

GEOCHEMICAL SURVEY
ON THE
JACKPOT (WEST) PROPERTY

SOUTHEASTERN BRITISH COLUMBIA
NELSON MINING DIVISION

NTS 82F /3E, 6E
LATITUDE 40°14'36"
LONGITUDE 117°12'15"

by
W.D. BOND and J.R. FOSTER
NEW JERSEY ZINC EXPLORATION CO. (CANADA) LTD.

9785

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NTS 82F /3E, 6E
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TABLE OF CONTENTS

INTRODUCTION

DESCRIPTION OF CLAIMS

PHYSIOGRAPHY

PROPERTY HISTORY

GEOLOGY

 Regional Setting

 Local Geology

GEOCHEMISTRY

 Present Survey

 Topography

 Survey Method

 Discussion of Results

 Statistical Parameters

 Element Patterns

 Resulting Anomalies

 Explained Anomalies

 Unexplained Anomalies

CONCLUSIONS

APPENDIX

 ANALYTICAL DATA

 A-1 - Soil Geochemistry Analytical Procedure

 A-2 - Soil Geochemistry Analytical Results

 A-3 - Mull Geochemistry Analytical Procedure

 A-4 - Mull Geochemistry Analytical Results

 STATISTICAL DATA

 Figures A- 5 to A-10 - Population Histograms for
 Ag, Pb, Zn, Au (mull), Sb, As.

 Figures A-11 to A-16 - Cumulative Frequency Diagrams
 for Ag, Pb, Zn, Au (mull), Sb, As.

 Figure A-17 - Element Correlation Diagram Ag vs Zn

 Figure A-18 - Element Correlation Diagram Ag vs Pb

 Figure A-19 - Element Correlation Diagram Pb vs Zn

 Figure A-20 - Element Correlation Diagram Au vs Sb

 Figure A-21 - Element Correlation Diagram Au vs As

 Figure A-22 - Element Correlation Diagram Sb vs As

Maps (back pocket) - Scale 1" to 200'

- 1 Geochemical Map Ag Distribution
- 2 Geochemical Map Au (mull) Distribution
- 3 Geochemical Map Pb Distribution
- 4 Geochemical Map Zn Distribution
- 5 Geochemical Map Sb Distribution
- 6 Geochemical Map As Distribution
- 7 Geochemical Map Au (soil) Distribution

I. INTRODUCTION

A geochemical survey was carried out on the Jackpot Property by New Jersey Zinc Exploration Co. (Canada) Ltd. The Jackpot property is situated within the Salmo (lead - zinc) "Mine Belt" in the Nelson Mining Division of Southeastern British Columbia (Figure 1).

The claim group is located 6.4 km (4 miles) south - southeast of Ymir immediately south of the junction of Porcupine and Active Creeks (Figure 2). Ymir is located on an all-weather paved highway, midway between the cities of Nelson and Trail. A bush road situated about 3 km south of Ymir leads eastward along Porcupine Creek about 8 km to the property.

II. DESCRIPTION OF CLAIMS

Table 1 indicates the currently held claims on the Jackpot property; there are 30 contiguous claims including 6 crown granted and 24 recorded and reverted crown claims. These claims are owned by New Jersey Zinc Exploration Co. (Canada) Ltd.

III. PHYSIOGRAPHY

The Jackpot property straddles a high east-west striking ridge on the southside of Porcupine Creek (elevation approximately 2500 feet (762 m), however, the claims lie predominantly on the steep northeast facing slope of this ridge. The highest elevation occurs in the southwest part of the claim group at 5400 feet (1646 m).

IV. PROPERTY HISTORY

The history of the property dates back to about the turn of the century when early exploration endeavors focused on the silver potential in the west part of the property. Between 1902 and 1929 the Double Standard and Hunter V glory holes were excavated and mined for their silver and gold. From 1949 to present the property has been owned by New Jersey Zinc Exploration Co. (Canada) Ltd.

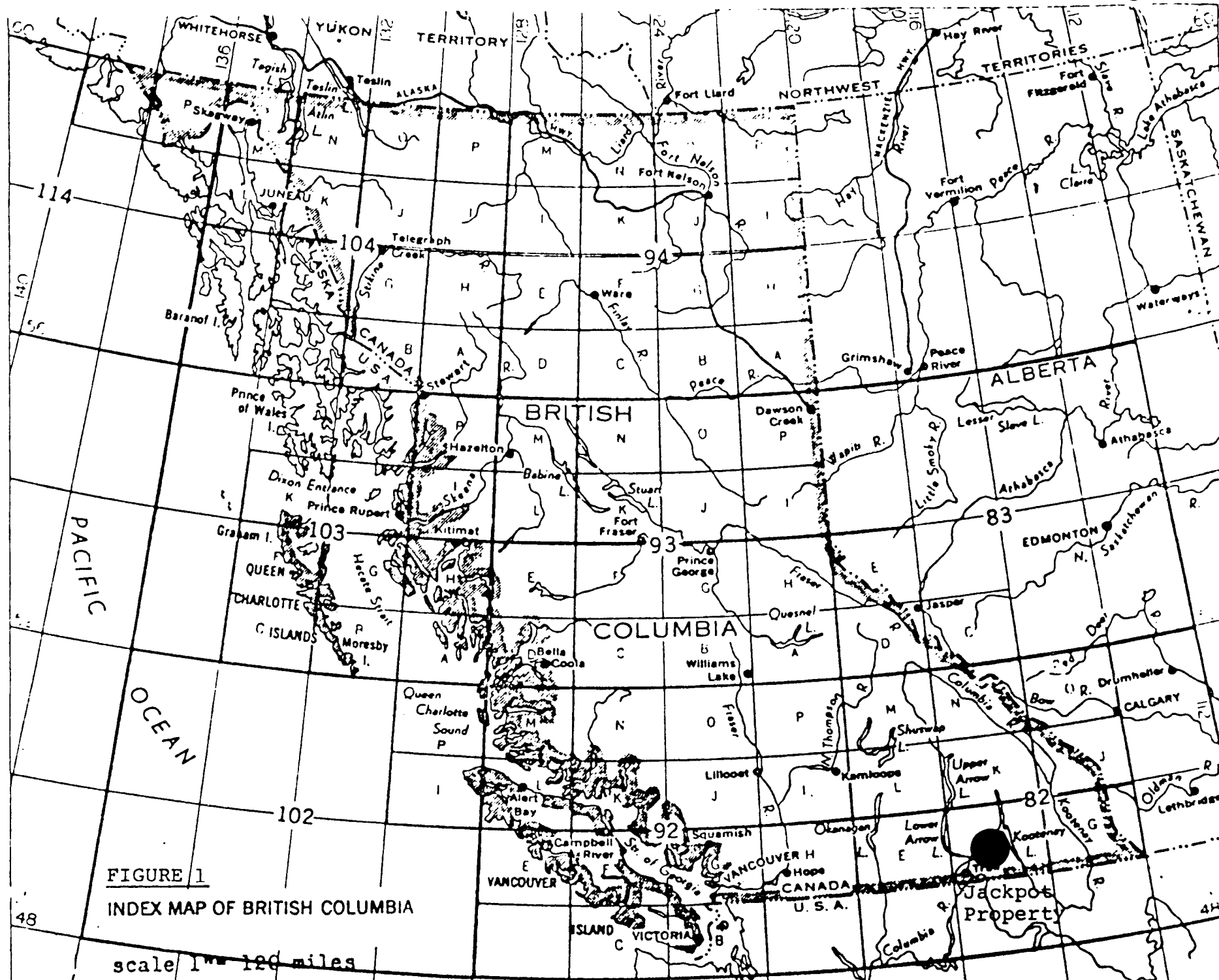


FIGURE 1
INDEX MAP OF BRITISH COLUMBIA

scale 1" = 126 miles

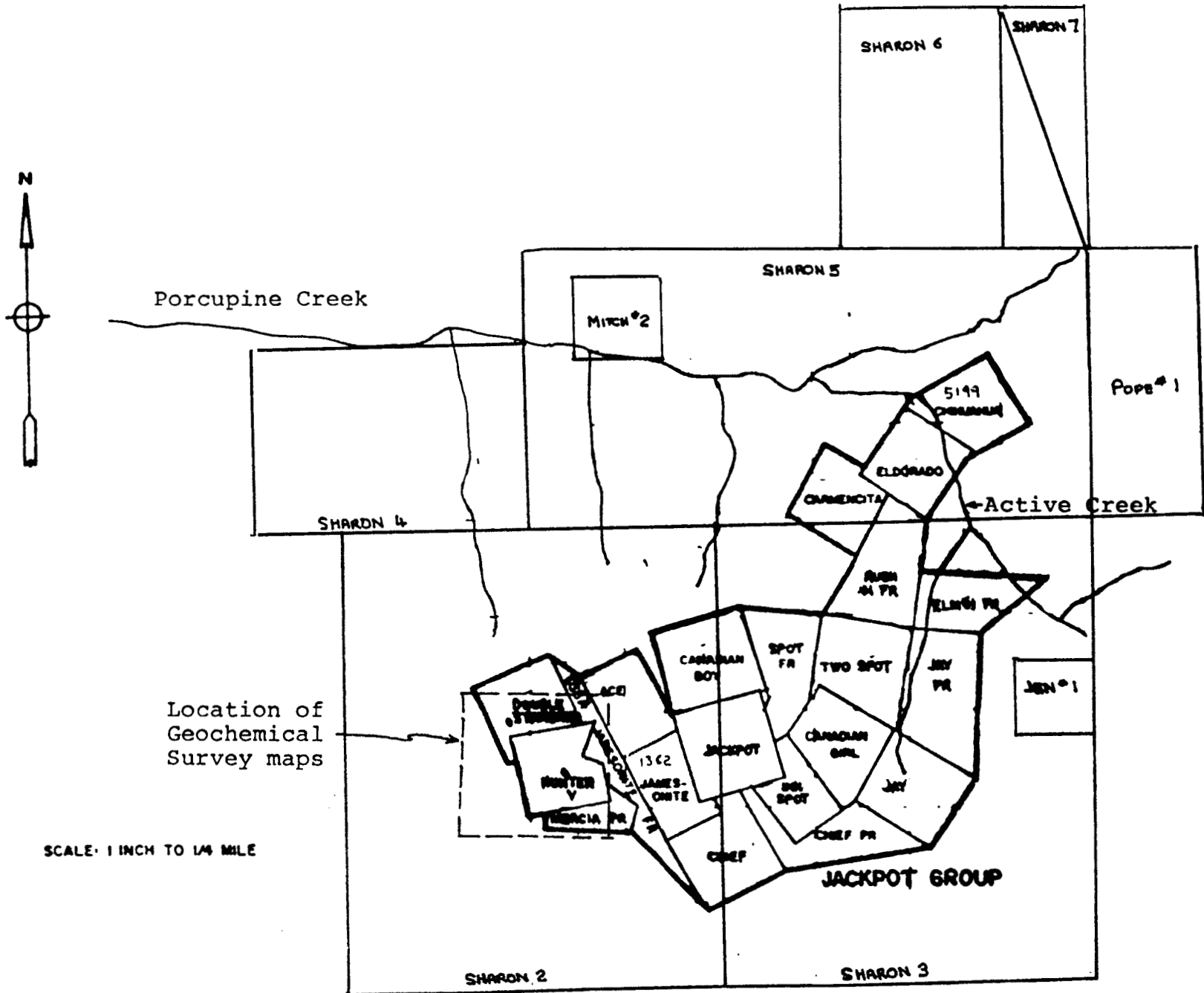


Figure 2: Land status of Jackpot Property, Ymir, British Columbia.

JACKPOT GROUP #1
CROWN GRANTED CLAIMS

<u>NAME (NO. of UNITS)**</u>	<u>REC/LOT NUMBER</u>	<u>EXPIRY DATE</u>
Hunter V	Lot 2212	Paid 1981*
Double Standard	" 2213	" 1981*
Mercia Fraction	" 2214	" 1981*
Eldorado	" 5198	" 1981*
Chihuahua	" 5199	" 1981*
Charmencita	" 5201	" 1981*

RECORDED CLAIMS

Ink Spot	Record 1356	Expires 1988
Jackpot	" 1357	" 1988
Ace	" 1361	" 1988
Jamesonite	" 1362	" 1988
Elm #5 Fraction	" 3042	" 1988
Canadian Boy	" 1370	" 1988
Canadian Girl	" 1371	" 1988
Two Spot	" 1375	" 1988
Spot Fraction	" 1384	" 1988
Rush #1 Fraction	" 15357	" Nov 20/81
Chief	" 1394	" 1988
Jay	" 1395	" 1988
Chief Fraction	" 1396	" 1988
Jay Fraction	" 1397	" 1988
Jamesonite Fraction	" 1484	" 1987
Sharon 2 (20)	" 2374	" 1982
Sharon 3 (20)	" 2375	" 1982
Sharon 4 (6)	" 2376	" 1982
Sharon 5 (18)	" 2377	" 1982
Sharon 6 (6)	" 2378	" 1982
Sharon 7 (2)	" 2452	" 1982
Jen #1 (1)	" 2293	" 1982
Mitch #2 (1)	" 2294	" 1982
Pope #1 (2)	" 2295	" 1982

*Tax due July 2nd annually

**Under modified grid system

Total: 30 claims (97 units)

TABLE I: New Jersey Zinc Claim Holdings on the Jackpot Claim Group

V. GEOLOGY

A) Regional Setting

Regional geology of the area has been documented by Drysdale (1917), Walker (1934), Little (1950) and Fyles and Hewlett (1959). The Jackpot property is situated within the critical Lower Cambrian carbonate stratigraphy that hosts a major lead-zinc province extending from the Coeur d'Alene (Washington, U.S.A.) area to the Kootenay Area (B.C.)

B) Local Geology

The oldest rocks underlying the Jackpot property are comprised of pure and impure quartzites of the Quartzite Range Formation; these are succeeded by limestone, marble and dolomite which constitute the Laib Formation. Siltstone and sandstone clastic metasediments that in part are penecontemporaneous and in part post date the above sequences form minor constituents. All of this supracrustal sequence is intruded by mafic to felsic plutonic rocks of Mesozoic Age.

Two main types of mineralization are present on the Jackpot property:

- i) silver-gold with attendant lead-zinc mineralization is associated with limestone on the west part of the property;
- ii) lead-zinc mineralization is associated with dolomite in the central and east parts of the property.

Type (i) mineralization is visible in the two previously mentioned glory holes. With reference to the accompanying geochemical maps the Hunter V Glory Hole is located 100 feet (30.5 m) northwest of grid reference L0+00 while the Double Standard Glory Hole is located 70 feet (22 m) northwest of L12W+00 (Figure 3).

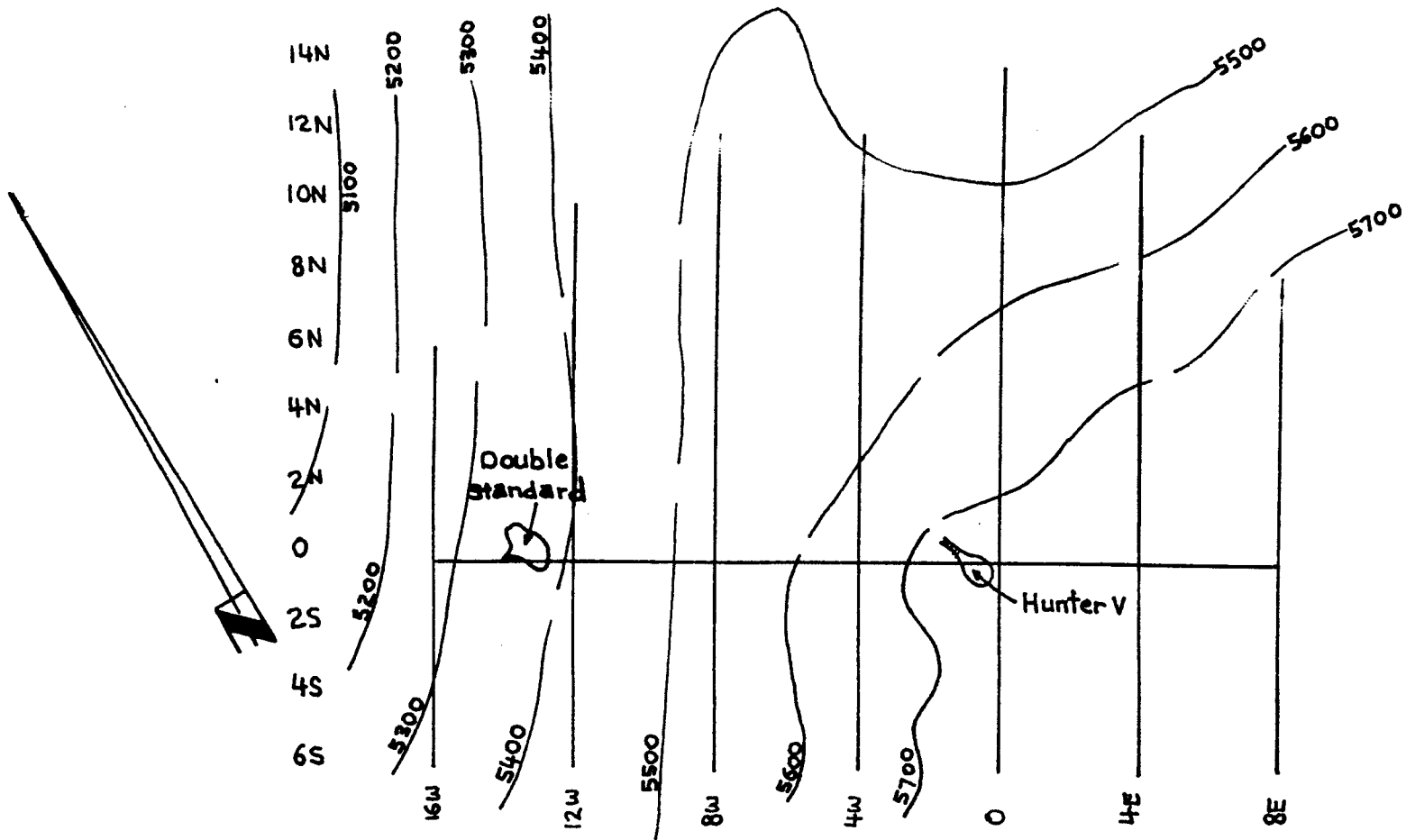


Figure 3: Schematic plan of geochemistry grid showing location of the Double Standard and Hunter V Glory Holes. Topography is indicated by 100-foot contours. Scale 1"= 490' or 1:5,880.

GEOCHEMISTRY

Present Survey

The geochemical survey was carried out over portions of the Hunter V, Double Standard, Mercia Fraction, and Jamesonite Fraction. The claim boundaries were not located in the field; their position is approximated on the geochemistry maps (1 to 7 - back pocket) based on the original survey notes on file at the Mining Recorders Office in Nelson.

The objectives of the soil geochemical survey were to determine which elements were best suited in delimiting the known precious metal mineralization in the vicinity of the glory holes and to delineate possible extensions or further areas of mineralization. Field work was completed during a short visit to the property (July 10th, 11th) by W.D. Bond and R. Sedore and during a longer duration visit from September 1 to 4 by W.D. Bond, J.R. Foster and P. Romard; both trips occurred in the 1980 field season.

Samples 1B to 12B (T.S.L. Report, Appendix A-2; X-Ray Report, Appendix A-4) were collected during the July visit to determine if soil geochemistry would work. Samples 1B to 12B were collected at 200-foot intervals taken along a traverse line running approximately subparallel to the base line of the geochemistry grid. This traverse line starts at L4E-2S and leads northeast to the Double Standard at grid reference L12+120W-00. All other samples were collected during the September visit. All of the past work done by New Jersey Zinc Exploration Co. (Canada) Ltd. on the Jackpot property was done using Imperial measurements; for this reason Imperial measurements have been retained in the present geochemical survey.

Topography

The topography in the southwest portion of the grid (Figure 3) is situated on top of the mountain and is relatively flat. North, northeast and northwest from the

Hunter V Glory Hole the topography steepens and drops off considerably.

Survey Method

The geochemical survey was done on a grid system of lines spaced at 400-foot (121 m) intervals with stations marked at 100-foot (30.5 m) intervals. The grid lines were located by traversing using a brunton compass and chain; the lines and the stations were marked using flagging tape. The grid totals 11,600 feet (3536 m) or 2.2. miles (3.54 km).

A total of 126 soil samples and 124 mull or biogeochemical samples were collected. The soil samples were taken from the B-horizon at depths of about 8 to 10 inches (20 to 25 cm) and consistently were comprised of a reddish-brown sandy soil. The B-horizon soil samples were analyzed for gold, silver, lead and zinc by Technical Services Laboratories of Mississauga, Ontario. The analysis procedures are outlined in appendix A-1 and the results are given in appendix A-2.

The mull samples were taken from the A° horizon at depths of 1/2 to 2 centimetres and consisted of decomposed (3 or 4 seasons old) biological vegetation comprised of a mixture of leaves, pine needles and other accumulations as present on the forest floor. The mull samples were analyzed for gold, arsenic and antimony by X-Ray Assay Laboratories of Toronto. The analytical procedure followed in these calculations is outlined in appendix A-3 and the results are given in appendix A-4.

All of the above results (Ag, Au (mull), Pb, Zn, Sb, As, Au (soil) are plotted on maps 1 to 7 respectively.

Discussion of Results

A) Statistical Parameters

Au (soil) results were found to be statistically

unreliable in that many of the results analyzed were below the detection limit. For this reason and the fact that no Au (soil) anomalies (map 7) were observed over the known mineralized glory holes, the data from this element received only moderate attention. The data from the other elements were found to be sufficient to be able to draw statistical conclusions.

Figures A-4 to A-10 inclusive (see Appendix) are histograms for Ag, Pb, Zn, Au (mull), Sb and As respectively. All show positive skewness toward high values, indicating mineralization above background levels. Cumulative frequency curves (Figures A-11 to A-16 inclusive) were constructed from the histograms after the method of Lepeltier (1969) and illustrate background and threshold (minimum) values. According to Lepeltier (1969) all of the diagrams except silver and arsenic reflect trends indicative of single populations; silver and arsenic trends indicate the possible presence of two populations but could also reflect an over-abundance of high values.

Other statistical data including range, arithmetic mean, and standard deviation are given in Table 2.

With the exception of Pb and Zn (B horizon), inter-element correlation diagrams (Figures A-17 to A-22 inclusive) generally show poor to fair correlation only. Ag values show a slight tendency to correlate with Zn values (Figure A-17) but do not correlate with Pb (Figure A-18). All the other elements Au vs Sb, Au vs As, Sb vs As show a wide scatter and do not correlate at all.

B) Element Patterns

Ag in the B horizon (map 1) is the most effective element for tracing the silver mineralization. The highest values obtained are directly correlateable to

areas of known mineralization. All of these anomalous zones are coincident with high values for the other elements analyzed. Anomalous (Ag-B horizon) trends are approximately conformable to carbonate stratigraphy.

According to Boyle (1979), Ag values of greater than 0.7 ppm in the B horizon should be considered anomalous. All but five soil samples meet this criterion, indicating that the entire property may represent a regional geochemical anomaly.

Au in the mull (ppb values map 2) is the next best indicator of precious metal mineralization. The trend of these anomalous areas also coincide with areas of known mineralization and with the strike of the carbonate stratigraphy. However, Au (mull) anomalies are more diffuse than Ag (B horizon) anomalies. The overall Au (mull) anomaly pattern approximates the Ag (B horizon) anomaly pattern.

Au in the B horizon (ppm values, map 7) parallel Au (mull) anomalies but are not directly coincident, possibly reflecting erratic bedrock distribution of gold. The results are inconclusive in that more of the values fall below the detection limit (.01 ppm) of the analytical method. In addition, there are three spot highs that are not indicated on the mull anomaly pattern.

Pb and Zn in the B horizon(maps 3 and 4) exhibit anomalous highs in the northern part of the grid consistent with higher Pb-Zn values in bedrock exposure in the Jamesonite Fraction. Pb data correlates well with known mineralization at the Double Standard. Pb and Zn in the B horizon parallel Ag (B horizon) anomalies but are displaced downslope from the latter. Pb and Zn are less effective on a detailed scale but may prove effective

on a regional scale or in areas of deep overburden.

Sb and As in mull (mpas 5 and 6) are broadly anomalous over the entire sampling grid and exhibit trends that approximately coincide with Ag (B horizon) anomalies. These two elements would also be more effective at a reconnaissance scale.

Resulting Anomalies

Ten anomalous zones are indicated. Of those, five are directly associated with known mineralization and five are as yet unexplained.

Explained Anomalies

- i) A broad anomaly, indicated by all elements, is centred on the Double Standard; the zone trends north-south and is open to the north-northwest;
- ii) A narrow anomaly conforming to underlying carbonate stratigraphy trends east-west over the Hunter V. The zone is indicated by Ag, Au (B horizon) and Au, Sb, As (mull) analyses. A corresponding Zn anomaly is displaced up to 400 feet downslope;
- iii) A very broad anomaly indicated primarily by Ag (B horizon) covering mineralized trenches south of Hunter V near L4E-5S. This anomaly is open to the east;
- iv) A very strong (460 ppb) point anomaly indicated by Au (mull) analysis at L4E-4N located over the known Jamesonite Fraction lead-zinc mineralization.
- v) A Pb (B horizon) anomaly is situated on the baseline between lines 4W and 8W where pods of galena + pyrite are dispersed in marble.

Unexplained Anomalies

- i) A north-south-trending anomaly is centred on L16W-5N. This anomaly is parallel to the Double Standard anomaly and is open to the west. All elements are moderately to strongly anomalous here;
- ii) An anomaly is situated at L8E-6S at the extreme southeast part of the grid indicated by Ag (B horizon) and Au, Sb (mull). The trend and extent of this anomaly is unknown in that it extends off the grid limits. This anomaly is at or near the carbonate/granitoid contact;
- iii & iv) Two strong Au (B horizon) anomalies occur at L4E, 7N and 12N. The latter anomaly at 12N is also reflected by moderate Sb, As (mull) analyses;
- v) A narrow, northwest-trending Au (mull) anomaly occurs between L4W-8N and L12W-9N. This anomaly is coincident with an As (mull) anomaly and is open to the west.

CONCLUSIONS

- (1) Anomalous geochemical trends for each element are conformable to carbonate stratigraphy.
- (2) The best indicator elements reflecting known mineralized areas are Ag (B horizon) and Au (mull) soil analyses. Au (B horizon) tends to parallel Ag (B horizon) distribution but also indicates additional unexplained anomalous sources.
- (3) Inter-element correlation is generally poor except for Pb-Zn ratios. Pb-Zn anomalies are displaced downslope from the precious metal anomalies reflecting the latter's lower mobility.
- (4) The lack of correlation of silver to either lead or zinc may be a function of the above differences in dispersion capabilities but may also signify the precious metal deposition is entirely unrelated to

the Pb-Zn deposition.

- (5) Ag (B horizon) and Au (mull) produce 5 anomalous zones that can be explained as being situated over known mineralized zones. At least two of these are open and trend off the limits of the grid. In addition, these elements produce 3 unexplained anomalies.
- (6) Two high Au (B horizon) anomalies are also unexplained.
- (7) Since both Ag and Pb are relatively immobile in groundwater and usually are closely associated (Boyle, 1965), this discrepancy may indicate that the Ag (precious metal) mineralization is due to one or more concentrating processes unrelated to the Pb-Zn mineralization.

REFERENCES

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1965: The Geochemistry of Silver; Geological Survey Canada, Bulletin 160.
- 1979: The Geochemistry of Gold and its Deposits; Geological Survey Canada, Bulletin 280, 584 p.
- Drysdale, C.W.
1917: Ymir Mining Camp, British Columbia, Geological Survey Canada Mem. 94; Accompanied by Map 175A (Ymir, Kootenay District), Scale 1:63,360
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- Lepeltier, C.
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- Little, H.W.
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- Walker, J.F.
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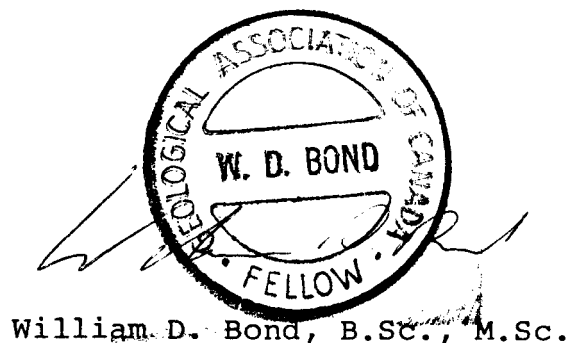
CERTIFICATE

I, William D. Bond, of the City of North York, Province of Ontario, do hereby certify that:

1. I am a geologist residing at 137 Alfred Avenue, City of North York, Ontario;
2. I am a graduate of the University of Waterloo (1970) - Hons. B.Sc., Degree and the University of Manitoba (1973) M.Sc., Degree;
3. I am a Fellow of the Geological Association of Canada;
4. I have been practising my profession for eleven (11) years;

5. The statements made in this report are based on private unpublished and published reports. The geochemical data is new data collected by members of New Jersey Zinc Exploration Co. (Canada) Ltd. during July and Septemebr 1980.

Dated at Mississauga, Ontario this 13 day of November 1981.



William D. Bond, B.Sc., M.Sc.

CERTIFICATE

I, Randy Sedore, of the City of Mississauga, Province of Ontario, do hereby certify that:

1. I am a geological technician residing at 95 Paisley Blvd. West, Apt. 804, City of Mississauga;
2. I am a graduate of Sir Sandford Fleming College, Diploma;
3. I have been practising my profession for three (3) years;
4. The statements made in this report are based on private unpublished and published reports. The data is new data collected by members of New Jersey Zinc Exploration Co. (Canada) Ltd. during July and September 1980.

Dated at Mississauga, Ontario this 13 day of November 1981.

Randy Sedore

Randy Sedore

CERTIFICATE

I, James R. Foster, of the City of Mississauga, Province of Ontario, do hereby certify that:

1. I am a geologist residing at 3477 Glen Erin Drive, Unit 54, City of Mississauga, Ontario;
2. I am a graduate of the University of Waterloo (1979) - Hons. B.Sc., Degree;
3. I am an Associate Member of the Geological Association of Canada;
4. I have been practising my profession for five (5) years;
5. The statements made in this report are based on private unpublished and published reports. The data is new data collected by members of New Jersey Zinc Exploration Co. (Canada) Ltd. during July and September 1980.

Dated at Mississauga, Ontario this 13 day of November 1981.



James R. Foster, B.Sc.

STATEMENT OF COSTS

Period : July 10 (travel)*, 11
Crew : W.D. Bond, R. Sedore
Expenses: Airfare (B.C. border to Castlegar)
2 persons @ \$50 ea. (one way)+ cab - \$ 250.00
Accommodation - 2 nights @ \$45/night - 90.00
Meals - 2 men - 2½ days @ \$30/day - 150.00
Truck Rental - 2 days @ \$80/day (all
inclusive - 160.00
Wages: W.D. Bond - 2 days (includes
travel time) @ \$120/day - 240.00
R. Sedore - 2 days (includes
travel time) @ \$50/day - 120.00
Analyses: T.S.L. Report T4475 - 89.00
X-Ray Report 4064 - 170.00
Miscellaneous (shipping, equipment) - 150.00
Subtotal (1) \$1,369.00

Period : Sept. 1 to 4*
Crew : W.D. Bond, J.R. Foster, P. Romard
Expenses: A) Field
Travel (3 persons @ \$50 ea.
(one way) + cab - 360.00
Accommodation - 12 men nights
@ \$25/night - 300.00
Meals - 18 men days @ \$30/day - 540.00
Truck Rental - 6 days @ \$80/day - 480.00
Wages: Bond - 2 days @ \$120/day - 240.00
Foster - 4 days @ \$70/day - 280.00
Romard - 4 days @ \$50/day - 200.00
Miscellaneous (equipment, chain,
flagging) - 150.00
Analyses: T.S.L. Report T4038 - 448.00
X-Ray Report 5189 - 927.00

Statement of Costs...

B) Office

Report Preparation - 7 days @ \$70/day (Foster)	- \$	490.00
Report Preparation - 2 days @ \$130/day (Bond)	-	260.00
Drafting - 4 days @ \$80/day	-	320.00
Subtotal (2)		<u>\$3,965.00</u>
Totals (1) and (2)		<u><u>\$5,334.00</u></u> =====

*includes 1 day (total) travel

ASSESSMENT DETAILS

PROPERTY: Jackpot Property
PROVINCE: British Columbia
MINING DIVISION: Nelson
LOCATION: Southeast of Ymir 82F/3E, 6E
OWNER/OPERATOR: New Jersey Zinc Explorations Co. (Canada) Ltd
TYPE OF SURVEY: Geochemical
OPERATION DATES: July 10, 11; Sept. 1 to 4
NUMBER OF STATIONS: 128
KILOMETERS OF LINE SAMPLED: 3.54
NUMBER OF SOIL SAMPLES: 126
NUMBER OF MULL (BIOGEOCHEMICAL) SAMPLES: 124
OPERATING MAN DAYS: 9.0
TRAVEL MAN DAYS: 5.0 (to and from Property to B.C. border)
OFFICE MAN DAYS: 9.0
(Report writing,
Calculations)
DRAFTING MAN DAYS: 4.0
TOTAL MAN DAYS: 27.0

GEOLOGISTS:

W.D. Bond : 137 Alfred Ave., City of North York, Ontario
J.R. Foster: 54 - 3477 Glen Erin Dr., Mississauga, Ontario
R. Sedore : 804 - 95 Paisley Blvd. West, Mississauga, Ontario
P. Romard : Summer Student

DRAUGHTSMAN:

J.R. Foster: As above

DATED: November 1981

T S L
APPENDIX A-1

NEW JERSEY ZINC

ANALYTICAL PROCEDURES - GEOCHEMICAL ANALYSES

Gold, Silver, Lead and Zinc

The samples were sieved to -80 mesh.

10 gs. of sample was digested with 20 mls. of aqua-regia for 1 hour at 95°C. The mixture was then diluted to 100 ml. with 50% hydrochloric acid, mixed and allowed to settle.

50 mls. of clear solution was decanted into an Erlenmeyer flask and shaken with 10 mls. of MIBK. After settling the acid layer was removed and the MIBK layer re-shaken with 40 mls. of 10% HCl (saturated with MIBK). The acid layer was removed and the MIBK again shaken with 40 mls. of 10% HCl (saturated with MIBK).

The MIBK was then aspirated into the atomic absorption unit for the gold analysis.

Gold solutions of known values were extracted into MIBK for use as standards.

A separate aliquot of the original extract (10 gms. digested with aqua-regia and diluted to 100 ml with 50% HCl) was used for the analysis of Ag, Pb and Zn by atomic absorption.

T S L

- CHEMICAL RESEARCH AND ANALYSIS
- CONTRACT LABORATORIES

TECHNICAL SERVICE LABORATORIES

DIVISION OF BURGNER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE, MISSISSAUGA, ONT. L4W 1A2

TELEPHONE: (416) 625-1544

TELEX 06-960215

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM New Jersey Zinc Explorations,
 268 Lakeshore Rd. E.,
 Mississauga, Ontario.
 L5G 1H1

REPORT No.

T - 4475

APPENDIX A-2
 Soil Geochemistry Results

Inv. #14378

SAMPLE(S) OF SOIL

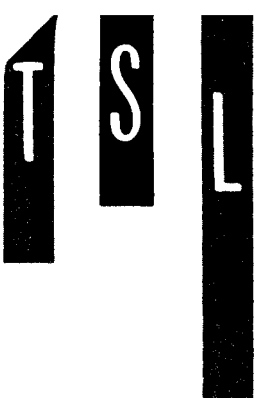
	<u>Silver (Ag) ppm</u>	<u>Zinc (Zn) ppm</u>	<u>Lead (Pb) ppm</u>
L8E-0+00-S	1.9	485	42
1S-S	2.2	235	33
2S-S	4.2	537	71
4S-S	2.3	173	30
5S-S	1.4	161	49
6S-S	2.2	221	46
1N-S	1.2	411	42
2N-S	1.1	281	39
3-S	1.0	327	41
4-S	0.8	830	85
5-S	1.7	1500	123
6-S	0.9	6210	59
7-S	1.4	750	75
8-S	1.7	395	69
L4E-0+00-S	1.4	171	39
1S-S	1.3	227	55
2S-S	1.2	243	51
3S-S	2.9	231	45
4S-S	4.6	43	15
5S-S	1.5	167	33

Samples, Pulps and Rejects discarded after two months

DATE October 8th 1980.

SIGNED *Sheehan*





- CHEMICAL RESEARCH AND ANALYSIS
- CONTRACT LABORATORIES

TECHNICAL SERVICE LABORATORIES

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TELEX 08-980215

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM New Jersey Zinc Explorations

REPORT No.

T - 4475

APPENDIX A-2

Soil Geochemistry Results

SAMPLE(S) OF SOILS

	<u>Silver (Ag) ppm</u>	<u>Zinc (Zn) ppm</u>	<u>Lead (Pb) ppm</u>
L4E-6S-S	0.8	115	24
1N-S	1.1	109	33
2N-S	0.4	107	34
3N-S	0.8	331	61
4N-S	1.9	630	110
5N-S	1.3	630	73
6N-S	1.1	201	36
7N-S	1.5	147	26
8N-S	0.9	85	25
9N-S	1.1	107	25
10N-S	0.9	141	20
11N-S	1.9	1280	145
12N-S	0.9	407	23
LO-0+00-S	1.4	189	47
1S-S	1.1	253	52
2S-S	1.1	269	63
3S-S	1.5	370	76
4S-S	1.3	149	35
5S-S	1.3	155	24
6S-S	0.9	73	25

Samples, Pulps and Rejects discarded after two months

DATE October 7th, 1980.

SIGNED





- CHEMICAL RESEARCH AND ANALYSIS
- CONTRACT LABORATORIES

TECHNICAL SERVICE LABORATORIES

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TELEPHONE: (416) 625-1544

TELEX 06-960215

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM New Jersey Zinc Explorations

REPORT No.
T - 4475

APPENDIX A-2 Soil Geochemistry Results

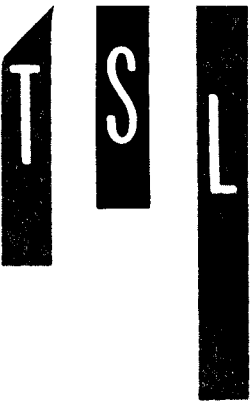
SAMPLE(S) OF SOIL

	<u>Silver (Ag) ppm</u>	<u>Zinc (Zn) ppm</u>	<u>Lead (Pb) ppm</u>
LO-1N-S	1.3	159	44
2N-S	1.1	243	42
3N-S	1.3	500	74
4N-S	1.7	322	74
5N-S	1.5	510	84
6N-S	1.5	4070	182
7N-S	1.3	1060	58
8N-S	0.9	207	25
9N-S	1.1	161	30
10N-S	0.9	580	32
11N-S	1.1	141	19
12N-S	0.5	67	19
13N-S	1.1	1250	31
14N-S	1.1	6500	23
L4W-0+00-S	1.1	343	85
1S-S	1.3	397	63
2S-S	1.1	291	42
3S-S	2.1	389	50
4S-S	1.1	155	26
5S-S	1.1	173	24

Samples, Pulps and Rejects discarded after two months

DATE October 7, 1980 SIGNED [Signature]





- CHEMICAL RESEARCH AND ANALYSIS
- CONTRACT LABORATORIES

TECHNICAL SERVICE LABORATORIES

DIVISION OF BURGNER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE, MISSISSAUGA, ONT. L4W 1A2

TELEPHONE: (416) 625-1544

TELEX 06-960215

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM New Jersey Zinc Explorations,
268 Lakeshore Rd. E.,
Mississauga, Ontario.
L5G 1H1

REPORT No.
T - 4475

APPENDIX A-2
Soil Geochemistry Results

SAMPLE(S) OF SOIL

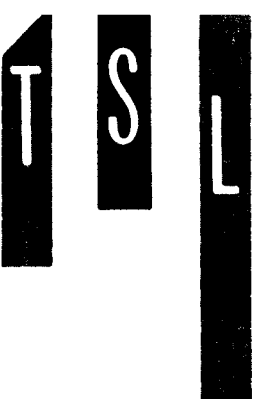
	<u>Silver (Ag) ppm</u>	<u>Zinc (Zn) ppm</u>	<u>Lead (Pb) ppm</u>
L4W-6S-S	2.0	191	28
1N-S	1.2	900	191
2N-S	1.4	2270	123
3N-S	1.0	610	39
4N-S	1.3	172	29
5N-S	0.9	231	25
6N-S	1.1	75	25
7N-S	1.5	81	19
8N-S	0.9	113	960
9N-S	1.1	123	41
10N-S	1.5	109	19
11N-S	0.9	73	29
12N-S	1.1	145	31
L8W-0+00-S	1.5	910	241
1S-S	1.1	321	49
2S-S	1.5	480	41
3S-S	1.9	1360	59
4S-S	1.3	530	59
5S-S	1.7	550	51
6S-S	2.5	271	37

mples, Pulps and Rejects discarded after two months

DATE October 7th, 1980.

SIGNED *[Signature]*





- CHEMICAL RESEARCH AND ANALYSIS
- CONTRACT LABORATORIES

TECHNICAL SERVICE LABORATORIES

DIVISION OF BURGNER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE, MISSISSAUGA, ONT. L4W 1A2

TELEPHONE: (416) 625-1544

TELEX 08-960215

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM New Jersey Zinc Explorations

REPORT No.

T - 4475

APPENDIX A-2

Soil Geochemistry Results

SAMPLE(S) OF SOIL

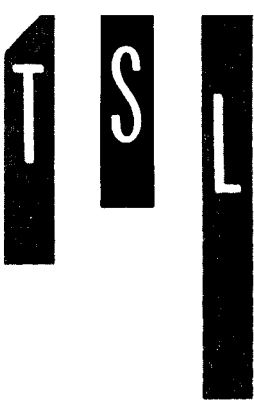
	<u>Silver (Ag) ppm</u>	<u>Zinc (Zn) ppm</u>	<u>Lead (Pb) ppm</u>
L8W-1N-S	1.5	460	59
2N-S	2.1	486	43
3N-S	1.7	710	71
4N-S	1.5	305	29
5N-S	1.7	495	29
6N-S	1.1	125	19
7N-S	1.4	850	21
8N-S	1.1	105	29
9N-S	0.9	95	29
10N-S	0.6	81	25
12N-S	0.7	71	47
L12W-0+00-S	1.5	510	27
1S-S	3.1	237	27
2S-S	4.5	407	41
3S-S	3.3	291	23
4S-S	2.1	343	37
5S-S	1.7	700	51
6S-S	1.1	413	27
1N-S	1.5	610	27
2N-S	1.3	223	23
3N-S	1.7	233	26
4N-S	1.9	1200	73
5N-S	1.5	403	45
6N-S	1.3	179	43
7N-S	1.2	164	35
8N-S	1.5	349	39
9N-S	1.3	141	29

Samples, Pulps and Rejects discarded after two months

DATE October 7th, 1980.

SIGNED





- CHEMICAL RESEARCH AND ANALYSIS
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TECHNICAL SERVICE LABORATORIES

DIVISION OF BURGNER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE, MISSISSAUGA, ONT. L4W 1A2

TELEPHONE: (416) 625-1544

TELEX 08-960215

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM New Jersey Zinc Explorations

REPORT No.
T - 4475

APPENDIX A-2


Soil Geochemistry Results

SAMPLE(S) OF SOIL

	<u>Silver (Ag) ppm</u>	<u>Zinc (Zn) ppm</u>	<u>Lead (Pb) ppm</u>
L16W-1+00S-S	1.7	325	28
2S-S	0.9	167	31
3S-S	1.6	219	31
4S-S	1.2	155	21
2+00N-S	1.5	610	49
3+00n-S	2.3	530	61
4+00N-S	1.3	910	55
5+00N-S	2.3	5600	243
6+00N-S	1.5	2610	83

Samples, Pulps and Rejects discarded after two months

DATE October 7th, 1980.

SIGNED 





- CHEMICAL RESEARCH AND ANALYSIS
- CONTRACT LABORATORIES

TECHNICAL SERVICE LABORATORIES

DIVISION OF BURGNER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE, MISSISSAUGA, ONT. L4W 1A2

TELEPHONE: (416) 625-1544

TELEX 06-960215

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM **New Jersey Zinc Explorations,
268 Lakeshore Rd. E.,
Mississauga, Ontario.
L5G 1H1**

REPORT No.
T - 4038

Inv. #13956

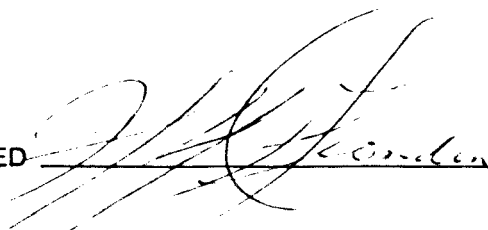
SAMPLE(S) OF PULPS

APPENDIX A-2
Soil Geochemistry Results

	<u>Gold (Au) ppm</u>	<u>Silver (Ag) ppm</u>	<u>Lead (Pb) ppm</u>
1B	<0.01	2.4	24
2B	<0.01	1.1	24
3B	<0.01	1.1	36
4B	<0.01	2.7	72
5B	<0.01	1.2	114
6B	<0.01	1.1	58
7B	<0.01	1.5	315
8B	<0.01	1.1	46
9B	<0.01	0.9	38
10B	<0.01	2.5	46
11B	<0.01	6.7	109
12B	<0.01	0.7	66

Samples, Pulps and Rejects discarded after two months

DATE August 14th, 1980.

SIGNED 





X-RAY ASSAY LABORATORIES

LIMITED

1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • (416) 445-5755

November 9, 1981

New Jersey Zinc Exploration Co. Canada Ltd.
268 Lakeshore Rd., E., 3rd Floor
Mississauga, Ontario
L5G 1H1

Attn: Mr. Bill Bond

Preparation and analytical procedures for organic samples at X-ray Assay Laboratories.

1. Preparation

Samples are oven dried at 65 - 70°C and are then macerated in a blender to produce a coarse powder. For neutron activation analysis or non dispersive XRF analyses an eight gram sample is briquetted at 40,000 lbs/sq.in. to produce a 40 mm diameter briquette. No further preparation is required.

Samples to be submitted to NAS for neutron activation analysis are packed in polyethylene film in bundles of 40 briquettes each.

2. Neutron Activation Analysis

Gold, Antimony and arsenic may all be determined on a single briquette. The procedure is to irradiate each bundle submitted for a period of 22 minutes at a flux density of 5×10^{-12} neutrons/sq. cm./sec.

After irradiation bundles are stored for eight days after which the bundles are opened and the briquettes are analyzed using a Canberra Series 80 multichannel analyzer linked to a PHYGE detector.

E. J. Brooker, Ph.D.
General Manager

A handwritten signature in black ink, appearing to be 'EJ Brooker', written over the typed name and title.

APPENDIX A-4: Mull Geochemistry Results

X-RAY ASSAY LABORATORIES LIMITED

1885 LESLIE STREET, DON MILLS, ONTARIO M3B 3J4

PHONE 416-445-5755

TELEX 06-986947

CERTIFICATE OF ANALYSIS

TO: NEW JERSEY ZINC EXPLORATION CO. CAN. LTD.,
ATTN: W.D. BOND,
268 LAKESHORE RD. E., 4TH FLOOR,
MISSISSAUGA, ONTARIO.
LSG 141

REPORT R994

REF. FILE 5189-RR

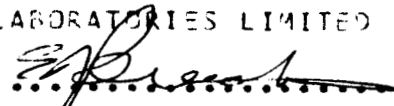
123 HUNUS SUBMITTED ON 24-SEP-80

WERE ANALYSED AS FOLLOWS:

	UNITS	METHOD	DETECTION LIMIT
AU	PPM	VA	1.000
AS	PPM	VA	1.000
CS	PPM	VA	0.200

DATE 08-NOV-80

X-RAY ASSAY LABORATORIES LIMITED

CERTIFIED BY 

J.H. OPDEBEECK

APPENDIX A-4: Mull Geochemistry Results

X-RAY ASSAY LABORATORY'S DR-NDV-30 REPORT 8994 REF. FILE 5189-BR PAGE 1

SAMPLE	AU PPM	AS PPM	SB PPM
LC-1+00N-A	5	16	12.0
LC-1+03N-M	3	6	2.8
LC-2N-1	<1	4	2.6
LC-2N-8	+	9	3.2
LC-4N-M	3	4	2.7
LC-5N-M	4	5	2.2
LC-5N-4	5	16	4.9
LC-7N-M	4	5	2.7
LC-8N-M	2	7	3.6
LC-9N-M	2	3	1.2
LC-10N-M	1	4	2.1
LC-11N-M	3	6	3.9
LC-12N-M	<1	+	1.5
LC-13N-M	3	6	3.0
LC-14N-M	2	5	3.0
LC-25-M	3	6	4.3
LC-3+03S-M	2	4	1.6
LC-4+03S-M	9	9	2.2
LC-5+03S-M	5	12	1.9
LC-6+03S-M	1	13	2.1
LC-1+03S-M	3	10	3.3
LC-13-M	SMP MISS	SMP MISS	SMP MISS
L4W-5+03S-M	3	7	2.6
L4W-5S-M	5	6	3.9
L4W-4S-M	<1	3	3.2
L4W-3S-M	5	7	3.5
L4W-2S-M	3	6	3.2
L4W-1S-M	1	5	1.4
L4W-3-M	1	4	2.2
L4W-1N-M	1	4	1.4
L4W-2N-M	4	8	5.0
L4W-3M-M	4	10	4.4
L4W-4N-M	4	4	2.0
L4W-5N-M	3	21	3.3
L4W-6N-M	1	5	3.2
L4W-7N-M	3	7	5.2
L4W-8N-M	9	22	4.0
L4W-9N-M	1	4	1.5
L4W-10N-M	1	6	2.7
L4W-11N-M	1	5	2.6
L4W-12N-M	2	6	2.1
LPW-5+03S-M	3	3	1.3
LPW-5S-M	2	4	1.2
LPW-4S-M	4	6	1.9
LPW-3S-M	2	12	5.8
LPW-2S-M	3	12	6.4
LPW-1S-M	2	6	1.7
LPW-0-M	<1	11	7.9
LPW-1N-M	3	7	3.0
LPW-2N-M	<1	10	4.0
LPW-3N-M	<1	9	3.8
LPW-4N-M	1	6	5.0
LPW-5N-M	3	4	1.5
LPW-6N-M	2	4	1.7
LPW-7N-M	<1	4	1.7

APPENDIX A-4: Mull Geochemistry Results

X-RAY ASSAY LA DRATORIES 09-10V-00 REPORT 0994 REF. FILE 6109-38 PAGE 2

SAMPLE	Al PPM	Si PPM	Sr PPM
L1W-5N-M	1	14	4.3
L1W-5N-1	5	3	3.9
L1W-10N-M	<1	5	7.1
L1W-11N-M	3	9	4.5
L1W-12N-M	15	19	2.7
L12W-0+000-M	<1	3	1.3
L12W-03-M	3	7	3.1
L12W-43-M	<1	2	0.9
L12W-33-M	2	7	4.3
L12W-23-M	3	7	1.9
L12W-13-M	<1	5	2.5
L12W-0-M	2	5	2.4
L12W-14-M	5	7	5.5
L12W-24-M	4	12	5.2
L12W-34-M	3	5	4.2
L12W-44-M	3	10	2.6
L12W-54-M	<1	5	1.0
L12W-64-M	4	4	2.2
L12W-74-M	3	7	3.9
L12W-84-M	<1	2	5.3
L12W-94-M	11	15	4.0
L12W-104-M	2	3	4.3
L15W-0+000-M	4	7	3.1
L15W-33-M	2	4	1.3
L15W-43-M	<1	5	4.9
L15W-33-M	2	9	4.5
L15W-23-M	7	10	4.0
L15W-13-M	1	5	1.3
L15W-0-M	4	5	5.4
L15W-1+000-M	7	5	3.5
L15W-24-M	2	5	4.0
L15W-34-M	2	6	1.3
L15W-44-M	2	9	3.8
L15W-54-M	10	23	4.7
L15W-64-M	<1	7	1.7
L8E-0+000-M	8	3	3.1
L8E-13-M	<1	7	2.7
L8E-23-M	1	7	4.1
L8E-33-M	11	12	2.5
L8E-43-M	4	20	3.1
L8E-53-M	2	4	2.0
L8E-63-M	6	13	5.4
L8E-14-M	6	13	3.8
L8E-24-M	7	24	3.7
L8E-34-M	2	12	5.6
L8E-44-M	1	15	3.0
L8E-54-M	8	16	3.3
L8E-64-M	1	5	5.2
L8E-74-M	16	6	3.0
L8E-84-M	1	6	3.8
L4E-0+000-M	3	3	4.3
L4E-13-M	2	3	2.0
L4E-23-M	4	2	4.0
L4E-33-M	1	4	1.7
L4E-43-M	2	6	3.1
L4E-53-M	2	6	2.8

APPENIDX A-4: Mull Geochemistry Results

X-RAY ASSAY LABORATORIES 03-NOV-80 REPORT 8994 REF. FILE 5189-8R PAGE 3

SAMPLE	AU PPB	AS PPM	SB PPM
L4E-5S-M	1	8	2.3
L4E-1N-M	<1	4	3.4
L4E-2N-M	4	12	2.8
L4E-3N-M	1	17	4.4
L4E-4N-M	450	20	4.3
L4E-5N-M	<1	4	1.3
L4E-6N-M	1	4	2.5
L4E-7N-M	4	3	1.3
L4E-8N-M	3	4	2.1
L4E-9N-M	<1	3	1.5
L4E-10N-M	3	9	3.4
L4E-11N-M	2	10	1.5
L4E-12N-M	1	10	4.1

X-RAY ASSAY LABORATORIES LIMITED

1885 LESLIE STREET, DON MILLS, ONTARIO M3B 3J4

PHONE 416-445-5755

TELEX 06-986947

CERTIFICATE OF ANALYSIS

TO: NEW JERSEY ZINC EXPLORATION CO. CAN LTD.,
ATTN: BILL BOND,
268 LAKESHORE RD. E., 4TH FLOOR,
MISSISSAUGA, ONTARIO.
LSG 1H1

REPORT 7809

REF. FILE 4064-BR

12 HUMUS SUBMITTED ON 14-JUL-80

WERE ANALYSED AS FOLLOWS:

	UNITS	METHOD	DETECTION LIMIT
AU	PPB	NA	1.000

X-RAY ASSAY LABORATORIES LIMITED

CERTIFIED BY

J.H. OPDEBEECK

DATE 01-AUG-80

SAMPLE	AU PPB
1A	<1
2A	2
3A	<1
4A	3
5A	2
6A	3
7A	<1
8A	7
9A	2
10A	5
11A	2
12A	3

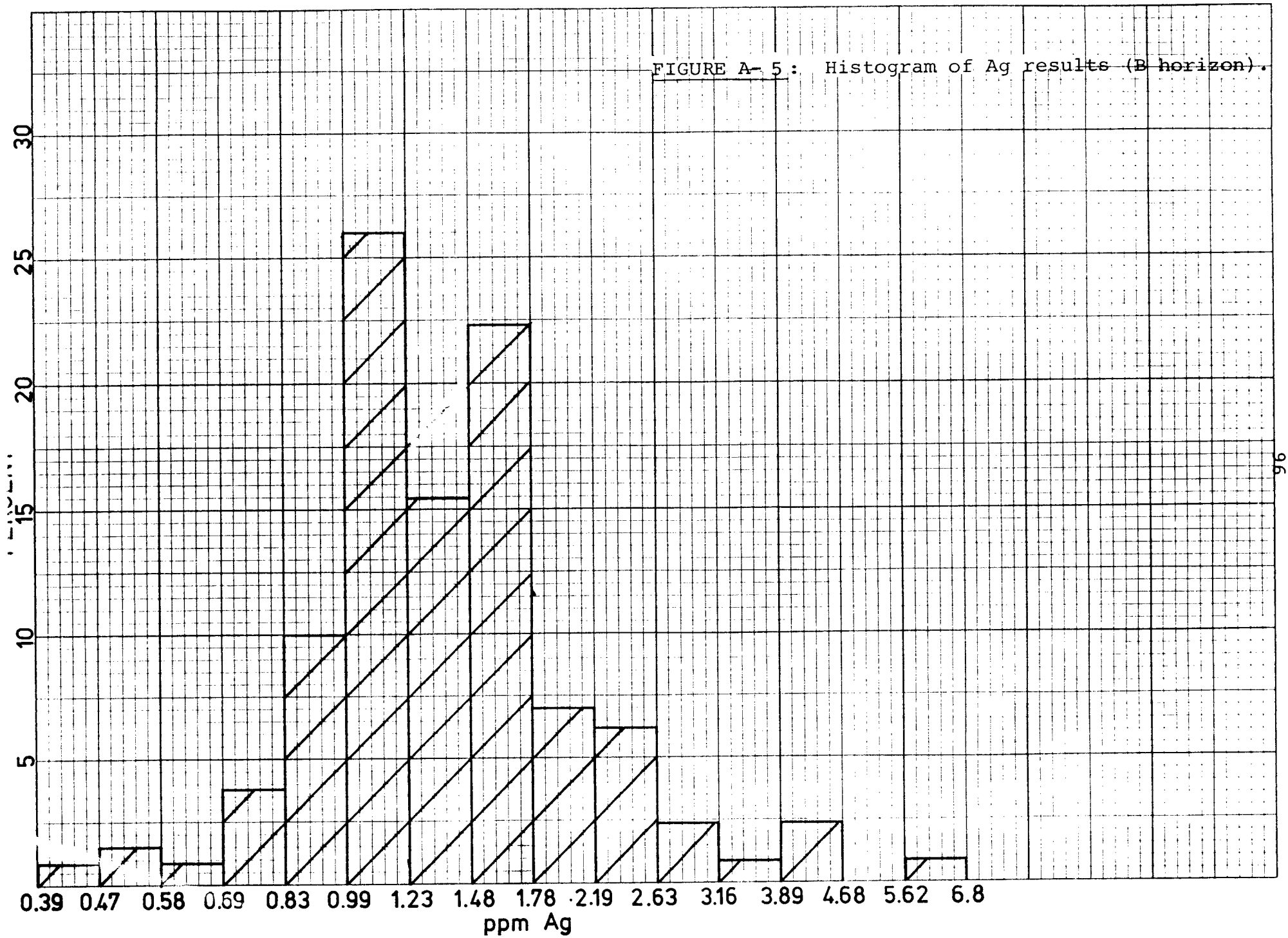


FIGURE A-6: Histogram of Pb results (B horizon)

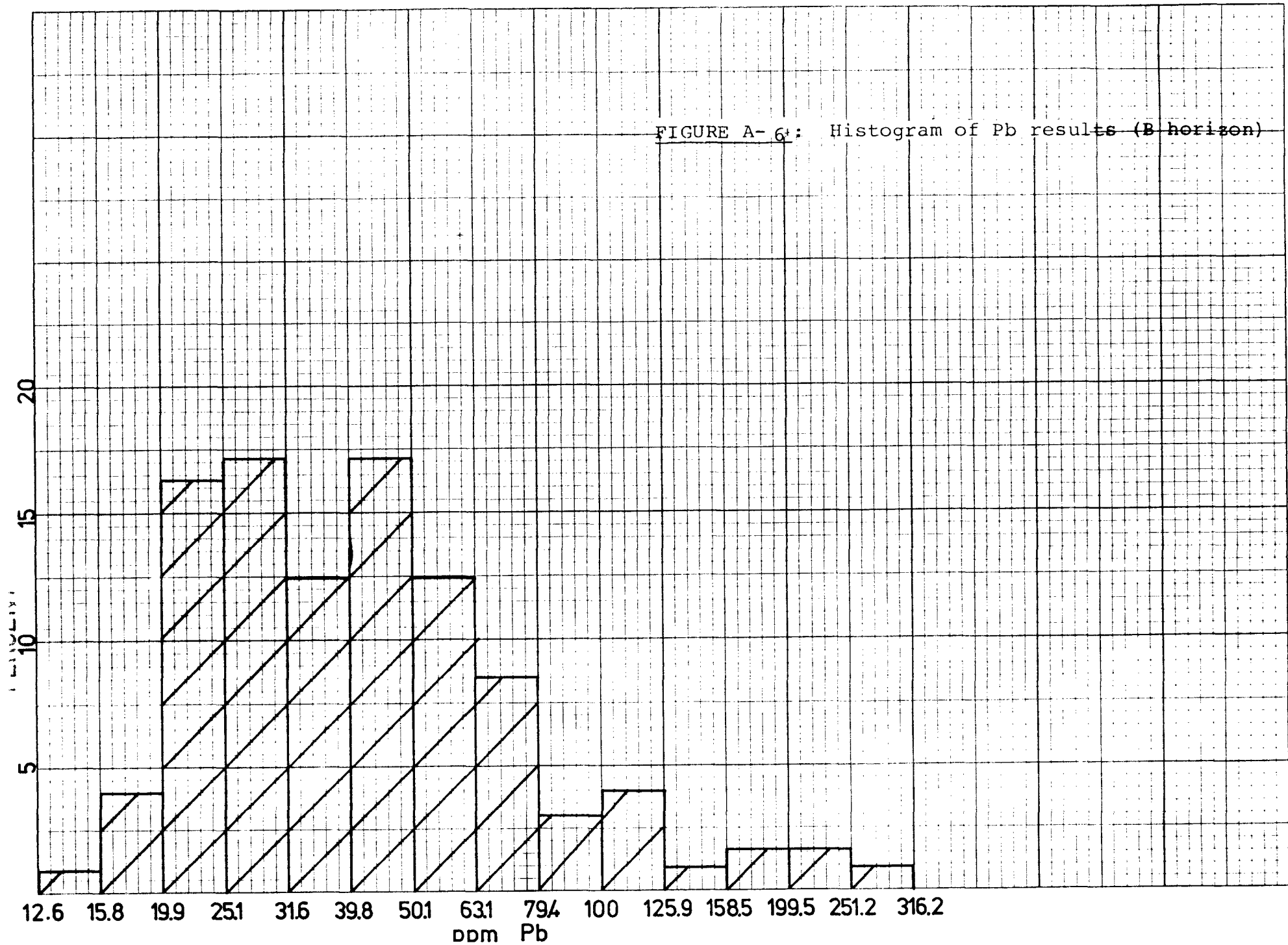
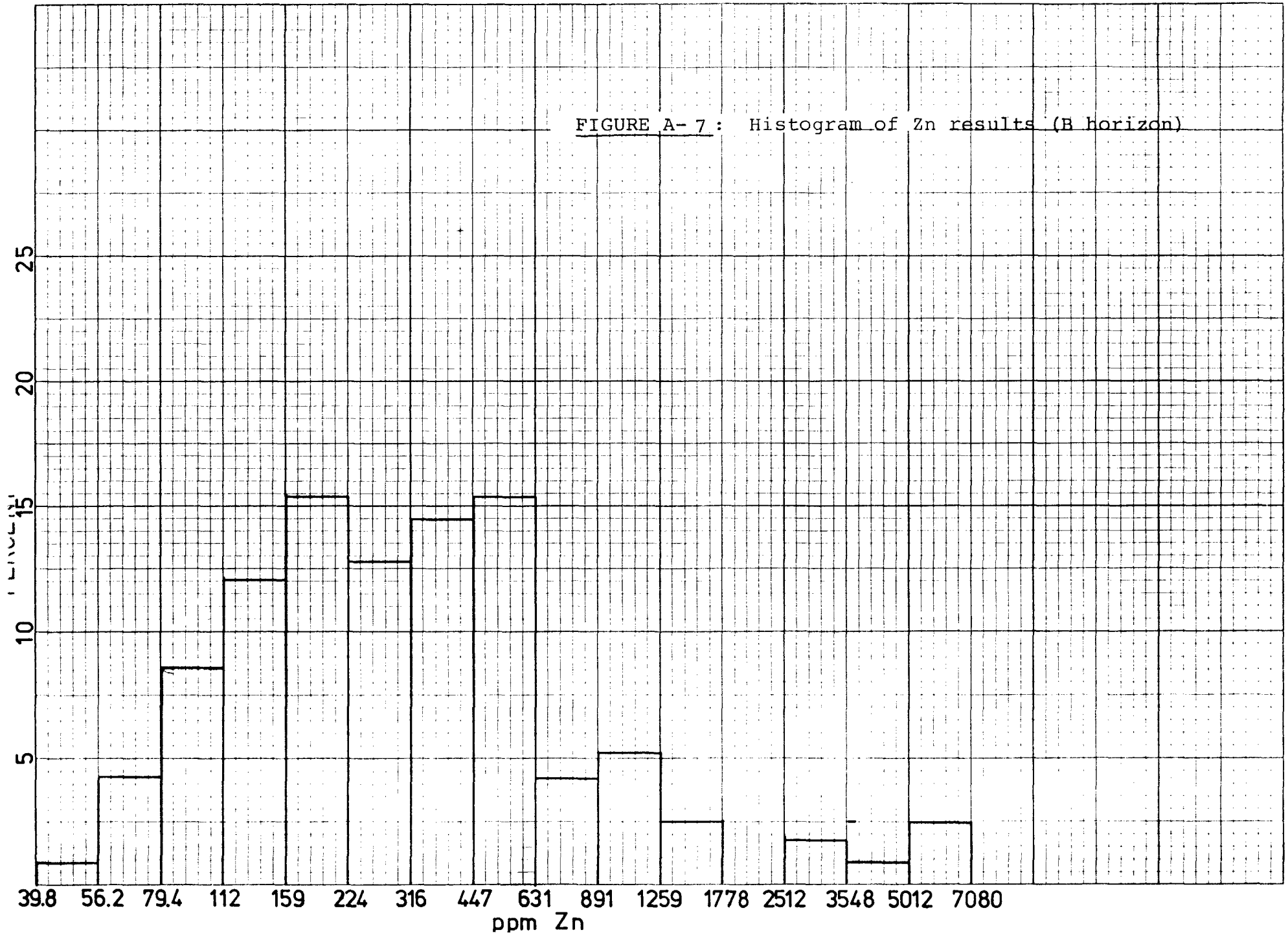


FIGURE A-7: Histogram of Zn results (B horizon)



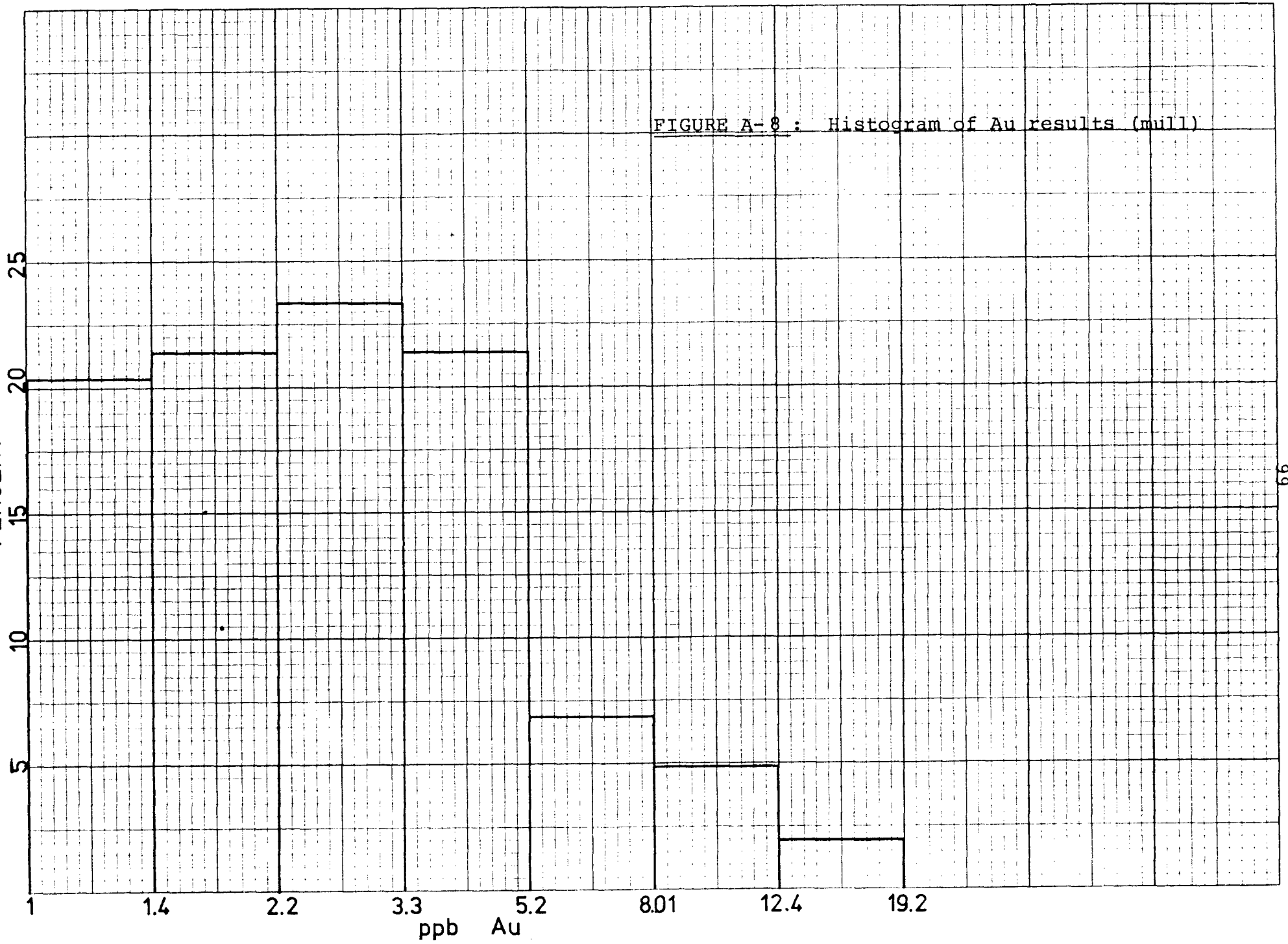


FIGURE A-9: Histogram of Sb results (mull)

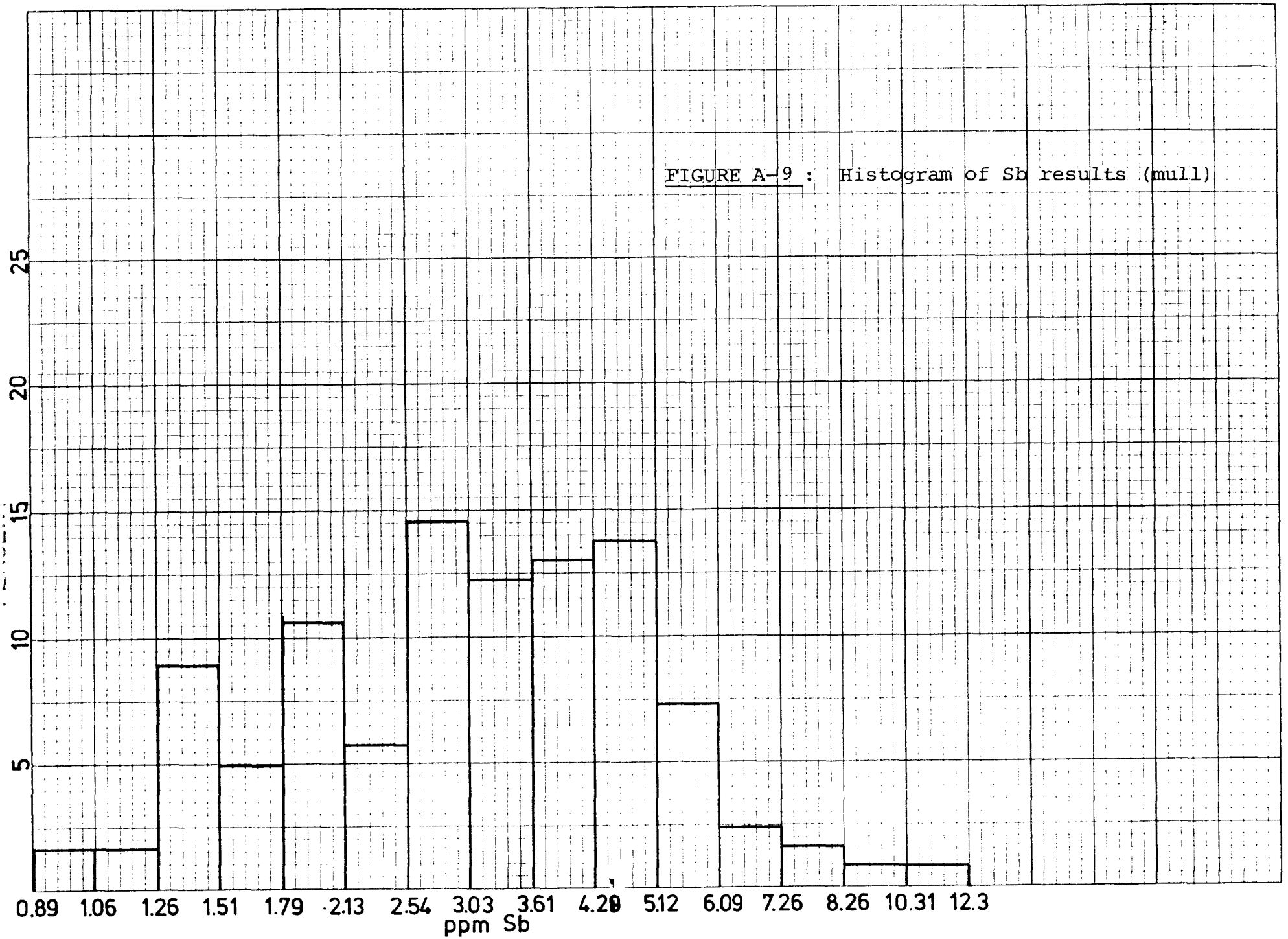
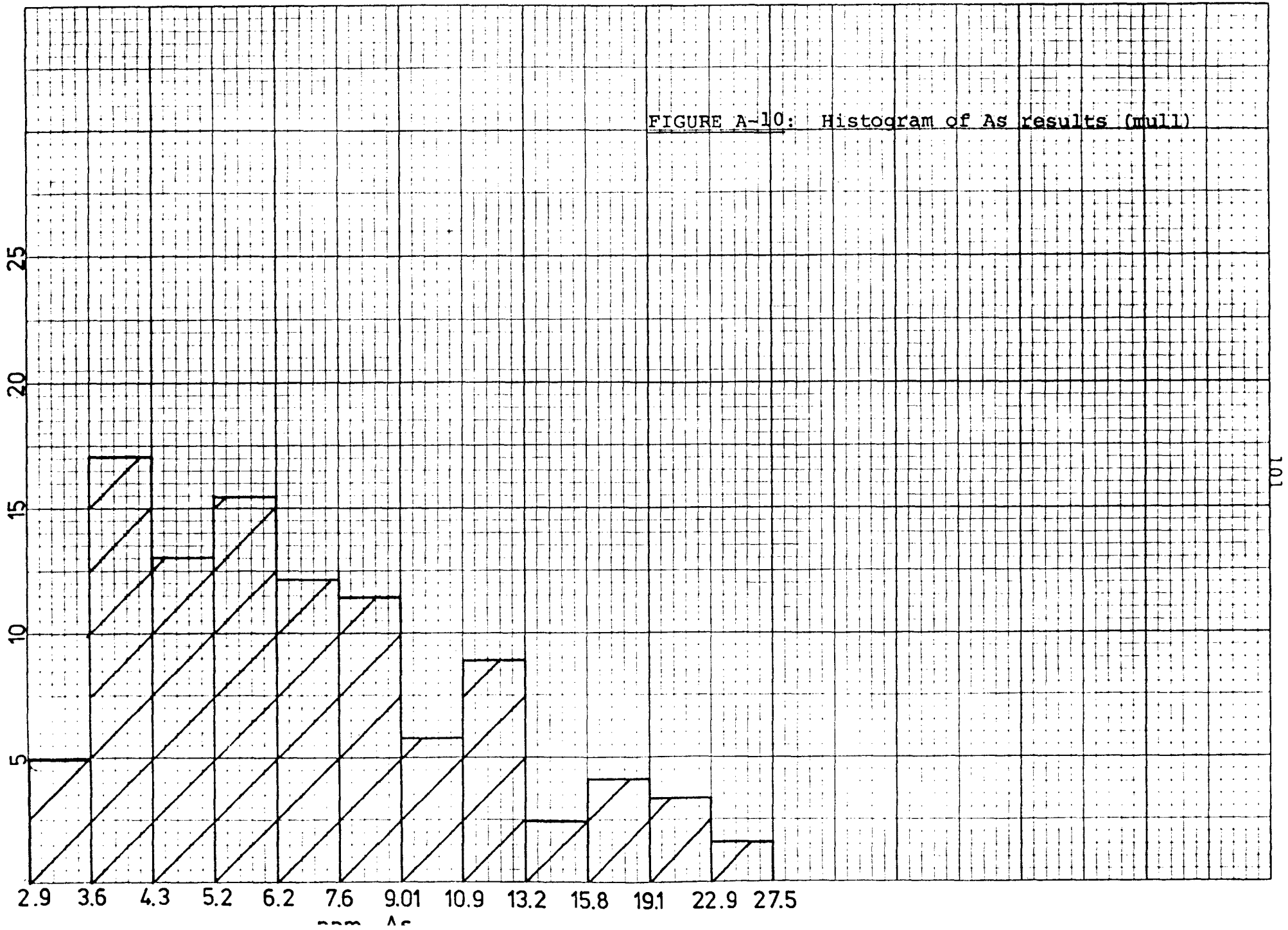
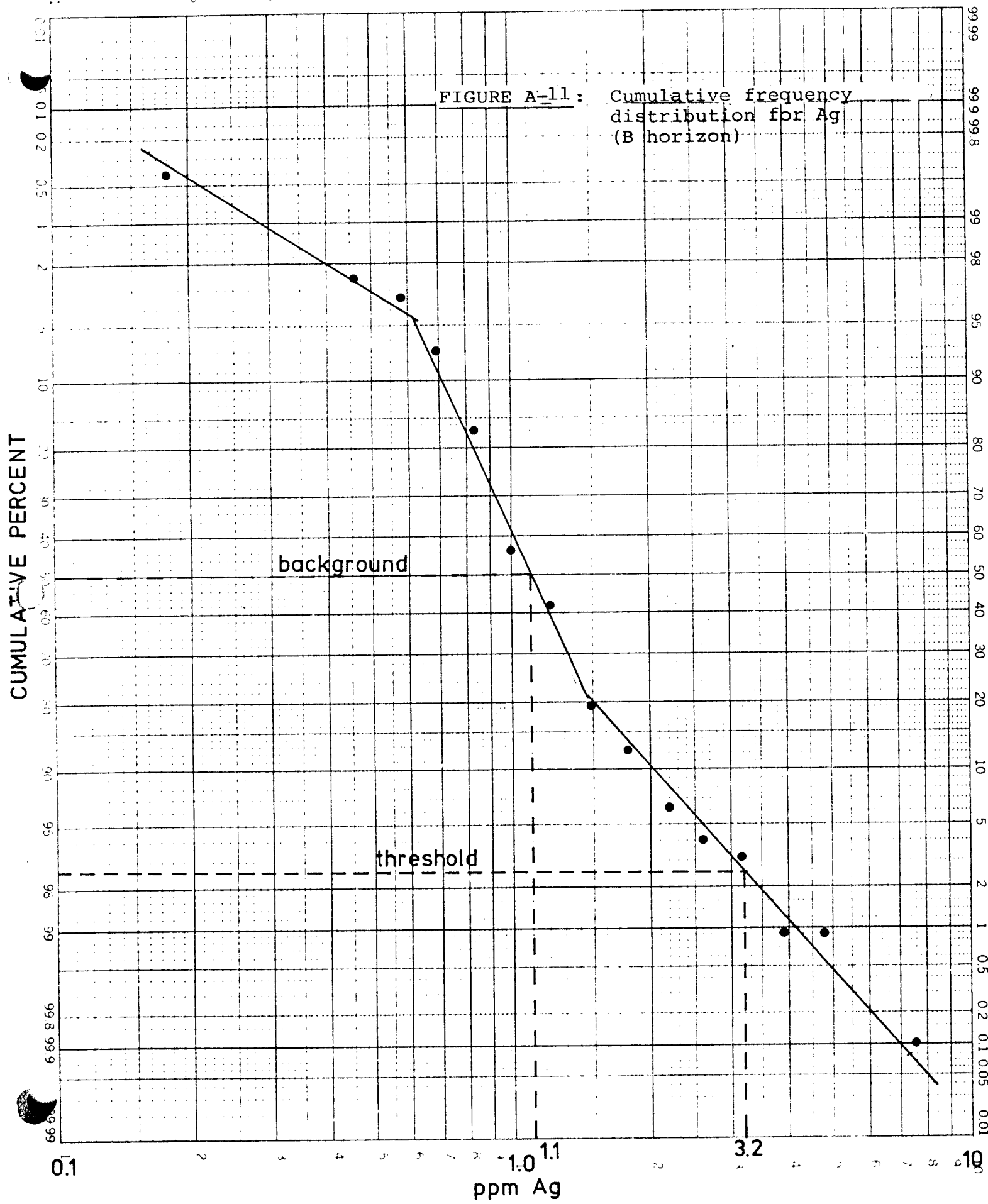
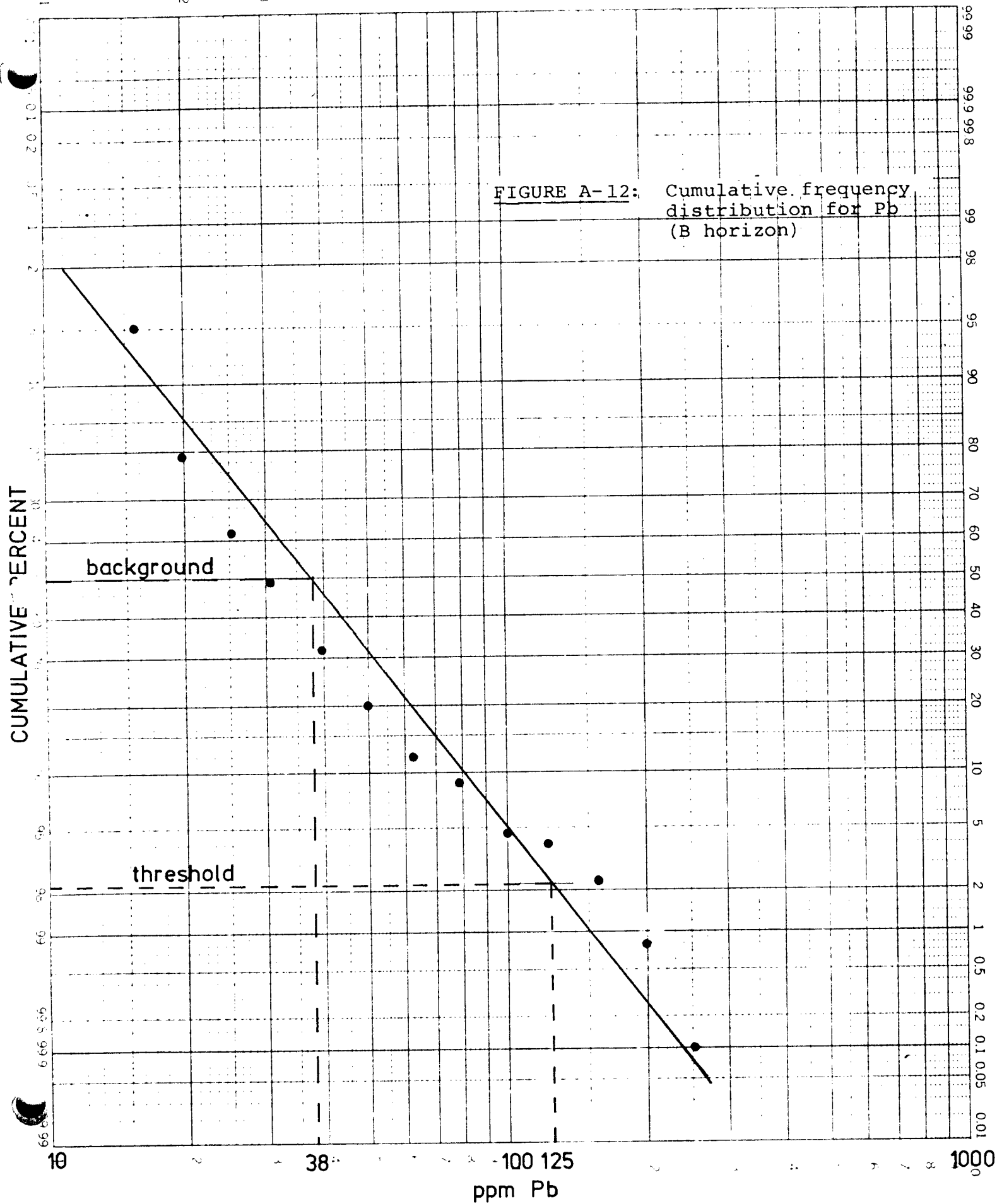


FIGURE A-10: Histogram of As results (mull)



101





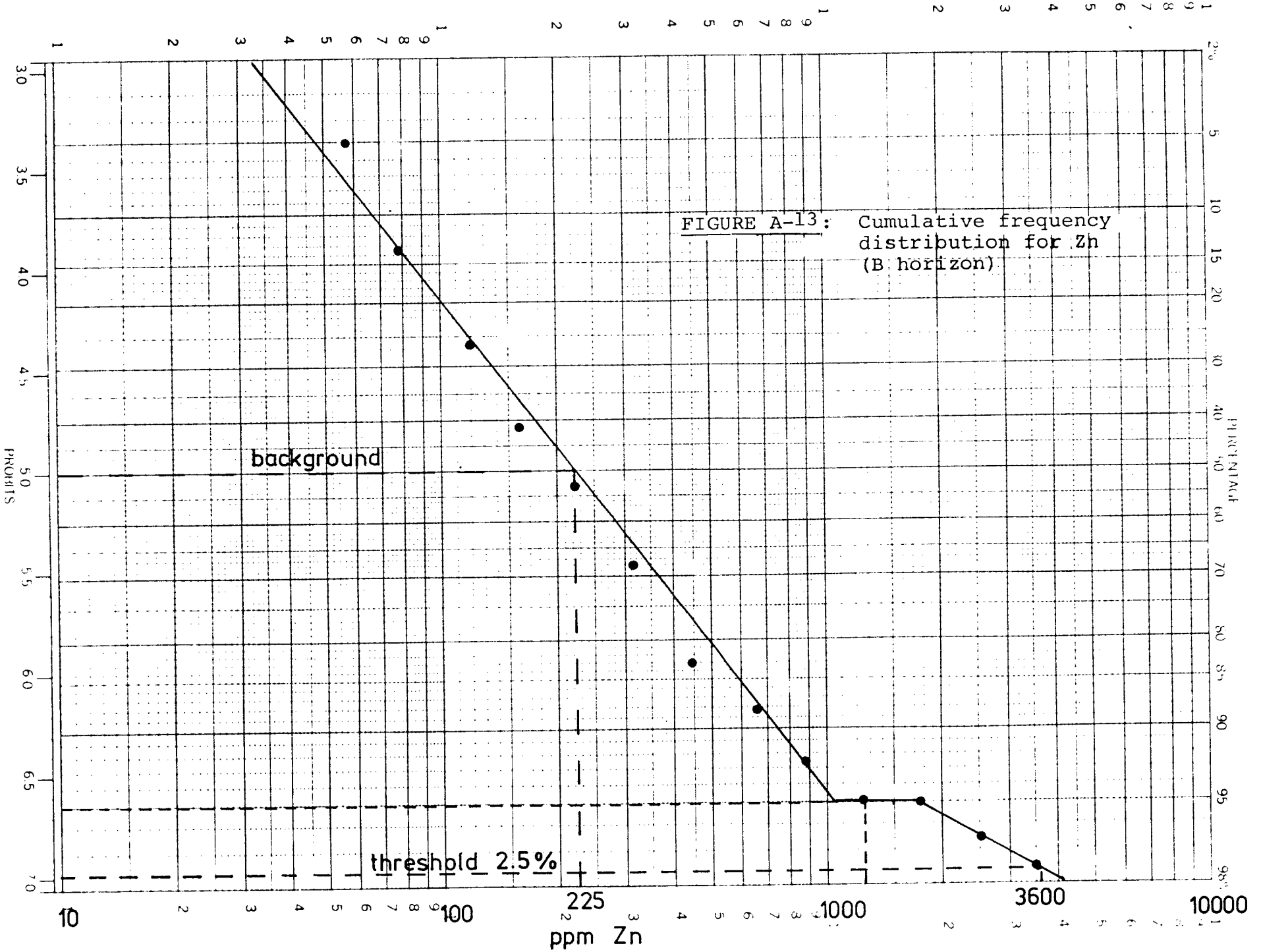


FIGURE A-14: Cumulative frequency distribution for Au (mull)

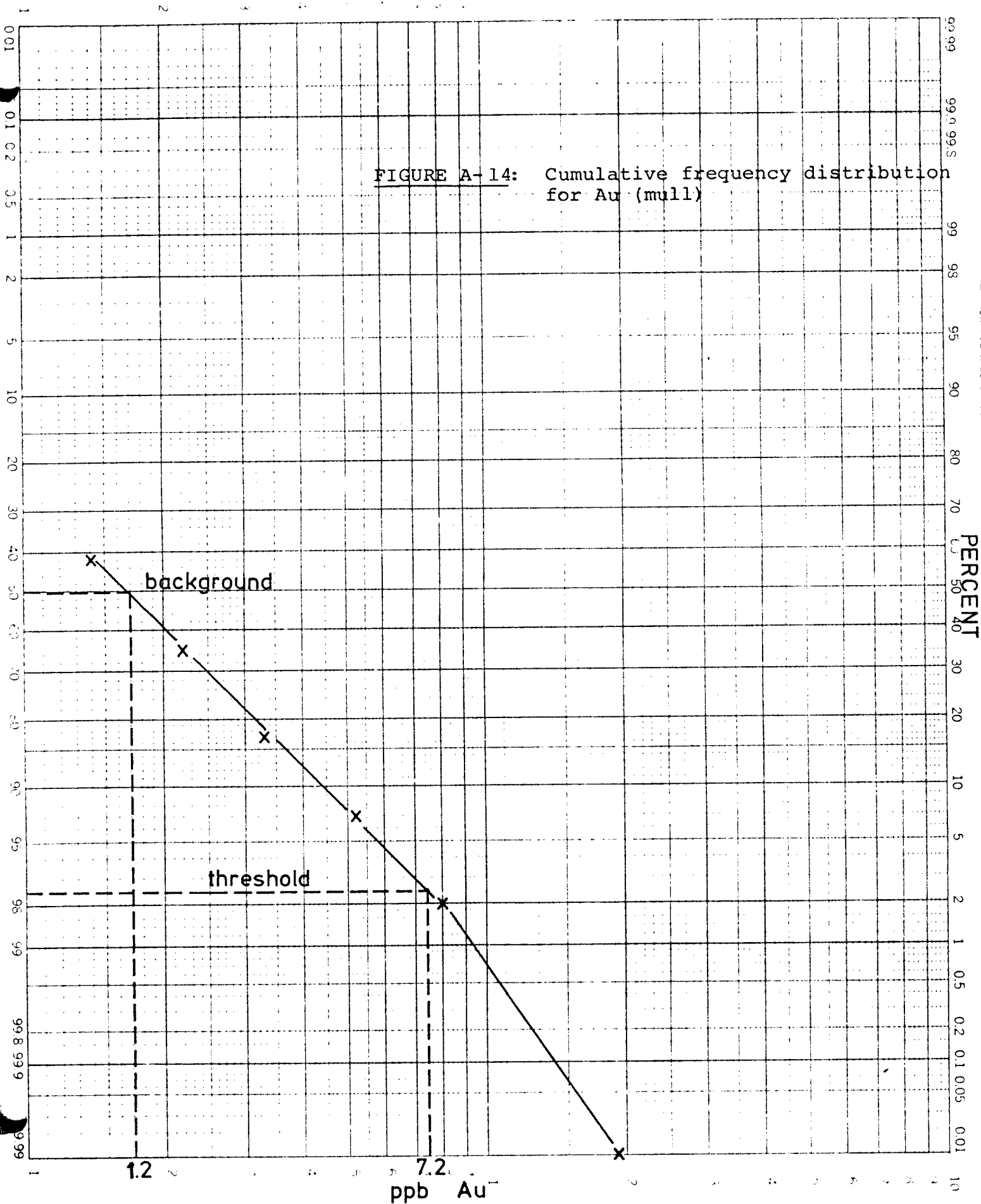


FIGURE A-15: Cumulative frequency distribution for Sb (mull)

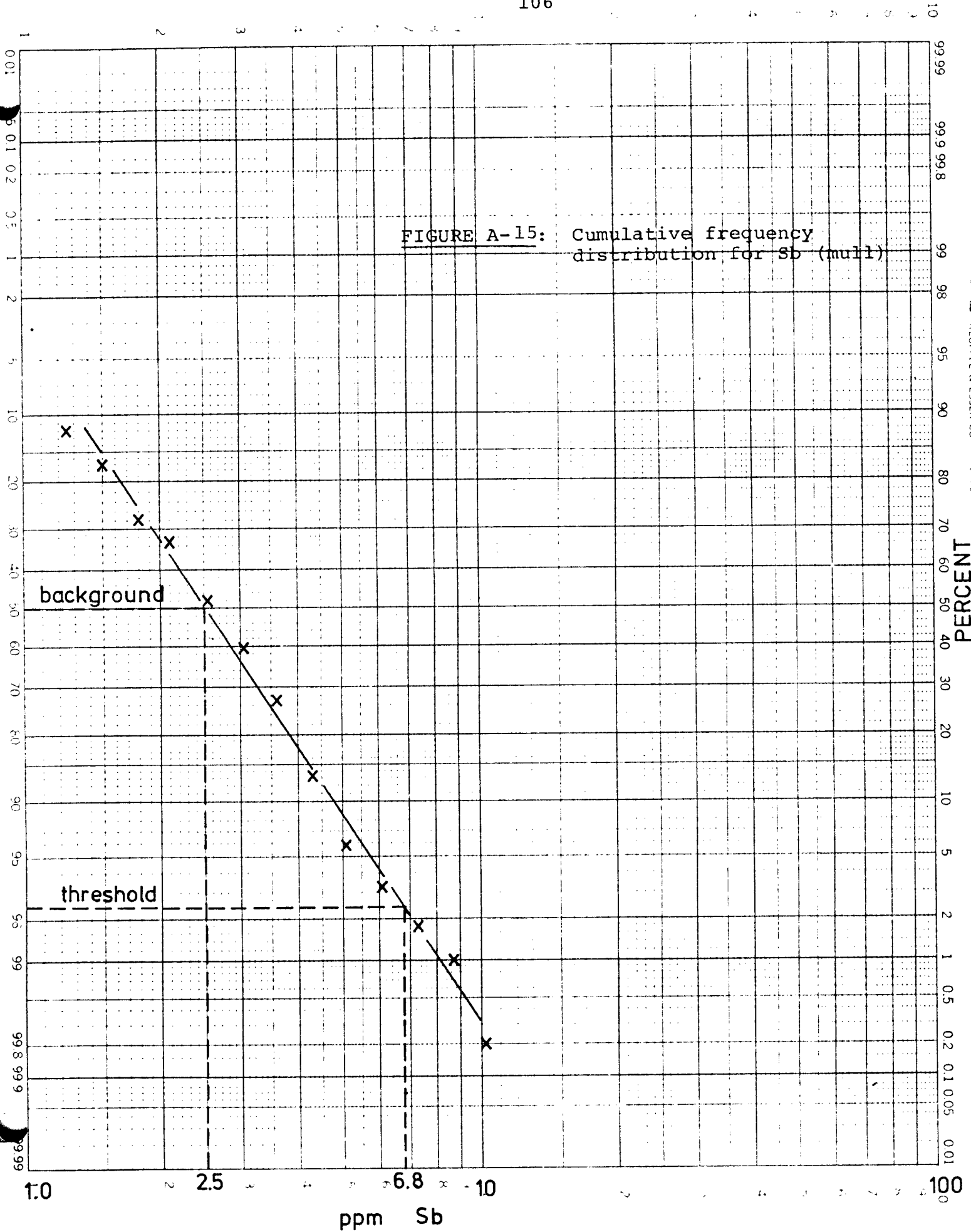
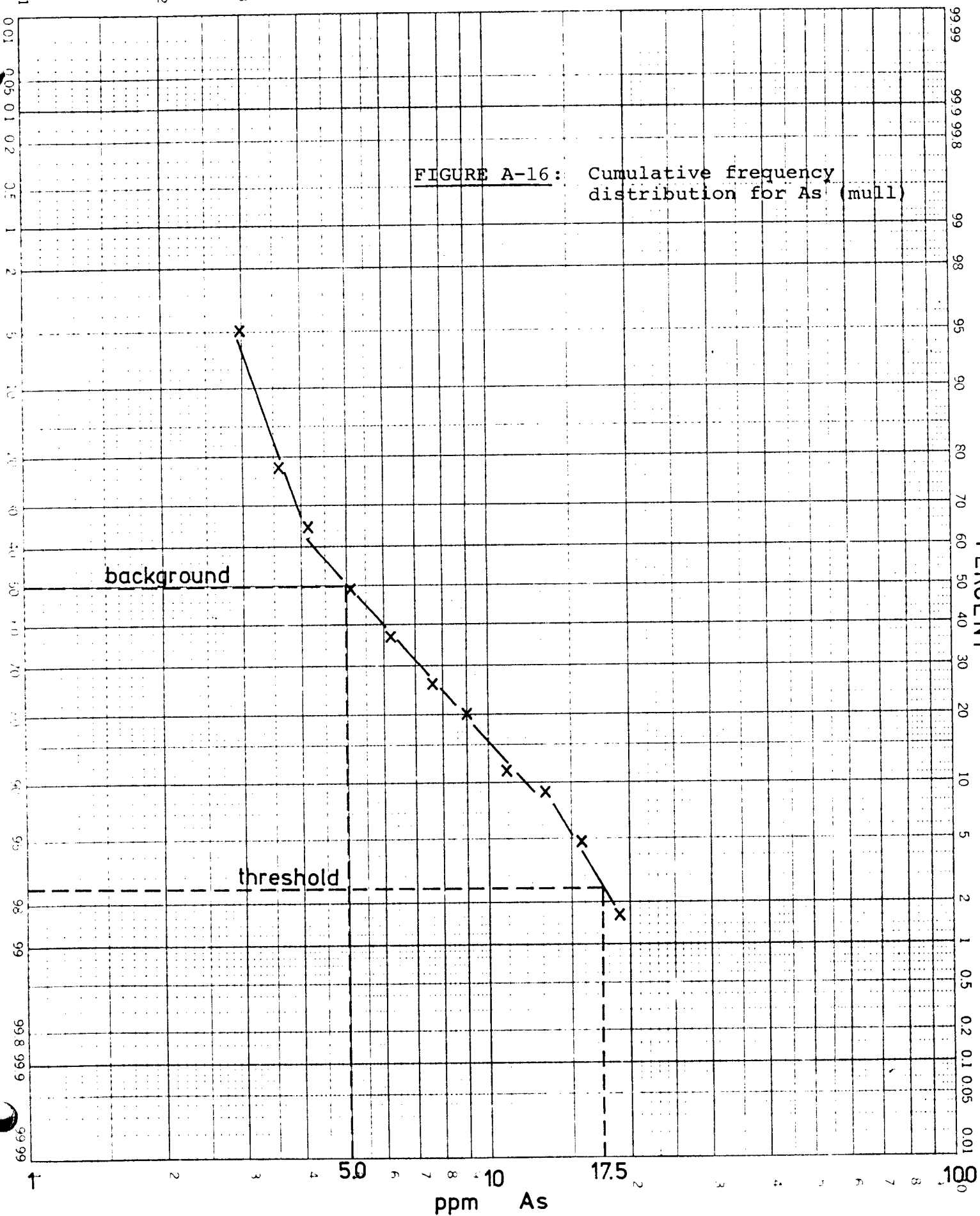


FIGURE A-16: Cumulative frequency distribution for As (mull)



1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1

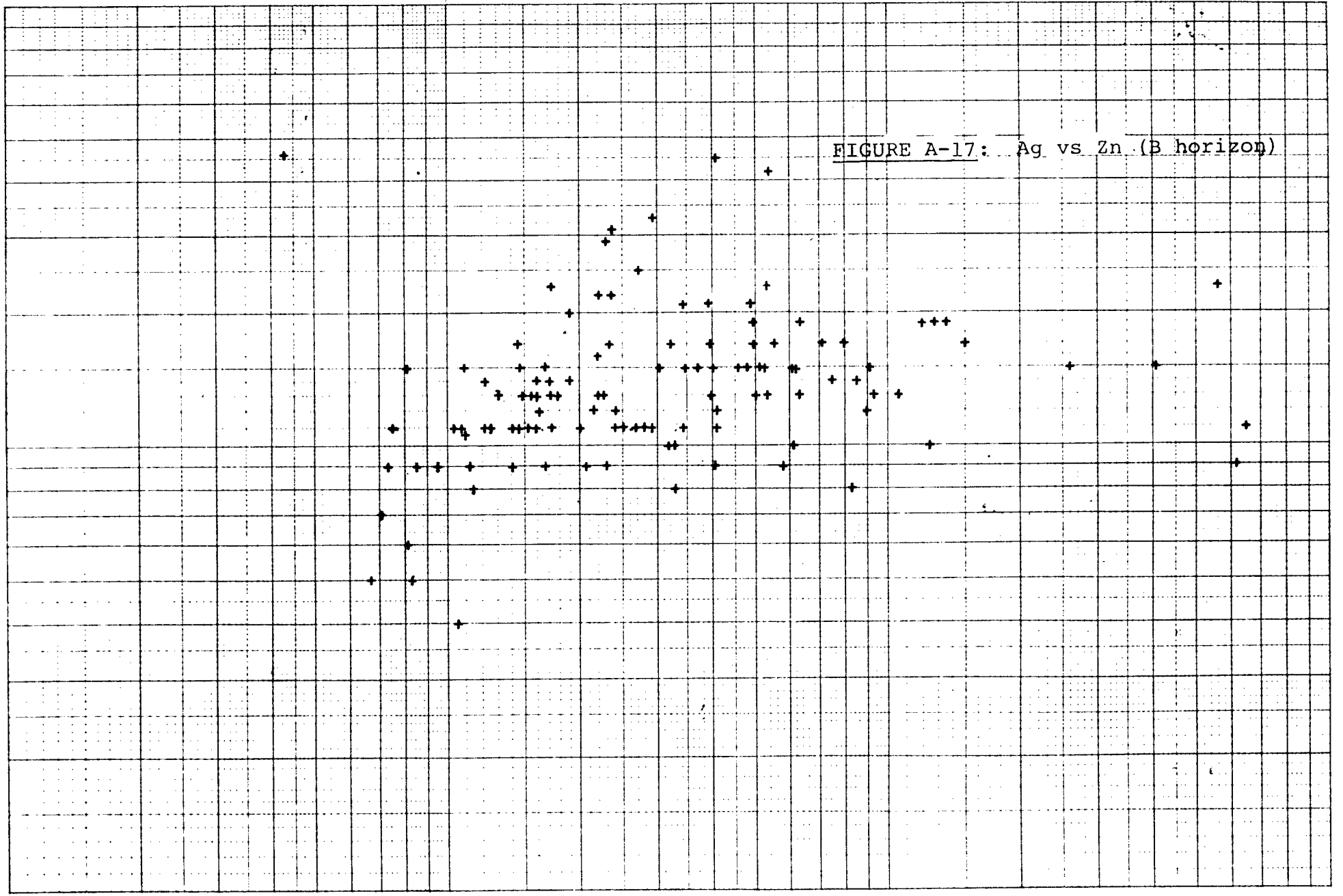


FIGURE A-17: Ag vs Zn (B horizon)

10 2 3 4 5 6 7 8 9 100 2 3 4 5 6 7 8 9 1000 2 3 4 5 6 7 8 9 10000

1
9
8
7
6
5
4
3
2
1
9
8
7
6
5
4
3
2
1

FIGURE A-18: Ag vs Pb (B horizon)

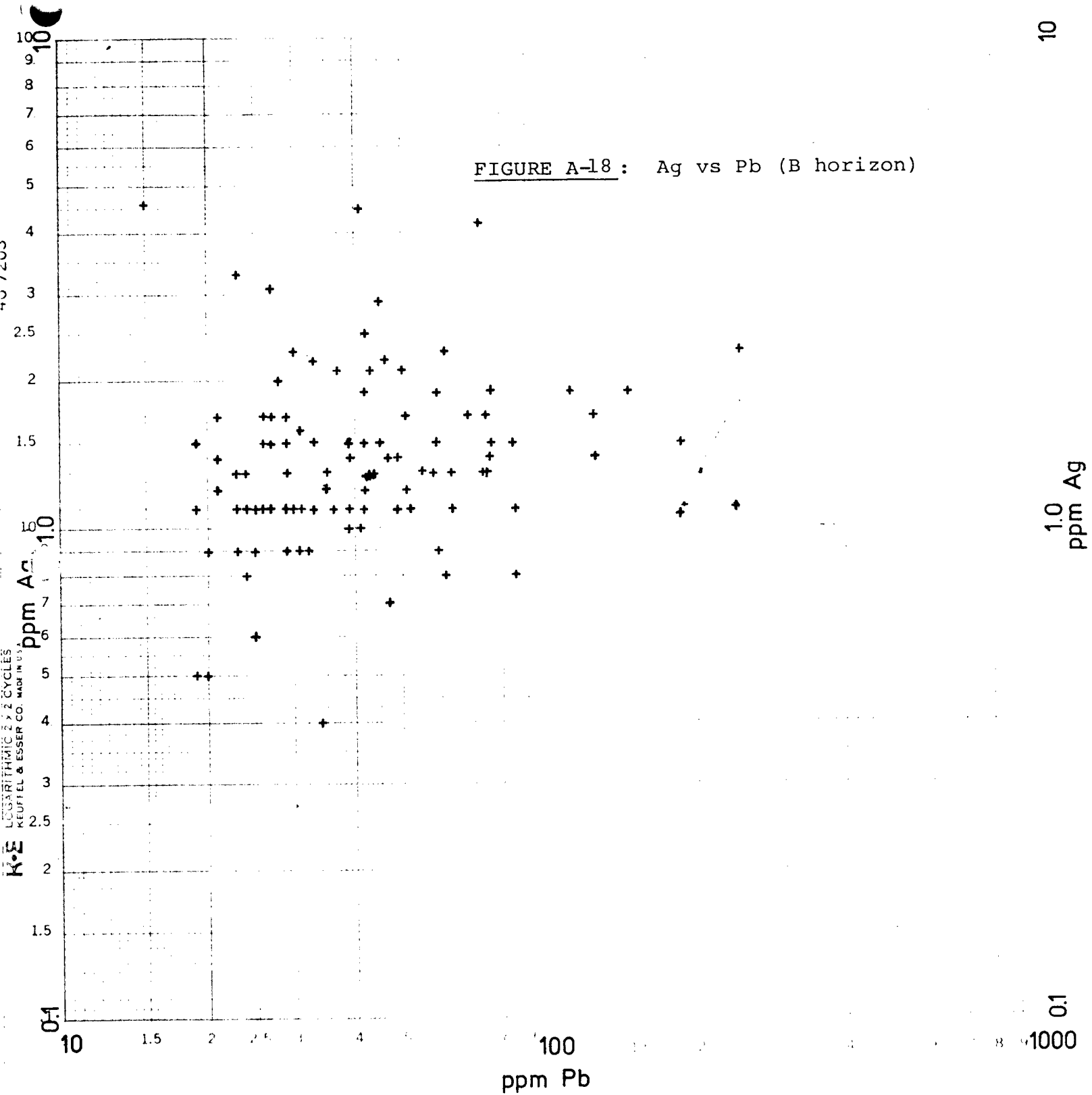
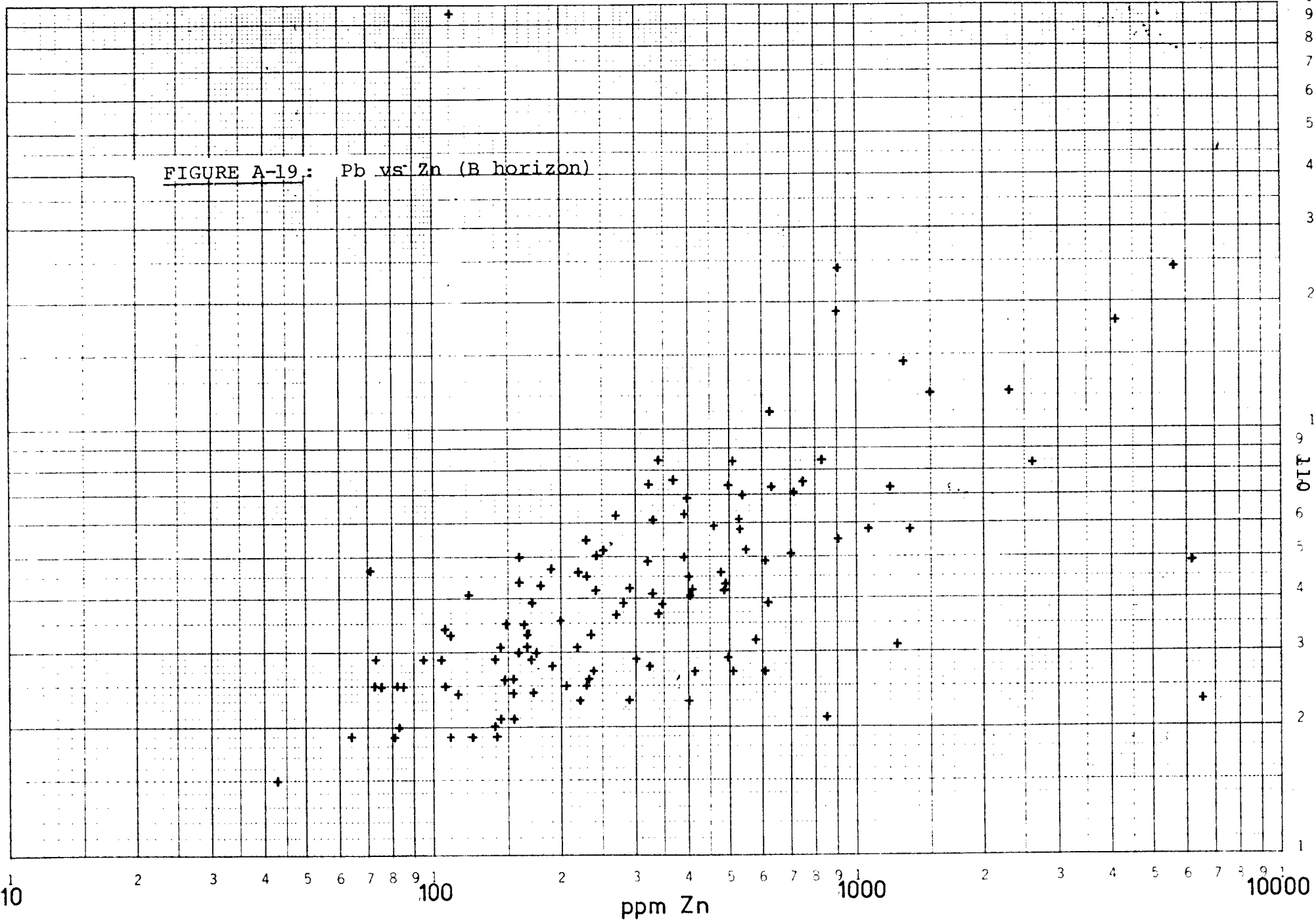
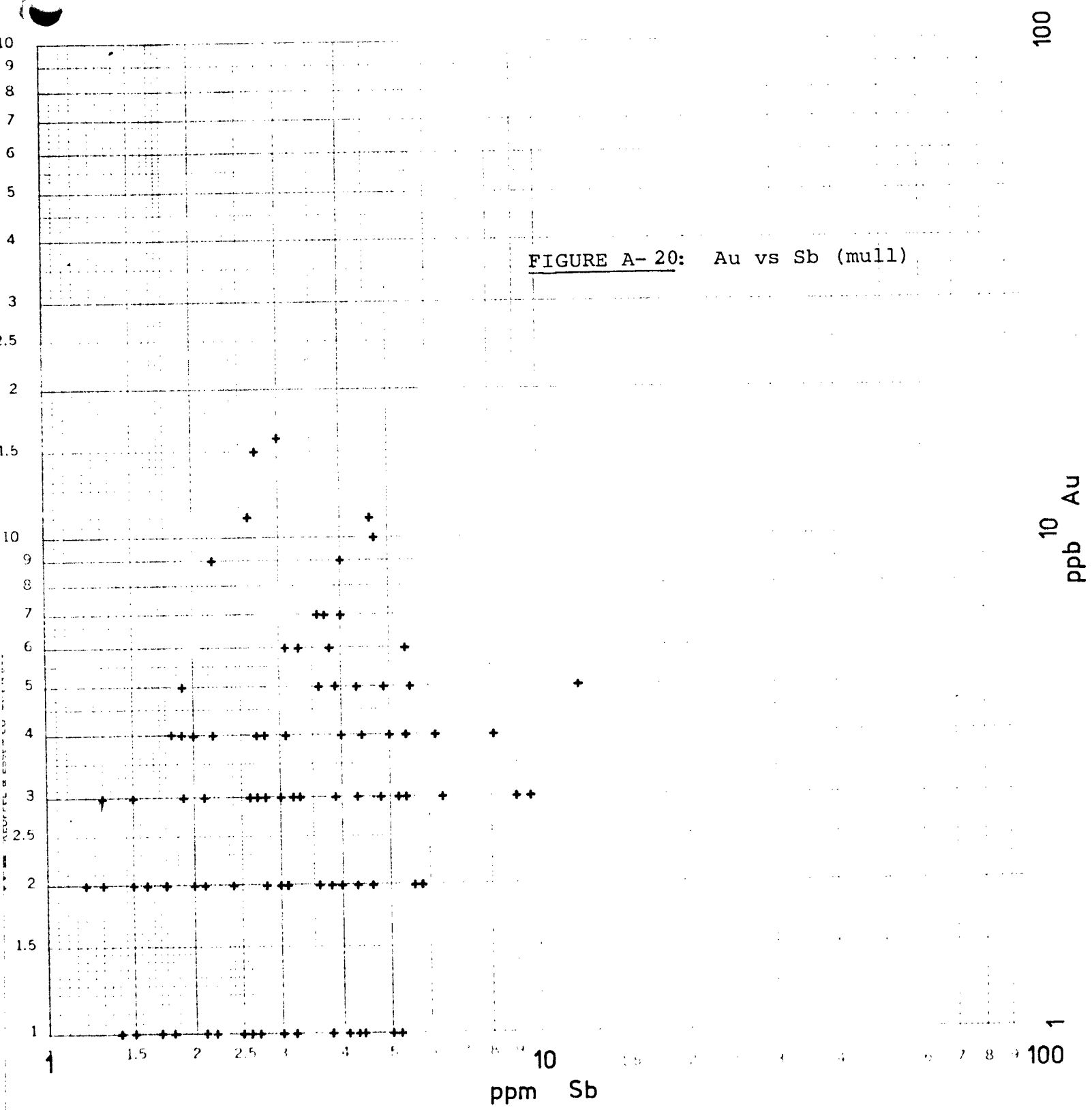


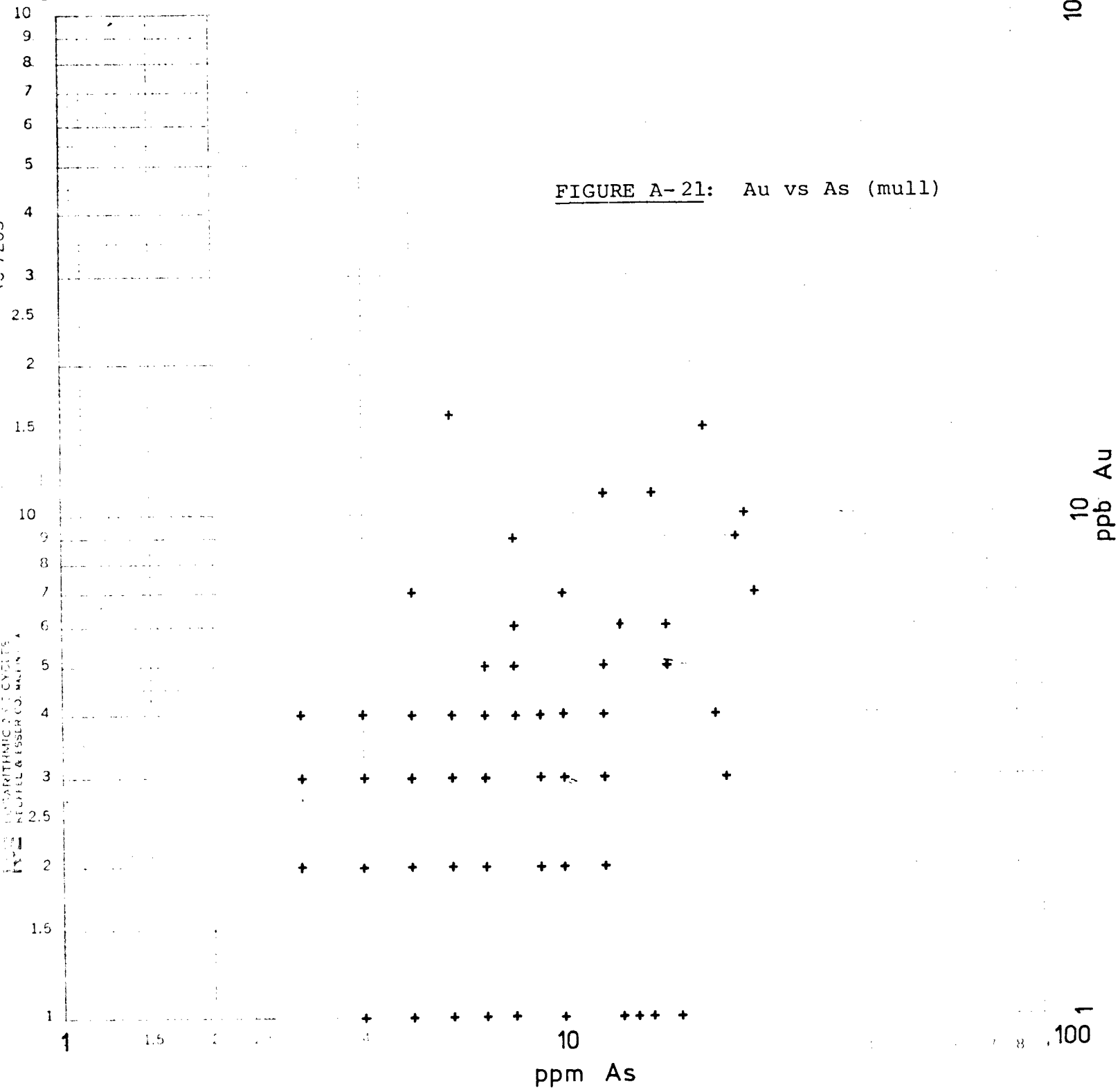
FIGURE A-19: Pb vs Zn (B horizon)





100

FIGURE A-21: Au vs As (mull)

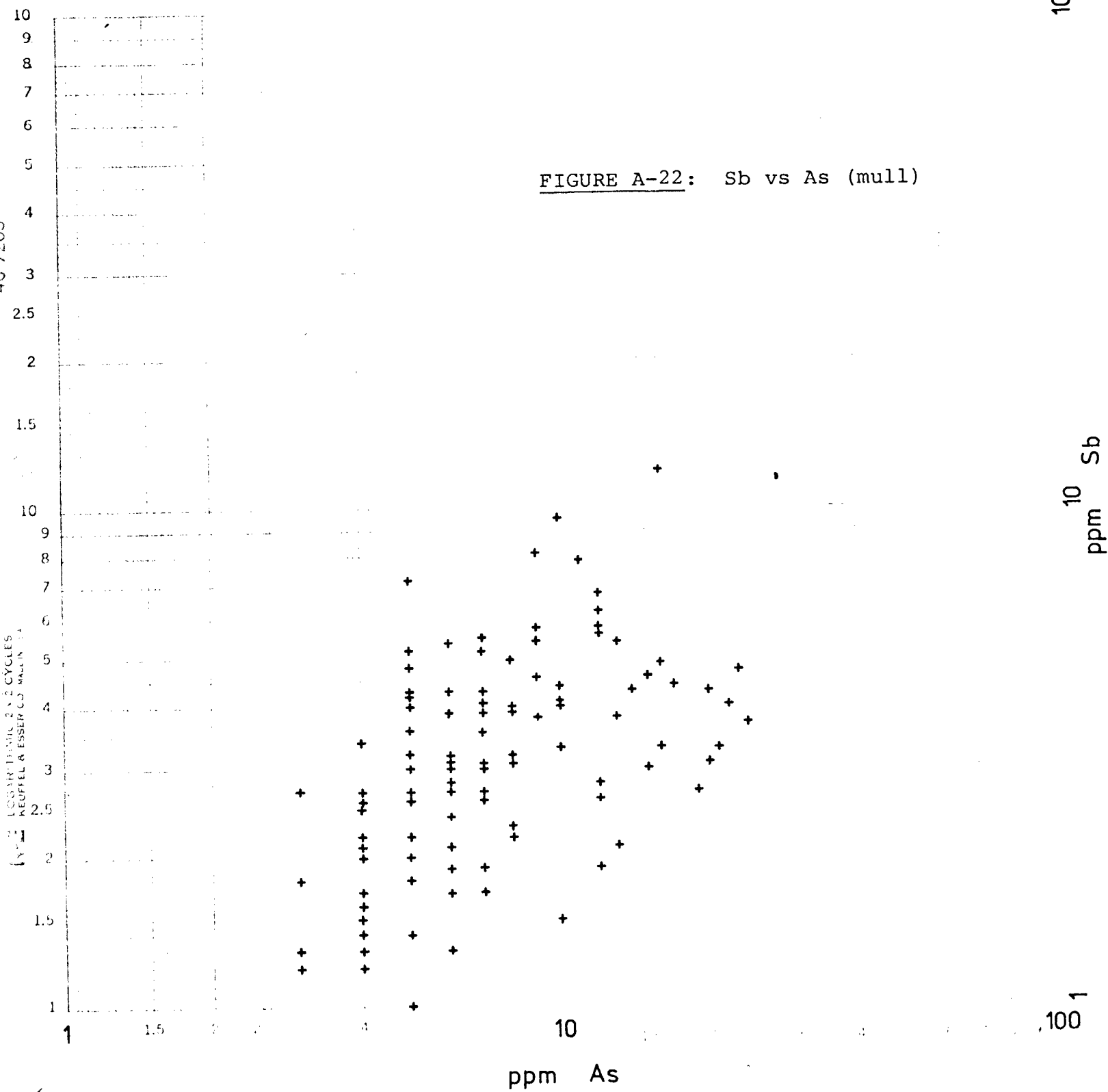


10
ppb Au

100

100

FIGURE A-22: Sb vs As (mull)



3000 E

5000 E

3500 N

3500 N

2500 N

2500 N

9785

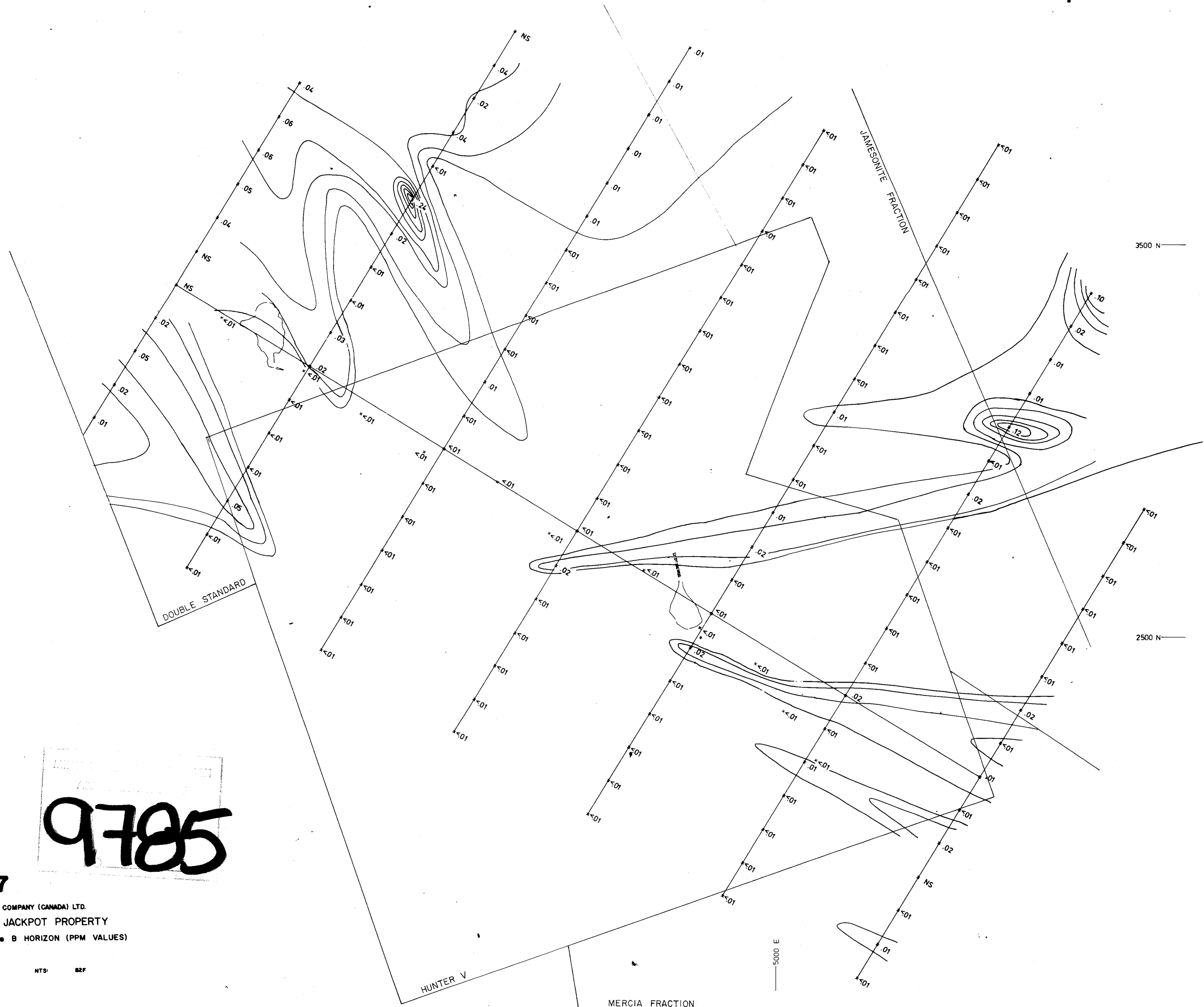
MAP 7

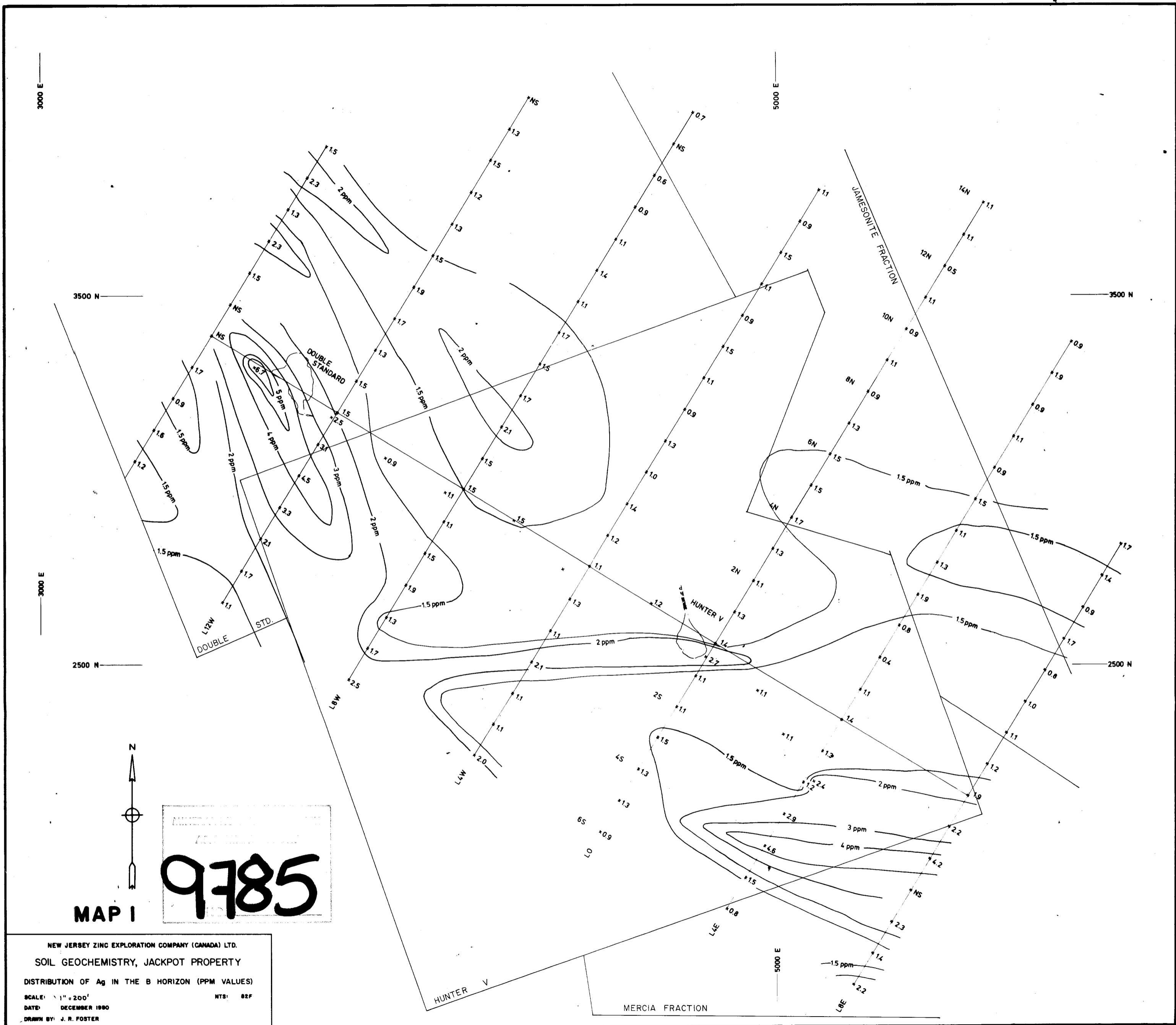
NEW JERSEY ZINC EXPLORATION COMPANY (CANADA) LTD.
SOIL GEOCHEMISTRY, JACKPOT PROPERTY
DISTRIBUTION OF Au in the B HORIZON (PPM VALUES)

SCALE: 1" = 200' NTS: 82F

DATE: DECEMBER 1980.

DRAWN BY: J. R. FOSTER.

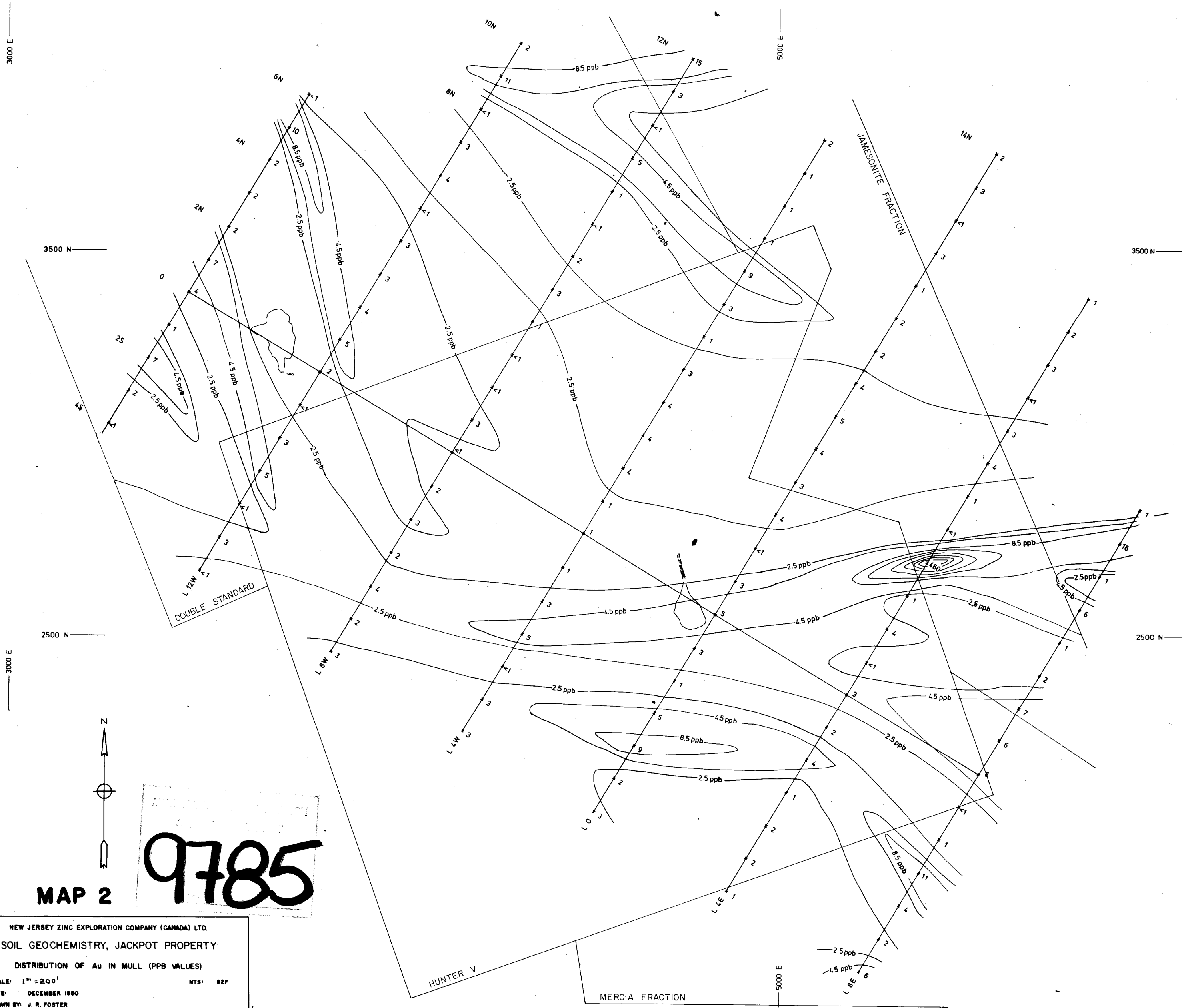




MAP I

9785

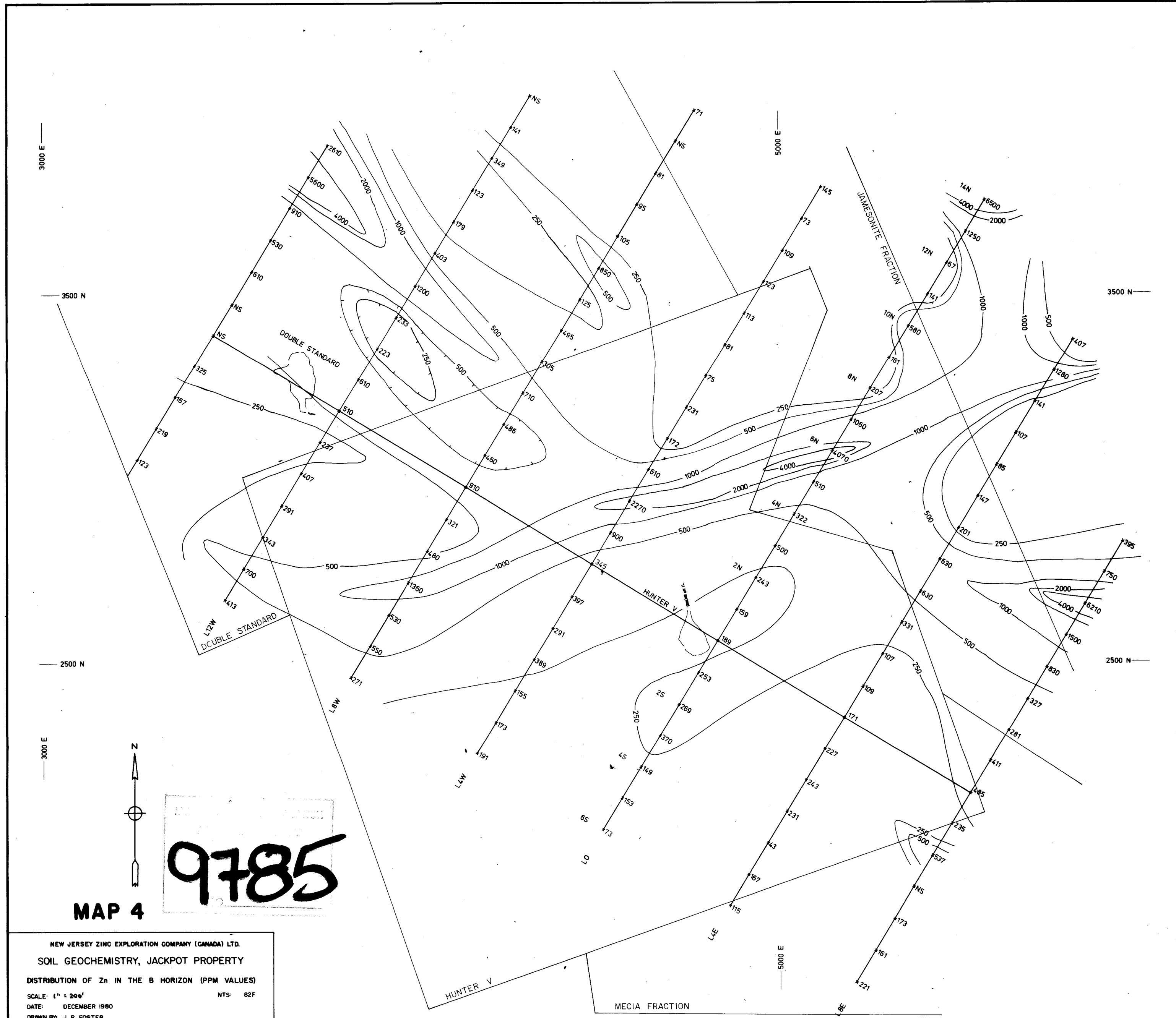
NEW JERSEY ZINC EXPLORATION COMPANY (CANADA) LTD.
 SOIL GEOCHEMISTRY, JACKPOT PROPERTY
 DISTRIBUTION OF Ag IN THE B HORIZON (PPM VALUES)
 SCALE: 1" = 200'
 DATE: DECEMBER 1990
 DRAWN BY: J. R. FOSTER



MAP 2

9785

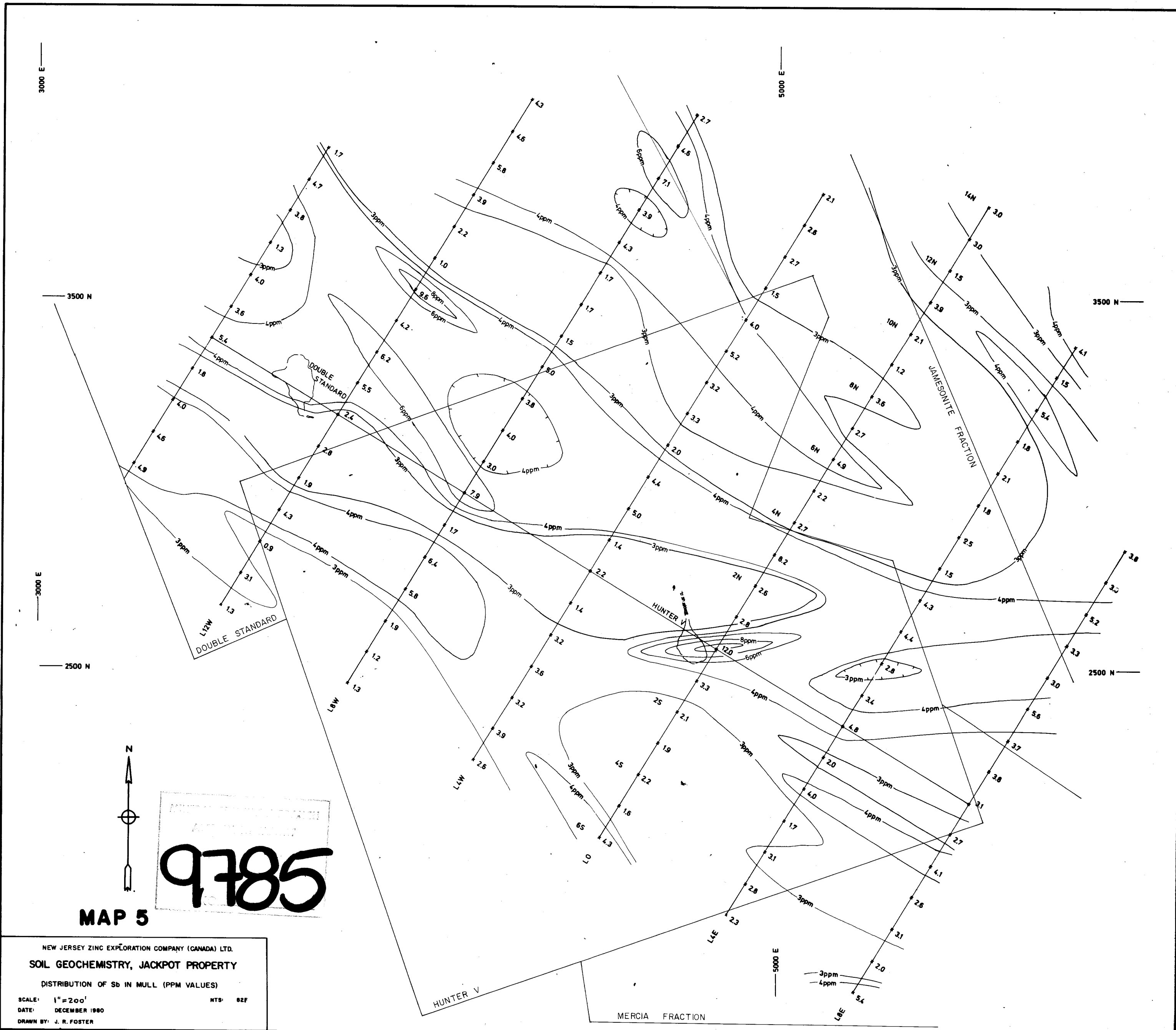
NEW JERSEY ZINC EXPLORATION COMPANY (CANADA) LTD.
SOIL GEOCHEMISTRY, JACKPOT PROPERTY
DISTRIBUTION OF Au IN MULL (PPB VALUES)
SCALE: 1" = 200'
DATE: DECEMBER 1990
DRAWN BY: J. R. FOSTER



9785

MAP 4

NEW JERSEY ZINC EXPLORATION COMPANY (CANADA) LTD.
 SOIL GEOCHEMISTRY, JACKPOT PROPERTY
 DISTRIBUTION OF Zn IN THE B HORIZON (PPM VALUES)
 SCALE: 1" = 200'
 DATE: DECEMBER 1980
 DRAWN BY: J. R. FOSTER



MAP 5

9785

NEW JERSEY ZINC EXPLORATION COMPANY (CANADA) LTD.
 SOIL GEOCHEMISTRY, JACKPOT PROPERTY
 DISTRIBUTION OF Sb IN MULL (PPM VALUES)
 SCALE: 1" = 200'
 DATE: DECEMBER 1980
 DRAWN BY: J. R. FOSTER

3000 E

5000 E

3500 N

3500 N

3000 E

2500 N

2500 N



9785

MAP 6

NEW JERSEY ZINC EXPLORATION COMPANY (CANADA) LTD.

SOIL GEOCHEMISTRY, JACKPOT PROPERTY

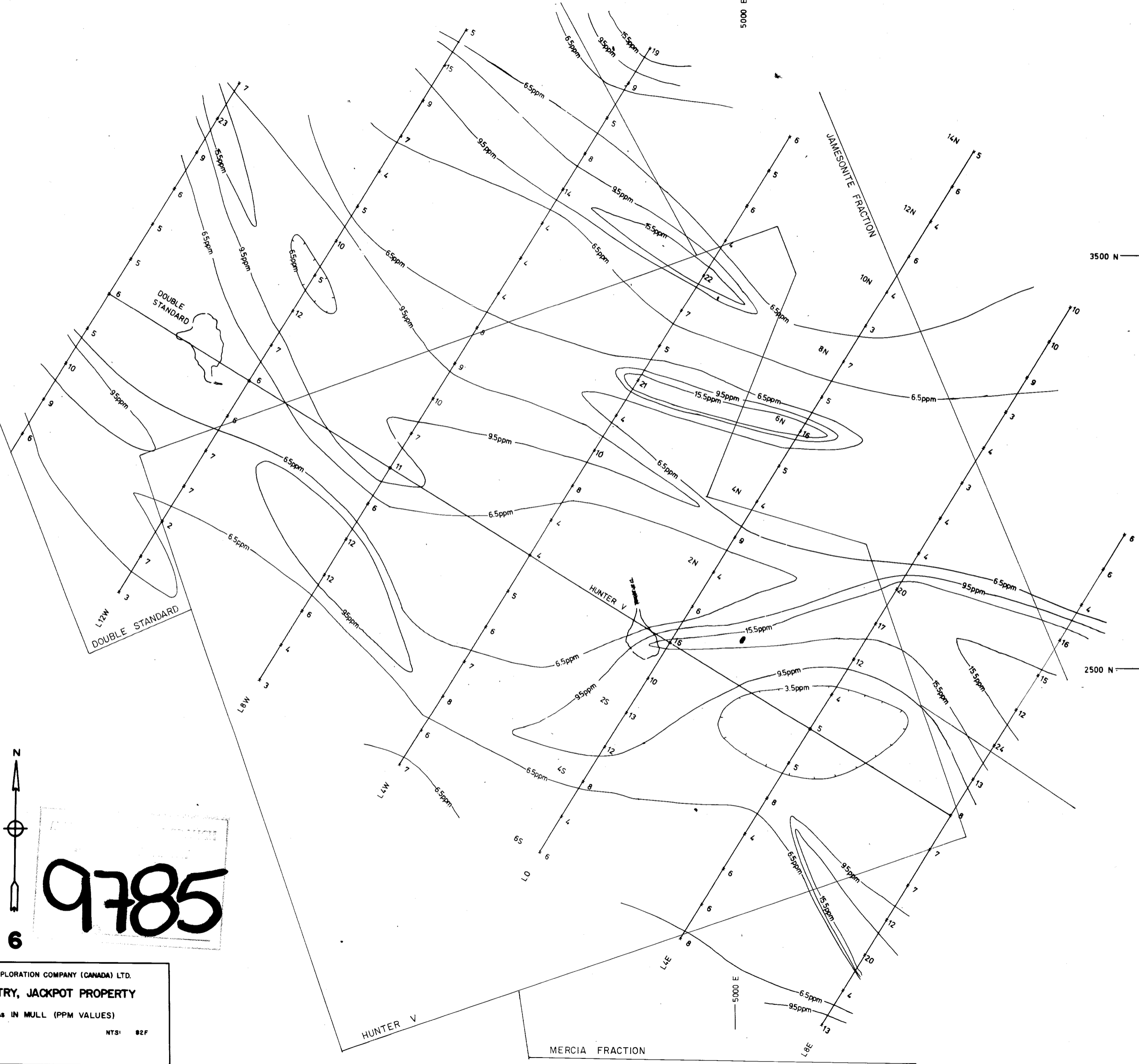
DISTRIBUTION OF As IN MULL (PPM VALUES)

SCALE: 1" = 200'

NTS: 82F

DATE: DECEMBER 1980

DRAWN BY: J. R. FOSTER



3000 E

5000 E

3500 N

3500 N

3000 E

2500 N

2500 N



MAP 3

9785

NEW JERSEY ZINC EXPLORATION COMPANY (CANADA) LTD.

SOIL GEOCHEMISTRY, JACKPOT PROPERTY

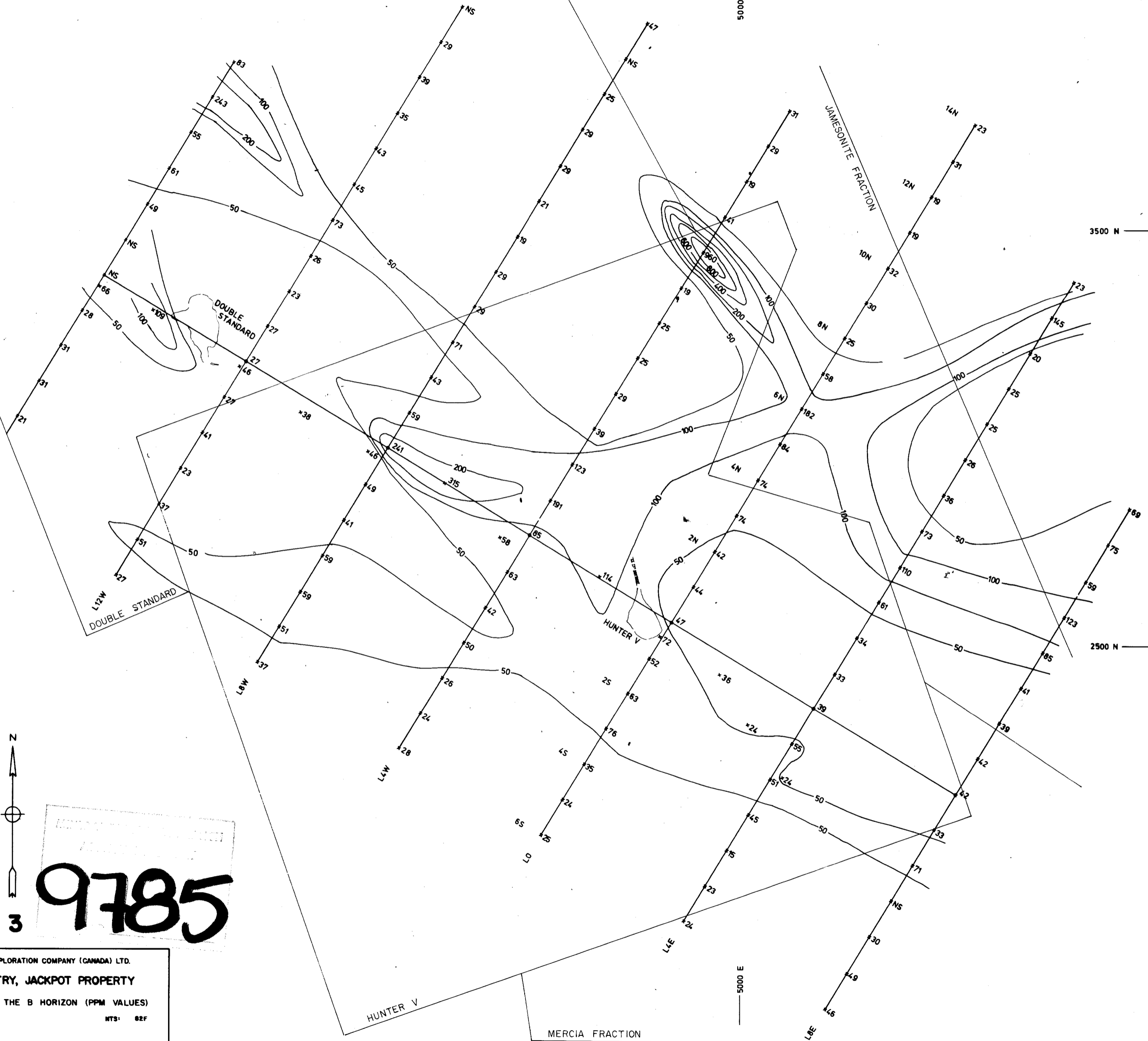
DISTRIBUTION OF Pb IN THE B HORIZON (PPM VALUES)

SCALE: 1" = 200'

NTS: 82F

DATE: DECEMBER 1980

DRAWN BY: J. R. FOSTER



HUNTER V

MERCIA FRACTION

5000 E

L8E