up work. There appears to be some correlation between anomalous Hg, Ag, Zn and Pb values from 'B' horizon soil samples and anomalous Pb values contained in the sediment from kettle lake number nineteen (19).

5.0 RECOMMENDATIONS

To test the validity of the surface geochemistry within the study area, the depth of overburden must be determined. It is recommended that an overburden drill be utilized in this environment. Between five (5) and ten (10) overburden drill holes should test the significant soil anomalies, determine the location of the Central Quartzite formation and define depth to bedrock. The overburden drill should have the capability of penetrating up to one hundred and fifty (150) metres in a cobbly till environment.

..../15

Report by: Michael D. Philpot

Michael D. Philpot, B.Sc.
Geologist

K.E. Northcote

K.E. Northcote, Ph.D., P.Eng.
Geological Supervisor

MDP/pcd

STATEMENT OF QUALIFICATIONS

I, MICHAEL D. PHILPOT OF BEMA INDUSTRIES LTD. DO HEREBY CERTIFY THAT:

1. I am a graduate of the University of British Columbia and hold the following degree:

   B.Sc. Geology, 1978

2. I have practised my profession as a geologist since 1978.

3. I have no interest, direct or indirect, in the property or shares of CANADA TUNGSTEN MINING CORPORATION LIMITED nor do I expect to receive any such interest.

4. That the information contained in this report is both true and correct to the best of my knowledge.

Signed: M.D. Philpot
M.D. Philpot, B.Sc.
Geologist

Date: April 3, 1981

STATEMENT OF QUALIFICATIONS

I, KENNETH E. NORTHCOTE OF BEMA INDUSTRIES LTD. DO HEREBY CERTIFY THAT:

1. I am a graduate of the University of British Columbia and hold the following degrees:

   B.A. Honours Geology, 1953

   M.Sc. Geology, 1961

   Ph.D. Geology, 1968

2. I am a member of the Association of Professional Engineers of the Province of British Columbia.

3. I have practised as a professional Geologist since 1953, gaining a wide variety of geological experience with petroleum companies, mining companies and Federal and Provincial governments.

4. I have no interest, direct or indirect, in the property or shares of CANADA TUNGSTEN MINING CORPORATION LIMITED nor do I expect to receive any such interest.

5. I have supervised the 1980 summer field program on the ZAP CLAIMS and approved the accompanying report for submittal for assessment purposes.

Signed: K E Northcote

K.E. NORTHCOTE, Ph.D., P.Eng.
Geological Supervisor

Date: April 3, 1981

BEMA
Industries Ltd.

APPENDIX I

COST STATEMENT

APPENDIX I

A) COST STATEMENT

Disbursement Costs

Camp Construction	15 man days @ $ 2.74/man day	$ 41.10
Camp Equipment	15 man days @ $ 4.08/man day	61.20
Camp Groceries	15 man days @ $12.50/man day	187.50
Camp Fuel Supplies	15 man days @ $ 1.01/man day	15.15
Vehicle Rental	15 man days @ $ 8.68/man day	130.20
Vehicle OP/Maintenance	15 man days @ $ 7.33/man day	109.95
Vehicle Gas	15 man days @ $ 2.59/man day	38.85
Communications	15 man days @ $ 3.22/man day	48.30
Freight Courier	15 man days @ $ 1.61/man day	24.15
Transportation, Travel	15 man days @ $ 5.14/man day	77.10
Expediting	15 man days @ $11.84/man day	177.60
Cook	15 man days @ $ 9.00/man day	135.00
Cook's Asst./Camp Asst.	15 man days @ $ 6.60/man day	99.00
Camp Manager	15 man days @ $ 7.80/man day	117.00
		$1,262.10

B)

Personnel	"Labour" Classification	Rate (per day)	Total (days)	TOTAL COST
G. Norman	Senior Project Geologist	275	1	275.00
M. Philpot	Geologist	175	3	525.00
P. Newton	Field Technician #3	95	1	95.00
J. MacRay	Field Technician	95	2	190.00
A. MacKenzie	Field Supervisor #3	130	1	130.00
J. Donnelly	Geological Assistant #3	75	1	75.00
D. Schatz	Geological Assistant #2	85	1	85.00
S. Milroy	Field Technician	110	1	110.00
R. Jordan	Field Technician #3	95	3	285.00
L. Hooley	Field Technician #3	95	3	285.00
				$2,055.00

C) Lake Sediment Geochemistry

19 samples (Ag, Pb, Zn, Cu & Hg) @ 7.90/sample = 150.00

D) Soil Geochemistry

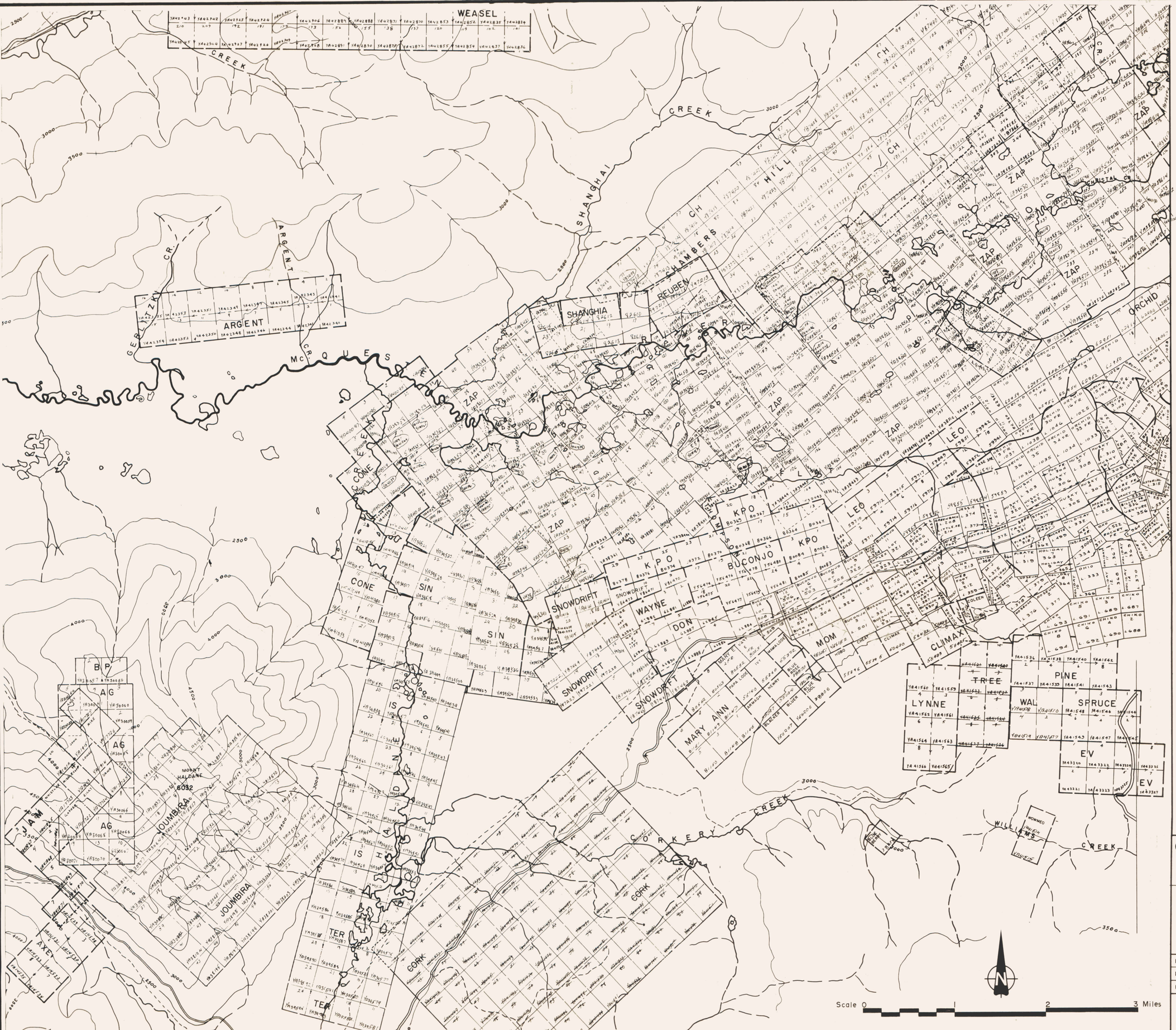
243 samples (Ag, Pb, Zn & Hg) @ 7.15/sample = 1,737.45

TOTAL A - D $5,204.55

Declared before me at Langley, BC
this 6 day of March 1981

March 6, 1981

M. D. Philpot, B.Sc.
Geologist



CANADA TUNGSTEN MINING CORPORATION

KENO HILL Y·T·

1980 GEOLOGICAL EXPLORATION PROGRAMME

ZAP, SIN, IS, TER & CONE CLAIMS
ASSESSMENT REPORT

CLAIM MAP

DATE: MARCH 1981	JOB NO. 80-09-A	FIG. NO. 2
DRAWN BY:		
REVISED BY:	SCALE 2": 1 MILE	

BEMA INDUSTRIES LTD.

CH CLAIMS
ZAP CLAIMS

BASE LINE

15+800
16+100
16+400
16+700
17+000
17+300
17+600
17+750
18+000
18+250
18+500
18+750
19+000
19+250
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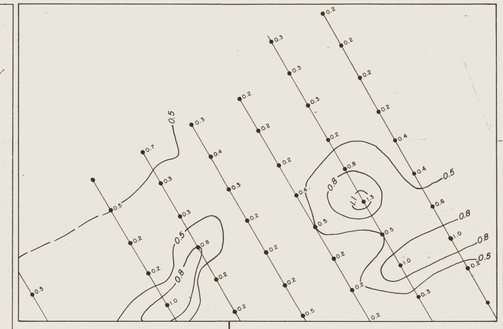

LEGEND

CONTOUR INTERVAL - ppm
- 0.5 MEAN+1σ
- 0.8 MEAN+2σ
- 1.1 MEAN+3σ
- 2.2 2(MEAN+3σ)

STANDARD DEVIATION - σ
MEAN - 0.2 ppm
TREND - 0.5 ppm
THRESHOLD - 0.8 ppm
POSSIBLY ANOMALOUS - 0.9-1.1 ppm
PROBABLY ANOMALOUS - > 1.1 ppm

SURVEY STATION

Scale 0 200 400 600 Metres

CANADA TUNGSTEN MINING CORPORATION
KENO HILL Y.T.
1980 GEOLOGICAL EXPLORATION PROGRAMME
ZAP & SINISTER CLAIMS
SHANGHAI - AREA 'C'
SOIL GEOCHEMISTRY
'A' HORIZON
Ag

DATE FEBRUARY 1981	JOB NO. 80-09-A	FIG NO. 3
DRAWN BY C.L.		
REVISED BY	SCALE 1:5,000	METRES

BEMA INDUSTRIES LTD.

CH CLAIMS
ZAP CLAIMS

BASE LINE

15+800
16+100
16+400
16+700
17+000
17+300
17+600
17+750
18+050
18+350
18+650
18+800
18+950
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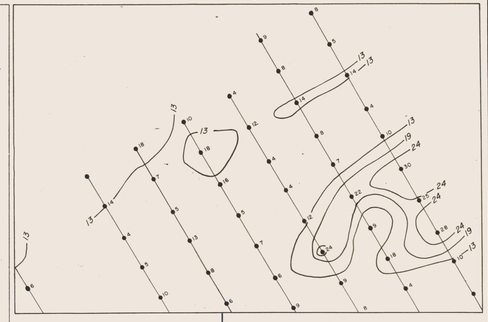
20+000
20+150
20+300
20+450
20+600
20+750



LEGEND

CONTOUR INTERVAL- ppm — I3 MEAN+1σ
— I9 MEAN+2σ
— 24 MEAN+3σ
— 48 2(MEAN+3σ)

STANDARD DEVIATION — σ
MEAN — 8 ppm
TREND — I3 ppm
THRESHOLD — I9 ppm
POSSIBLY ANOMALOUS — 20-24 ppm
PROBABLY ANOMALOUS — > 24 ppm

SURVEY STATION
■

Scale 0 200 400 600 Metres

CANADA TUNGSTEN MINING CORPORATION
KENO HILL Y.T.
1980 GEOLOGICAL EXPLORATION PROGRAMME
ZAP & SINISTER CLAIMS
SHANGHAI-AREA 'C'
SOIL GEOCHEMISTRY
'A' HORIZON
Pb

DATE FEBRUARY 1981	JOB NO. 80-09-A	FIG. NO. 4
DRAWN BY C.L.		
REVISED BY	SCALE 1:5,000	METRES

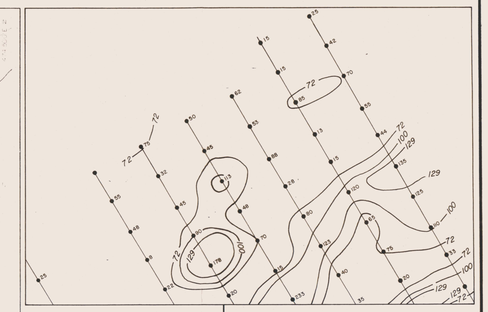
BEMA INDUSTRIES LTD.

CH CLAIMS
ZAP CLAIMS

BASE LINE

16+100
16+400
16+700
17+000
17+300
17+600
17+750
18+000
18+250
18+500
18+750
19+000
19+250
19+500
19+700
19+850
20+000
20+150
20+300
20+450

Scale 0 200 400 600 Metres



LEGEND

CONTOUR INTERVAL - ppm
- 72 MEAN+1σ
- 100 MEAN+2σ
- 129 MEAN+3σ
- 258 2(MEAN+3σ)

STANDARD DEVIATION - σ
MEAN - 43 ppm
TREND - 72 ppm
THRESHOLD - 84 ppm
POSSIBLY ANOMALOUS - 101-129 ppm
PROBABLY ANOMALOUS - > 129 ppm

SURVEY STATION
■

CANADA TUNGSTEN MINING CORPORATION
KENO HILL Y.T.
1980 GEOLOGICAL EXPLORATION PROGRAMME
ZAP & SINISTER CLAIMS
SHANGHAI - AREA 'C'
SOIL GEOCHEMISTRY
'A' HORIZON
Zn

DATE FEBRUARY 1981	JOB NO. 80-09-A	FIG. NO. 5
DRAWN BY E.L.		
REVISED BY	SCALE 1:5,000 METRES	

BEMA INDUSTRIES LTD.

CH CLAIMS
ZAP CLAIMS

BASE LINE

16+800
16+700
16+600
16+500
16+400
16+300
16+200
16+100
16+000

LEGEND

CONTOUR INTERVAL- ppm — 106 MEAN+1σ
— 142 MEAN+2σ
— 179 MEAN+3σ
— 358 2(MEAN+3σ)

STANDARD DEVIATION — σ
MEAN — 69 ppm
TREND — 106 ppm
THRESHOLD — 142 ppm
POSSIBLY ANOMALOUS — 143-179 ppm
PROBABLY ANOMALOUS — > 179 ppm

SURVEY STATION
■

Scale 0 200 400 600 Metres

SHEET INDEX

CANADA TUNGSTEN MINING CORPORATION
KENO HILL Y.T.
1980 GEOLOGICAL EXPLORATION PROGRAMME
ZAP & SINISTER CLAIMS
SHANGHAI-AREA 'C'
SOIL GEOCHEMISTRY
'A' HORIZON
Hg

DATE FEBRUARY 1981	JOB NO 80-09-A	FIG. NO 6
DRAWN BY C.L.		
REVISED BY	SCALE 1:5,000 METRES	

BEMA INDUSTRIES LTD.

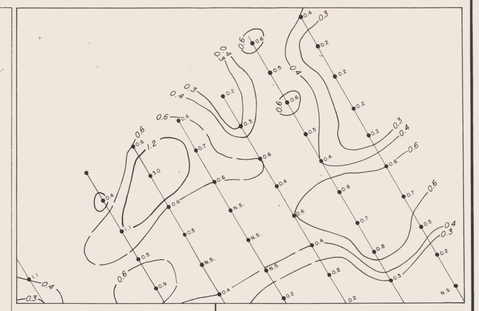
CH CLAIMS
ZAP CLAIMS

BASE LINE

16+100
16+400
16+700
16+800

17+200
17+400
17+750

18+650
18+800
18+950
19+100
19+250
19+400
19+550
19+700
19+850
20+000
20+150
20+300
20+450
20+600



Scale 0 200 400 600 Metres

N

LEGEND

CONTOUR INTERVAL - ppm
- 0.3 MEAN+1σ
- 0.4 MEAN+2σ
- 0.6 MEAN+3σ
- 1.2 2(MEAN+3σ)

STANDARD DEVIATION - σ
MEAN - 0.2 ppm
TREND - 0.3 ppm
THRESHOLD - 0.4 ppm
POSSIBLY ANOMALOUS - 0.5-0.6 ppm
PROBABLY ANOMALOUS - => 0.6 ppm

SURVEY STATION
■

CANADA TUNGSTEN MINING CORPORATION
KENO HILL Y.T.
1980 GEOLOGICAL EXPLORATION PROGRAMME
ZAP & SINISTER CLAIMS
SHANGHAI - AREA "C"
SOIL GEOCHEMISTRY
'B' HORIZON
Ag

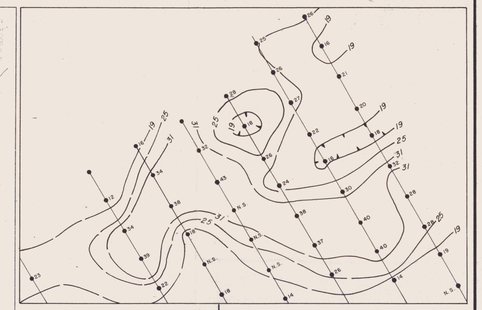
DATE FEBRUARY 1981 | JOB NO 80-09-A | FIG NO 7
DRAWN BY C.L.
REVISED BY
SCALE 1:5,000 METRES

BEMA INDUSTRIES LTD.

CH CLAIMS
ZAP CLAIMS

BASE LINE

15+800
16+000
16+200
16+400
16+600
16+800
17+000
17+200
17+400
17+600
17+750
17+800
18+000
18+200
18+400
18+600
18+800
19+000
19+200
19+400
19+550
19+700
19+850
20+000
20+150
20+300
20+450



LEGEND

CONTOUR INTERVAL- ppm
- 19 MEAN+1σ
- 25 MEAN+2σ
- 31 MEAN+3σ
- 62 2(MEAN+3σ)

STANDARD DEVIATION - σ
MEAN - 13 ppm
TREND - 19 ppm
THRESHOLD - 25 ppm
POSSIBLY ANOMALOUS - 26-31 ppm
PROBABLY ANOMALOUS - > 31 ppm

SURVEY STATION
■

Scale 0 200 400 600 Metres

CANADA TUNGSTEN MINING CORPORATION
KENO HILL Y.T.
1980 GEOLOGICAL EXPLORATION PROGRAMME
ZAP & SINISTER CLAIMS
SHANGHAI - AREA "C"
SOIL GEOCHEMISTRY
"B" HORIZON
Pb

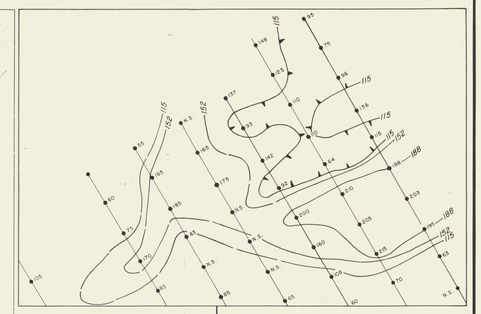
DATE FEBRUARY 1981	JOB NO. 80-09-A	FIG. NO. 8
DRAWN BY C.L.	SCALE 1:5,000	METRES
REVISED BY		

BEMA INDUSTRIES LTD.

CH CLAIMS
ZAP CLAIMS

BASE LINE

16+700
16+400
16+100
15+800



LEGEND

CONTOUR INTERVAL-ppm – 115 MEAN+1σ
– 152 MEAN+2σ
– 188 MEAN+3σ
– 376 2(MEAN+3σ)

STANDARD DEVIATION – σ
MEAN – 79.5 ppm
TREND – 115 ppm
THRESHOLD – 152 ppm
POSSIBLY ANOMALOUS – 153-188 ppm
PROBABLY ANOMALOUS – >= 188 ppm

SURVEY STATION
■

Scale 0 200 400 600 Metres

CANADA TUNGSTEN MINING CORPORATION
KENO HILL Y.T.
1980 GEOLOGICAL EXPLORATION PROGRAMME
ZAP & SINISTER CLAIMS
SHANGHAI-AREA 'C'
SOIL GEOCHEMISTRY
"B" HORIZON
Zn

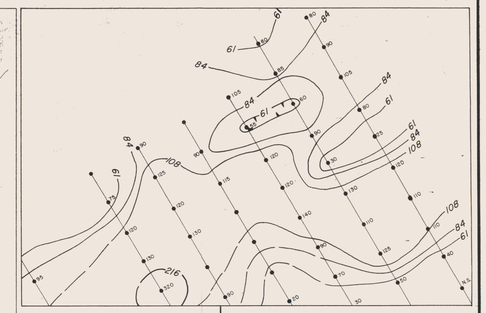
DATE FEBRUARY 1981	JOB NO 80-09-A	FIG NO 9
DRAWN BY C.L.		
REVISED BY	SCALE 1:5,000 METRES	

BEMA INDUSTRIES LTD.

CH CLAIMS
ZAP CLAIMS

BASE LINE

15+900
16+100
16+400
16+700



LEGEND

CONTOUR INTERVAL - ppm
- 61 MEAN+1σ
- 84 MEAN+2σ
- 108 MEAN+3σ
- 216 2(MEAN+3σ)

STANDARD DEVIATION - σ
MEAN - 37 ppm
TREND - 61 ppm
THRESHOLD - 84 ppm
POSSIBLY ANOMALOUS - 85-108 ppm
PROBABLY ANOMALOUS - > 108 ppm

SURVEY STATION
■

Scale 0 200 400 600 Metres

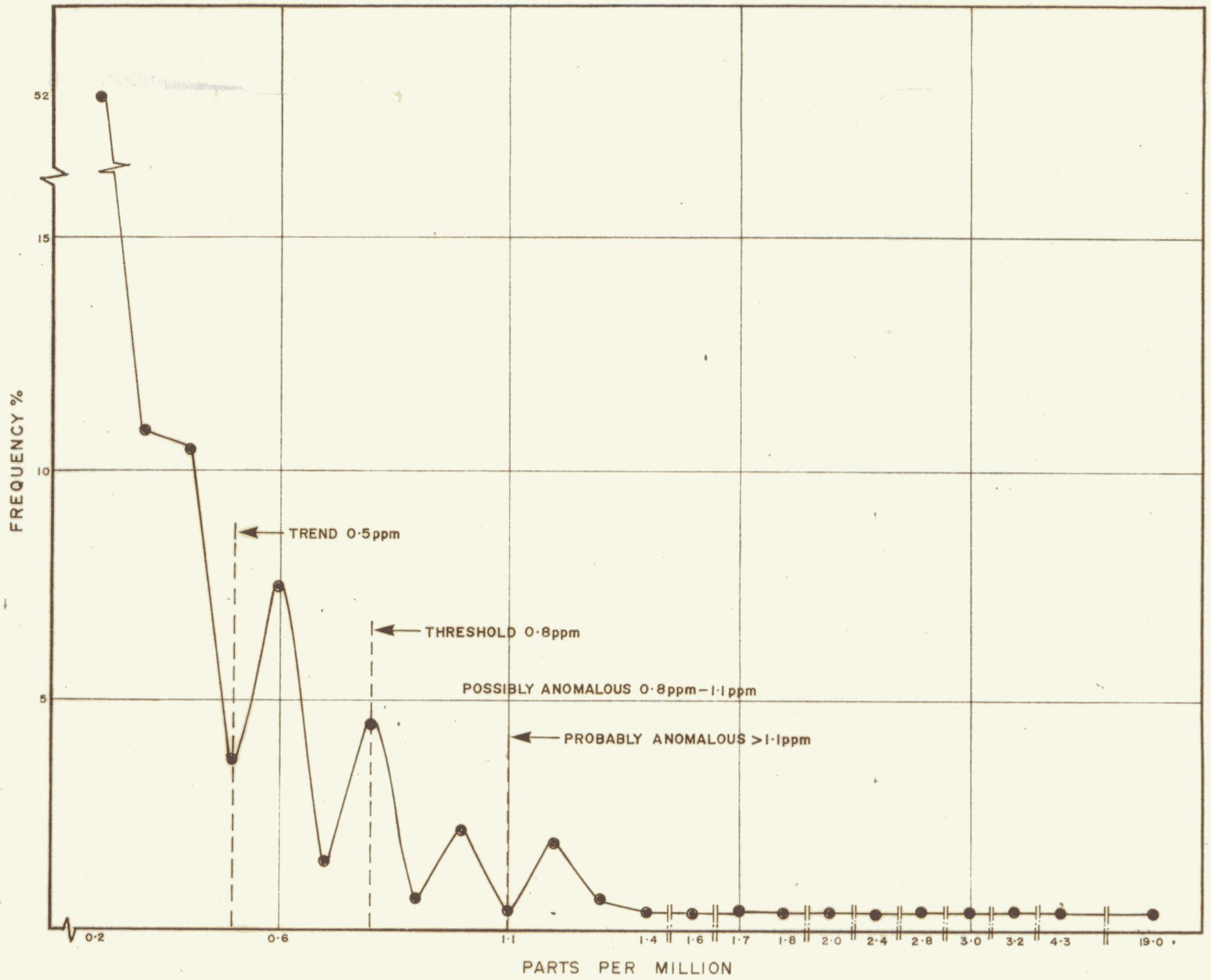
CANADA TUNGSTEN MINING CORPORATION
KENO HILL Y.T.
1980 GEOLOGICAL EXPLORATION PROGRAMME

ZAP & SINISTER CLAIMS
SHANGHAI - AREA 'C'

SOIL GEOCHEMISTRY
'B' HORIZON
Hg

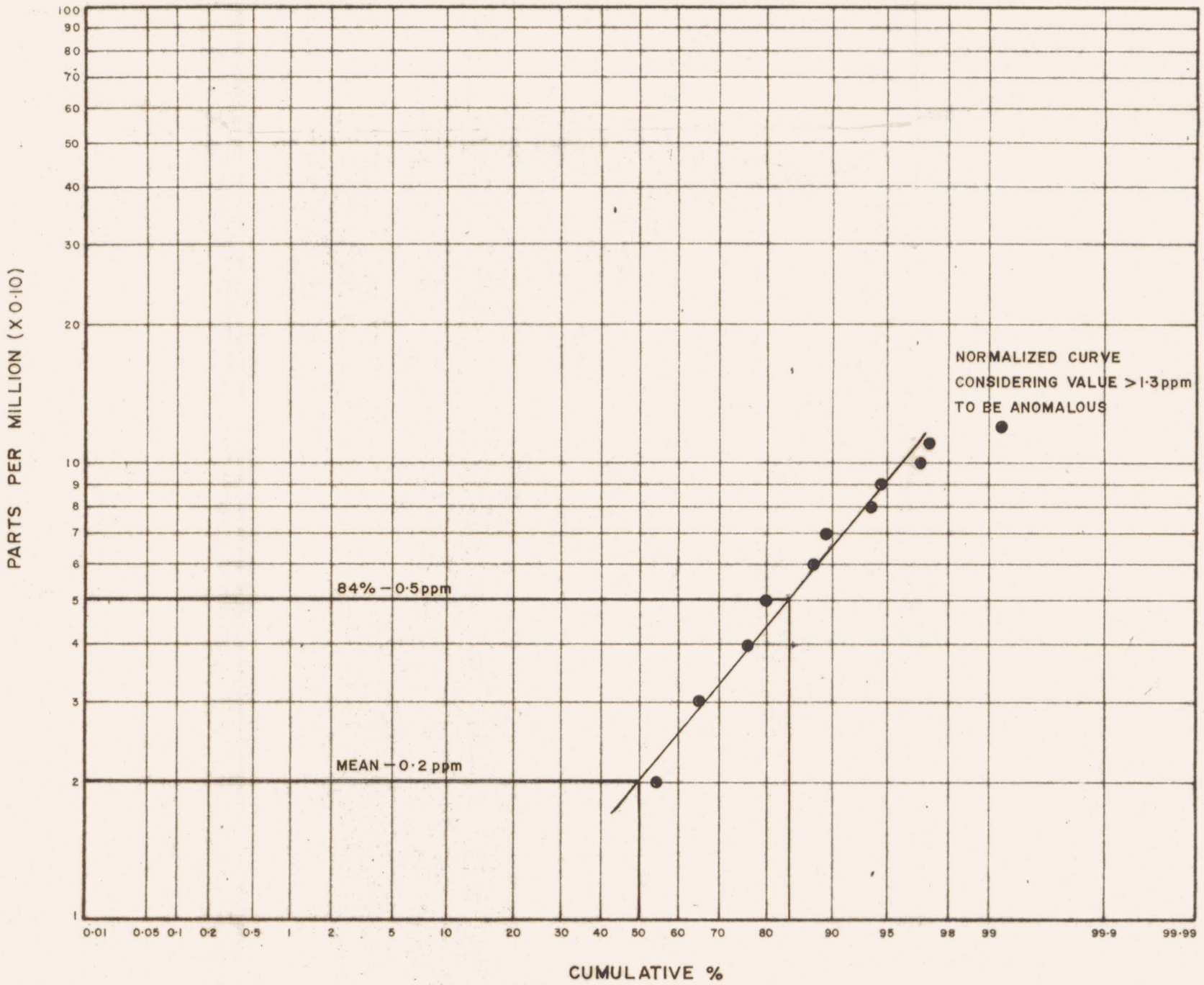
DATE FEBRUARY 1981	JOB NO. 80-09-A	FIG. NO. 10
DRAWN BY C.L.		
REVISED BY: -	SCALE 1/5,000 METRES	

BEMA INDUSTRIES LTD.



Ag
FREQUENCY CURVE
SAMPLES OF
'A' HORIZON SOIL SAMPLES
ZAP CLAIMS
AREA B & C

Fig 11



Ag

CUMULATIVE FREQUENCY CURVE

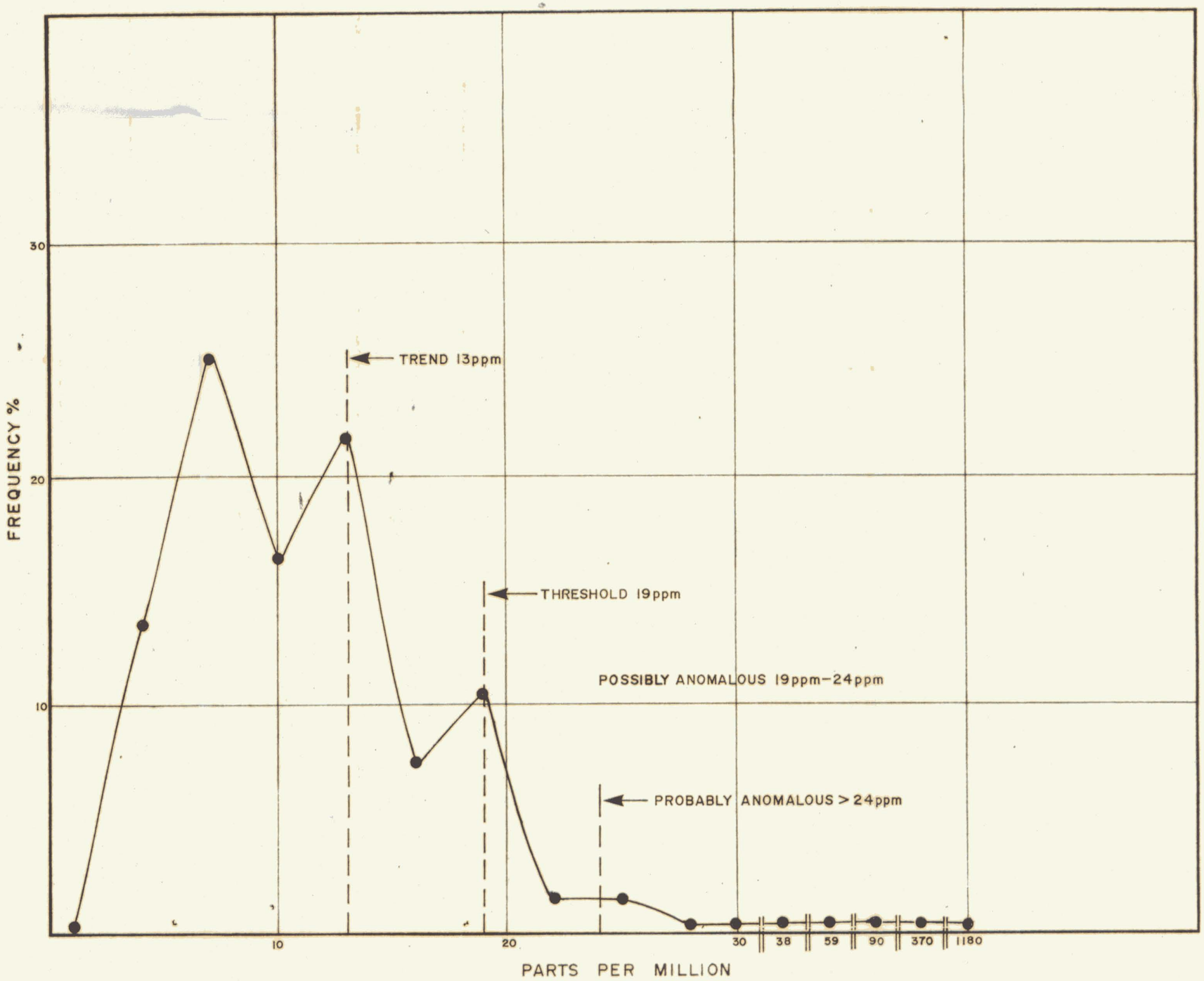
SAMPLES OF

'A' HORIZON SOIL SAMPLES

ZAP CLAIMS

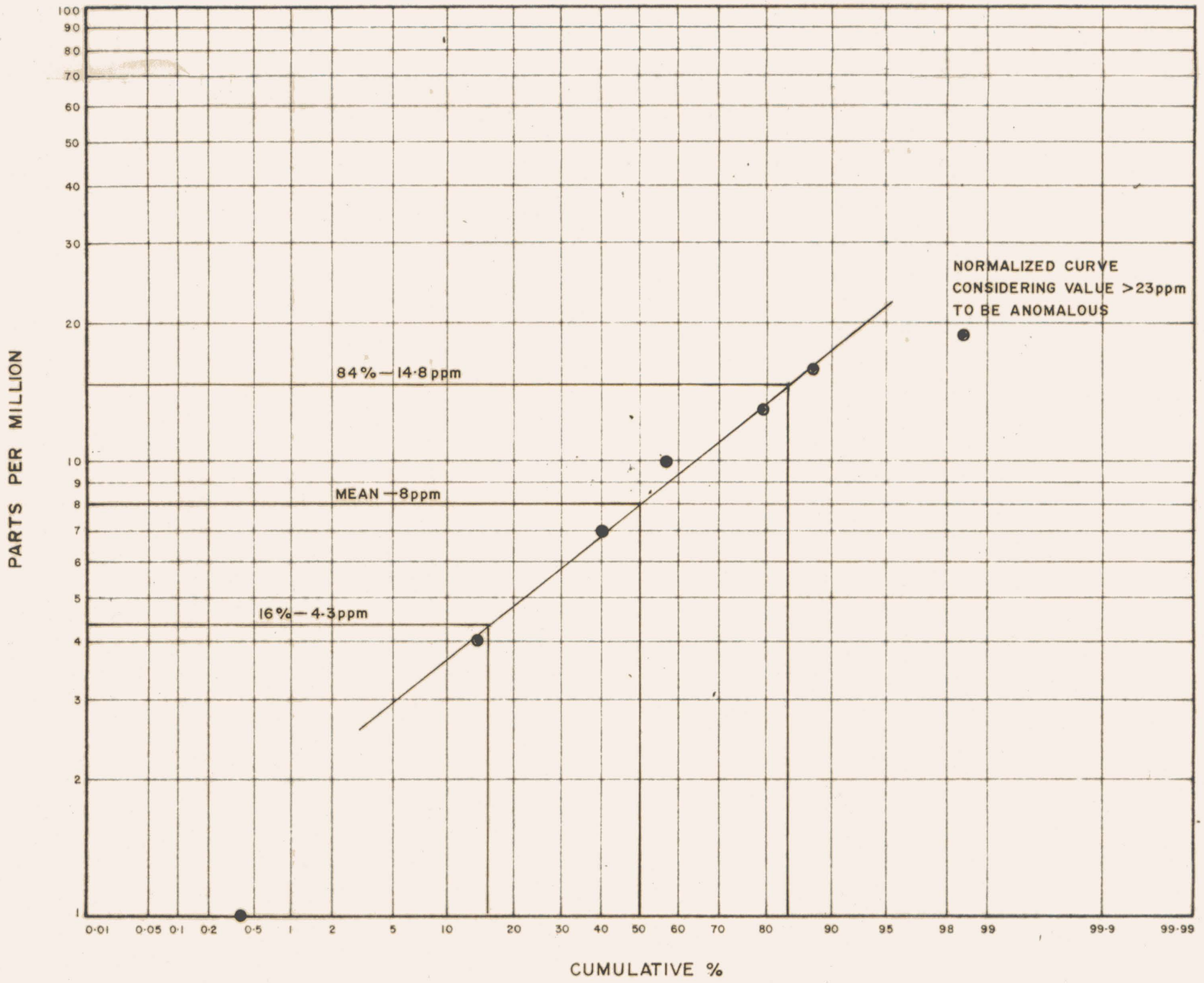
AREA B & C

Fig 12



Pb
FREQUENCY CURVE
SAMPLES OF
'A' HORIZON SOIL SAMPLES
ZAP CLAIMS
AREA B&C

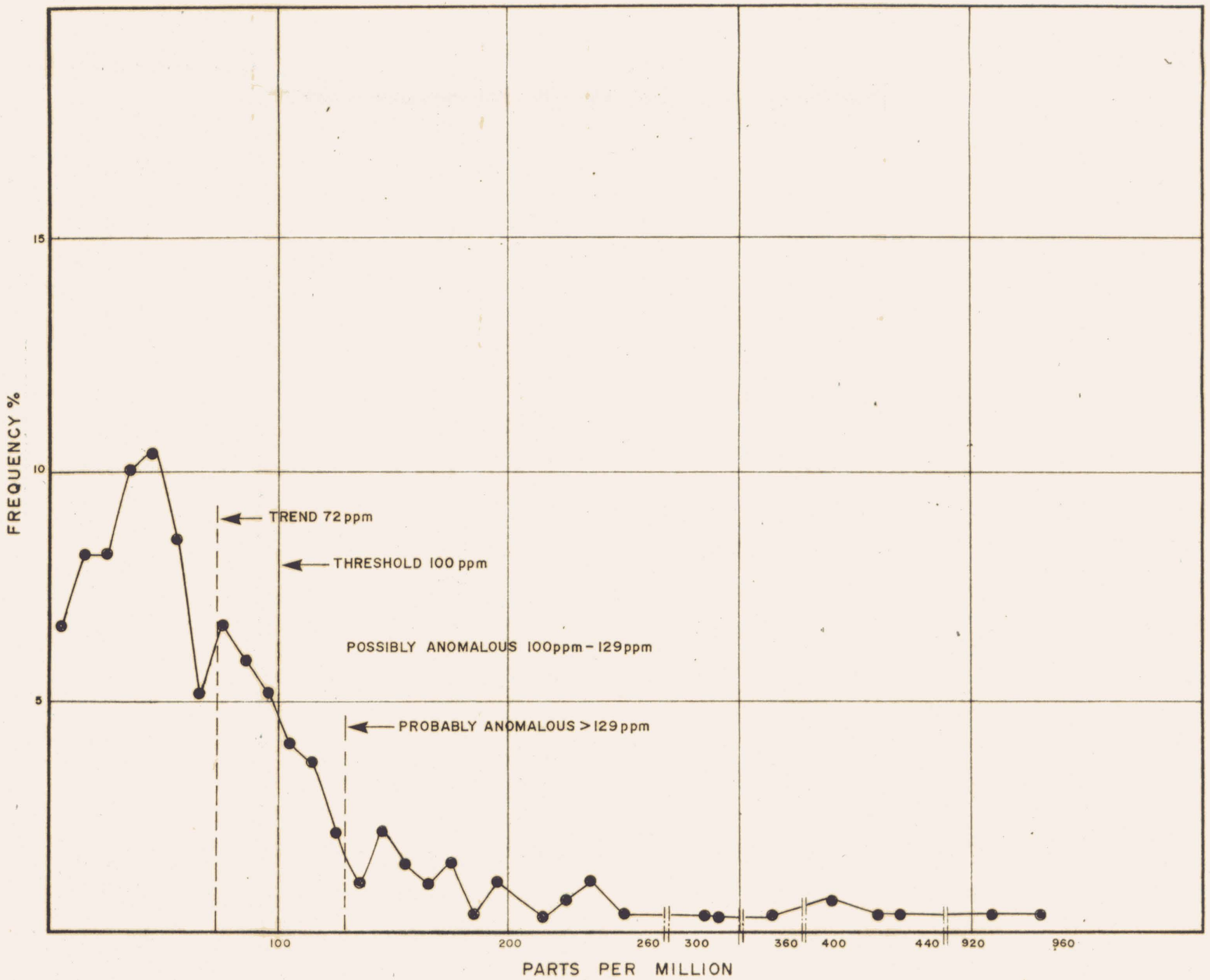
Fig 13



Pb

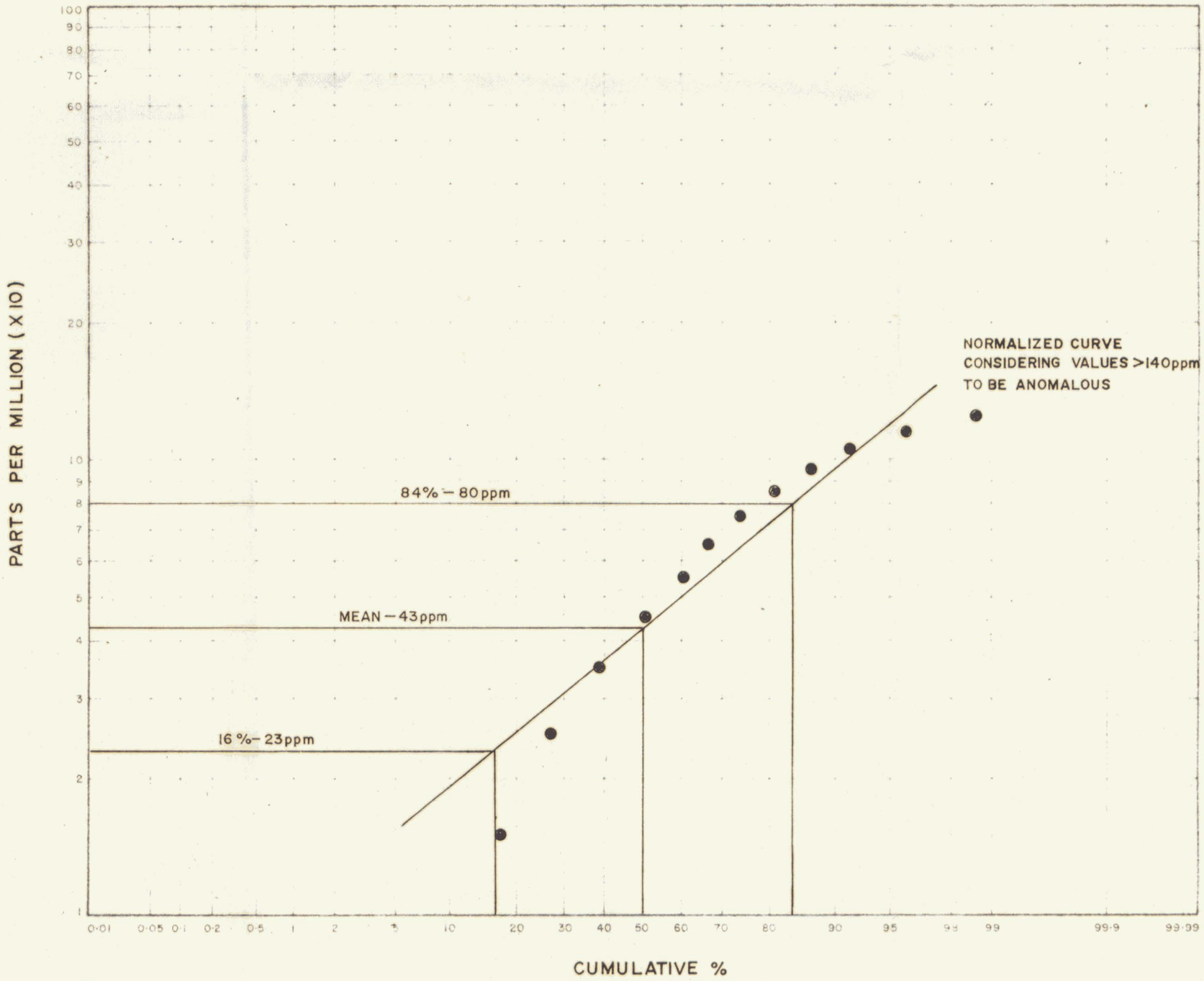
CUMULATIVE FREQUENCY CURVE
SAMPLES OF
'A' HORIZON SOIL SAMPLES
ZAP CLAIMS
AREA B&C

Fig 14



Zn
FREQUENCY CURVE
SAMPLES OF
'A' HORIZON SOIL SAMPLES
ZAP CLAIMS
AREA B&C

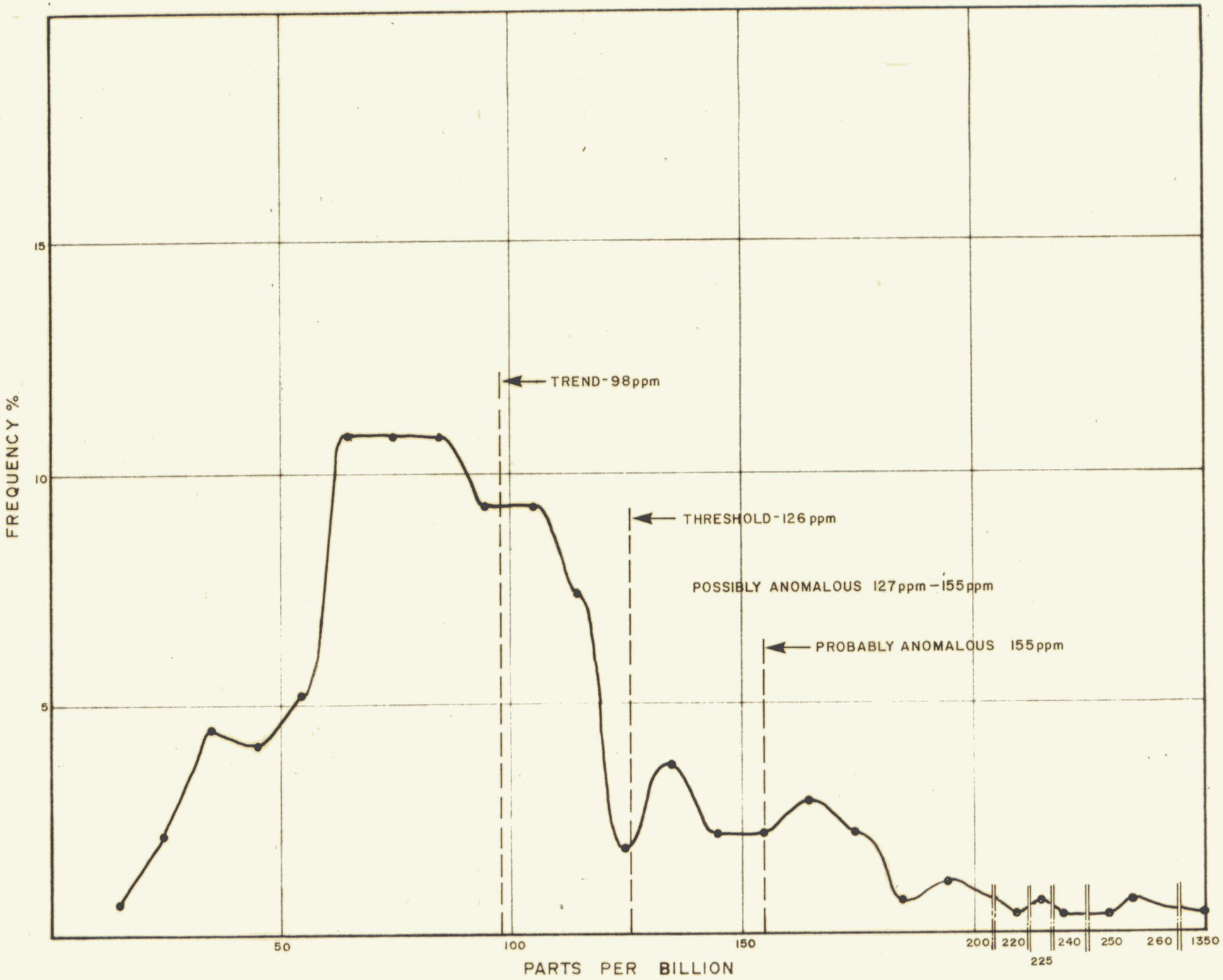
Fig 15



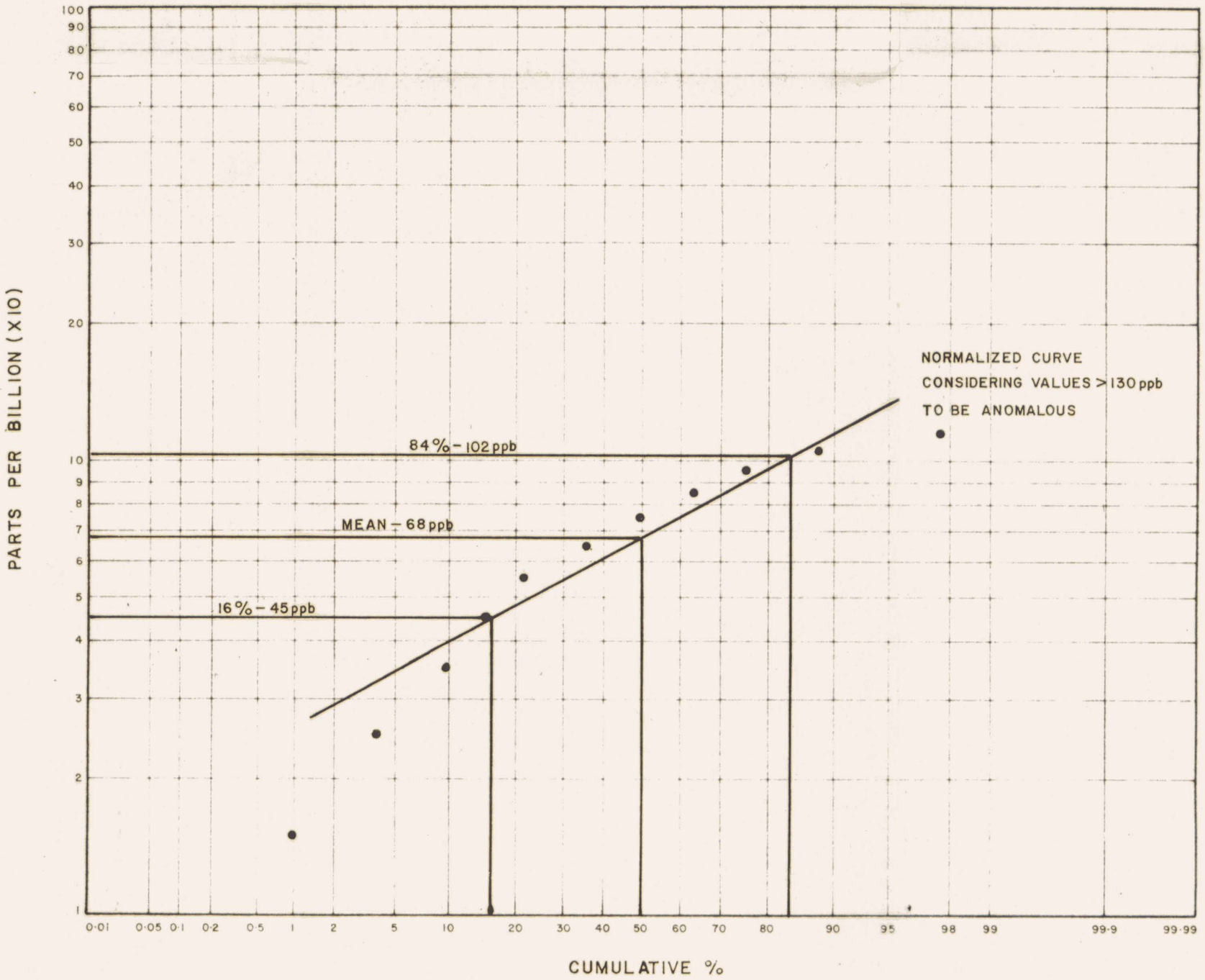
Zn

CUMULATIVE FREQUENCY CURVE
SAMPLES OF
'A' HORIZON SOIL SAMPLES
ZAP CLAIMS
AREA B & C

Fig 16



Hg
FREQUENCY CURVE
SAMPLES OF
'A' HORIZON SOIL SAMPLES
ZAP CLAIMS
AREA B & C
Fig 17

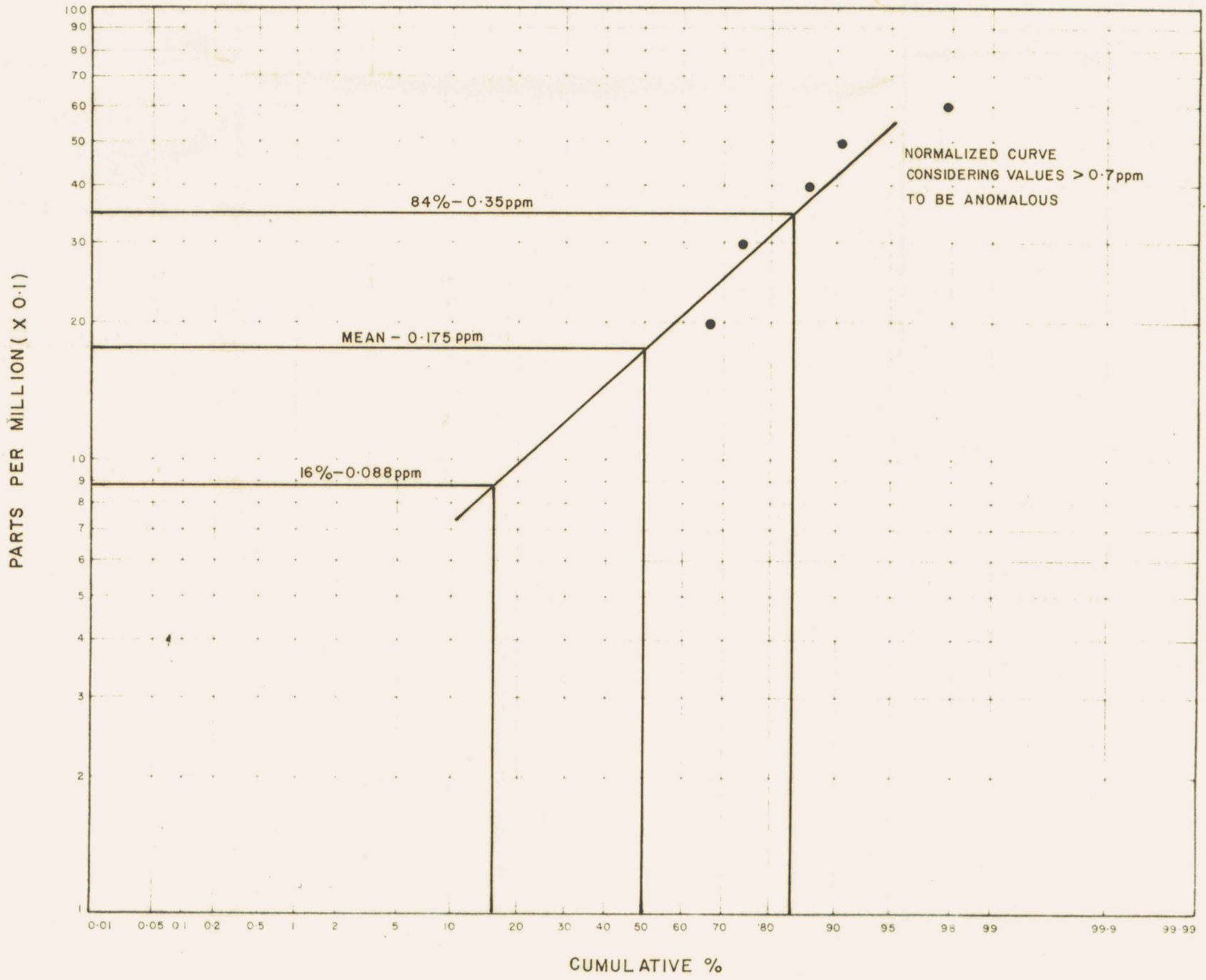


Hg

CUMULATIVE FREQUENCY CURVE
SAMPLES OF
'A' HORIZON SOIL SAMPLES

ZAP CLAIMS
AREA B & C

Fig 18

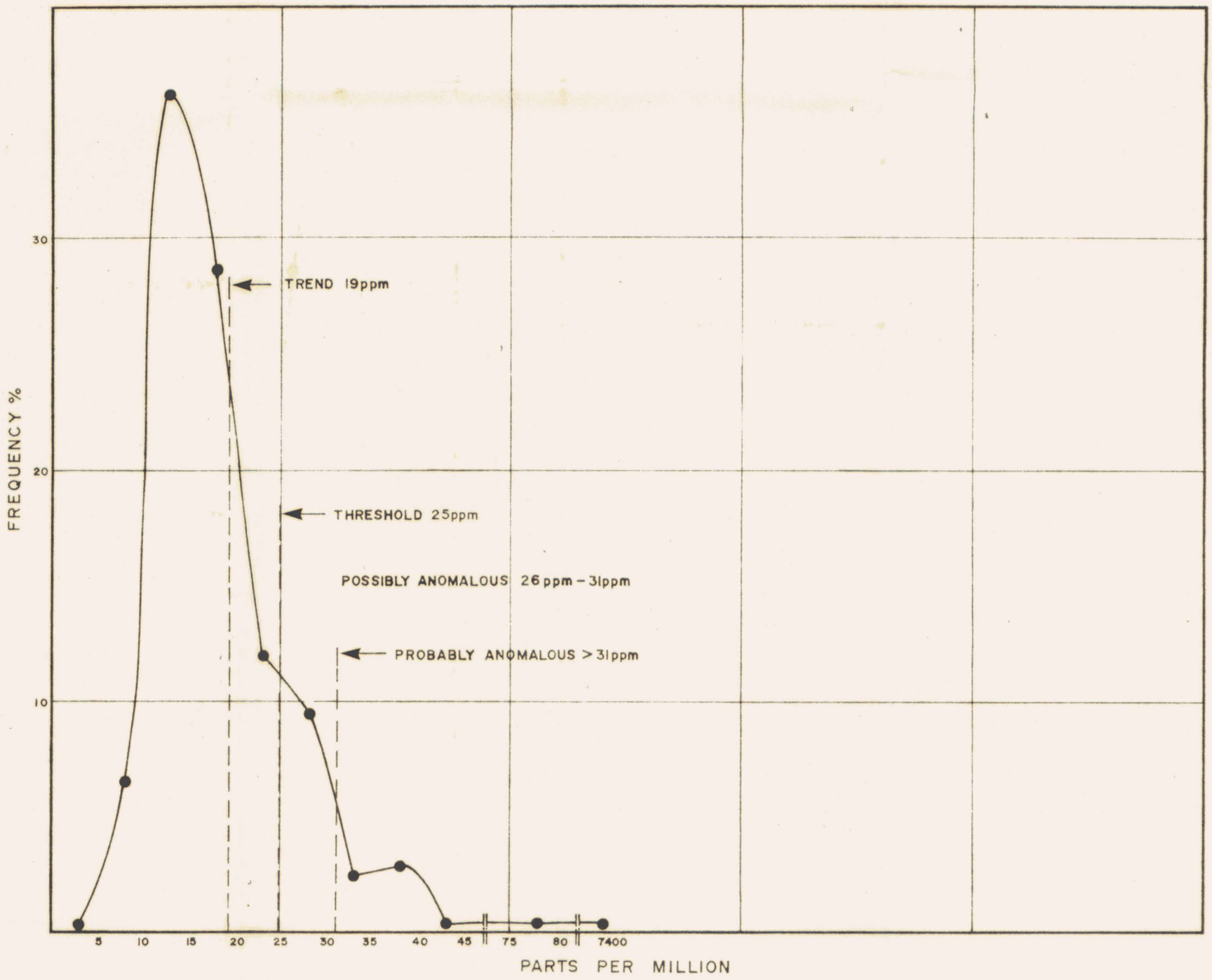


Ag

CUMULATIVE FREQUENCY CURVE
from
'B' HORIZON SOIL SAMPLES

ZAP CLAIMS
AREA B&C

Fig 20

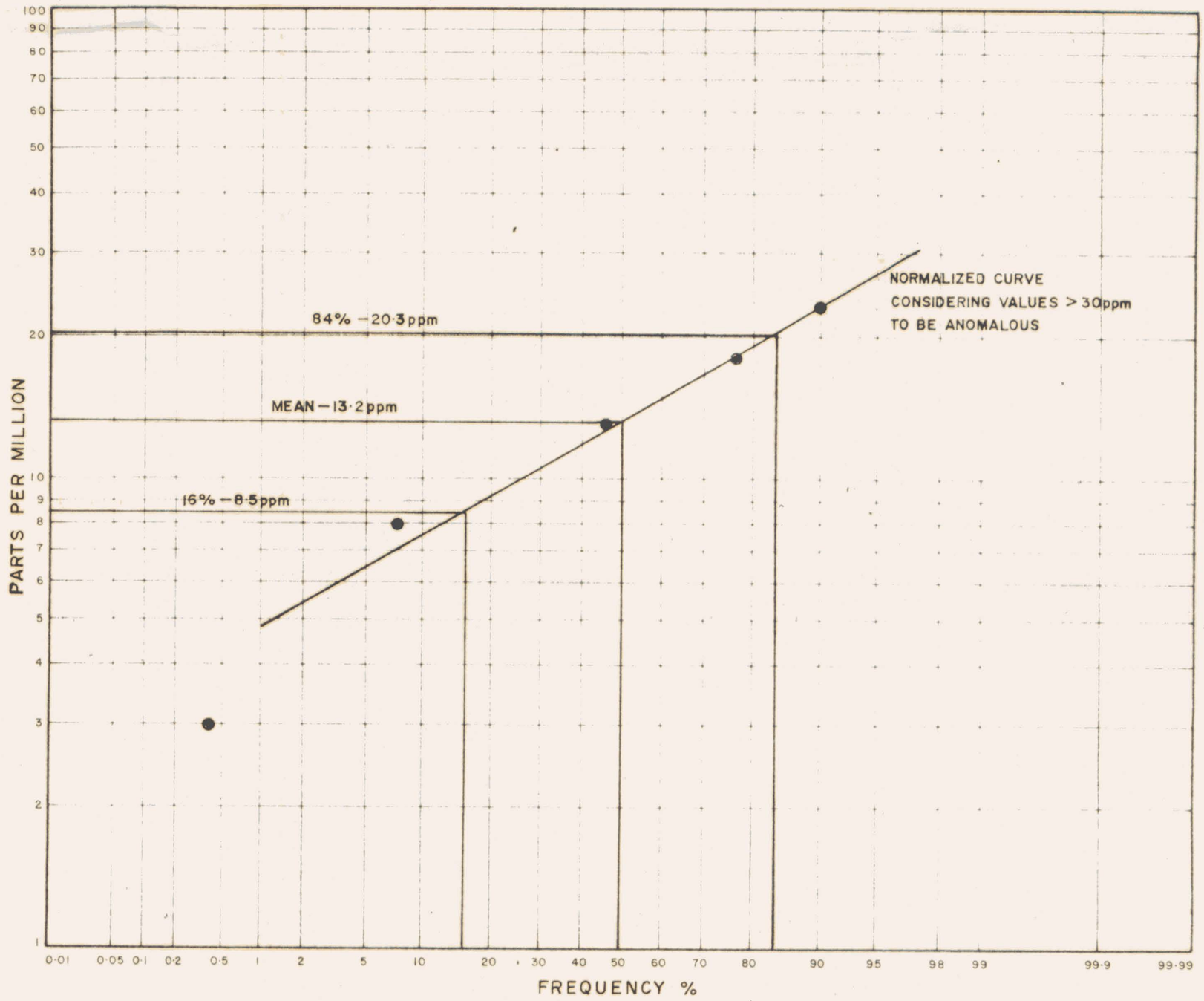


Pb

FREQUENCY CURVE
from
'B' HORIZON SOIL SAMPLES

ZAP CLAIMS
AREA B & C

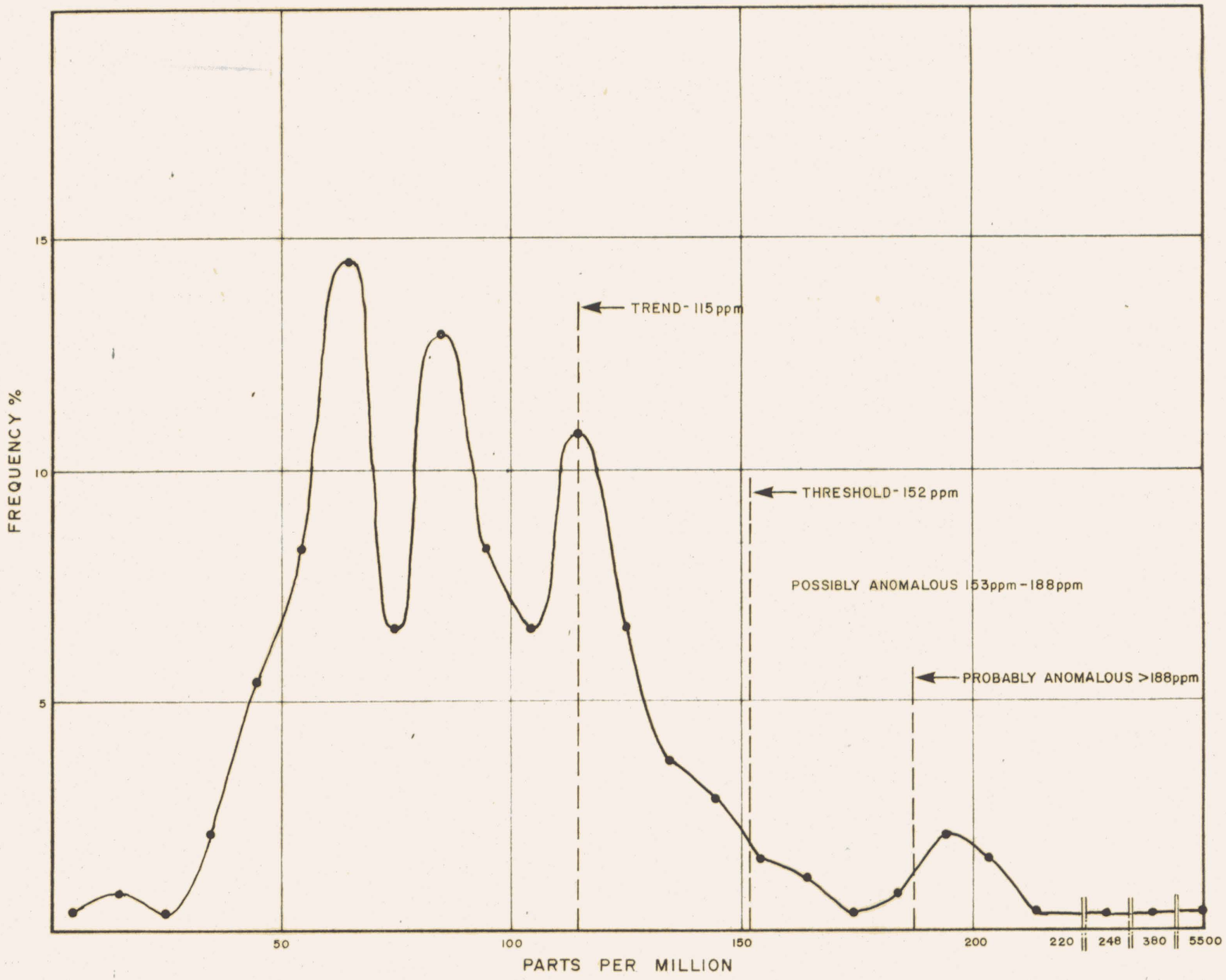
Fig 21



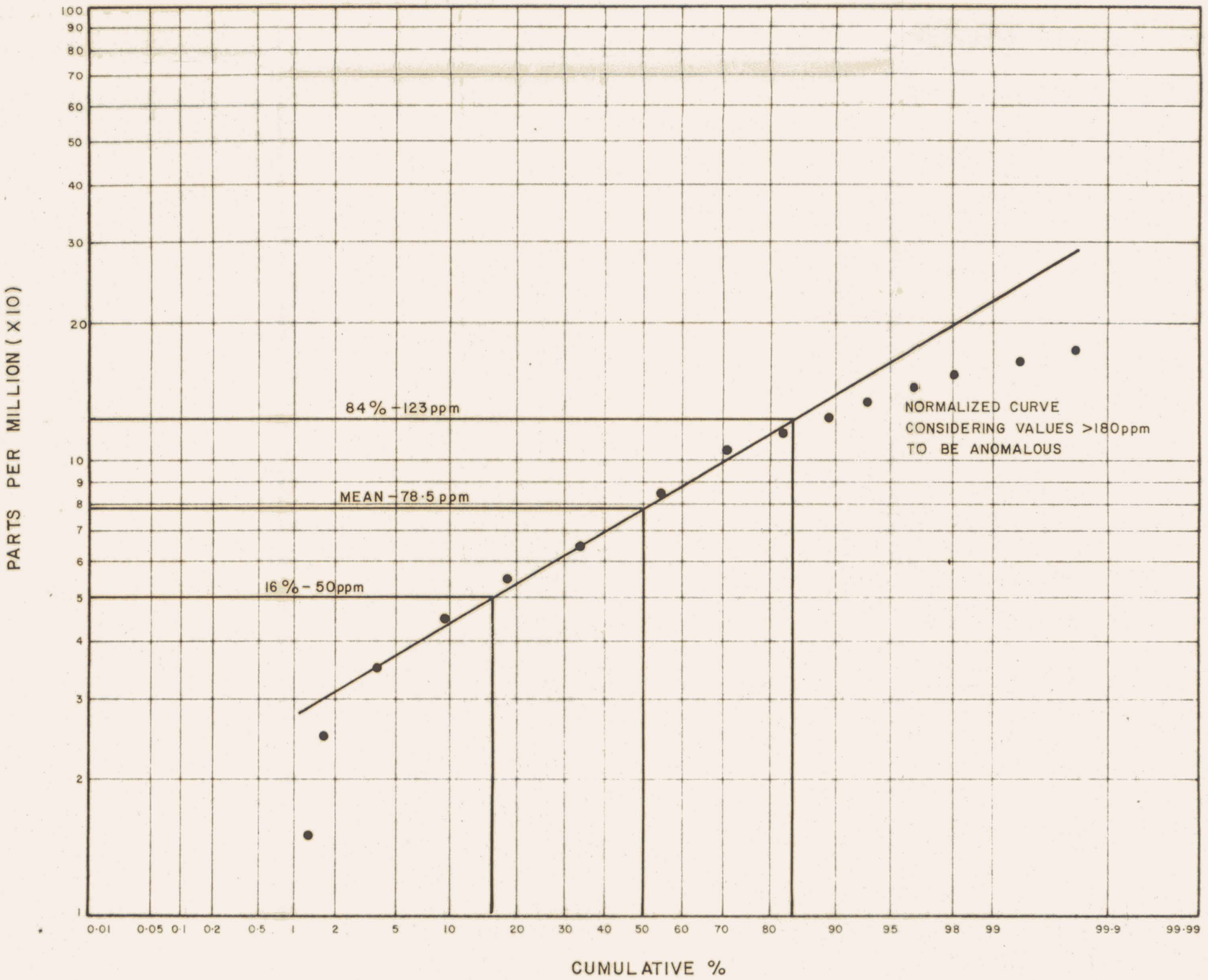
Pb

CUMULATIVE FREQUENCY CURVE
from
'B' HORIZON SOIL SAMPLES
ZAP CLAIMS
AREA B & C

Fig 22



Zn
FREQUENCY CURVE
from
'B' HORIZON SOIL SAMPLES
ZAP CLAIMS
AREA B & C
Fig 23

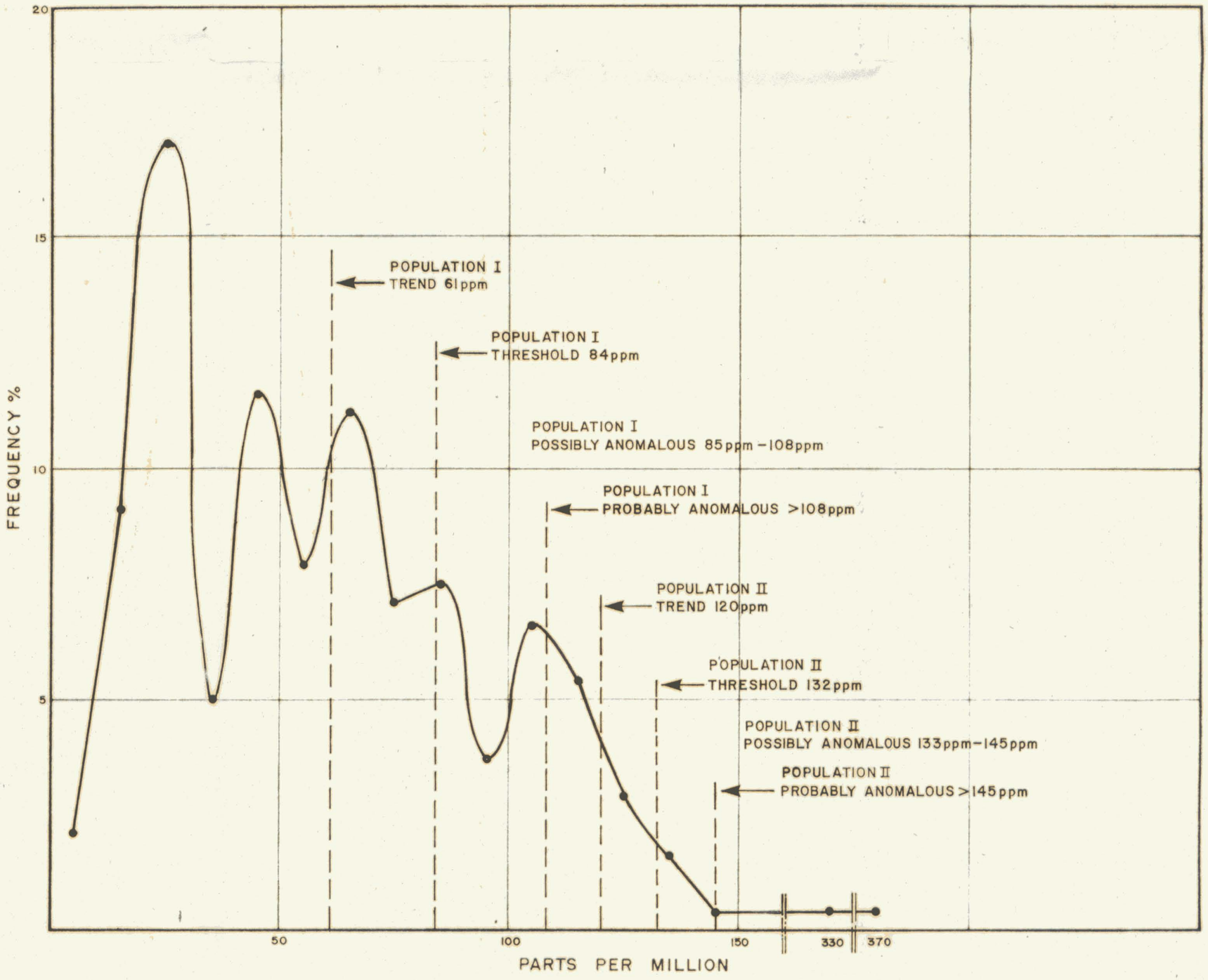


Zn

CUMULATIVE FREQUENCY CURVE
from
'B' HORIZON SOIL SAMPLES

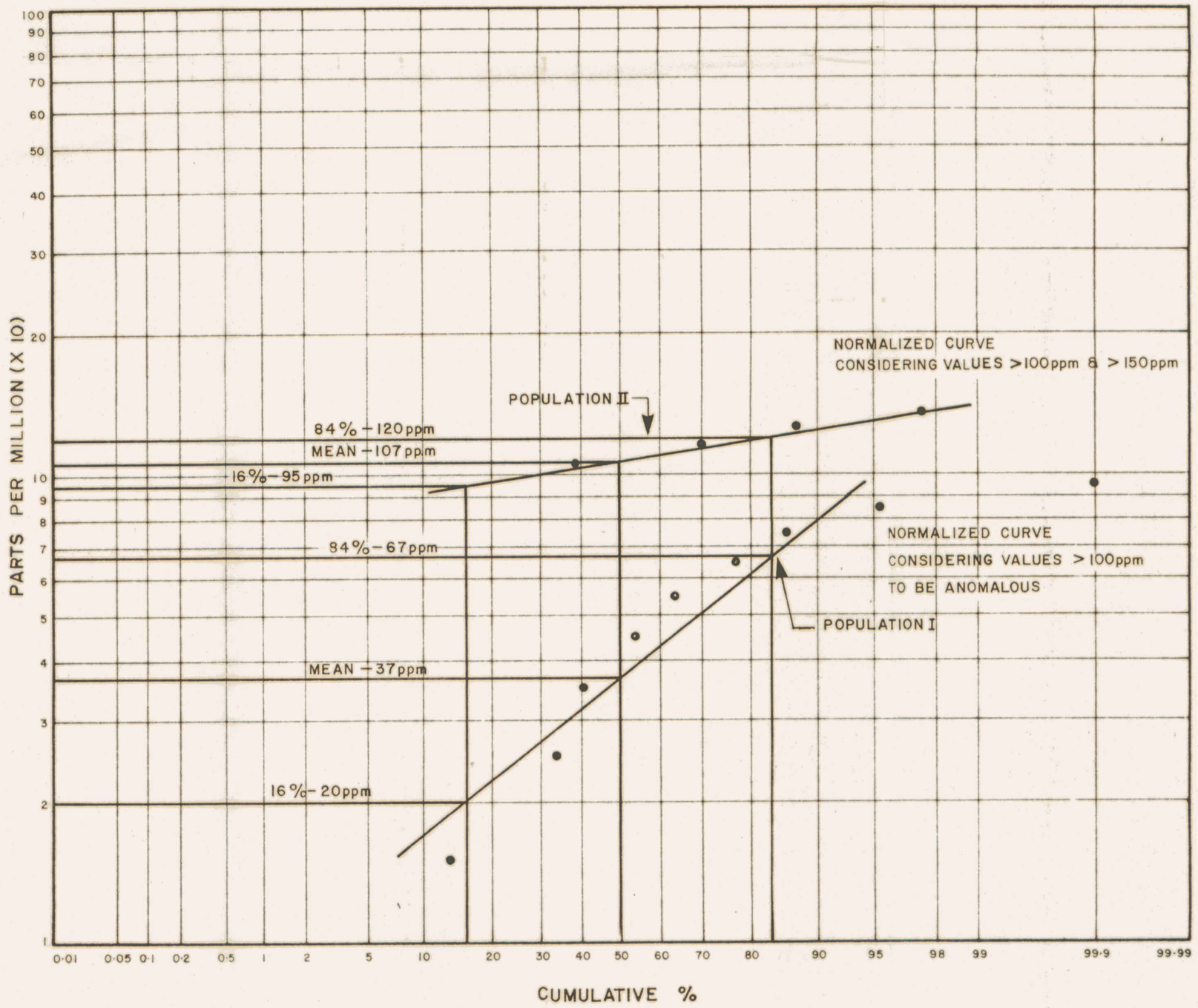
ZAP CLAIMS
AREA B & C

Fig 24



Hg
FREQUENCY CURVE
from
'B' HORIZON SOIL SAMPLES
ZAP CLAIMS
AREA B&C

Fig 25



Hg

CUMULATIVE FREQUENCY CURVE
from
'B' HORIZON SOIL SAMPLES
ZAP CLAIMS
AREA B&C

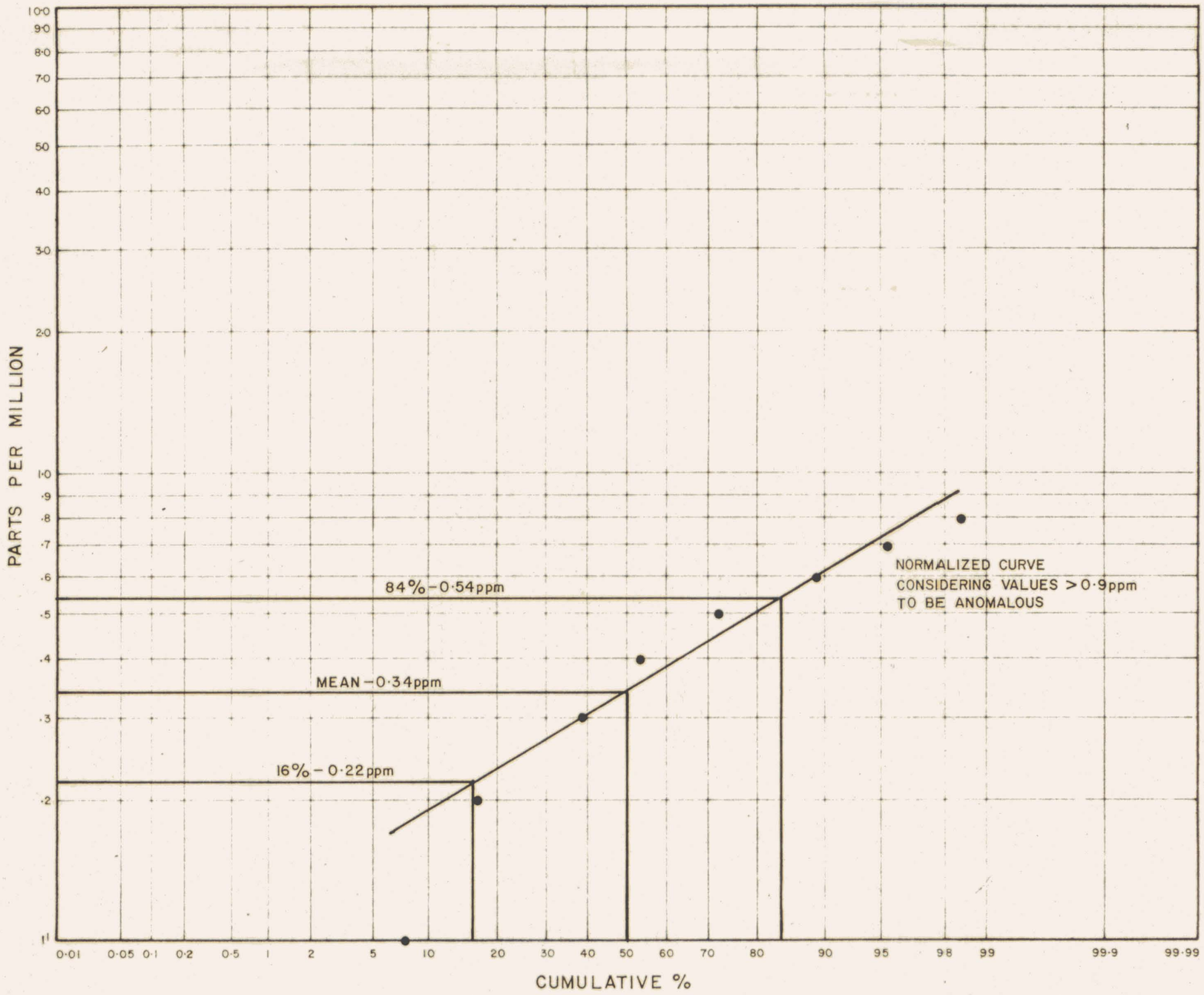
Fig 26

Ag

FREQUENCY CURVE
from
LAKE SEDIMENT SAMPLES

ZAP CLAIMS

Fig 28

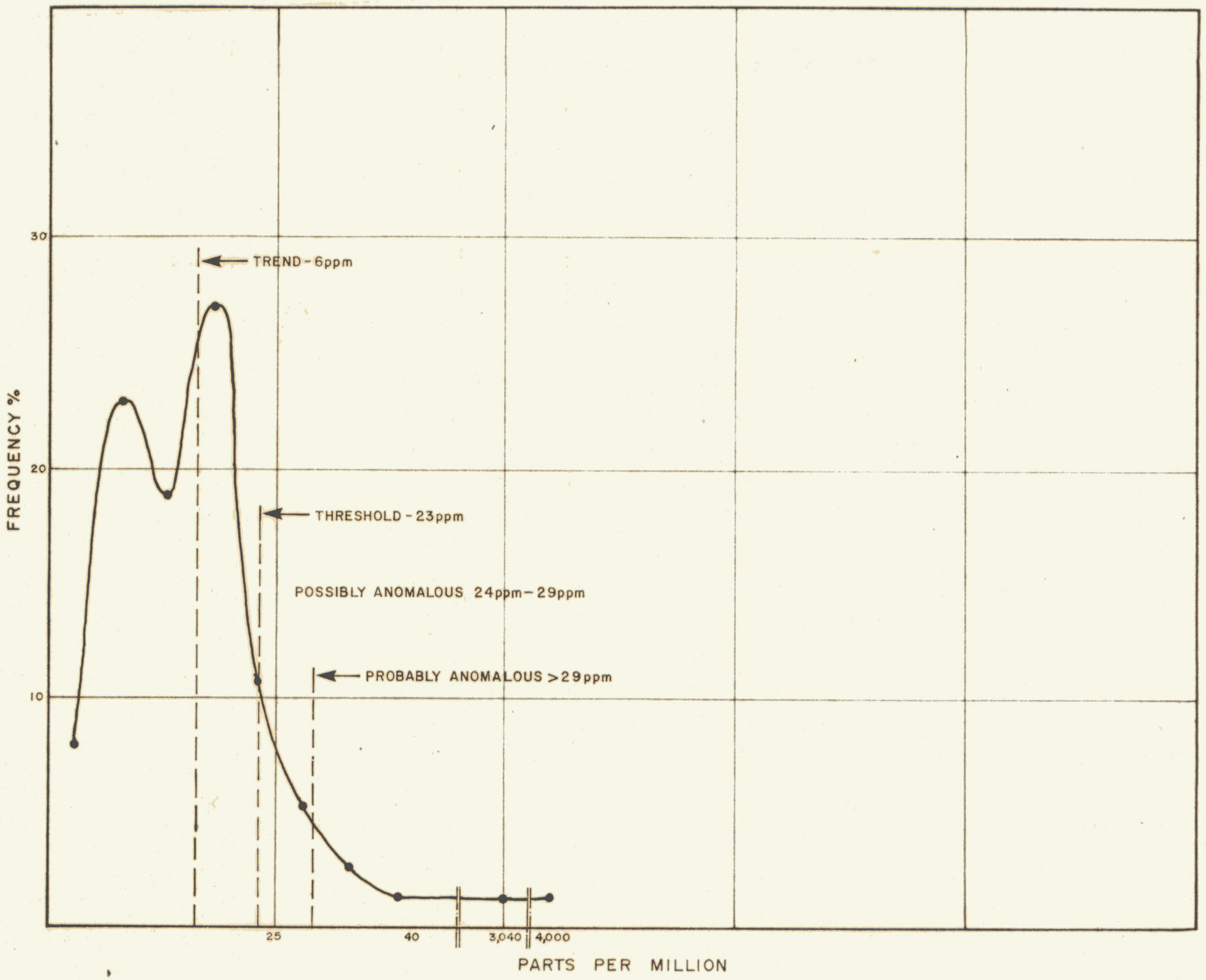


Ag

CUMULATIVE FREQUENCY CURVE
from
LAKE SEDIMENT SAMPLES

ZAP CLAIMS

Fig 29

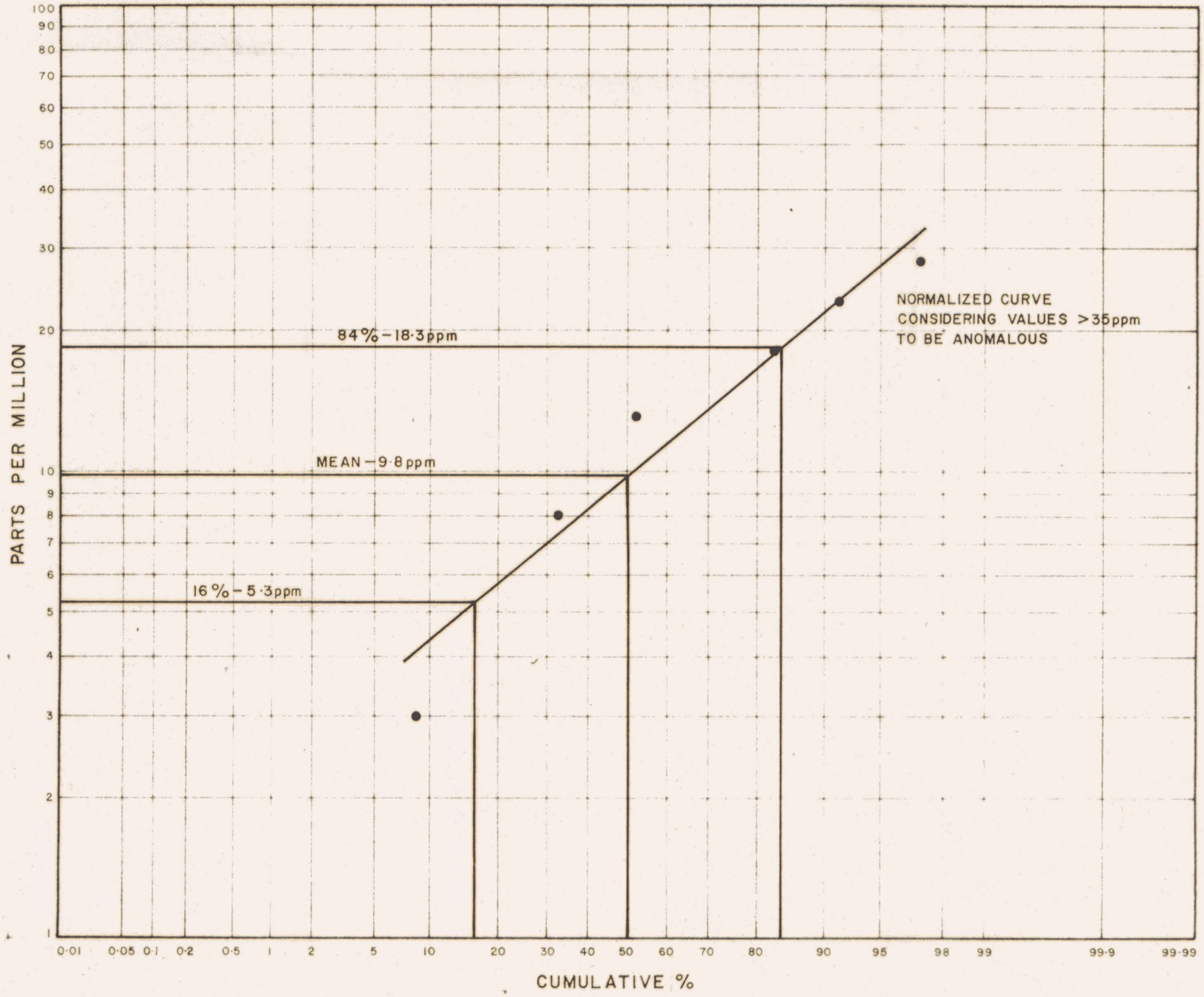


Pb

FREQUENCY CURVE
from
LAKE SEDIMENT SAMPLES

ZAP CLAIMS

Fig 30

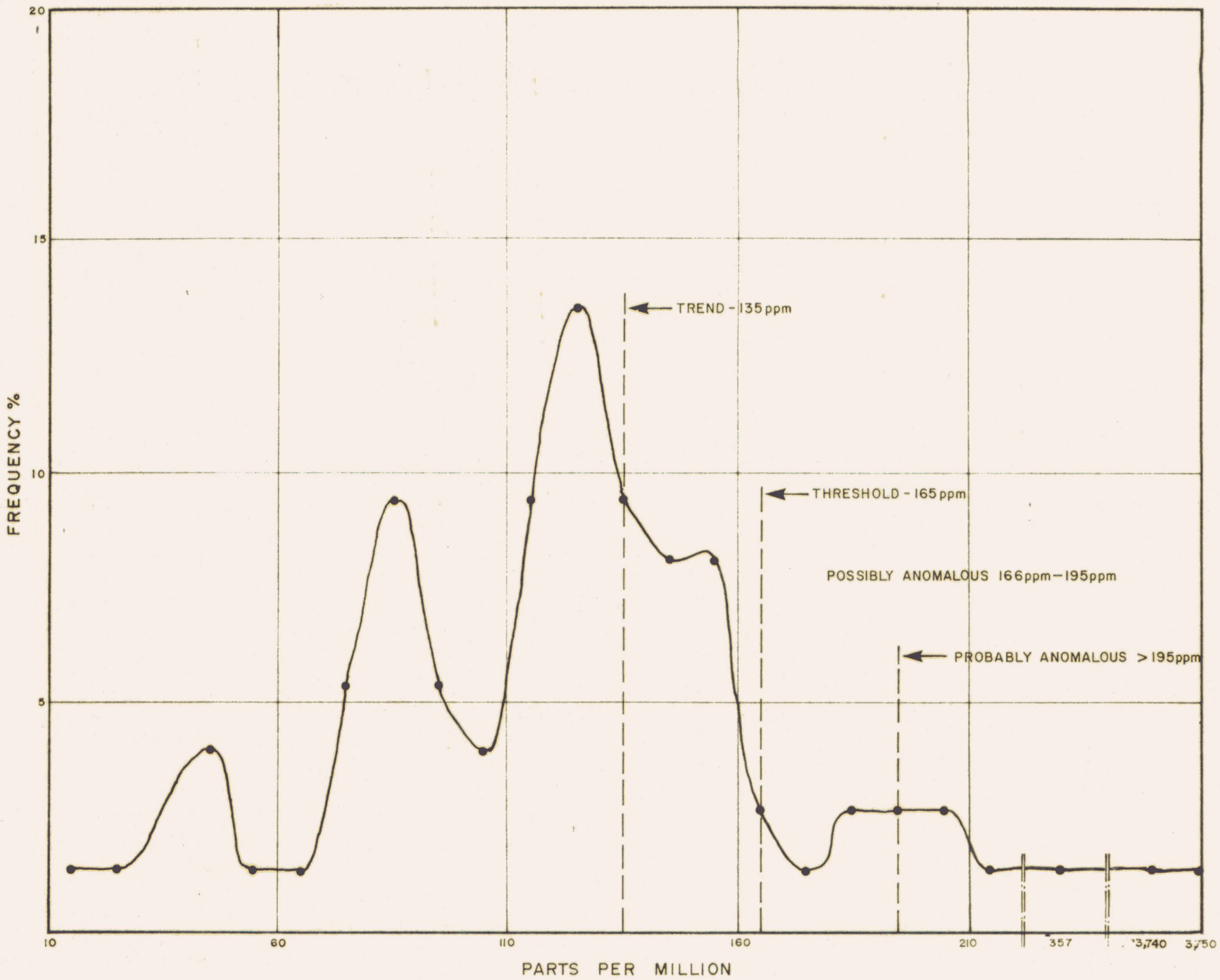


Pb

CUMULATIVE FREQUENCY CURVE
from
LAKE SEDIMENT SAMPLES

ZAP CLAIMS

Fig 31



Zn

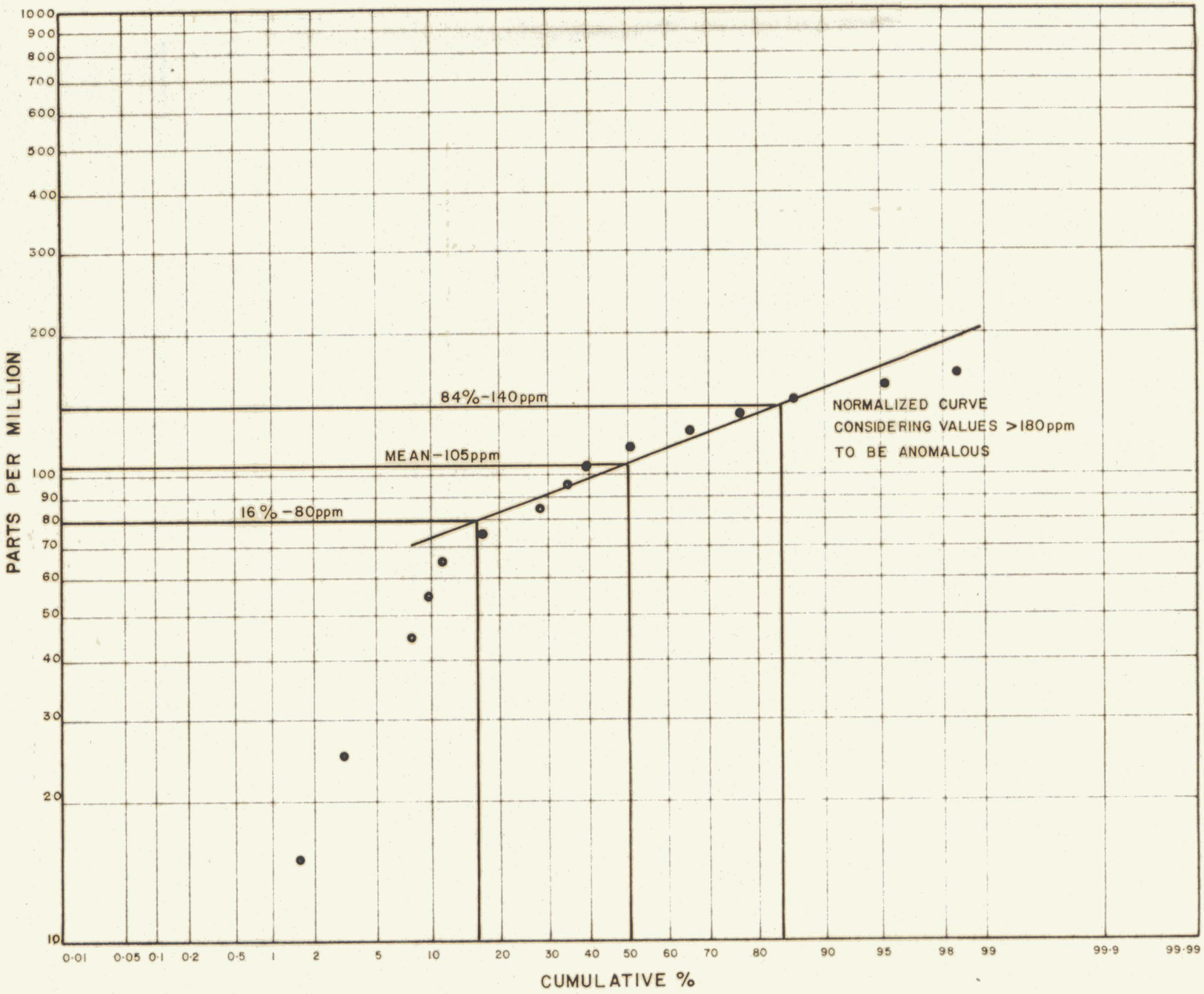
FREQUENCY CURVE

from

LAKE SEDIMENT SAMPLES

ZAP CLAIMS

Fig 32

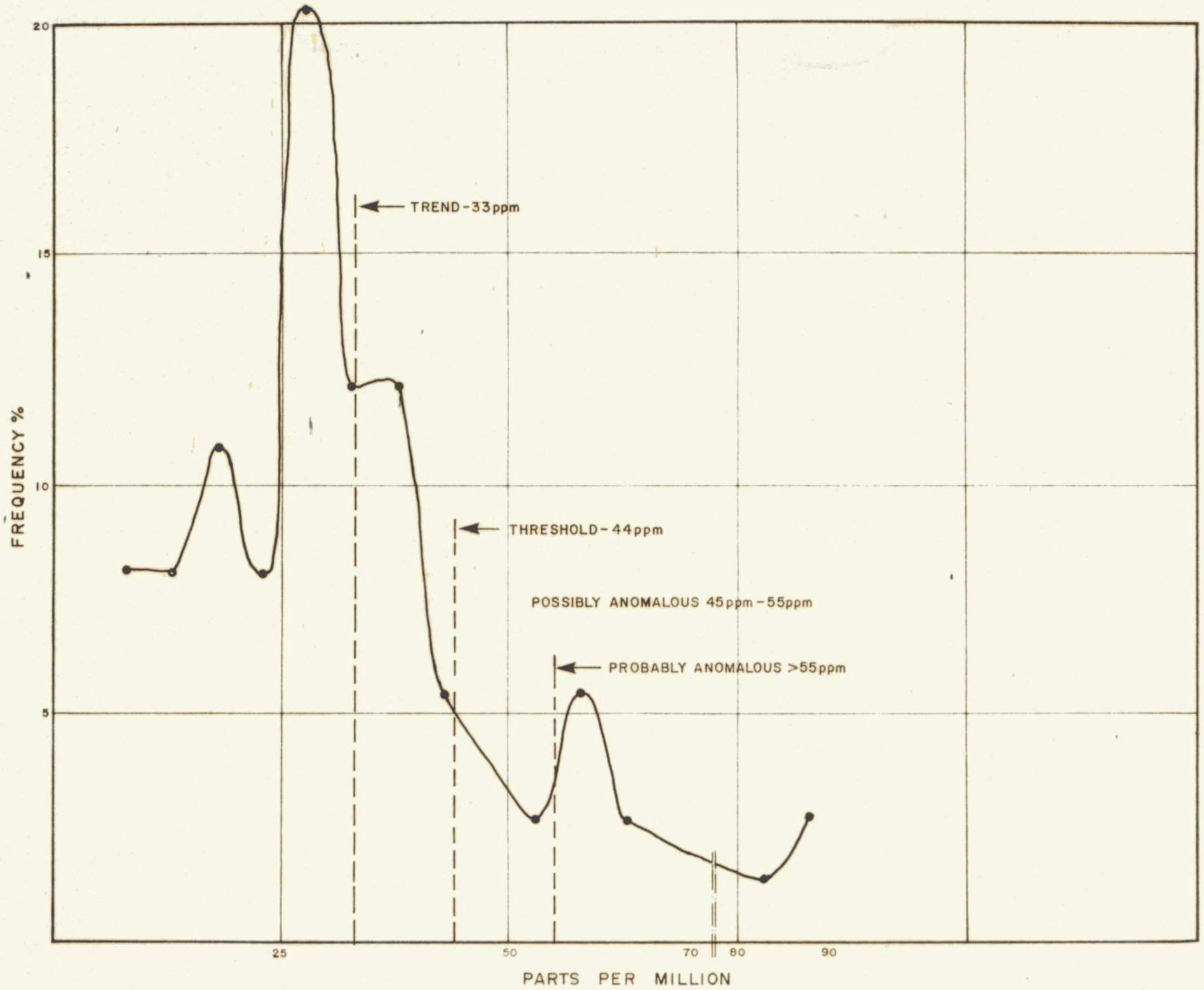


Zn

CUMULATIVE FREQUENCY CURVE
from
LAKE SEDIMENT SAMPLES

ZAP CLAIMS

Fig 33

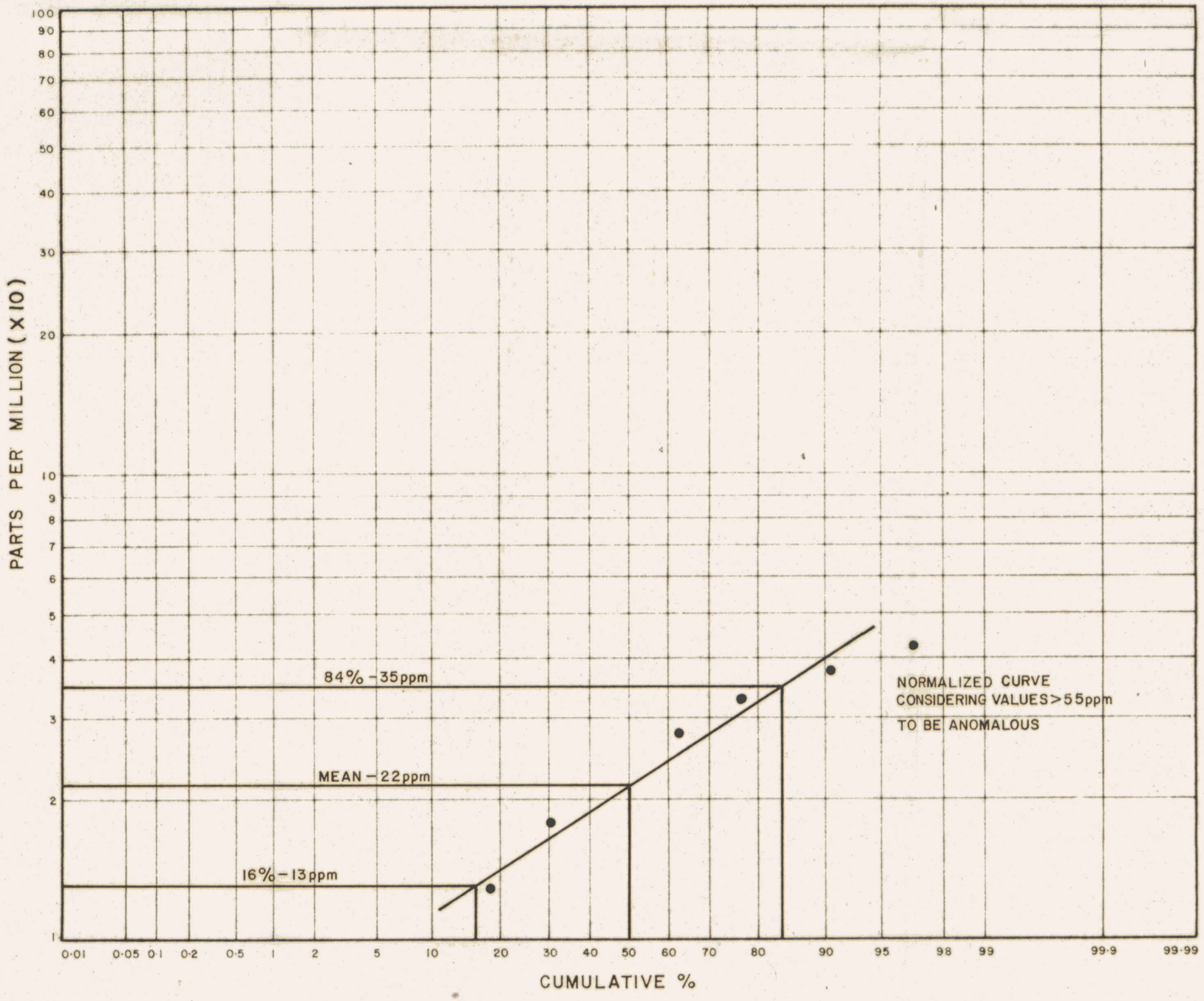


Cu

FREQUENCY CURVE
from
LAKE SEDIMENT SAMPLES

ZAP CLAIMS

Fig 34

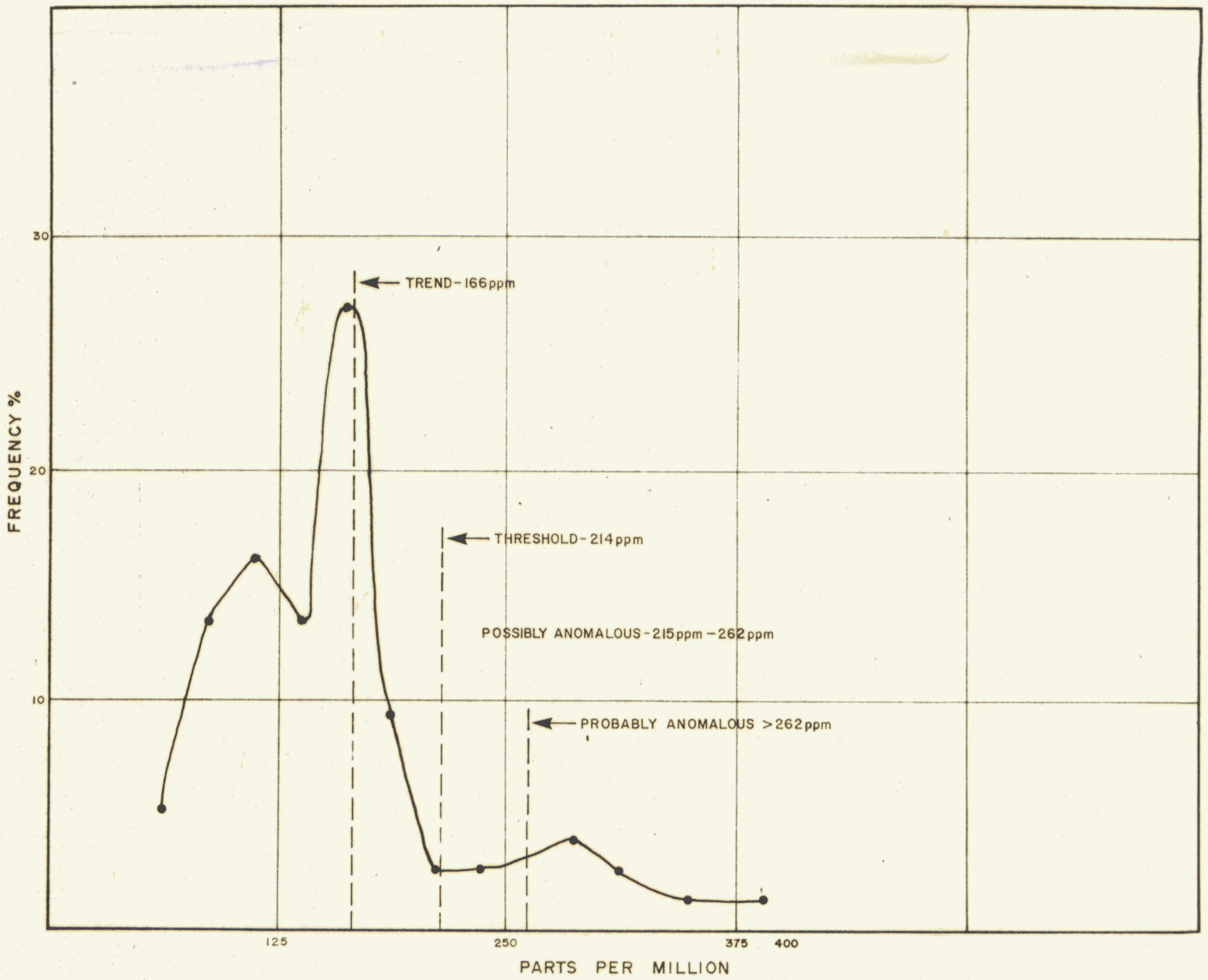


Cu

CUMULATIVE FREQUENCY CURVE
from
LAKE SEDIMENT SAMPLES

ZAP CLAIMS

Fig 35



Hg

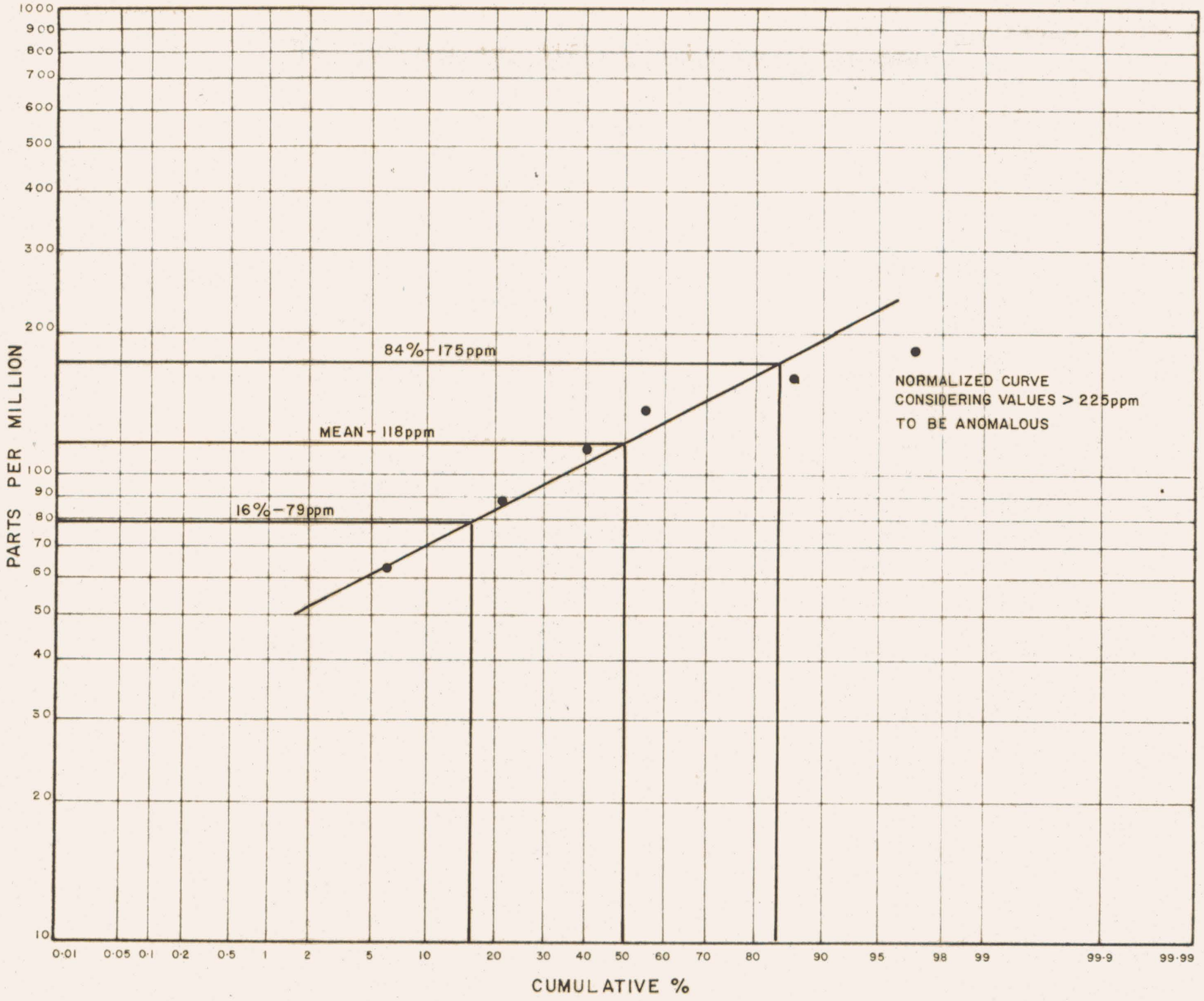
FREQUENCY CURVE

from

LAKE SEDIMENT SAMPLES

ZAP CLAIMS

Fig 36



Hg

CUMULATIVE FREQUENCY CURVE
from
LAKE SEDIMENT SAMPLES

ZAP CLAIMS

Fig 37