

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

GEOLOGY AND GEOCHEMISTRY

OF THE

TIER CLAIM GROUP



CLAIM SHEET NO. 105F/9

Lat.: 61°40'N

Long.: 132°15'W



Claims:

TIER 1-36

WATSON LAKE MINING DISTRICT

YUKON TERRITORY

090842

by:

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Work Completed July 15-22, 1980

This report has been examined by the
Geological Evaluation Unit and is recom-
mended to the Commissioner to be consider-
ed as representation work in the amount of
\$ 3,600.00

R. Debrick A. Reg. Geol.
Resident Geologist or
Resident Mining Engineer

Considered as representation work under
Section 58 (4) Yukon Quarts Mining Act.

Commissioner of Yukon Territory

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7	" " Molybdenum Values and Contours
8	" " Silver Values and Contours
9	" " Uranium Values and Contours
10	Stream Sediment and Heavy Minerals
11	Compilation Map

SUMMARY

The TIER Claim Group is located at 132°15'W, 61°40'N within map sheet 105F/9, Watson Lake Mining District, Yukon Territory. The claims were staked on July 22, 1979 to cover a Geological Survey of Canada stream sediment Mo-Cu-Ba-F high value (16 ppm Mo, 52 ppm Cu, 2500 Ba, 1000 ppm F) generated by the 1978 Uranium Reconnaissance Program stream sediment-water survey of the Quiet Lake Sheet released in 1979. Preliminary property examination was carried out in 1979 and included geological mapping, stream sediment sampling and heavy mineral sampling.

The geology of the TIER Claims consists of a folded sequence of volcanic, pyroclastic and sedimentary rocks. The age of these rocks is Devonian to Triassic. A klippe of older Silurian aged dolomite has been thrust over the younger rocks. The resistant dolomite unit forms a northwest trending ridge across the claim group.

No economic mineralization has been found on the TIER Claims. Zinc and possibly copper and uranium appear to offer the best economic target commodities. Soil and stream sediment surveys were carried out on the southern half of the claim group. Samples were analyzed for Cu, Zn, Ag, U and Mo. A zinc (1350 ppm) - copper (up to 122 ppm) - silver (up to 4.8 ppm) soil anomaly was located in an area underlain by volcanic rocks of dacite composition in the

southern sector of the TIER Claims. Rock samples of dacite tuffs contain up to 675 ppm zinc and 98 ppm copper. A zinc (up to 1600 ppm) - uranium (up to 6.5 ppm) stream sediment anomaly was discovered in the east central sector of the claim group. The source of this anomaly appears to be in rhyolites and prophyritic dacite rocks close to or along a contact with an overlying black shale unit.

Detailed geological mapping and additional stream sediment sampling is recommended for the TIER Claims.

I. INTRODUCTION

The TIER Claims were staked on July 22, 1979 to cover streams with high values of Mo, Cu, Ba, and F as delineated by a Geological Survey of Canada Uranium Reconnaissance Program. A geochemistry soil stream sediment survey and heavy mineral sampling program was undertaken in conjunction with geological mapping during July, 1980 in order to evaluate the mineral potential of the property. This report presents the results of that program.

II. LOCATION AND ACCESS

The TIER Claim Group is located at 132°15'W, 61°40'N, and comprises 36 individual claims covering an area of 2.9 mi² (7.5 km²). The claims lie within NTS map sheet 105F/9, Watson Lake Mining District, Yukon Territory (Figures 1 and 2).

The claim group lies approximately 20 mi (32 km) south-southeast of the town of Ross River and approximately 10 mi (16 km) south of the Robert Campbell Highway (Highway 9). Access to the claims is via helicopter, approximately 10-15 minutes from Ross River. A dirt road runs south from the Robert Campbell Highway along the Ketza River to within 1 mile (1.6 km) east of the claim group.

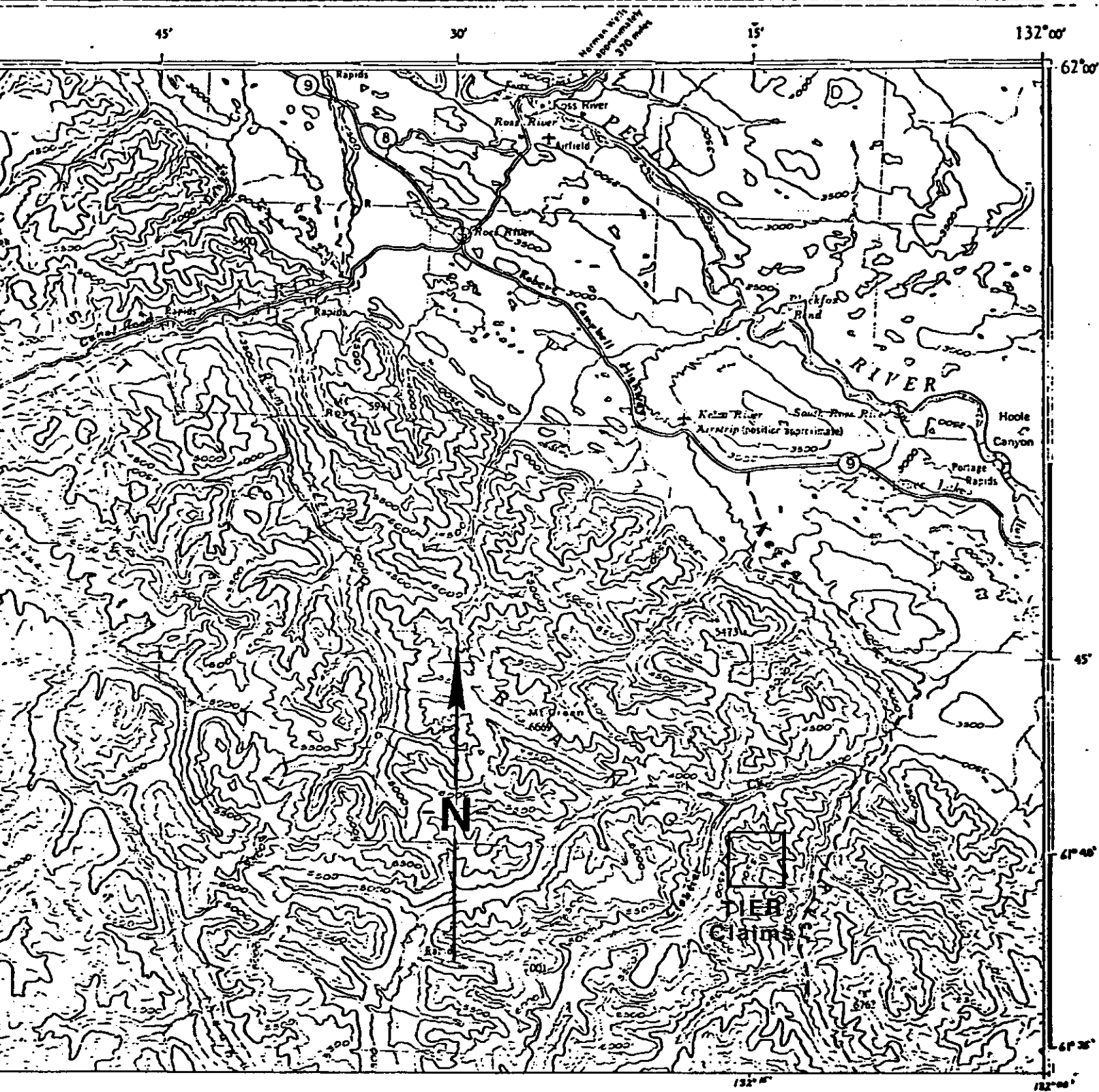


FIGURE 1

LOCATION AND ACCESS OF THE TIER CLAIMS.

Scale 1: = 50,000

III. PHYSIOGRAPHY AND VEGETATION

Relief over the TIER Claims is 1800 ft (550 m) between elevations of 5800 ft and 4000 ft (1770 m and 1200 m) above sea level. The topography consists of relatively steep (20°-40°) slopes with extensive talus coverage and some almost vertical, rocky crags. Vegetation consists of buckbrush and trees below 4000 ft (1220 m) and tundra flora (Labrador Tea, grass) above 5000 ft (1525 m) (treeline).

IV. PREVIOUS WORK

The area south of the Pelly River, which includes the TIER Claim Group, is and has been, the site of extensive prospecting for Pb-Zn-Ag mineralization. Several ongoing drilling and development projects are located in this region. To the author's knowledge, the TIER Claims themselves had not been previously explored prior to CanadianOxy's 1979 effort.

The Quiet Lake map sheet has been geologically mapped by numerous Geological Survey of Canada geologists from 1956 to 1976. In 1978 the Geological Survey of Canada conducted a helicopter mounted, regional stream sampling survey of the Quiet Lake sheet. The TIER Claims were staked in 1979 to cover the headwaters of a stream sediment Mo-Cu-Ba-F high value (16 ppm Mo, 52 ppm Cu, 2500 ppm Ba, 1000 ppb F).

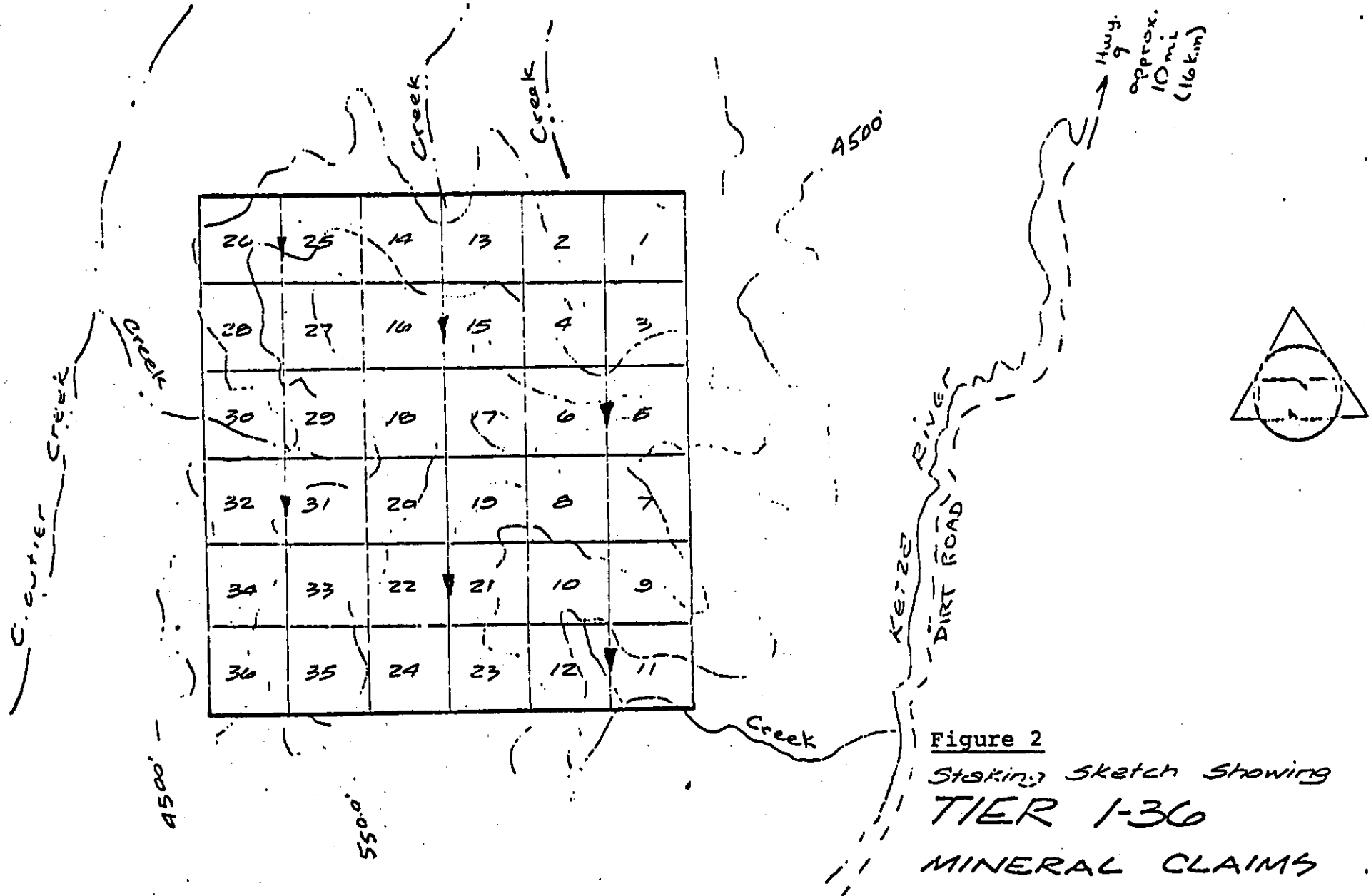


Figure 2

Staking Sketch Showing

TIER 1-36

MINERAL CLAIMS

Watson Lake Mining District

Map Sheet 105 F/9

Scale 1" = 2640'

During 1979 Canadian Occidental personnel spent 4.9 man days on a preliminary appraisal of the claim group. The property was mapped and stream sediment, heavy mineral and soil samples were taken. The results from this program are presented in the report, Geology and Geochemistry of the TIER Claim Group, E.J. Sacks, July 29, 1979.

V. CLAIM STATUS

<u>Claim Names</u>	<u>Claim Tag No.</u>	<u>Date Staked</u>	<u>Date Recorded</u>	<u>Expiry Date</u>
TIER 1-36	YA447734 to YA44769	June 22/79	July 6/79	April 6/82

The TIER 1-36 Mineral Claims were staked on June 22, 1979 by M.B.W. Surveys of Whitehorse, Yukon Territory for Canadian Occidental. The claims were recorded in Watson Lake, Yukon Territory on July 6, 1979.

VI. WORK COMPLETED - 1980

6.1 Claim Post Tagging

On return to the claim group in 1980, 1.5 man days were spent locating and tagging the claim posts by C. Richardson and F. Gittings.

6.2 Geological Mapping

F.W. Gittings mapped and prospected the claim group for two man days. Wallis, Kuehnbaum, Gleeson and Tetu visited the property at the beginning of the field season in June 1980. A total of 3.8 man days of work was performed. Results are discussed under Geology within this report.

6.3 Geochemistry

A total of 14 rock, 38 stream sediment, 2 heavy mineral and 109 soil samples were collected over the TIER Claims by Richardson, McNeill, Oberc and Jarvis. A total of 13 man days of work was performed.

6.4 Summary of Work Completed

TABLE 1:

Type of Work	Man Days	Samples	No. of Analyses											Total
			Cu	Mo	Ag	U	Zn	Pb	W	Sn	Au	Th		
Geological Mapping	3.8													
Geochemistry	13													
i) Rock		14	14	14	14	14	14						70	
ii) Heavy Min.		2	2	2	2	2	2	2	2	2	2	2	20	
iii) Stream Sed.		38	38	38	38	38	38						190	
iv) Soils		109	109	109	109	109	109						545	
TOTAL	16.8	163	163	163	163	163	163	2	2	2	2	2	825	

Helicopter (Bell 206-B) 9.5 hours

6.5 Names and Addresses of Personnel

Dr. R.H. Wallis Canadian Occidental Petroleum Ltd. Minerals Division Ste. 311-215 Carlingview Drive Rexdale, Ontario M9W 5X8	Chief Geologist
R.M. Kuehnbaum Same address as above	Project Supervisor
G. Tetu Same address as above	Project Geologist
F. Gittings Same address as above	Project Geologist
C. Richardson Same address as above	Senior Assistant
M. Oberc Same address as above	Junior Assistant
A. Jarvis Same address as above	Junior Assistant
B. McNeill Same address as above	Junior Assistant
Dr. C.F. Gleeson C.F. Gleeson and Associates R.R.#1 Lakeshore Drive Iroquois, Ontario K0E 1K0	Consulting Geochemist

VII. GEOLOGY

7.1 General Geology

Tempelman-Kluit of the Geological Survey of Canada compiled several previous mapping efforts in the Quiet Lake map sheet (see References). He describes the northwest-southwest trending ridge as unit SDd = Silurian and Lower Devonian, resistant, light grey, buff and orange weathering, medium

bedded dolomite-mudstone-calcarenite with many shallow water sedimentary features. Stratigraphically above this but actually underlying the dolomite unit on the TIER Claims lies unit uDMs = Upper Devonian and Mississippian black, recessive weathering, with rusty streaks, and thin bedded, black siliceous slate interbedded chert greywacke and grit; includes lenses of intermediate to acid volcaniclastic rocks. To the north of the unit SDd and underlying the folded thrust plane lies Templeman-Kluit's unit uKsc - Upper Triassic, dark grey and buff weathering recessive, thin bedded bioclastic limestone and calcareous siltstone, this unit overlies unit Mt = Mississippian, rusty orange weathering, resistant, apple green and dark grey chert and cherty tuff.

Mapping by CanadianOxy indicates that the dolomite ridge is a klippe of older Silurian aged rocks which has been thrust over the younger rock and at some time been folded into what appears to be a syncline with the same order of amplitude of the underlying younger fine-grained sediments and volcanic rocks. The synclinal axis runs northeast-southwest parallel to the ridge and supposedly plunges to the west. At CLO, which lies across Cloutier Creek to the west, the Silurian dolomite thrust slice is much larger indicating a westerly plunging syncline.

Detailed mapping of the younger Devonian to Triassic sequence indicates that these rocks have been folded into a series of anticlines and synclines. This folded

sequence can be seen on the CLO Claims. The sequence is composed of felsic volcanic and pyroclastic rocks which are overlain by graphitic shales and cherts. Overlying these rocks is a thick black chert unit (Templeman-Kluit's unit Mt) which is usually rusty weathering and resistant. Stratigraphically overlying the rusty chert is a well sorted, grey, fine-grained quartz sandstone with a calcareous cement. This is Templeman-Kluit's unit uKsc. Stratigraphic and structural relationships are shown in the cross section Plan 2.

7.2 Table of Formations (Plan 1)

TABLE 2:

<u>Unit</u>	<u>Description</u>
<u>Devonian - Triassic</u>	
4	Black shale, chert
4a	Quartz stockwork in Black Shale
3	Sandstone
2	Rhyolite, Dacite welded tuffs, with pyritic and Pyroclastic units.
2a	Porphyritic Dacite
<u>Silurian</u>	
1	Dolomite

7.3 Description of Rock Units

Description of rock samples and their elemental content is presented in Appendix VII.

Unit 1 Dolomite

This unit consists of light grey, buff and orange weathering, resistant, medium bedded, fine-grained, vuggy dolomite. Vugs are coated by euhedral quartz and dolomite crystals. (FG-TIER-1). The unit is characterized by a low scintillometer response of 40-50 cps.

Unit 2 Rhyolite, Dacite welded tuffs, pyritic, with Pyroclast units.

This unit consists of light green-purplish, highly siliceous volcanic and pyroclastic rocks. Most rocks are welded tuffs. Sample FG-TIER-10 is a quartz crystal vitric tuff with abundant pyrite disseminated throughout the rock.

A pyritic gossan was located in a fine-grained dacite rock near the presumed top of the volcanic pile. Minor sulphides were visible in all the rocks and varied from 1 to 10% of the rock. Sample FG-TIER-6 contains a significant amount of carbonate as matrix as well as brown euhedral grains (siderite).

Unit 2a Porphyritic Dacite

This unit occurs as float in the gossan and within outcrop. Sample BM-TIER-4 is a K-feldspar, porphyritic, possibly reworked dacite tuff.

Unit 3 Sandstone

The sandstone is a light grey, well-sorted fine-grained quartzite with a calcite cement. The unit was recessive, well-bedded in fine laminae 0.5-2 mm.

Unit 4 Black Chert and Shale

This unit consists of very fine-grained, dark grey-black chert (FG-TIER-12 and FG-TIER-13) and black fissile shale (FG-TIER-3).

Unit 4a Stockwork Quartz veins in black Cherty Shale

Thin (1-4 mm) quartz stockwork veins cuts the cherty shale at two locations (Plan 1, 11). The anostomosing vein network has introduced silica into the usually soft black shale to produce a siliceous, hard, resistive unit. The unit does not appear to be extensive and does not carry anomalous rock values.

7.4 Structure

The Devonian to Triassic sequence of volcanics and sediments have been folded into a series of open synclines and anticlines. Location of axis for the known structures are shown on the Geology Map (Plan 1). Because of this series of folds the Chert/Black Shale Unit, which is a good marker horizon, outcrops in the north central and southern portion of the claim group.

The Silurian dolomite unit has been thrust over the younger volcanic-sedimentary sequence from the southwest

(Templeman-Kluit, 1977). At TIER this unit has formed a Klippe which appears to have been folded along with younger rocks. To the west at the CLO Claim Group this unit appears to be folded into a syncline. At TIER the dolomite cement is on the south flank of an anticline formed in the younger rocks.

Jointing on the TIER Claims resolves into sets at 090° - 120° T/ 50° - 70° S, 090° - 120° T/ 60° - 90° N, 000 T- 020° T/ 60° - 80° W and 160° T/ 45° E. Within the younger volcanics and sediments the fractures are commonly coated with limonite.

7.5 Metamorphism

The only metamorphic feature noted on TIER Claim Group is the development of schistosity in the black shale and a cleavage in the cherts and in the volcanic rocks. This event is probably related to the folding within the Devonian to Triassic rocks.

7.6 Alteration

Bright orange and yellow gossan zones lie within the uppermost volcanic rocks in the central portion of the property. The main gossan zone west of the north-south ridge covers an area approximately 300 x 100 m. The gossan material consists of limonite, goethite and red hematite mud. Rock samples obtained from the gossan zone are non-anomalous.

7.7 Economic Geology

No visible mineralization was found on the TIER Claims with the exception of trace to minor amounts of pyrite in the dacite volcanics.

An extensive bright red gossan lies within the dacite volcanics at the top of the volcanic pile and stratigraphically underlying a graphitic shale horizon (Plans 1, 11). The gossan zone was soil sampled and rock sampled but the geochemical values obtained were disappointingly low. Cross section B-B' traverses this gossan area and shows no strong metal increases over the area (Plan 3).

A summary of rock geochemical values is presented in Table 3. None of the rock values are extremely high but the high copper (98 ppm) and zinc (675 ppm) values are interesting especially since zinc and copper were found in anomalous levels in stream sediment and soil samples in the southeast quadrant of the claim group (see Geochemistry section).

The highest zinc rock value (675 ppm) is contained in a quartz crystal vitric welded tuff of dacite composition with a pyrite content of 10% (WA-80-11119R). This rock sample was obtained from an outcrop immediately south of an overlapping zinc-copper anomaly (soil anomaly A). This rock sample also contains the second highest copper value obtained in 1980 (76 ppm). A rock sample obtained in the same location in 1979 contained 102 ppm copper. Soil geochemical values in soil anomaly A ranged up to 122 ppm

copper and 1350 ppm zinc. The highest copper value obtained in 1980 is 92 ppm and was taken from an outcrop of dacite tuff located 150 m north of soil anomaly A.

Based on information gathered on the TIER Claims it appears that horizons of dacite tuff within the volcanic pile provides the greatest potential for economic mineralization. However, more information is required on the area along the volcanic/black shale contact in east central sector of the claim group where the strongly anomalous stream sediments appear to originate.

VIII. GEOCHEMISTRY

8.1 Rock Geochemistry

A total of 14 rock samples were collected over the TIER Claims. The samples were analyzed for Cu, Mo, Ag, U and Zn. Values obtained for each metal were grouped into appropriate intervals and a histogram was produced. These histograms are contained in Appendix III and include Figures 3 to 10 inclusive. A 'best fit' curve was constructed on the histogram and all values right of the intersection of this curve with the abscissa are considered anomalous. Probably anomalous levels were arbitrarily selected to approximate the 97th percentile portion of the normal (non-anomalous) population. A summary of the rock geochemistry is contained in Table 3. Rock samples containing anomalous and probably anomalous values were

plotted on the compilation map (Plan 11) as well as being indicated as anomalous and non-anomalous on the geology map (Plan 1). Discussion of significant results is included in Section 7.6.

TABLE 3:

SUMMARY OF ROCK GEOCHEMICAL RESULTS
(Values in ppm)

<u>Element</u>	<u># of Samples</u>	<u>Range</u>	<u>Probably Anomalous</u>	<u>Anomalous</u>
Copper	14	2-98	15-20	>20
Molybdenum	14	1-12	5-8	>8
Silver	14	0.1-0.8	0.4-0.5	>0.5
Uranium	14	0.5-3.0	1.0-1.5	>1.5
Zinc	14	6-675	130-150	>150

8.2 Reproducibility of Geochemical Data

To check reproducibility of the analytical work, splits from randomly selected soil samples were used as standards. The control samples were made by randomly taking half of the original sample. No mixing was done to obtain a monogenized sample which may explain why high percentage differences do occur in the standard samples. The results are presented in Table 4.

TABLE 4: Reproducibility of Standard Samples

#	Control					#	Duplicate Of					% Difference from Average				
	Cu	Mo	Zn	Ag	U		Cu	Mo	Zn	Ag	U	Cu	Mo	Zn	Ag	U
1100	60	11	265	0.8	1.5	11051	68	10	270	1.2	1.5	6	5	1	20	0
11001	14	5	68	0.1	1.5	11081	14	5	80	0.1	2.0	0	0	8	0	14
11002	14	10	168	0.2	1.0	11180	14	7	186	0.2	0.5	0	18	0	0	33
11003	42	1	415	0.2	0.5	11206	44	2	425	0.1	0.5	2	25	1	33	0
11004	42	4	154	0.4	2.0	11234	36	3	156	0.1	1.0	8	17	1	60	0
11005	20	4	510	0.8	2.5	11258	18	4	410	0.6	4.0	11	0	11	14	23
11006	28	5	1150	0.4	6.5	11032	26	5	940	0.1	5.0	6	0	10	60	13

Generally accepted reproducibility limits: 0-10 ppm - 30%
 10-50 ppm - 20%
 +50 ppm - 10%

The elemental values fall within acceptable limits for reproducibility except for the low Mo, Ag and U values which are close to the detection limits for these metals. The soil and stream sediment analytical values can be considered within acceptable limits.

In the future control samples should be taken from one homogeneous bulk sample in order to determine analytical reproducibility.

8.3 Soil Geochemistry

A soil geochemical program was carried out by Canadian Occidental personnel over the TIER Claims south of the Devonian dolomite ridge which runs east-west through the center of the claim group. B horizon soils were collected every 100 m along pace and compass grid lines which were tied into a chained north-south baseline which ran down the main north-south ridge (Plans 5 to 9). All samples were partially dried in the field before shipment to the Chemex laboratory in North Vancouver, B.C. The analytical techniques used are given in Appendix I. Analytical results are contained in Appendix II. The results for each commodity were grouped into appropriate intervals and a histogram and cumulative frequency graph and table were produced. These graphs and table are contained in Appendix IV. A 'best fit' curve was constructed on the histogram. All values within the curve are considered non-anomalous or the normal population.

The mean value is taken to be the 50th percentile of the normal population cumulative frequency graph. Values at or above 97 percentile are considered probably anomalous. The results are presented in Table 5.

Soil value maps for each commodity were contoured to show the distribution of soil values across the claim group (Plans 5 to 9). The anomalous contour levels for Cu, Mo, Ag and U were placed on the compilation map (Plan 11) to determine anomalous areas. Since anomalous zinc values were so pervasive across the TIER Claims a higher contour interval of 400 ppm was chosen to highlight the focus of the zinc soil anomalies.

TABLE 5:

SUMMARY OF SOIL GEOCHEMICAL RESULTS

<u>Element</u>	<u>No. of Samples</u>	<u>Range</u>	<u>Mean</u>	<u>Probably Anomalous</u>	<u>Anomalous</u>
Copper	142	1-122	13	41-45	>45
Molybdenum	142	1-28	3	9-11	>11
Silver	142	0.1-4.8	0.3	1.0-1.2	>1.2
Uranium	142	0.5-7.0	1.3	2.5-3.0	>3.0
Zinc	142	1-1350	64	167-180	>180

8.4 Soil Anomalies

Soil anomalies for each of the five elements analyzed appear to be randomly oriented with many of the anomalous areas consisting of only one sample station. The failure of clear patterns to develop may be due to the wide spacing of soil lines and the rugged topography at TIER. Stream sediment sampling appears to be a much better tool in locating potential mineralized area at TIER (see Stream Sediment Geochemistry). One area near the southern limit of the claim group does have an apparently related Zn, Cu, and Ag anomaly and this area has been designated as soil anomaly A and has been discussed separately (section 3.4).

The anomalous molybdenum level in soils is low (11 ppm) with values ranging up to 29 ppm. This high value is located near the main gossan ridge in the west-central sector of the claim group (Plans 7, 11). A heavy mineral sample was taken in the stream directly north of the molybdenum soil anomaly and it is anomalous in molybdenum (10 ppm), (Plan 10, 11). The rock samples obtained from the area, however, are not anomalous.

There are seven separate silver soil anomalies on the TIER Claims. The three near the southern boundary of the claims are the strongest and have been broadly grouped into Anomaly 'A' for discussion. The main gossan area in the west central (Plans 8, 11) sector contains two separate samples which contain 1.6 and 1.8 ppm silver respectively.

A rock sample of porphyritic rhyolite tuff (80-WA-11115R) taken from the eastern soil anomaly contains 0.4 ppm silver which is considered probably anomalous. Directly north of this gossan area, but within a black shale unit and not the dacite tuff on which the gossan is formed, is a single point silver soil anomaly of 1.4 ppm silver (Plan 8). Two anomalous silver soil values (1.2 and 1.4 ppm) are located west of the claim boundary directly west of the two previously discussed anomalous areas (Plan 11). The stream which drains these four areas does not contain anomalous amounts of silver.

The strongest copper values occur in Anomaly "A". A second ridge around 0+00N and consists of two samples which contain 50 and 68 ppm copper. This copper soil anomaly occurs over a black shale unit. Rock samples of the black shale however do not contain anomalous copper values. Another anomalous copper values (46 ppm) occurs west of the claim group (Plan 11) and it also does not have an apparent source.

One single point uranium soil anomaly of interest is situated east of the main north-south ridge near the black shale/volcanic rock contact near the headwaters of the stream which is anomalous in uranium and zinc (Plan 11). A black shale rock sample 300 m to the west is anomalous (3.0 ppm) in uranium.

The main zinc anomalies occur within anomalous area "A". Of all the elements in soil samples analyzed for, zinc anomalous values are the most pervasive. Outside of area "A", three single station anomalous zinc values occur along

the dolomite talus/black shale contact immediately south of the dolomite ridge. These values range up to 740 ppm zinc and may be derived from the dolomite.

8.5 Soil Anomaly A

Soil anomaly A is located in the south central part of the TIER Claims and consists of widely dispersed copper, zinc, and silver soil anomalies, as well as possibly related uranium anomalies. An east ridge consisting of light purple dacitic tuff appears to be the probable source of these soil anomalies.

The copper anomalies in this area occur as two nodes. The major node is centered on the height of land and extends west downslope (Plans 6, 11). This node contains 5 sample stations with copper values over the anomalous 45 ppm contour interval and include the highest soil copper value obtained on the property of 122 ppm. Rock WA-80-11118R, a dacite tuff, was obtained from outcrop within the soil anomaly and contains an anomalous level of copper, 22 ppm. An outcrop of quartz crystal vitric welded tuff of dacite composition is located 75 m south of the soil anomaly and contains 76 ppm copper. The second copper soil node is located 250 m downslope of the main anomaly and consists of one sample which contains 64 ppm copper.

The most prominent silver soil anomaly on the property occurs 200-300 m downslope from the ridge of dacite

tuff and consists of four soil stations with values ranging from 1.2 to 2.0 ppm silver. There is no anomalous rock silver samples in the area to indicate a possible source and the streams which drain the area are not anomalous in silver.

There are five anomalous zones of zinc in soils which are believed to be associated with the dacite ridge source rock and therefore have all been grouped with soil anomaly A. (Plan 11). There are 13 soil sample with zinc values greater than the 400 ppm. Values range from 410 to 1350 ppm with the highest values occurring west of the main north-south ridge (Plans 5, 11). Streams which drains soil anomaly A are anomalous in zinc, up to 550 ppm on the west and up to 1600 ppm on the east (Plan 10).

The highest soil values for uranium (up to 5.0 ppm) are grouped in an area in the south-west corner of the claim group. There doesn't appear to be a direct relationship between this uranium soil anomaly and the zinc, copper and silver soil anomalies grouped into soil anomaly A. It is more plausible that the high uranium values are coming from the black shale talus which has been transported into the valley from the black shale outcrops immediately south. Because of low values, uranium is not of further interest.

8.6 Stream Sediment and Heavy Mineral Geochemistry

Twenty-nine stream sediment and two heavy mineral samples were collected during the 1980 TIER field program.

Stream sediment samples were taken every 150 m along three streams in the southern half of the claim group (Plan 10). Samples were analyzed for Cu, Mo, Ag, U, and Zn. The resulting data was plotted on histogram and cumulative frequency graphs in order to determine the mean, probably anomalous and anomalous levels (Appendix V). Results are presented in Table 6.

TABLE 6:

SUMMARY OF STREAM SEDIMENT GEOCHEMICAL RESULTS
(Values in ppm)

<u>Element</u>	<u>No. of Samples</u>	<u>Range</u>	<u>Mean</u>	<u>Probably Anomalous</u>	<u>Anomalous</u>
Copper	29	14-78	24	37 - 40	>40
Molybdenum	29	2-11	6	10	>10
Silver	29	0.1-0.8	0.2	0.6	>0.6
Uranium	29	0.5-6.5	1.5	2.5	>2.5
Zinc	29	130-1600	180	265-280	>280

Anomalous levels for heavy mineral values were taken from Eric Sacks' 1979 TIER report.

The main west flowing stream from which the G.S.C. obtained an anomalous zinc value of 420 ppm was sampled and returned one anomalous sample with 0.8 ppm silver and 2.5 ppm uranium (Plan 10). A minor stream which drains west from the southwest corner of the TIER Claims was sampled and one

sample was anomalous in zinc (550 ppm) and another sample which contained 11 ppm molybdenum. This stream should be sampled further downstream to test whether zinc values increase as they do in the highly anomalous east draining stream.

The main east draining stream is highly anomalous in zinc and consistently anomalous in uranium. Copper values are anomalous near the headwaters of the stream but drop off rapidly downstream. Lead was not analyzed for the stream sediment samples from this stream should be rerun for lead. Zinc values from the stream range up to 1600 ppm and uranium values range up to 6.5 ppm. A heavy mineral sample obtained downstream from the stream sediment samples contain an anomalous level of zinc (640 ppm). Rock values of zinc in the dacite tuff near the headwaters of the stream contains up to 580 ppm of zinc.

The two north flowing streams were sampled for Cu, Pb, Zn, Mo, U, Th and Ag in 1979 (Sacks). Seven of the eight samples were slightly anomalous in molybdenum and three samples were slightly anomalous in copper with a high of 62 ppm copper. Anomalous values ranged from 11 to 14 ppm. Both samples of black shale obtained from the area north of main east-west ridge however were not anomalous in molybdenum, with values of 1 ppm. Both samples however were anomalous in copper with values of 26 and 30 ppm.

IX. RADIOMETRICS

A systematic scintillometer survey was carried out in conjunction with the soil and stream sediment surveys. Readings were taken on the URTEC UG-133 model on TC at 10-second channel at every sample station (Plan 4). The readings were plotted according to their location and contoured at 150, 200, 150 and 300 cps intervals. The results are presented in Plan 4. A histogram and cumulative frequency graph are presented in Appendix VI. A summary of these results is presented in Table 7.

TABLE 7:

SUMMARY OF SCINTILLOMETER RESULTS

<u>Total Readings</u>	<u>Mean</u>	<u>Range</u>	<u>Probably Anomalous</u>	<u>Anomalous</u>
173	126 cps	13-401 cps	270-300 cps	>300 cps

The 300 cps scintillometer contour interval was drawn on the compilation map (Plan 11) to outline the anomalous areas. The largest area is located over the main gossan zone which has developed on a pyritic dacite tuff in the west-central sector of the TIER Claims (Plan 11). Another area of interest is located immediately upslope of the uranium soil anomaly along the east draining stream which is consistently anomalous in uranium. The highest scintillometer reading is an isolated reading of 401 cps along the east-west ridge which appears to be near the source of the uranium soil anomaly at the south end of the claims with anomaly "A". The other anomalous area, also within

soil anomaly 'A', is located at the headwaters of the stream which drains to the west along the southern boundary of the TIER Claims. Downslope 250 m from this area the highest soil uranium values up to 5 ppm are concentrated.

The overall low scintillometer responses indicates a low potential for economic uranium on the TIER Claims.

X. CONCLUSIONS

The geology of the TIER Claims consists of a folded volcanic, pyroclastic and sedimentary sequence of rocks. The age of these rocks has been described by Templeman Kluit (1977), as Devonian to Triassic. A klippe of older Silurian aged dolomite unit has been thrust over the younger rocks and forms a resistant northwest trending ridge across the TIER Claims.

No mineralization has been found to date on the TIER Claims, however, high zinc, and to a lesser extent, copper values have been found in rock (zinc 675 ppm, copper 98 ppm). The zinc and copper are hosted in dacitic tuffaceous units within the volcanic pile at TIER. Detailed mapping of these dacite tuff units is necessary to determine whether the Zn, Cu mineralization is stratabound or structurally controlled.

The highest soil geochemical values are located in the extreme south-central sector of the claim group in an area underlain by dacite tuff (soil anomaly A - see Plan 11). Values ranged up to 1350 ppm zinc, 122 ppm copper, 4.8 ppm silver and 7.0 ppm uranium. The highest molybdenum soil value (28 ppm) is located over the main gossan zone in the west-central sector of the TIER Claims.

It is interesting to note that only streams on the east half of the claim group are anomalous in zinc (up to

1600, copper (up to 78), and uranium (up to 6.5). The highest potential for uranium mineralization appears to occur along the black shale/volcanic contact on the east half of the property.

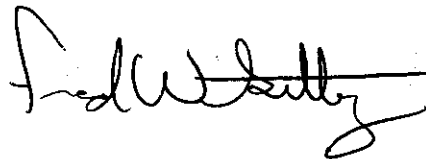
The main gossan zone is disappointingly barren of economic mineralization with only minor Ag, Mo soil anomalies located in the area.

XI. RECOMMENDATIONS

Further work on the TIER Claims should be concentrated on the southeast sector of the claim group.

1. Additional detailed stream sediment sampling should be carried out in order to outline the source areas for potential Zn, Cu and U mineralization.
2. Further geological mapping would attempt to determine the control for the high zinc, copper and uranium values within the volcanic dacite units.
3. Detailed geological mapping and possibly hand pitting should be carried out across the black shale/volcanic contact east of the main north-south ridge to determine the source of the highly anomalous zinc and uranium stream sediment values in the southeast sector.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'Fred W. Gittings', with a stylized, cursive script.

Fred W. Gittings

Toronto, Ontario
December, 1980

REFERENCES

1. G.S.C. (1978): U.R.P. Stream Sediment and Water Geochemical Survey, Southern Yukon Territory, 1978 - Quiet Lake Sheet NTS 105F; O.F.R. 564.
2. Sacks, E.J. (1979), Geology and Geochemistry of the TIER Claim Group, submitted to Canadian Occidental Petroleum Ltd.
3. Templeman-Kluit, D.J. (1977): Quiet Lake (105F) and Finlayson Lake (105G) Map Areas; G.S.C. O.F.R. 486.
4. Wheeler, J., Green, L. and Roddick, J. (1960); Geology of Quiet Lake Map Sheet, Yukon Territory; G.S.C. Map 7 - 1960, Preliminary Series, Sheet 105F.

Appendix I - Sampling and Laboratory Procedures

I. SAMPLING PROCEDURES

A) Heavy Minerals

1. A sample site is selected which exhibits maximum sorting of stream bed material. Active (below water) or previously active (dry now but previously below water) sites may be chosen. Leading edges or sides of gravel bars with large boulders are most attractive. In practice, the ideal case is rare and one chooses the best possible site.
2. Gravel and cobble material is shoveled into a large (18" to 24") gold pan into which 1/4" holes have been drilled. The material is vigorously shaken in still water so that - 1/4 in. material passes the screen into a second, matching pan. Enough -1/4 in. material is collected to fill an 18" x 24" poly bag (usually one large pan or two smaller ones). The -1/4" material is returned to camp.
3. The - 1/4 in. material is panned to achieve a concentrate of heavy minerals and aggregates containing heavy minerals. Approximately 80% of the original material (20 - 25 lbs) is discarded while a 1 - 2 lb. concentrate is obtained. The concentrate is sealed in a plastic or cloth bag (cloth is preferred as it allows

the sample to dry, thus reducing shipping weight) and then sent to the laboratory for geochemical analysis.

B) Stream Sediment

1. A presently or previously active stream site is selected which exhibits minimum sorting ie. quiet water, and accumulation of fine sandy and silty material. If the stream is too active, material can be obtained from bank-moss which acts as a trap, or by digging out the lee of large boulders.
2. Three to four handfuls of material is collected and after squeezing to remove excess water is placed in high wet-strength, heavy duty, prenumbered kraft envelopes. The samples are dried in the field and then sent to the laboratory for geochemical analysis.

C) Stream Water

1. A 4 oz. poly bottle is rinsed with the sample site water at least three times then filled fully and tightly capped. The sample is tested in the field for pH and specific conductivity, then sent to the laboratory for geochemical analysis.
2. Care should be taken to avoid contamination by always collecting waters up-stream from a heavy mineral or sediment sample site.

D) Soil

1. 'B' horizon or talus fine material is sampled.
2. Three to four handfuls of material are collected into heavy duty, high wet-strength kraft envelopes which are dried in the field and then sent to the laboratory for analysis.

E) Sample Site Information Card

1. At each soil or stream sample site, an 80 column field data card is completed. The sampler records such information as sample number, location and type, depth of stream, sample composition, vegetation, drainage, etc. Separate cards are used for stream and soil samples in order to record pertinent information.

II. Laboratory Procedures

A. Sample Preparation

i) Heavy Minerals

1. Samples dried and weighed.
2. Screen - 10 mesh material from sample and weigh; weigh and retain +10 mesh material left on screen.
3. Use -10 mesh fraction for heavy liquid separation.
4. Transfer -10 mesh (fine) fraction into a 1000 ml. separatory funnel containing 200 mls. of tetrabromoethane (S.G. 2.96).
5. Shake sample gently in heavy liquid. Particles of fines adhering to sides of the separatory funnel can be washed into the heavy liquid by slowly rotating the funnel at an oblique angle. The "heavies" (S.G. >2.96) will slowly settle to the bottom of the heavy liquid.
6. Drain the "heavies" into a small filter funnel. Drain excess heavy liquid and light materials into a separate filter funnel. Collect all heavy liquid into a waste receiving bottle.
7. Save light minerals (S.G. <2.96). Wash "heavies" fraction with methanol to remove residual tetrabromoethane. Use the same procedure on light minerals fraction. Dry both fractions and weigh. Retain the "lights" in a suitable sealed container. Save 0.5 gm of "heavies" in a plastic vial for visual examination.
8. Pulverize the remaining "heavies" in an agate mortar and pestle and homogenize before weighing for analyses.

9. Analyse the "heavies" powder for appropriate elements. The number of elements analysed for is determined by the amount of "heavy" material obtained in separation.

ii) Stream Sediments

1. Samples are sorted and dried at 50°C for 12 to 16 hours.
2. Dried material is then screened to obtain the -80 mesh (177 micron) fraction. The rest of the material is discarded.
3. -80 mesh fraction material is weighed and analysed for appropriate elements.

iii) Soils

Same procedure as for stream sediments.

iv) Rocks

1. Entire sample is crushed.
2. If necessary (>250 gms.). The sample is split on a Jones splitter, the reject is retained for a short period.
3. The split fraction is pulverized in a ring grinder such that 90% passes a 200 mesh (74 micron) sieve.
4. The -200 mesh material is weighed and analysed for the appropriate elements.

v) Waters

See individual element descriptions for U and F.

B. Elemental Analyses

i) ppm Copper, Lead, Zinc, Silver, Molybdenum (Atomic Absorption)

1. A 1.0 gm portion of -80 mesh soil or stream sediment or -200 mesh rock flour or pulverized "heavies" is digested in concentrated, hot, perchloric - nitric acid ($\text{HClO}_4\text{-HNO}_3$) for 2 hours.
2. Digested sample is cooled and made up to 25 mls. with distilled water.
3. Solution is mixed and solids allowed to settle.
4. Cu, Pb, Zn Ag and Mo are determined by atomic absorption, using background correction for Pb and Ag analyses.

<u>Element</u>	<u>Bkgd. Corr.</u>	<u>Flame Type</u>	<u>Wave Length nm</u>	<u>Detection Limit</u>	<u>Chemex Standard</u>	<u>+ 1 Std. Deviation</u>
Cu	No	A	324.7	1 ppm	71 ppm	<u>+ 3</u>
Pb	Yes	A	217.0	1 ppm	59 ppm	<u>+ 1</u>
Zn	No	A	213.8	1 ppm	52 ppm	<u>+ 3</u>
Ag	Yes	A	328.1	0.2 ppm	8.5 ppm	<u>+ 0.5</u>
Mo	No	N	313.3	1 ppm	25 ppm	<u>+ 1</u>

A = Air acetylene flame.

N = Nitrous oxide - acetylene flame.

ii) ppm Tin (Sn) (Atomic Absorption)

1. A 1.0 gm sample of -80 mesh soil or stream sediment, -200 mesh rock flour or pulverized "heavies" is scinttered with ammonium iodide.
2. The resulting tin-iodide is leached with a dilute HCl - ascorbic acid solution.

3. The TOPO complex is then extracted into MIBIC (Methyl isobutyl ketone) and analysed via atomic absorption.

4. Detection limit: 1 ppm Sn

iii) ppm Tungsten (W) (Colourimetric)

1. 0.5 gm of -80 mesh soil or stream sediment, -200 mesh rock flour or pulverized "heavies" is fused with potassium bisulfate and leached with HCl.

2. The reduced form of W is complexed with toluene 3, 4 dithiol and extracted into an organic phase.

3. The resulting colour is visually compared to similarly prepared standards. (Colourimetric method)

4. Detection limit: 2 ppm W

iv) ppb Gold (Au) (Atomic Absorption)

1. A 5 gm sample of -200 mesh rock flour or pulverized "heavies" is ashed at 800°C for 1 hour.

2. Ashed material is digested with aqua regia twice to dryness.

3. Digested material is taken up in 25% HCl.

4. Au is extracted as the bromide into MIBK and analysed via atomic absorption.

5. Detection limit: 10 ppb Au

v) ppm Thorium (Th) (Neutron Activation)

1. 1 gm of -80 mesh soil or stream sediment, -200 mesh rock flour or pulverized "heavies" is weighed into a polyethylene vial and heat sealed.

2. Samples, along with standards, are then irradiated

for sufficient periods to receive a neutron dose of $1-3 \times 10^{10}$ to $10^{15}/\text{cm}^2$.

3. Following irradiation, samples are cooled for at least one week and thorium determined by the measurement of its characteristic gamma ray, using a semiconductor (Ge (Li)) detector.

4. Detection limit: 1 ppm Th

vi) Uranium (U) (Fluorimetry)

A) Uranium in soils, stream sediments, "heavies", rocks.

1. 1 gm of -80 mesh soil or stream sediment, -200 mesh rock flour or pulverized "heavies" is digested with hot, $\text{HClO}_4\text{-HNO}_3$ to strong fumes of HClO_4 for approximately 2 hours.

2. The digest is diluted to volume and mixed.

3. An aliquot is extracted into MIBK with the acid of an aluminum nitrate-tetrapropyl ammonium hydroxide salting solution. (TP)

4. Uranium in the MIBK is determined by evaporating a portion of the MIBK in a platinum dish and fusing with a mixture of $\text{Na}_2\text{CO}_3\text{-K}_2\text{CO}_3\text{-NaF}$.

5. The fluorescence of the fused flux is measured to determine the uranium content.

6. Detection limit: 0.5 ppm U

pH

1. pH in waters was determined in the field, using a portable pH meter.
2. The meter was standardized by means of buffer solutions, every 10th sample to minimize meter drift.

Specific Conductivity (S.C.)

1. S.C. in waters was determined in the field, using a portable S.C. meter.
2. The electrode was washed in a standard water, after each determination, to minimize and standardize contamination.

APPENDIX II
GEOCHEMICAL CERTIFICATES

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54847

TO: Canadian Occidental Petroleum Ltd.,
Minerals Division,

INVOICE NO. 38285

Ste. 311 - 215 Carlingview Dr., CC. Watson Lake, Y.T.
Rexdale, Ont. M9W 5X8

RECEIVED July 22/80

ATTN: Tier - Heavy Minerals, Project Watsu

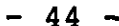
ANALYSED Aug. 27/80

[illegible]

**MEMBER
CANADIAN TESTING
ASSOCIATION**

CERTIFIED BY:

Hart Biddle



212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
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AREA CODE: 604
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TO: CANADIAN OCCIDENTAL PETROLEUM LTD.
Minerals Division
Ste. 311 - 215 Carlingview Drive
Rexdale, Ontario

ATTN: M9W 5X8 Tier - Heavy Minerals Project: Watsu

CERTIFICATE NO. 54847

INVOICE NO. 38968

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ANALYSED Sept. 23/80

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**MEMBER
CANADIAN TESTING
ASSOCIATION**

CERTIFIED BY:

Harry Bickel



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CERTIFICATE OF ANALYSIS

TO: Canadian Occidental Petroleum Ltd.
Minerals Division
Ste. 311 - 215 Carlingview Dr.
Rexdale, Ont. M9W 5X8

ATTN: TIER Soils - Project WATSON GC. Watson Lake

CERTIFICATE NO. 54964

INVOICE NO. 37621

RECEIVED July 25/80

ANALYSED Aug. 6/80

SAMPLE NO. :	PPM Cu	PPM Mo	PPM Zn	PPM Ag	PPM U
80-WA-11238	14	1	68	0.1	1.5
11239	24	1	194	0.1	0.5
11240	18	1	68	0.2	0.5
11241	12	1	74	0.1	0.5
11242	8	1	80	0.1	0.5
11243	4	1	4	0.1	0.5
11244	2	1	28	0.2	0.5
11245	8	4	86	0.1	1.0
11246	34	4	275	0.4	3.5
11247	4	1	10	0.1	1.0
11248	10	12	48	0.6	1.5
11249	14	12	104	0.4	1.0
11250	22	5	120	0.2	1.5
11251	10	5	126	0.1	1.0
11252	44	1	200	0.1	0.5
11253	26	1	465	1.0	5.0
11254	6	1	14	0.1	1.5
11255	22	1	300	0.1	2.5
11256	6	1	82	0.2	1.5
11257	22	3	300	0.6	2.5
11258	18	4	410	0.6	4.0
11259	2	1	24	0.2	0.5
11260	18	1	215	0.8	1.5
11261	24	1	196	2.4	1.5
90-WA-11262	32	1	180	1.4	1.0



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CANADIAN TESTING
ASSOCIATION

CERTIFIED BY: *Hart Biddle*



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AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

TO: Canadian Occidental Petroleum Ltd.,
Minerals Division,
Ste. 311 - 215 Carlingview Dr.,
Rexdale, Ont. M9W 5X8

ATTN: TIER SOILS Project WATSU

CC. Watson Lake

CERTIFICATE NO. 54963

INVOICE NO. 37621

RECEIVED July 25/80

ANALYSED Aug. 6/80

SAMPLE NO. :	PPM Cu	PPM Mo	PPM Zn	PPM Ag	PPM U
80-WA-11194	16	5	300	0.1	1.0
11195	24	7	1000	0.2	2.0
11196	8	9	275	0.4	1.0
11197	10	7	158	0.8	0.5
11198	6	1	136	0.2	1.0
11199	1	1	58	0.1	1.0
11200	1	7	10	1.2	0.5
11201	2	16	18	1.2	1.5
11202	16	8	94	1.4	0.5
11203	20	7	325	2.0	0.5
11204	10	4	28	0.1	0.5
11205	8	7	48	0.1	0.5
11206	44	2	425	0.1	0.5
11207	24	2	138	0.1	1.0
11208	16	5	76	0.1	0.5
11209	10	1	675	0.2	2.0
11210	36	1	1350	0.8	0.5
11211	24	1	555	0.4	0.5
11212	1	1	700	4.8	0.5
11213	28	6	118	0.2	0.5
11214	16	1	56	0.1	1.0p
11215	10	1	200	0.1	3.0
11216	8	1	28	0.2	1.0
11217	76	1	40	0.1	0.5
11218	122	1	148	0.1	0.5
11219	54	3	410	0.1	0.5
11224	14	1	192	0.1	1.0
11225	10	1	245	0.1	1.0
11226	10	1	64	0.1	1.5
11227	10	2	46	0.1	1.0
11228	10	2	34	0.1	1.0
11229	8	1	56	0.1	0.5
11230	10	1	34	0.1	1.0
11231	14	2	56	0.1	1.5
11231	8	1	28	0.1	1.0
11232	18	1	118	0.1	1.0
11234	36	3	156	0.1	2.0
11235	16	1	250	0.1	1.0
11236	22	1	90	0.1	1.0
80-WA-11237	2	1	2	0.1	0.5



MEMBER
CANADIAN TESTING
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CERTIFIED BY:

Harry Biddle



- 47 -

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CERTIFICATE OF ANALYSIS

TO: Canadian Occidental Petroleum Ltd.,
Minerals Division,
Ste. 311 - 215 Carlingview Dr.,
Rexdale, Ont. M9W 5X8

ATTN: TIER Soils - Project WATSU CC. Watson Lake

CERTIFICATE NO. 54962

INVOICE NO. 37621

RECEIVED July 25/80

ANALYSED Aug. 6/80

SAMPLE NO. :	PPM Cu	PPM Mo	PPM Zn	PPM Ag	PPM U
80-WA-11002	14	10	186	0.2	1.0
11003	42	1	415	0.2	0.5
11004	42	4	154	0.4	2.0
11005	20	4	510	0.8	2.5
11006	28	5	1150	0.4	6.5
11137	84	1	1100	0.1	1.0
11138	30	4	410	0.2	0.5
11139	30	3	295	0.1	0.5
11140	64	4	94	0.1	0.5
11141	14	7	365	0.2	0.5
11142	22	2	310	0.2	7.0
11143	6	1	32	0.2	1.0
11144	18	3	174	0.2	1.5
11145	12	1	130	0.1	1.5
11146	10	1	90	0.2	1.0
11147	18	2	186	0.4	2.0
11148	8	1	42	0.4	1.0
11149	2	1	1	0.1	0.5
11150	10	2	88	0.1	0.5
11151	14	2	34	0.2	2.0
11152	12	3	66	0.6	2.0
11153	28	4	152	0.2	1.5
11154	40	3	196	0.1	1.0
11155	46	3	250	0.1	1.0
11156	30	5	315	0.1	1.0
11157	34	5	445	0.1	1.0
11180	14	7	186	0.2	0.5
11181	8	8	64	0.1	0.5
11182	12	6	62	0.1	1.0
11183	24	14	186	1.0	1.5
11184	12	5	118	0.6	1.5
11185	28	5	280	0.4	1.5
11186	2	2	8	0.2	0.5
11187	10	6	114	0.1	2.0
11188	6	3	186	0.1	1.0
11189	6	3	88	0.1	2.0
11190	8	2	122	0.1	2.0
11191	34	3	515	0.2	1.0
11192	20	3	186	0.2	2.0
80-WA-11193	1	1	12	0.1	0.5



MEMBER
CANADIAN TESTING
ASSOCIATION

CERTIFIED BY: *Hart Biddle*



CHEMEX LABS LTD.

12 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Canoxy
Minerals Division
311 - 215 Carlingview Drive
Rexdale, Ontario

ATTN: M9W 5X8 Tier Soils, Project Watsu

CERTIFICATE NO. 54838
INVOICE NO. 37487
RECEIVED July 22, 1980
ANALYSED August 1, 1980

SAMPLE NO. :	PPM Mo	PPM Cu	PPM Zn	PPM Ag	PPM U
80WA 11051	10	68	270	1.2	1.5
11052	6	32	124	0.4	1.0
11053	3	12	52	0.1	1.0
11054	3	18	152	0.2	1.5
11055	1	10	740	0.1	1.0
11056	1	4	34	0.1	0.5
11057	5	50	188	0.8	1.5
11058	1	4	16	0.2	1.0
11059	6	12	82	0.4	1.0
11060	11	10	44	0.6	1.0
11061	17	6	18	1.6	1.0
11062	5	10	86	0.2	1.0
11063	7	12	56	0.4	1.0
11064	29	40	194	1.8	2.0
11065	21	30	148	0.4	1.0
11066	4	6	22	0.6	1.0
11067	3	10	64	0.4	2.0
11068	2	8	36	0.2	1.5
11069	3	8	30	0.1	1.0
11070	3	10	54	0.6	0.5
11071	1	4	10	1.2	0.5
11072	7	46	178	1.4	2.5
11073	2	4	22	0.4	0.5
11074	1	4	18	0.8	0.5
11075	2	16	174	0.8	1.5
11076	1	4	24	0.1	1.0
11077	7	14	106	0.4	1.0
11078	8	22	192	0.6	1.0
11079	4	6	30	0.2	0.5
11080	5	8	32	0.4	1.0
11081	5	14	80	0.1	2.0
11082	11	34	410	1.4	2.0
11083	4	14	32	0.4	1.5
11084	3	16	740	0.1	1.0
11085	15	42	330	0.6	3.5
11000	11	60	265	0.8	1.5
80WA 11001	5	14	68	0.1	1.5



MEMBER
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ASSOCIATION

CERTIFIED BY:

Hart Biddle



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO 54965

TO: Canadian Occidental Petroleum Ltd.,
Minerals Division
Ste. 311 - 215 Carlingview Dr.
Rexdale, Ont. M9W 5X8

INVOICE NO. 37621

RECEIVED July 25/80

ATTN: TIER Stream Seds - Proj. WATSU CC. Watson Lake

ANALYSED Aug. 6/80

SAMPLE NO. :	PPM Cu	PPM Mo	PPM Zn	PPM Ag	PPM U
80-WA-11011SS	28	10	136	0.8	2.5
11012	24	8	275	0.4	2.0
11013	18	11	182	0.6	1.5
11014	14	8	180	0.4	1.5
11015	16	7	196	0.2	1.5
11016	16	7	184	0.2	1.5
11017	18	7	215	0.2	1.5
11018	18	5	235	0.1	2.0
11019	16	5	182	0.1	1.5
11020	16	7	180	0.2	2.0
11021	18	6	200	0.1	2.0
11022	18	7	192	0.1	0.5
11023	18	11	130	0.1	1.5
11024	28	6	220	0.1	1.5
11025	24	9	184	0.1	0.5
11026	26	10	198	0.1	1.0
11027	34	7	550	0.4	1.5
11028	78	2	370	0.1	0.5
11029	40	6	265	0.1	1.0
11030	36	5	460	0.1	1.5
11031	32	6	1000	0.1	4.5
11032	26	5	940	0.1	5.0
11033	34	7	1100	0.1	5.5
11034	30	6	1200	0.1	6.5
11035	28	7	1150	0.1	5.5
11036	32	4	1600	0.2	3.0
11037	24	4	1300	0.1	3.0
11038	22	2	190	0.1	1.5
80-WA-11039SS	30	4	775	0.2	1.5



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ASSOCIATION

CERTIFIED BY:

Harry Biddle



- 50 -

CHEMEX LABS LTD.

12 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54958

TO: Canadian Occidental Petroleum Ltd.,
Minerals Division,
Ste. 311 - 215 Carlingview Dr.,
Rexdale, Ont. M9W 5X8

INVOICE NO. 37604

RECEIVED July 25/80

ATTN: TIER Rocks - Project WATSU CC. Watson Lake, Y.T.

ANALYSED Aug. 6/80

SAMPLE NO. :	PPM Cu	PPM Mo	PPM Zn	PPM Ag	PPM U
80-WA-11112R	10	2	118	0.1	1.0
11113	18	2	144	0.1	1.0
11114	14	12	6	0.4	3.0
11115	6	4	10	0.4	0.5
11116	2	1	34	0.1	0.5
11117	98	1	94	0.1	0.5
11118	22	4	52	0.1	0.5
11119	76	2	675	0.1	0.5
11120	8	4	18	0.2	2.5
11121	26	1	580	0.2	2.0
11122	2	1	44	0.4	1.5
11123	26	1	70	0.2	1.0
11124	30	1	124	0.8	0.5
80-WA-11125R	8	2	20	0.1	1.0



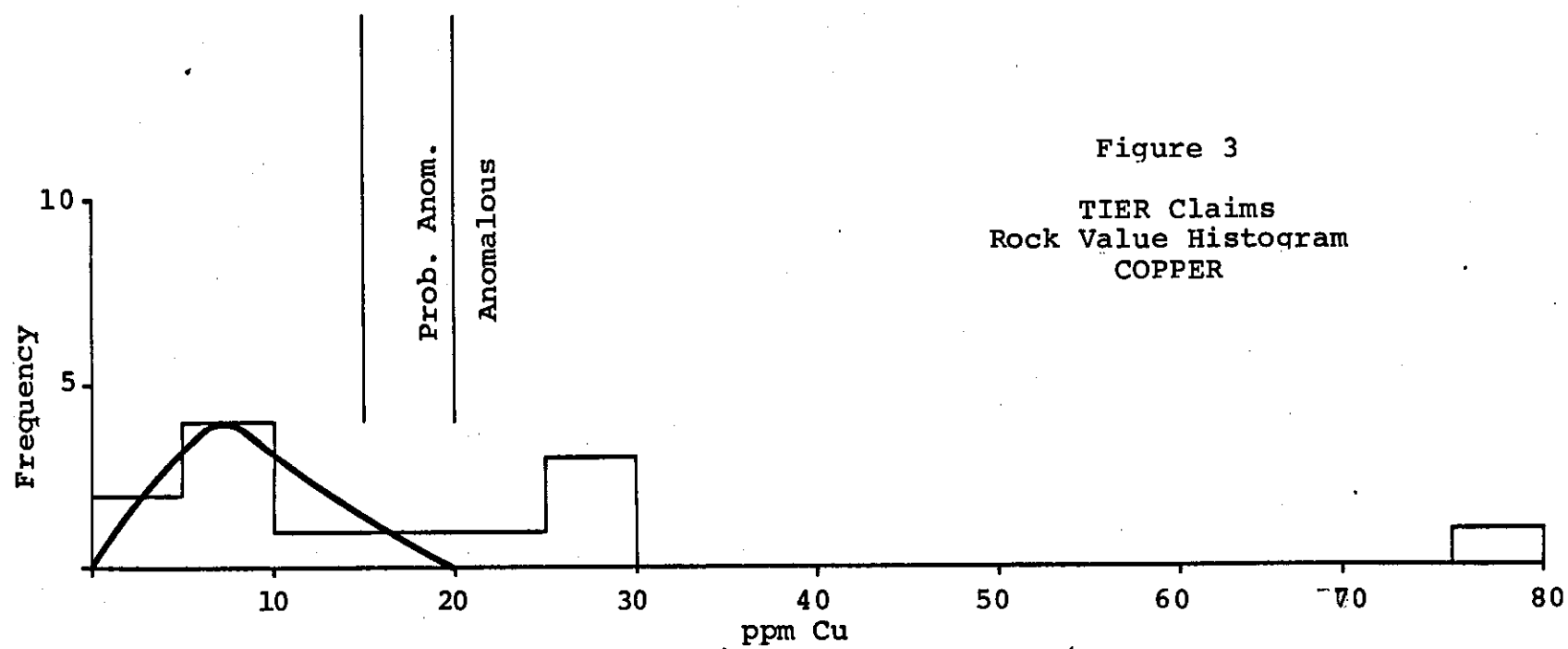
MEMBER
CANADIAN TESTING
ASSOCIATION

CERTIFIED BY:

Hart Biele

APPENDIX III

HISTOGRAMS FOR ROCK GEOCHEMISTRY



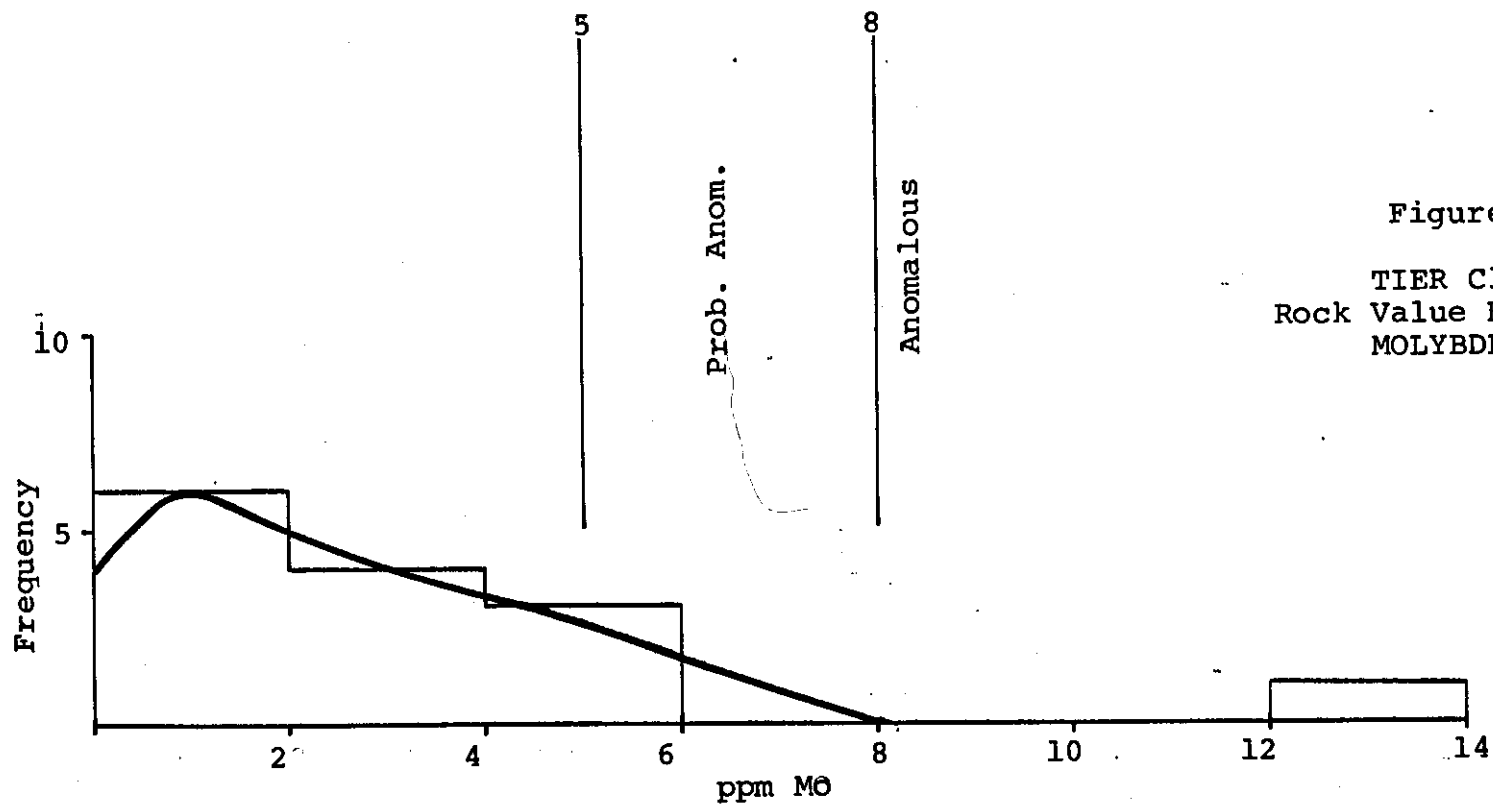


Figure 4
TIER Claims
Rock Value Histogram
MOLYBDENUM

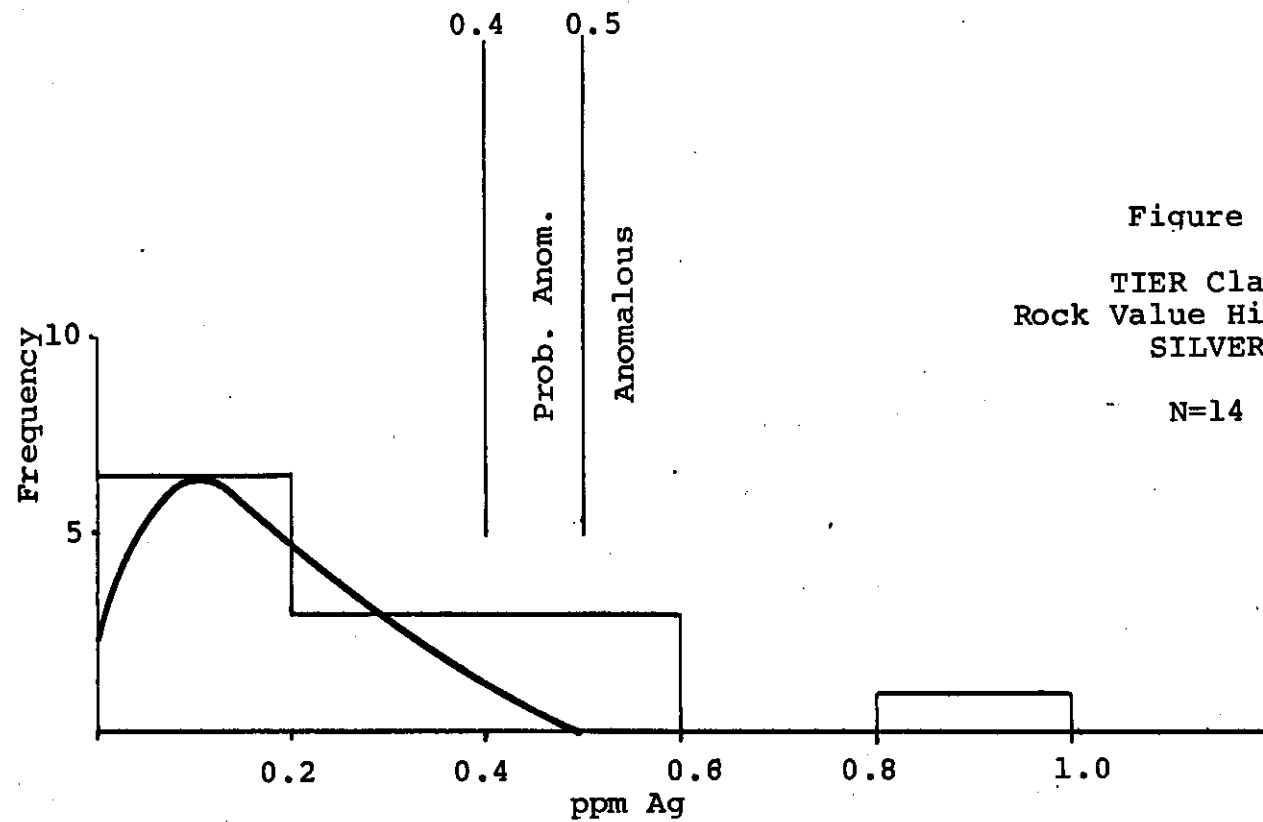


Figure 5
TIER Claims
Rock Value Histogram
SILVER
N=14

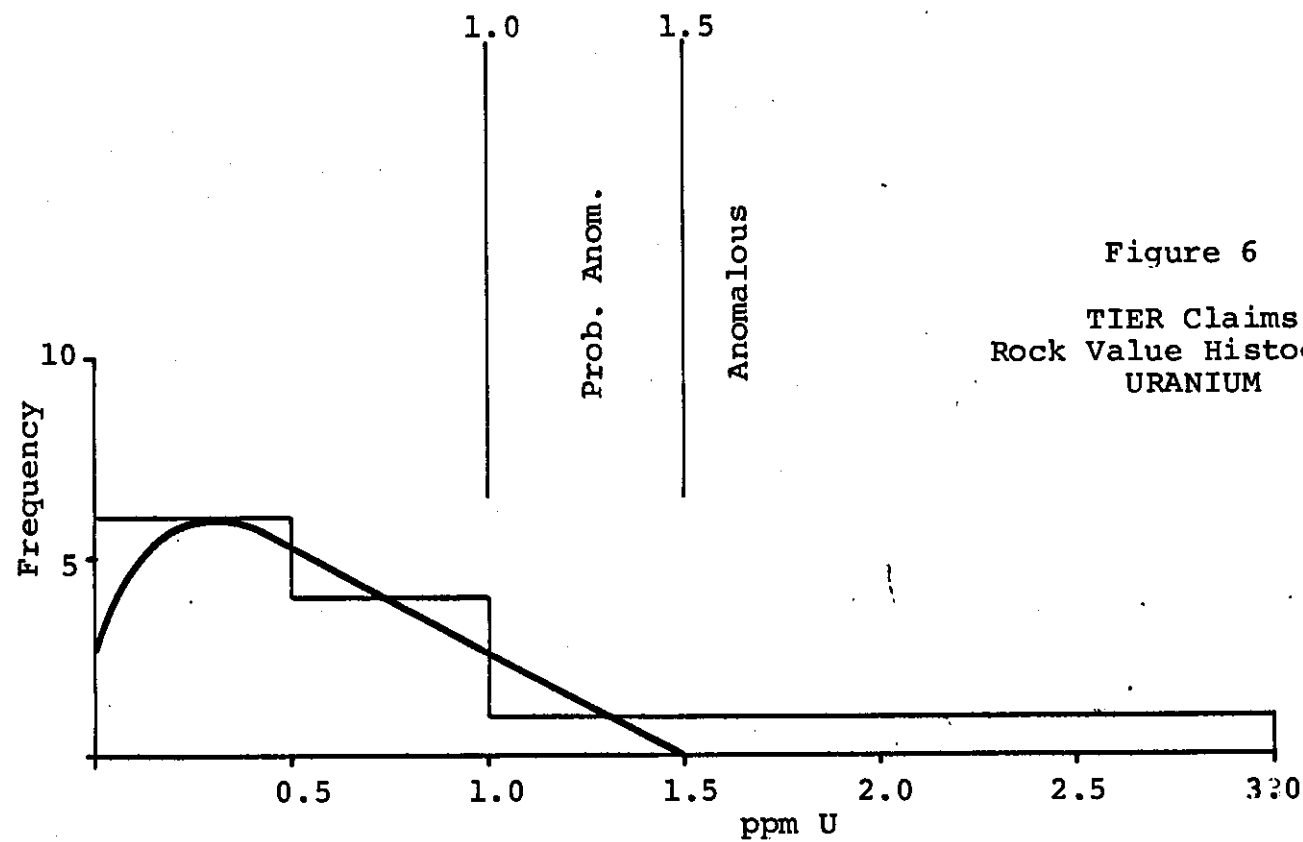


Figure 6
TIER Claims
Rock Value Histogram
URANIUM

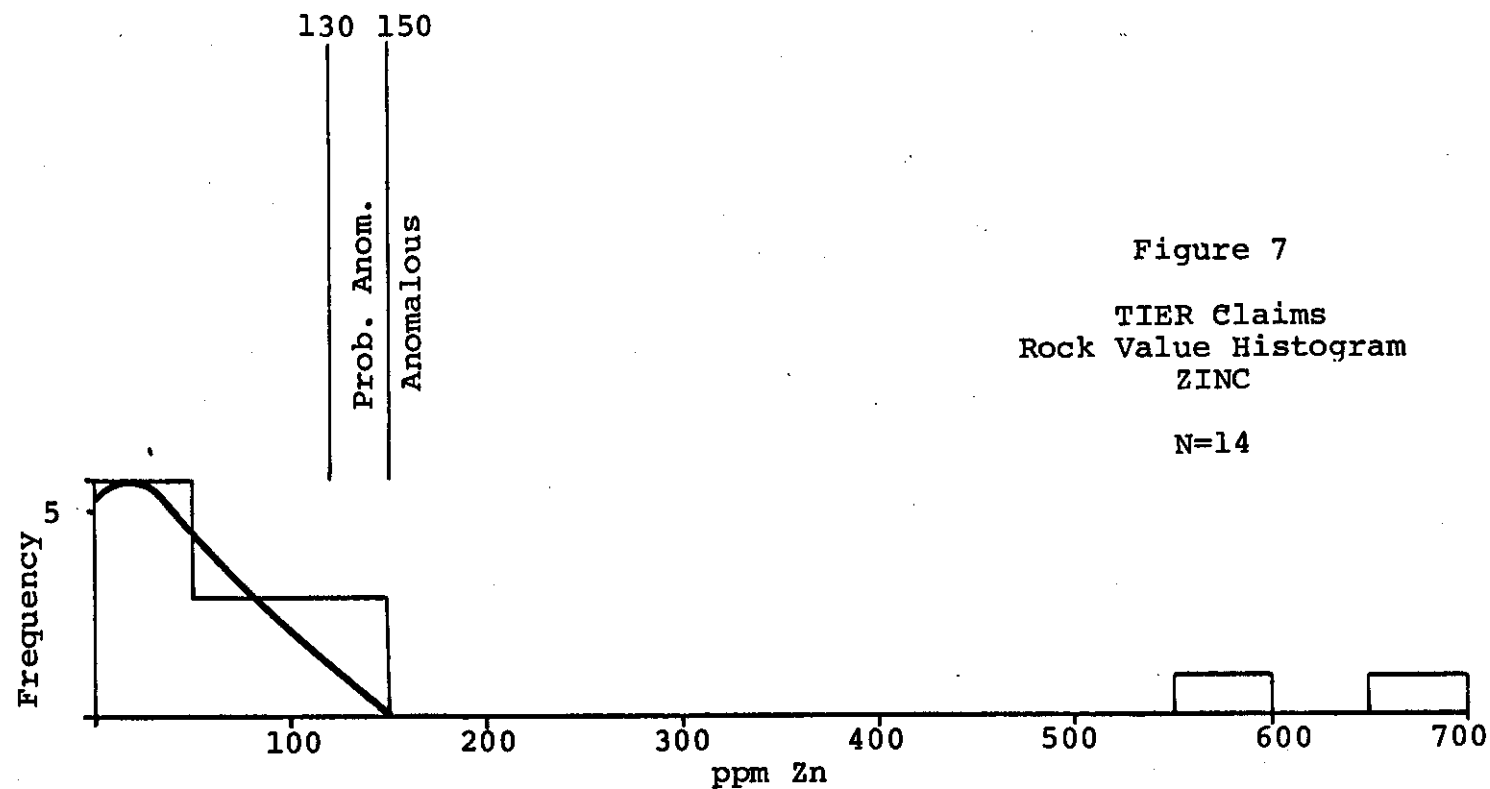


Figure 7
TIER Claims
Rock Value Histogram
ZINC
N=14

APPENDIX IV

Histograms and Cumulative Frequency Graphs
and Tables for Soil Geochemistry

TABLE 8: Tier
Soils
Copper

Interval (ppm)	Frequency	Cumulative Frequency	Cumulative Percentage of the Normal Population
0- 5	18		13.6
6- 10	41	59	44.6
11- 15	20	79	59.8
16- 20	17	96	72.7
21- 25	12	108	81.8
26- 30	9	117	88.6
31- 35	6	123	93.1
36- 40	4	127	96.2
41- 45	5	132	100.0
46- 50	3	135	
51- 55	1	136	
56- 60	1	137	
61- 65	1	138	
66- 70	1	139	
71- 75	0		
76- 80	1	140	
81- 85	1	141	
86- 90	0		
91- 95	0		
96-100	0		
101-105	0		
106-110	0		
111-115	0		
116-120	0		
121-125	1	142	

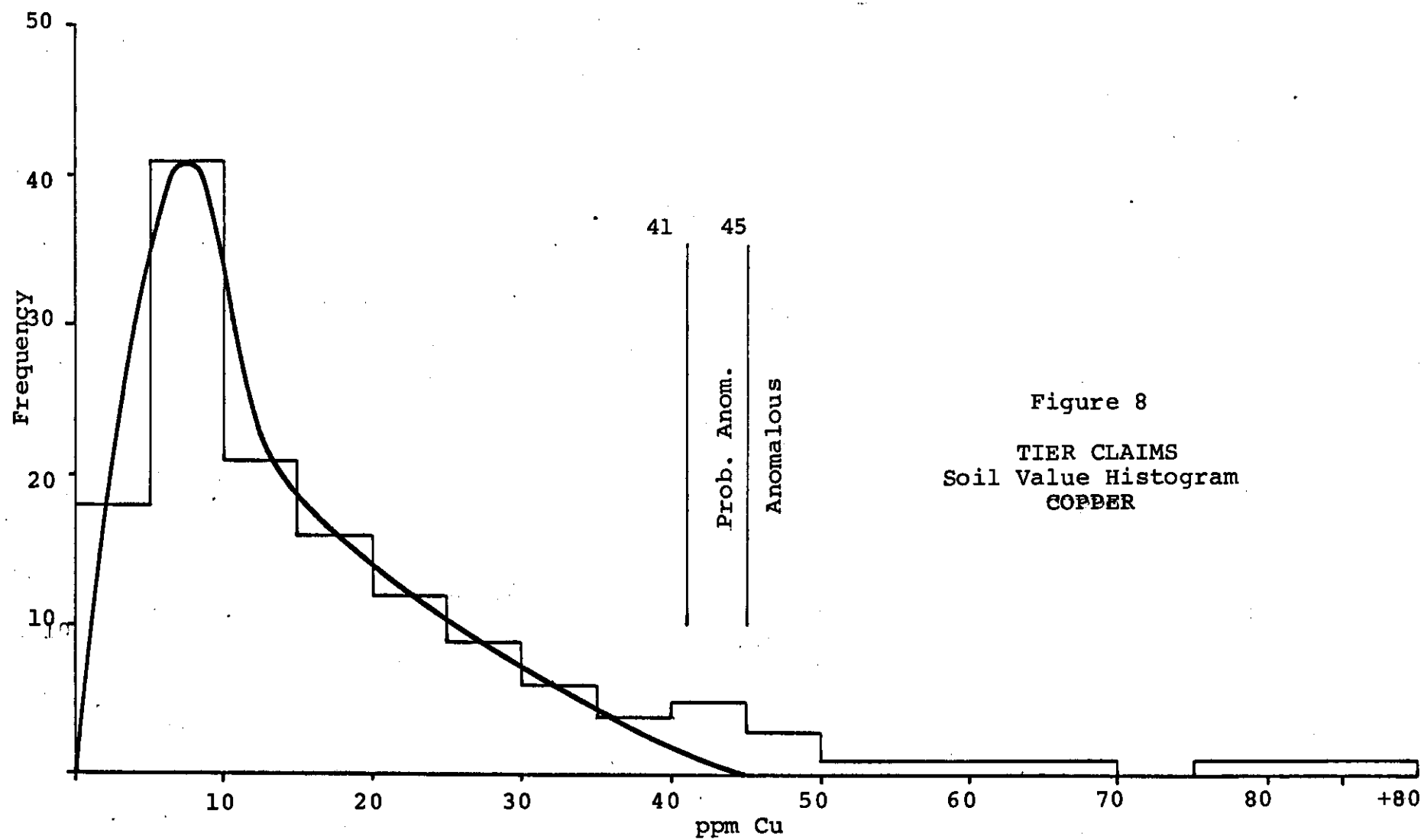


Figure 8
TIER CLAIMS
Soil Value Histogram
COPPER

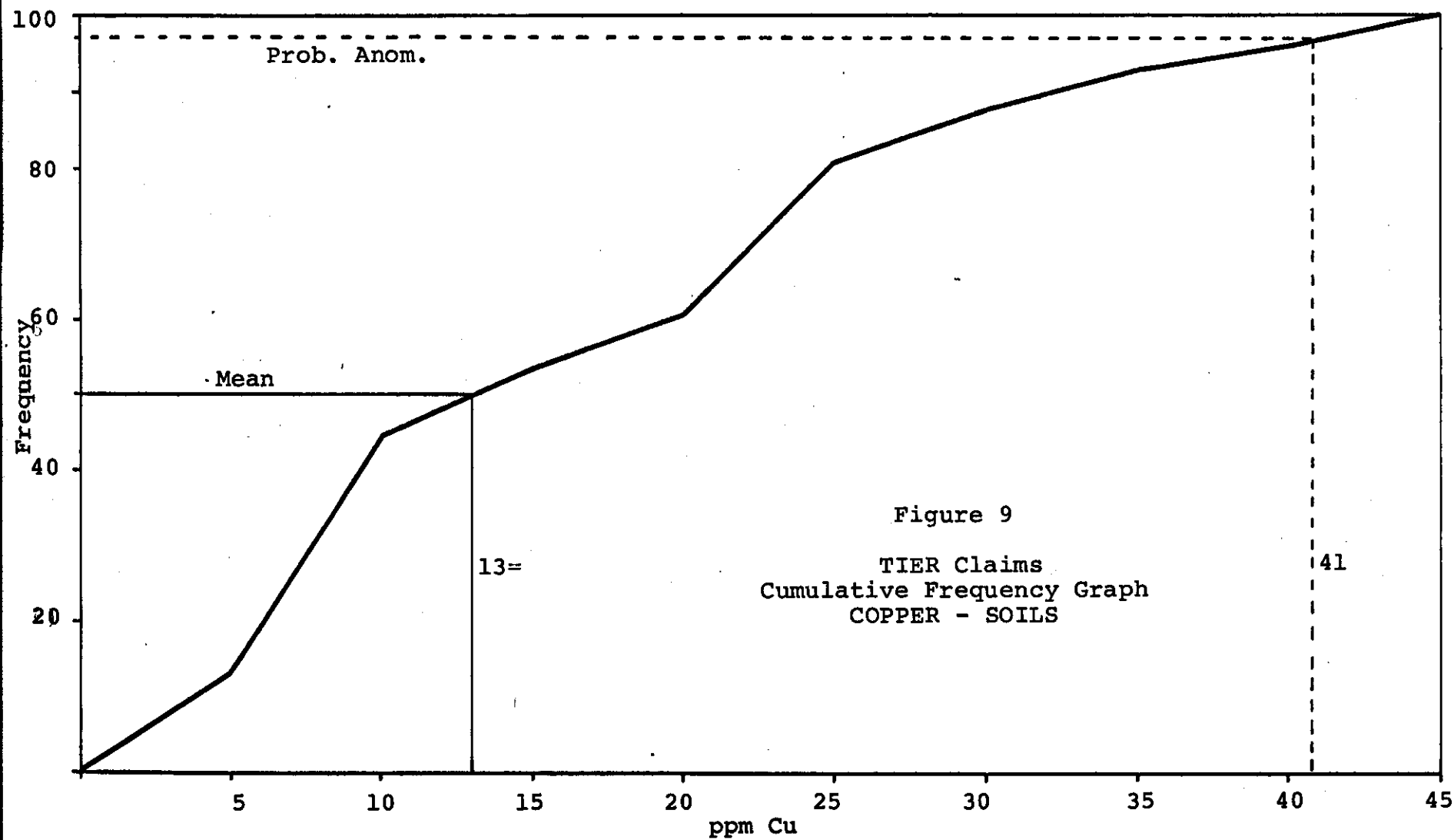


TABLE 9: Tier
Soils
Molybdenum

Interval (ppm)	Frequency	Cumulative Frequency	Cumulative Percentage of the Normal Population
0- 1	52		38.8
2- 3	32	84	62.6
4- 5	26	110	82.2
6- 7	15	125	93.2
8- 9	4	129	96.2
10-11	5	134	100.0
12-13	2	136	
14-15	2	138	
16-17	2	140	
18-19	0		
20-21	1	141	
22-23			
24-25			
26-27			
28-29	1	142	
30-31			

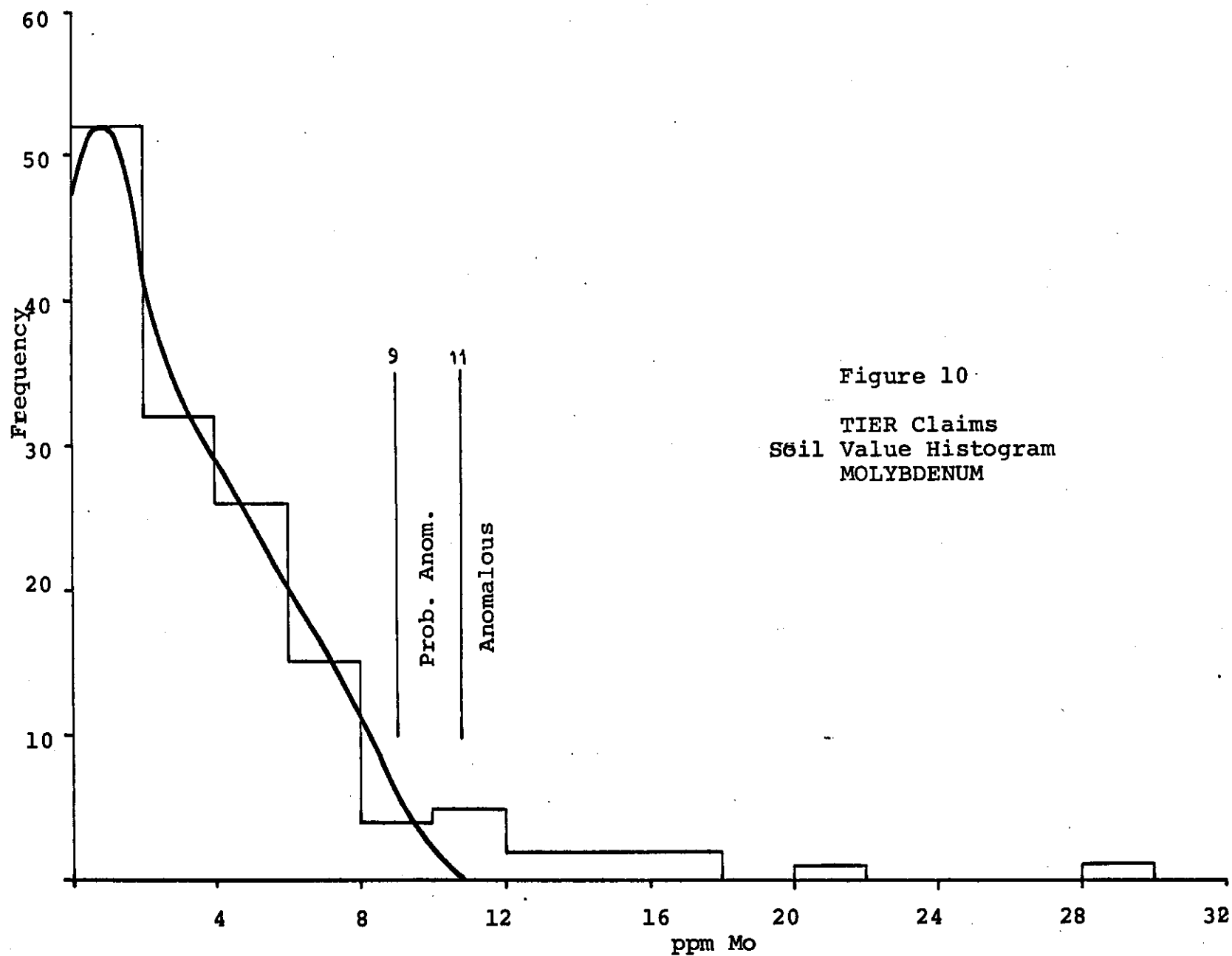


Figure 10
TIER Claims
Soil Value Histogram
MOLYBDENUM

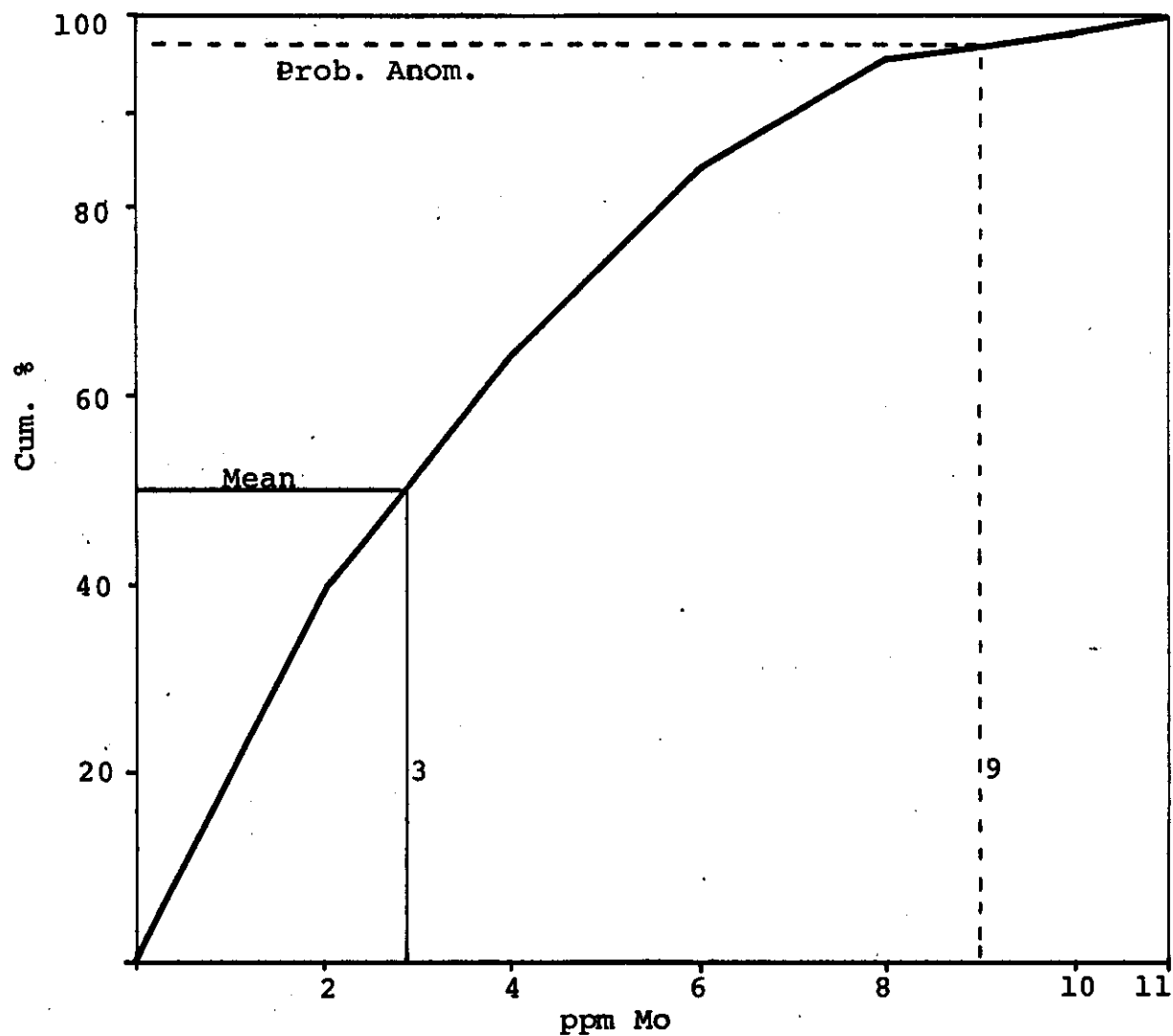
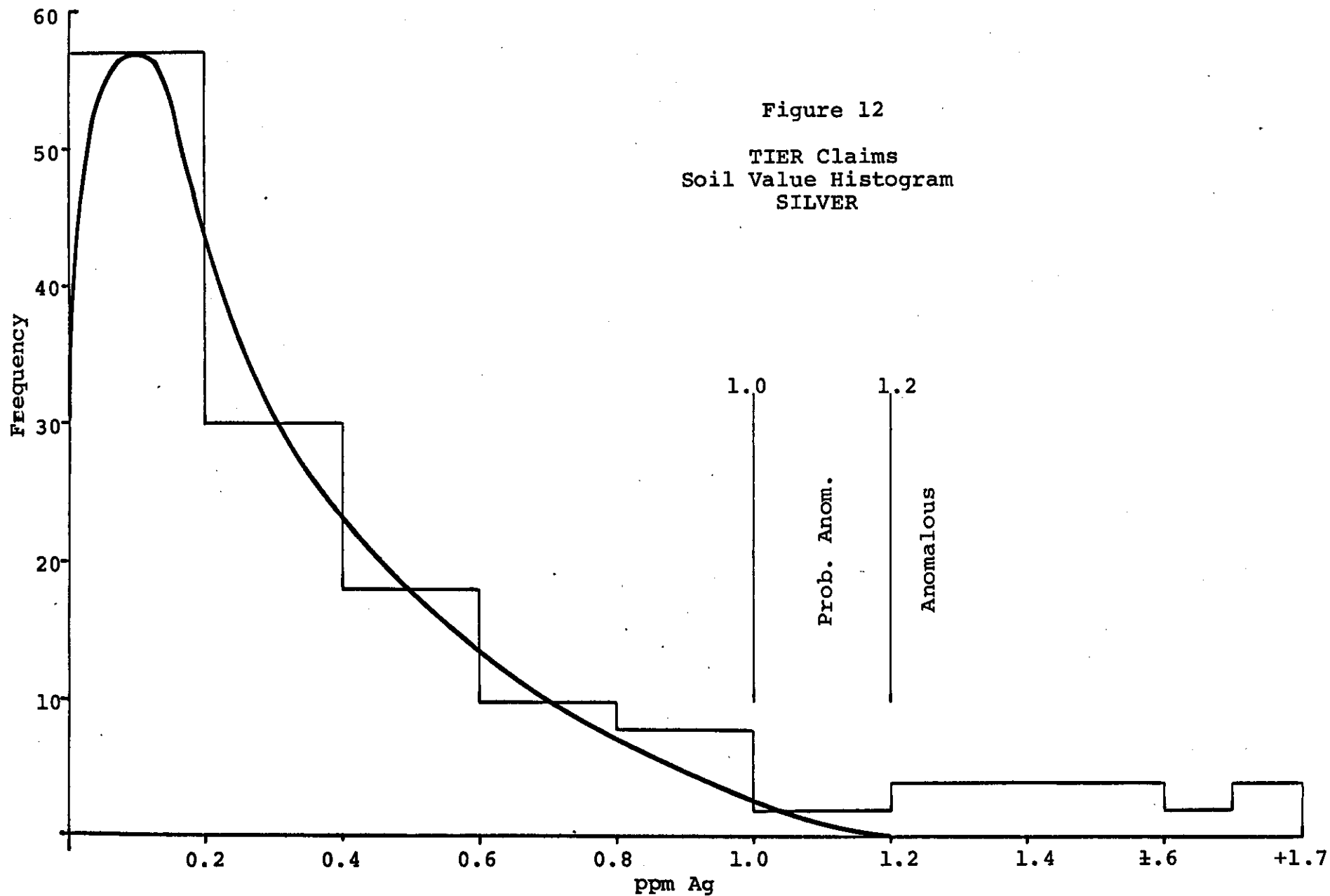


Figure 11
TIER Claims
Cumulative Frequency Graph
MOLYBDENUM - SOILS

TABLE 10: Tier
Soils
Silver

Interval (ppm)	Frequency	Cumulative Frequency	Cumulative Percentage of the Normal Population
0-0.1	60		45.1
0.2-0.3	31	91	68.4
0.4-0.5	18	109	81.9
0.6-0.7	10	119	89.4
0.8-0.9	8	127	95.4
1.0-1.1	2	129	96.9
1.2-1.3	4	133	100.0
1.4-1.5	4	137	
1.6-1.7	1	138	
1.8-1.9	1	139	
2.0-2.1	1	140	
2.2-2.3	0		
2.4-2.5	1	141	
2.6-2.7			
2.8-2.9			
Also 4.8	1	142	



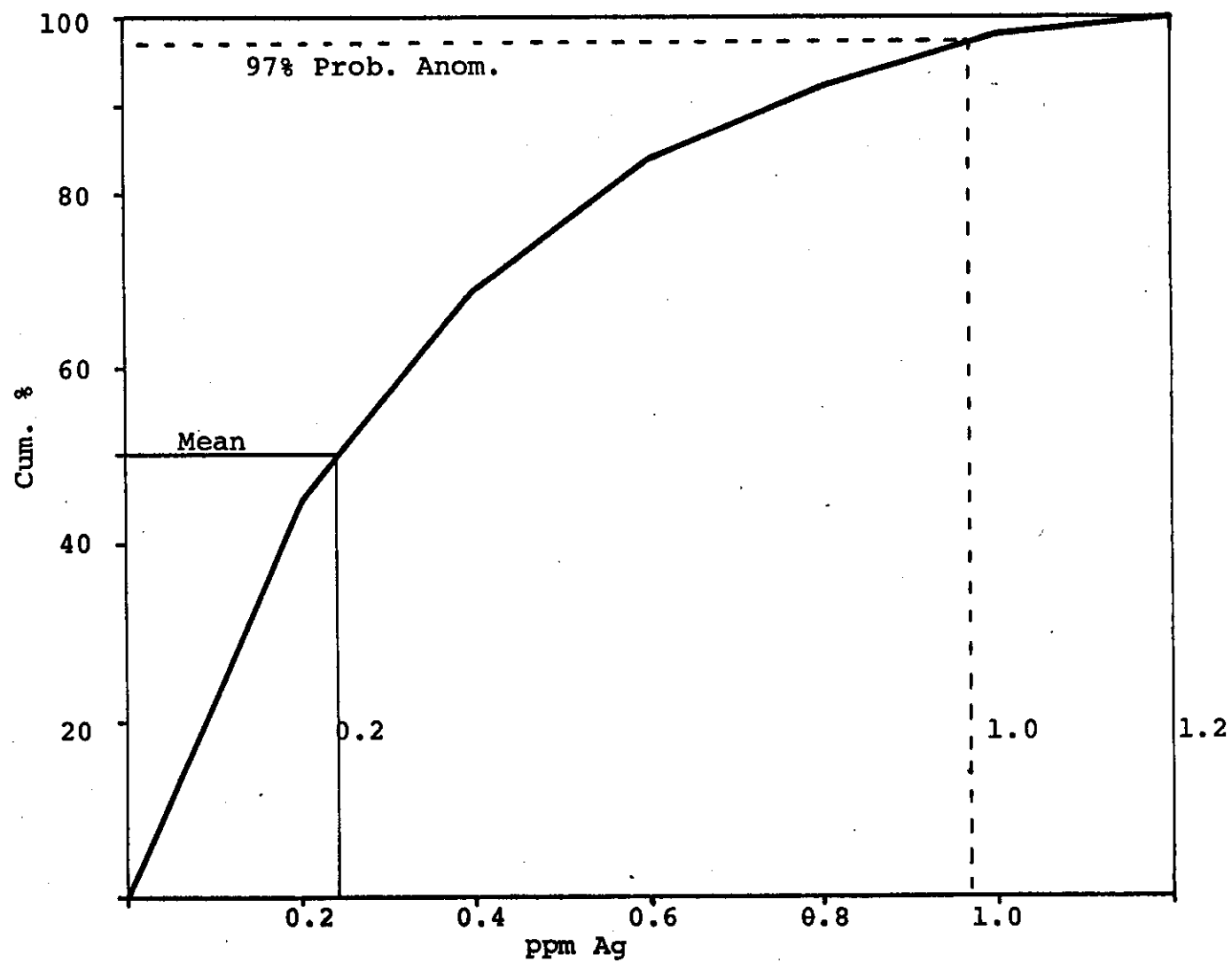


Figure 13
TIER Claims
Cumulative Frequency Graph
SILVER - SOILS

TABLE 11: Tier
Soils
Uranium

Interval (ppm)	Frequency	Cumulative Frequency	Cumulative Frequency of the Normal Population
0.5	41		30.5
1.0	49	90	67.1
1.5	24	114	85.0
2.0	15	129	96.2
2.5	4	133	99.2
3.0	1	134	100.0
3.5	2	136	
4.0	1	137	
4.5	0		
5.0	1	138	
5.5	2	140	
6.0	0		
6.5	1	141	
7.0	1	142	

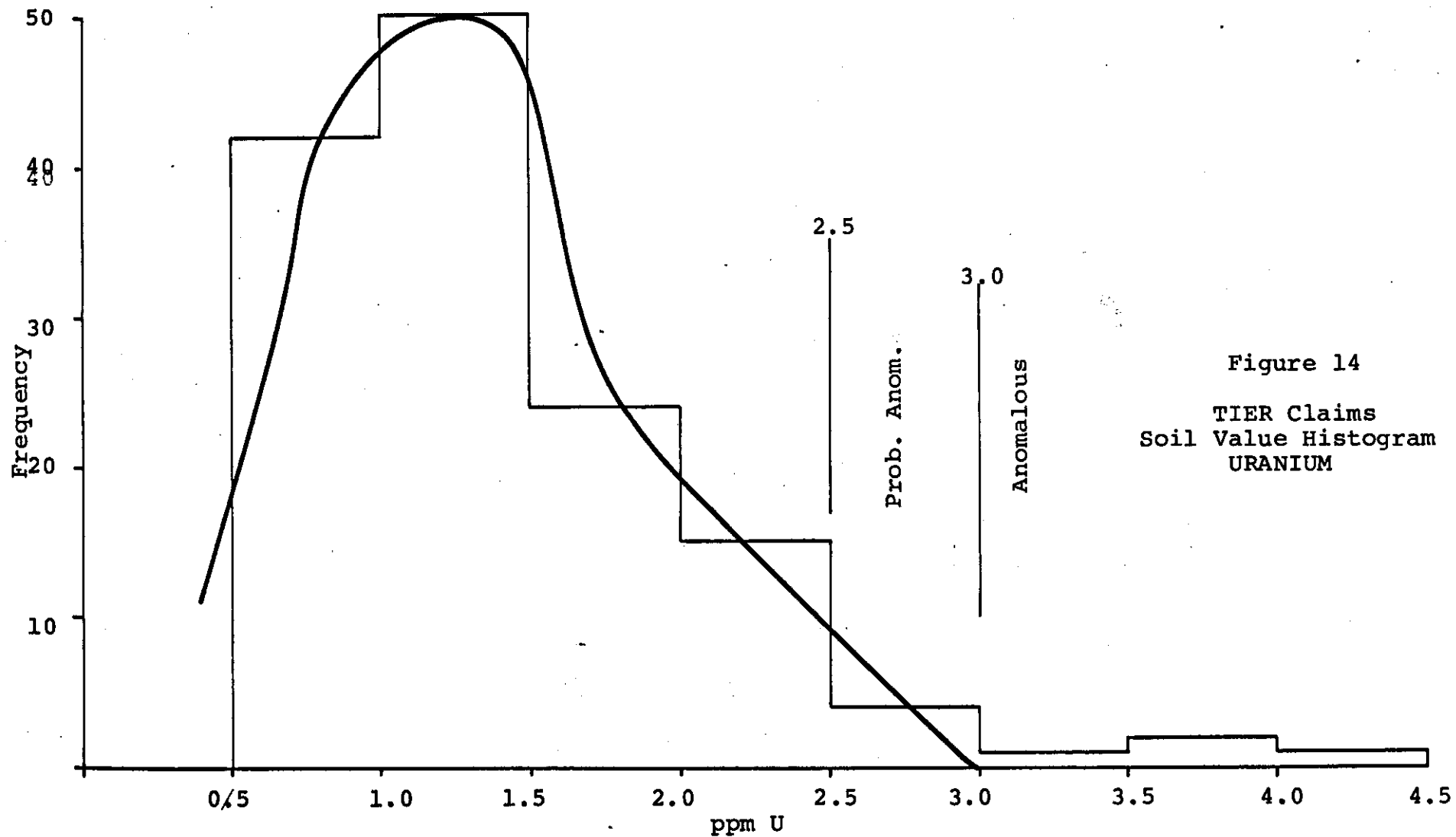


Figure 14
TIER Claims
Soil Value Histogram
URANIUM

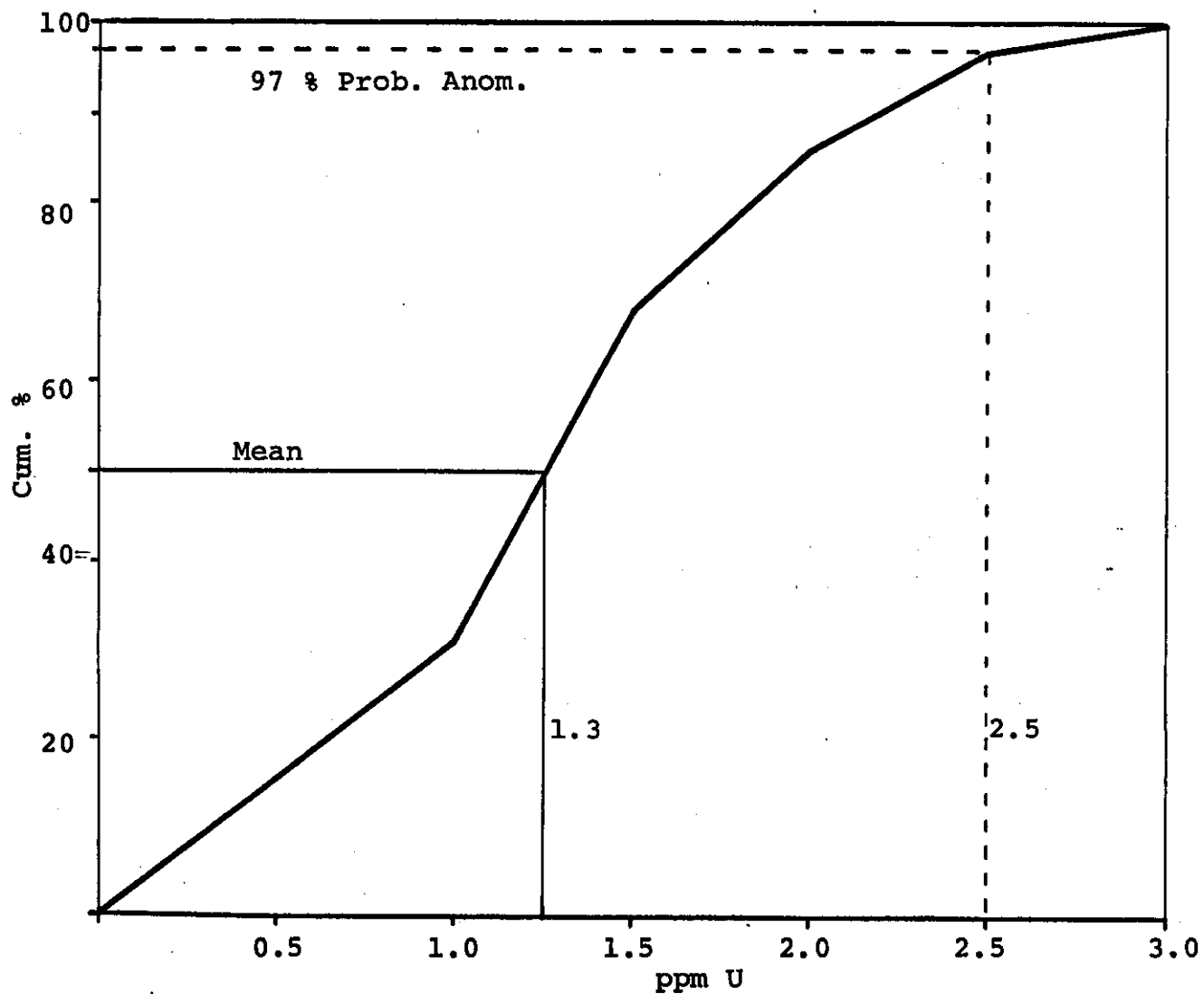
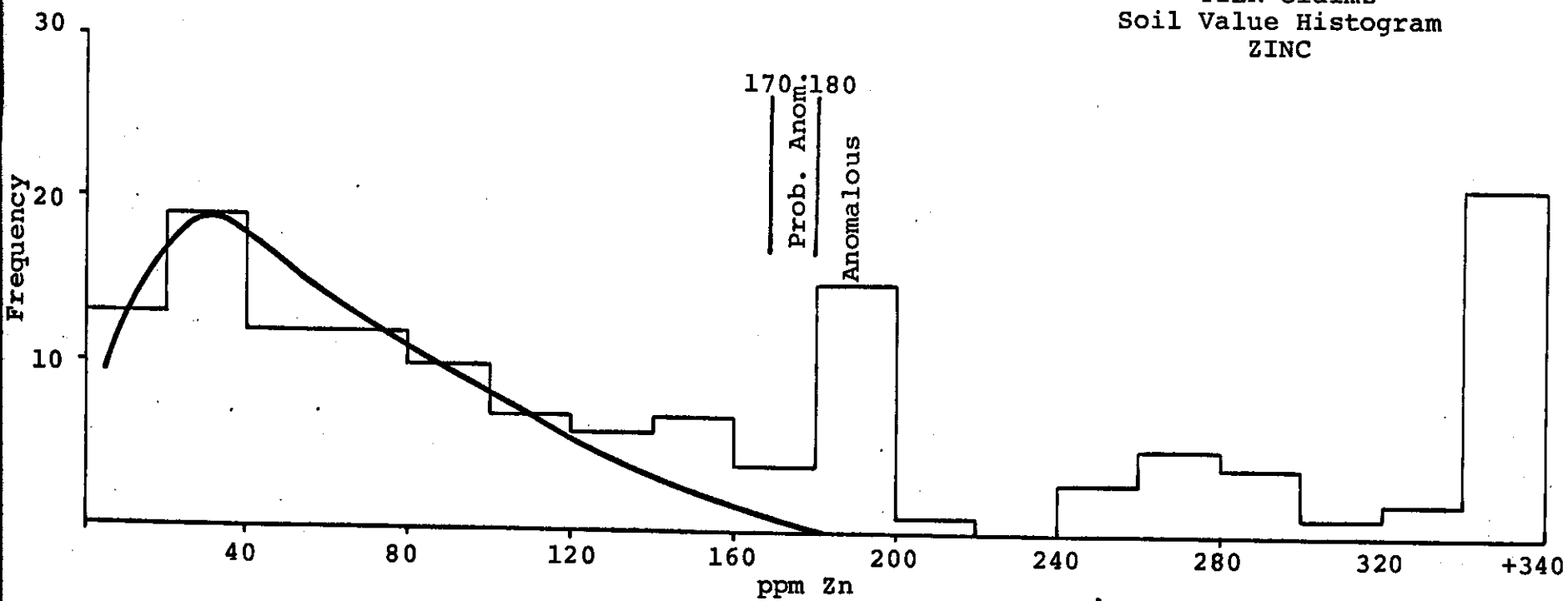


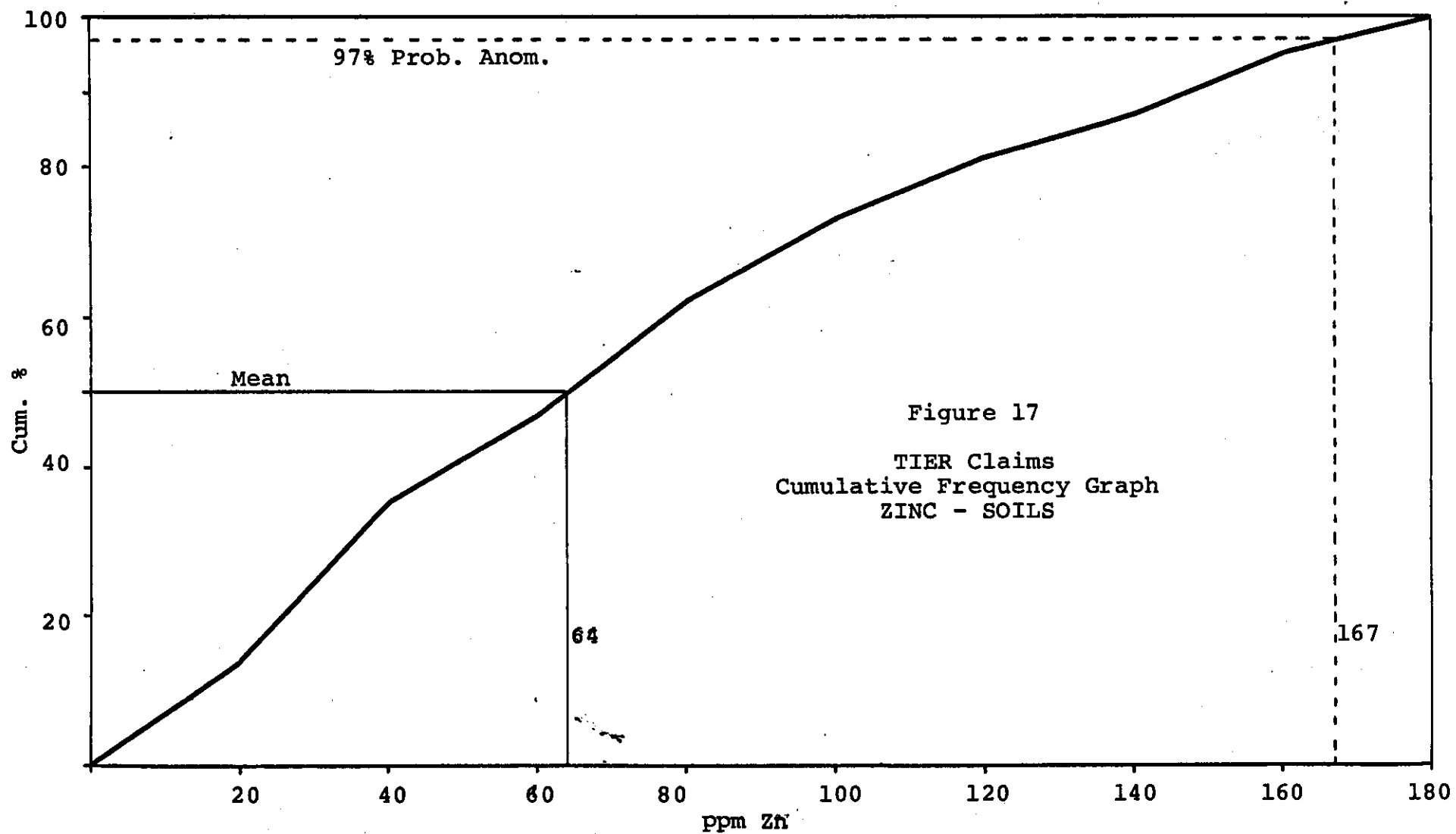
Figure 15
TIER Claims
Cumulative Frequency Graph
URANIUM - SOILS

TABLE 12: Tier
Soils
Zinc

Interval (ppm)	Frequency	Cumulative Frequency	Cumulative Percentage of the Normal Population
1- 20	13		14.4
21- 40	19	32	35.5
41- 60	12	44	48.8
61- 80	12	56	62.2
81-100	10	66	73.3
101-120	7	73	81.1
121-140	6	79	87.7
141-160	7	86	95.5
161-180	4	96	100.0
181-200	15	105	
201-220	1	106	
221-240	0		
241-260	3	109	
261-280	5	114	
281-300	4	118	
301-320	2	120	
321-340	2	122	
341-360	0		
361-380	1	123	
381-400	0		
401-420	5	128	
421-440	1	129	
441-460	1	130	
461-480	1	131	
481-500	0		
501-520	2	133	
Also 570, 675, 700, 740, 790, 1000, 1100, 1150, 1350 N=142			

Figure 16
TIER Claims
Soil Value Histogram
ZINC





APPENDIX V

Histograms and Cumulative Frequency Graphs
for Stream Sediment Geochemistry

TABLE 13: Tier
Stream Sediment
Copper

Interval (ppm)	Frequency	Cumulative Frequency	Cumulative Percentage of the Normal Population
0- 5	0		
6-10	0		
11-15	1		3.5
16-20	10	11	39.2
21-25	4	15	53.5
26-30	7	22	78.5
31-35	4	26	92.8
36-40	2	28	100.0
41-45			
46-50			
51-55			
56-60			
61-65			
66-70			
71-75			
76-80	1	29	

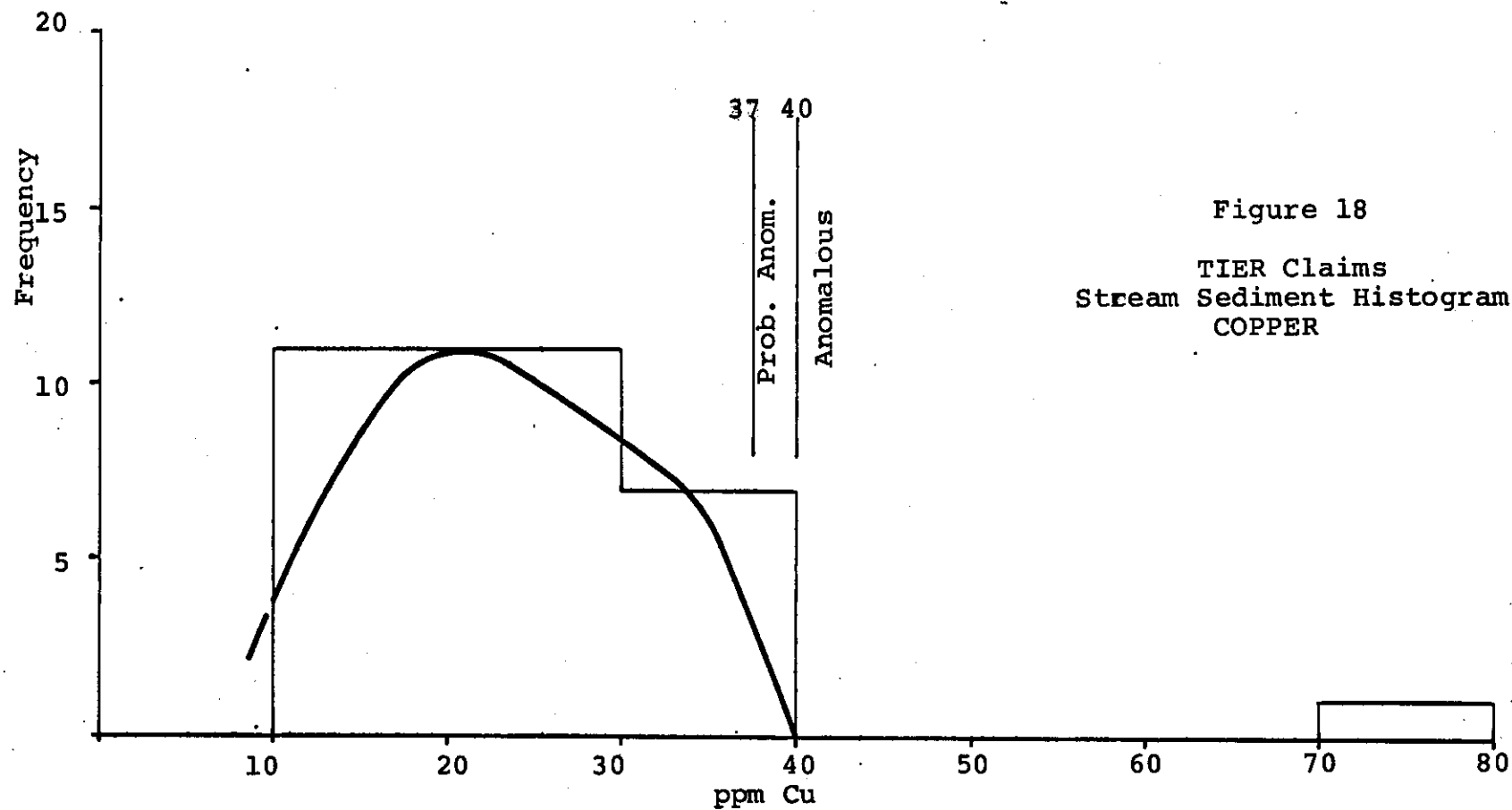


Figure 19

TIER Claims
Cumulative Frequency Graph
COPPER - STREAM SEDIMENTS

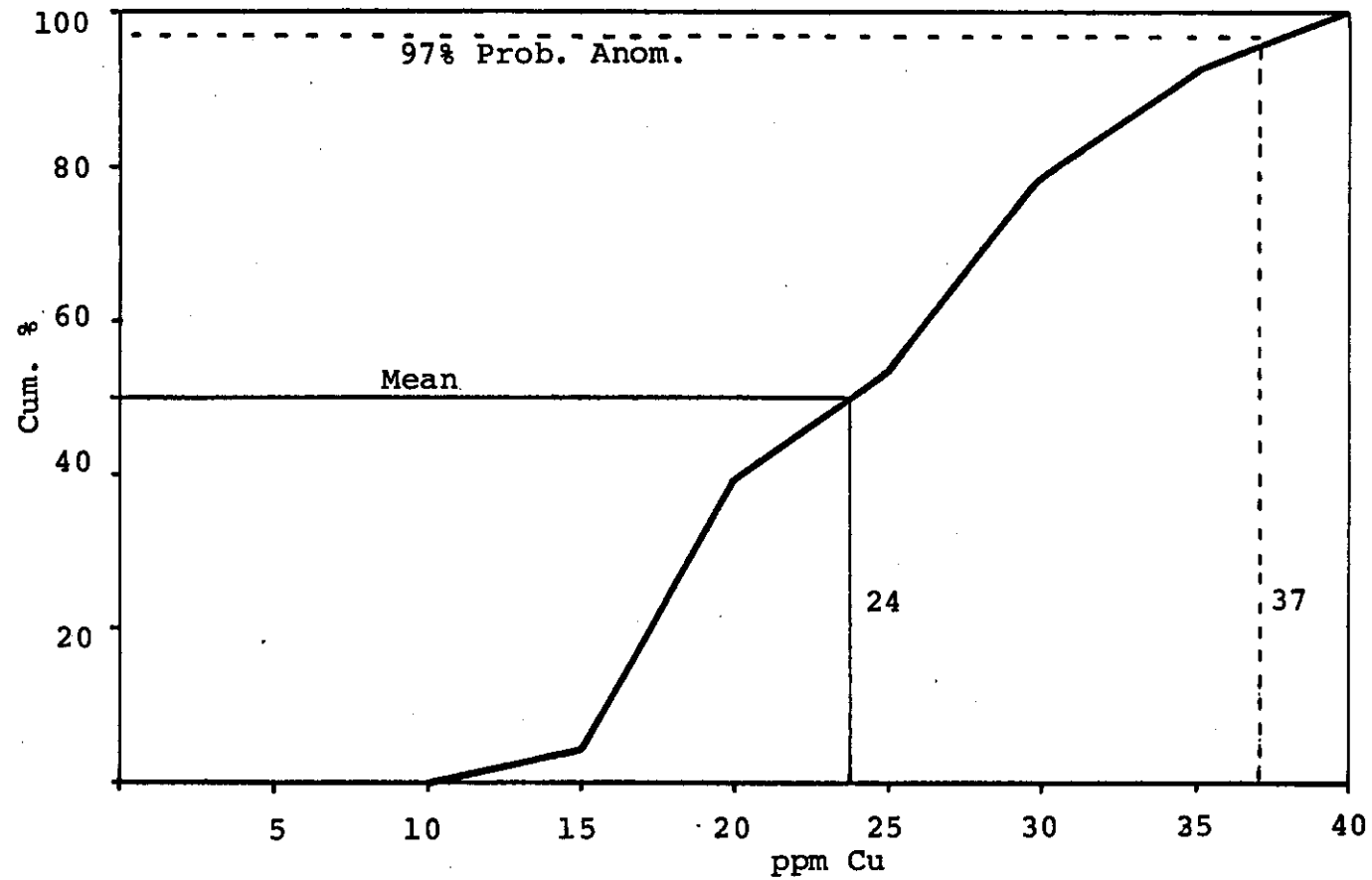


TABLE 14: Tier
Stream Sediment
Molybdenum

Interval (ppm)	Frequency	Cumulative Frequency	Cumulative Percentage of the Normal Population
1			
2	2		7.4
3			
4	3	5	18.5
5	4	9	37.5
6	5	14	51.8
7	8	22	81.4
8	2	24	88.8
9	1	25	92.5
10	2	27	100.0
11	2	29	

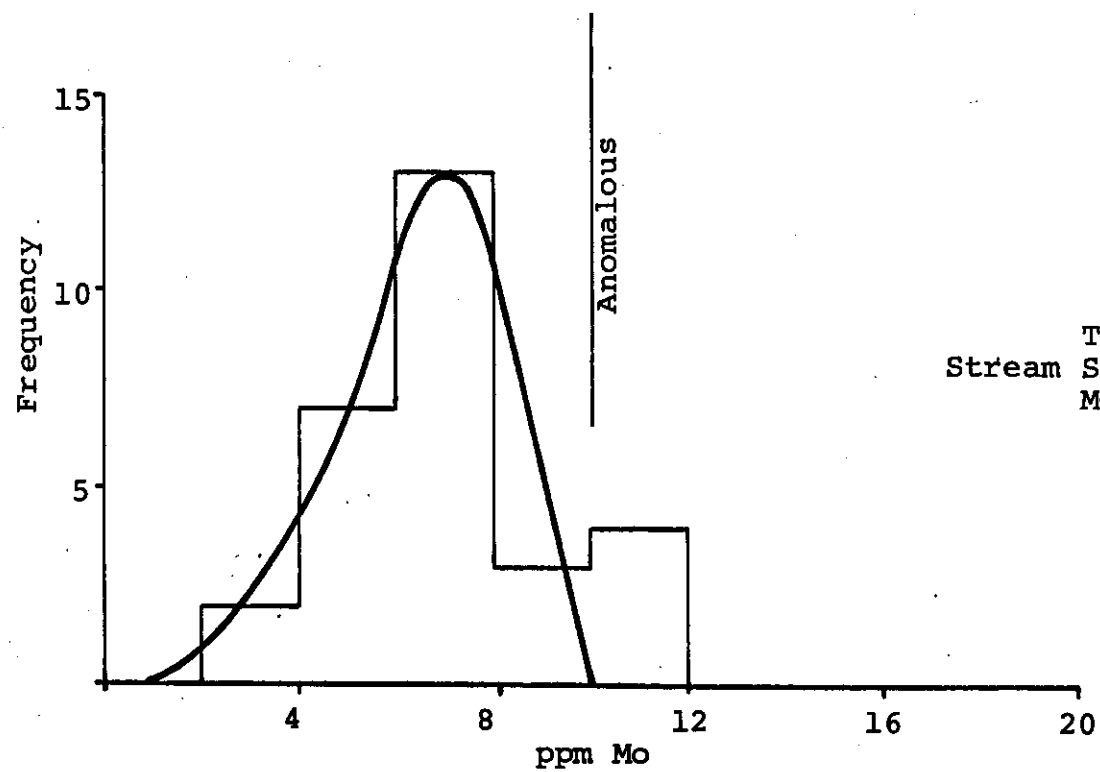


Figure 20
TIER Claims
Stream Sediment Histogram
MOLYBDENUM

Figure 21

TIER Claims
Cumulative Frequency Graph
MOLYBDENUM - STREAM SEDIMENT

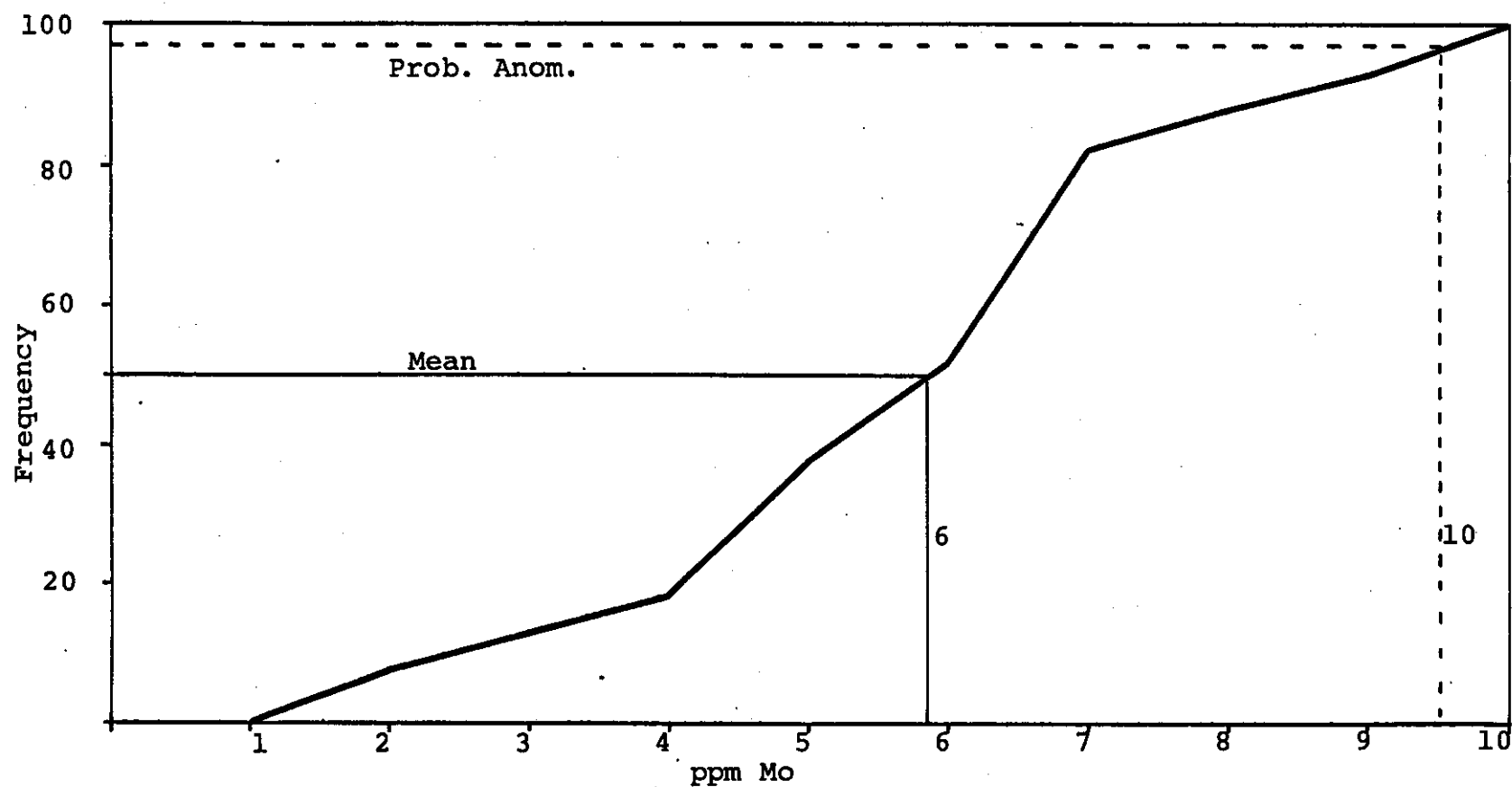


TABLE 15: Tier
Stream Sediment
Silver

Interval (ppm)	Frequency	Cumulative Frequency	Cumulative Percentage of the Normal Population
0-0.1	18		66.6
0.2-0.3	6	24	88.8
0.4-0.5	3	27	100.0
0.6-0.7	1	28	
0.8-0.9	1	29	
1.0-1.1			

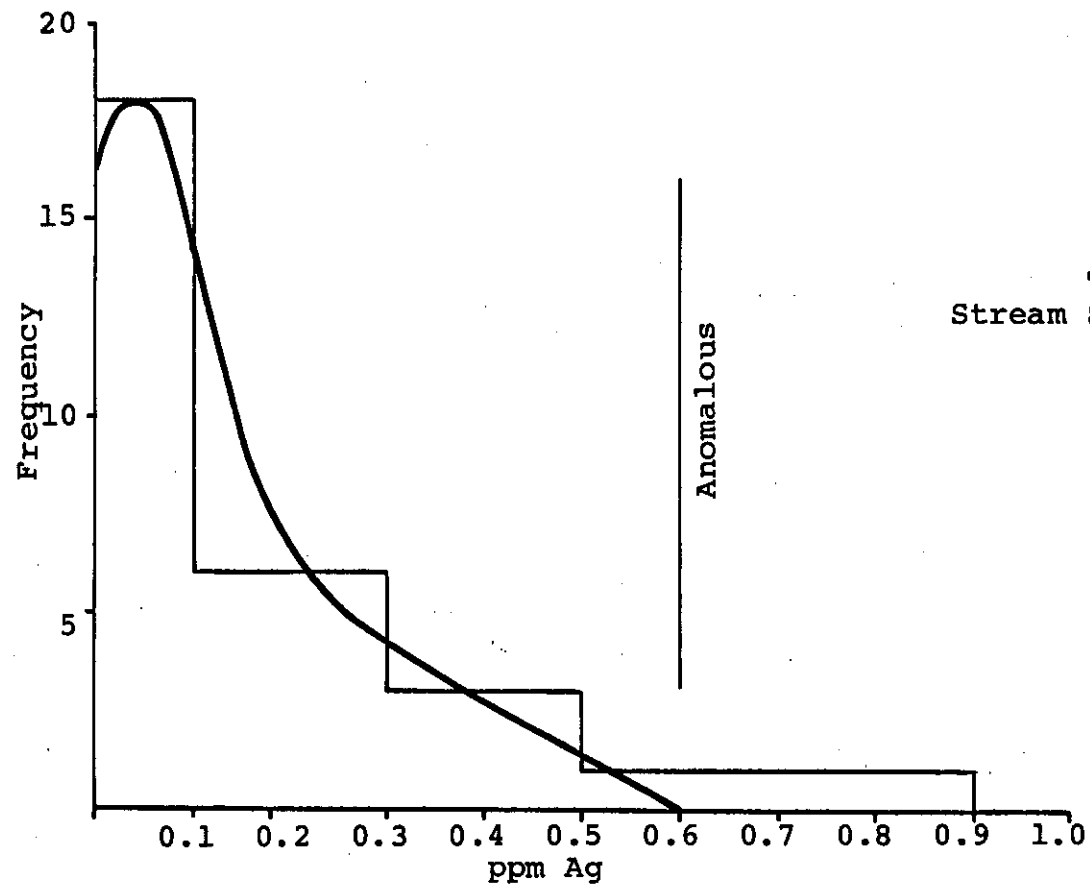


Figure 22
TIER Claims
Stream Sediment Histogram
SILVER

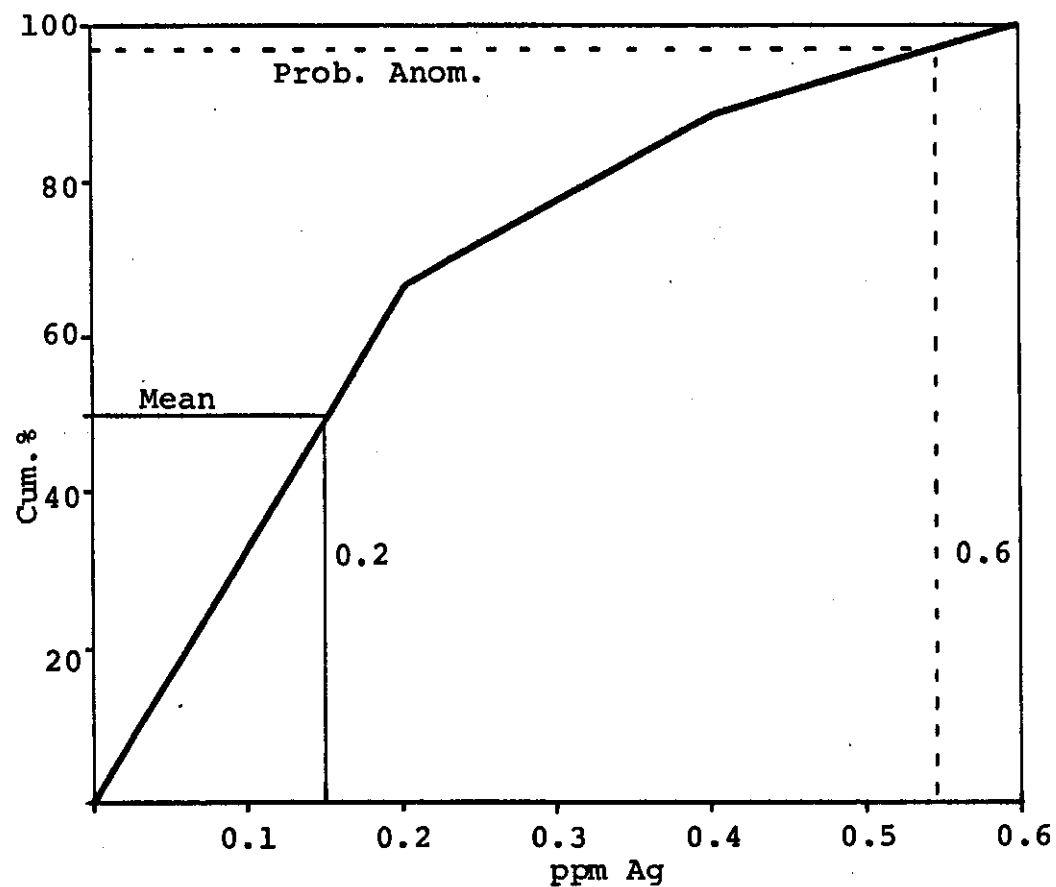


Figure 23
TIER CLAIMS
Cumulative Frequency Graph
SILVER STREAM SEDIMENT

TABLE 16: Tier
Stream Sediment
Uranium

Interval (ppm)	Frequency	Cumulative Frequency	Cumulative Percentage of the Normal Population
0.5	3		13.6
1.0	2	5	22.7
1.5	12	17	77.2
2.0	4	21	95.4
2.5	1	22	100.0
3.0	2	24	
3.5	0	24	
4.0	0	24	
4.5	1	25	
5.0	1	26	
5.5	2	28	
6.0	0	28	
6.5	1	29	

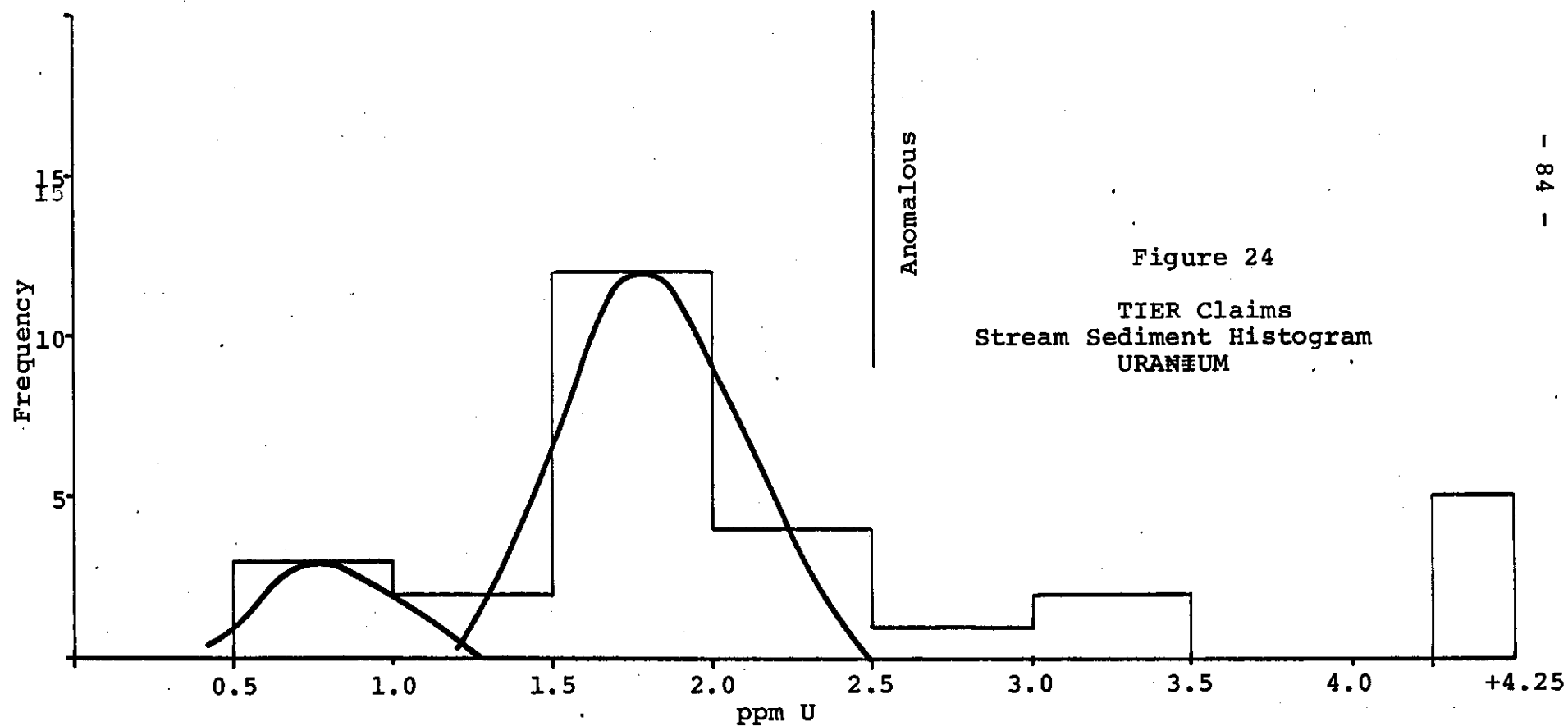


Figure 24
TIER Claims
Stream Sediment Histogram
URANEUM

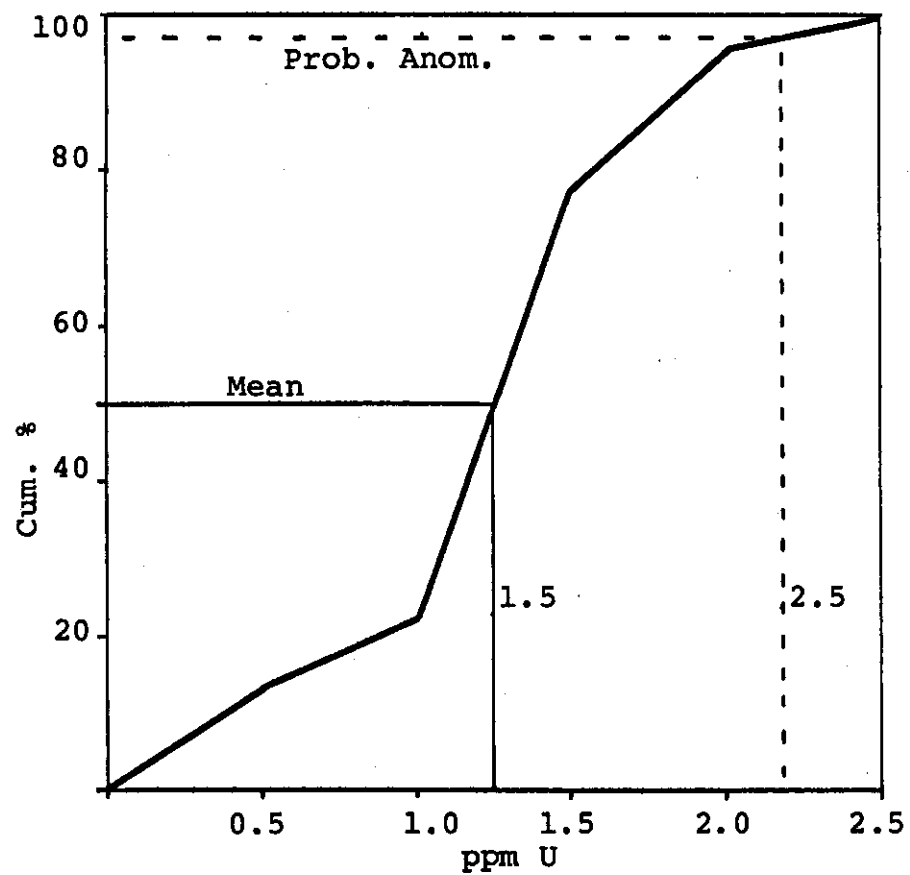
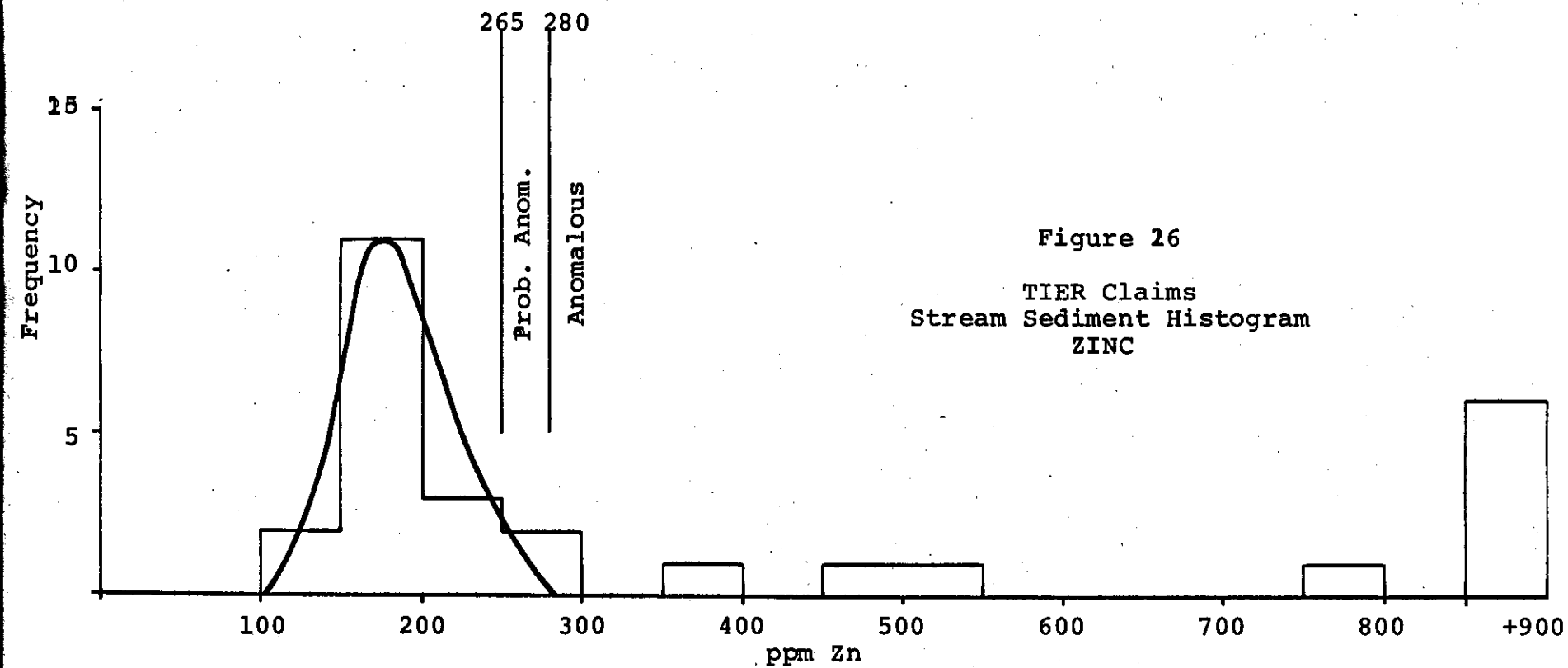


Figure 25
TIER Claims
Cumulative Frequency Graph
URANIUM - STREAM SEDIMENTS

TABLE 17: Tier
Stream Sediment
Zinc

Interval (ppm)	Frequency	Cumulative Frequency	Cumulative Percentage of the Normal Population
0- 50	0		
51- 100	0		
101- 150	2		11.1
151- 200	11	13	72.2
201- 250	3	16	88.8
251- 300	2	18	100.0
301- 350	0		
351- 400	1	19	
401- 450	0		
451- 500	1	20	
501- 550	1	21	
551- 600	0		
601- 650	0		
651- 700	0		
701- 750	0		
751- 800	1	22	
801- 850	0		
851- 900	0		
901- 950	1	23	
951-1000	1	24	
1001-1050	0		
1051-1100	1	25	
1101-1150	1	26	
1151-1200	1	27	
1201-1250			
1251-1300	1	28	
1600	1	29	

Figure 26
TIER Claims
Stream Sediment Histogram
ZINC



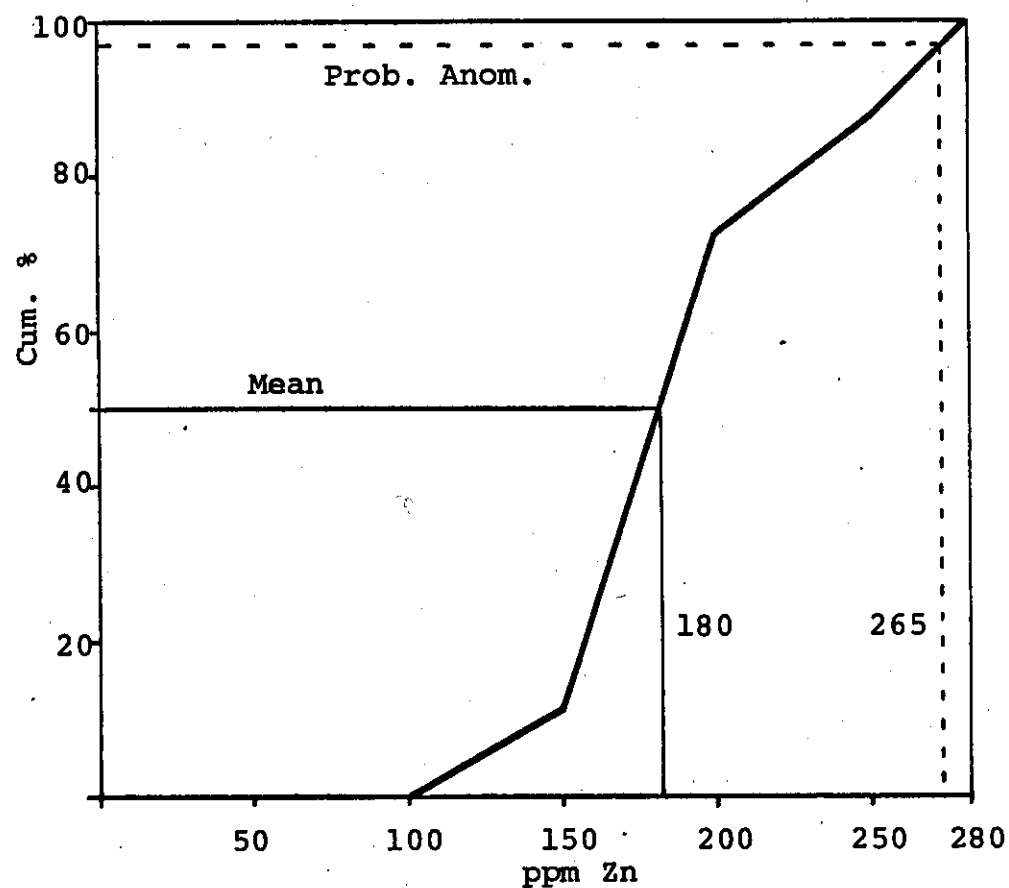


Figure 27
TIER Claims
Cumulative Frequency Graph
ZINC - STREAM SEDIMENT

APPENDIX VI

Histogram and Cumulative Frequency Graphs
for Scintillometer Results

TABLE 18: Tier
Scintillometer Values

Interval (C.P.S.)	Frequency	Cumulative Frequency	Cumulative Percentage of the Normal Population
1- 20	1		0.6
21- 40	2	3	1.9
41- 60	8	11	7.2
61- 80	13	24	15.8
81-100	21	45	29.8
101-120	22	67	44.3
121-140	27	94	62.2
141-160	15	109	72.1
161-180	10	119	78.8
181-200	8	127	84.1
201-220	7	134	88.7
221-240	6	140	92.7
241-260	4	144	95.3
261-280	5	149	98.6
281-300	2	151	100.0
301-320	7	158	
321-340	5	163	
341-360			
361-380			
381-400			
401-420	1	164	100.0

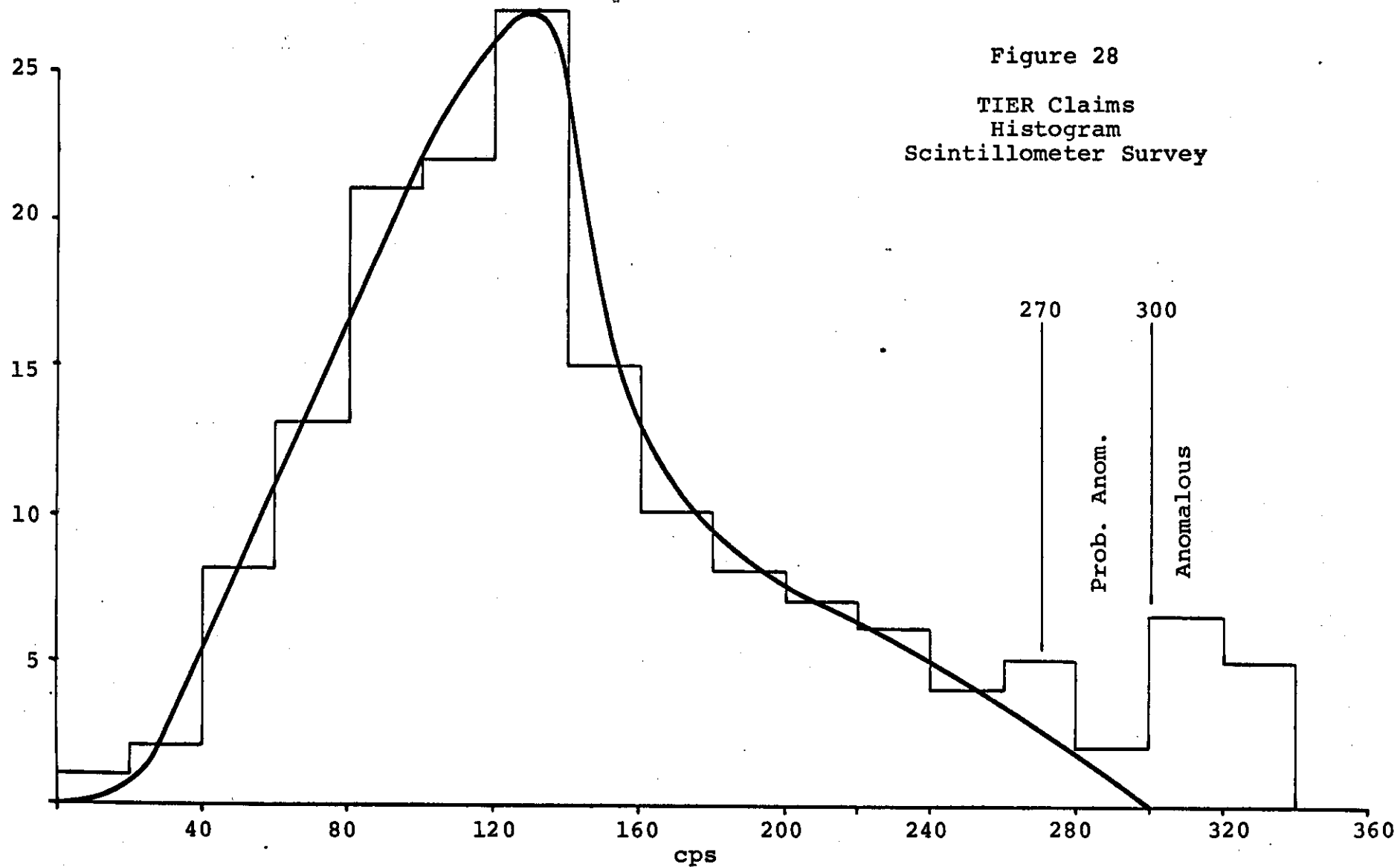
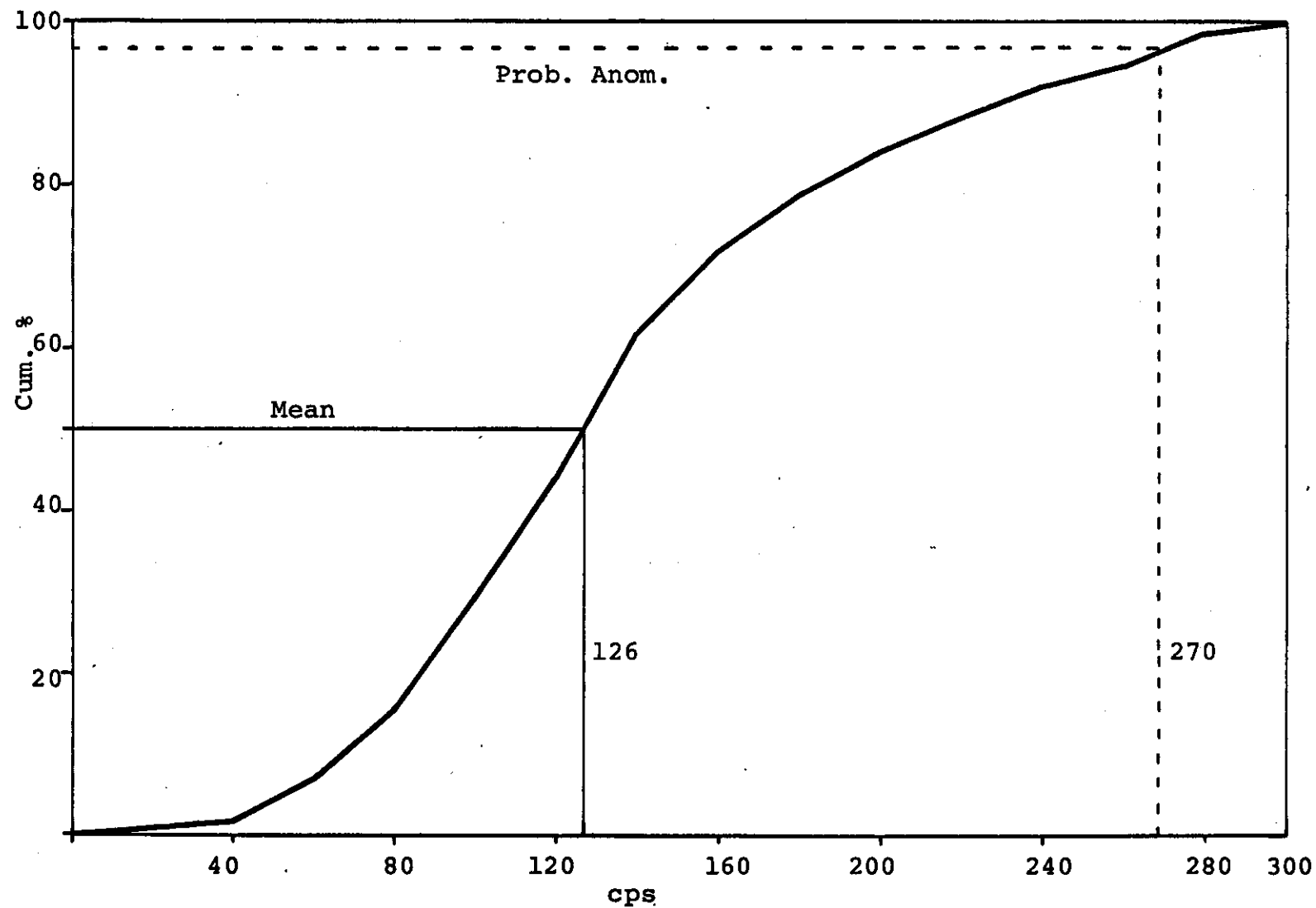


Figure 29

TIER Claims
Cumulative Frequency Graph
SCINTILLOMETER VALUES



APPENDIX VII

Rock Descriptions

ROCK DESCRIPTIONS

	Cu	Mo	Zn	Ag	U	
FG-TIER-7 80-WA-11118R	Dacite Tuff 22	4	52	0.1	0.5	Grey-light, soft aphanitic.
FG-TIER-10 80-WA-11119R	Quartz Crystal Vitric Welded Tuff Dacite Composition 76	2	675	0.1	0.5	Green chlorite colour with 5-10% sulphide content (pyrite), welded shards of volcanic glass.
FG-TIER-12 80-WA-11120R	Black Cherty Shale 8	4	18	0.2	2.5	Siliceous indurated shale with numerous quartz veins (1-4 mm) Schistose cleavage has developed.
BM-TIER- 80-WA-11121R	Recent Pseudoconglomerate 26	1	580	0.2	2.0	Rock fragments cemented with limonite. Recent rock found in creek bed.
BM-TIER-4 80-WA-11122R	Rhyolite Tuff 2	1	44	0.4	1.5	K-feldspar pheno- crysts have altered to kaolin (up to 1 cm). Possibly reworked light grey rhyolite tuff.
FG-TIER-13 80-WA-11123R	Black Chert 26	1	70	0.2	1.0	Siliceous indurated chert shale with numerous quartz veins (1-4 mm) throughout.
FG-TIER-14 80-WA-11124R	Black Chert 30	1	124	0.8	0.5	Siliceous indurated cherty shale with limonite along cleavage planes, weathers brown, bedded 1-3".
FG-TIER-15 80-WA-11125R	Fine-grained Quartz Sandstone 8	2	20	0.1	1.0	Thinly bedded quartzite well-sorted well-rounded quartz grains in a carbonate cement.

ROCK DESCRIPTIONS

	Cu	Mo	Zn	Ag	U	
FG-TIER-1 80-WA-11112R	Dolomite 10	2	118	0.1	1.0	Light, grey, fine-grained vugs coated by euhedral dolomite crystal, massive.
FG-TIER-2 80-WA-11113R	Dacite Tuff 18	2	114	0.1	1.0	Aphanitic, light green volcanic, very finely disseminated pyrite weathers brown.
FG-TIER-3 80-WA-11114R	Graphitic Shale 14	12	6	0.4	3.0	Thinly laminated fissile, black (graphite) shale.
FG-TIER-4 80-WA-11115R	Weathered Porphyritic Rhyolite Tuff, Float 6	4	10	0.4	0.5	K-feldspar phenocryst altered to kaolin, coated in red hematite stain groundmass is siliceous and aphanitic.
FG-TIER-5 80-WA-11116R	Dacite Tuff 2	1	34	0.1	0.5	Aphanitic, light green-purple tint, siliceous, fine disseminated pyrite weathers brown.
FG-TIER-6 80-WA-11117R	Dacite Tuff with Secondary Carbonate 98	1	94	0.1	0.5	Light green siliceous volcanic rock with secondary carbonate cement. Cubic grains of brown carbonate (siderite?) after pyrite.

PROJECT WATSU

1980

Statement of Expenditures

Claims TIER

Record Numbers YA44734-YA44769



1) Salaries & Benefits	\$ 4,401.00 ¹
2) Helicopter flying - <u>9.5</u> hours @ \$315/hour	2,993.00 ²
3) Scintillometer rentals (Urtec)	584.00 ³
4) Geochemical Analyses - <u>163</u>	1,169.12 ⁴
Sub Total	9,147.12
5) Administration @ 10%	914.71
Total	\$ <u>10,061.83</u>

Notes:

¹ Pro-rated on basis of 16.8 man-days worked on claims conducting geological/geochemical/geophysical surveys out of a total of 511 man-days spent on Project Watsu surveys (see attached breakdown on following sheet), unit cost @ \$262/man-day.

² Helicopter flying completed by Northern Mountain Helicopters Inc., Prince George, B.C., unit cost @ \$315/hr.

³ Pro-rated on basis of 16.8 man-days worked on claims conducting geophysical surveys out of a total of 461 man-days spent on Project Watsu surveys (see attached breakdown on following sheet), unit cost @ \$34.70/man-day.

⁴ Geochemical analyses completed by Chemex Labs of Vancouver, B.C. (see attached cost breakdown), unit cost @ \$7.17/sample.

PROJECT WATSU
Salaries & Benefits Costs - 1980

<u>Claim Group</u>	<u>No. of Man-Days</u>	<u>@ \$262/m.d.</u>
<u>B.C.</u>		
ALLEN	9	\$ 2,358
KAZ	10	2,620
NEED	37	9,694
PLATE 1-2	26.4	6,917
PLATE 3-4	16.2	4,245
RAN	48	12,576
SHAR 1-2	14	3,668
SHAR 10	4	1,048
SHAR 3, 4, 9, 11	9.7	2,541
SHAR 5-6	16	4,192
SHAR 7-8	37.7	9,877
#####		
<u>YUKON</u>		
GOAT 1-36	18.5	4,847
BORDER	5	1,310
BIG OX 1-72	54	14,148
CO	9	2,358
GOAT 37-84	25	6,550
ICE	13.1	3,432
LICK	27.7	7,257
MOX	33	8,646
OXY	10.8	2,830
PISA	13	3,406
SAL	19	4,978
TIER	16.8	4,401
WOX	26.8	7,022
NISU	12	3,144
BIG OX 73-76	<u>2</u>	<u>524</u>
TOTALS	<u>511</u>	<u>\$134,099</u>

PROJECT WATSU
Scintillometer Rentals - 1980

<u>Claim Group</u>	<u>No. of Man Days</u>	<u>@ \$34.7/m.d.</u>
<u>B.C.</u>		
ALLEN	9	\$ 312
PLATE 1-2	26.4	916
PLATE 3-4	16.2	562
RAN	48	1,666
SHAR 1-2	14	486
SHAR 10	10	347
SHAR 5-6	16	555
SHAR 7-8	37.7	1,308

#####

YUKON

GOAT 1-36	18.5	642
BORDER	5	174
BIG OX 1-72	54	1,874
CO	9	312
GOAT 37-84	25	868
ICE	13.1	455
LICK	27.7	961
MOX	33	1,145
OXY	10.8	375
PISA	13	451
SAL	19	659
TIER	16.8	584
WOX	26.8	930
NISU	<u>12</u>	<u>416</u>
TOTALS	<u>461</u>	<u>\$16,004</u>

PROJECT WATSU

TIER CLAIMS

1980

Geochemical Cost Breakdown

<u>Invoice #</u>	<u>Certificate #</u>	<u>Amount</u>
38285	54847	\$44.72
38968	"	71.60
37621	54961	
	54962	
	54963	750.40
	54964	
37487	54838	207.20
37604	54958	<u>95.20</u>
	TOTAL	\$1169.12

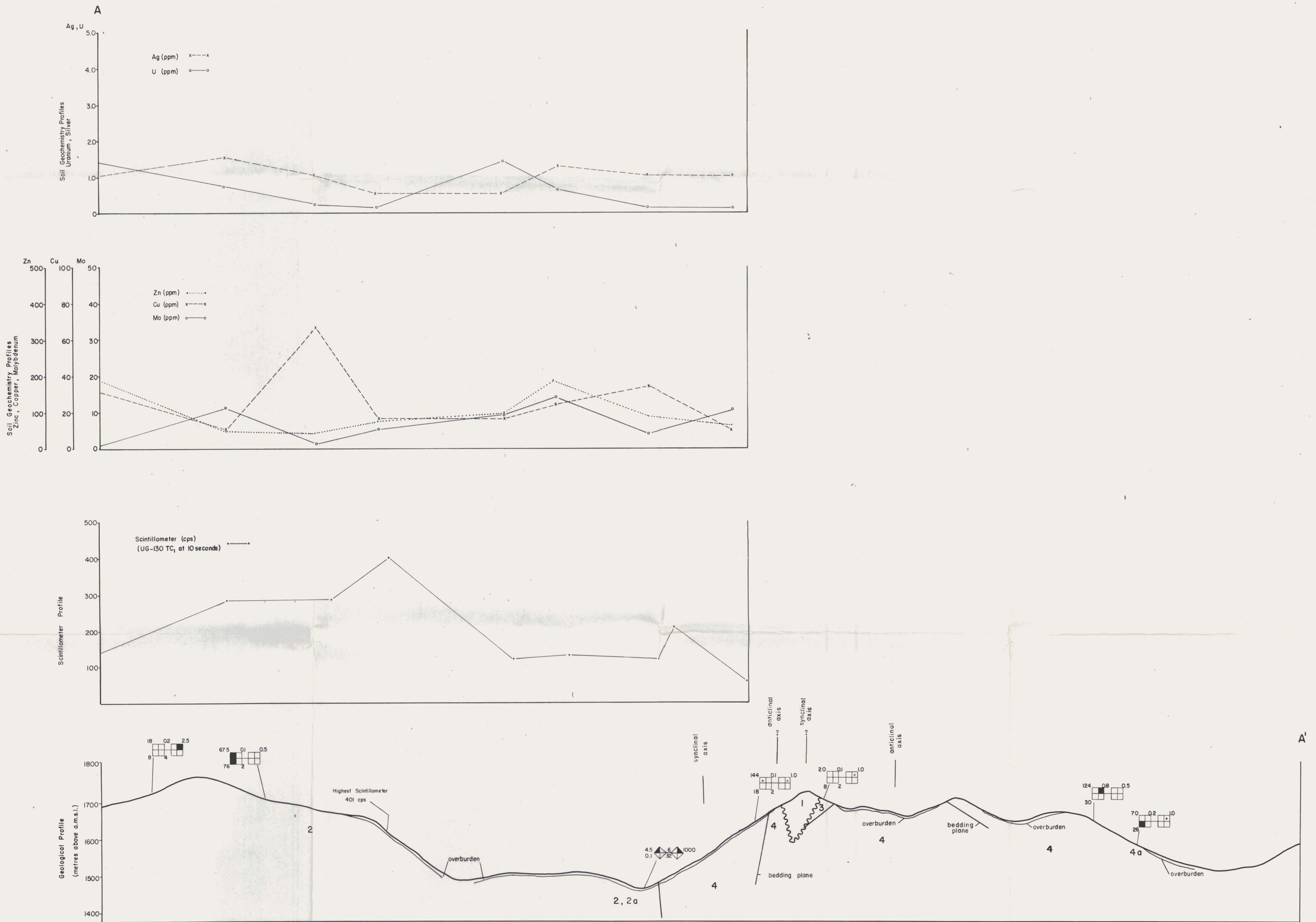


- LEGEND
- Claim Post
 - Assumed Claim Post
 - Claim Boundary (assumed)
 - Claim Boundary
 - Direction of staking

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION
**PROJECT WATSU
TIER CLAIMS**
WATSON LAKE MINING DISTRICT,
YUKON
N.T.S. 105-F

BASE MAP

SCALE IN METRES
100 50 0 100 200 300 400
PLAN 0 FG/dt, Dec.80



Horizontal Scale for all Profiles 1cm = 50m

LEGEND

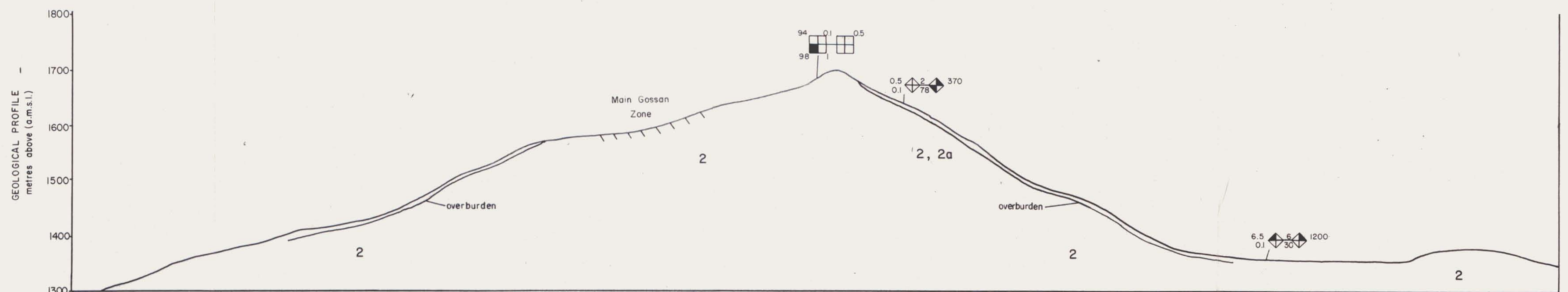
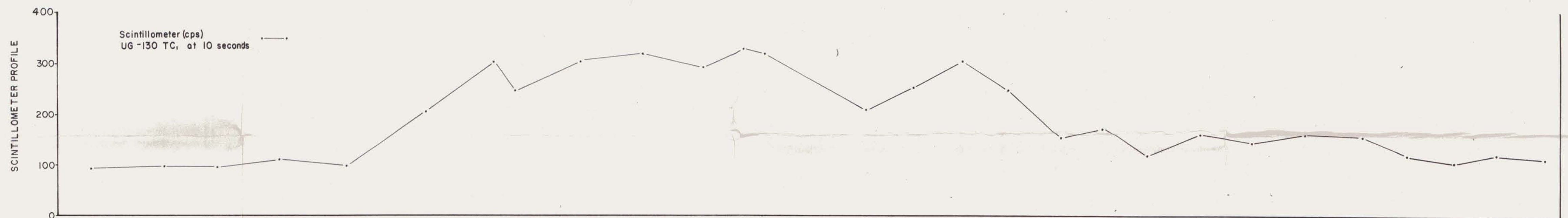
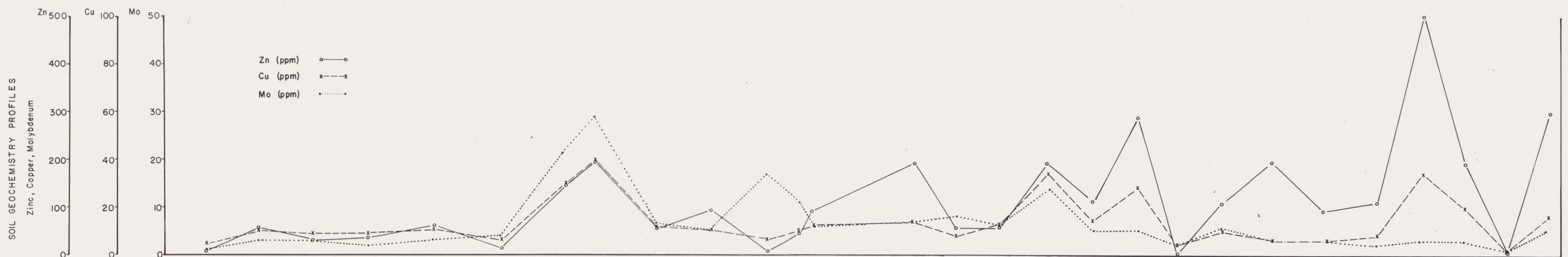
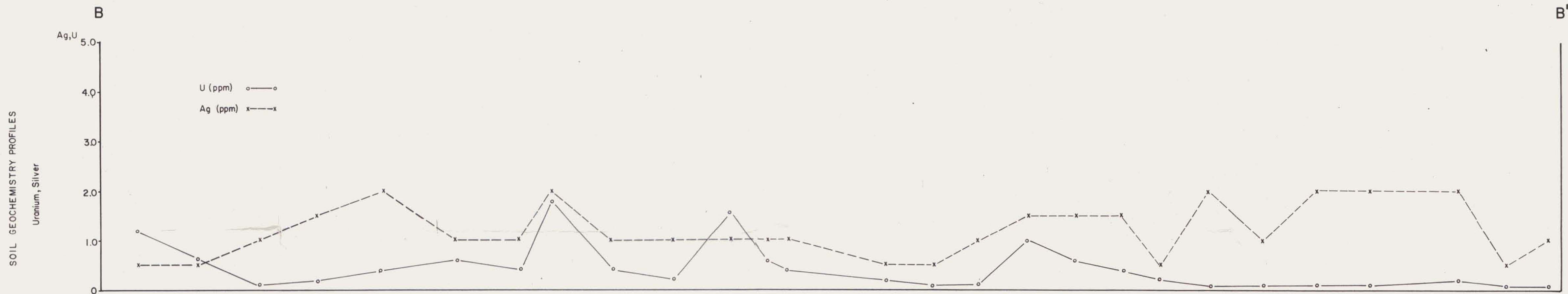
Unit	Description	Rock Geochemistry
DEVONIAN-TRIASSIC		
Sedimentary and Volcanic Rocks		
4	Black Shale, chert	20-100 ppm Ag, 10-100 ppm U
4a	Quartz Stockwork in Black Shale	20-100 ppm Ag, 10-100 ppm U
3	Sandstone	20-100 ppm Ag, 10-100 ppm U
2	Rhyolite, Dacitic welded tuffs, with pyritic and Pyroclastic units	20-100 ppm Ag, 10-100 ppm U
2a	Porphyritic Dacite	20-100 ppm Ag, 10-100 ppm U
SILURIAN		
1	Dolomite	20-100 ppm Ag, 10-100 ppm U
Stream Sediment Geochemistry		
Ag	20-100 ppm	20-100 ppm
U	10-100 ppm	10-100 ppm
Ag	20-100 ppm	20-100 ppm
U	10-100 ppm	10-100 ppm

~ ~ ~ ~ ~ Thrust Fault
 - - - - - Geological Contact; known, approximate, assumed

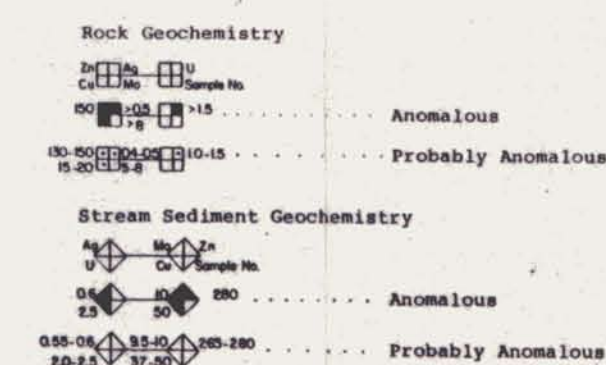
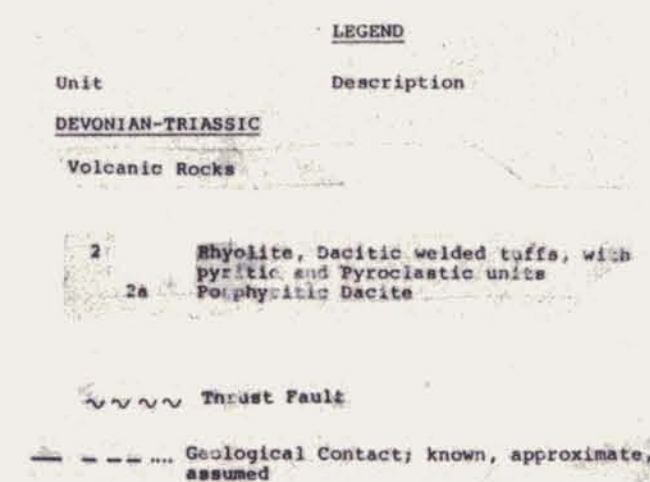
CANADIAN OCCIDENTAL PETROLEUM LTD.
 MINERALS DIVISION
PROJECT WATSU
TIER CLAIMS
 WATSON LAKE MINING DISTRICT,
 YUKON
 N.T.S. 105-F
 GEOLOGICAL, GEOCHEMISTRY and
 SCINTILLOMETER PROFILES A to A'

F.W.G./a.h./Jan. 1981

Plan 2



Horizontal Scale for all Profiles 1cm = 50m



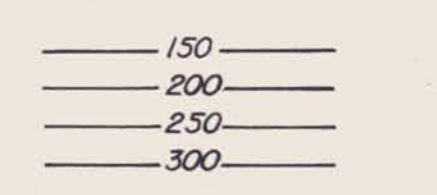
CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION
**PROJECT WATSU
TIER CLAIMS**
WATSON LAKE MINING DISTRICT,
YUKON
N.T.S. 105-F
GEOLOGICAL, GEOCHEMICAL and
SCINTILLOMETER PROFILES B to B'



LEGEND

- Anomalous
- > 300
- Probably Anomalous
- 270 - 300

Readings and contours in c.p.s.
Urtec model UG 150 TC at 10 sec.



— Claim Boundary
A — A' Cross Section
Py — Pyrite

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION
**PROJECT WATSU
TIER CLAIMS**
WATSON LAKE MINING DISTRICT,
YUKON
N.T.S. 105-F
**SCINTILLOMETER SURVEY
CONTOURED VALUES**





LEGEND

All values in ppm

$\oplus$ Zn
80 CA sample number
ANOMALOUS

$\oplus$ Zn
80 CA sample number
PROBABLY ANOMALOUS

Contour Interval in ppm

150
200
400

Claim Boundary

A-A' Cross Section

Py - Pyrite

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION

**PROJECT WATSU
TIER CLAIMS**

WATSON LAKE MINING DISTRICT,
YUKON

N.T.S. 105-F

SOIL GEOCHEMISTRY

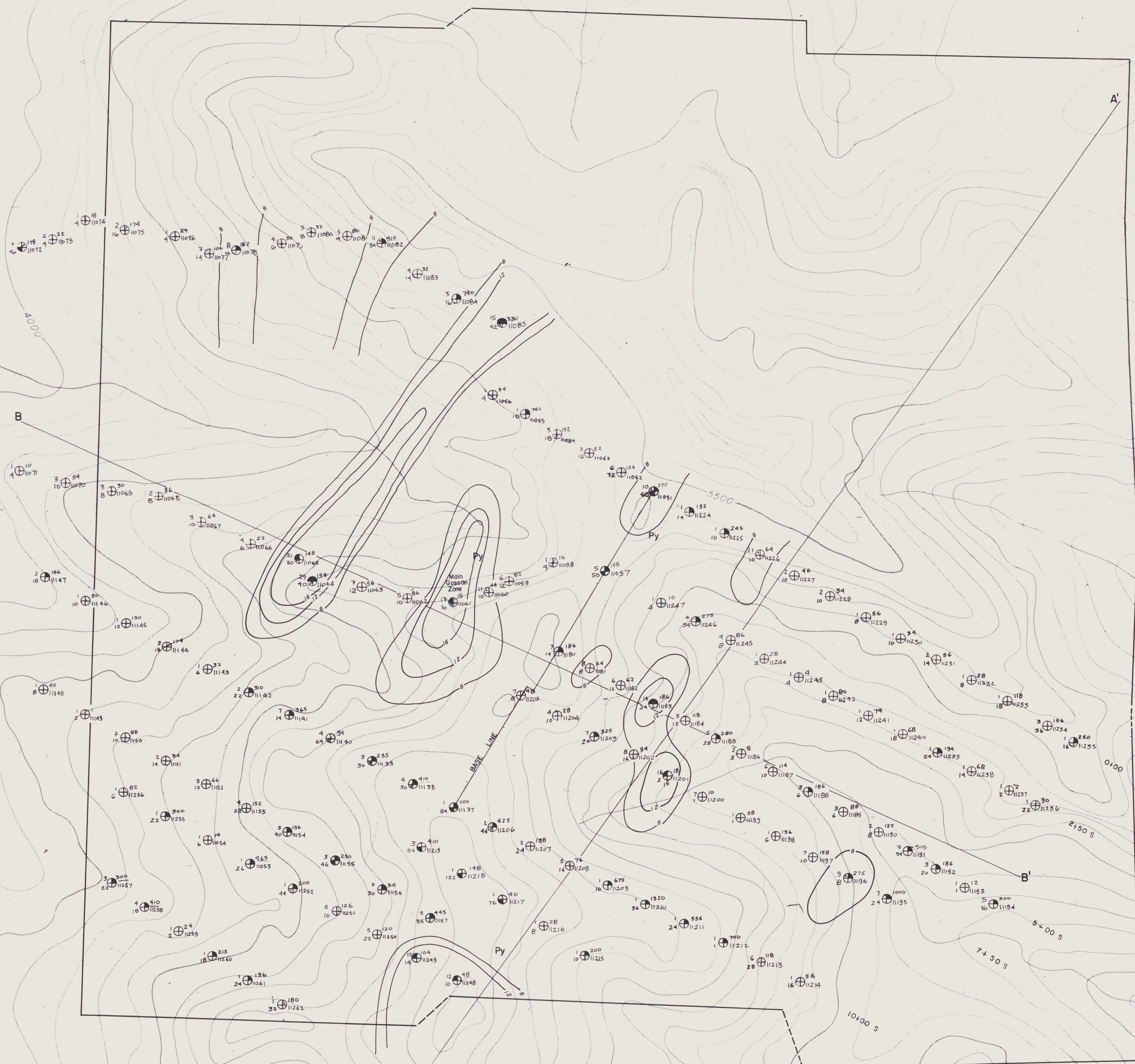
SAMPLE LOCATION AND CONTOURED VALUES

Zn

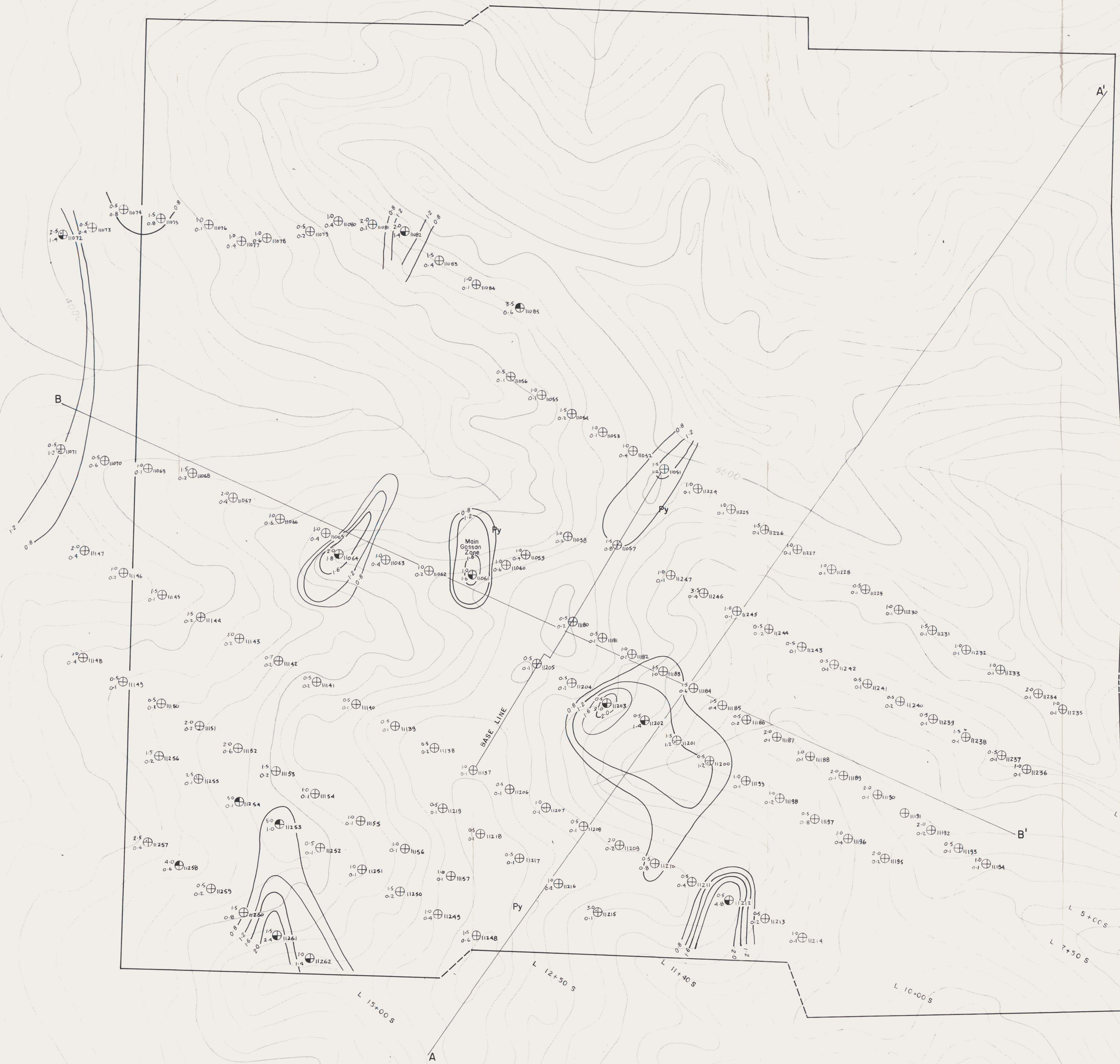
SCALE IN METRES

100 50 0 100 200 300 400

PLAN 5 F.G./d.t. Dec.80



- LEGEND**
- All values in ppm
- Mo Zn
90 CA sample number
ANOMALOUS
PROBABLY ANOMALOUS
9-11 167-180
41-45
- Contour Interval in ppm
8
12
16
- Claim Boundary
A-A' Cross Section
B-B' Cross Section
Py - Pyrite



LEGEND

All values in ppm

U $\oplus$ 100 CA sample number

ANOMALOUS

>30 $\oplus$

>12 $\oplus$

PROBABLY ANOMALOUS

2.5-30 $\oplus$

0.97-1.2 $\oplus$

Contour Interval in ppm

0.8

1.2

1.6

2.0

Claim Boundary

A A' Cross Section

Py — Pyrite



LEGEND
All values in ppm
U 11071 CA sample number
ANOMALOUS
PROBABLY ANOMALOUS
2.5-3.0
0.97-1.2
Contour Interval in ppm
30
Claim Boundary
A A' Cross Section
Py - Pyrite

