82-292-10477

GEOLOGY, SOIL GEOCHEMISTRY,

ROCK SAMPLING AND TRENCHING PROGRAM (1981)

ON THE

SUNRISE MINERAL PROPERTY

OMINECA MINING DIVISION

N.T.S. 93M/6W

LATITUDE: 55°21', LONGITUDE: 127°29'

FOR

WESTMIN RESOURCES LIMITED

BY

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FEBRUARY 1982

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INTRODUCTION

1. Location and Access

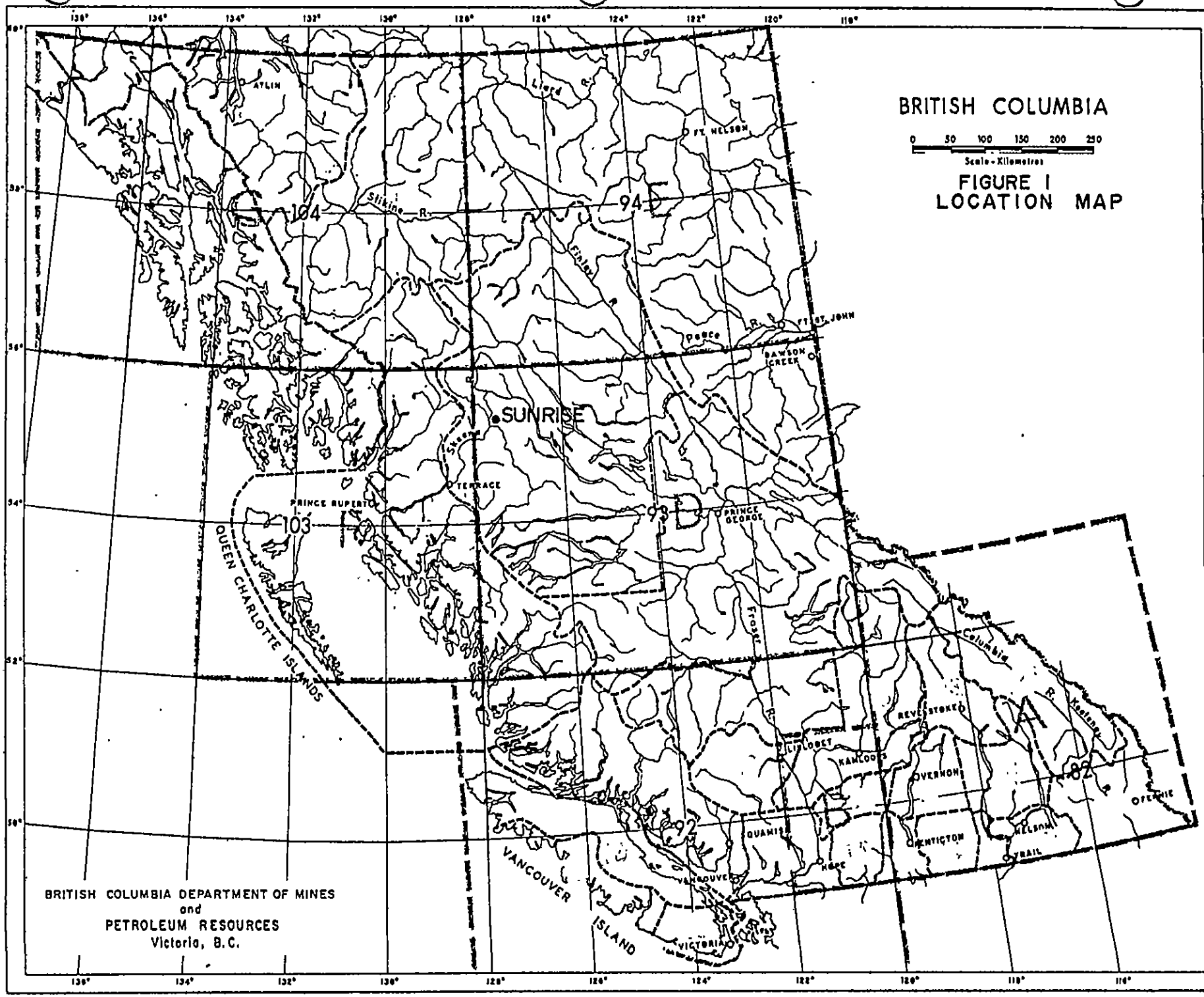
The Sunrise mineral property is located on Nine Mile Mountain in the Babine Range of the Skeena Mountains. The mountain is bounded on the west by the Skeena River, on the north by the Shegunia River and on the south by the Bulkley and Suskwa river systems (Figure 1).

The property is fifteen air kilometres northeast of New Hazelton, B.C. It is accessible during the summer months via a 23 kilometre gravel road from the village of Two-Mile, B.C.

2. Topography and Vegetation

The property blankets the steep-sided slopes of Nine Mile Mountain between elevations of 1,070 metres (3,500 feet) and 1,675 metres (5,500 feet). Above 1,675 metres the mountain flattens. The peak is at an elevation of 1,765 metres (5,790 feet).

Slopes are sparsely covered with stands of fir, balsam and jackpine to elevations of 1,310 metres (4,300 feet). Short, dense buck brush blankets the hillsides between elevations of 1,300 and 1,400 metres and becomes patchy up to elevations of 1,525 metres (5,000 feet). Alpine vegetation, growing amidst outcrop and boulders, dominates the landscape at elevations greater than 1,370 metres (4,500 feet).


BRITISH COLUMBIA
0 50 100 150 200 250
Scale - Kilometres
FIGURE I
LOCATION MAP
SUNRISE
104
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ATLIN
Liard R.
FT. NELSON
Stikine R.
Finlay R.
Peace R.
FT. ST. JOHN
DAWSON CREEK
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TERRACE
PRINCE RUPERT
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QUEEN CHARLOTTE ISLANDS
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REVELSTOKE
LILLOOET
KAMLOOPS
VERNON
OSOYOOS
QUAMIS
PENTICTON
NELSON
TRAIL
HOPE
VANCOUVER
VANCOUVER ISLAND
VICTORIA
BRITISH COLUMBIA DEPARTMENT OF MINES
and
PETROLEUM RESOURCES
Victoria, B.C.

3. Claim Statistics (Figure 2)

CLAIM	RECORD NO.	NO. OF UNITS	RECORD DATE	ASSESSMENT DATE
VAN 1-6	26761-26766	6	Sept. 8	Sept. 8, 1983
ALPHA 1-5	22036-22040	5	June 28	June 28, 1983
ALPHA 6 & 7	21304 & 21305	2	July 22	July 22, 1984
ALPHA 8-10	22471-22473	3	Aug. 30	Aug. 30, 1983
ALPHA 11-26	25387-25402	16	June 29	June 29, 1983
ALPHA 27-30	26767-26770	4	Sept. 8	Sept. 8, 1983
GRIZ	4279	10	Sept. 15	Sept. 15, 1982
GRIZ (FR.)	4280	1	Sept. 15	Sept. 15, 1982
MIDNITE (FR.)	4281	1	Sept. 15	Sept. 15, 1982
GOAT	4282	6	Sept. 15	Sept. 15, 1982

Crown-Granted	Lot #
Ethel	593
Sunset	594
Sunrise	595
Noonday	596
Hidden Treasure	597
Ethel Fraction	599

* Total of 54 claim units and 6 Crown-granted claims.

4. History

Lead, zinc and silver minerals were first discovered on Nine Mile Mountain in the early nineteen hundreds. Subsequent exploration involved the digging of pits and trenches and the construction of short adits and shafts into the mountain side. Small amounts of hand-cobbed ore were shipped by packhorse in the early days. Remnant stockpiles of this material assay up to 90 oz/ton Ag.

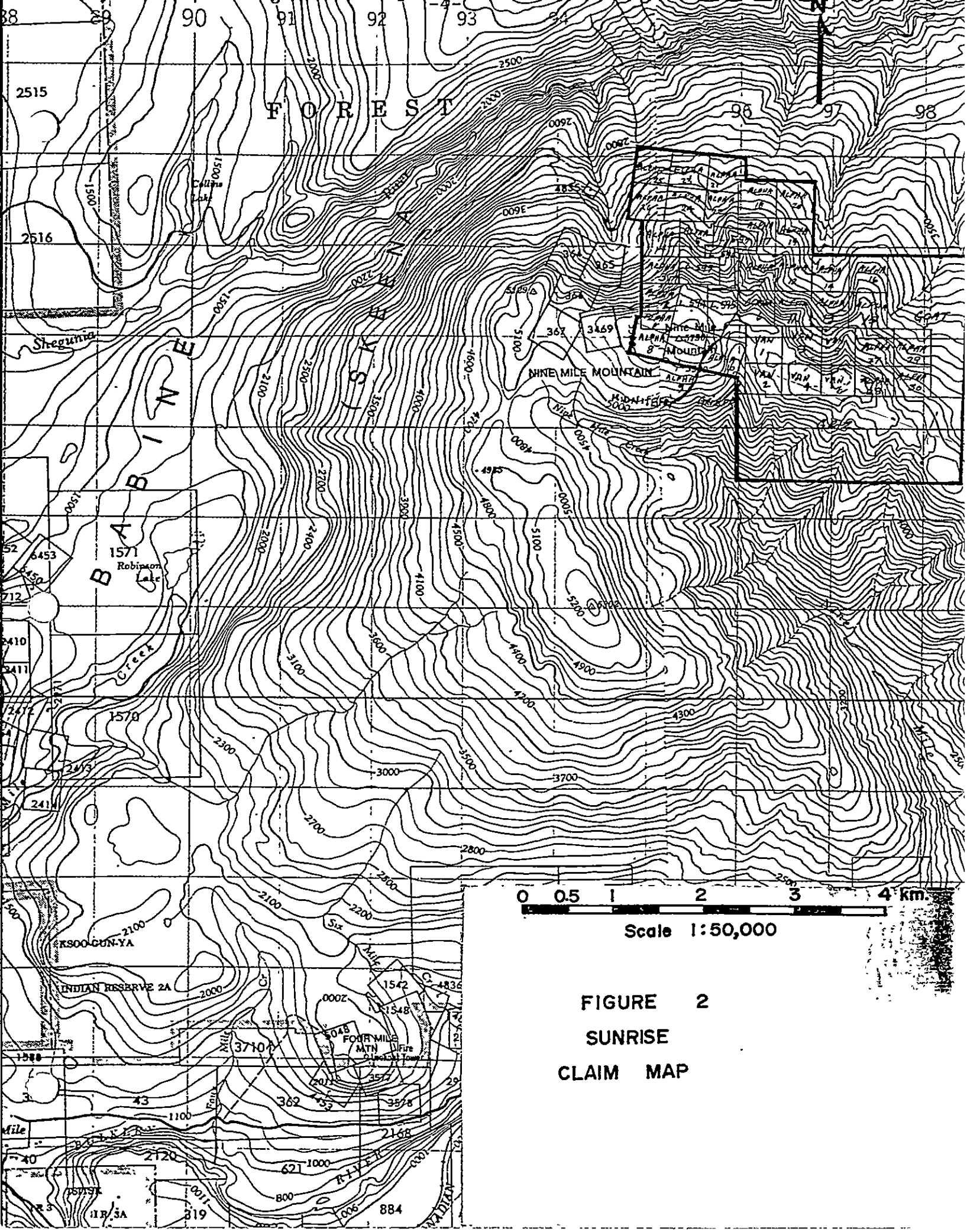

FIGURE 2

SUNRISE

CLAIM MAP

In the late 1920's a 750-foot adit and 60-foot raise were driven on the Sunrise claim. Few mineralized veins were intersected and the "Main Vein" was never reached. Trenching and prospecting from the 1930's to 1950's uncovered additional veins.

Major work resumed in the area in the late 1960's. This consisted of access road construction, surface stripping and trenching, mill site preparation and 2,800 feet of diamond drilling in 10 holes over the Sunrise claim. By the end of 1974, some 160 tons of high-grade ore had been mined from large open cuts along the Sunrise "Main Vein" structure. In 1979 contract mining produced 19 tons of concentrate at 0.12 oz/ton Au, 43.4 oz/ton Ag, 18.1% Pb, 15.4% Zn, 5% As, 5% Sb and 0.28% Cu. Westmin Resources Ltd. began work on the property in August 1981 as part of the Sunrise-Westmin joint venture program.

5. Regional Geology

Rocks underlying the Hazelton area of the Babine Range consist of two major sequences; one sedimentary and the other volcanic:

1) Upper Jurassic-Lower Cretaceous Bowser Group sedimentary rocks - sandstone, siltstone, shale, conglomerate

2) Lower to Middle Jurassic Hazelton Group volcanic rocks.

These sequences are intruded by stocks of Upper Cretaceous granodiorite, quartz diorite and quartz monzonite, Bulkley Intrusions. Most of the mineral deposits in the Hazelton area occur within these intrusive bodies or in sedimentary or volcanic rocks adjacent to them. Smaller Eocene age Babine Intrusions consisting of diorite , porphyritic rock and breccia occur regionally.

1981 PROGRAM

1. Property Geology

Geological mapping over the Sunrise property was accomplished at a scale of 1:5000. The property is underlain by the one kilometre by three kilometre westerly elongated Nine Mile Granodiorite Stock (Figure 3). The coarse grained granodiorite is one of numerous Bulkley Intrusions dated at 72 Ma (hornblende). Its approximate composition is 60 percent andesine feldspar, 10 percent quartz, 10 percent orthoclase, 10 percent biotite and 10 percent hornblende. Finer grained phases have been observed on the property.

The stock intrudes sandstone, siltstone and shale belonging to the Upper Jurassic-Lower Cretaceous Bowser Group. Sedimentary rocks are often hornfelsed adjacent to the intrusive contact, and sandstone may be altered to quartzite. Structurally, the sediments form broad, moderately-dipping synclines and anticlines.

2. Vein Structures

Numerous quartz-carbonate veins with simple and complex minerals containing silver, lead, zinc, antimony and arsenic occur in both the granodiorite and the surrounding metasedimentary rocks. Generally they are flat to moderately dipping structures (10° to 45°) which are exposed sometimes for long distances, but pinch and swell greatly. Branching vein structures are common. Some areas (i.e. Sunrise main vein structure) have a system of network mineralized veins and veinlets in zones adjacent to the main mineralized structure. Such a system may measure from 10 cm to 3 metres wide adjacent to one vein structure. Veins in the Lead King area are generally sub-parallel and dip gently into the mountain side. This sheeted vein habit is exposed intermittently along the mountain side for 600 metres (approximately 2,000 feet) with a width of greater than 50 metres (160 feet) in places.

Local shearing and faulting, evidenced by numerous chlorite slips and slickensides is commonly associated with areas of mineralized vein concentrations. Mineralized veins in granodiorite are generally enveloped by zones of phyllic alteration characterized by the abundance of quartz, sericite and disseminated pyrite. Silicified zones around veins are a pale green colour in comparison with the white background colour of the normally unaltered granodiorite.

Vein trends are variable across the property. Most veins strike east, northeast and northwest and generally dip moderately to the south. Fewer north-striking veins commonly dip to the east. Veins within sediments often follow bedding planes which commonly strike north to northeast and dip gently to the east.

3. Mineralization

At least seven areas of mineralized vein concentrations and former workings are exposed across the top or along steep slopes of Nine Mile Mountain. They are shown on Figure 3 and are described as follows, west to east across the property:

Silver Cup - elevation - 4,600 to 5,000 feet (1400-1525 m)

- 5 cm to 20 cm quartz veins plus sphalerite, galena, jamesonite, tetrahedrite and pyrite
- few parallel structures - 030°/75° SE
- vein located along a fault at crest of anticlinal fold structure in sediments
- not within present Sunrise mineral property

Barber Bill - elevation - 4,100 feet (1250 m)

- 10 cm to 1 metre replacement shear zone in sediments containing finely crystalline jamesonite, sphalerite, galena and arsenopyrite - 000°/18°-30° SE

Pole Star - elevation - 5,100 to 5,400 feet along gentle slopes of mountain top (1550-1645 m)

- 15 cm to 60 cm main vein exposed for 30 metres along cliff face - consists of galena, sphalerite, tetrahedrite and arsenopyrite - 330°/15° SW

Sunrise - elevation - 4,700 to 5,200 feet (1430-1585 m)

- numerous veins in a disturbed zone approximately 200 metres x 300 metres in granodiorite
- 70 cm to 1.2 metre wide quartz veins - ±045°/30-50° SE, 090°/10-40° S, 000°/W & E (weak)
- minerals in order of abundance are jamesonite, sphalerite, galena, cosalite, pyrite, arsenopyrite, argentite and tetrahedrite
- the ore here contains appreciable amounts of silver, lead, antimony and bismuth

Lead King - elevation - 4,600 to 5,100 feet (1400-1550 m)

- numerous sub-parallel veins in disturbed zone 200 metres x 400 metres along slickensided fault zones in granodiorite
- vein sets 090°/10-35° S, 000°/25°-45° E (weak)
- 10 cm to 1 metre wide veins often 30 to 100 metres length

- veins offset few feet by normal faults, NE/60°-90° SE
- quartz + jamesonite, sphalerite, cosalite, galena with some argentite and tetrahedrite

Slocan - elevation - 5,300 to 5,500 feet (1615-1675 m)

- veins of jamesonite, galena, pyrite, plus minor quartz in sheared sediments

West - 7 to 14 cm wide veins - 305°-330°/ 30°-40° S

- few graphitic coal seams

Middle - 0.5 metre quartz-carbonate vein with 3% arsenopyrite

- 045°/60° SE

East - 7 to 14 cm wide quartz, galena, jamesonite, sphalerite vein

- 090°/20-30° S and N

Silver Pick - elevation - 4,500 to 5,400 feet (1370-1645 m)

- east of Slocan and Lead King workings
- most of former workings in sediments

i.e. oxidized vein - 000°/20° E
20 cm quartz, jamesonite, sphalerite vein - 090°/15° S
30 cm to 1 metre wide quartz breccia vein - 020°/80° SE

- few shear zones and quartz veins in granodiorite

The chief metallic minerals, determined by the Federal Department of Mines, are jamesonite ($Pb_5Sb_4S_{11}$), galena (PbS), sphalerite (ZnS) and freibergite $(Cu,Ag)_{12}Sb_4S_{13}$. Arsenopyrite and pyrite may be present in variable quantities. Quartz and carbonate are the major gangue minerals.

4. Property Examination

An initial property examination was undertaken by Westmin Resources Limited on July 2nd and 3rd. A total of 17 rock samples were collected. These were shipped to Chemex Labs. Ltd., North Vancouver and analysed for Au, Ag, Cu, Pb, Zn using atomic absorption method. Results are plotted on Table 1 (samples 72401 to 72417).

A Westmin crew subsequently moved onto the property on August 15 to continue property evaluation. The men moved out on September 30 due to an early snowfall.

5. Grid Establishment and Soil Geochemical Survey

A grid was established over the top of Nine Mile Mountain using the elevation marker at the peak as the zero point. A baseline was run on a bearing of 110°. for 500 metres westerly and 3,000 metres in an east direction. Crosslines were run perpendicular to the baseline at 100 metre spacings and all lines were picketed at 50 metre intervals. Number of line kilometres total 21.90.

Soil samples were taken where possible at 50 metre intervals. A total of 422 samples were collected and shipped to Min-En Laboratories Ltd., North Vancouver and seived through a standard minus 80 mesh screen. The soils were then analysed for Ag, Cu, Pb and Zn using the nitric-perchloric digestion method and atomic absorption.

6. Statistical Analyses of Soil Geochemical Results

Statistical analysis was applied to soil geochemical data using the combined P-STAT and MEGAS (Multi-Element Geochemical Analysis System) programs offered by Control Data Corporation of Vancouver, B.C. Normal and log normal histograms were first constructed and means and standard deviations were established (Appendix 1). Data was then presented as log-normal cummulative frequency histograms referred to as probability plots. This is where a frequency within any class is added to the total frequencies of all preceding classes. In this study, frequencies were cumulated from the low end of the range of values. Threshold values for each element with the exception of Cu, were determined using bimodal distribution methods (Sinclair, 1976). Cu values showed only a single population distribution over the property and threshold values were determined using the mean and standard deviations.

Values obtained from these statistical analysis are:

Element	Threshold Anomalous (ppm)	Moderate Anomalous (ppm)	Strong Anomalous (ppm)
Ag	≥1.6	≥ 2.2	≥ 3.4
Cu	≥30	≥ 45	≥70
Pb	≥60	≥120	≥ 180
Zn	≥300	≥500	≥700

Subsequently the data was grouped as follows:

Element	Percent	Number
Ag		
Group 1		
≥2.2 ppm	2	7
Group 2		
≥1.6 ppm	7	30
Group 3		
<1.6 ppm	91	373
TOTALS	100	410

Element	Percent	Number
Cu		
Group 1		
≥45 ppm	10	40
Group 2		
≥30 ppm	25	105
Group 3		
<30 ppm	65	272
TOTALS	100	417
Pb		
Group 1		
≥120 ppm	4	16
Group 2		
≥60 ppm	14	59
Group 3		
<60 ppm	82	338
TOTALS	100	413
Zn		
Group 1		
≥500	6	23
Group 2		
≥300	7	30
Group 3		
<300	87	359
TOTALS	100	412

The data was then fed into the SACM program file where it was plotted. The value of the surface at each point of a uniform 25 metre x 25 metre grid system was computed next. This process is called "numerical approximation" and its purpose is to produce an accurate approximation of a surface defined by a set of points. Once approximate surface values were calculated, contour maps were produced, by the computer, using contour intervals defined by threshold and anomalous values (Figures 4-7).

7. Interpretation of Soil Geochemical Anomalies

Ag, Pb and Zn soil geochemical anomalies are concentrated over the west half of the established grid, and expose several anomalous trends in the general area around Nine Mile Mountain peak. Cu values, on the other hand, form broad anomalous zones over the entire grid. Areas of significant overlap of Ag, Pb, Zn ± Cu anomalies are presented below in order of strength and possible significance.

1) West Slocan Area

- coincident Ag, Pb soil anomaly
- trends north over exposed veins in metasediments on side of Nine Mile Mountain, west of Griz Creek
- coincident northeast trending Pb, Zn anomaly uphill from West Slocan showings extends along L 3+00E from 3+00S to 1+00N
- Cu values also coincide with Pb, Zn anomaly but trends are not as distinctive
- granodiorite-metasediment contact at north end of anomaly

2) Nine Mile Mountain Peak to 1+00E - 5+00N Area

- coincident Ag, Cu, Pb, Zn soil anomaly extends across mountain peak from 1+00W - 1+50S to 1+00E - 4+00E (open to northeast towards Sunrise showing)
- cuts across granodiorite-metasediment contact at 0+00E - 1+50N vicinity
- generally strengthens to north around 1+00E - 4+00N slightly uphill from mineralized showing located at 1+30E - 4+30N

3) 6+00E - 2+50N Area

- coincident E-W trending Ag, Pb, Zn soil anomaly straddles granodiorite-metasediment contact from 5+00E - 2+00N to 7+00E - 3+00N (open to east towards DD adit)
- covers one small showing at 6+30E - 2+00N

4) Baseline-West

- small coincident Ag, Cu, Pb, Zn anomaly at extreme west end of baseline over metasediments
- may open up to west and north over Silver Cup basin

5) 3+00W - 3+00S Area

- small coincident Cu, Pb, Zn anomaly in vicinity of showings at 2+00W - 2+50S to 3+50S
- metasediments are intruded by granodiorite dykes and mineralized quartz veins

6) Several vicinities in the west half of the grid host isolated anomalous Ag, Cu, Pb and Zn values

- isolated Cu values and few Ag values are scattered in the east half of the grid as well

Two broad, low to moderate Cu anomalies trend east-southeast over the area around Nine Mile Mountain peak. One such anomaly straddles the granodiorite-metasediment contact from 3+00W - 1+00N to 3+50E - 1+00N. The second east-southeast trending anomaly occurs over the metasediments south of Nine Mile Mountain peak. Another broad Cu anomaly lies over metasediments north of the baseline from 8+00N to 14+00E, being open to the northeast over the Silver Pick basin. Low anomalous Cu soil values virtually blanket the metasediments south of the baseline between 6+00E and 17+00E. At 17+00E, the anomaly crosses the baseline and extends eastward, north of the baseline, to 21+00E. There is no present interpretation for the presence of broad Cu anomalies across the top of Nine Mile Mountain. It is likely that the threshold value for Cu_c was chosen slightly low as 35% of the samples fall above this value. This is a high percentage compared to other elements.

8. Rock Sampling

A total of 44 rock samples were collected over the property in 1981 (Figure 3). All samples were shipped to Chemex Labs, North Vancouver for analyses of Au, Ag, Cu, Pb and Zn. Results are plotted on Table 1 .

The silver, lead and zinc content varies from vein to vein and even from locality to locality along the same structure. Veins sampled in the 1981 survey indicate a range of 1 oz/ton to 28 oz/ton Ag. This averages out to 8 oz/ton Ag for the 20 veins sampled. The gold content in veins is generally trace but values up to 0.18 oz/ton Au are reported. Combined lead and zinc values vary from 1% to 27% in veins and average 11% Pb + Zn over 20 samples. The Ag to Pb + Zn ratio is about 1:27 or 0.73 oz. Ag for each 1% of combined lead and zinc.

Most samples collected across a width of vein systems on surface show anomalous Ag, Pb and Zn values, but rarely exhibit potential economical values. An exception to this is two 3 metre-wide chip samples across Pb-King trench 3. These average 3.15 oz/ton Ag and 3.19% Pb + Zn.

9. Trenching

Because of normally poor values generated by continuous chip sampling of surface outcrop, selected areas will be trenched (drilled, blasted and mucked) before undertaking sample collection across a zone. Only fresh rock will be sampled. Results should reflect a more representative suite of metal values expected at depth. Trenching across a 100-metre wide disturbed zone over the Lead-King workings was near completion in 1981, but an early snowfall halted progress. Pb-King trench 1 will be completed in 1982.

CONCLUSIONS

Geological surveys conducted in 1981 succeeded in better defining the contact between the Nine Mile Mountain granodiorite stock and surrounding metasediments. Geology and rock sampling also established the extent, density and general quality of mineralized occurrences on the mountain. Soil sampling across the mountain top defined several coincidental Ag, Pb, Zn ± Cu anomalies and their apparent trends. Both surveys resulted in the definition of prime exploration targets for future programs. Present target areas in order of importance are; Sunrise, Lead King, West Slocan, Nine Mile Mountain peak to 1+00E-5+00N Area, and 6+00E-2+50N Area.

SUNRISE

1982 WORK PROGRAM PROPOSAL

1) Geology

- More detailed examination of intrusive body and areas of mineralization.
- Re-examination of 1971 drill core.

2) Geophysics

Induced Polarization	- Approximately 10 line kilometers over top of Nine Mile Mountain
Magnetometer	- Similar survey to I.P., using accurate proton magnetometer.

3) Bulldozing and Trenching

Bulldozer	- Opening access road across southwest side of Nine Mile Mountain and digging few trenches.
Trenching	- Drill and blast mineralized targets on less-steep Sunrise claim using air compressor.

4) Diamond Drilling

- 2,500 feet of N.Q. diamond drilling in areas of greatest response to all previous exploration tools.

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SUMMARIZED COST STATEMENT, 1981

Assay and Geochemical Costs	$ 2,784.10
Trenching Costs (one 1 x 75 metre trench) physical - $	6,183.00 / 3,000.00 TEK
Salaries	10,719.00
Transportation (Rental, Fuel, Maintenance)	4,033.84
Food and Accomodation	3,015.44
Materials and Supplies	414.53
Maps and Reports	150.17
Telephone and Business Expense	237.44
TOTAL EXPLORATION EXPENDITURE	$30,537.52

Sample #	Location	Description	Au		Ag		Cu		Pb		Zn	
			ppb	oz/ton	ppm	oz/ton	ppm	%	ppm	%	ppm	%
57501	DD Adit	- high grade grab sample	60	.018	> 100	8.68	420		> 10,000	11.3	>10,000	10.3
57502	elevation 1445 m Silver Cup Basin	- 50 cm across vein	140	.010	> 100	7.14	196		> 10,000	2.8	>10,000	13.5
57503	elevation 1460 m Silver Cup Basin	- 40 cm flat-lying vein	120	.008	> 100	17.08	390		> 10,000	10.5	>10,000	16.5
57504	7 + 40E - 4 + 50N	- 5 metre chip sample across 10 metre veined zone	<10		15.8		27		3,350		9,100	1.03
57505	7 + 40E - 4 + 50N	- 5 metre chip sample across 10 metre veined zone	< 10		27.0	0.88	60		1,850		2,750	
57506	10 + 00E - 1 + 50N	- 1 metre chip sample across vein structure	< 10		3.2		24		252		525	
57507	7 + 00E - 0 + 45N	- 1 metre chip sample across bx zone in carbonaceous seds.	< 10		2.7		13		88		240	
57508	7 + 00E - 0 + 55N	- 1 metre chip sample across 6 cm bx'd quartz vein (py + aspy)	< 10.		3.9		18		135		130	
57509	7 + 00E - 0 + 80N	- 2 metre sample across bx'd vein & silicified hanging wall	20	< .003	1.1		7		40		492	
57510	1 + 30E - 4 + 30N	- 2 metre sample across 20 cm vein & hanging wall veinlets	20	.006	17.3		73		> 10,000	1.37	7,600	1.0
57511	1 + 30E - 4 + 20N	- 1 metre sample across 10 cm vein & 2 cm vein	< 10		17.4		16		9,000	0.81	8,000	1.03
57512	4 + 15E - 1 + 00N	- grab sample of 20 cm vein (028°/42°E)	< 10		> 100	4.46	200		> 10,000	6.75	>10,000	9.2
57513	4 + 40E - 0 + 20N	- 60 cm sample across 50 cm vein	140	.006	26	1.28	72		> 10,000	1.42	4,300	
57514	4 + 00E - 0 + 20S	- 2 metre chip sample across 50 cm vein & 8 cm vein	100	.004	22	0.76	20		> 10,000	1.42	4,800	
57515	4 + 00E - 0 + 10S	- grab sample of 20 cm vein	20	.006	> 100	27.70	2,200	0.20	> 10,000	18.7	>10,000	6.2
57516	3 + 60E - 0 + 20S	- sample from high grade dump	180	.006	> 100	16.98	460		> 10,000	11.3	>10,000	8.22
57517	3 + 50E - 0 + 00N	- sample along 3 to 5 cm quartz vein	10		18.1		31		5,300	0.55	3,400	
57518	elevation 1455 m Camp Ridge	- 1.5 metre grab sample across two veins	120	.005	12.6		20		3,300		5,450	0.69

TABLE 1

SUNRISE

1981 ROCK SAMPLING DATA AND RESULTS

Sample #	Location	Description	Au		Ag		Cu		Pb		Zn	
			ppb	oz/ton	ppm	oz/ton	ppm	%	ppm	%	ppm	%
72401	Sunrise Open Cut #1	- grab sample across 50 metres of dump (random)	20		> 100	5.42		0.03	8,000	0.95	>10,000	3.15
72402	Camp ridge	- 4 metres vertical across 2 or 3 veins	<10		6.6			.01	1,300		5,000	
72403	Camp ridge	- 3 metres vertical across 2 or 3 veins	<10		3.5			.01	400		4,500	
72404	Camp ridge	- 12 metres horizontal across 2 veins	<10		1.3			.01	250		2,500	
72405	Camp ridge	- 4 metre grab of altered rock	<10		40	1.06		.01	2,000	0.23	>10,000	3.15
72406	Camp ridge	- 2 metre grab of main vein	<10		29			.01	5,500		>10,000	
72407	Pb-King ridge	- 5 metre grab of main vein	80		58	1.48		.01	>10,000	1.96	>10,000	1.59
72408	Pb-King basin	- 0.5 metre vein	100	.005	> 100	6.02		0.02	>10,000	2.30	>10,000	3.05
72409	Pb-King basin	- 6 cm vein	40		70	3.50		0.02	>10,000	5.40	>10,000	11.50
72410	elevation 1585 m Camp basin	- 6 cm vein	40		39	7.74		.01	2,400	0.26	>10,000	1.34
72411	Pb-King basin	- 8 cm vein	20		16.5			.01	1,600		>10,000	
72412	Pb-King basin	- 13 cm vein	<10		> 100	1.04		0.05	>10,000	1.54	5,500	0.52
72413	Pb-King basin	- 7 cm vein	10		> 100	7.59		0.03	>10,000	1.56	>10,000	3.05
72414	Pb-King ridge	- 40 cm main vein	10		> 100	3.60		0.02	7,800	0.84	>10,000	17.40
72415	Pb-King ridge	- 1 metre main vein	10		> 100	5.56		0.01	>10,000	5.22	>10,000	9.93
72416	west of baseline	- 15 cm vein	180	.010	> 100	6.28		0.03	>10,000	1.25	8,500	1.00
72417	west of baseline	- 12 cm vein	20		> 100	28.08		0.12	>10,000	8.36	>10,000	17.40

Sample #	Location	Description	Au		Ag		Cu		Pb		Zn	
			ppb	oz/ton	ppm	oz/ton	ppm	%	ppm	%	ppm	%
57519	elevation 1450 m Camp Ridge	- grab sample of 20 cm vein	260	< .003	80	4.22	133		>10,000	4.84	>10,000	8.22
57520	6 + 30E - 2 + 00N	- grab sample from hand pit	20	< .003	87	4.20	145		>10,000	3.44	5,000	
57527	Sunrise Open Cut #1	- blind-folded grab sample across 30 metres of dump		< .003		0.54		< 0.01		0.48		1.26
57521	Pb-King Tr. 3	- 0 - 3 metre chip sample (3 m)	<10		35.0	3.64	125		>10,000	2.10	6,600	1.03
57522	Pb-King Tr. 3	- 3 - 6 metre chip sample (3 m)	<10		14.3		69		1,020		4,450	
57523	Pb-King Tr. 3	- 6 - 9 metre chip sample (3 m)	<10		13.1		63		3,200		>10,000	
57524	Pb-King Tr. 3	- 9 - 12 metre chip sample (3 m)	<10		30.0	2.66	62		>10,000	1.03	>10,000	2.22
57525	Pb-King Tr. 3	- 12 - 15 metre chip sample (3 m)	40	< .003	8.9		41		1,000		2,500	
57526	Pb-King Tr. 3	- 15 - 18 metre chip sample (3 m)	10		5.2		57		290		1,450	

APPENDIX 1

STATISTICAL DATA APPLIED TO SOIL GEOCHEMICAL RESULTS

	X	Y	Cu	Pb	Zn	Ag
NBB 1	000	000	30	58	132	0.6
NBB 2	050	000	24	34	78	0.6
NBB 3	100	000	30	65	174	0.5
NBB 4	150	000	43	108	273	0.7
NBB 5	200	000	45	67	156	0.8
NBB 6	250	000	30	125	401	0.6
NBB 7	300	000	50	80	1030	1.0
NBB 8	450	000	34	73	410	1.2
NBB 9	400	000	24	38	144	0.8
NBB 10	450	000	28	1020	470	8.0
NBB 11	500	000	23	46	135	1.4
NBB 12	550	000	25	20	131	2.0
NBB 13	600	000	59	27	242	1.0
NBB 14	700	000	30	110	107	1.6
NBB 15	750	000	16	18	67	0.8
NBB 16	800	000	27	26	72	0.8
NBB 17	850	000	28	24	74	0.8
NBB 18	900	000	24	20	65	0.7
NBB 19	950	000	48	50	720	1.1
NBB 20	1000	000	30	18	262	0.6
NBB 21	1050	000	23	20	98	0.8
NBB 22	1100	000	29	30	82	0.7
NBB 23	1150	000	31	20	72	0.7
NBB 24	1200	000	21	370	54	1.0
NBB 25	1250	000	15	19	49	0.7
NBB 26	1300	000	30	18	74	0.6
NBB 27	1350	000	26	11	53	0.7
NBB 28	1400	000	24	20	68	0.9
NBB 29	1450	000	28	18	75	0.8
NBB 30	1500	000	23	22	78	0.8
NBB 31	1550	000	36	22	80	0.5
NBB 32	1600	000	17	17	54	0.5
NBB 33	1650	000	36	30	130	0.6
NBB 34	1700	000	23	26	107	0.6
NBB 35	1750	000	24	23	63	0.9
NBB 36	1800	000	71	26	148	0.9
NBB 37	1850	000	34	24	90	0.9
NBB 38	1900	000	26	22	61	1.2
NBB 39	1950	000	47	26	90	0.6
NBB 40	2000	000	22	23	51	0.6
NBB 41	2050	000	25	25	62	0.7
NBB 42	2100	000	29	28	64	0.8
NBB 43	2150	000	24	20	61	0.5
NBB 44	2200	000	49	20	86	0.6
NBB 45	2250	000	23	18	50	0.5
NBB 46	2300	000	25	20	47	0.7
NBB 47	2350	000	21	18	41	0.8
NBB 48	2400	000	28	19	72	1.1
NBB 49	2450	000	83	26	71	1.2
NBB 50	2500	000	17	23	30	0.8
NBB 51	2550	000	25	18	47	1.0
NBB 52	2600	000	32	18	68	1.0
NBB 53	2650	000	20	20	45	0.7
NBB 54	2700	000	32	21	60	0.8
NBB 55	2750	000	26	20	58	0.9
NBB 56	2800	000	29	17	91	0.7
NBB 57	2850	000	40	20	165	0.8
NBB 59	2950	000	48	19	114	1.0
NBB 60	3000	000	26	16	60	0.8
NBB 61	-050	000	30	120	720	2.8
NBB 62	-100	000	25	42	130	0.8
NBB 63	-150	000	54	115	250	1.4
NBB 64	-200	000	26	72	358	1.1

NBB 88	-300	000	37	57	240	1.2
NBB 67	-350	000	26	14	44	0.5
NBB 68	-400	000	113	340	506	4.2
NBB 69	-450	000	40	56	127	1.6
NBB 70	-500	000	29	76	184	2.4
NBB 71	650	000	20	35	84	2.2
NBB 72	-400	-500	21	42	96	0.9
NBB 73	-400	-450	31	78	248	1.5
NBB 74	-400	-400	10	21	43	0.7
NBB 75	-400	-350	7	13	20	1.0
NBB 76	-400	-300	25	33	125	1.0
NBB 77	-400	-250	26	34	88	0.8
NBB 78	-400	-200	25	32	72	0.9
NBB 79	-400	-150	22	26	105	1.0
NBB 80	-400	-100	26	28	88	1.0
NBB 81	-400	-050	27	37	118	0.8
NBB 82	-400	150	22	120	193	0.8
NBB 83	-400	100	23	22	67	0.7
NBB 84	-400	050	22	18	76	0.6
NBB 85	-200	-500	26	35	95	0.9
NBB 86	-200	-450	22	64	98	1.3
NBB 87	-200	-400	25	82	178	1.1
NBB 88	-200	-350	27	60	284	1.5
NBB 89	-200	-300	74	70	181	0.8
NBB 90	-200	-250	51	60	209	1.3
NBB 91	-200	-200	18	28	65	0.6
NBB 92	-200	-150	8	37	30	2.0
NBB 93	-200	-100	19	60	105	1.3
NBB 94	-200	-050	9	22	41	1.1
NBB 95	-200	300	21	32	68	0.7
NBB 96	-200	250	15	35	76	0.6
NBB 97	-200	200	16	62	178	0.8
NBB 98	-200	150	40	53	268	1.3
NBB 99	-200	100	61	90	226	1.0
NBB100	-200	050	44	96	292	1.2
NBB101	000	400	30	52	302	0.9
NBB102	000	350	25	60	322	0.7
NBB103	000	300	32	60	187	1.0
NBB104	000	250	35	66	235	1.1
NBB105	000	200	28	52	325	1.3
NBB106	000	150	40	80	585	2.0
NBB107	000	100	50	160	355	1.7
NBB108	000	050	38	125	298	1.1
NBB109	700	-500	33	72	210	1.0
NBB110	700	-450	43	55	185	1.2
NBB112	700	-350	30	40	80	1.8
NBB113	700	-300	36	58	178	0.8
NBB114	700	-250	13	42	68	1.2
NBB115	700	-200	25	40	84	1.2
NBB116	700	-150	22	21	58	0.8
NBB117	700	-100	18	22	52	0.8
NBB118	700	-050	28	45	95	1.4
NBB119	700	050	25	38	65	0.8
NBB120	700	100	20	25	58	0.6
NBB121	700	150	22	30	79	1.0
NBB122	700	200	35	56	123	1.2
NBB123	700	250	20	12	33	0.8
NBB124	700	300	26	110	473	4.8
NBB125	700	350	18	19	64	0.9
NBB126	700	400	14	37	87	1.4
NBB127	700	450	26	32	108	1.5
NBB128	800	-500	20	14	53	2.6
NBB129	800	-400	15	15	42	1.0
NBB130	800	-350	16	17	48	1.0
NBB131	800	-300	38	28	103	1.2

NBB133	800	-200	28	20	70	1.2
NBB134	800	-150	26	19	59	1.4
NBB135	800	-100	21	14	83	1.1
NBB136	800	-050	14	15	38	0.9
NBB137	800	050	28	16	60	0.8
NBB138	800	100	21	32	61	1.0
NBB139	800	150	29	25	72	1.2
NBB140	900	-500	33	27	87	1.6
NBB141	900	-450	36	30	84	1.4
NBB142	900	-400	31	18	82	1.1
NBB143	900	-300	28	20	63	1.3
NBB144	900	-250	32	36	487	1.5
NBB145	900	-200	64	42	560	2.0
NBB146	900	-150	57	160	650	3.3
NBB147	900	-100	35	30	163	1.2
NBB148	900	-050	25	20	67	1.4
NBB149	900	050	19	170	80	1.3
NBB150	900	200	34	24	89	1.2
NBB151	900	150	37	25	78	1.1
NBB152	900	100	35	25	85	1.4
NBB153	900	050	23	16	55	1.3
NBB154	1000	-450	37	26	69	1.8
NBB155	1000	-350	65	35	142	1.4
NBB156	1000	-250	22	20	67	1.3
NBB157	1000	-200	23	20	78	1.2
NBB158	1000	-150	14	18	46	1.2
NBB159	1000	-100	33	24	191	1.6
NBB160	1000	-050	23	35	52	0.9
NBB161	1000	200	53	32	146	1.0
NBB162	1000	150	27	16	60	1.0
NBB163	1000	050	19	20	78	0.9
NBB164	1000	-500	36	30	104	1.2
NBB165	1000	-450	26	24	73	0.9
NBB166	1000	-400	51	45	121	1.2
NBB167	1000	-350	25	60	109	1.2
NBB168	1000	-300	29	40	132	1.2
NBB169	1000	-250	42	64	362	1.5
NBB170	1000	-200	28	22	72	1.1
NBB171	1000	-150	34	38	83	1.2
NBB172	1000	-050	29	25	67	1.0
NBB173	1000	200	36	20	87	1.0
NBB174	1000	150	28	20	72	1.1
NBB175	1000	100	85	38	484	6.2
NBB176	1000	050	29	38	130	1.4
NBB177	1200	-450	35	28	90	1.4
NBB178	1200	-350	36	30	96	1.5
NBB179	1200	-300	35	28	92	1.2
NBB180	1200	-250	11	14	32	1.3
NBB181	1200	-200	76	33	106	1.4
NBB182	1200	-150	36	22	76	1.4
NBB183	1200	-050	22	20	71	1.0
NBB184	1500	250	27	58	121	1.3
NBB186	1500	200	21	27	70	1.1
NBB187	1500	150	23	22	78	1.0
NBB188	1500	100	23	25	82	1.2
NBB189	1500	-050	31	12	52	0.8
NBB190	1500	-300	33	12	90	0.9
NBB191	1500	-350	17	10	78	0.9
NBB192	1500	-400	26	14	46	1.0
NBB193	1400	150	34	35	112	1.1
NBB194	1400	100	31	40	104	1.0
NBB195	1400	050	26	40	92	1.1
NBB196	1400	-050	25	18	74	0.9
NBB200	1900	050	28	10	55	1.8
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

NBB203	1900	-150	22	13	108	1.0
NBB204	1900	-200	15	11	53	0.9
NBB206	1900	-300	22	13	50	0.9
NBB207	2200	-050	34	14	95	1.0
NBB208	2200	-100	34	16	75	1.0
NBB209	2200	-150	33	20	66	0.8
NBB210	2200	-200	17	12	95	1.1
NBB211	2200	050	20	13	143	0.8
NBB212	2200	100	17	13	65	1.0
NBB213	2200	250	32	18	88	0.9
NBB214	2200	300	20	11	50	0.9
NBB215	2200	350	36	13	83	0.8
BG 1	-500	-500	25	26	86	1.0
BG 2	-500	-450	30	34	122	1.0
BG 3	-500	-400	32	35	134	0.9
BG 4	-500	-350	35	39	139	0.7
BG 5	-500	-300	34	38	130	0.7
BG 6	-500	-250	29	22	96	1.0
BG 7	-500	-200	26	28	328	1.8
BG 8	-500	-150	27	24	95	0.6
BG 9	-500	-100	17	16	69	0.8
BG 10	-300	-500	15	24	119	0.6
BG 11	-300	-450	24	31	450	1.3
BG 12	-300	-400	28	42	296	1.1
BG 13	-300	-350	34	30	465	1.0
BG 14	-300	-300	73	89	485	1.0
BG 15	-300	-250	26	52	197	1.2
BG 16	-300	-200	38	145	288	1.0
BG 17	-300	-150	25	24	98	1.0
BG 18	-300	-100	33	60	193	0.8
BG 19	-300	-050	28	39	138	1.0
BG 20	-300	050	30	24	106	0.8
BG 21	-300	100	12	30	65	0.4
BG 22	-300	150	31	50	301	0.7
BG 23	-300	200	26	28	106	0.7
BG 24	-100	-500	20	29	104	0.7
BG 25	-100	-450	17	32	114	0.8
BG 26	-100	-400	21	22	252	1.2
BG 27	-100	-350	25	21	164	1.1
BG 28	-100	-300	40	32	404	1.3
BG 29	-100	-250	54	44	192	1.4
BG 30	-100	-200	17	18	76	1.0
BG 31	-100	-150	29	140	230	1.5
BG 32	-100	-100	36	165	530	2.0
BG 33	-100	-050	30	46	115	1.6
BG 34	000	-500	14	20	135	1.0
BG 35	000	-450	21	21	73	1.0
BG 36	000	-400	30	28	118	1.1
BG 37	000	-350	20	40	87	1.1
BG 38	000	-300	21	24	78	1.0
BG 39	000	-250	32	41	193	0.8
BG 40	000	-200	30	76	291	1.0
BG 41	000	-150	24	34	131	0.6
BG 42	000	-100	31	30	175	0.6
BG 43	000	-050	30	42	228	0.5
BG 44	-100	050	48	57	156	0.6
BG 45	-100	100	30	59	228	1.0
BG 46	-100	150	28	44	123	0.8
BG 47	-100	200	19	20	90	0.7
BG 48	-100	250	26	27	1720	0.8
BG 49	-100	300	30	53	820	0.8
BG 50	-100	350	31	24	132	0.8
BG 51	-100	400	26	28	150	0.9
BG 52	200	-500	26	56	345	1.2
BG 53	200	-450	19	35	71	1.1

BG	55	200	-350	30	80	193	1.3
BG	56	200	-300	27	40	132	1.0
BG	57	200	-250	30	46	143	0.7
BG	58	200	-200	30	160	384	1.0
BG	59	200	-150	30	40	120	0.8
BG	60	200	-100	20	28	113	0.7
BG	61	200	-050	34	55	177	0.9
BG	62	200	300	25	106	450	1.5
BG	63	200	250	30	42	183	1.0
BG	64	200	200	24	66	415	1.4
BG	65	200	150	29	46	134	0.8
BG	66	200	100	49	97	504	1.4
BG	67	200	050	36	78	259	1.1
BG	68	400	-400	18	42	114	0.8
BG	69	400	-350	21	42	123	1.0
BG	70	400	-300	21	46	106	1.6
BG	71	400	-250	29	40	169	1.8
BG	72	400	-200	27	34	95	0.6
BG	73	400	-150	30	52	126	0.7
BG	74	400	-100	17	24	80	0.8
BG	75	400	-050	30	48	520	0.7
BG	76	400	400	29	66	210	1.1
BG	77	400	350	22	33	83	0.6
BG	78	400	300	30	98	187	0.6
BG	79	400	250	20	60	146	0.5
BG	80	400	200	20	24	259	0.6
BG	81	400	150	14	45	152	0.6
BG	82	400	100	22	46	128	0.7
BG	84	600	-500	30	30	82	1.2
BG	85	600	-450	30	110	575	1.3
BG	86	600	-400	31	76	221	1.6
BG	87	600	-350	23	55	204	0.8
BG	88	600	-300	31	66	180	1.5
BG	89	600	-250	50	96	755	1.8
BG	90	600	-200	29	51	225	1.4
BG	91	600	-150	27	126	151	3.9
BG	92	600	-100	23	31	75	1.4
BG	93	600	-050	22	24	79	1.3
BG	94	600	050	12	17	58	1.1
BG	95	600	100	21	46	82	1.5
BG	96	600	150	26	38	94	1.2
BG	97	600	200	21	61	145	1.8
BG	98	600	250	27	180	750	8.9
BG	99	600	300	20	33	98	1.4
BG	100	600	350	19	51	194	1.8
BG	101	600	400	27	38	110	1.3
BG	102	600	450	22	62	131	1.4
DB	1	1600	050	48	28	101	1.3
DB	2	1600	100	37	24	73	0.9
DB	3	1600	150	28	26	64	1.0
DB	4	1600	200	27	28	88	0.7
DB	5	1600	-050	61	37	112	2.1
DB	6	1600	-100	44	28	93	0.9
DB	7	1600	-150	49	27	92	1.0
DB	8	1600	-200	24	24	88	1.1
DB	9	1600	-250	37	31	105	0.9
DB	10	1600	-300	45	26	87	1.0
DB	11	1600	-350	47	25	88	0.8
DB	12	1600	-400	55	28	84	1.1
DB	13	1600	-450	33	26	81	1.0
DB	14	1600	-500	44	26	91	1.0
DB	15	1700	050	23	17	64	1.4
DB	16	1700	100	30	26	86	0.9
DB	17	1700	150	35	32	97	1.1

DB	21	1700	-150	21	22	83	1.2
DB	22	1700	-200	13	23	49	1.0
DB	23	1700	-250	24	22	65	1.0
DB	24	1700	-300	34	28	101	1.0
DB	25	1700	-350	36	35	91	1.2
DB	26	1700	-400	48	31	90	1.2
DB	27	1700	-450	16	15	39	1.0
DB	28	1700	-500	22	13	46	1.0
DB	29	1800	050	23	14	66	1.5
DB	30	1800	100	32	22	55	1.2
DB	33	1800	-050	51	25	189	2.1
DB	34	1800	-100	24	15	80	1.6
DB	44	2000	450	20	14	58	1.0
DB	45	2000	400	40	15	61	1.2
DB	46	2000	350	16	17	63	1.3
DB	47	2000	300	24	18	84	1.2
DB	48	2000	250	19	18	58	1.0
DB	49	2000	200	22	15	56	1.2
DB	50	2000	150	32	16	90	1.1
DB	51	2000	100	23	14	69	1.2
DB	52	2000	050	10	6	27	0.8
DB	53	2000	050	38	12	89	1.0
DB	54	1300	-050	30	22	75	0.8
DB	55	1300	050	62	20	103	1.1
DB	56	1300	100	30	18	61	1.0
DB	57	1200	050	26	19	55	1.0
DB	58	1200	100	23	18	74	0.9
DB	59	1200	150	54	40	116	1.0
DB	60	1200	-050	25	14	54	1.1
DD	1	100	-500	11	12	86	0.8
DD	2	100	-450	15	11	72	1.0
DD	3	100	-400	16	17	96	0.7
DD	4	100	-350	59	45	410	1.2
DD	5	100	-300	14	17	60	0.4
DD	6	100	-250	28	33	117	0.6
DD	7	100	-200	35	39	182	0.7
DD	8	100	-150	24	33	218	1.0
DD	9	100	-100	19	17	102	0.7
DD	10	100	-050	27	46	167	0.6
DD	11	100	400	28	66	498	1.7
DD	12	100	350	33	110	760	4.2
DD	13	100	300	32	98	540	5.6
DD	14	100	250	18	60	226	2.0
DD	15	100	200	19	36	162	0.8
DD	16	100	150	27	24	102	0.7
DD	17	100	100	30	66	190	0.7
DD	18	100	050	26	76	212	1.9
DD	19	300	-500	27	55	98	1.1
DD	20	300	-450	23	37	79	1.0
DD	21	300	-400	21	36	106	1.2
DD	22	300	-350	22	31	95	0.8
DD	23	300	-300	14	24	64	1.0
DD	24	300	-250	45	760	4600	1.7
DD	25	300	-200	20	45	174	0.8
DD	26	300	-150	22	42	275	1.0
DD	27	300	-100	31	240	1880	1.5
DD	28	300	-050	24	93	690	1.8
DD	29	300	400	21	24	235	0.7
DD	30	300	350	10	32	318	0.6
DD	31	300	300	20	48	101	0.8
DD	32	300	250	30	34	362	1.1
DD	33	300	200	30	60	250	0.7
DD	34	300	150	24	67	226	0.7
DD	35	300	100	39	90	363	0.8

DD	38	500	-450	18	26	115	0.6
DD	39	500	-400	22	23	73	0.8
DD	40	500	-350	19	33	74	0.9
DD	41	500	-300	19	30	91	0.6
DD	42	500	-250	17	30	92	0.7
DD	43	500	-200	29	46	410	1.1
DD	44	500	-150	25	42	115	1.2
DD	45	500	050	10	53	87	3.4
DD	46	500	100	14	17	132	0.8
DD	47	500	150	17	88	489	0.9
DD	48	500	200	11	210	223	3.4
DD	49	500	250	24	42	95	0.8
DD	50	500	300	22	50	140	0.9
DD	51	500	350	13	17	66	0.8
DD	52	500	400	20	18	70	0.7
DD	53	500	450	13	6	32	0.6
DD	54	500	500	27	12	101	0.6
DB	61	2100	-100	18	17	68	0.9
DB	62	2100	100	48	104	125	1.0
DB	63	2100	150	34	22	80	1.0
DB	64	2100	200	22	12	62	0.9
NRB	185	1200	-400	27	32	98	1.1

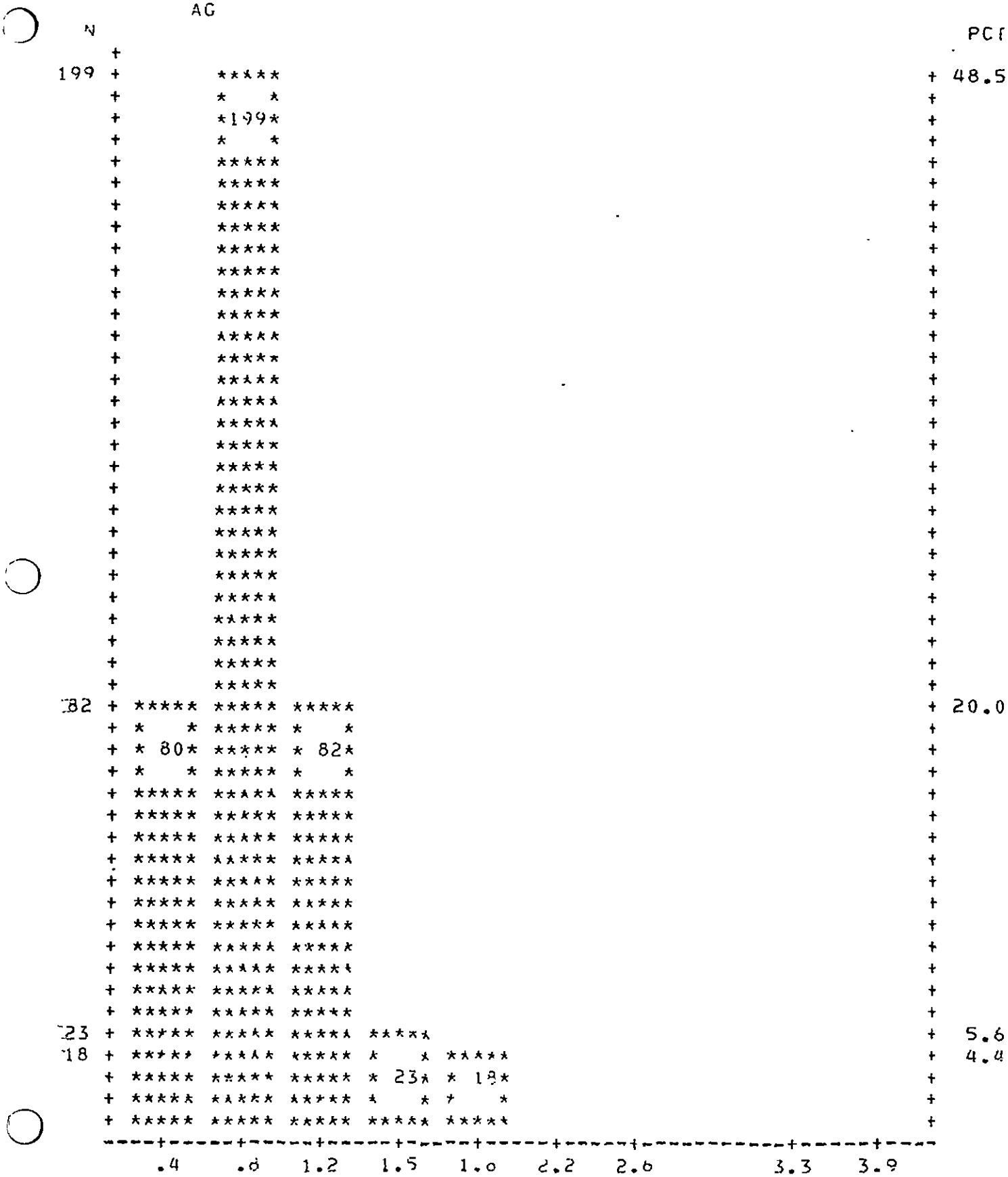
READY.

Ok. D WF.
Dec 31/81

HISTOGRAMS OF ALL ELEMENTS SUNRISE PROJECT FILE PSYS

N=410 BARS=10 MEAN=1.0661 SD=.432064

NORMAL HISTOGRAM

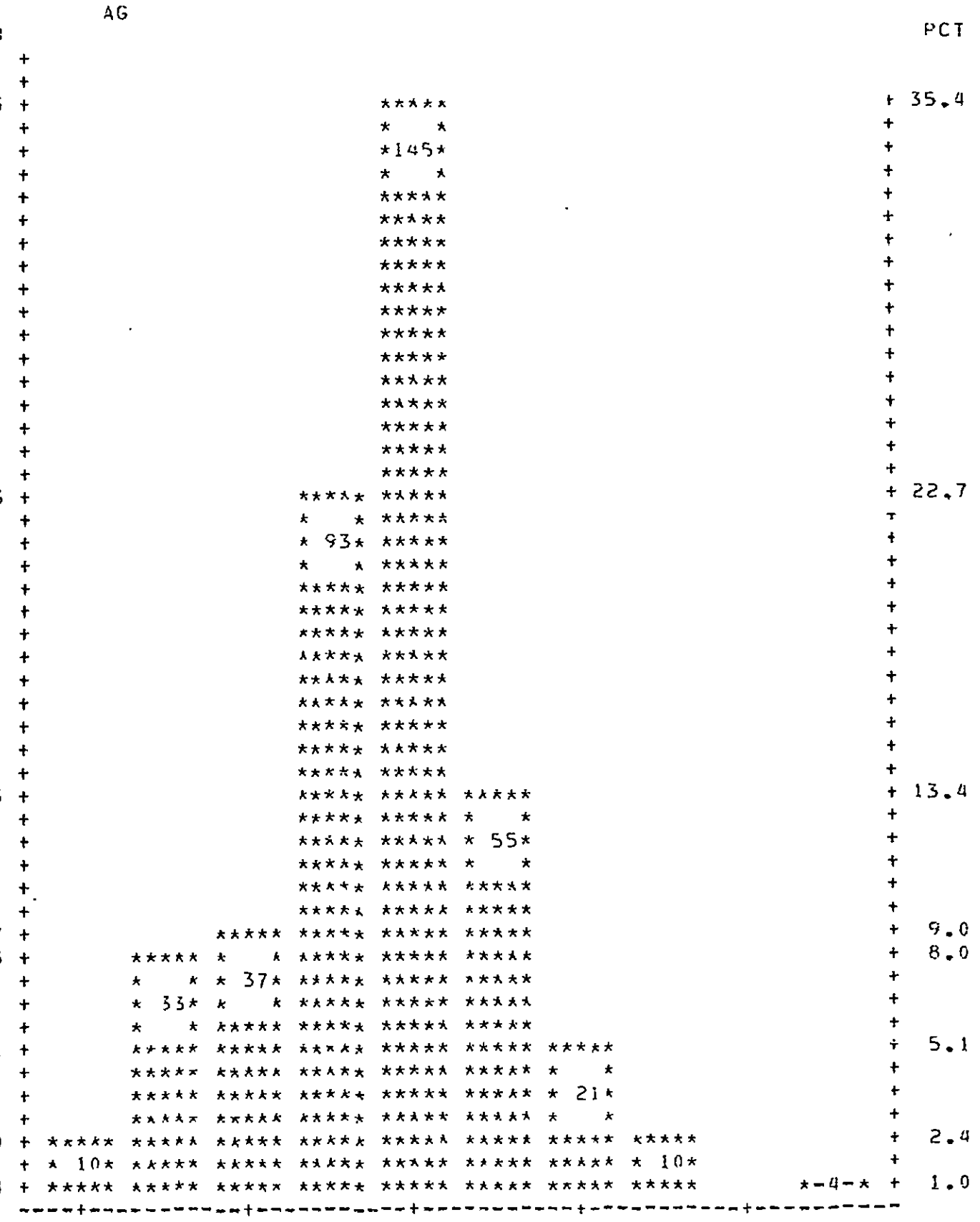


HIST=PSYS (IF AG .LE. 4.0, DETAIL)
(FOR (AG), SET .X. TO LOGIC(.X.))

BARS=10

HISTOGRAMS OF ALL ELEMENTS SUNRISE PROJECT FILE PSYS
N=410 BARS=10 MEAN=-.19669E-03 SD=.150989

LOG-NORMAL HISTOGRAM

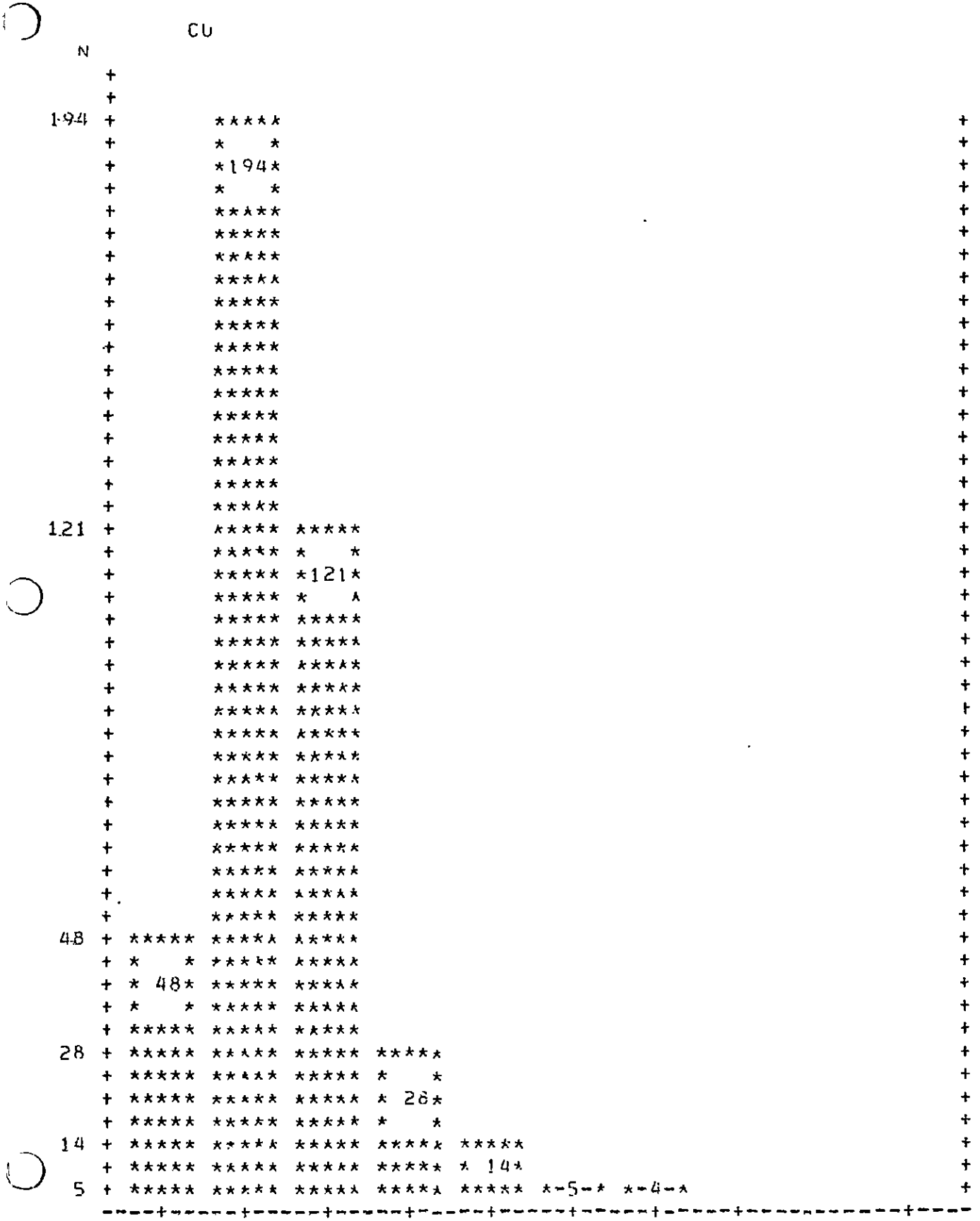


END OF FILE WHEN READING A COMMAND FROM UNIT 5

HISTOGRAMS OF ALL ELEMENTS SUNRISE PROJECT FILE PSYS

N=417 BARS=10 MEAN=28.8321 SD=12.3035

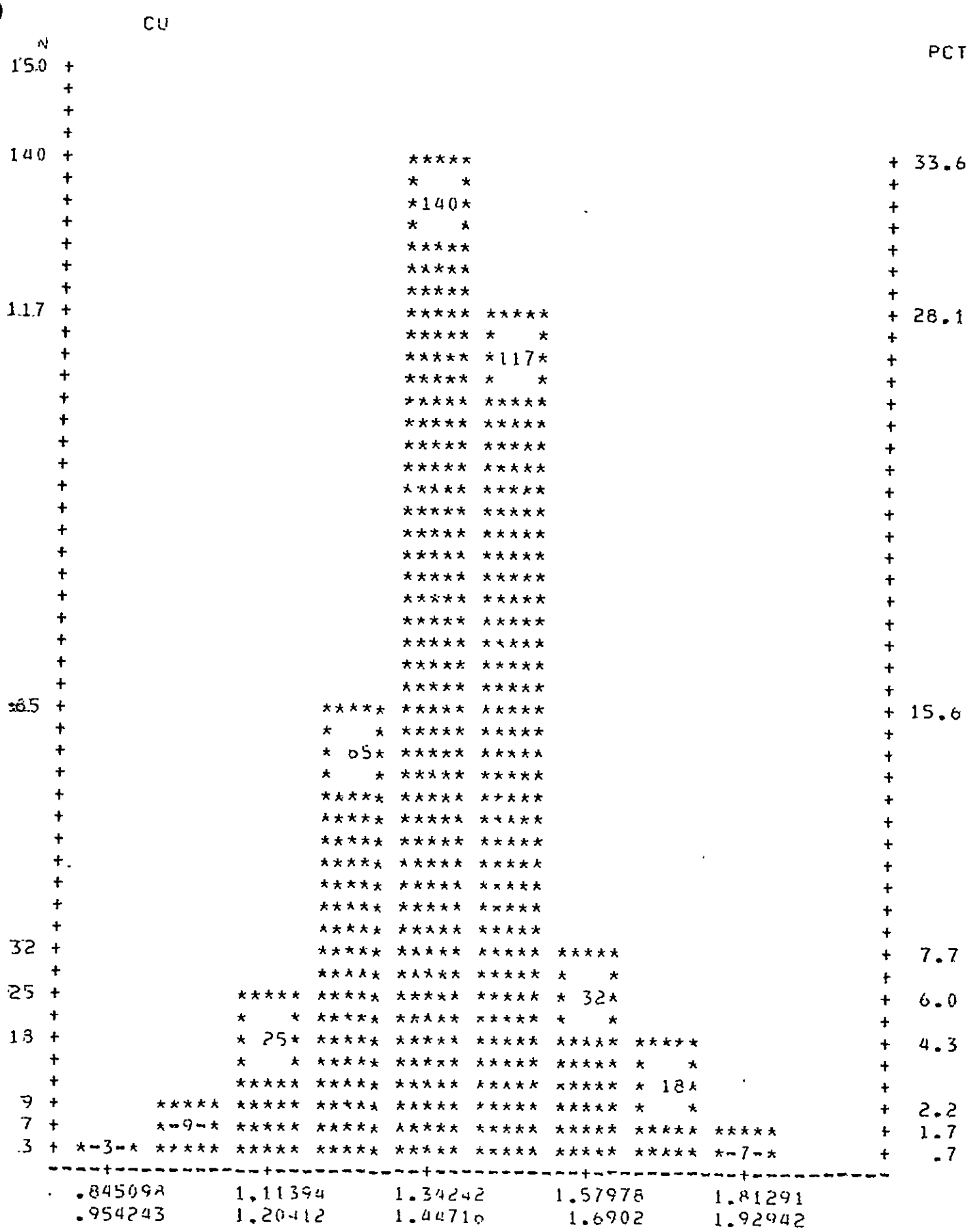
NORMAL HISTOGRAM



HIST=PSYS (FOR (CU), SET .X. TO LOG10(.X.))
(C CU) ,

HISTOGRAMS OF ALL ELEMENTS SUNRISE PROJECT FILE PSYS
N=417 BARS=10 MEAN=1.42693 SD=.167271

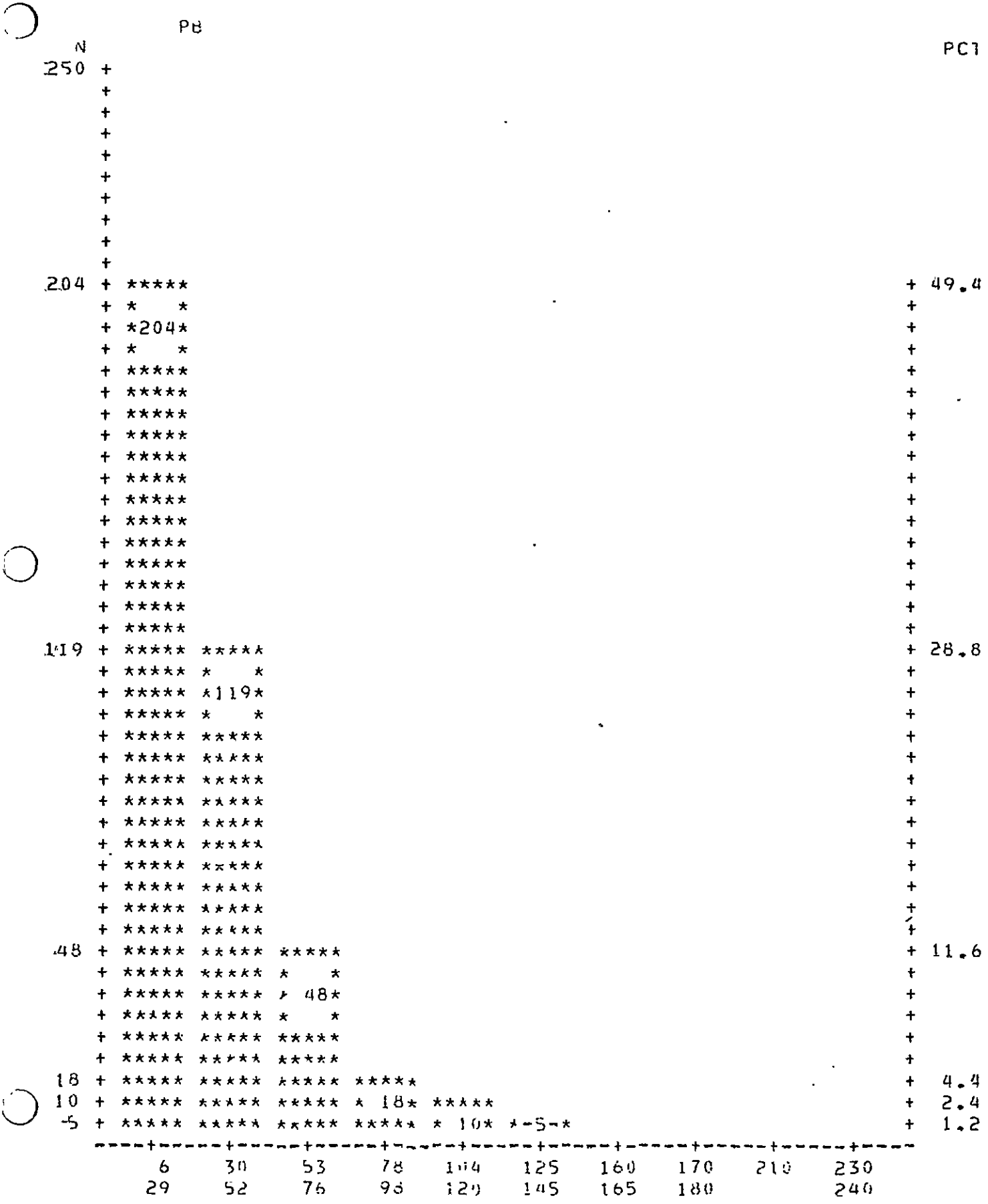
LOG-NORMAL HISTOGRAM



HIST=PSYS (IF PB .LE. 250, RETAIN)
(C PB)

HISTOGRAMS OF ALL ELEMENTS SUNRISE PROJECT FILE PSYS
:N=413 BARS=10 MEAN=40.4189 SD=33.1745

NORMAL HISTOGRAM

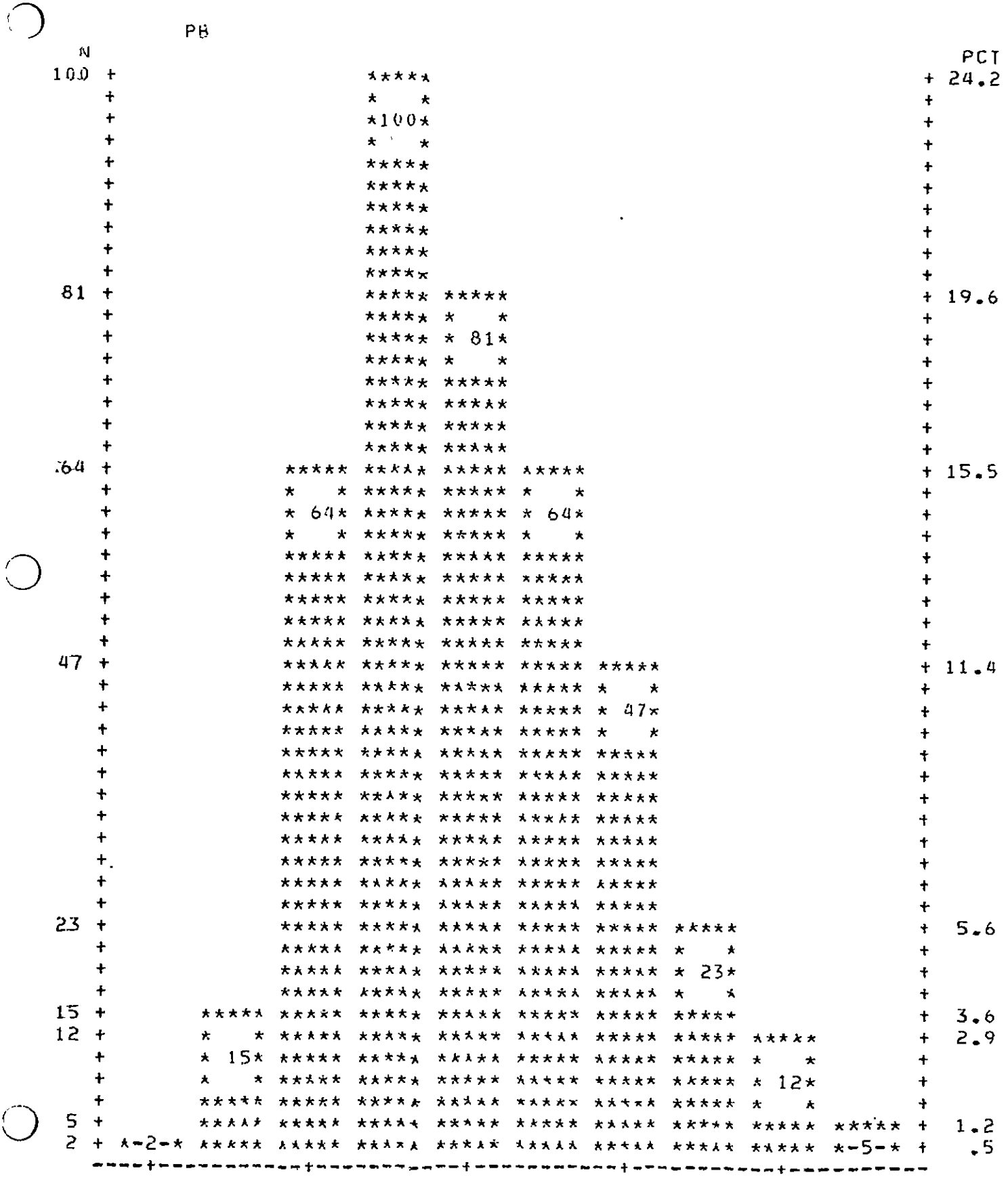


HIST=PSYS (IF PB .LE. 250, RETAIN)
(FOR (PB), SET .X. TO LOG10(.X.))

BARS=10

HISTOGRAMS OF ALL ELEMENTS SUNRISE PROJECT FILE PSYS
N=413 BARS=10 MEAN=1.50839 SD=.276495

LOG-NORMAL HISTOGRAM

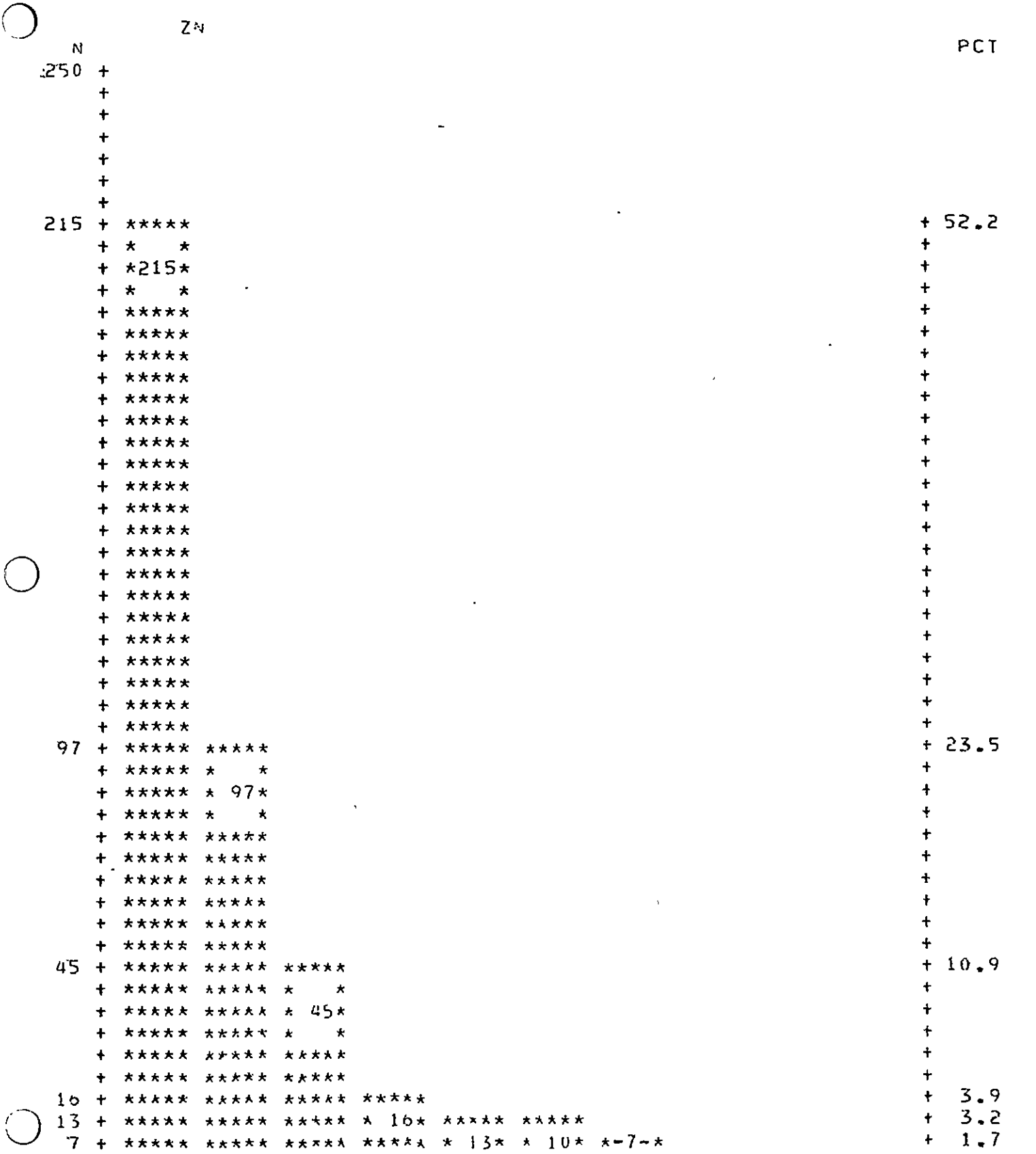


HIST=PSYS (IF ZN .LE. 1000, RETAIN)
(C /N) ,

HISTOGRAMS OF ALL ELEMENTS SUNRISE PROJECT FILE PSYS

N=412 BARS=10 MEAN=150.607 SD=137.396

NORMAL HISTOGRAM

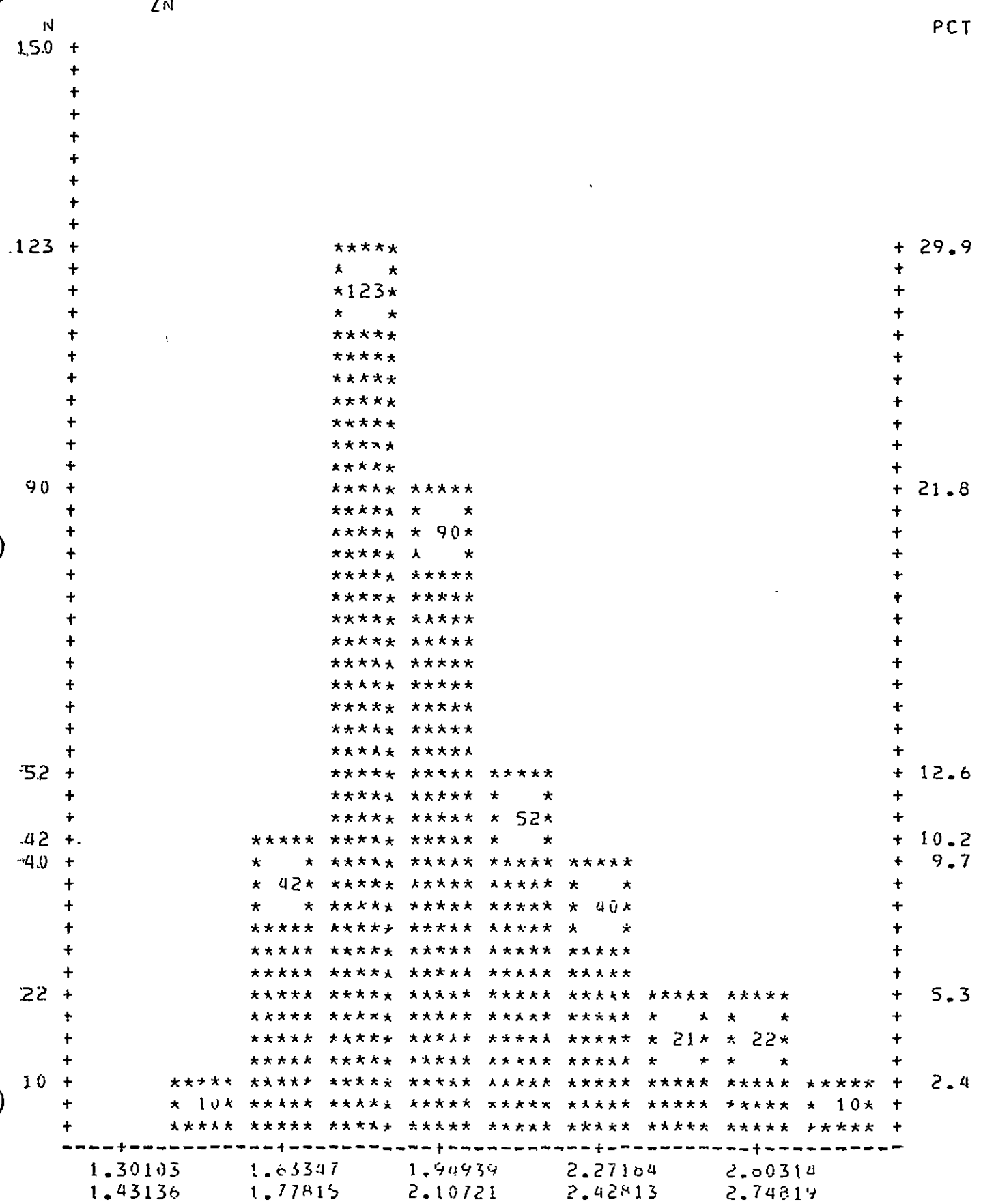


HIST=PSYS (IF ZN .LE. 1000, RETAIN)
(FOR (ZN), SET .X. TO LOG10(.X.))

BARS=10

HISTOGRAMS OF ALL ELEMENTS SUNRISE PROJECT FILE PSYS
N=412 BARS=10 MEAN=2.06006 SD=.297127

LOG-NORMAL HISTOGRAM



HIST=PSYS (IF AG .LE. 4.0, RETAIN)
(C AG)

VARIABLE NUMBER	LABEL	RECD NUMBER	POSITION WITHIN RECORD		NUMBER OF GOOD CASES	NUMBER OF MISSING CASES .. M1	.. M2	.. M3
1	X	1	9 -	14	417	0	0	0
2	Y	1	17 -	22	417	0	0	0
3	CU	1	27 -	31	417	0	0	0
4	PB	1	32 -	36	417	0	0	0
5	ZN	1	37 -	41	417	0	0	0
6	AG	1	42 -	46	417	0	0	0

.....

VAR. NUMBER	LABEL OF FIRST MISSING CASE	NUMBER OF INVALID CASES	LABEL OF FIRST INVALID CASE	MEAN	STANDARD DEVIATION
1		0		744.7242	819.8607
2		0		-62.9496	238.8377
3		0		28.8321	12.3035
4		0		46.0024	71.3229
5		0		176.4508	302.7290
6		0		1.1487	.7958

.....

VAR. NUMBER	LABEL OF FIRST CASE WITH LOWEST SCORE	LOWEST SCORE	HIGHEST SCORE	LABEL OF FIRST CASE WITH HIGHEST SCORE
1	L1	-500.0000	3000.0000	L267
2	L1	-500.0000	500.0000	L208
3	L282	7.0000	113.0000	L275
4	L142	6.0000	1020.0000	L218
5	L282	20.0000	4600.0000	L178
6	L21	.4000	8.9000	L97

417 DATA RECORDS READ.
417 CASES WERE SUCCESSFULLY PROCESSED.

ENDS

NUMBER OF ERRORS DURING THIS RUN WAS 0

ANALYSIS OF GEOCHEMICAL DATA FOR SUNRISE PROJECT.

NUMBER OF SAMPLES 417

NAME	MINIMUM	MAXIMUM	MEAN	COEF.VAR.
CU	7.0000	113.0005	26.7250	
	.8451	2.0531	1.4269	11.7224 LOGS
PB	6.0000	1020.0005	33.1339	
	.7782	3.0086	1.5203	19.8129 LOGS
ZN	20.0000	4600.0005	118.8674	
	1.3010	3.6628	2.0751	15.7116 LOGS
AG	.4000	8.9005	1.0294	
	-.3979	.9494	.0126	1428.4404 LOGS

NAME	+1 STND DEV	+2 STND DEV	+3 STND DEV	
CU	39.2830	57.7398	84.8685	
	1.5942	1.7615	1.9287	LOGS
PB	66.2952	132.6451	265.3999	
	1.8215	2.1227	2.4239	LOGS
ZN	251.8183	533.4725	1130.1517	
	2.4011	2.7271	3.0531	LOGS
AG	1.5562	2.3527	3.5569	
	.1921	.3716	.5511	LOGS

**********NORMAL FREQUENCY DISTRIBUTIONS ALL ELEMENTS SUNRISE PROJECT
FILE PSYS

VARIABLE 1. AG

ALL

LOW	HIGH	N	PCT	CUM
.40	.50	10	2	2
.60	.70	70	17	20
.80	.90	93	23	42
1.00	1.10	106	26	68
1.20	1.20	39	10	78
1.30	1.40	43	10	88
1.50	1.60	20	5	93
1.70	1.70	3	1	94
1.80	1.90	10	2	96
2.00	2.10	8	2	98
2.20	2.20	1	0	98
2.40	2.40	1	0	99
2.60	2.60	1	0	99
2.80	2.80	1	0	99
0.00	0.00			
0.00	0.00			
3.30	3.30	1	0	99
3.40	3.40	2	0	100
0.00	0.00			
3.90	3.90	1	0	100

MISSING DATA 1	0.
MISSING DATA 2	0.
MISSING DATA 3	0.
GOOD N	410.

MEAN	1.0661
VARIANCE	.1867
S.D.	.4321

END OF FILE WHEN READING A COMMAND FROM UNIT 5

NUMBER OF ERRORS DURING THIS RUN WAS 0

LOG-NORMAL FREQUENCY DISTRIBUTIONS ALL ELEMENTS SUNRISE PROJECT.
FILE PSYS

VARIABLE 1, AG

ALL

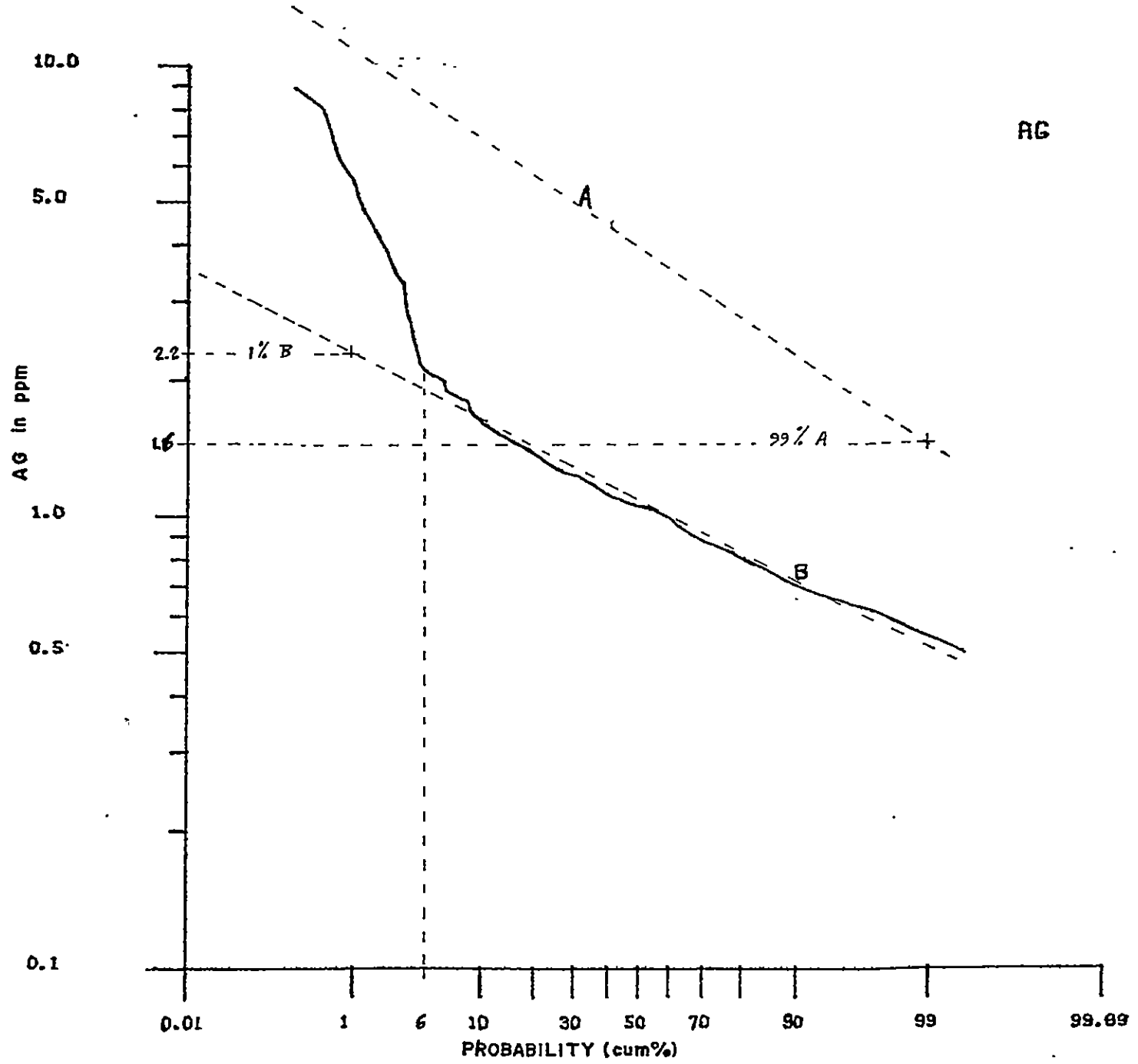
LOW	HIGH	N	PCT	CUM
-.40	-.40	2	0	0
-.30	-.30	8	2	2
0.00	0.00			
-.22	-.22	33	8	10
-.15	-.15	37	9	20
0.00	0.00			
-.10	-.10	58	14	34
-.05	-.05	35	9	42
0.00	.04	106	26	68
.08	.08	39	10	78
.11	.11	20	5	82
.15	.18	35	9	91
.20	.23	11	3	94
.26	.28	10	2	96
.30	.34	9	2	98
.38	.38	1	0	99
.41	.41	1	0	99
.45	.45	1	0	99
.52	.53	3	1	100
.59	.59	1	0	100

MISSING DATA 1	0.
MISSING DATA 2	0.
MISSING DATA 3	0.
GOOD N	410.
MEAN	-.0002
VARIANCE	.0228
S.D.	.1510

END OF FILE WHEN READING A COMMAND FROM UNIT 5

NUMBER OF ERRORS DURING THIS RUN WAS 0

Analysis of geochemical data Sunrise Project.



FILE PSYS

VARIABLE 1, CU

ALL

LOW	HIGH	N	PCT	CUM
7.00	11 00	10	2	2
12.00	15 00	21	5	7
16.00	20.00	54	13	20
21.00	24.00	75	18	38
25.00	29.00	98	23	62
30.00	33.00	63	15	77
34.00	37.00	38	9	86
38.00	42.00	12	3	89
43.00	45.00	9	2	91
47.00	51.00	17	4	95
53.00	55.00	5	1	96
57.00	59.00	3	1	97
61.00	64.00	4	1	98
65.00	65.00	1	0	98
71.00	73.00	2	0	99
74.00	76.00	2	0	99
0.00	0.00			
83.00	85.00	2	0	100
0.00	0.00			
0.00	0.00			
0.00	0.00			
0.00	0.00			
0.00	0.00			
113.00	113.00	1	0	100

MISSING DATA 1	0.
MISSING DATA 2	0.
MISSING DATA 3	0.
GOOD N	417.
MEAN	23 8321
VARIANCE	151.3756
S.D.	12.3035

```
FREQ=PSYS (IF PB  .GE.  0  .AND. PB .LE. 250, RETAIN)
      ( C PB)   ,
    NCAT=25,
    EQUALCAT,
    ALLCAT,
    V=4$
```

LOG-NORMAL FREQUENCY DISTRIBUTIONS ALL ELEMENTS SUNRISE PROJECT.
FILE PSYS

VARIABLE 1, CU

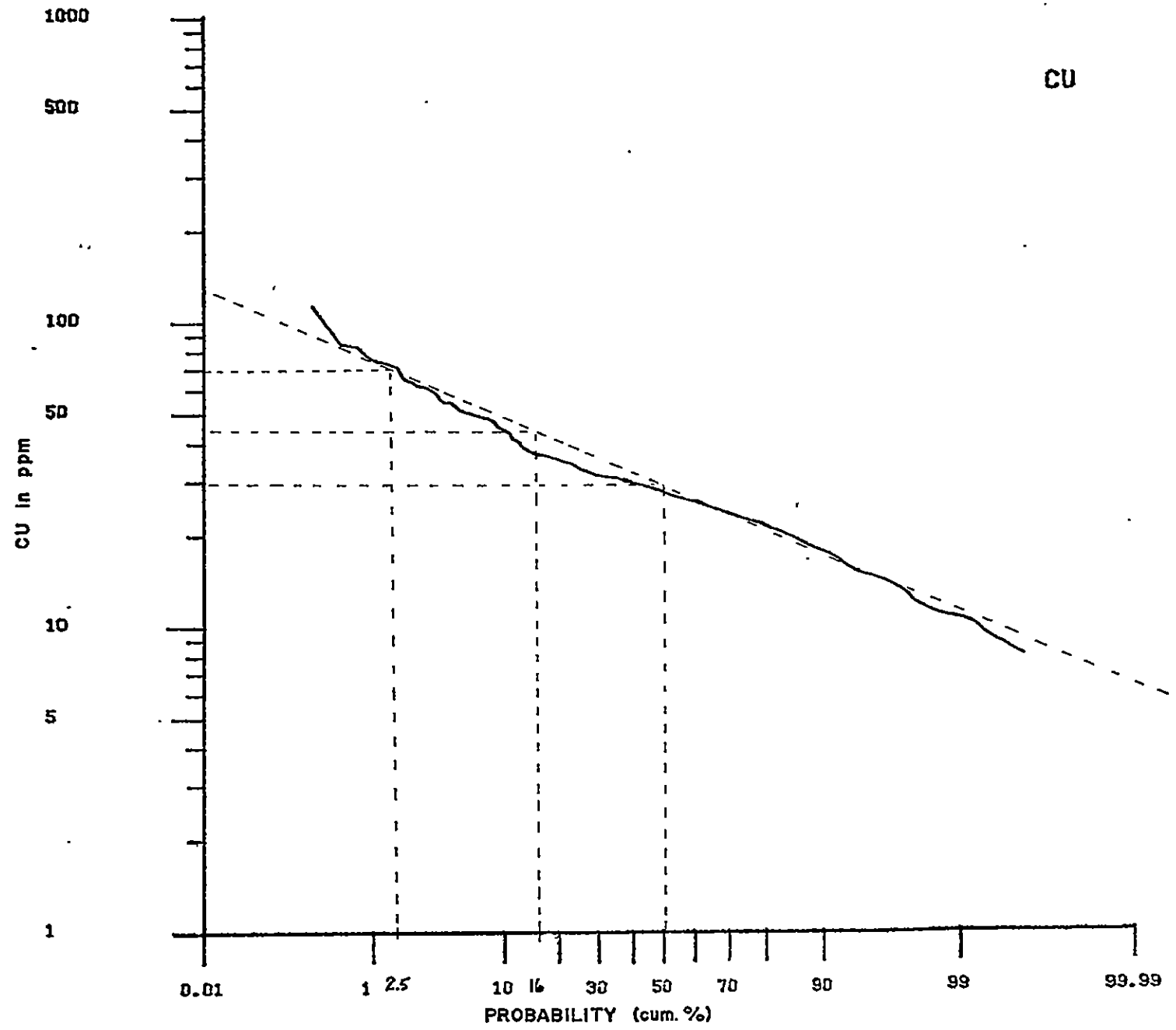
ALL

LOW	HIGH	N	PCT	CUM
.85	.85	1	0	0
.90	.90	1	0	0
.95	.95	1	0	1
1.00	1.04	7	2	2
1.08	1.08	2	0	3
1.11	1.15	12	3	6
1.18	1.18	7	2	7
1.20	1.23	17	4	12
1.26	1.28	20	5	16
1.30	1.34	57	14	30
1.36	1.40	55	13	43
1.41	1.45	62	15	58
1.46	1.49	60	14	72
1.51	1.54	40	10	82
1.56	1.59	22	5	87
1.60	1.64	13	3	90
1.65	1.70	17	4	94
1.71	1.74	8	2	96
1.76	1.79	6	1	98
1.81	1.85	3	1	99
1.86	1.88	3	1	99
1.92	1.93	2	0	100
0.00	0.00			
2.05	2.05	1	0	100

MISSING DATA 1	0.
MISSING DATA 2	0.
MISSING DATA 3	0.
GOOD N	417.
MEAN	1.4269
VARIANCE	.0280
S.D.	.1673

```
FREQ=PSYS (IF PB  .GE.  0  .AND. PB .LE. 250, RETAIN)
      (FOR (PB), SET .X. TO LOG10(.X.) )
      ( C PB)   ,
   NCAT=25,
   EQUALCAT,
   ALLCAT,
   V=4$
```

Analysis of geochemical data Sunrise project.



**********NORMAL FREQUENCY DISTRIBUTIONS ALL ELEMENTS SUNRISE PROJECT
FILE PSYS

VARIABLE 1, PB

ALL

LOW	HIGH	N	PCT	CUM
6.00	14.00	34	8	8
15.00	23.00	103	25	33
24.00	32.00	95	23	56
33.00	41.00	52	13	69
42.00	50.00	33	8	77
51.00	59.00	22	5	82
60.00	67.00	24	6	88
70.00	76.00	8	2	90
78.00	86.00	8	2	92
88.00	93.00	5	1	93
96.00	104.00	6	1	94
106.00	110.00	6	1	96
115.00	120.00	3	1	97
125.00	126.00	3	1	97
140.00	140.00	1	0	98
145.00	145.00	1	0	98
0.00	0.00			
160.00	165.00	4	1	99
170.00	170.00	1	0	99
180.00	180.00	1	0	99
0.00	0.00			
0.00	0.00			
210.00	210.00	1	0	100
0.00	0.00			
230.00	230.00	1	0	100
240.00	240.00	1	0	100

MISSING DATA 1	0.
MISSING DATA 2	0.
MISSING DATA 3	0.
GOOD N	413.

MEAN	40.4189
VARIANCE	1100.5498
S.D.	33.1745

```
. FREQ=PSYS (IF ZN .GE. 0 .AND. ZN .LE. 1000, RETAIN)
        ( C ZN)   ,
     NCAT=20,
     EQUALCAT,
     ALLCAT,
     V=4$
```

LOG-NORMAL FREQUENCY DISTRIBUTIONS ALL ELEMENTS SUNRISE PROJECT.
FILE PSYS

VARIABLE 1, PB

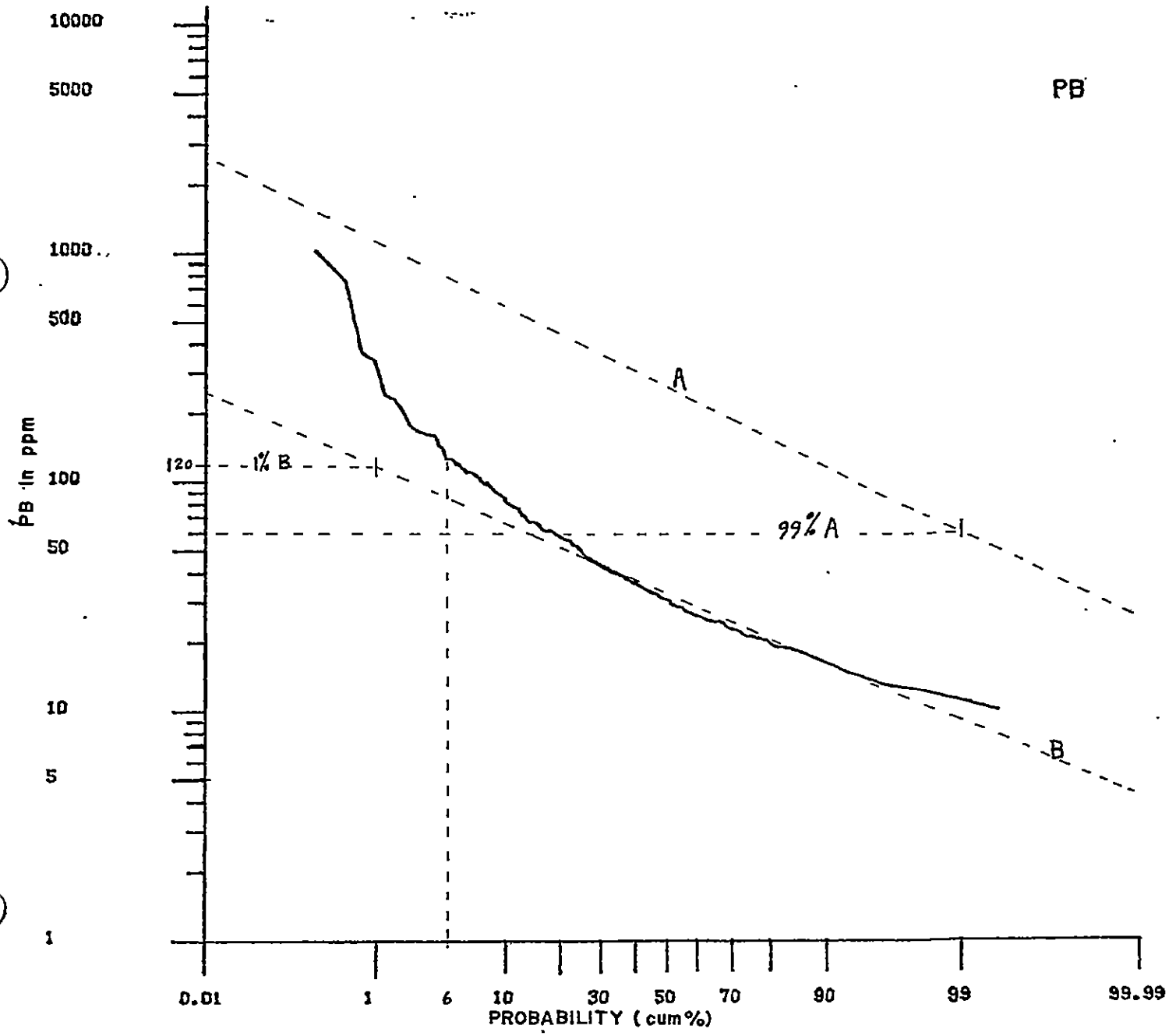
ALL

LOW	HIGH	N	PCT	CUM
.78	.78	2	0	0
0.00	0.00			
0.00	0.00			
1.00	1.00	2	0	1
1.04	1.08	13	3	4
1.11	1.15	17	4	8
1.18	1.20	15	4	12
1.23	1.26	32	8	20
1.28	1.32	35	8	28
1.34	1.38	42	10	38
1.40	1.45	45	11	49
1.46	1.51	29	7	56
1.52	1.57	30	7	63
1.58	1.62	34	8	72
1.64	1.70	21	5	77
1.71	1.76	21	5	82
1.77	1.82	23	6	87
1.83	1.88	10	2	90
1.89	1.94	9	2	92
1.95	1.99	9	2	94
2.02	2.06	8	2	96
2.08	2.10	5	1	97
2.15	2.16	2	0	98
2.20	2.26	6	1	99
0.00	0.00			
2.32	2.38	3	1	100

MISSING DATA 1	0.
MISSING DATA 2	0.
MISSING DATA 3	0.
GOOD N	413.
MEAN	1.5084
VARIANCE	.0764
S.D.	.2765

```
FREQ=PSYS (IF ZN .GE. 0 .AND. ZN .LE. 1000, RETAIN)
      (FOR (ZN), SET .X. TO LOG10(.X.) )
      ( C ZN) .,
    NCAT=20,
    EQUALCAT,
    ALLCAT,
    V=4$
```

Analysis of geochemical data Sunrise Project.



FILE PSYS

VARIABLE 1, ZN

ALL

LOW	HIGH	N	PCT	CUM
20.00	59.00	48	12	12
60.00	98.00	167	41	52
101.00	139.00	70	17	69
140.00	178.00	27	7	76
180.00	218.00	26	6	82
221.00	259.00	19	5	87
262.00	298.00	10	2	89
301.00	328.00	6	1	91
345.00	363.00	6	1	92
384.00	415.00	7	2	94
450.00	450.00	2	0	94
465.00	498.00	8	2	96
504.00	530.00	4	1	97
540.00	575.00	3	1	98
585.00	585.00	1	0	98
650.00	650.00	1	0	98
690.00	690.00	1	0	99
720.00	720.00	2	0	99
750.00	760.00	3	1	100
820.00	820.00	1	0	100

MISSING DATA 1	0.
MISSING DATA 2	0.
MISSING DATA 3	0.
GOOD N	412.

MEAN	150.6068
VARIANCE	18877.5238
S.D.	137.3955

```
FREQ=PSYS (IF AG  .GE   0  .AND. AG .LE  4.0, RETAIN)
      ( C AG)   ,
   NCAT=20,
   EQUALCAT,
   ALLCAT,
   V=4$
```

LOG-NORMAL FREQUENCY DISTRIBUTIONS ALL ELEMENTS SUNRISE PROJECT.
FILE PSYS

VARIABLE 1, ZN

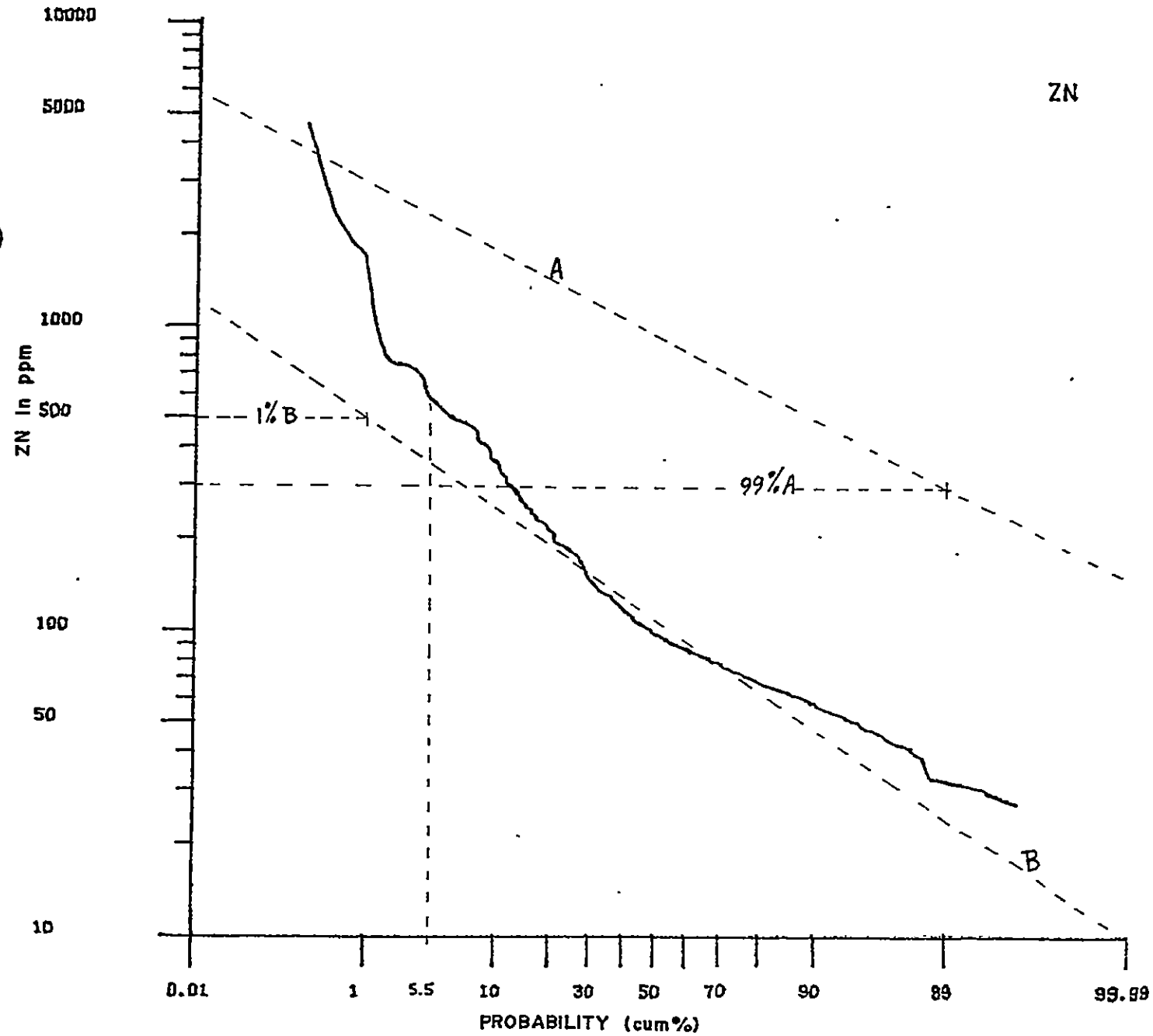
ALL

LOW	HIGH	N	PCT	CUM
1.30	1.30	1	0	0
1.43	1.43	1	0	0
1.48	1.52	5	1	2
1.58	1.62	5	1	3
1.63	1.70	14	3	6
1.71	1.78	28	7	13
1.79	1.86	59	14	27
1.87	1.94	64	16	43
1.95	2.03	57	14	57
2.03	2.11	33	8	65
2.11	2.18	30	7	72
2.19	2.27	22	5	77
2.27	2.35	21	5	83
2.35	2.43	19	5	87
2.44	2.51	12	3	90
2.51	2.58	9	2	92
2.60	2.67	9	2	94
2.67	2.75	13	3	98
2.76	2.81	3	1	98
2.84	2.91	7	2	100

MISSING DATA 1	0.
MISSING DATA 2	0.
MISSING DATA 3	0.
GOOD N	412.
MEAN	2.0601
VARIANCE	.0683
S.D.	.2971

```
FREQ=PSYS (IF AG  .GE.  0  .AND. AG .LE. 4.0, RETAIN)
      (FOR (AG), SET .X. TO LOG10(.X.) )
      ( C AG)   ,
   NCAT=20,
   EQUALCAT,
   ALLCAT,
   V=4$
```

Analysis of geochemical data Sunrise Project.



STATEMENT OF QUALIFICATIONS

I, DEL W. FERGUSON, of P. O. Box 48593, The Bentall Centre, Vancouver, B.C., do hereby certify that:

1) I am a geologist with office address at Suite 904, 1055 Dunsmuir Street, P.O. Box 49066, Four Bentall Centre, Vancouver, B.C. V7X 1C4.

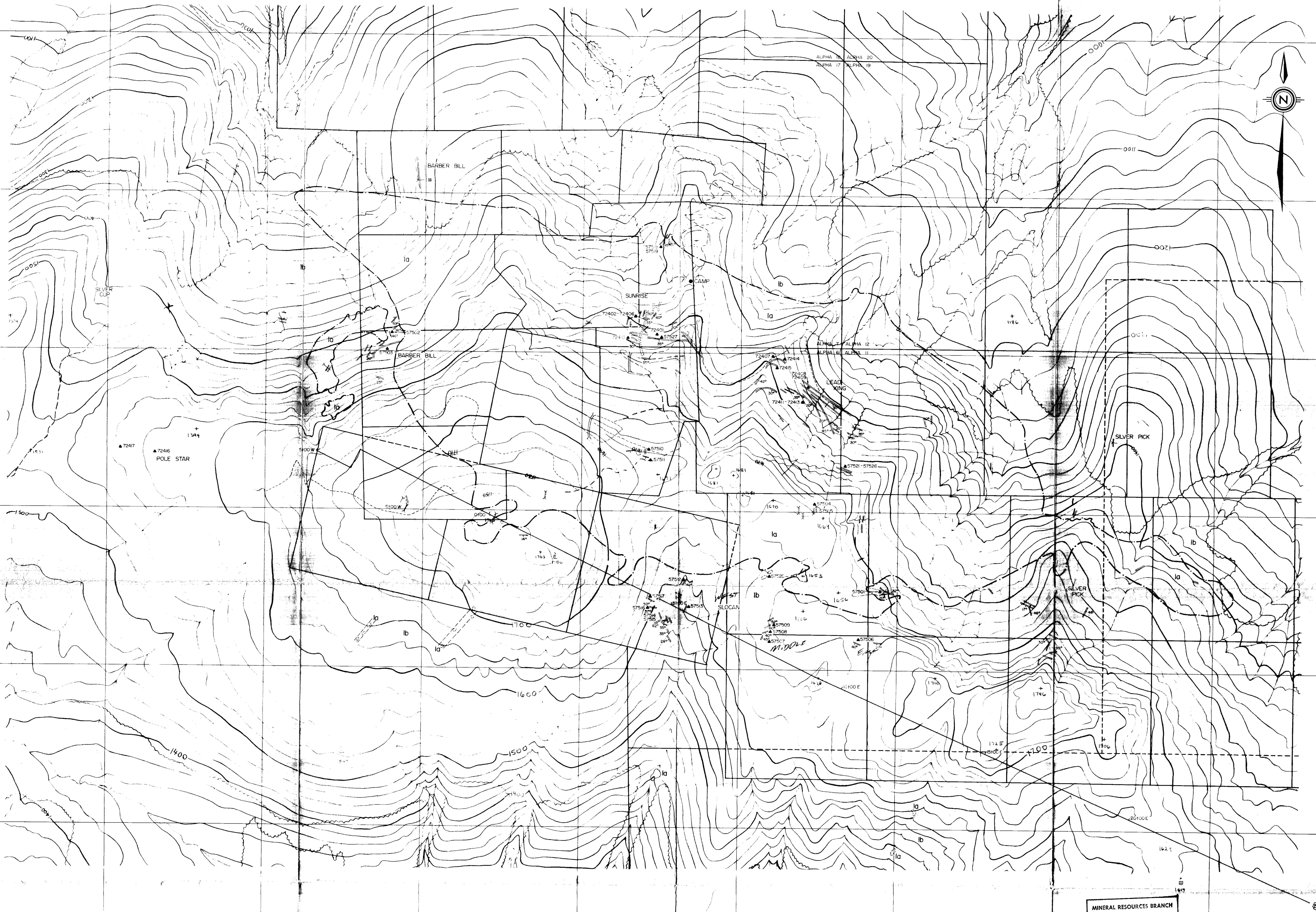
2) I am a graduate of the University of Western Ontario with an Honours Bachelor of Science Degree in Geology (1979).

3) I have had three years of geological experience in various phases of mineral exploration in B.C.

4) I have supervised the 1981 field program of the Sunrise mineral property, referred to herein.

Respectfully submitted

Del W. Ferguson
Project Geologist



LEGEND

- Ia Granodiorite
- Ib Metasediment (sandstone, siltstone, shale)
- Approximate Granodiorite - Metasediment Contact
- Rock Sample Locations
- Mineralized Quartz Veins
- Adit
- Trench
- Fault

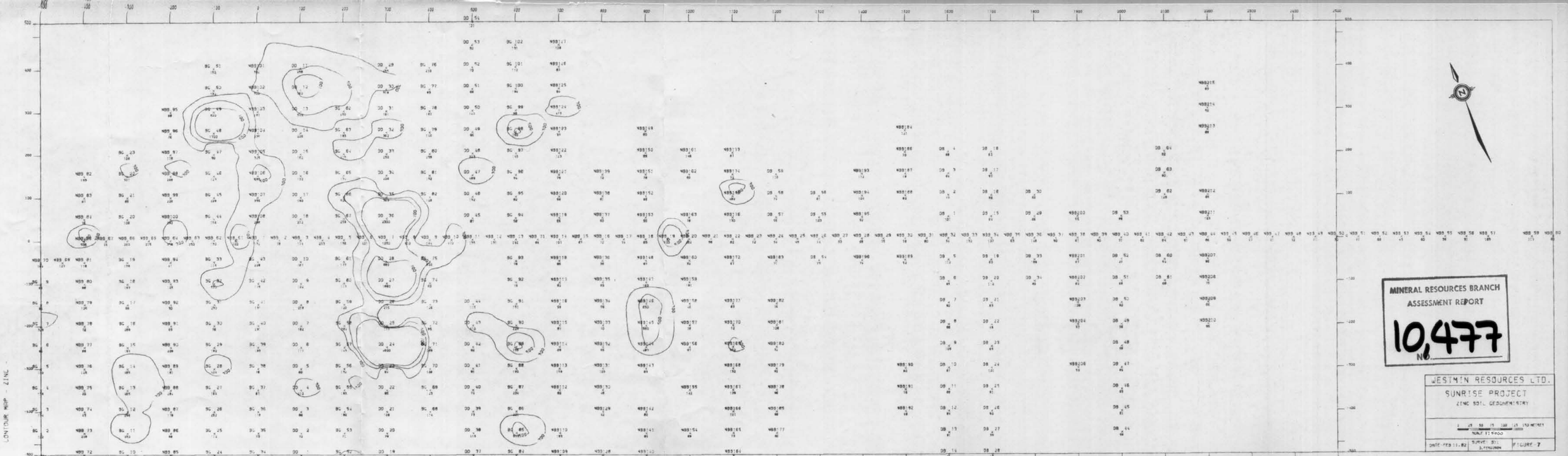
595 500 E

596 500 E

597 000 E

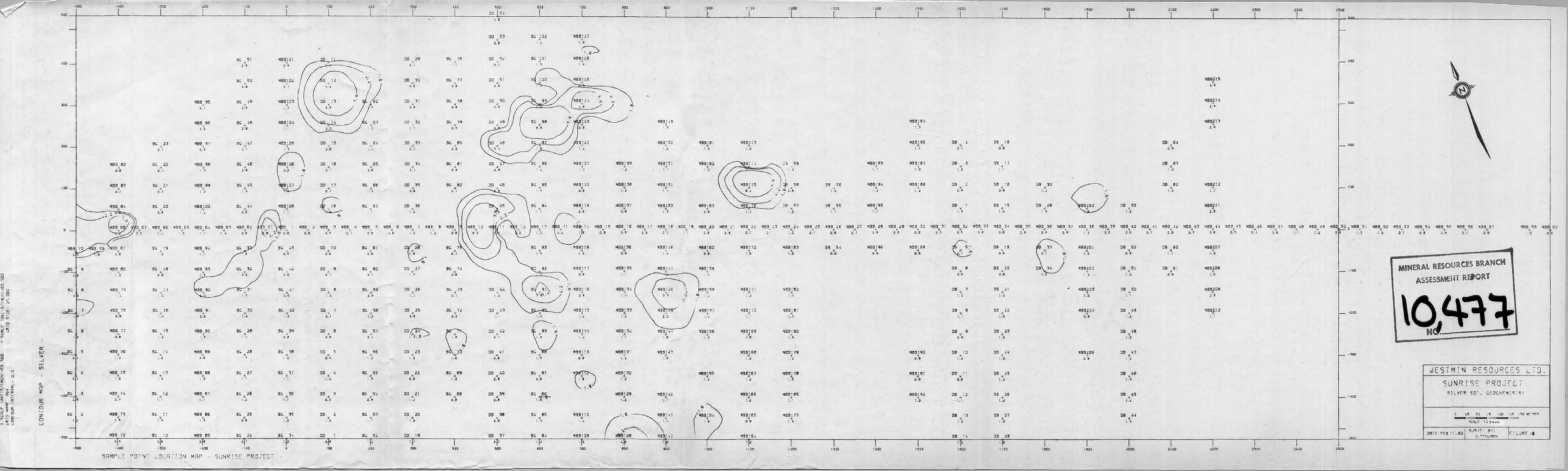
597 500 E

WESTMIN RESOURCES LTD.			
SUNRISE PROPERTY			
GEOLOGY & ROCK SAMPLE LOCATIONS			
100 50 0 100 200 300 metres — Scale 1:5000			
Date: Feb. 1982	Drawn By: R. Ivany	N.T.S. No: 93M/5,6	Figure No: 3



MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 10,477

JESTMIN RESOURCES LTD.
SUNRISE PROJECT
ZINC SOIL GEOCHEMISTRY
SCALE 1:5000
DATE FEB 11, 82 | SURVEY BY: J. FERGUSON | FIGURE 7


CONTOUR MAP - SILVER -
SAMPLE POINT LOCATION MAP - SUNRISE PROJECT -
MINERAL RESOURCES BRANCH
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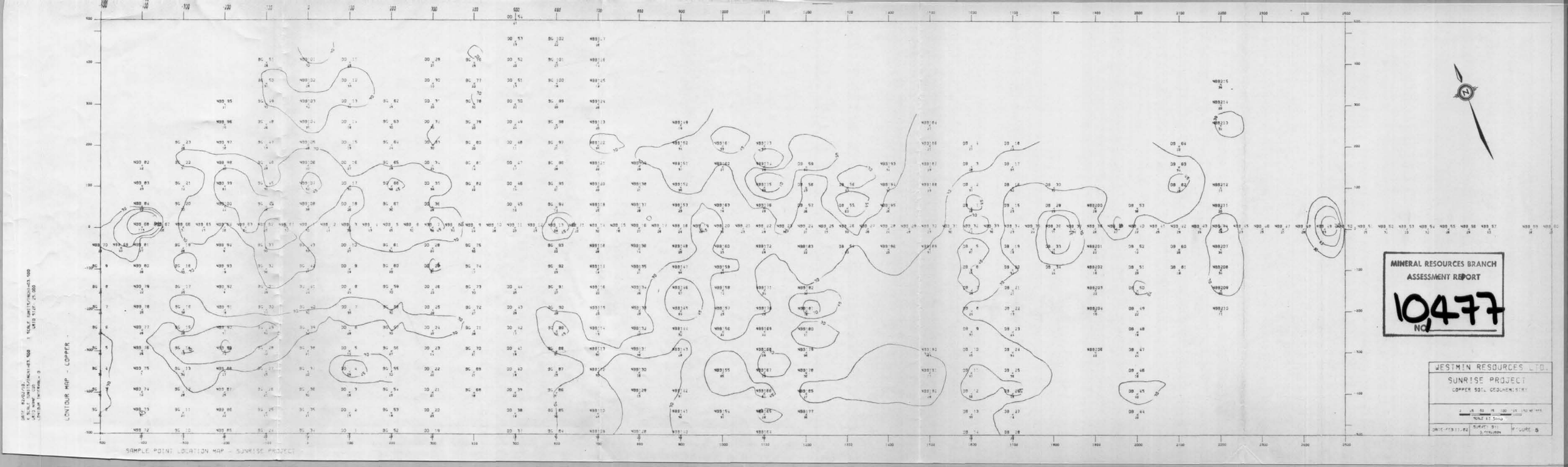
SUNRISE PROJECT
SILVER SOIL GEOCHEMISTRY
SCALE 1:5000
DATE FEB 17, 82
FIGURE 4


CONTOUR MAP - COPPER
SAMPLE POINT LOCATION MAP - SUNRISE PROJECT
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ASSESSMENT REPORT
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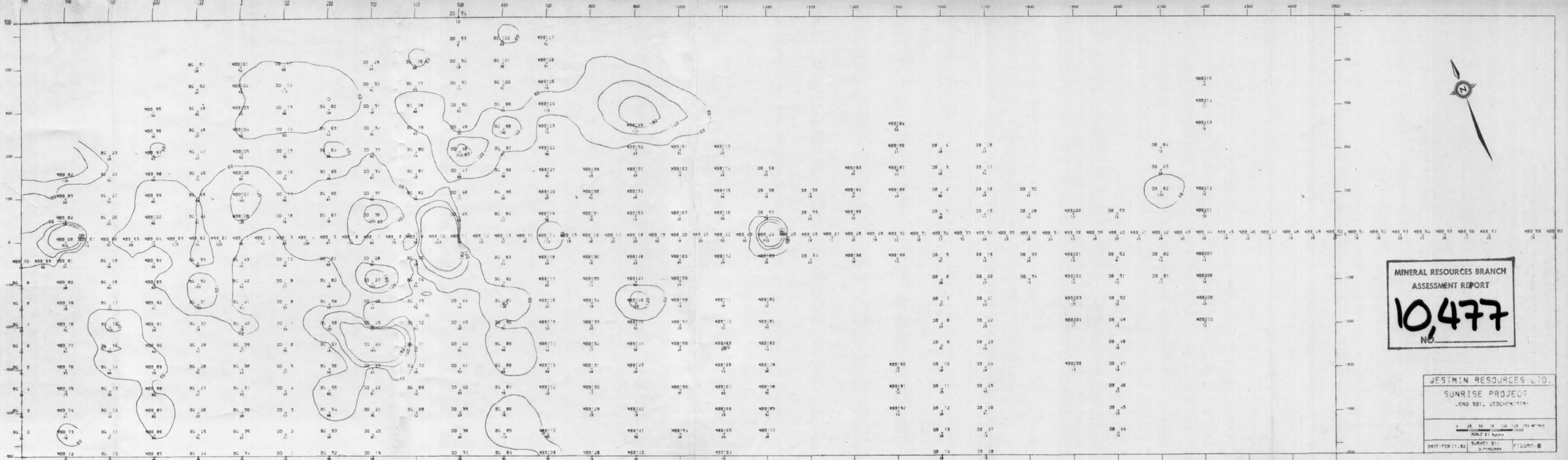
SUNRISE PROJECT
COPPER SOIL GEOCHEMISTRY
SCALE 1:5000
SURVEY BY:
DRAWN BY:
FIGURE 5


CONTOUR MAP - LEAD -
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
10,477
NO.
WESTMIN RESOURCES LTD.
SUNRISE PROJECT
LEAD SOIL GEOCHEMISTRY
SCALE 1:5000
DATE: FEB 11, 82
SURVEY BY: J. PEARSON
FIGURE 6