

CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

GEOLOGY AND GEOCHEMISTRY
OF THE
ENEAS CLAIM GROUP

Claim Sheet 82-E-12-W

Lat. : 49°40'N
Long.: 119°46'W

Claims:

ENEAS 1: Units 1-15
ENEAS 2: Units 1-15
ENEAS 3: Units 1-12
ENEAS 4: Units 1-18
ENEAS 5: Units 1-6
Osoyoos Mining Division
British Columbia

MINERAL RESOURCES BRANCH ASSESSMENT REPORT 7308 NO. _____

by:

J.R. Hill, B.Sc.

Work Completed During the Period July 4-24, 1978

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PLANS ACCOMPANYING REPORT

8A: Sediment Geochemistry)
8B: Water Geochemistry) in back pocket
8C: Heavy Mineral Geochemistry)
8D: Geology and Rock Geochemistry)

Summary

An E-W structure crosses the ENEAS Claims, to the south of which there are coincident uranium anomalies in both stream sediments (up to 63 ppm U) and stream waters (up to 1000 ppb U) and also in ponds. This ground is underlain by Jurassic quartz diorite. These anomalies extend off the claims to both east and west but this ground is already staked by others. Detailed radiometric prospecting and geological mapping, soil and rock geochemistry will be carried out over the claims.

To the north of the ENFAS Claims is an Eocene syenitic stock with which is associated coincident stream water (up to 34 ppb U) and sediment (up to 80 ppm U) anomalous uranium values. This area was previously staked, but may now be open, and should be closely prospected.

Heavy mineral sampling has shown anomalous values for gold (560 and 1000 ppb Au) exist in Darke Creek, further sampling should be carried out to locate the source of this gold.

Location and Access

Areas 22, 39 and 40 are located 11 km NW of the village of Summerland and cover an area of 60 km². This includes portions of the Garnet Lake/Eneas Creek valley to the east and the Darke Creek valley to the west, NTS map sheet 82E/12W.

Access to Garnet Lake is from the village of Summerland taking Garnet Ave., while access to the Darke Creek valley



is via the Trout Creek logging road turning north at Mile 0 onto the road to Fish Lake (Darke Lake).

Physiography and Vegetation

Relief over the entire area is 500 m. The terrain generally consists of rocky hills separated by deeply cut stream channels such as Darke Creek and Eneas Creek. Much of the stream valley bottom is open pasture or agricultural land. Higher slopes are forested but are quite open with little underbrush. The area is quite arid.

Previous Work

A total of 20 stream silt samples were collected within areas 22, 39 and 40 during the Princeton/Nicky Project. Uranium values ranged from 2.5 to 96.8 ppm U with a background of 6.7 ppm U. The samples were collected mainly on Eneas and Darke Creeks.

The G.S.C. collected a total of 5 stream silt and water samples during the 1976 U.R.P. survey. Values ranged from 3.7 to 38.8 ppm U in the silts and from 1.9 to 13.6 ppb U in the waters.

Evidence of at least one previous generation of stream sampling was noticed on the northernmost tributary of Darke Creek.

Work Completed

A Canadian Oxy crew made up of Anderson, Smith, Gardner, Tofani and Hill completed the majority of the sampling in areas 22, 39 and 40 on July 4 and 5. Minor follow-up work was completed by Hill and C.F. Gleeson on July 23 and 24. This represents a total 12 man-days work.

A total of 112 stream and lake silt samples, 110 stream and lake water samples and 6 heavy mineral samples were collected within the area. As well, Hill, Anderson and C.F. Gleeson examined the geology of localized portions of the area and collected 12 rock chip samples.

During the period June 25 to 29, 1978, the ENEAS claim group were staked to cover that part of the original stream geochemical anomaly which remained open for staking.

A total of 66 units was staked by Eastern Associates Ltd. of Whitehorse, Y.T., for Canadian Oxy.

Geology and Rock Geochemistry

The area is underlain by intrusive rocks belonging to the Upper Jurassic Nelson Plutonic suite and by a small stock of Upper Eocene Coryell plutonic rock. A very small occurrence of Nicola Volcanics outcrops at the north end of Garnet Lake.

Geological mapping by Hill and Anderson has shown the Nelson Plutonics to be generally a coarse-grained, biotite granodiorite, usually fresh but also displaying hematitic and chloritic alteration of the feldspars and mafics. The unit was characterized by a scintillometer response of 100-130 cps and contained up to 1.0 ppm U. Geochemical values of 2.5 and 7.0 ppm U were obtained from pegmatite dykes on the NW shore of Garnet Lake.

Geochemistry

Sediments (Plans 8A, 9A) - Anomalous values (720 ppm) for U are found in lake and stream sediments in the southwest parts of the area and in Garnet Lake. Jurassic quartz diorite underlies these locales and northeast of Garnet Lake a stock of Tertiary (Coryell) syenite occur; in addition a remnant of Nicola

volcanics is present at the north end of Garnet Lake.

Pegmatite dykes cutting this unit contain 2.5 to 7 ppm U.

Correlation coefficients show that there is a significant (90-95%) positive correlation between U in stream sediments and U in stream waters.

Waters (Plans 8B, 9B) - Values greater than 20 ppb U in waters cluster in areas southwest, south and north (Garnet Lake area) of the ENEAS Claims. The two southern areas have abrupt cut-offs of anomalous values to the north; the limit of anomalous values can be traced by an east-west line which would cut across the south quarter of ENEAS 4 claim block. Jurassic quartz diorite underlies this part of the area and it is interesting to speculate that possibly that U anomalies are related to an E-W structure in the quartz diorite.

More high U water values are present in Garnet Lake, in two ponds north of Garnet Lake and in a tributary stream east of Garnet Lake. The stream and ponds are underlain by a Tertiary syenite (Coryell) stock. Garnet Lake lies along the southwest contact of this stock and 2 samples of pegmatite containing 2.5 and 7 ppm U have been found on the northwest shore of the lake.

Significant positive correlations are as follows:

U water versus Conductivity, HCO_3 , U sediment

pH versus HCO_3 , Conductivity

Conductivity versus HCO_3 , U water, pH

HCO_3 versus U water, Conductivity, pH.

The relationships are graphically shown in the scattergram and linear regression plots.

Heavy Minerals - Five panned concentrates have been taken from Eneas and Darke Creeks and analyzed geochemically for U, Au, Ag, W and Sn. The highest U value (3.5 ppm) is present in sample 13861 which also contains the highest amount of sphene.

Two anomalous gold values (560 and 1000 ppb) occur in the two samples from Darke Creek.

Ag values greater than 0.2 ppm are present in one sample from Darke Creek (13861) in a sample (10078) from a tributary on the east side of Garnet Lake and in sample 10052 from upper Eneas Creek.

W is above normal (10 ppm) in 2 samples from Eneas Creek (10052, 13825) and one from Darke Creek (13835).

The source of the anomalies in Darke Creek is probably in the Jurassic granite rocks upstream, those in Eneas Creek may have a similar source but the Ag is probably derived from the Tertiary syenite stock upstream from sample 10078. This sample is also characterized by its high goethite content (15%).

Prominent heavy minerals in decreasing order of abundance from all samples include: magnetite (10 to 70%), amphibole (10 to 50%), pyroxene (10 to 15%), epidote (10 to 40%), sphene (5 to 15%) and apatite (tr to 5%).

Conclusions

High U values in sediments and waters in the southern part of the area are probably derived from Jurassic quartz diorite. The abrupt cut-off of anomalous values suggests that a major E-W uranium-bearing structure could traverse the claim. Water and sediment uranium anomalies in the north part

of the area are in part related to a Tertiary syenitic stock and pegmatite dykes: also Ag in heavy mineral sample is probably derived from this stock.

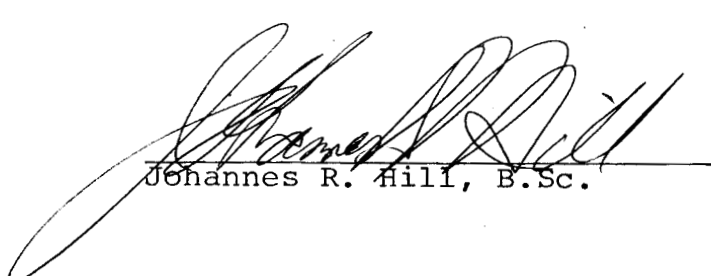
Recommendations

None of the anomalies described above actually occur on the ENEAS Claims, however, if a uranium-bearing E-W structure is present in the southern part of the area it would traverse the south quarter of ENEAS 4 claims. With this in mind, air photo interpretation should be carried out prior to geological mapping, soil sampling, rock geochemistry, and prospecting; all samples should be analyzed for uranium.

In the past the anomalous area around Garnet Lake has been staked and dropped. The assessment files should be examined prior to prospecting the area.

Additional heavy mineral sampling for Au should be done up Darke Creek.

Respectively submitted,



Johannes R. Hill, B.Sc.

TORONTO

November, 1978

APPENDIX 1
Petrography

Specimen No. - 22-51 (8028)

Rock name - altered and sheared granodiorite

Mineralogy - essential - plagioclase - 40%
quartz - 25%
K-feldspar - 20%
ferromagnesian minerals - 15%
(pseudomorphed)

accessory - magnetite
sphene
apatite

secondary - sericite
epidote group minerals
chlorite
carbonate

Description - This rock is a medium grained granodiorite, with a hypidiomorphic granular texture, and a grain size of around 3-5 mm, which has undergone considerable alteration and some shearing stress. It originally consisted of abundant subhedral tabular crystals of plagioclase, and scattered crystals of ferromagnesian minerals (hornblende in part) surrounded by interstitial anhedral of quartz and K-feldspar. Only the quartz and K-feldspar remain relatively fresh, but they appear to have taken up most of the shearing stress and are highly strained looking.

Plagioclase is the most abundant rock constituent. The crystals are now virtually completely obscured by a mass of fine grained alteration products, (making up about 75-90% of most of the crystals) so that the original composition cannot be determined. The alteration consists of a very fine mixture of sericite and clinozoisite, sometimes accompanied by occasional relatively large crystals of epidote, and in other cases by some finely disseminated carbonate. By contrast, the K-feldspar is almost completely fresh. It contains only a very small amount of finely scattered carbonate. It is sometimes slightly perthitic, and often has a strongly strained to partially fractured appearance, with stringers of secondary minerals lying within any actual planes of fracture. Quartz, which is mineralogically fresh, appears to have taken up the main part of the stress, and now consists of stringers of very highly strained material streaking out between the more resistant plagioclase grains. Ferromagnesian minerals have now, in virtually every case, been completely replaced by a fine grained mixture of chlorite and carbonate, sometimes accompanied by some epidote. The form has been distorted by the shearing stress, so that the original composition cannot be determined in most cases. However, a couple of chlorite masses in relatively protected areas of the section do retain small remnants of hornblende.

(continued overleaf)

Specimen No. - 22-51 (continued)

Throughout the section there are stringers of very fine grained secondary minerals, sometimes mingled with finely granulated quartzo-feldspathic material, filling small spaces between the large and relatively resistant crystals. Accessory amounts of magnetite and sphene tend to be intermingled with the carbonate-chlorite masses.

The section is also cut by a number of discreet fracture planes, some of which contain some carbonate, others which are only hairline fractures.

Geochemistry Values and Statistics

PAGE 1

AREA 22 FLOW SITE PPINIC 1978 GEOCHEMICAL SURVEY

LIST OF VALUES AND THEIR RANK IN % FROM THE TOP

SAMPLE	U-SILT PPM	RANK %	U-WATER PPB	RANK %	PH %	COND MMHU	RANK %	HCO3 MG/L	RANK %	
10003	72.0	2	11.0	31	7.3	93	445	18	122.0	18
10021	2.5	44	1.5	94	7.8	49	290	75	75.6	80
10022	2.0	57	1.4	99	7.9	44	290	75	76.0	78
10023	2.5	44	1.4	99	7.7	60	300	65	76.3	77
10025	1.5	75	1.7	89	7.9	44	300	65	77.8	73
10041	-4.0	0	1.6	92	8.0	33	275	78	79.3	64
10042	4.0	28	1.8	87	8.1	9	290	75	79.1	67
10043	4.0	28	1.5	94	7.9	44	300	65	80.2	63
10044	1.5	75	1.9	84	8.1	9	270	79	78.7	70
10045	2.0	57	1.9	84	8.0	33	300	65	79.2	65
10046	2.5	44	1.8	87	8.0	33	295	72	78.9	69
10047	4.5	25	1.4	99	8.0	33	295	72	78.2	72
10048	1.5	75	1.8	87	8.0	33	295	72	79.1	67
10049	1.5	75	1.4	99	8.1	9	295	72	78.5	71
10050	2.0	57	1.7	89	8.1	9	295	72	77.5	75
10052	2.0	57	1.6	92	8.1	9	275	78	76.6	76
10054	1.0	82	-0.1	0	-0.1	0	0	0	-0.1	0
10070	2.0	57	9.3	51	7.6	69	775	15	216.0	11
10071	1.5	75	14.4	15	7.6	69	850	11	266.0	4
10073	1.5	75	21.0	14	8.0	33	940	6	217.0	10
10074	3.5	30	34.0	9	7.4	84	990	4	252.0	7
10075	2.0	57	28.0	12	7.5	76	1000	2	194.0	13
10076	0.5	87	34.0	9	7.7	60	1135	1	196.0	12
10077	1.5	75	1.3	100	7.4	84	950	5	133.0	17
10078	0.5	87	23.0	13	7.7	60	840	13	188.0	14
13801	0.2	100	9.8	46	7.7	60	295	72	100.0	51
13802	1.5	75	9.2	55	7.7	60	305	60	95.5	58
13803	1.5	75	9.8	46	7.8	49	320	58	96.2	57
13804	-0.1	0	9.2	55	7.4	84	310	59	104.0	40
13805	15.0	11	10.2	40	7.3	93	350	47	110.0	20
13806	0.2	100	9.8	46	7.7	60	340	53	105.0	33
13807	0.2	100	10.2	40	7.7	60	320	58	104.0	40
13808	0.5	87	9.8	46	7.8	49	340	53	104.0	40
13809	0.2	100	10.4	36	7.9	44	330	55	98.0	53
13810	3.0	36	11.0	31	7.9	44	330	55	112.0	19
13811	1.0	82	10.4	36	8.0	33	250	47	104.0	40
13812	0.5	87	10.2	40	8.0	33	360	39	98.0	53
13813	1.0	82	11.0	31	8.0	33	355	44	94.5	59
13814	2.0	57	11.2	25	8.0	33	365	35	106.0	26
13815	2.5	44	11.8	21	8.0	33	340	53	107.0	23
13816	0.2	100	10.6	34	8.0	33	345	49	102.0	46
13817	-0.1	0	9.2	55	7.6	69	345	49	97.6	54
13818	6.0	21	10.6	34	8.0	33	345	49	103.0	43
13821	2.5	44	11.0	31	8.0	33	370	32	-0.1	0
13822	1.5	75	11.4	22	8.1	9	375	29	105.0	33
13823	1.0	82	12.8	18	8.0	33	355	44	105.0	33
13824	20.0	8	12.0	20	8.1	9	355	44	106.0	26
13825	16.0	9	12.0	20	8.1	9	330	28	103.0	43
13826	0.2	100	11.0	31	8.0	33	360	39	101.0	49
13827	0.2	100	11.2	25	8.0	33	360	39	101.0	49

LIST OF VALUES AND THEIR RANK IN % FROM THE TOP

SAMPLE	U-SILT PPM	RANK %	U-WATER PPB	RANK %	PH %	RANK %	COND MMHO	RANK %	HCO3 MG/L	RANK %
13828	7.0	18	10.6	34	8.0	33	355	44	103.0	43
13831	1.5	75	3.2	76	7.6	69	150	94	38.6	94
13832	1.5	75	2.6	80	7.3	93	130	100	39.4	90
13833	2.0	57	3.4	75	7.3	93	140	99	39.3	92
13834	2.5	44	3.4	75	7.5	76	145	96	40.4	87
13835	5.0	23	3.0	79	7.3	93	140	99	39.9	89
13836	3.0	36	3.0	79	7.4	84	150	94	39.9	89
13837	35.0	6	32.0	11	7.3	93	240	81	65.3	81
13840	260.0	1	1040.0	1	7.7	60	915	8	171.0	16
13841	15.0	11	8.2	62	7.1	99	180	85	43.6	84
13842	63.0	5	195.0	4	7.3	93	840	13	257.0	5
13844	34.0	7	5.2	73	7.1	99	185	84	42.9	85
13845	8.0	15	6.4	67	7.2	95	185	84	45.9	82
13851	7.0	18	8.2	62	7.6	69	155	89	37.8	95
13852	12.0	13	5.6	72	7.1	99	160	87	39.0	93
13853	2.0	57	6.4	67	7.5	76	155	89	35.9	99
13854	3.5	30	6.2	68	7.5	76	150	94	36.9	96
13855	70.0	3	13.0	16	7.7	60	250	80	84.7	61
13856	0.2	100	8.4	60	7.4	84	175	86	45.8	83
13857	3.0	36	2.0	81	7.5	76	145	96	34.8	100
13861	-0.1	0	-0.1	0	-0.1	0	0	0	-0.1	0
13862	0.5	87	5.9	69	8.0	33	410	19	-0.1	0
13874	0.2	100	45.0	7	7.3	93	925	7	291.0	1
13875	1.5	75	-0.1	0	-0.1	0	0	0	-0.1	0
13876	2.0	57	-0.1	0	-0.1	0	0	0	-0.1	0
13877	1.5	75	47.0	6	7.4	84	670	16	222.0	8
13878	3.0	36	-0.1	0	-0.1	0	0	0	-0.1	0
13879	1.5	75	100.0	5	7.5	76	850	11	262.0	5
13880	5.0	23	210.0	2	7.9	44	825	14	279.0	2
13881	7.5	16	-0.1	0	-0.1	0	0	0	-0.1	0
13882	0.2	100	5.7	71	7.0	100	150	94	36.6	98
13891	0.2	100	7.6	64	7.2	95	350	47	104.0	40
13892	4.5	25	7.5	65	7.6	69	380	28	101.0	49
13893	6.5	20	9.0	56	7.6	69	370	32	97.1	55
13894	11.0	14	9.4	49	7.6	69	390	25	106.0	26
13895	3.0	36	8.8	59	7.8	49	400	22	102.0	46
13896	2.0	57	8.8	59	7.8	49	400	22	104.0	40
13897	1.0	82	9.8	46	7.9	44	390	25	105.0	33
13898	2.0	57	9.6	48	7.9	44	365	35	89.0	60
13899	1.0	82	9.2	55	8.0	33	380	28	105.0	33
13900	2.5	44	9.6	48	7.9	44	400	22	109.0	22

VALUES 87

65

85

85

83

PAGE 3

AREA 22 FLOW SITE PF INIC 1978 GEOCHEMICAL SURVEY

HEAVY MINERAL VALUES AND RANK IN % FROM THE TOP

SAMPLE	AG RANK		AU RANK		U-HM RANK		W RANK		SN RANK	
	PPM	%	PPB	%	PPM	%	PPM	%	PPM	%
10052	0.2	60	5	100	0.2	100	10	60	4	40
10078	0.6	20	5	100	0.2	100	4	100	6	20
13825	0.1	100	5	100	0.2	100	10	60	2	80
13835	0.1	100	1000	20	0.2	100	10	60	3	60
13861	0.2	60	560	40	3.5	20	4	100	1	100
VALUES	5		5		5		5		5	

AREA 22 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY

STATISTICAL SUMMARY OF ALL SAMPLES

ELEMENT	AR.	MEAN	STD DEV	GECM	MEAN LN	DEV	RANGE		SMPLS	<DET LIM
							MIN	MAX		
U-S		9.1	30.3		2.2	4.4	0.2	260.0	87	11
U-W		27.5	115.7		8.0	3.3	1.3	1040.0	85	0
PH		7.7	0.3		7.7	1.0	7.0	8.1	85	0
COND		394.2	240.3		339.3	1.7	130.0	1135.0	85	0
HCO3		106.2	61.4		91.9	1.7	34.8	291.0	83	0
AG		0.2	0.2		0.2	2.1	0.1	0.6	5	2
AU		315.0	452.1		37.1	15.7	5.0	1000.0	5	3
U-HM		0.9	1.5		0.4	3.6	0.2	3.5	5	4
W		7.6	3.3		6.9	1.7	4.0	10.0	5	0
SN		3.2	1.9		2.7	2.0	1.0	6.0	5	0

AREA 22 FLOW SITE

PPINIC 1978 GEOCHEMICAL SURVEY

DEVIATIONS FROM MEANS : VALUES AND % FROM TOP OF GROUP

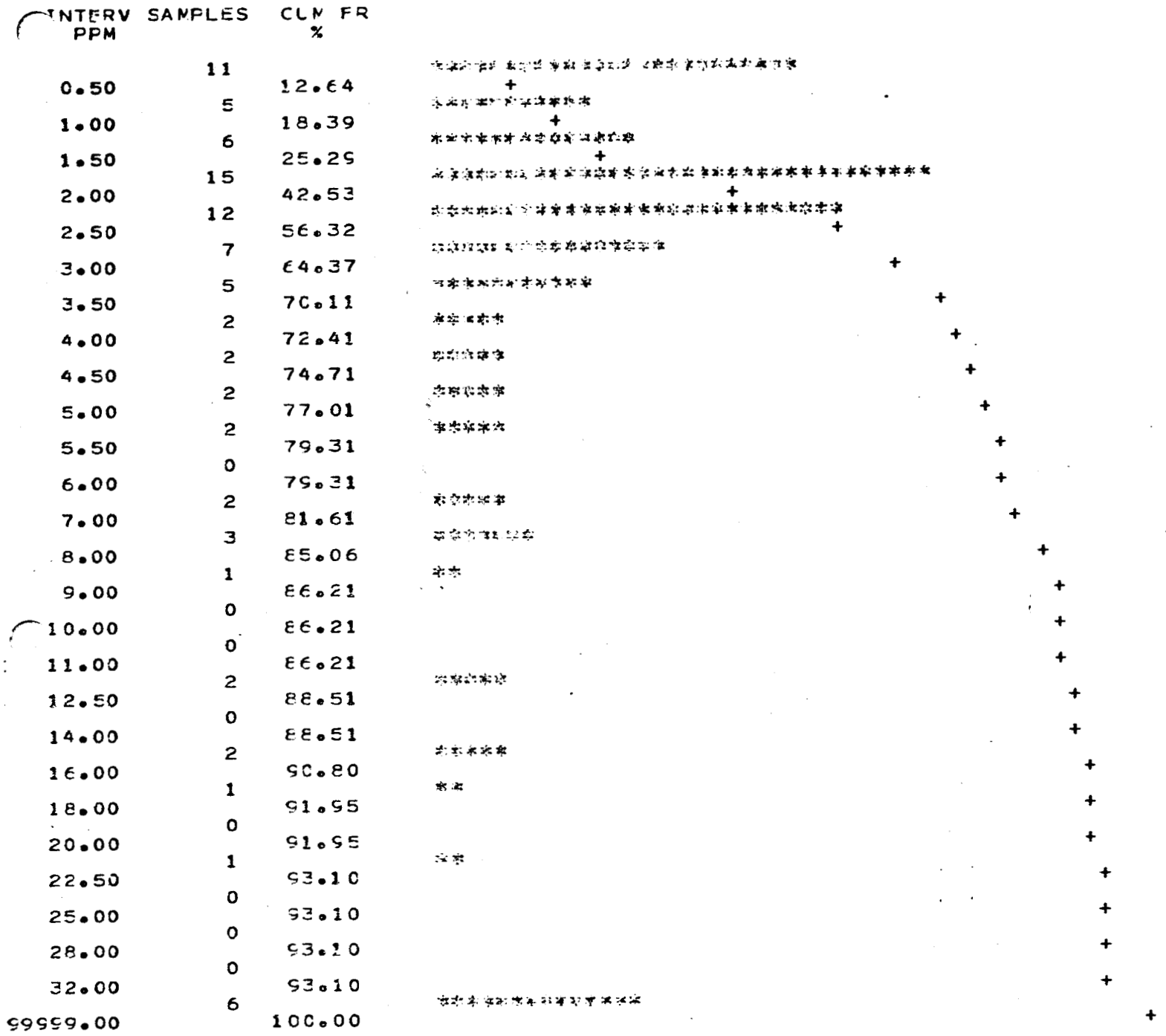
ELEMENT	MEAN-2 DEV		MEAN-1 DEV		MEAN		MEAN+1 DEV		MEAN+2 DEV		
	VALUE	%	VALUE	%	VALUE	%	VALUE	%	VALUE	%	
U-S	-51.5	0	-21.2	0	9.1	14	39.4	5	69.6	3	ARITH
U-S	0.1	100	0.5	82	2.2	44	9.7	14	42.6	5	LOG
U-W	-203.9	0	-88.2	0	27.5	12	143.1	4	258.8	1	ARITH
U-W	0.7	100	2.4	80	8.0	62	26.4	12	87.1	5	LOG
PH	7.1	95	7.4	76	7.7	49	8.0	9	8.3	0	ARITH
PH	7.1	95	7.4	76	7.7	49	8.0	9	8.3	0	LOG
COND	-86.3	0	154.0	89	394.2	22	634.5	16	874.8	8	ARITH
COND	116.4	100	198.7	81	339.3	53	579.5	16	989.6	4	LOG
HCO3	-16.7	0	44.7	83	106.2	23	167.6	16	229.0	7	ARITH
HCO3	31.3	100	53.6	81	91.9	59	157.4	16	269.6	2	LOG
AG	-0.2	0	0.0	100	0.2	20	0.4	20	0.7	0	ARITH
AG	0.0	100	0.1	100	0.2	60	0.4	20	0.8	0	LOG
AU	-589.2	0	-137.1	0	315.0	40	767.1	20	1219.2	0	ARITH
AU	0.2	100	2.4	100	37.1	40	580.4	20	9086.4	0	LOG
U-HM	-2.1	0	-0.6	0	0.9	20	2.3	20	3.8	0	ARITH
U-HM	0.0	100	0.1	100	0.4	20	1.3	20	4.6	0	LOG
W	1.0	100	4.3	60	7.6	60	10.9	0	14.2	0	ARITH
W	2.5	100	4.2	60	6.9	60	11.4	0	18.9	0	LOG
SN	-0.6	0	1.3	80	3.2	40	5.1	20	7.0	0	ARITH
SN	0.7	100	1.4	80	2.7	60	5.4	20	10.6	0	LOG

AREA 22 FLCW SITE FRINIC 1978 GEOCHEMICAL SURVEY
 CORRELATION COEFFICIENTS, LEVEL OF SIGNIFICANCE, NUMBER OF SAMPLES

	U-S	U-W	PH	COND	HCO3	AG	AU	U-HM	W	SN
U-S	**** **-* ****	0.20 90-95 82	-0.20 90-95 82	-0.03 0-50 82	-0.07 0-50 80	-0.94 90-95 4	0.23 0-50 4	-0.00 0-50 4	0.81 80-90 4	-1.00 99-** 4
U-W	0.20 90-95 82	**** **-* ****	-0.16 80-90 85	0.60 99-** 85	0.63 99-** 83	0.47 0-50 4	-0.38 0-50 4	0.00 0-50 4	-0.73 60-80 4	0.16 0-50 4
PH	-0.20 90-95 82	-0.16 80-90 85	**** **-* ****	0.19 90-95 85	0.23 95-99 83	0.04 0-50 4	-0.87 80-90 4	-0.01 0-50 4	0.16 0-50 4	-0.19 0-50 4
COND	-0.03 0-50 82	0.60 99-** 85	0.19 90-95 85	**** **-* ****	0.96 99-** 83	0.81 80-90 4	-0.78 60-80 4	-0.00 0-50 4	-0.83 80-90 4	0.51 50-60 4
HCO3	-0.07 0-50 80	0.63 99-** 83	0.23 95-99 83	0.96 99-** 83	**** **-* ****	0.78 60-80 4	-0.81 80-90 4	-0.00 0-50 4	-0.79 60-80 4	0.47 0-50 4
AG	-0.94 90-95 4	0.47 0-50 4	0.04 0-50 4	0.81 80-90 4	0.78 60-80 4	**** **-* ****	-0.38 0-50 5	0.04 0-50 5	-0.76 80-90 5	0.50 60-80 5
AU	0.23 0-50 4	-0.38 0-50 4	-0.87 80-90 4	-0.78 60-80 4	-0.81 80-90 4	-0.38 0-50 5	**** **-* ****	0.55 60-80 5	-0.12 0-50 5	-0.55 60-80 5
U-HM	-0.00 0-50 4	0.00 0-50 4	-0.01 0-50 4	-0.00 0-50 4	-0.00 0-50 4	0.04 0-50 5	0.55 60-80 5	**** **-* ****	-0.61 60-80 5	-0.81 90-95 5
W	0.81 80-90 4	-0.73 60-80 4	0.16 0-50 4	-0.83 80-90 4	-0.79 60-80 4	-0.76 80-90 5	-0.12 0-50 5	-0.61 60-80 5	**** **-* ****	0.13 0-50 5
SN	-1.00 99-** 4	0.16 0-50 4	-0.19 0-50 4	0.51 50-60 4	0.47 0-50 4	0.50 60-80 5	-0.55 60-80 5	-0.81 90-95 5	0.13 0-50 5	**** **-* ****

AREA 22 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY

U-5 HISTOGRAM AND CUMULATIVE FREQUENCY



TOTAL SAMPLES= 87 VALUES < DETECTION = 11 RANGE= 0.2 TO 260.0

AREA 22 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY

U-W HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV PPB	SAMPLES	CUM FR %	
0.20	0	0.00	
1.20	0	0.00	
1.60	7	8.24	*****
2.00	9	18.82	+ *****
2.50	1	20.00	*****
3.20	3	23.53	*****
4.00	3	27.06	*****
5.00	0	27.06	
6.30	5	32.94	*****
8.00	4	37.65	*****
10.00	19	60.00	*****
12.50	19	82.35	*****
16.00	3	85.88	*****
20.00	0	85.88	
25.00	2	88.24	*****
32.00	1	89.41	*****
40.00	3	92.94	*****
50.00	2	95.29	*****
63.00	0	95.29	
80.00	0	95.29	
100.00	0	95.29	
125.00	1	96.47	*****
160.00	0	96.47	
200.00	1	97.65	*****
250.00	1	98.82	*****
310.00	0	98.82	
9999.00	1	100.00	*****

TOTAL SAMPLES= 85 VALUES < DETECTION = 0 RANGE= 1.3 TO 1040.0

ARFA 22 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY

PH HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV	SAMPLES	CUM FR %		
4.00	0	0.00		
7.00	0	0.00		
7.10	1	1.18	***	
7.20	3	4.71	***	
7.30	2	7.06	***	
7.40	8	16.47	***	
7.50	6	23.53	***	
7.60	6	30.59	***	
7.70	8	40.00	***	
7.80	9	50.59	***	
7.90	5	56.47	***	
8.00	9	67.06	***	
8.10	20	90.59	***	
8.20	8	100.00	***	+
8.30	0	100.00		+
8.40	0	100.00		+
8.50	0	100.00		+
8.60	0	100.00		+
8.70	0	100.00		+
8.80	0	100.00		+
8.90	0	100.00		+
9.00	0	100.00		+
9.10	0	100.00		+
9.20	0	100.00		+
9.30	0	100.00		+
9.40	0	100.00		+
99999.00	0	100.00		+

TOTAL SAMPLES= 85 VALUES < DETECTION = 0 RANGE= 7.0 TO 8.1

AREA 22 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY

COND HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV MMHO	SAMPLES	CUM FR %		
1.00	0	0.00		
125.00	0	0.00		
140.00	1	1.18	*	
160.00	10	12.94	*****	
180.00	2	15.29	+	
200.00	3	18.82	***	
225.00	0	18.82		
250.00	1	20.00	*	
280.00	4	24.71	****	
320.00	15	42.35	*****	
360.00	16	61.18	*****	
400.00	14	77.65	*****	
450.00	5	83.53	*****	
500.00	0	83.53		+
560.00	0	83.53		+
630.00	0	83.53		+
710.00	1	84.71	*	+
800.00	1	85.88	*	+
900.00	5	91.76	*****	+
1000.00	5	97.65	*****	+
1250.00	2	100.00	***	+
1400.00	0	100.00		+
1600.00	0	100.00		+
2000.00	0	100.00		+
2500.00	0	100.00		+
3200.00	0	100.00		+
59999.00	0	100.00		+

TOTAL SAMPLES= 85 VALUES < DETECTION = 0 RANGE= 130.0 TO 1135.0

APEA 22 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY

HCO3 HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV MG/L	SAMPLES	CUM FR %			
1.00	0	0.00			
32.00	0	0.00			
35.00	1	1.20	**		
40.00	10	13.25	*****	+	
45.00	3	16.87	***	+	
50.00	2	19.28	**	+	
56.00	0	19.28		+	
63.00	0	19.28		+	
71.00	1	20.48	*	+	
80.00	14	37.35	*****	+	
90.00	3	40.96	**	+	
100.00	7	49.40	***	+	
112.00	26	80.72	*****	+	
125.00	2	83.13	**	+	
140.00	1	84.34	*	+	
160.00	0	84.34		+	
180.00	1	85.54	**	+	
200.00	3	89.16	***	+	
225.00	3	92.77	***	+	
250.00	0	92.77		+	
280.00	5	98.80	*****	+	
320.00	1	100.00	*	+	
360.00	0	100.00		+	
400.00	0	100.00		+	
450.00	0	100.00		+	
500.00	0	100.00		+	
9999.00	0	100.00		+	

TOTAL SAMPLES= 83 VALUES < DETECTION = 0 RANGE= 34.8 TO 291.0

AREA 22 FLOW SITE PFINIC 1978 GEOCHEMICAL SURVEY

U-S HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV PFM	SAMPLES	CUM FR %	
0.50	11	12.64	***** +
1.00	5	18.39	***** +
1.50	6	25.29	***** +
2.00	15	42.53	***** +
2.50	12	56.32	***** +
3.00	7	64.37	***** +
3.50	5	70.11	***** +
4.00	2	72.41	***** +
4.50	2	74.71	***** +
5.00	2	77.01	***** +
5.50	2	79.31	***** +
6.00	0	79.31	***** +
6.00	2	79.31	***** +
7.00	3	81.61	***** +
8.00	3	85.06	***** +
9.00	1	86.21	***** +
10.00	0	86.21	***** +
10.00	0	86.21	***** +
11.00	2	88.51	***** +
12.50	0	88.51	***** +
14.00	2	88.51	***** +
16.00	1	90.80	***** +
18.00	0	91.95	***** +
20.00	0	91.95	***** +
22.50	1	93.10	***** +
25.00	0	93.10	***** +
28.00	0	93.10	***** +
32.00	0	93.10	***** +
99999.00	6	100.00	***** +

TOTAL SAMPLES= 87 VALUES < DETECTION = 11 RANGE= 0.2 TO 260.0

AREA 22 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY

U-W HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV PPB	SAMPLES	CUM FR %	
0.20	0	0.00	
1.20	0	0.00	
1.60	7	8.24	+++++
2.00	9	18.82	+++++
2.50	1	20.00	+
3.20	3	23.53	+++
4.00	3	27.06	+++
5.00	0	27.06	
6.30	5	32.94	+++++
8.00	4	37.65	++++
10.00	19	60.00	+++++
12.50	19	82.35	+++++
16.00	3	85.88	+++
20.00	0	85.88	
25.00	2	88.24	++
32.00	1	89.41	+
40.00	3	92.94	+++
50.00	2	95.29	++
63.00	0	95.29	
80.00	0	95.29	
100.00	1	96.29	+
125.00	0	96.47	
160.00	1	97.65	+
200.00	1	98.65	+
250.00	0	98.82	
310.00	1	99.82	+
59595.00	1	100.00	+

TOTAL SAMPLES= 85 VALUES < DETECTION = 0 RANGE= 1.3 TO 1040.0

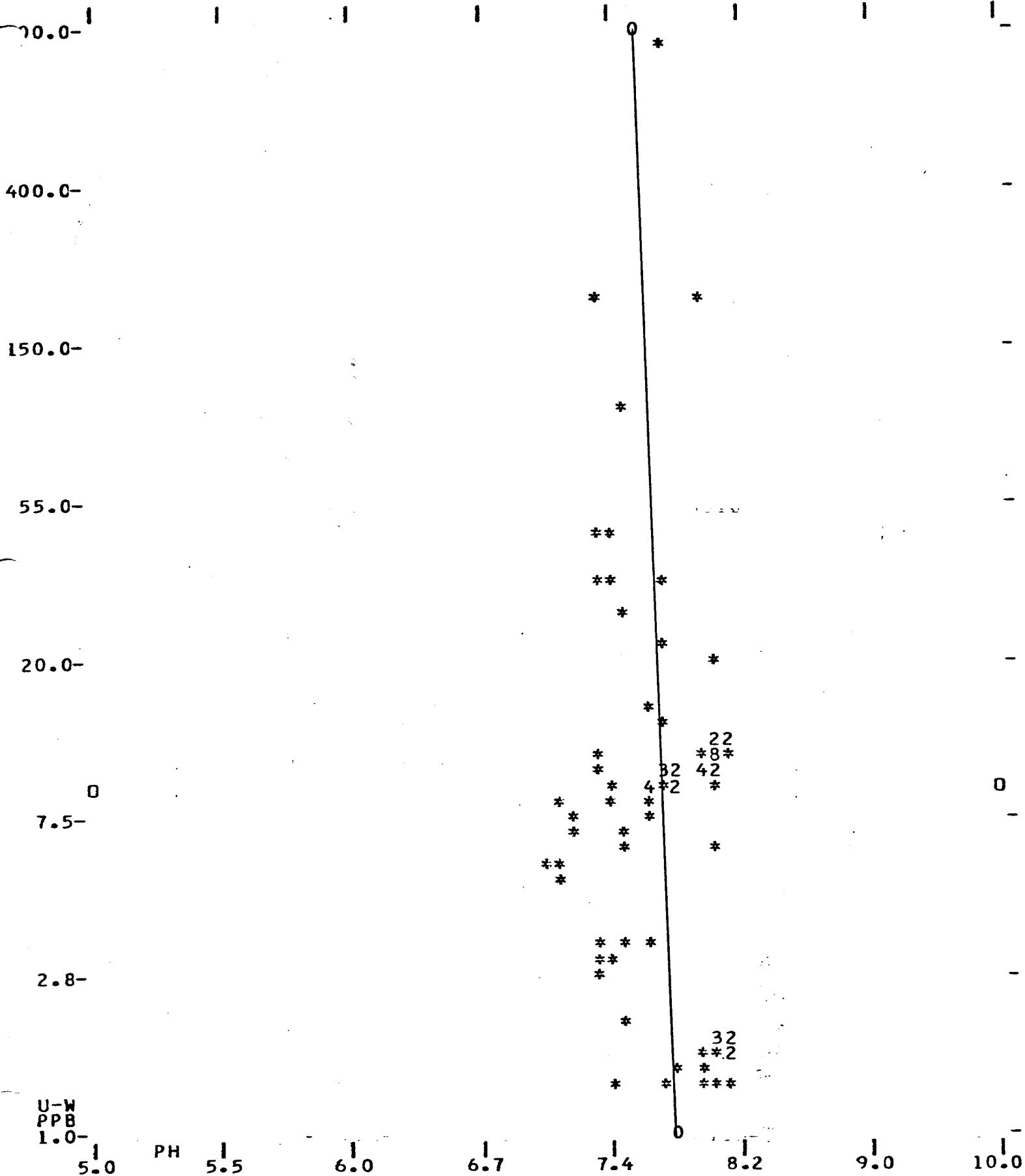
AREA 22 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY

PH HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV	SAMPLES	CUM FR %		
4.00	0	0.00		
7.00	0	0.00		
7.10	1	1.18		
7.20	3	4.71		
7.30	2	7.06		
7.40	8	16.47		
7.50	6	23.53		
7.60	6	30.59		
7.70	8	40.00		
7.80	9	50.59		
7.90	5	56.47		
8.00	9	67.06		
8.10	20	90.59		
8.20	8	100.00		+
8.30	0	100.00		+
8.40	0	100.00		+
8.50	0	100.00		+
8.60	0	100.00		+
8.70	0	100.00		+
8.80	0	100.00		+
8.90	0	100.00		+
9.00	0	100.00		+
9.10	0	100.00		+
9.20	0	100.00		+
9.30	0	100.00		+
9.40	0	100.00		+
99999.00	0	100.00		+

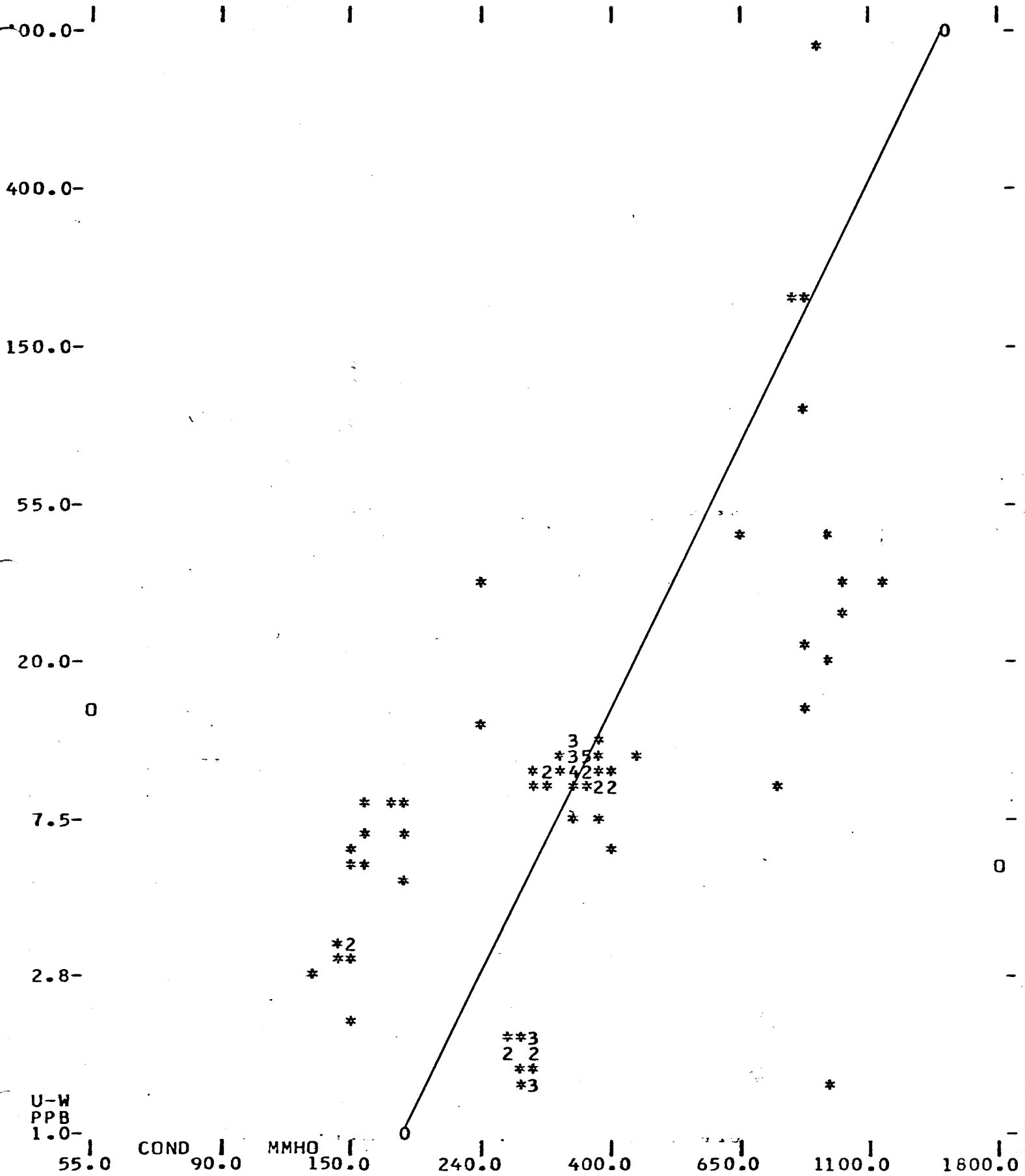
TOTAL SAMPLES= 85 VALLES < DETECTION = 0 RANGE= 7.0 TO 8.1

AREA 22 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF U-W VS PH



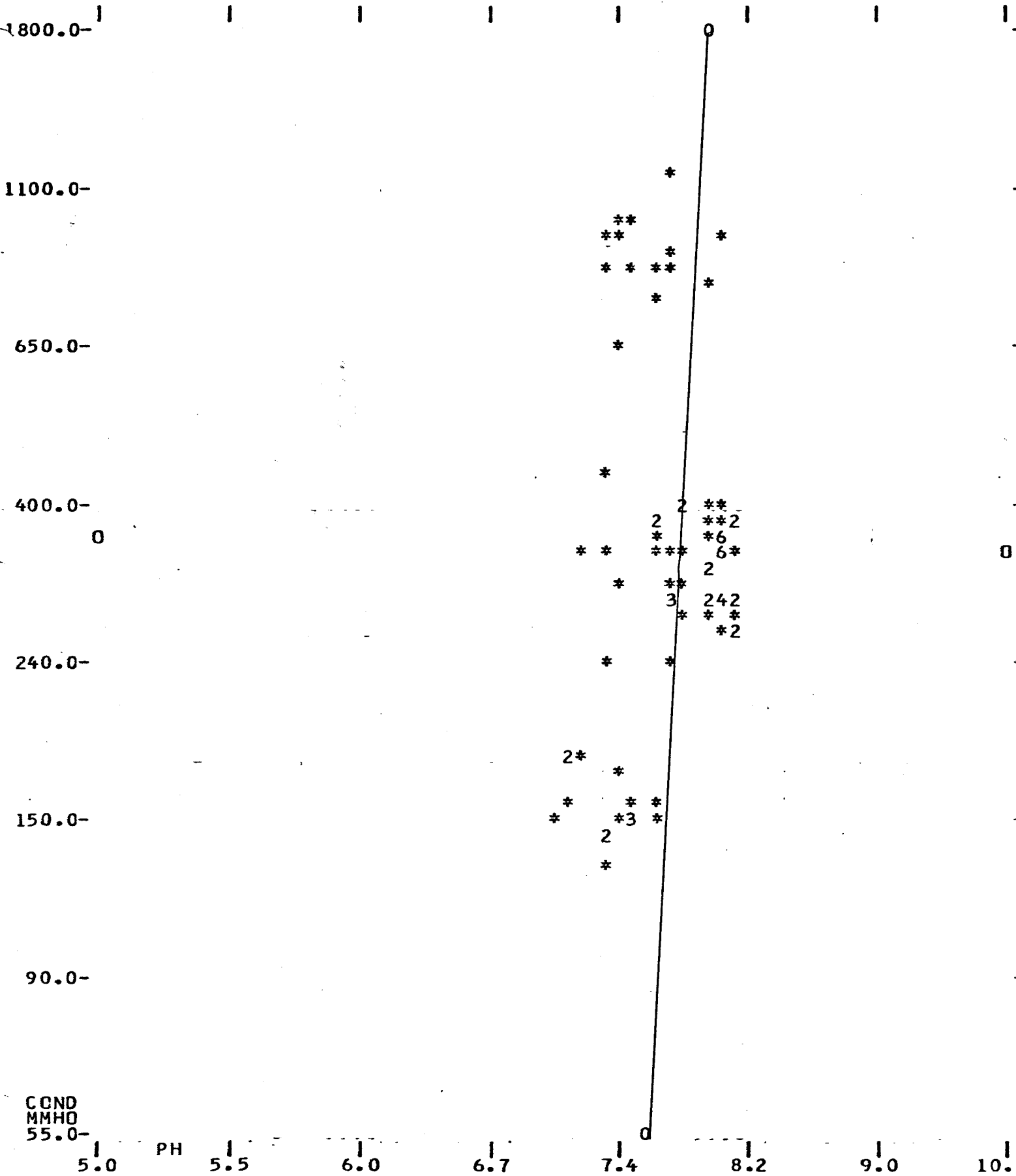
85 SETS USED--VALUES<DETECTION: 0 PH 0 U-W--COR COEF=-0.15--PREDICT 3%

AREA 22 FLOW SITE PRINC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF U-W VS COND



85 SETS USED--VALUES<DETECTION: 0 COND 0 U-W--COR COEF= 0.60--PREDICT 36%

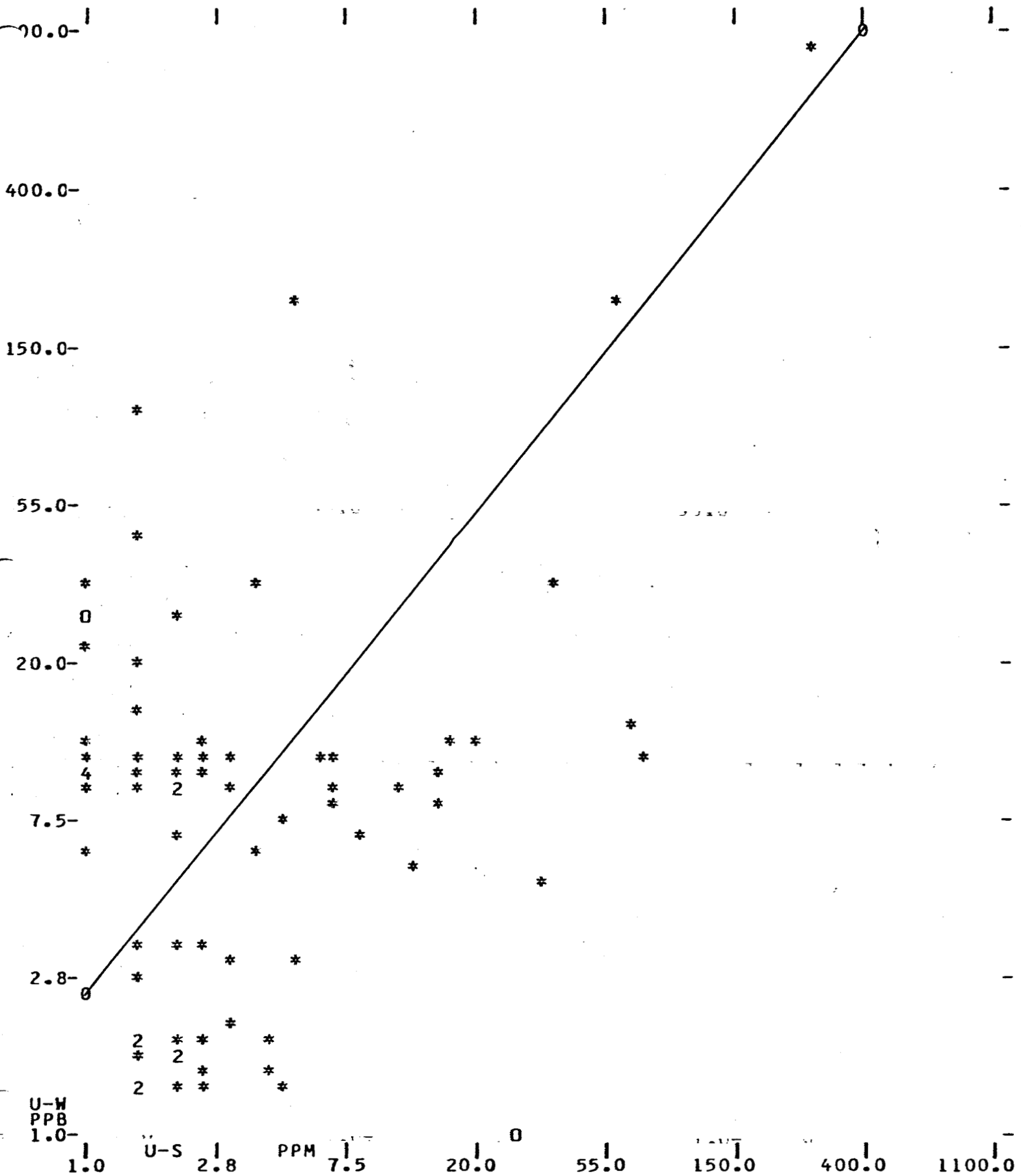
AREA 22 FLCW SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF COND VS PH



COND
MMHO
55.0-

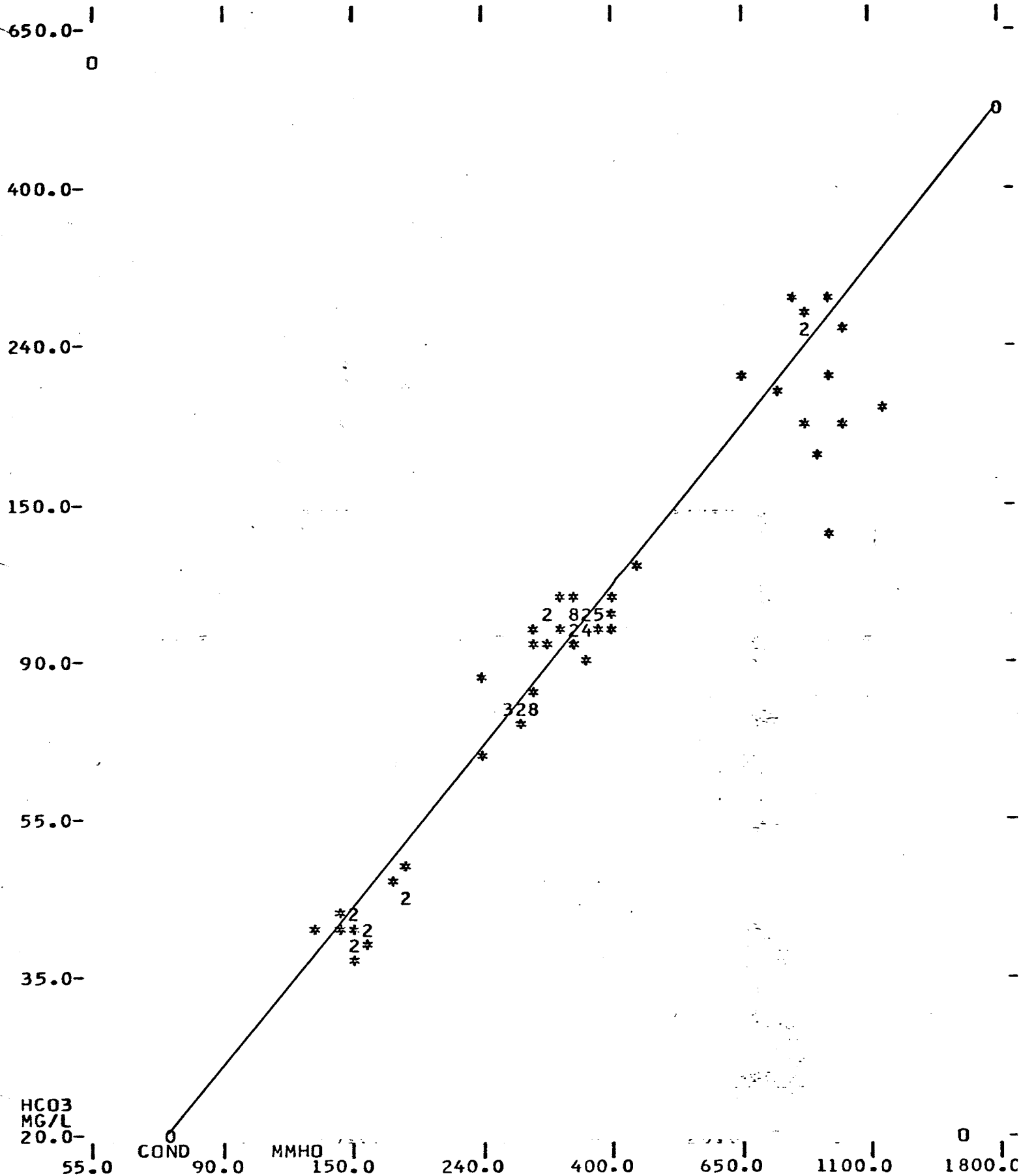
85 SETS USED--VALUES<DETECTION: 0 PH 0 COND--COR COEF= 0.19--PREDICT 4%

AREA 22 FLOW SITE PRINC 1978 GEOCHEMICAL SURVEY
 SCATTERGRAM AND LINEAR REGRESSION OF U-W VS U-S



71 SETS USED--VALUES<DETECTION: 11 U-S 0 U-W--COR COEF= 0.33--PREDICT 11%

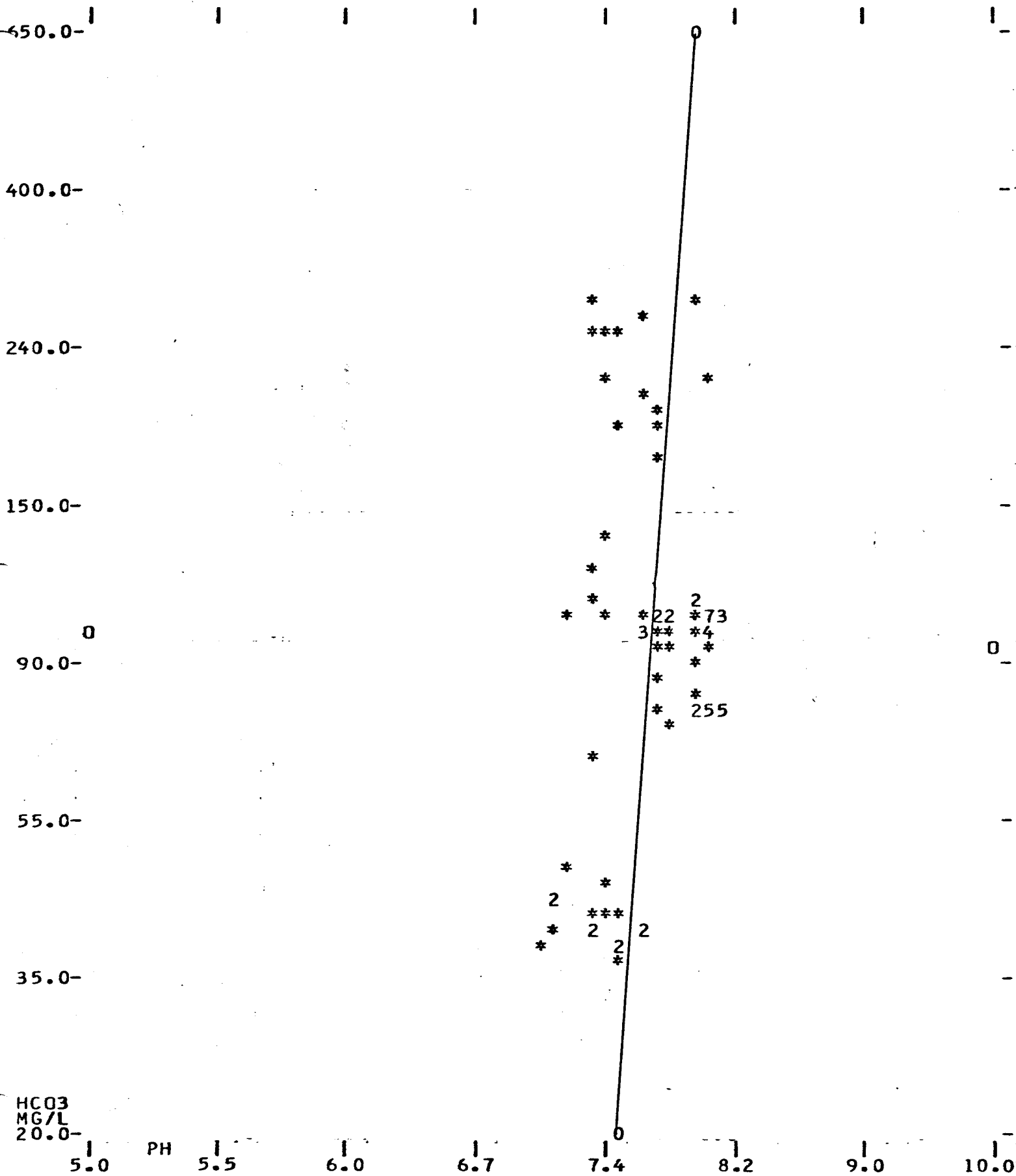
AREA 22 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF HCO3 VS COND



HCO3
MG/L
20.0-

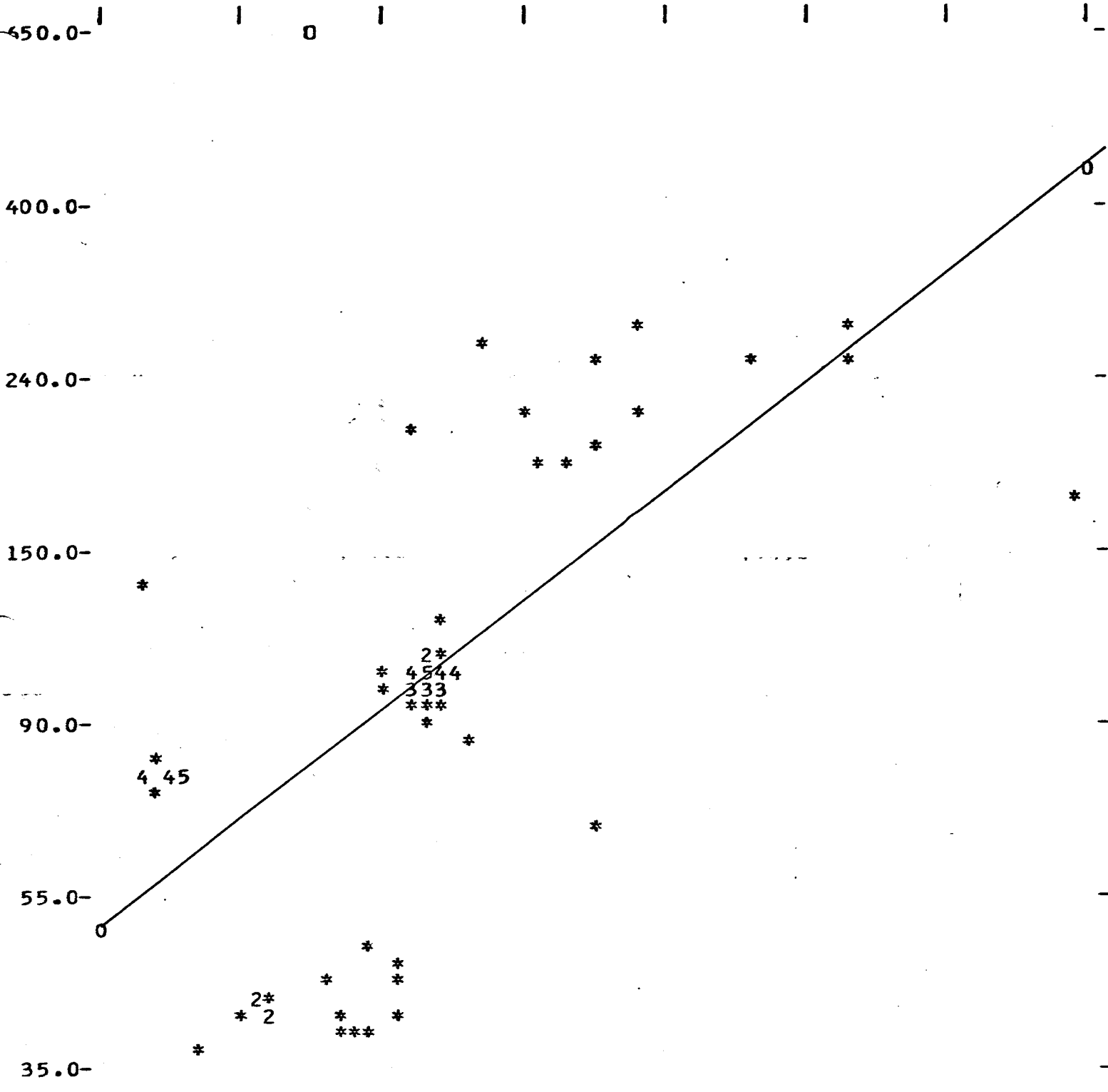
83 SETS USED--VALUES<DETECTION: 0 COND 0 HCO3--COR COEF= 0.96--PREDICT 93%

AREA 22 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF HCO3 VS PH



83 SETS USED--VALUES<DETECTION: 0 PH 0 HCO3--COR COEF= 0.23--PREDICT 5%

AREA 22 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF HCO3 VS U-W

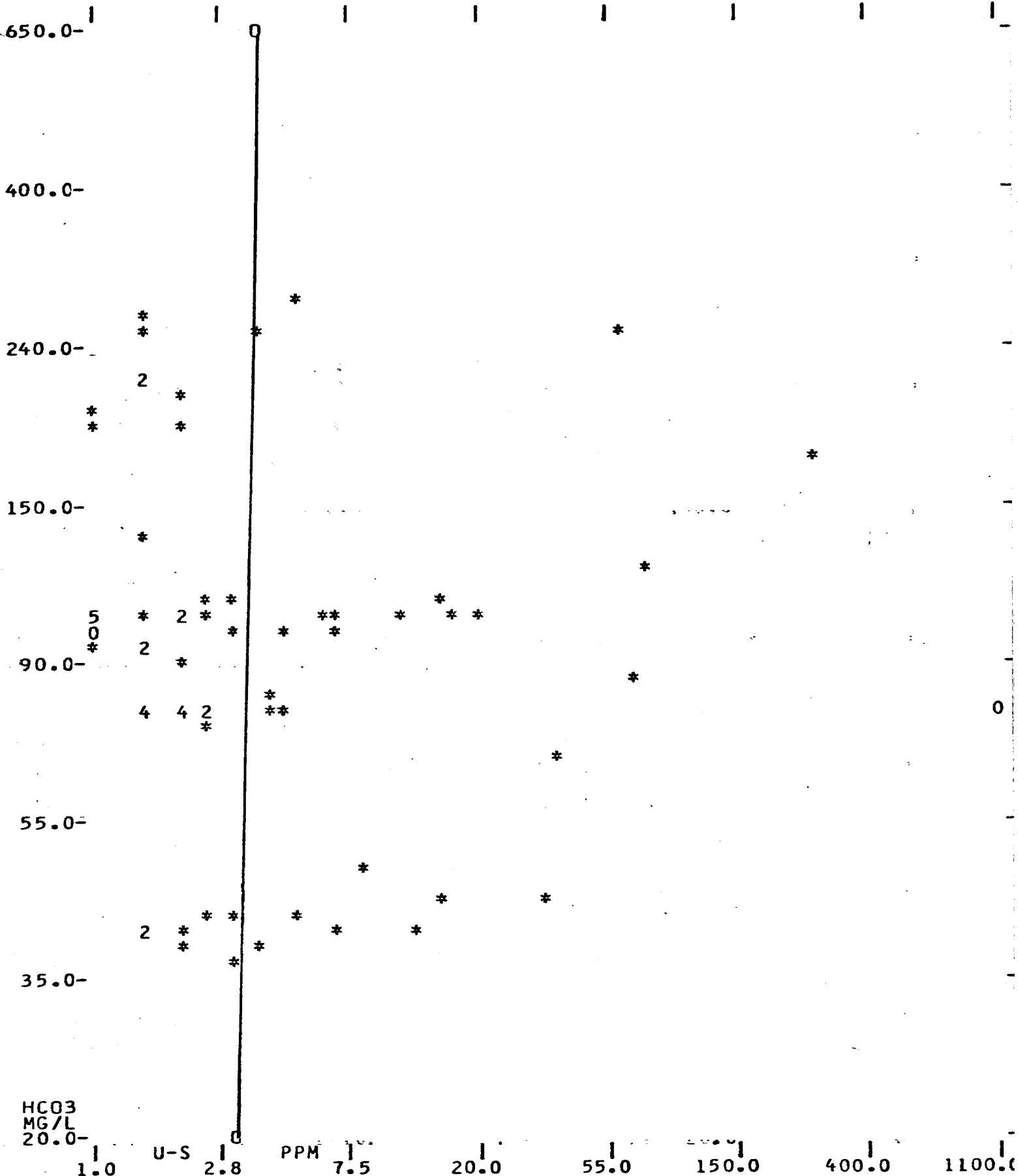


HCO3
MG/L
20.0-

1.0 U-W 2.8 PPB 7.5 20.0 55.0 150.0 400.0 1100.0

83 SETS USED--VALUES<DETECTION: 0 U-W 0 HCO3--COR COEF= 0.62--PREDICT 39%

AREA 22 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF HCO3 VS U-S



69 SETS USED--VALUES<DETECTION: 11 U-S 0 HCO3--COR COEF=-0.07--PREDICT 0%

AREA 22 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY

LIST OF VALUES AND THEIR RANK IN % FROM THE TOP

SAMPLE	U-SILT PPM	RANK %	U WATER PPB	RANK %	PH %	RANK %	COND MMHO	RANK %	HCO3 MG/L	RANK %
10001	0.2	100	7.2	92	7.4	87	400	87	104.0	64
10002	80.0	19	9.5	58	7.4	87	430	58	111.0	50
10024	5.0	77	25.0	46	7.3	96	625	42	161.0	36
10026	3.5	81	26.0	42	8.2	54	425	62	101.0	68
10051	50.0	35	21.0	54	7.4	87	610	50	157.0	41
10053	46.0	38	1.6	100	7.3	96	615	46	163.0	32
10061	2.5	92	7.9	87	8.2	54	400	87	107.0	55
10062	53.0	27	8.6	71	8.2	54	380	96	92.8	73
10063	115.0	12	8.4	83	8.2	54	400	87	105.0	59
10064	55.0	23	8.6	71	8.2	54	400	87	52.3	91
10065	50.0	35	8.5	75	8.2	54	400	87	52.1	95
10066	25.0	42	8.4	83	8.2	54	400	87	52.4	86
10067	7.5	54	8.8	62	8.3	54	390	92	51.8	100
10068	7.0	58	26.0	42	8.5	17	650	37	82.7	77
10069	1.0	96	27.0	33	8.4	21	700	33	177.0	27
10072	5.5	73	23.0	50	7.5	71	975	17	242.0	18
13838	94.0	15	175.0	17	7.4	87	525	54	151.0	45
13839	340.0	4	710.0	4	7.5	71	775	25	188.0	23
13843	23.0	46	6.0	96	7.0	100	200	100	57.9	82
13858	6.0	65	83.0	25	9.5	4	850	21	-0.1	0
13860	5.5	73	-0.1	0	-0.1	0	0	0	-0.1	0
13863	220.0	8	58.5	29	7.8	62	740	29	-0.1	0
13864	6.5	62	-0.1	0	-0.1	0	0	0	-0.1	0
13871	3.0	88	480.0	8	9.2	8	4500	4	953.0	5
13872	9.5	50	390.0	12	8.1	58	2000	12	531.0	14
13873	3.0	88	135.0	21	8.9	12	2250	8	571.0	9
VALUES	26		24		24		24		22	

HEAVY MINERAL VALUES AND RANK IN % FROM THE TOP

SAMPLE	AG PPM	RANK %	AU PPB	RANK %	U-FM PPM	RANK %	W PPM	RANK %	SN PPM	RANK %
VALUES	0		0		0		0		0	

AREA 22 LAKE SITE PFINIC 1978 GEOCHEMICAL SURVEY

STATISTICAL SUMMARY OF ALL SAMPLES

ELEMENT	AR.	MEAN	STD DEV	GECM	MEAN LN	LN DEV	RANGE		SMPLS	<DET LIM
							MIN	MAX		
U-S		46.8	77.5	14.0	5.8	0.2	340.0	26	1	
U-W		94.3	179.0	25.7	4.8	1.6	710.0	24	0	
PH		8.0	0.6	8.0	1.1	7.0	9.5	24	0	
COND		835.0	918.2	623.6	2.0	200.0	4500.0	24	0	
HCO3		193.8	218.3	134.0	2.2	51.8	953.0	22	0	
AG		0.0	0.0	0.0	0.0	0.0	0.0	0	0	
AU		0.0	0.0	0.0	0.0	0.0	0.0	0	0	
U-HM		0.0	0.0	0.0	0.0	0.0	0.0	0	0	
W		0.0	0.0	0.0	0.0	0.0	0.0	0	0	
SN		0.0	0.0	0.0	0.0	0.0	0.0	0	0	

DEVIATIONS FROM MEANS : VALUES AND % FROM TOP OF GROUP

ELEMENT	MEAN-2 DEV		MEAN-1 DEV		MEAN		MEAN+1 DEV		MEAN+2 DEV		
	VALUE	%	VALUE	%	VALUE	%	VALUE	%	VALUE	%	
U-S	-108.1	0	-30.7	0	46.8	35	124.3	8	201.7	8	ARITH
U-S	0.4	96	2.4	92	14.0	46	81.2	15	472.3	0	LOG
U-W	-263.7	0	84.7	0	94.3	21	273.3	12	452.2	8	ARITH
U-W	1.1	100	5.3	96	25.7	42	123.3	21	592.2	4	LOG
PH	6.7	100	7.4	87	8.0	58	8.6	12	9.3	4	ARITH
PH	6.8	100	7.4	87	8.0	58	8.6	12	9.3	4	LOG
COND	-1001.4	0	-83.2	0	835.0	21	1753.2	12	2671.4	4	ARITH
COND	160.9	100	316.7	96	623.6	42	1227.8	12	2417.2	4	LOG
HCC3	-242.7	0	-24.4	0	193.8	18	412.1	14	630.4	5	ARITH
HCC3	27.1	100	60.2	77	134.0	45	298.0	14	662.9	5	LOG
AG	-0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	ARITH
AG	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	LOG
AU	-0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	ARITH
AU	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	LOG
U-HM	-0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	ARITH
U-HM	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	LOG
W	-0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	ARITH
W	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	LOG
SN	-0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	ARITH
SN	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	LOG

APEA 22 LAKE SITE PFINIC 1978 GEOCHEMICAL SURVEY

U.S. HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV FFM	SAMPLES	CUM FR %	
0.50	1	3.85	***** +
1.00	0	3.85	+
1.50	1	7.69	***** +
2.00	0	7.69	+
2.50	0	7.69	+
3.00	1	11.54	***** +
3.50	2	19.23	***** +
4.00	1	23.08	***** +
4.50	0	23.08	+
5.00	0	23.08	+
5.50	1	26.92	***** +
6.00	2	34.62	***** +
7.00	2	42.31	***** +
8.00	0	50.00	+
9.00	0	50.00	+
10.00	1	53.85	***** +
11.00	0	53.85	+
12.50	0	53.85	+
14.00	0	53.85	+
16.00	0	53.85	+
18.00	0	53.85	+
20.00	0	53.85	+
22.50	0	53.85	+
25.00	1	57.69	***** +
28.00	1	61.54	***** +
32.00	0	61.54	+
99999.00	10	100.00	***** +

TOTAL SAMPLES= 26 VALUES < DETECTION = 1 RANGE= 0.2 TO 340.0

ARFA 22 LAKE SITE FRINIC 1978 GEOCHEMICAL SURVEY

U-W HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV PPB	SAMPLES	CUM FR %			
0.20	0	0.00			
1.60	0	0.00			
2.00	1	4.17	+		
2.50	0	4.17	+		
3.20	0	4.17	+		
4.00	0	4.17	+		
5.00	0	4.17	+		
6.30	1	8.33	+		
8.00	2	16.67	+		
10.00	7	45.83	+		
12.50	0	45.83	+		
16.00	0	45.83	+		
20.00	0	45.83	+		
25.00	2	54.17	+		
32.00	4	70.83	+		
40.00	0	70.83	+		
50.00	0	70.83	+		
63.00	1	75.00	+		
80.00	0	75.00	+		
100.00	1	79.17	+		
125.00	0	79.17	+		
160.00	1	83.33	+		
200.00	1	87.50	+		
250.00	0	87.50	+		
310.00	0	87.50	+		
360.00	0	87.50	+		
9999.00	3	100.00	+		

TOTAL SAMPLES= 24 VALUES < DETECTION = 0 RANGE= 1.6 TO 710.0

AREA 22 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY

PH HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV	SAMPLES	CUM FR %	
4.00	0	0.00	
7.00	0	0.00	
7.10	1	4.17	+
7.20	0	4.17	
7.30	0	4.17	
7.40	2	12.50	+
7.50	4	29.17	+
7.60	2	37.50	+
7.70	0	37.50	
7.80	0	37.50	
7.90	1	41.67	+
8.00	0	41.67	
8.10	0	41.67	
8.20	1	45.83	+
8.30	7	75.00	+
8.40	1	79.17	+
8.50	1	83.33	+
8.60	1	87.50	+
8.70	0	87.50	
8.80	0	87.50	
8.90	0	87.50	
9.00	1	91.67	+
9.10	0	91.67	
9.20	0	91.67	
9.30	1	95.83	+
9.40	0	95.83	
9.50	1	100.00	+

TOTAL SAMPLES= 24 VALUES < DETECTION = 0 RANGE= 7.0 TO 9.5

APEA 22 LAKE SITE FINIC 1978 GEOCHEMICAL SURVEY

COND HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV MMFD	SAMPLES	CUM FR %			
1.00	0	0.00			
200.00	0	0.00			
225.00	1	4.17	*****	+	
250.00	0	4.17		+	
280.00	0	4.17		+	
320.00	0	4.17		+	
360.00	0	4.17		+	
400.00	2	12.50	*****	+	
450.00	8	45.83	*****	+	
500.00	0	45.83		+	
560.00	1	50.00	*****		+
630.00	3	62.50	*****		+
710.00	2	70.83	*****		+
800.00	2	79.17	*****		+
900.00	1	83.33	*****		+
1000.00	1	87.50	*****		+
1150.00	0	87.50			+
1400.00	0	87.50			+
1600.00	0	87.50			+
2000.00	0	87.50			+
2500.00	2	95.83	*****		+
3200.00	0	95.83			+
4000.00	0	95.83			+
5000.00	1	100.00	*****		+
6300.00	0	100.00			+
8000.00	0	100.00			+
99999.00	0	100.00			+

TOTAL SAMPLES= 24 VALUES < DETECTION = 0 RANGE= 200.0 TO 4500.0

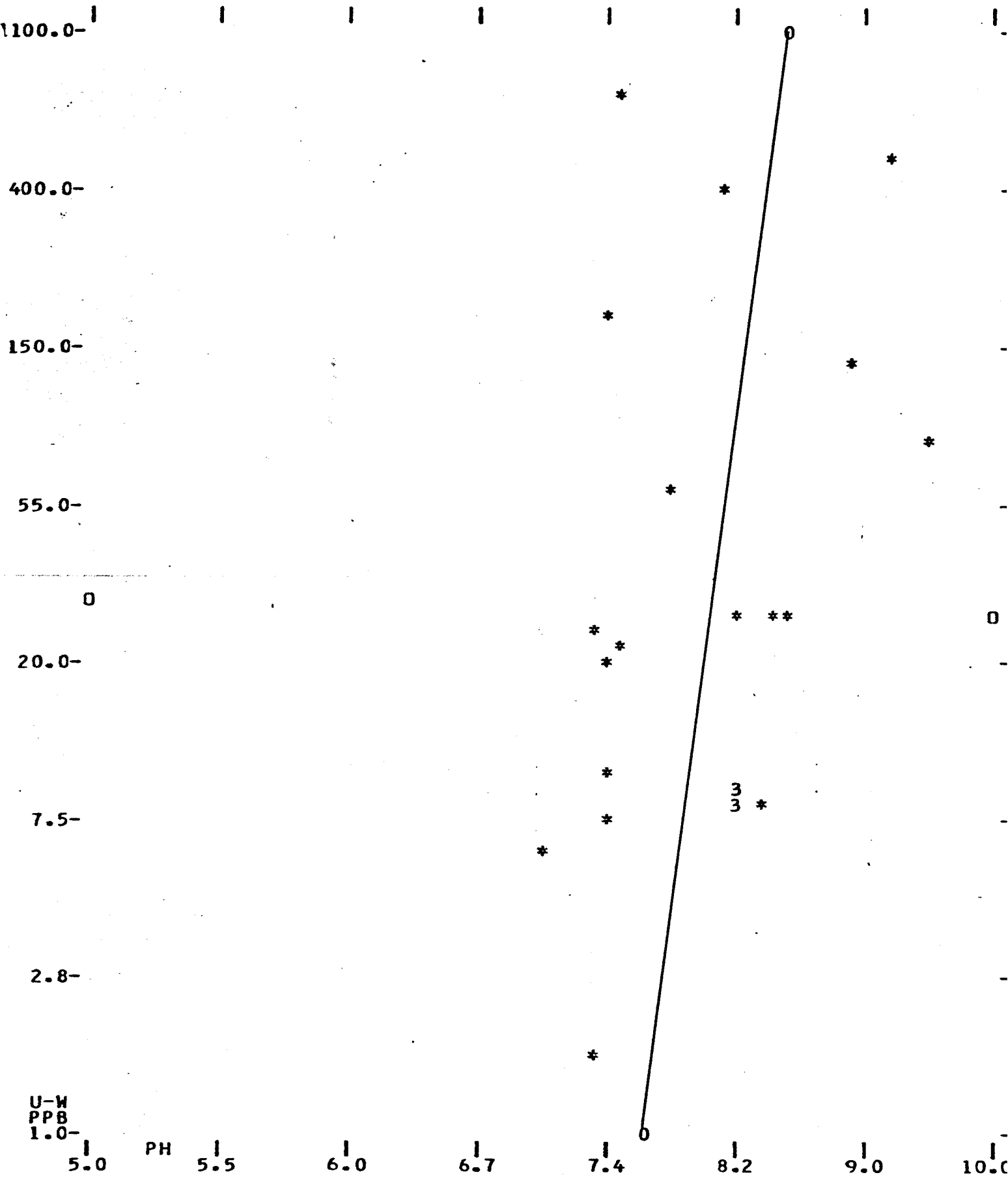
AREA 22 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY

HCO3 HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV MG/L	SAMPLES	CUM FR %	
1.00	0	0.00	
50.00	0	0.00	
56.00	4	18.18	+
63.00	1	22.73	+
71.00	0	22.73	+
80.00	0	22.73	+
90.00	1	27.27	+
100.00	1	31.82	+
112.00	5	54.55	+
125.00	0	54.55	+
140.00	0	54.55	+
160.00	2	63.64	+
180.00	3	77.27	+
200.00	1	81.82	+
225.00	0	81.82	+
250.00	1	86.36	+
280.00	0	86.36	+
320.00	0	86.36	+
360.00	0	86.36	+
400.00	0	86.36	+
450.00	0	86.36	+
500.00	0	86.36	+
560.00	1	90.91	+
630.00	1	95.45	+
710.00	0	95.45	+
800.00	0	95.45	+
9999.00	1	100.00	+

TOTAL SAMPLES= 22 VALUES < DETECTION = 0 RANGE= 51.8 TO 953.0

AREA 22 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF U-W VS PH

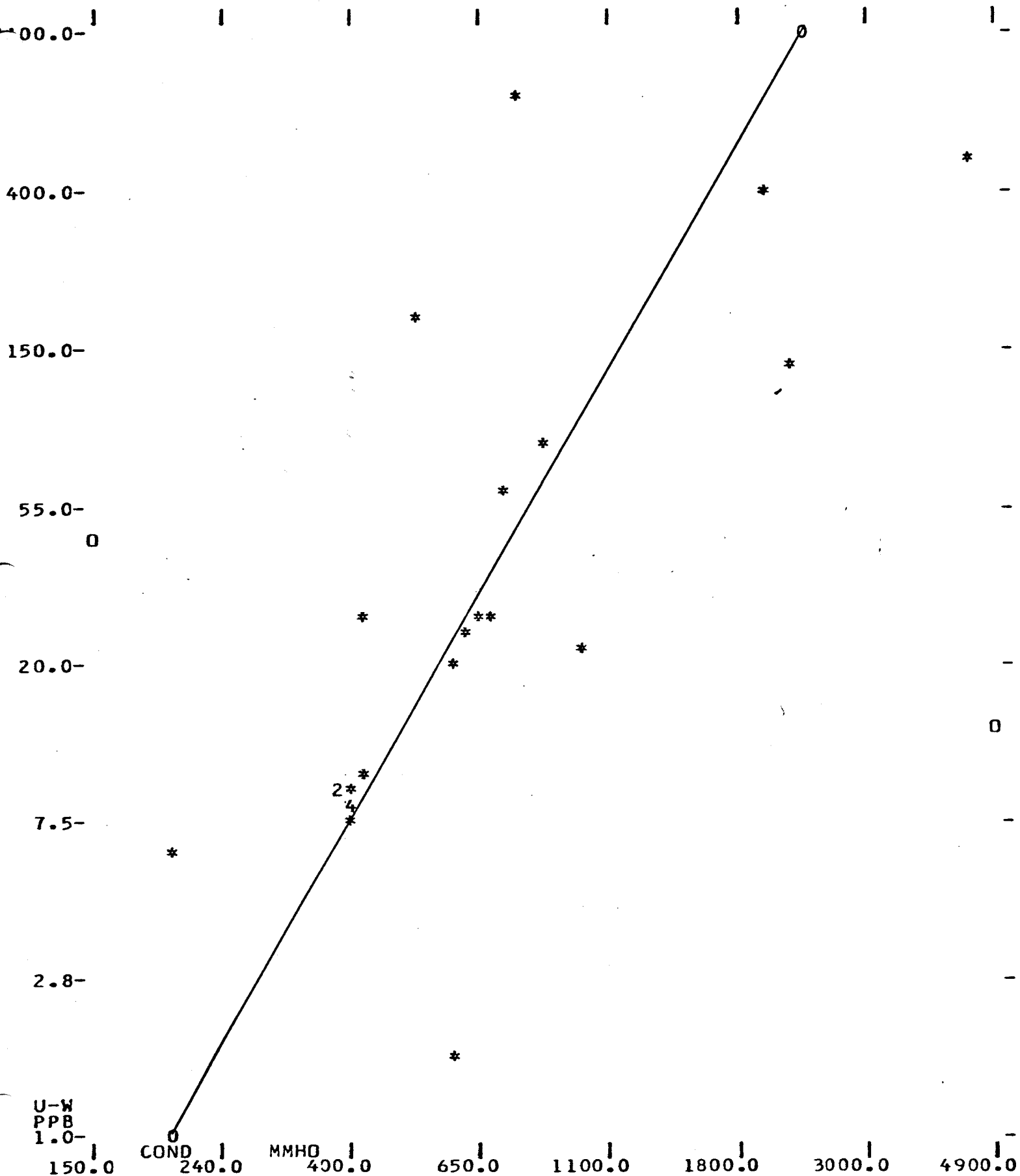


U-W
PPB
1.0-

5.0 PH 5.5 6.0 6.7 7.4 8.2 9.0 10.0

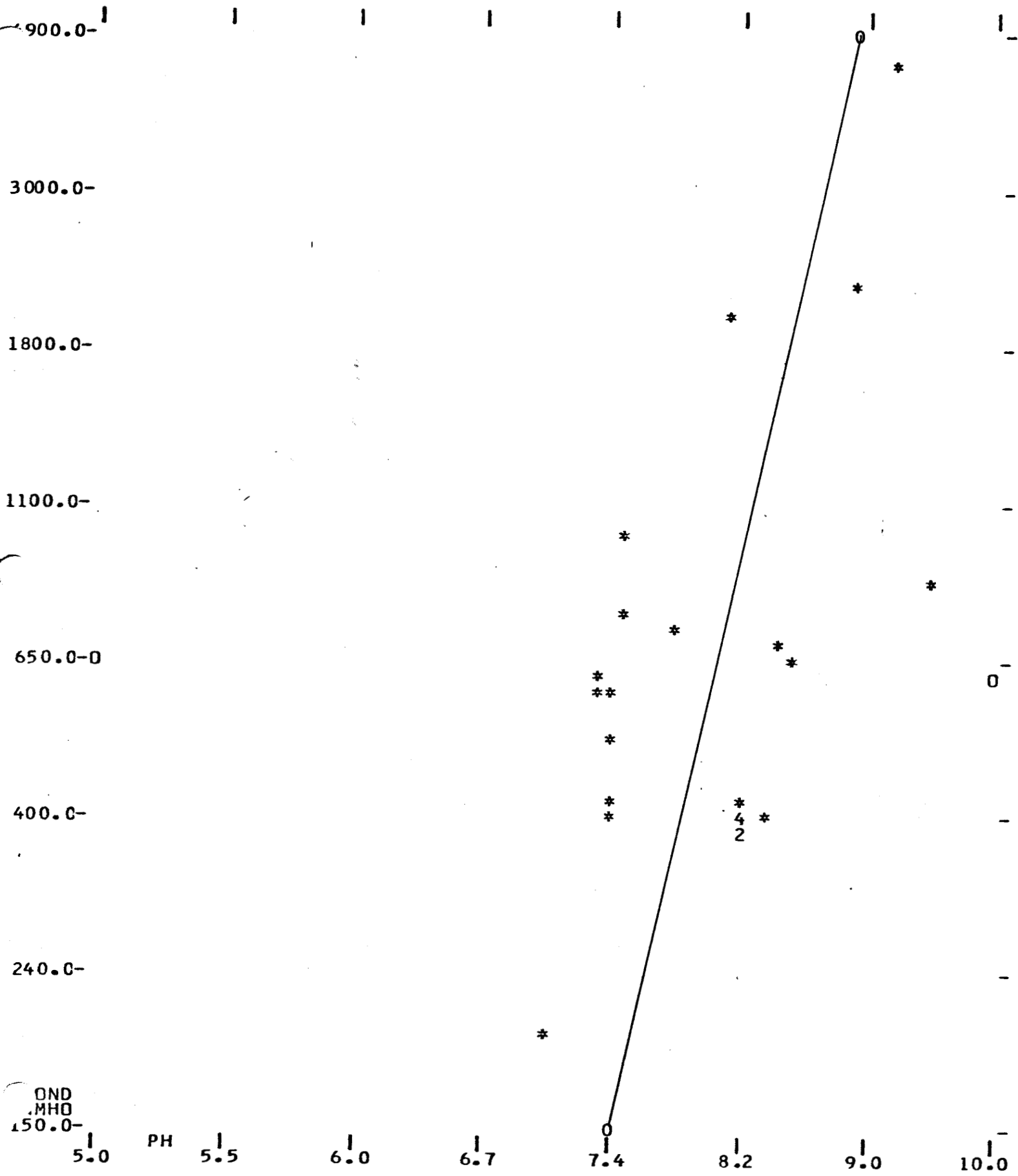
24 SETS USED--VALUES<DETECTION: 0 PH 0 U-W--COR COEF= 0.31--PREDICT 10%

AREA 22 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF U-W VS COND



24 SETS USED--VALUES<DETECTION: 0 COND 0 U-W--COR COEF= 0.74--PREDICT 55%

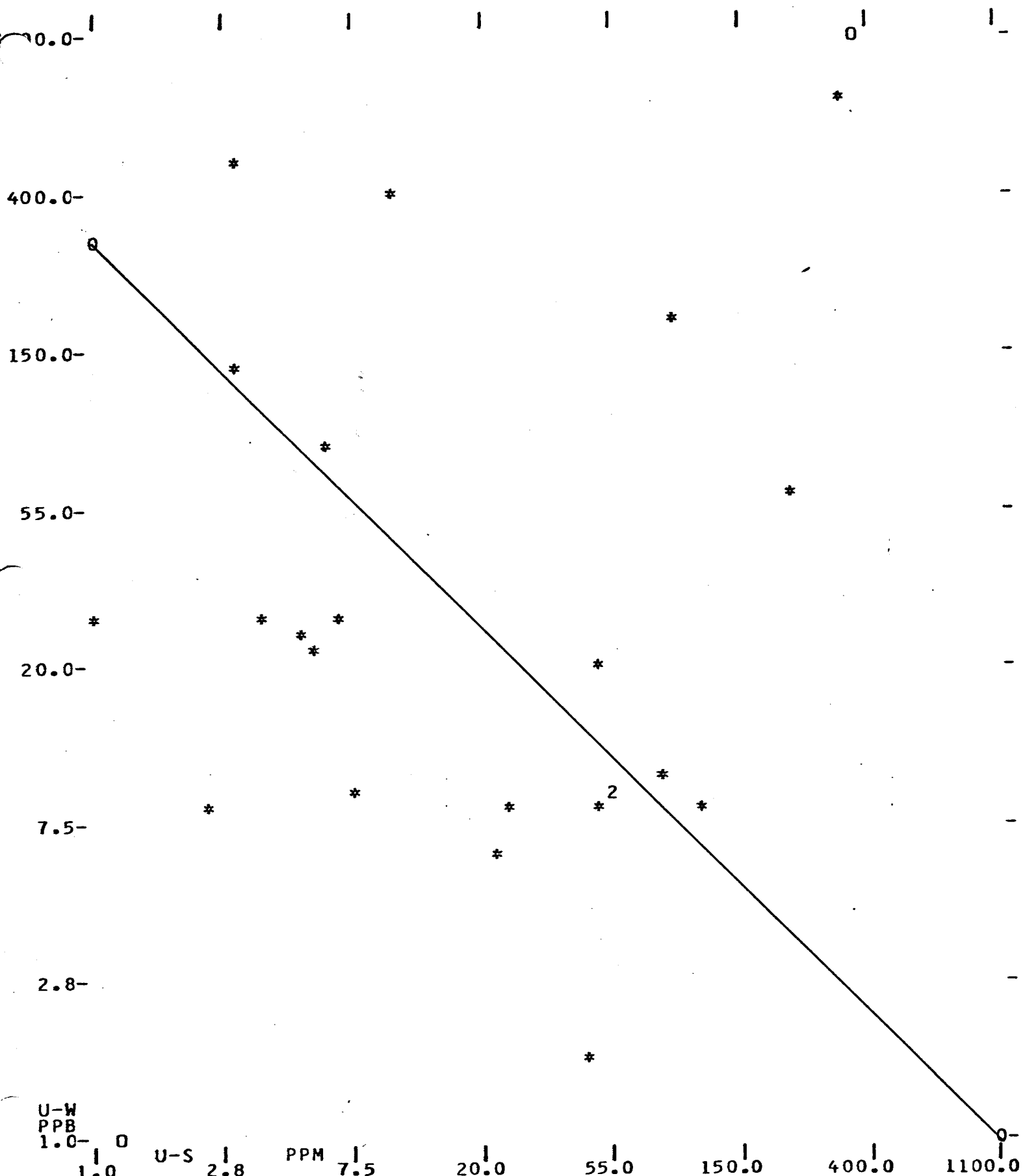
AREA 22 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF COND VS PH



COND
.MHO
150.0-

24 SETS USED--VALUES<DETECTION: 0 PH 0 COND--COR COEF= 0.48--PREDICT 23%

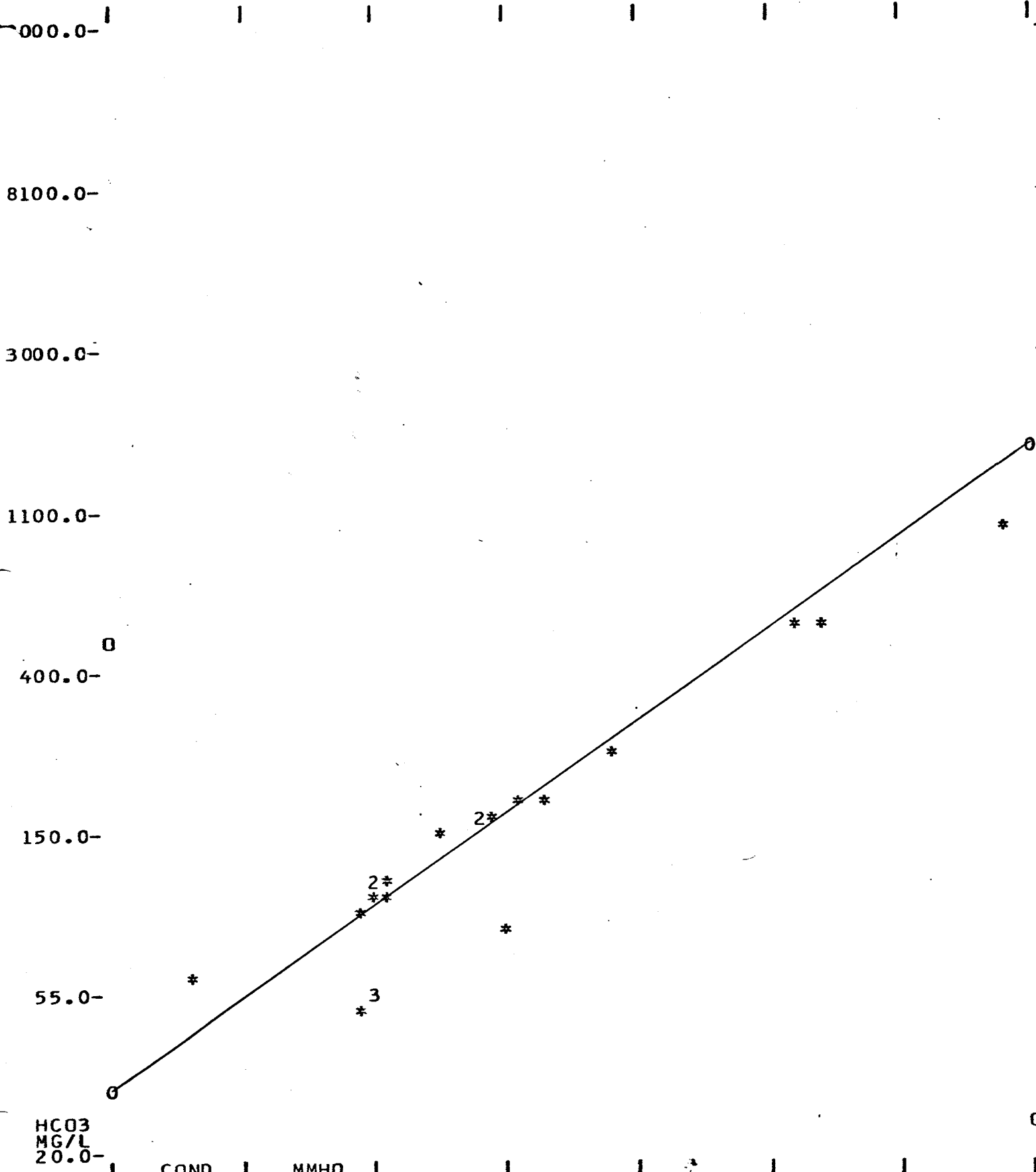
AREA 22 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF U-W VS U-S



U-W
PPB
1.0- 0
1.0 U-S 2.8 PPM 7.5 20.0 55.0 150.0 400.0 1100.0

23 SETS USED--VALUES<DETECTION: 1 U-S 0 U-W--COR COEF=-0.07--PREDICT 0%

AREA 22 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF HCO3 VS COND



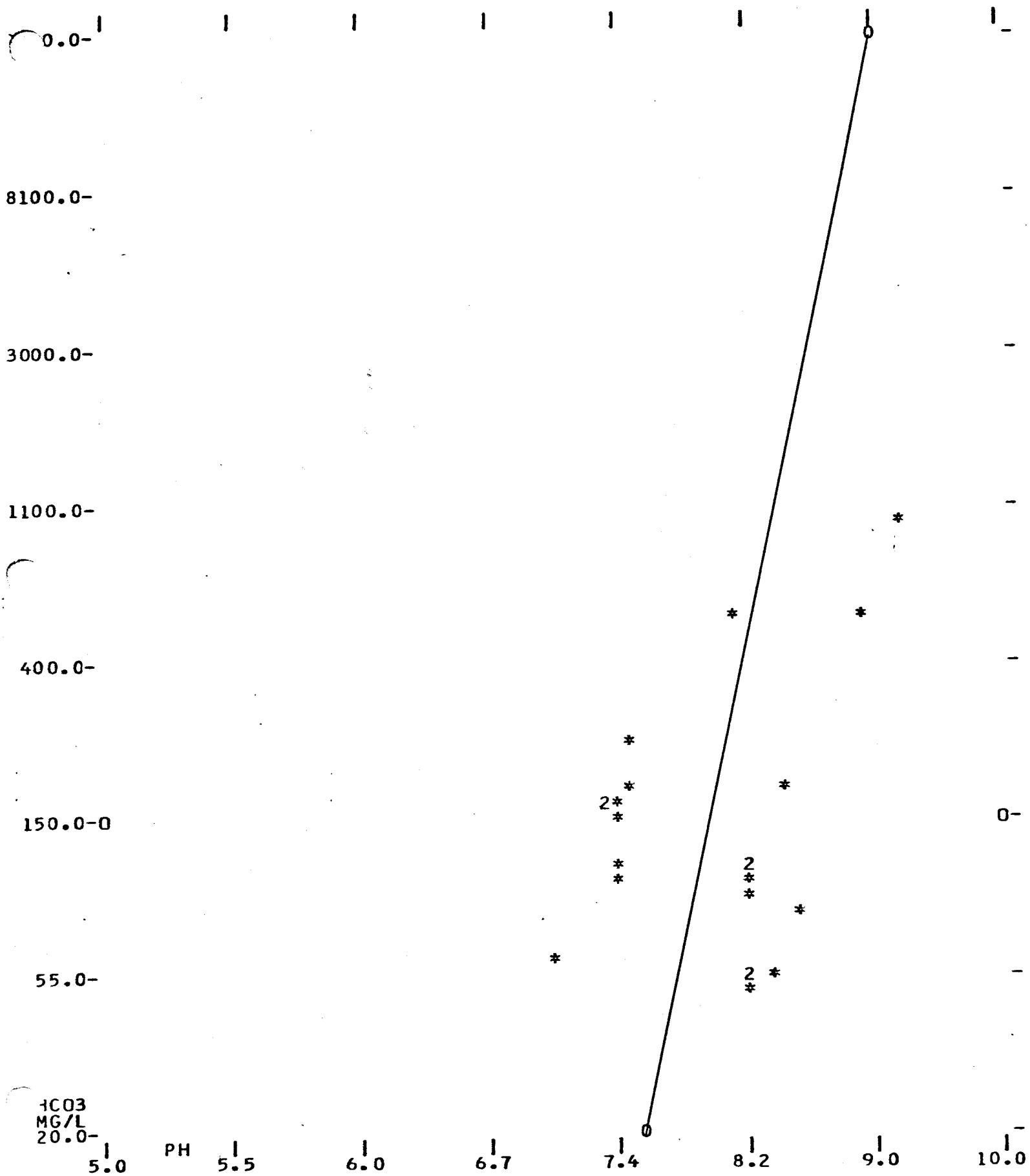
HCO3
MG/L
20.0-

COND MMHO

150.0 240.0 400.0 650.0 1100.0 1800.0 3000.0 4900.0

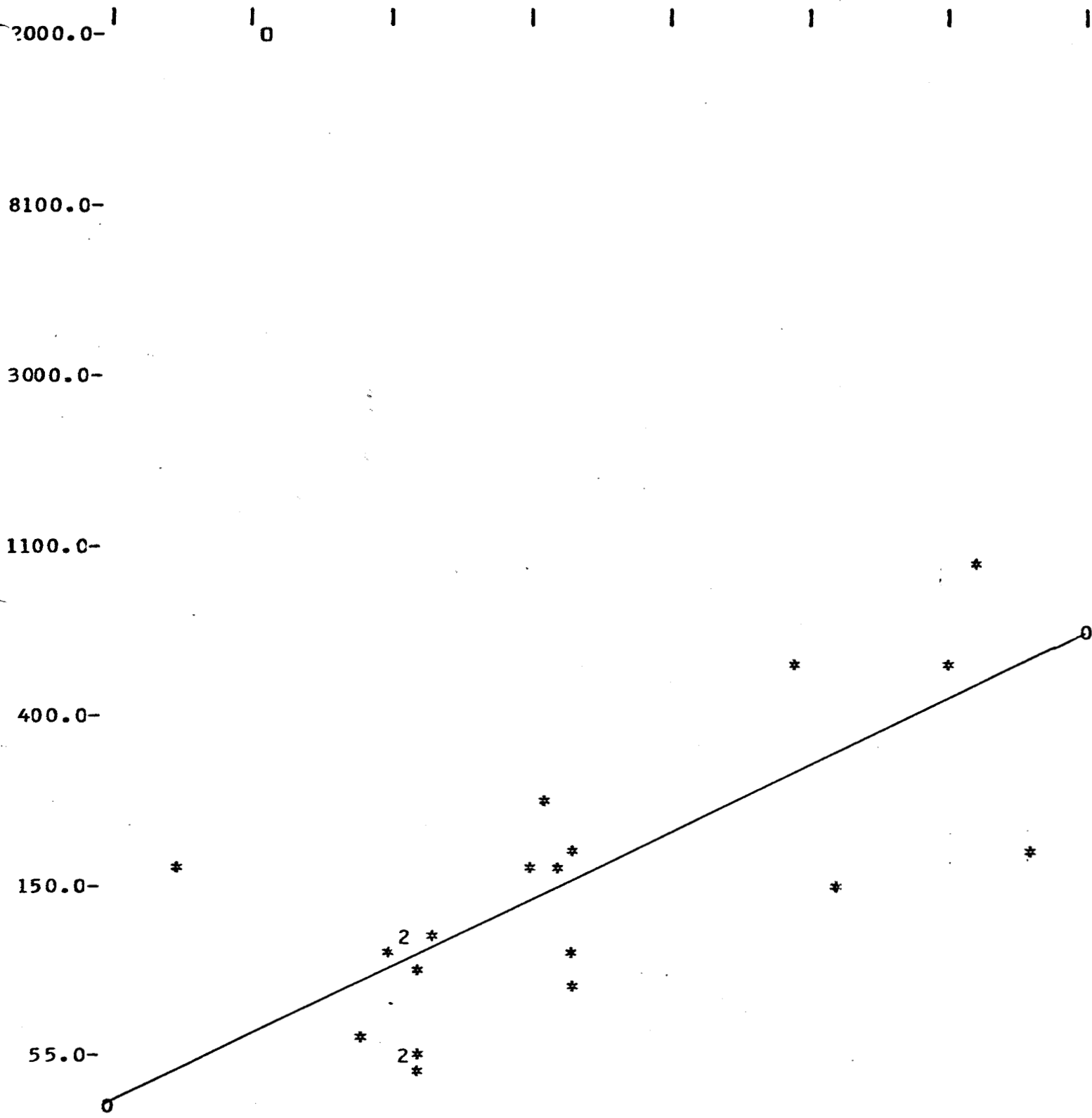
22 SETS USED--VALUES<DETECTION: 0 COND 0 HCO3--COR COEF= 0.93--PREDICT 87%

AREA 22 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF HCO3 VS PH



22 SETS USED--VALUES<DETECTION: 0 PH 0 HCO3--COR COEF= 0.27--PREDICT 7%

AREA 22 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF HCO3 VS U-W

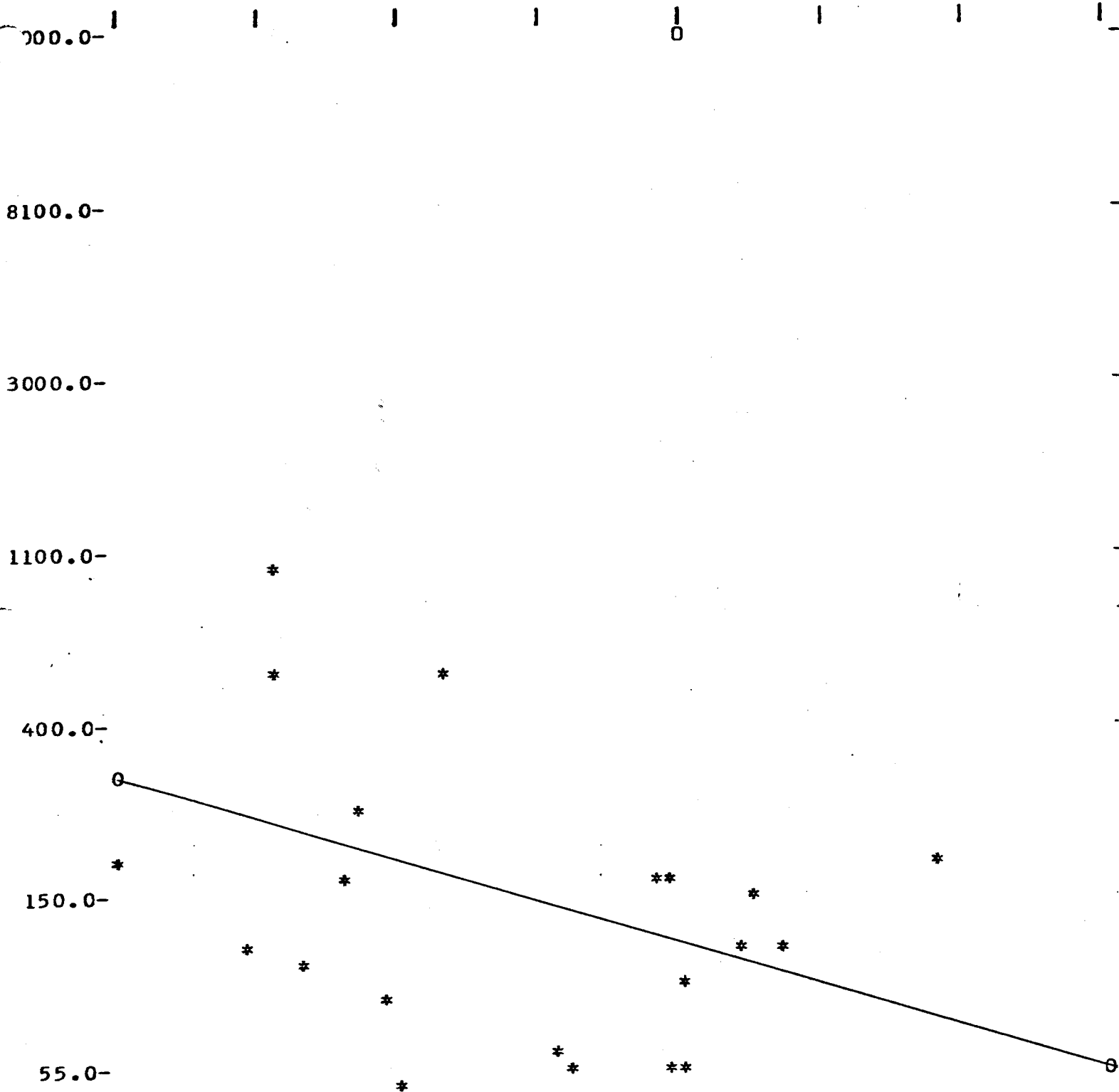


HCO3
MG/L
20.0-

1.0 U-W 2.8 PPB 7.5 20.0 55.0 150.0 400.0 1100.0

22 SETS USED--VALUES<DETECTION: 0 U-W 0 HCO3--COR COEF= 0.72--PREDICT 52%

AREA 22 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF HCO3 VS U-S



HCO3
MG/L
20.0-
1.0 U-S 2.8 PPM 7.5 0 20.0 55.0 150.0 400.0 1100.0
21 SETS USED--VALUES<DETECTION: 1 U-S 0 HCO3--COR COEF=-0.34--PREDICT 119

APPENDIX 3

GUIDE TO THE STATISTICAL REPORT

1. LIST OF VALUES AND RANK.

The Sample Number is followed by the measured analytical value and % Rank for each element or parameter. For measured values below the detection limit, the assigned value is 1/2 of the detection limit. A - sign indicates that no analytical value is available. The number of samples with values for a given element is given at the end of the table.

The Rank specifies the position of the corresponding measured value in a sequence from the highest to the lowest values; it is given in % of the number of values for that element to the nearest integer. For example if there are 55 samples, all values below detection are ranked 100 (there are no lower values). The highest value is ranked 2 (1 sample is 2% of 55). Missing values are given 0 rank.

2. STATISTICAL SUMMARY TABLE.

For Element E with N values

a) AR (Arithmetic) MEAN: $MA = \bar{E} = \frac{1}{N} \sum E$

b) STD DEV (Standard Deviation): $SD = \sqrt{\frac{1}{N-1} \sum (E - \bar{E})^2}$

c) GEOM (Geometric) MEAN: $MG = \text{Exp} \left[\frac{1}{N} \sum \ln (E) \right]$

d) LN DEV (Deviation of the Logarithms):

$$LD = \text{Exp} \left[\sqrt{\frac{1}{N-1} \sum [(\ln(E) - \ln(MG))]^2} \right]$$

In the formulas ln indicates the Natural Logarithm, Exp the exponential function.

The Geometric Mean and Logarithmic Deviation are expressed in the same measuring units as the corresponding arithmetic parameters.

- e) The RANGE gives the Minimum and Maximum values
- f) SMPLS is the total number of samples with values for the element (including below detection)
- g) < DET LIM indicates how many of the sample values are below the detection limit.

3. DEVIATIONS FROM THE MEANS.

The table gives the VALUE of the MEAN and at 1 and 2 deviations below and above the mean. The % indicates the RANK of such value, or what percentage of the measured values would be above it. The deviations are given for both the Arithmetic (ARITH) and Logarithmic (LOG) parameters. All Values are expressed in the same measuring units.

Example. Given MA = 10.0 ppm
 SD = 15.0 ppm
 MG = 7.0 ln (MG) = 1.95
 LD = 2.0 ln (LD) = 0.69

For Mean + 2 DEV

ARITH - VALUE is $10 + 2 \times 15 = 40$ ppm

LOG - VALUE is $\text{Exp} [\ln (\text{MG}) + 2 \times \ln (\text{LD})] = \text{Exp} (3.33) = 28$ ppm

The LOG value could also be computed directly in true units:

$$V = \text{MG} \times (\text{LD})^2 = 7 \times 4 = 28$$

4. HISTOGRAM AND CUMULATIVE FREQUENCY.

The INTERVAL limits values, the number of SAMPLES in each interval and the Cumulative Frequency are printed. The scaled Bar Diagram (****) illustrate the number of samples in the interval.

The + plots the Cumulative Frequency Curve, rising to 100% at the right. The Number of Samples, the number below the detection limit and the Minimum and Maximum values are shown in the last line.

5. CORRELATION COEFFICIENTS.

The table consists of cells for pairs of elements. In each cell the first value is the Linear Correlation Coefficient for the pair. The second line is the range of the level of significance; it indicates the % probability that the correlation is due to causes other than random measuring errors and is computed by a modified Student-t test at the 50, 60, 80, 90, 95 and 99% levels.

A 0-50 range means that there is better than 50% chance that the correlation is caused by random errors.

A 99-** range means that there is less than 1% probability that errors cause the correlation, or that there is better than 99% certainty that the coefficient reflects the true behaviour of the data.

The third value in the cell indicates the number of samples in the pair, including values below detection.

For N pairs of elements X and Y with means \bar{X} and \bar{Y} and deviations sX and sY, the correlation coefficient R is

$$R = \frac{\sum XY - N \bar{X} \bar{Y}}{N \cdot sX \cdot sY}$$

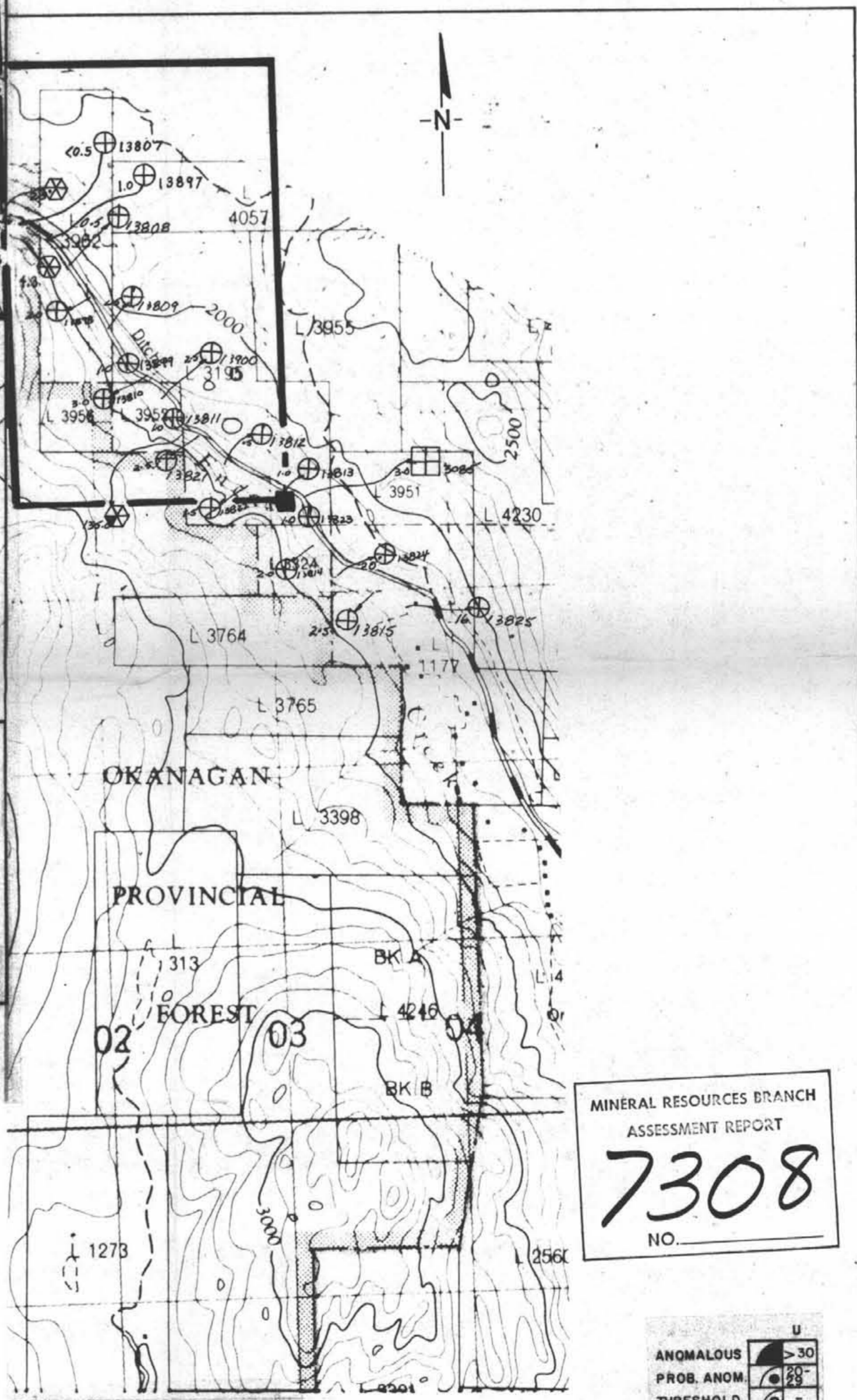
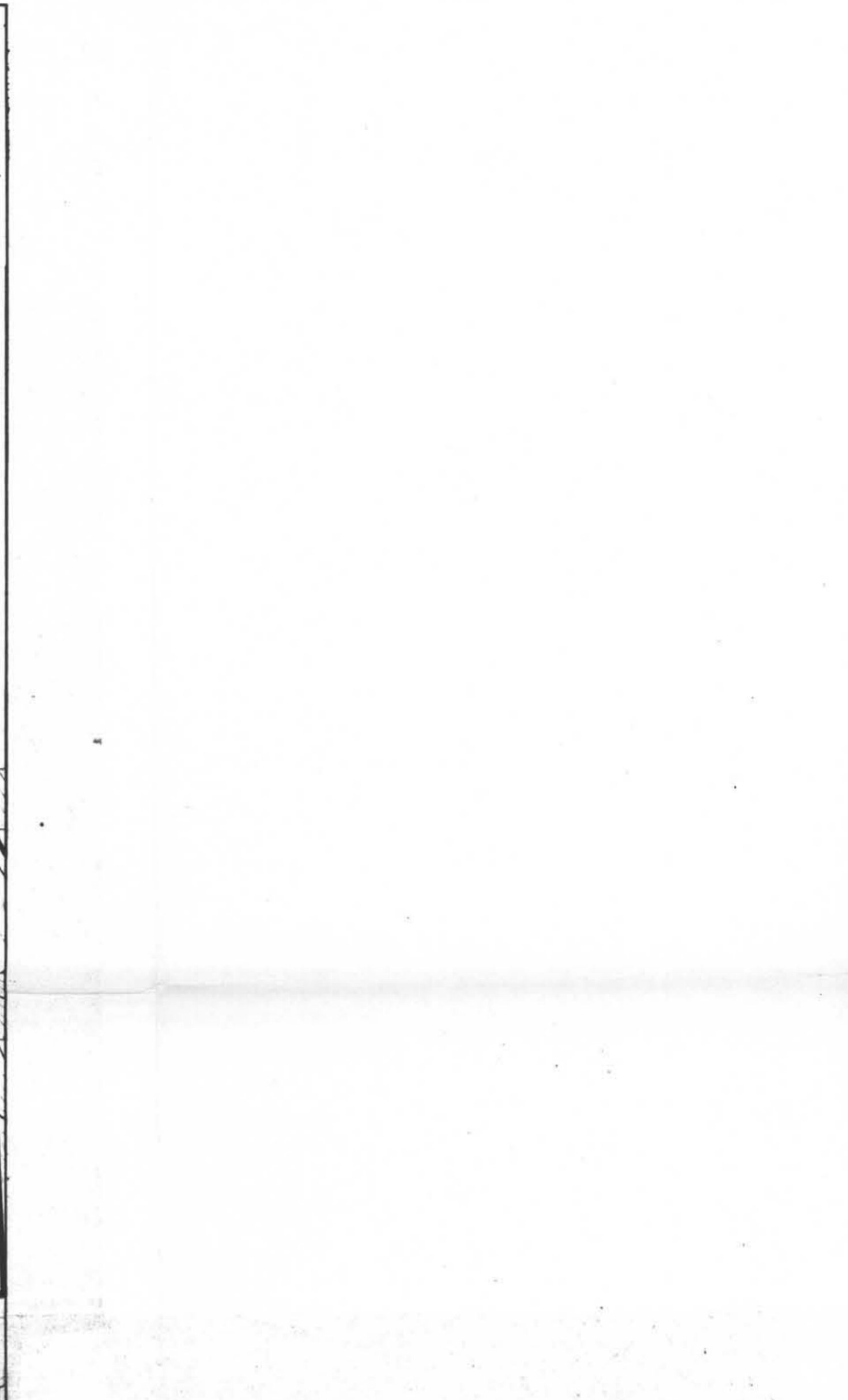
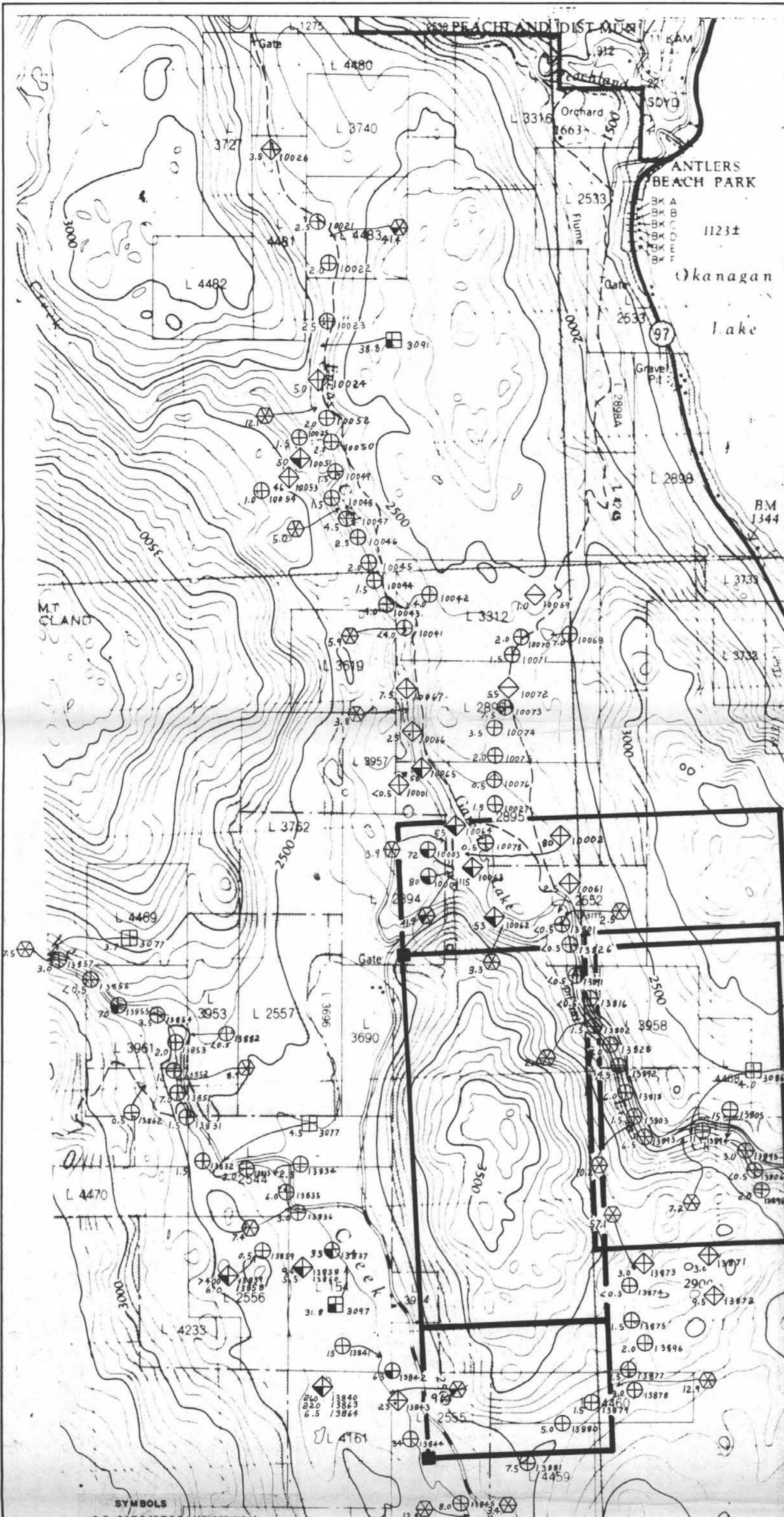
6. SCATTERGRAM AND LINEAR REGRESSION.

For selected pairs of elements the values are plotted in the scattergram using logarithmic scales on both axes; the labels are in true measuring units. An * indicates one occurrence of a pair of values, a 2 is for two pairs at the same position, 3 for three pairs, etc. up to 9. For ten or more pairs a + is used.

The linear regression is computed assuming errors in both elements, thus the fit minimizes the sum of the distances from the occurrences to the regression line.

Two possible fits result, the more logical being shown by the regression line.

The last line in the page specifies the number of sets of pairs plotted, the additional number of values for each element below the detection limit (not plotted), the linear correlation coefficient for the plotted values and the percentage of the values which can be predicted from the correlation.



SYMBOLS

C.O. 1978 (STREAMS, SPRINGS)
 ppmU Sample N°

C.O. 1978 (LAKES, SWAMPS)
 ppmU Sample N°

G.S.C. CURPJ 1976
 ppmU Sample N°

C.O. PRINCETON/NICKY 1973, 1974
 ppmU

ANOMALOUS PROB. ANOM THRESHOLD

U	> 30
U	20
U	10
U	-

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 MINERALS DIVISION

PROJECT PRINIC
 SOUTHERN BRITISH COLUMBIA
 AREA 22, 39, 40

SEDIMENT GEOCHEMISTRY

ENEAS CLAIMS

Scale 1:25,000
 September 1978 N.T.S. 82-E/12 **PLAN 9A**

MINERAL RESOURCES BRANCH
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7308
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ANOMALOUS PROB. ANOM THRESHOLD

U	> 30
U	20
U	10
U	-

SYMBOLS

C.O. 1978 (STREAMS, SPRINGS)
 ppmU Sample N°

C.O. 1978 (LAKES, SWAMPS)
 ppmU Sample N°

G.S.C. CURPJ 1976
 ppmU Sample N°

C.O. PRINCETON/NICKY 1973, 1974
 ppmU

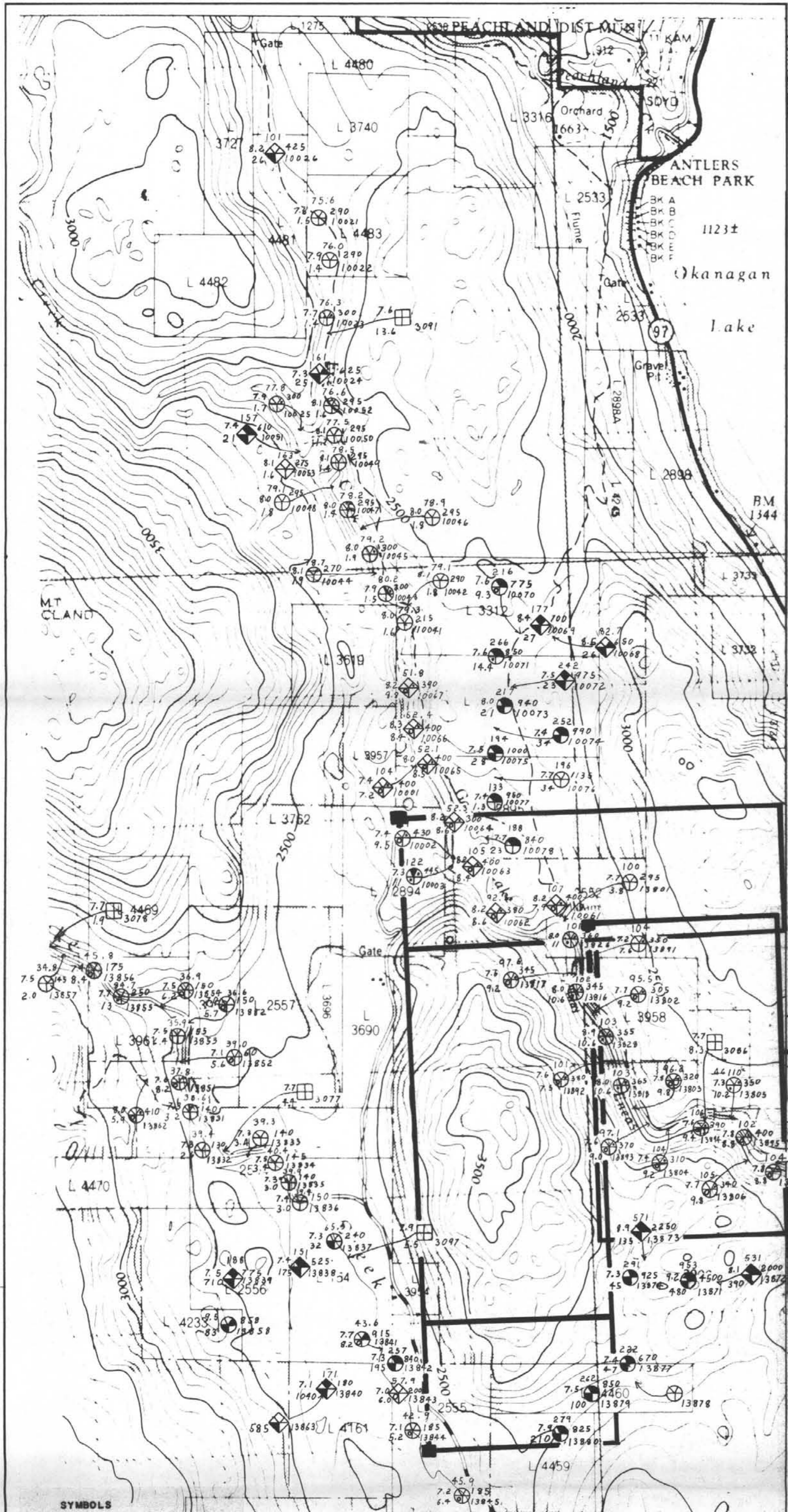
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PROJECT PRINIC
 SOUTHERN BRITISH COLUMBIA
 AREA 22

SEDIMENT GEOCHEMISTRY

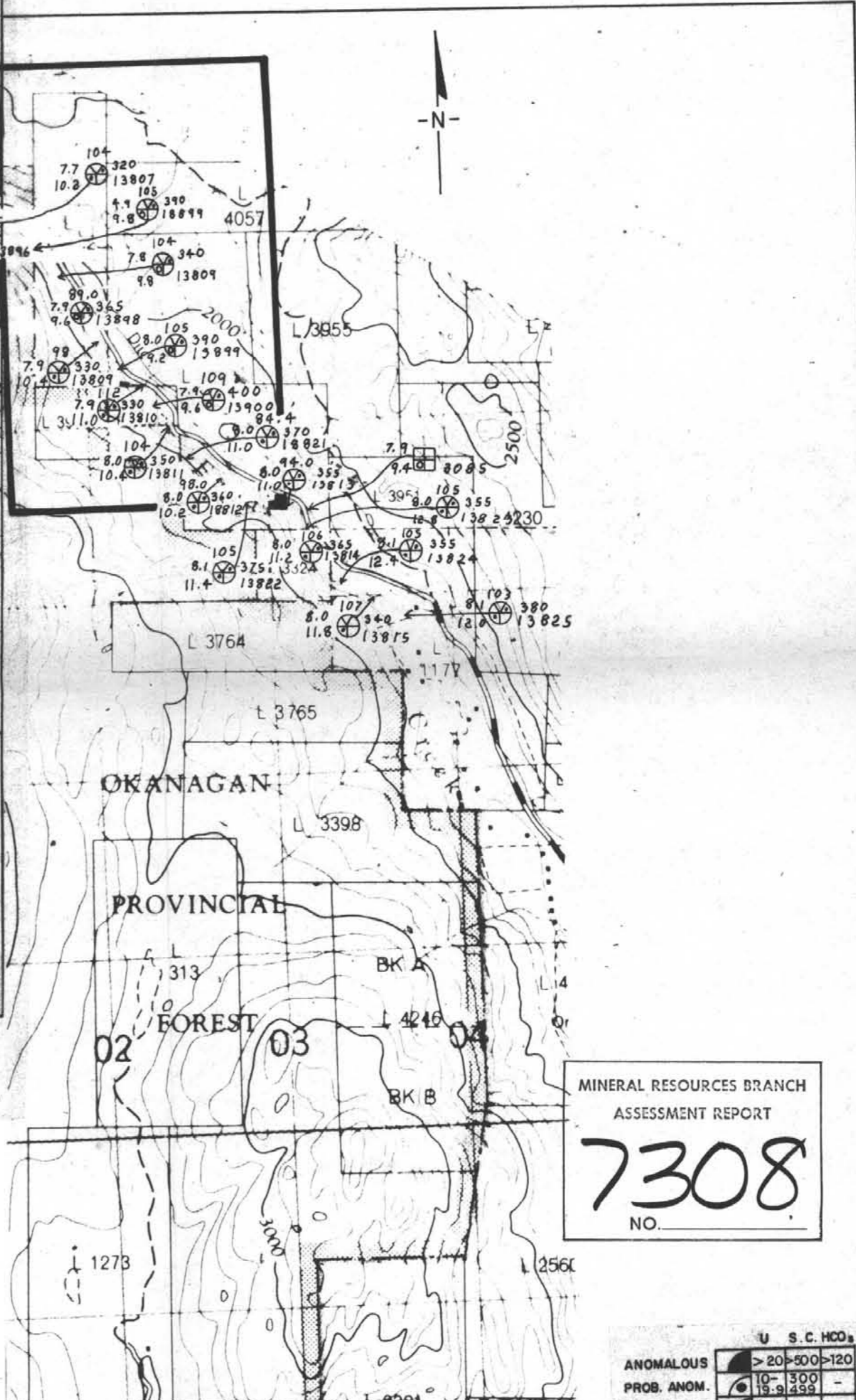
ENEAS CLAIMS

Scale 1:25,000
 September 1978 N.T.S. 82-E/12 **PLAN 8A**



SYMBOLS
C.O. 1978 (STREAMS, SPRINGS)
 pH S.C. pH HCO₃ S.C.
 ppbU Sample N° ppbU Sample N°
C.O. 1978 (LAKES, SWAMPS)
 pH S.C. pH HCO₃ S.C.
 ppbU Sample N° ppbU Sample N°
G.S.C. EURPJ 1978
 pH HCO₃ in mg/l
 ppbU Sample N° S.C. in µmhos

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 AREA 22, 39, 40
WATER GEOCHEMISTRY
ENEAS CLAIMS
 Scale 1:25,000
 September 1978 N.T.S. 82-E/12 PLAN 9B

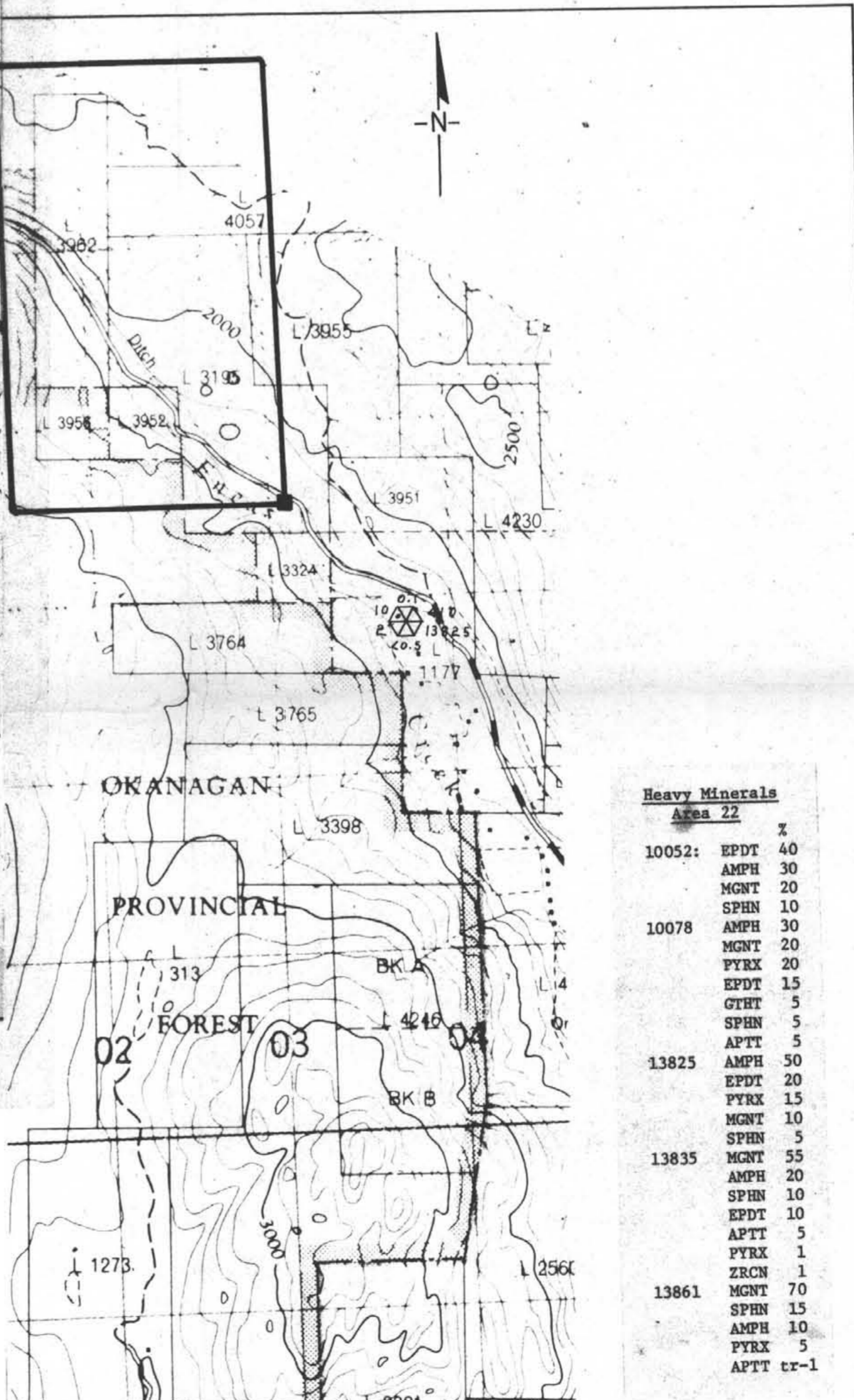
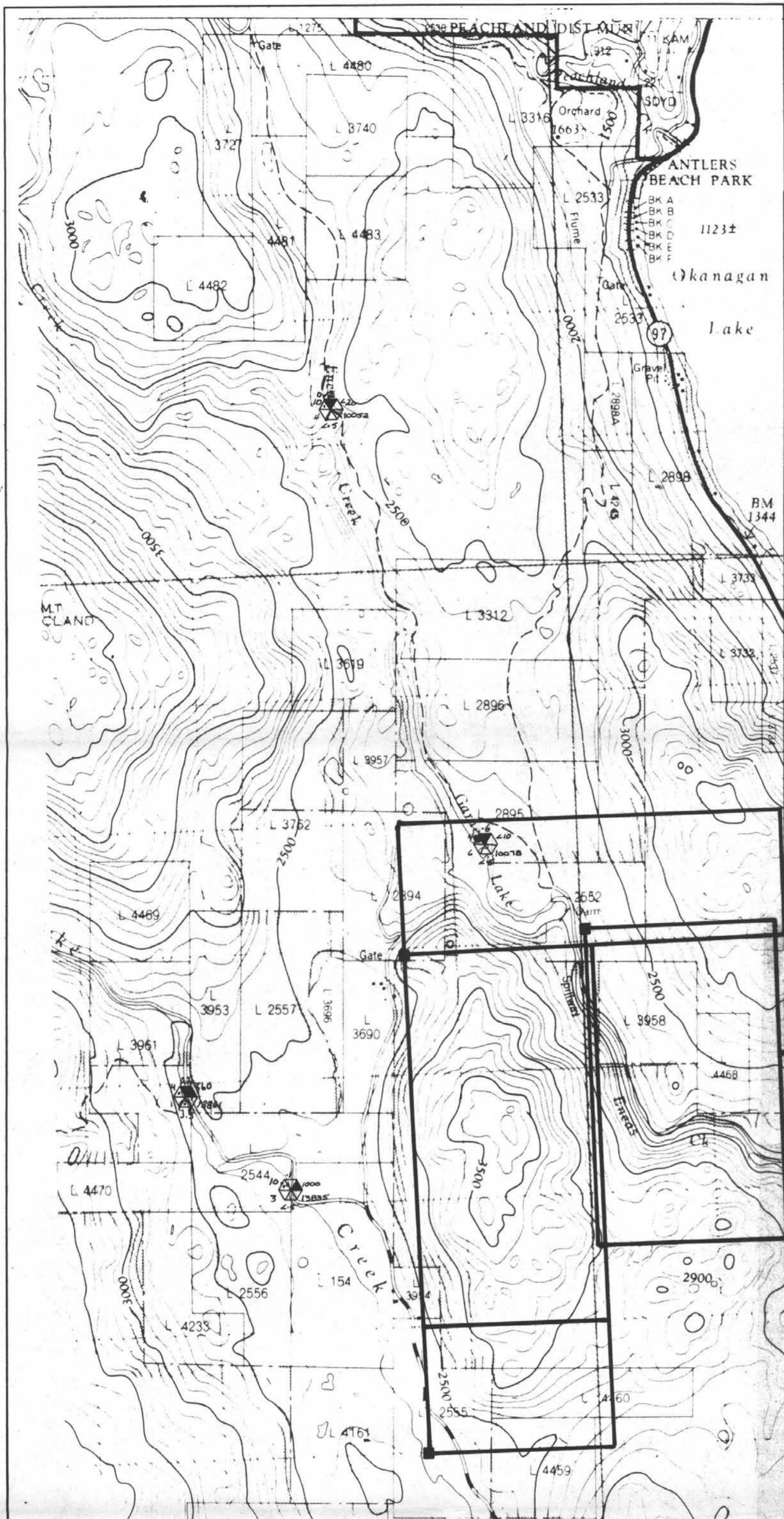


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 NO.

	U	S.C. HCO ₃
ANOMALOUS	20-500	120
PROB. ANOM.	10-300	-
THRESHOLD	5-99	-

SYMBOLS
C.O. 1978 (STREAMS, SPRINGS)
 pH S.C. pH HCO₃ S.C.
 ppbU Sample N° ppbU Sample N°
C.O. 1978 (LAKES, SWAMPS)
 pH S.C. pH HCO₃ S.C.
 ppbU Sample N° ppbU Sample N°
G.S.C. EURPJ 1978
 pH HCO₃ in mg/l
 ppbU Sample N° S.C. in µmhos

CANADIAN OCCIDENTAL PETROLEUM LTD.
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PROJECT PRINIC
 SOUTHERN BRITISH COLUMBIA
 AREA 22
WATER GEOCHEMISTRY
ENEAS CLAIMS
 Scale 1:25,000
 September 1978 N.T.S. 82-E/12 PLAN 8B



SYMBOLS
C.O. 1978

ppm Ag
ppm W
ppm Sn
ppm U

ppb Au
Sample No

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MINERALS DIVISION

PROJECT PRINIC
SOUTHERN BRITISH COLUMBIA
AREA 22, 39, 40

HEAVY MINERAL GEOCHEMISTRY

ENEAS CLAIMS

Scale 1:25,000
September 1978 N.T.S. 82-E/12 PLAN 9C

Heavy Minerals
Area 22

Sample No	Element	%
10052:	EPDT	40
	AMPH	30
	MGNT	20
	SPHN	10
10078	AMPH	30
	MGNT	20
	PYRX	20
	EPDT	15
13825	GTHT	5
	SPHN	5
	AMPH	50
	EPDT	20
13835	PYRX	15
	MGNT	10
	SPHN	5
	MGNT	55
13861	AMPH	20
	SPHN	10
	EPDT	10
	APTT	5
13861	PYRX	1
	ZRCN	1
	MGNT	70
	SPHN	15
13861	AMPH	10
	PYRX	5
	APTT	tr-1

MINERAL RESOURCES BRANCH
ASSESSMENT

7308

SYMBOLS
C.O. 1978

ppm Ag
ppm W
ppm Sn
ppm U

ppb Au
Sample No

	U	Sn	W	Ag	Au
ANOMALOUS	-	-	>10	0-2	500
PROB. ANOM.	3-5	4-10	-	-	-
THRESHOLD	3-5	4-10	-	-	-

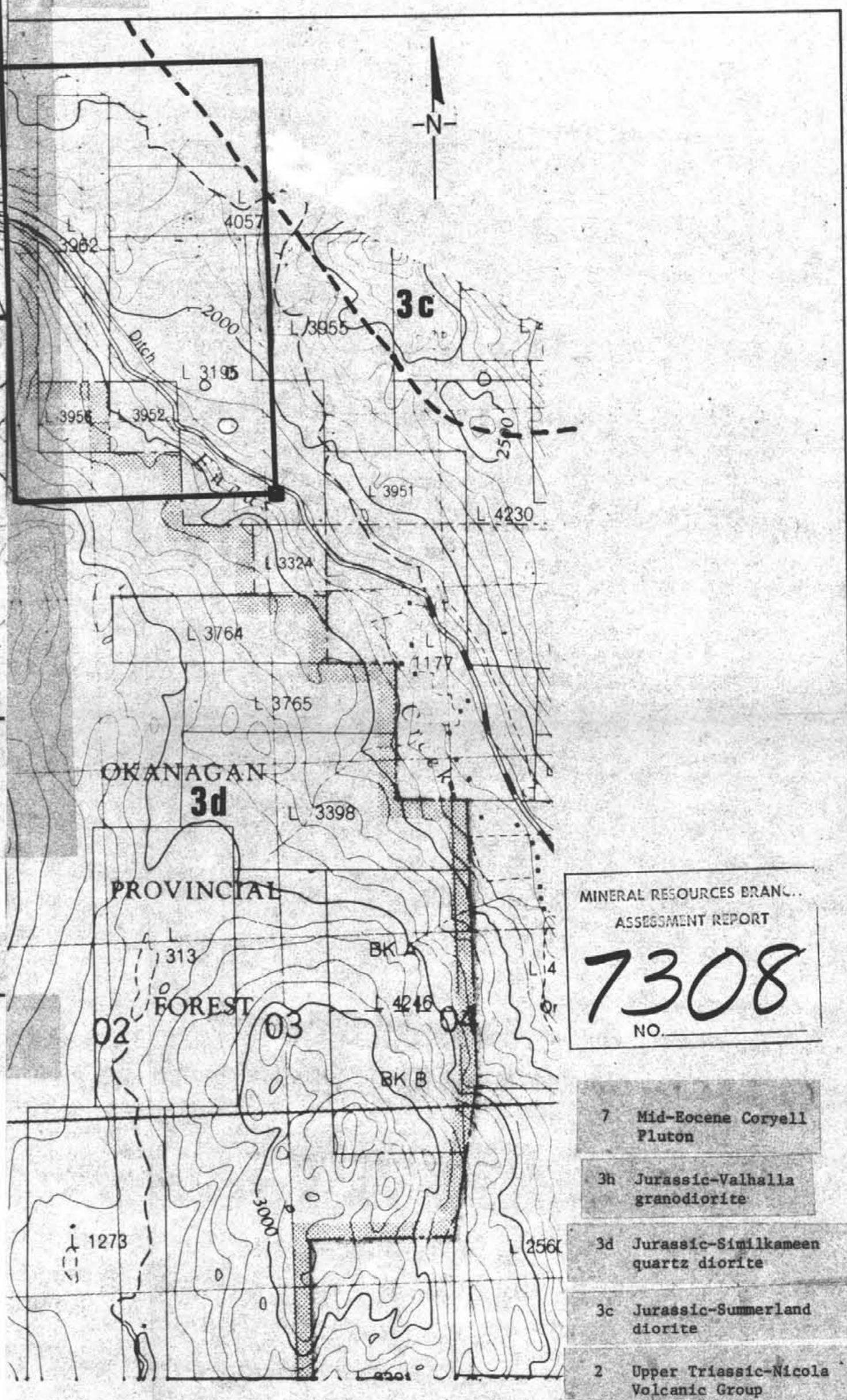
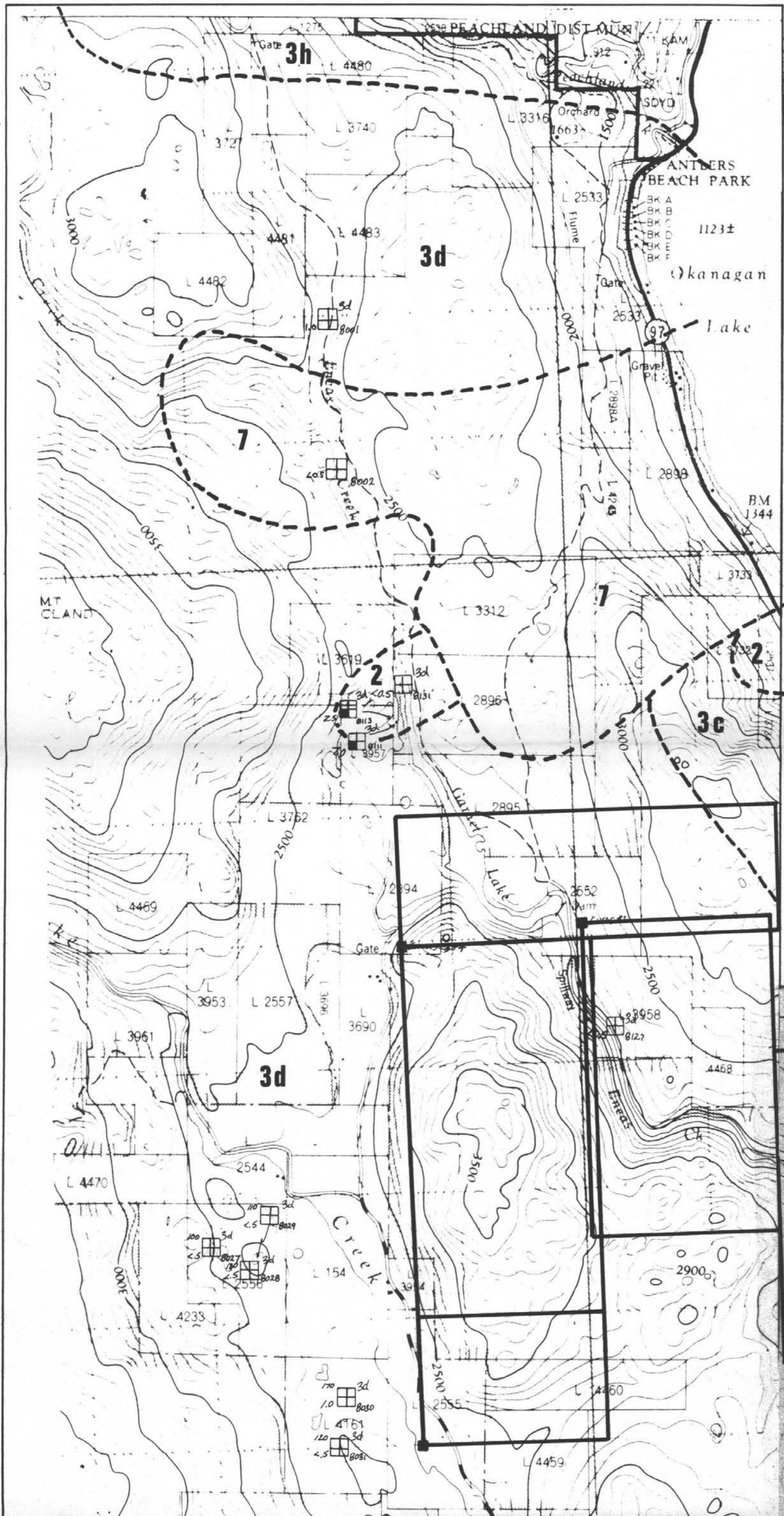
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SOUTHERN BRITISH COLUMBIA
AREA 22

HEAVY MINERAL GEOCHEMISTRY

ENEAS CLAIMS

Scale 1:25,000
September 1978 N.T.S. 82-E/12 PLAN 8C



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- 7 Mid-Eocene Coryell Pluton
- 3h Jurassic-Valhalla granodiorite
- 3d Jurassic-Similkameen quartz diorite
- 3c Jurassic-Summerland diorite
- 2 Upper Triassic-Nicola Volcanic Group

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PROJECT PRINIC
SOUTHERN BRITISH COLUMBIA
AREA 22, 39, 40
GEOLOGY & ROCK GEOCHEMISTRY
ENEAS CLAIMS
Scale 1:25,000
September 1978 N.T.S. 82-E/12 **PLAN 9D**

SYMBOLS
C.O. 1978
Scintillometer (cps) Rock Unit
ppmU Sample No.
U Scint.
ANOMALOUS >2.5 -
PROB. ANOM. - -
THRESHOLD 6 - -

SYMBOLS
C.O. 1978
Scintillometer (cps) Rock Unit
ppmU Sample No.
U Scint.
ANOMALOUS >2.5 -
PROB. ANOM. - -
THRESHOLD 6 - -

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION
PROJECT PRINIC
SOUTHERN BRITISH COLUMBIA
AREA 22
GEOLOGY & ROCK GEOCHEMISTRY
ENEAS CLAIMS
Scale 1:25,000
September 1978 N.T.S. 82-E/12 **PLAN 8D**