CANADIAN OCCIDENTAL PETROLEUM LTD.

MINERALS DIVISION

GEOLOGY AND GEOCHEMISTRY OF THE BALD CLAIM GROUP

Claim Sheet 82-L-4-E
Lat.: 50°04'N
Long.: 119°33'W

Claims:

BALD #1	12 Units
BALD #2	20 Units
BALD #3	15 Units
BALD #4	15 units

Vernon Mining Division
British Columbia

7332

by:

J.R. Hill, B.Sc.

Work Completed During the Period July 25-26, 1978

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PLANS ACCOMPANYING REPORT

17A: Sediment Geochemistry)
17B: Water Geochemistry)
17C: Heavy Mineral Geochemistry) in back pocket
17D: Geology & Rock Geochemistry)

Summary

The BALD Claim group is underlain by Jurassic Similkameen quartz diorite which to the west is unconformably overlain by Upper Eocene volcanics and clastic sediments, a small outcrop of Eocene volcanics was also found to the northeast.

The original Canadian Oxy survey found stream sediments with up to 84 ppm U and a G.S.C. water sample contained 1.6 ppb U.

The detailed survey replicated these results with stream sediments having up to 200 ppm U in the eastern creek and up to 105 ppm U in the northwestern creek. Stream waters are also anomalous being up to 9.5 ppb in the eastern creek and 2.5 ppb in the northwest creek. Heavy mineral samples have values of 2.5 and 3.0 ppm U, these relatively low values suggest that mechanical dispersion is not that important in the BALD Claims.

Thus detailed scintillometer surveys, geological mapping, rock and soil geochemical surveys should be carried out over both the Jurassic quartz diorite and the Eocene volcanic areas.

Location and Access

The areas are located on the west side of the Okanagan Valley 20 km north of Kelowna. The sampling area covers 23 km^2 and includes the headwaters of tributaries of Stewart Creek flowing north and Bald Range Creek flowing south. They are located on NTS map sheet 82L/4E.

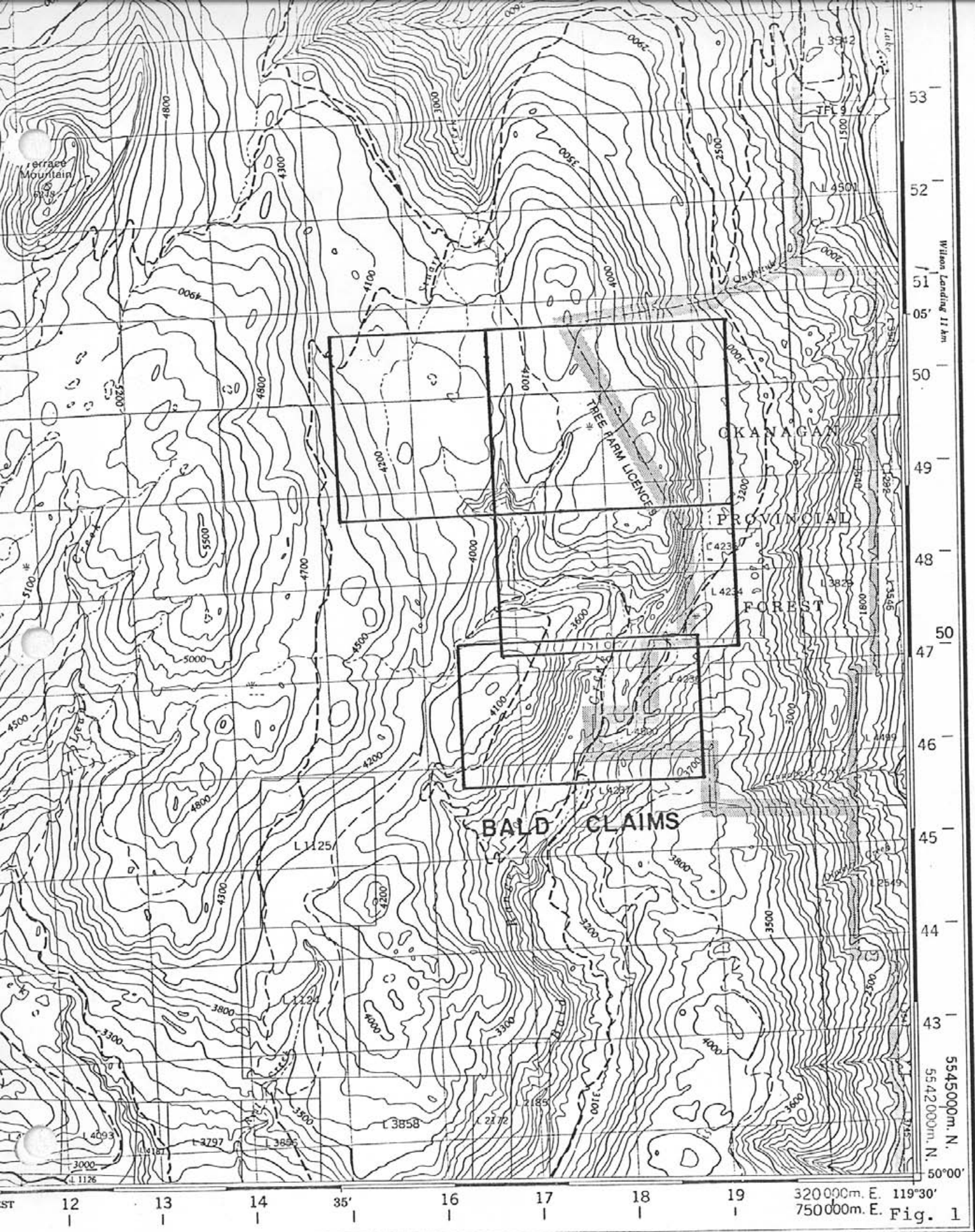


Fig. 1

Établie par la DIRECTION DES LEVÉS ET DE LA CARTOGRAPHIE, MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES. Mise à jour à l'aide de photographies aériennes prises en 1975. Vérification [illegible] en 1976. Renseignements à jour en 1975.

Access is via the Terrace Mountain Main Logging road which begins at km 8 of the Bear Lake Main and runs along the eastern margin of the area. Many secondary but driveable logging roads turn-off the Terrace Main to provide access to other parts of the area.

Physiography and Vegetation

Relief over the area is 650 m; main drainage flows north and south; the dominant feature is the east-facing slope of the Okanagan Valley.

Large portions of the area have been clear-cut logged but otherwise thick coniferous forests cover the plateau. The steeper side slopes are more open with little underbrush and with occasional vertical rocky cliffs.

Previous Work

Canadian Oxy collected a total of 18 stream silt samples within Areas 52-53 during the Princeton/Nicky Project. All major stream and tributaries were sampled. The values ranged from 219 to 84 ppm U with a background of approximately 20 ppm U.

One stream silt and water sample was collected on Bald Range Creek by the G.S.C. during the 1976 U.R.P. survey, the samples contained 6 ppm U and 1.6 ppb U respectively.

Work Completed

The BALD Claim group (62 units) were staked by Eastern Associates of Whitehorse, Y.T. during the period June 4-7, 1978 to cover the anomalies determined from the original Prinic data.

Over the period July 25 and 26, the entire crew completed a total of 8 man-days of work to collect 79 stream and lake silts, 54 stream and lake waters and 3 heavy mineral samples. As well, Hill and Anderson completed a limited amount of prospecting with scintillometers. A total of 7 rock chip samples was collected for analysis.

Geology and Rock Geochemistry

The majority of the area is underlain by intrusives of Nelson Plutonics suite of Upper Jurassic age. To the west, the intrusives are overlain by volcanics of the Upper Eocene Skaha Formation. Also a small outcrop of amygdaloidal andesite was found in the northwest part of the area.

The pluton observed in the most eastern part of the area is a coarse-grained biotite, hornblende quartz monzonite porphyry with K-spar and plagioclase phenocrysts up to 1 cm in size.

Radiometrically, the quartz monzonite showed a variation in readings of 110-145 cps, while the volcanic rock was characterized by a response of 80 cps. All rock chip samples contained from less than 0.5 to 0.5 ppm U.

Geochemistry

Sediments (Plan 17A) - Sediments from streams draining Jurassic quartz diorite in the southeast part of the claim group are anomalous in U, values range from 12-200 ppm.

Weaker anomalous stream and lake sediment uranium values (14-105 ppm) are present also in the northwest corner

of the claim where Upper Eocene volcanic and sedimentary rocks occur.

Waters (Plan 17B) - Stream and lake waters in the southeast sector of the area tend to be high in uranium (2.3-9.5 ppb), while those in the northwest are relatively low (0.5-2.5 ppb). Good correlations are apparent between high U in waters (+2 ppb), alkalinity (pH 7.2-8.0), specific conductivity (+200 m mhos) and HCO_3 (+100 mg/l).

Heavy Minerals (Plan 17C) - Two of the heavy mineral samples from stream draining the quartz diorite contain 2.5 and 3.0 ppm U. Because of quenching effects U in sample 13449 could not be determined with any degree of reliability, however, a slight increase in Ag (0.2 ppm) is apparent. The major heavy minerals in this sample include: magnetite (30%), sphene (25%), pyroxene (20%), apatite (2%), amphibole (20%), goethite (2%) and chlorite (1%). The provenances of these minerals are Eocene volcanic-sedimentary rocks and the Jurassic quartz diorite. The main heavy minerals associated with quartz diorite (#13482 and 13528) include: magnetite (20-30%), sphene (25%), amphibole (25-30%), pyroxene (20%) and epidote (5%). Traces of biotite, zircon, leucoxene, garnet, kyanite and fluorite also occur.

Conclusions

Sediment and water uranium anomalies occur over Jurassic quartz diorite in the southeast part of the area. Increases in pH, HCO_3 and conductivity are associated with increasing U in these waters.

Sediment U anomalies occur in streams draining Eocene volcanic and sedimentary rocks in the northwest sector of the claims.

Recommendations

Systematic geological mapping, soil sampling, rock geochemistry, scintillometric surveying and prospecting should be carried out over the property.

Geologically, there appear to be two potential targets: 1) the quartz diorite and, 2) the Eocene volcanic and sedimentary rocks. The latter, which are present south of BALD 1, should be prospected also.

Respectfully submitted,

Johannes R. Hill, B.Sc.

TORONTO

March, 1979

APPENDIX 1

Petrography

Specimen No. - 52,53-4 (8153)

Rock name - altered hornblende biotite quartz microdiorite

Mineralogy - Essential - plagioclase - 60%
hornblende - 20%
biotite (pseudomorphed) - 10%
quartz - 5%

accessory - sphene
apatite
magnetite

secondary - chlorite
carbonate
sericite
epidote

Description - This rock is medium grained, hypidiomorphic granular, with an average grain size of about 1-2mm. It is non-porphyritic. It consists of abundant subhedra to anhedra of plagioclase, intermingled with compact anhedra of hornblende and subsidiary biotite, and a low proportion of interstitial quartz. The rock shows a moderate degree of alteration.

Plagioclase is the predominant constituent of this rock. It forms compact, usually tabular, subhedra and equidimensional anhedra which ranges from unzoned to quite strongly zoned. The composition is about calcic andesine An_{42}, for the unzoned crystals. The degree of alteration in this rock varies across the section. In the relatively fresh part of the section plagioclase is often quite fresh looking, being flecked by a little sericite, often mingled with some clinozoisite or carbonate. At the more altered side of the section, the plagioclase is is densely impregnated by a very fine mixture of sericite and carbonate, which may make up as much as 70% of the crystal. No K-feldspar was identified in this rock. Hornblende forms compact anhedra, and occasionally subhedra, which often contain inclusions of plagioclase and biotite. At the relatively fresh side of the section the hornblende is virtually unaltered, occasionally containing a little chlorite along its cleavages. Where the rock is more altered, the hornblende has been completely pseudomorphed by a 50/50 mixture of chlorite and carbonate in most cases. Sometimes a little remnant hornblende is visible. By contrast, the biotite has been completely pseudomorphed throughout the section, and is now represented by chlorite, often intermingled with some granular epidote. The biotite flakes were also in the form of compact anhedra, usually closely associated with the hornblende. Quartz occurs in low proportion, in small interstitial anhedra. There are also occasional small patches of carbonate, and masses of epidote, probably of secondary origin, but not clearly pseudomorphing any particular mineral. Sphene, in relatively large rhombs, is a noticeable accessory mineral, while small

(continued overleaf)

Specimen No. - 52,53-4 (continued)

grains of magnetite are only very rarely seen. Prismatic crystals of apatite are a moderately common accessory mineral.

The thin section is cut across by a fræture plane, containing a very thin film of granulated rock material intermingled with very fine grained carbonate. It also contains occasional undulating, and often discontinuous, 'rivulets' of carbonate.

Specimen No. - 52,53-5 (8154)

Rock name - porphyritic andesite

Mineralogy - phenocrysts - plagioclase
clinopyroxene
amphibole (pseudomorphed)

groundmass - plagioclase
quartz
clinopyroxene
biotite - possibly secondary
magnetite
apatite

secondary - sericite
chlorite
carbonate
epidote

Description - This rock is highly porphyritic, with abundant medium grained phenocrysts, set in a very fine grained matrix.

Plagioclase is by far the most common phenocryst type, in euhedral to subhedral tabular crystals which occasionally reach up to 6 mm, but average around 1-3 mm. The phenocrysts are typically unzoned, and have a composition of calcic andesine, about An48. Many of them have an extremely blotchy appearance, as a result of alteration, which seems to have caused a separating out of a turbid calcic fraction and a relatively clear albitic fraction, often accompanied by occasional quartz blebs. The turbidity is usually too fine grained to be identified, but most crystals do contain some identifiable tiny flakes of sericite. Tiny inclusions of biotite, probably of secondary origin, are sometimes found within plagioclase phenocrysts. Clinopyroxene phenocrysts tend to be somewhat smaller, and less abundant, than the plagioclase. They are euhedral to subhedral, sometimes occur in crystal clusters, and are quite fresh, the only alteration being a slight blurring along cracks and cleavages which is not sufficiently well developed to be identified. Small amphibole phenocrysts appear to have been originally quite abundant, probably in similar proportions to the clinopyroxene. These have now been completely pseudomorphed by a mat of very fine chloritic material, of rather variable composition, usually rimmed by a variety of brownish green colour and relatively high birefringence, which appears to be approaching a biotite in composition.

(continued overleaf)

Specimen No. - 52,53-5 (continued)

The groundmass is very fine grained, with an average grain size of around 0.1 mm. It consists predominantly of a mass of tabular to elongate plagioclase crystals which are turbid looking and flecked by tiny crystals of sericite. Quartz is quite common in the matrix, making up about 15% of it, in tiny angular crystals interstitial to the plagioclase. Occasional small granular anhedra of clinopyroxene are dotted through the groundmass in low proportion, and there are also quite abundant altered looking crystals, which appear to be made up of a mixture of biotite and chlorite which tend to form elongate masses and may possibly represent previous crystals of amphibole. Occasional small granular masses of epidote also occur in the matrix, and there are also occasional small interstitial patches of chlorite, and very occasional small patches of carbonate. Granules of magnetite are scattered through the groundmass (about 10%) and occasional small prisms of apatite. K-feldspar was not identified in this rock, although a little could possibly be present in the groundmass.

Specimen No. - 52,53-50 (8051)

Rock name - fresh quartz monzonite

Mineralogy - essential - K-feldspar - 35%
plagioclase - 25%
quartz - 20%
biotite - 15%

accessory - magnetite
sphene
apatite, zircon

secondary - sericite
chlorite
epidote

Description - This rock is medium to coarse grained, allotriomorphic granular. It consists of a rather uneven grained inter-locking mosaic of K-feldspar, plagioclase and quartz, with scattered clots of relatively small biotite flakes.

K-feldspar is the predominant mineral in this rock. It forms irregularily shaped anhedra up to about 5 mm across, which are typically highly perthitic and occasionally show microcline twinning. The crystals frequently have a rather strained appearance, but are otherwise very fresh. Many of the larger crystals contain numerous inclusions of the other rock minerals. Plagioclase is less abundant than K-feldspar, and tends to form smaller crystals which sometimes approximate to a tabular form. They often show slight zoning from calcic andesine to intermediate oligoclase; the average plagioclase composition is around andesine-oligoclase. Most plagioclase crystals are quite fresh; a few show some patchy sericitisation. Plagioclase tends to have a slightly more turbid appearance than K-feldspar. Quartz occurs in irregularily shaped anhedra of very variable size. Often several crystals occur together. The quartz in this rock has a very strongly strained appearance. In some cases the crystals have actually ruptured. Biotite forms clots of relatively small, rather ragged, flakes. These are mostly quite fresh, but some flakes show slight chloritisation along cleavages. Accessory amounts of magnetite, in small compact grains, tend to be associated with the biotite, as do smaller amounts of sphene and apatite. A few small crystals of epidote were noted associated with magnetite.

APPENDIX 2
Geochemistry Values & Statistics

AREA 52 FLOW SITE PRINIC 1973 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 %
13401	0.2	100	-0.1	0	-0.1	0	0	0	-0.1	0
13402	1.5	55	-0.1	0	-0.1	0	0	0	-0.1	0
13403	0.5	77	3.4	6	7.9	4	205	35	57.6	15
13404	0.5	77	2.7	10	7.9	4	205	35	55.3	29
13405	0.5	77	2.7	10	7.8	10	210	25	56.7	25
13406	1.0	65	2.5	21	7.7	25	210	25	57.3	17
13407	3.0	43	2.5	21	7.6	29	205	35	56.9	21
13421	14.0	16	0.8	54	6.6	90	160	60	43.6	60
13422	14.0	16	0.5	85	6.7	85	141	81	40.6	69
13423	9.0	22	-0.1	0	-0.1	0	0	0	-0.1	0
13424	-4.0	0	0.6	77	6.8	79	127	90	30.8	94
13425	23.0	12	-0.1	0	-0.1	0	0	0	-0.1	0
13429	6.0	33	0.8	54	6.8	79	184	50	45.7	54
13430	10.0	20	0.8	54	7.1	65	200	40	51.0	37
13431	0.2	100	2.5	21	7.0	73	200	40	46.7	48
13432	0.2	100	1.0	40	7.7	25	210	25	57.7	12
13433	1.5	55	1.1	35	7.7	25	210	25	56.9	21
13434	0.5	77	1.0	40	7.7	25	210	25	56.7	25
13435	0.5	77	0.6	77	7.0	73	165	56	41.4	67
13436	0.5	77	0.9	44	6.8	79	187	44	49.3	40
13437	1.0	65	0.6	77	7.4	35	166	54	41.5	65
13438	1.0	65	2.3	27	7.2	56	210	25	52.1	35
13439	3.0	43	2.3	27	7.8	10	205	35	52.4	33
13440	3.0	43	2.6	25	7.7	25	205	35	53.0	31
13441	0.2	100	0.4	90	7.2	56	151	62	38.1	77
13442	0.2	100	0.1	100	7.2	56	150	67	38.4	75
13443	0.2	100	0.7	65	7.2	56	145	77	36.2	87
13444	0.2	100	0.5	85	7.2	56	145	77	36.5	83
13445	0.2	100	0.5	85	7.2	56	145	77	35.9	90
13446	0.2	100	0.5	85	7.1	65	140	83	36.6	81
13447	6.5	30	0.8	54	6.4	100	121	94	30.4	98
13448	1.0	65	0.4	90	6.7	85	141	81	36.3	85
13449	1.5	55	-0.1	0	-0.1	0	0	0	-0.1	0
13450	1.5	55	0.9	44	7.0	73	185	48	47.7	42
13451	7.0	29	0.6	77	6.6	90	174	52	43.6	60
13452	105.0	3	0.8	54	6.5	96	185	48	45.9	52
13453	1.0	65	-0.1	0	-0.1	0	0	0	-0.1	0
13454	3.5	38	-0.1	0	-0.1	0	0	0	-0.1	0
13455	0.5	77	-0.1	0	-0.1	0	0	0	-0.1	0
13456	3.5	38	0.3	98	6.4	100	127	90	31.8	92
13457	48.0	7	-0.1	0	-0.1	0	0	0	-0.1	0
13458	7.0	29	0.7	65	6.7	85	160	60	44.2	56
13459	2.5	46	-0.1	0	-0.1	0	0	0	-0.1	0
13460	0.2	100	-0.1	0	-0.1	0	0	0	-0.1	0
13461	32.0	9	-0.1	0	-0.1	0	0	0	-0.1	0
13462	1.0	65	-0.1	0	-0.1	0	0	0	-0.1	0
13463	0.2	100	-0.1	0	-0.1	0	0	0	-0.1	0
13464	12.0	19	-0.1	0	-0.1	0	0	0	-0.1	0
13465	0.2	100	-0.1	0	-0.1	0	0	0	-0.1	0
13466	0.2	100	-0.1	0	-0.1	0	0	0	-0.1	0

PAGE 2

AREA 52 FLOW 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 %
13481	2.0	49	-0.1	0	-0.1	0	0	0	-0.1	0
13482	2.5	46	2.4	23	7.8	10	215	12	55.4	27
13483	2.0	49	2.6	15	7.7	25	215	12	64.5	10
13485	7.0	29	0.7	65	7.2	56	410	2	122.0	2
13486	68.0	6	1.9	29	7.2	56	400	4	87.4	8
13487	200.0	1	3.4	6	7.1	65	345	8	104.0	4
13488	75.0	4	8.1	2	7.6	29	350	6	102.0	6
13522	0.2	100	0.3	98	7.2	56	187	44	47.4	44
13523	0.2	100	0.6	77	7.1	65	145	77	37.3	79
13524	0.2	100	-0.1	0	-0.1	0	0	0	-0.1	0
13525	1.0	65	0.7	65	7.5	31	115	98	29.8	100
13526	7.0	29	-0.1	0	-0.1	0	0	0	-0.1	0
13527	5.0	35	0.3	98	6.5	96	123	92	30.7	96
13528	0.5	77	0.6	77	7.0	73	150	67	39.3	73
13529	23.0	12	1.1	35	7.7	25	135	85	40.1	71
13530	6.0	33	1.8	31	7.4	35	145	77	43.4	62
13541	3.0	43	0.7	65	7.3	37	90	100	46.7	48
13542	20.0	13	-0.1	0	-0.1	0	0	0	-0.1	0
13543	13.0	17	0.3	98	6.5	96	115	98	46.4	50
13544	8.5	23	-0.1	0	-0.1	0	0	0	-0.1	0
VALUES	69		48		48		48		48	

HEAVY MINERAL VALUES AND RANK IN % FROM THE TOP

SAMPLE	AG PPM	RANK %	AU PPB	RANK %	U-HM PPM	RANK %	W PPM	RANK %	SN PPM	RANK %
13441	0.2	33	0	0	-4.0	0	4	100	0	0
13482	0.1	100	0	0	3.0	50	6	33	1	100
13528	0.1	100	0	0	2.5	100	4	100	2	50
VALUES	3		0		2		3		2	

AREA 52 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY

STATISTICAL SUMMARY OF ALL SAMPLES

ELEMENT	AR. MEAN	STD DEV	GEOM MEAN	LN DEV	RANGE MIN	RANGE MAX	SMPLS	<DET LIM
U-S	11.2	29.4	2.0	6.4	0.2	200.0	69	16
U-W	1.4	1.4	0.9	2.3	0.1	8.1	48	1
PH	7.2	0.4	7.2	1.1	6.4	7.9	48	0
COND	185.9	67.4	176.6	1.4	90.0	410.0	48	0
HCO3	50.0	18.9	47.5	1.4	29.8	122.0	48	0
AG	0.1	0.1	0.1	1.5	0.1	0.2	3	2
AU	0.0	0.0	0.0	0.0	0.0	0.0	0	0
U-HM	2.8	0.4	2.7	1.1	2.5	3.0	2	0
W	4.7	1.2	4.6	1.3	4.0	6.0	3	0
SN	1.5	0.7	1.4	1.6	1.0	2.0	2	0

DEVIATIONS FROM MEANS : VALUES AND % FROM TOP OF GROUP

ELEMENT	MEAN-2 VALUE	DEV %	MEAN-1 VALUE	DEV %	MEAN VALUE	%	MEAN+1 VALUE	DEV %	MEAN+2 VALUE	DEV %	
U-S	-47.6	0	-18.2	0	11.2	19	40.6	7	70.0	4	ARITH
U-S	0.0	100	0.3	77	2.0	49	12.7	17	81.7	3	LOG
U-W	-1.4	0	-0.0	0	1.4	31	2.7	6	4.1	2	ARITH
U-W	0.2	98	0.4	85	0.9	40	2.2	27	5.1	2	LOG
PH	6.3	100	6.7	79	7.2	56	7.6	25	8.1	0	ARITH
PH	6.3	100	6.7	79	7.2	56	7.6	25	8.1	0	LOG
COND	51.2	100	118.6	94	185.9	44	253.3	8	320.6	8	ARITH
COND	94.8	98	129.4	85	176.6	50	241.0	8	328.9	8	LOG
HCO3	12.2	100	31.1	92	50.0	37	68.9	8	87.8	6	ARITH
HCO3	25.6	100	34.8	90	47.5	42	64.7	8	88.1	6	LOG
AG	0.0	100	0.1	100	0.1	33	0.2	33	0.2	0	ARITH
AG	0.1	100	0.1	100	0.1	33	0.2	33	0.3	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	2.0	100	2.4	100	2.8	50	3.1	0	3.5	0	ARITH
U-HM	2.1	100	2.4	100	2.7	50	3.1	0	3.5	0	LOG
W	2.4	100	3.5	100	4.7	33	5.8	33	7.0	0	ARITH
W	2.9	100	3.6	100	4.6	33	5.8	33	7.3	0	LOG
SN	0.1	100	0.8	100	1.5	50	2.2	0	2.9	0	ARITH
SN	0.5	100	0.9	100	1.4	50	2.3	0	3.8	0	LOG

AREA 52 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY

CORRELATION COEFFICIENTS, LEVEL OF SIGNIFICNCE, NUMBER OF SAMPLES

	U-S	U-W	PH	COND	HCO3	AG	AU	U-HM	W	SN
U-S	*****	0.28 90-95 47	-0.27 90-95 47	0.31 95-99 47	0.41 99-** 47	-0.78 50-60 3	*** *** 0	*** *** 2	0.93 50-60 3	*** *** 2
U-W	0.28 90-95 47	*****	0.59 99-** 48	0.61 99-** 48	0.63 99-** 48	-0.68 0-50 3	*** *** 0	*** *** 2	0.98 80-90 3	*** *** 2
PH	-0.27 90-95 47	0.59 99-** 48	*** *** *****	0.39 99-** 48	0.43 99-** 48	-0.27 0-50 3	*** *** 0	*** *** 2	0.97 80-90 3	*** *** 2
COND	0.31 95-99 47	0.61 99-** 48	0.39 99-** 48	*** *** *****	0.91 99-** 48	-0.49 0-50 3	*** *** 0	*** *** 2	1.00 95-99 3	*** *** 2
HCO3	0.41 99-** 47	0.63 99-** 48	0.43 99-** 48	0.91 99-** 48	*** *** *****	-0.56 0-50 3	*** *** 0	*** *** 2	1.00 95-99 3	*** *** 2
AG	-0.78 50-60 3	-0.68 0-50 3	-0.27 0-50 3	-0.49 0-50 3	-0.56 0-50 3	*** *** *****	*** *** 0	*** *** 2	-0.50 0-50 3	*** *** 2
AU	*** *** 0	*** *** 0	*** *** 0	*** *** 0	*** *** 0	*** *** 0	*** *** *****	*** *** 0	*** *** 0	*** *** 0
U-HM	*** *** 2	*** *** 2	*** *** 2	*** *** 2	*** *** 2	*** *** 2	*** *** 0	*** *** *****	*** *** 2	*** *** 2
W	0.93 50-60 3	0.98 80-90 3	0.97 80-90 3	1.00 95-99 3	1.00 95-99 3	-0.50 0-50 3	*** *** 0	*** *** 2	*** *** *****	*** *** 2
SN	*** *** 2	*** *** 2	*** *** 2	*** *** 2	*** *** 2	*** *** 2	*** *** 0	*** *** 2	*** *** 2	*** *** *****

AREA 62 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY

U-S HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV PPM	SAMPLES	CUM FR %
	16	
0.50	8	23.19
1.00	7	34.78
1.50	4	44.93
2.00	2	50.72
2.50	2	53.62
3.00	4	56.52
3.50	2	62.32
4.00	0	65.22
4.50	0	65.22
5.00	1	65.22
5.50	0	66.67
6.00	3	66.67
7.00	4	71.01
8.00	1	76.81
9.00	1	78.26
10.00	1	79.71
11.00	1	81.16
12.50	1	82.61
14.00	2	84.06
16.00	0	86.96
18.00	0	86.96
20.00	1	86.96
22.50	2	88.41
25.00	0	91.30
28.00	0	91.30
32.00	6	91.30
99999.00		100.00

TOTAL SAMPLES= 69 VALUES < DETECTION = 16 RANGE= 0.2 TO 200.0

AREA 52 FLOW SITE PRINC 1978 GEOCHEMICAL SURVEY

U W HISTOGRAM AND CUMULATIVE FREQUENCY

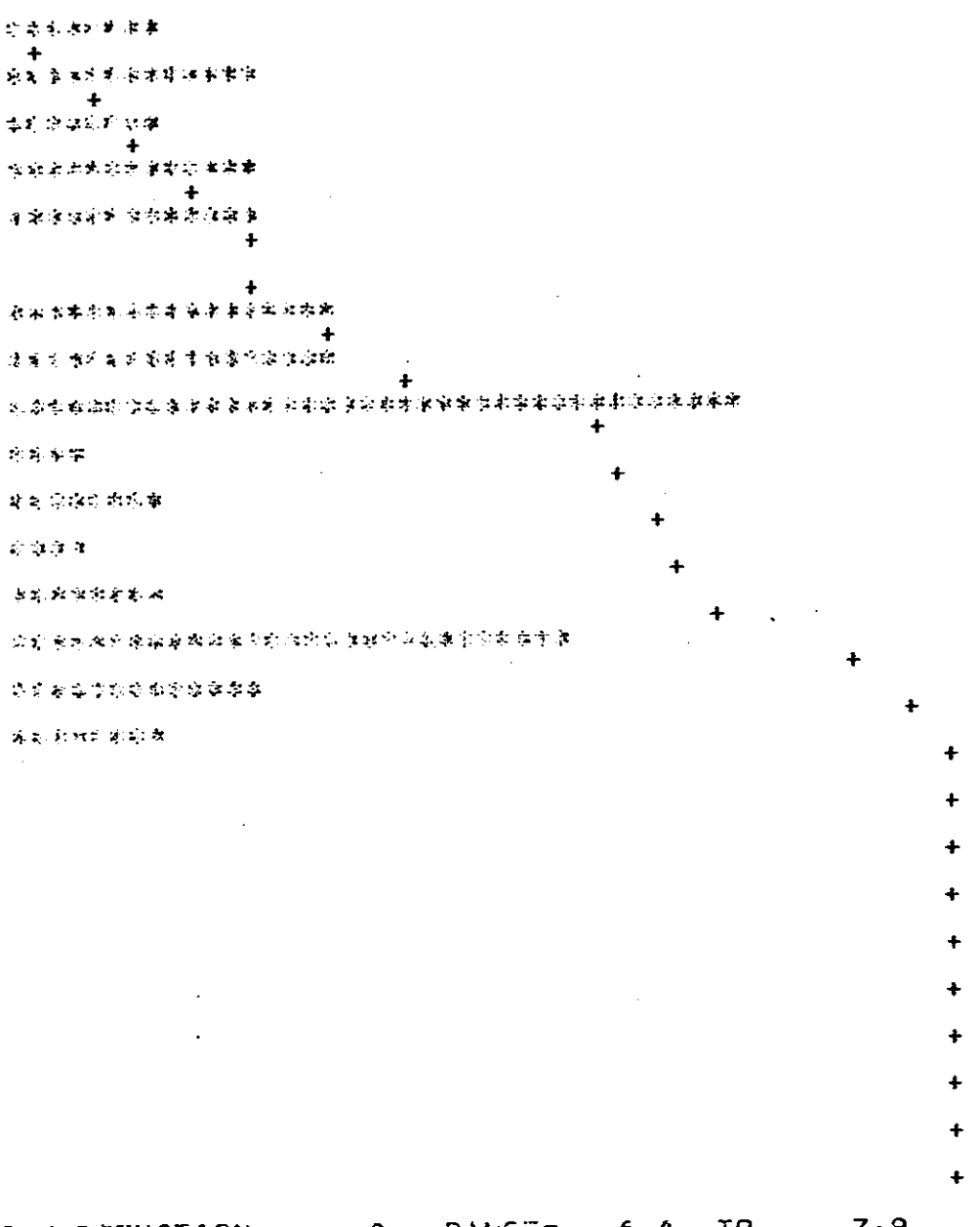
INTERV PPB	SAMPLES	CUM FR %	
	1		*
0.20		2.08	+
	0		
0.30		2.08	+
	4		**** * **********
0.40		10.42	+
	2		******
0.50		14.58	+
	4		********** **
0.60		22.92	+
	11		********** ********** ********** ********** **********
0.80		45.83	+
	7		********** ********** **********
1.00		60.42	+
	4		**** **********
1.20		68.75	+
	0		
1.60		68.75	+
	2		********
2.00		72.92	+
	3		**********
2.50		79.17	+
	7		********** ********** **********
3.20		93.75	+
	2		******** **
4.00		97.92	+
	0		
5.00		97.92	+
	0		
6.30		97.92	+
	0		
8.00		97.92	+
	1		*****
10.00		100.00	+
	0		
12.50		100.00	+
	0		
16.00		100.00	+
	0		
20.00		100.00	+
	0		
25.00		100.00	+
	0		
32.00		100.00	+
	0		
40.00		100.00	+
	0		
50.00		100.00	+
	0		
63.00		100.00	+
	0		
80.00		100.00	+
	0		
99999.00		100.00	+

TOTAL SAMPLES= 48 VALUES < DETECTION = 1 RANGE= 0.1 TO 8.1

AREA 52 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY

FR HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV	SAMPLES	CUM FR %
	0	
4.00		0.00
	0	
6.40		0.00
	2	
6.50		4.17
	3	
6.60		10.42
	2	
6.70		14.58
	3	
6.80		20.83
	3	
6.90		27.08
	0	
7.00		27.08
	4	
7.10		35.42
	4	
7.20		43.75
	9	
7.30		62.50
	1	
7.40		64.58
	2	
7.50		68.75
	1	
7.60		70.83
	2	
7.70		75.00
	7	
7.80		89.58
	3	
7.90		95.83
	2	
8.00		100.00
	0	
8.10		100.00
	0	
8.20		100.00
	0	
8.30		100.00
	0	
8.40		100.00
	0	
8.50		100.00
	0	
8.60		100.00
	0	
8.70		100.00
	0	
8.80		100.00
	0	
99999.00		100.00



TOTAL SAMPLES= 48 VALUES < DETECTION = 0 RANGE= 6.4 TO 7.9

AREA 52 FLOW SITE PRINTOUT 1973 GEOCHEMICAL SURVEY

COND HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV MMHO	SAMPLES	CUM FR %
1.00	0	0.00
90.00	0	0.00
100.00	1	2.08
125.00	4	10.42
140.00	3	16.67
160.00	11	39.58
180.00	5	50.00
200.00	5	60.42
225.00	15	91.67
250.00	0	91.67
280.00	0	91.67
320.00	0	91.67
360.00	2	95.83
400.00	0	95.83
450.00	2	100.00
500.00	0	100.00
560.00	0	100.00
630.00	0	100.00
710.00	0	100.00
800.00	0	100.00
900.00	0	100.00
1000.00	0	100.00
1250.00	0	100.00
1400.00	0	100.00
1600.00	0	100.00
2000.00	0	100.00
99999.00	0	100.00

TOTAL SAMPLES= 48 VALUES < DETECTION = 0 RANGE= 90.0 TO 410.0

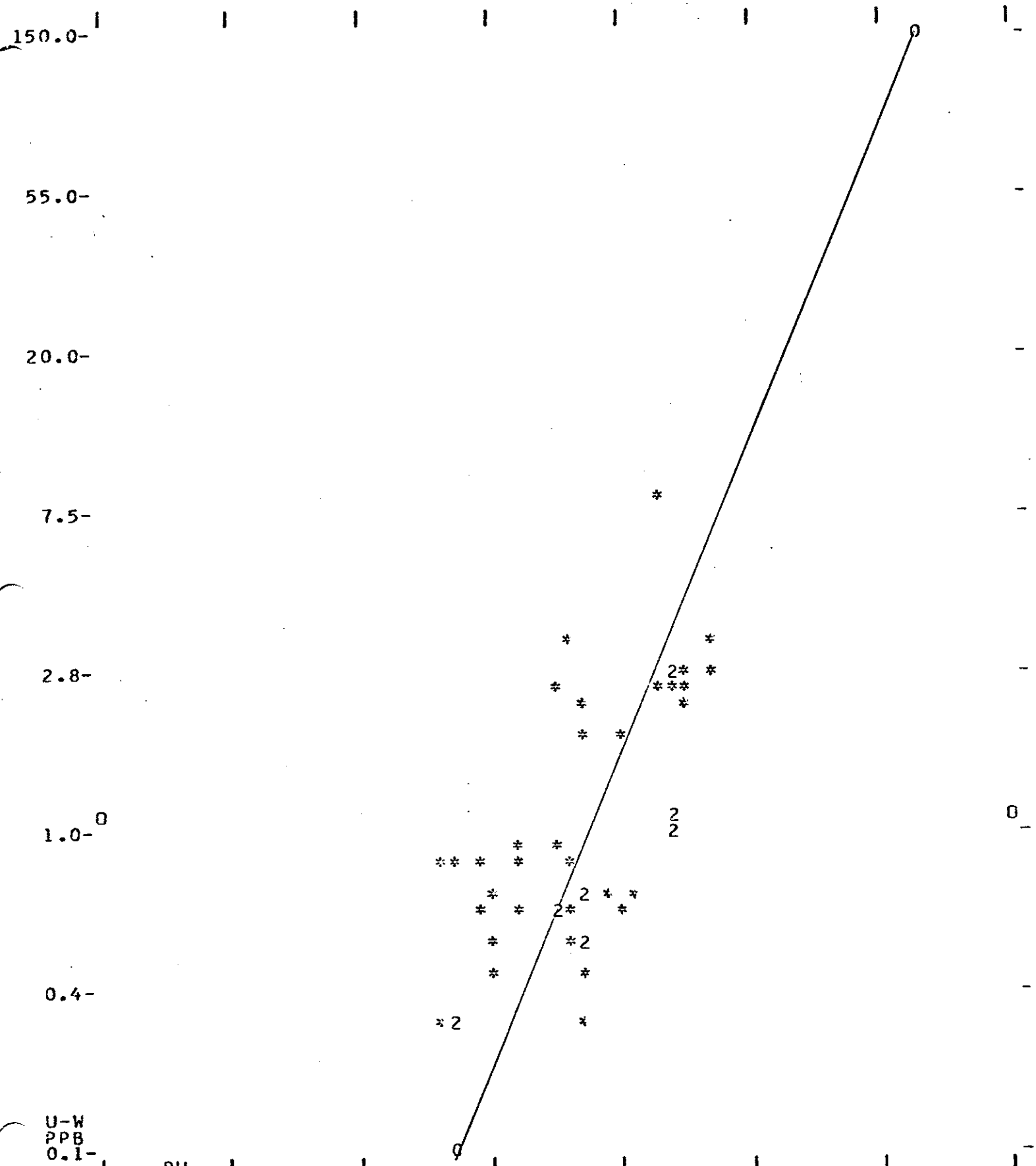
AREA 52 FLOW SITE PINIC 1978 GEOCHEMICAL SURVEY

HCO3 HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV MG/L	SAMPLES	CUM FR %	
	0		
1.00		0.00	
	0		
28.00		0.00	
	5		
32.00		10.42	+
	0		
35.00		10.42	+
	9		
40.00		29.17	+
	8		
45.00		45.83	+
	8		
50.00		62.50	+
	6		
56.00		75.00	+
	7		
63.00		89.58	+
	1		
71.00		91.67	+
	0		
80.00		91.67	+
	1		
90.00		93.75	+
	0		
100.00		93.75	+
	2		
112.00		97.92	+
	1		
125.00		100.00	+
	0		
140.00		100.00	+
	0		
60.00		100.00	+
	0		
180.00		100.00	+
	0		
200.00		100.00	+
	0		
225.00		100.00	+
	0		
250.00		100.00	+
	0		
280.00		100.00	+
	0		
320.00		100.00	+
	0		
360.00		100.00	+
	0		
400.00		100.00	+
	0		
450.00		100.00	+
	0		
99999.00		100.00	+

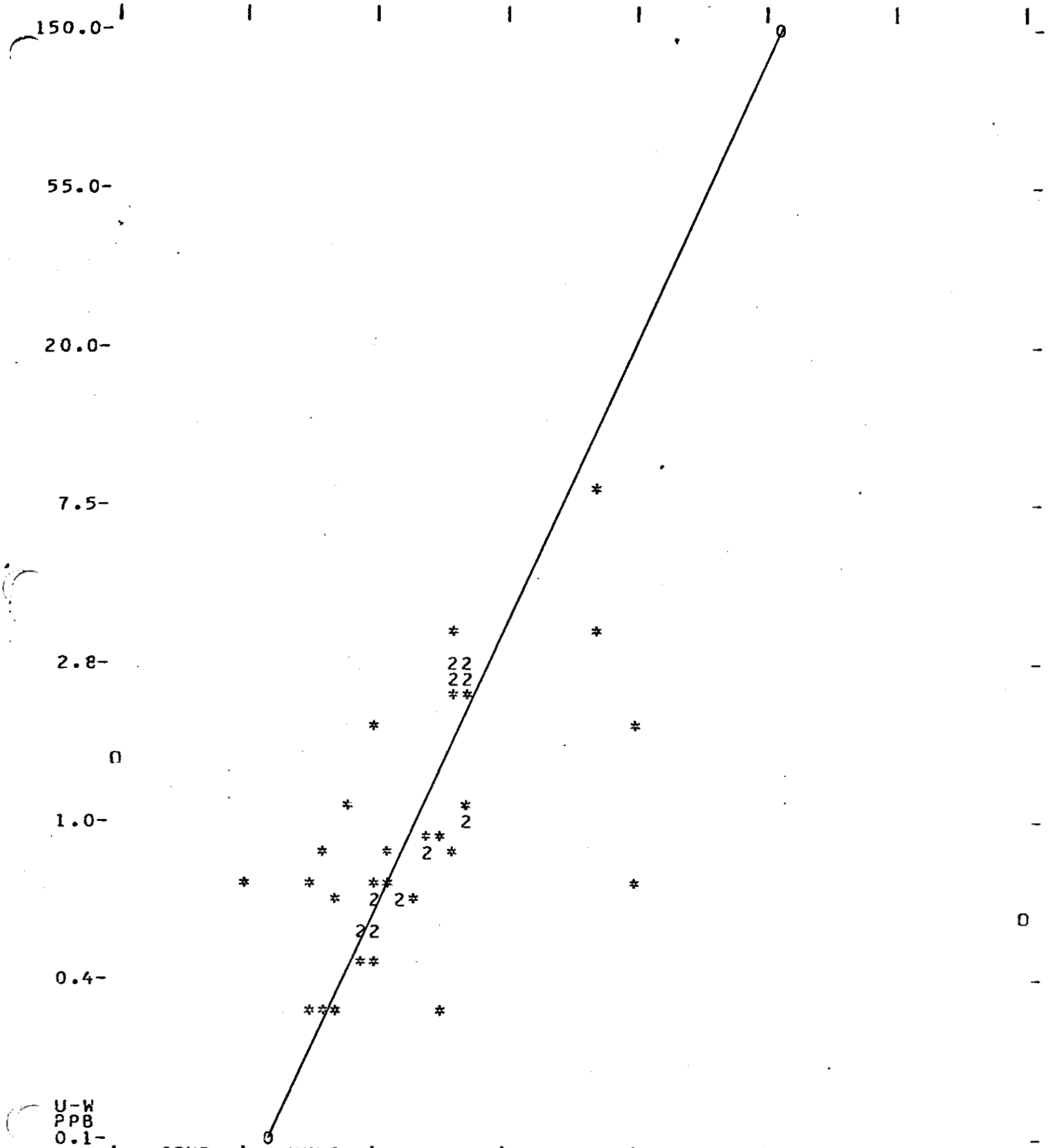
TOTAL SAMPLES= 48 VALUES < DETECTION = 0 RANGE= 29.8 TO 122.0

AREA 52 FLOW SITE PRINIC 1973 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF U-W VS PH



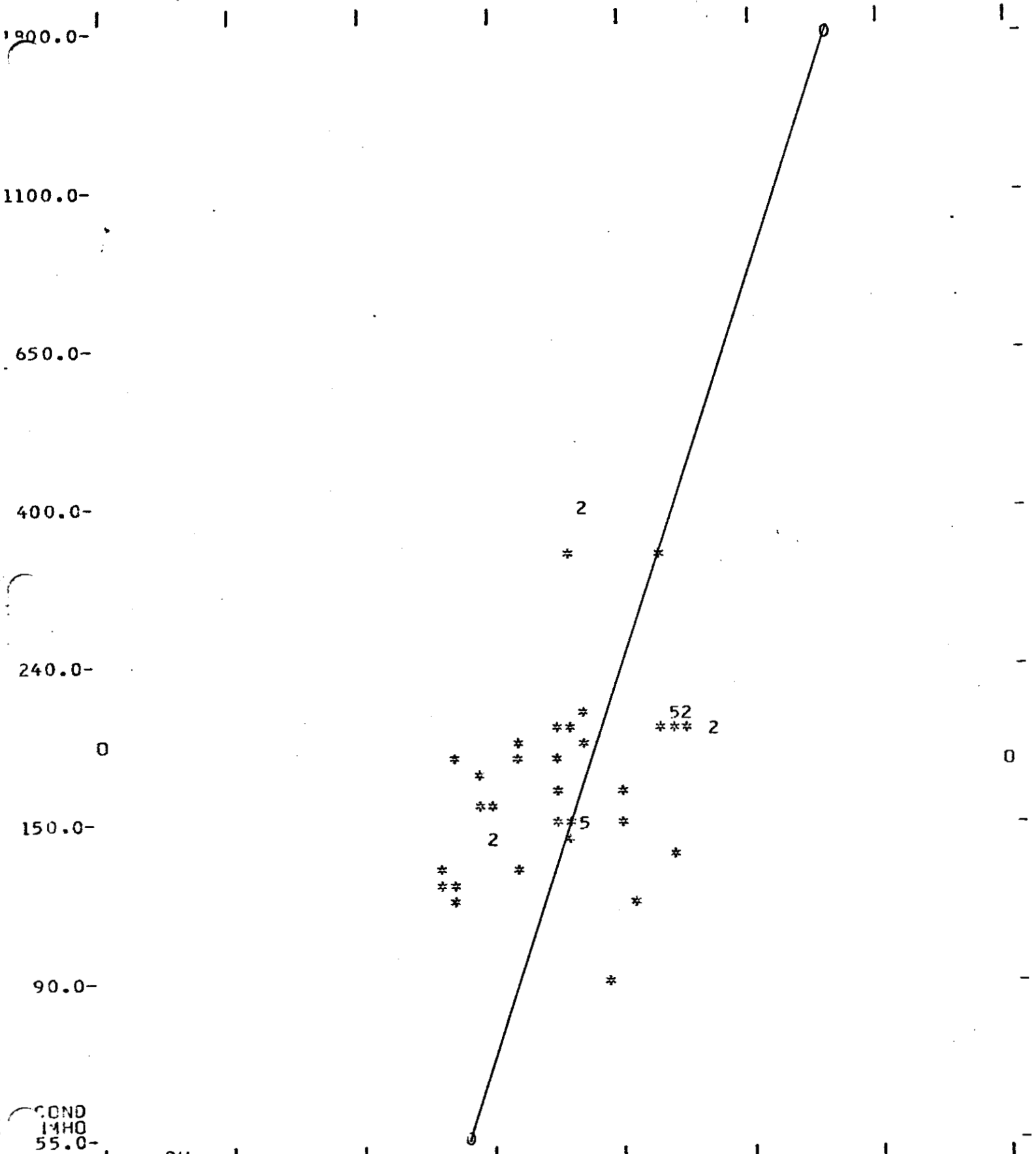
47 SETS USED--VALUES<DETECTION: 0 PH 1 U-W--COR COEF= 0.65--PREDICT 42%

AREA 52 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF U-W VS COND



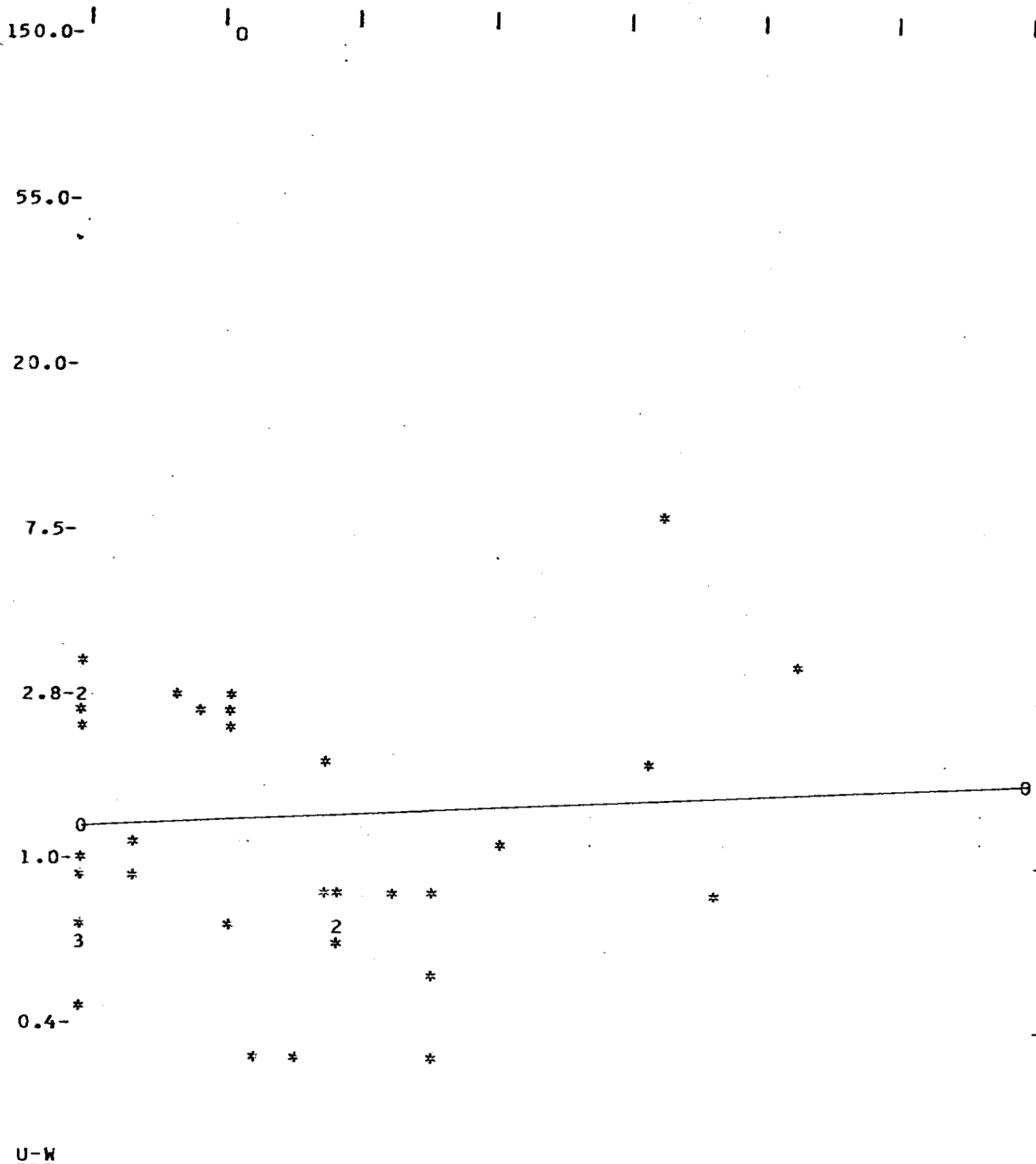
47 SETS USED--VALUES<DETECTION: 0 COND 1 U-W--COR COEF= 0.64--PREDICT 41%

AREA 52 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF COND VS PH



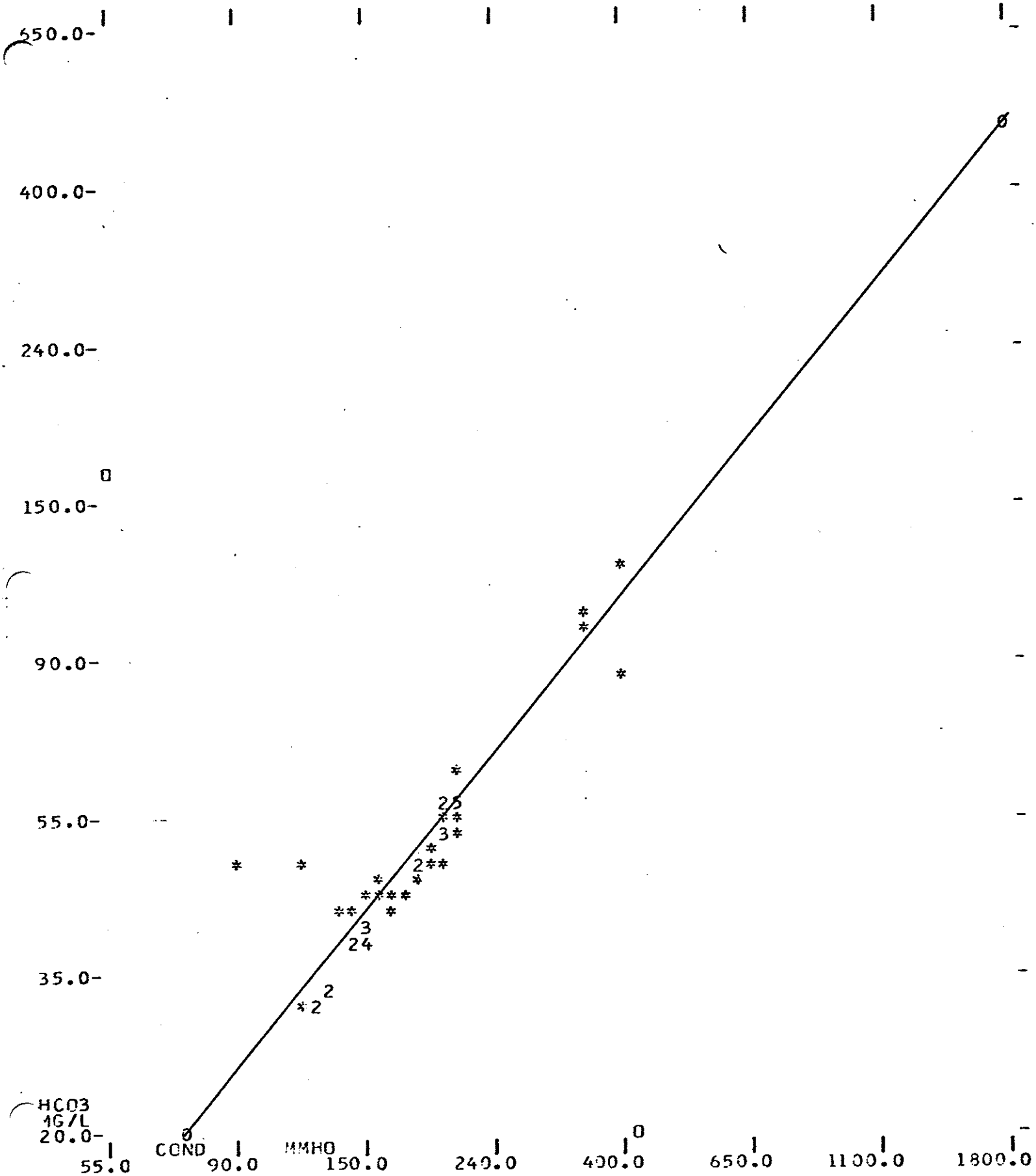
48 SETS USED--VALUES<DETECTION: 0 PH 0 COND--COR COEF= 0.39--PREDICT 15%

AREA 52 FLOW SITE PRINIC 1978 GEOCHEMICAL SUPVEY
SCATTERGRAM AND LINEAR REGRESSION OF U-W VS U-S



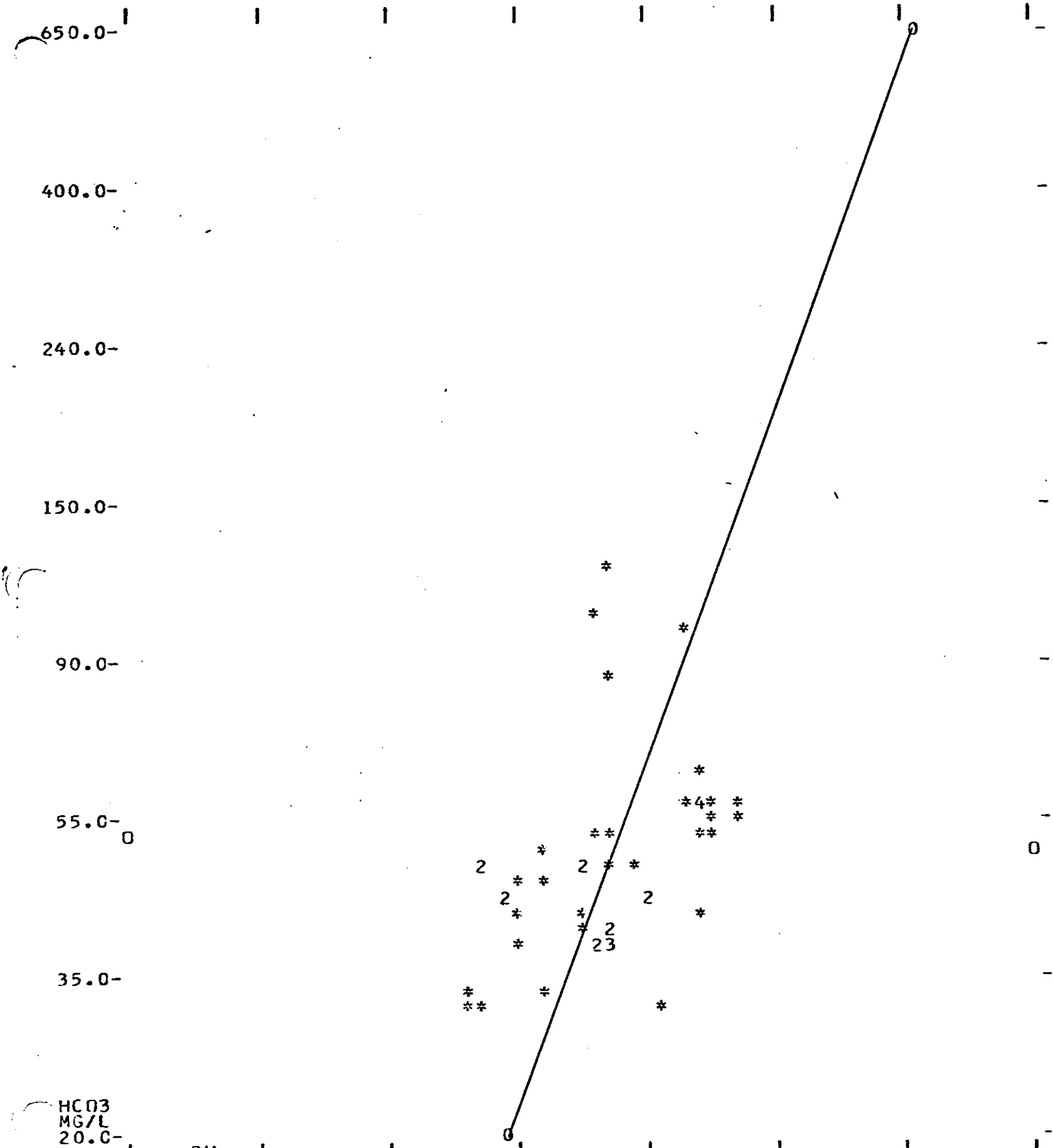
37 SETS USED--VALUES<DETECTION: 16 U-S 1 U-W--COR COEF= 0.06--PREDICT 0%

AREA 52 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF HCO3 VS COND



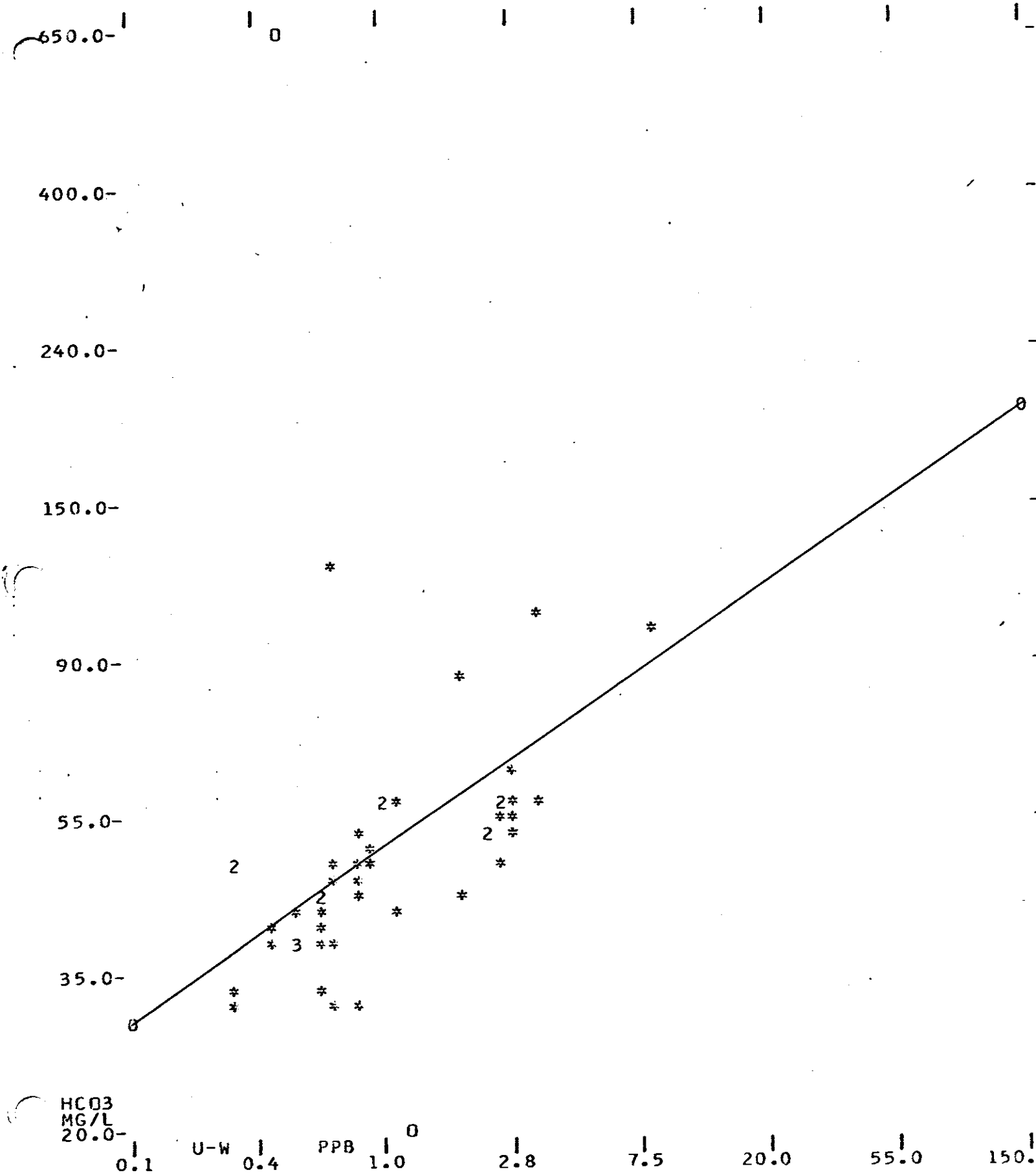
48 SETS USED--VALUES<DETECTION: 0 COND 0 HCO3--COR COEF= 0.91--PREDICT 82%

AREA 52 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF HCO3 VS PH



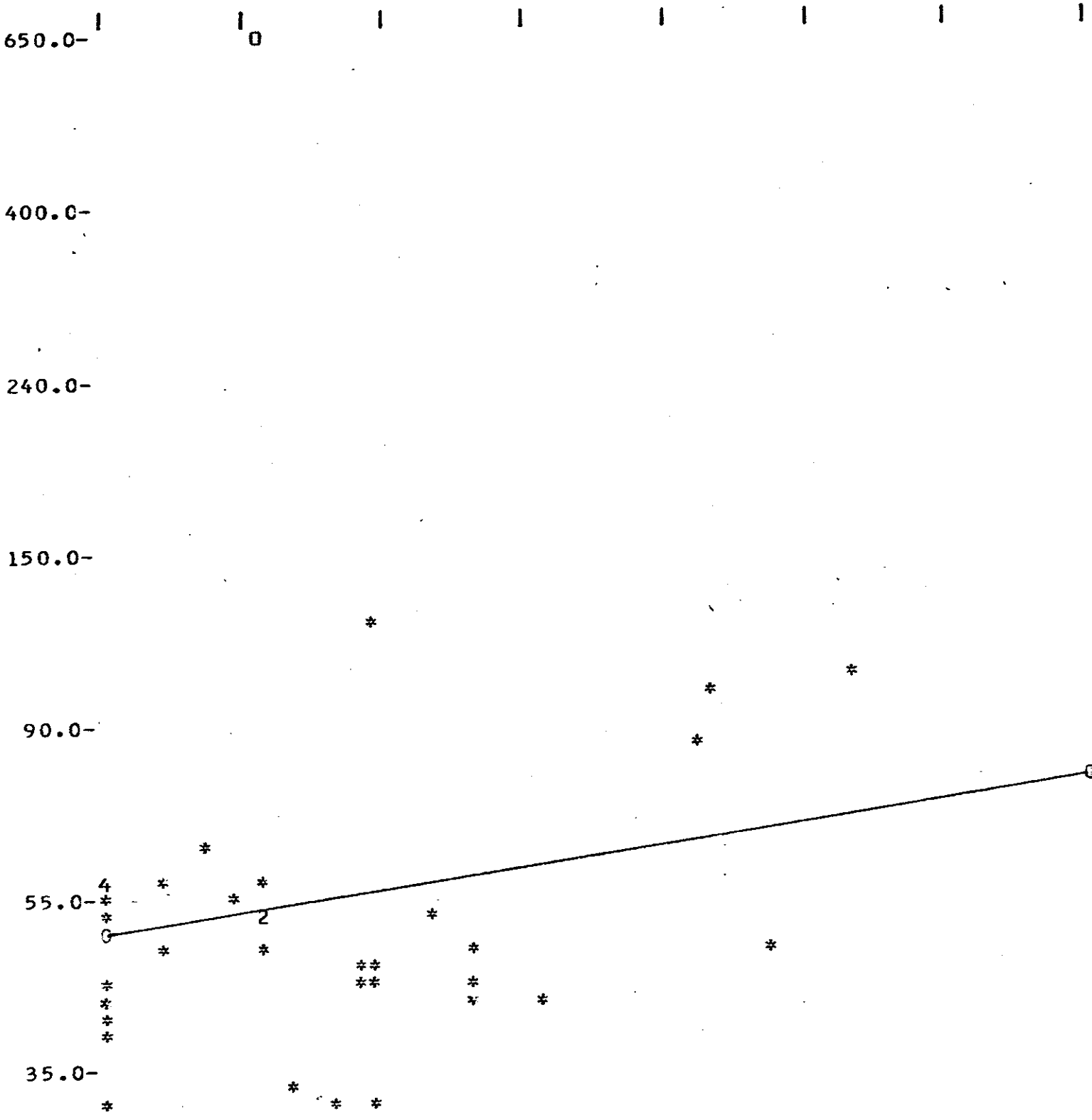
48 SETS USED--VALUES<DETECTION: 0 PH 0 HCO3--COR COEF= 0.43--PREDICT 19%

AREA 52 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF HCO3 VS U-W



47 SETS USED--VALUES<DETECTION: 1 U-W 0 HCO3--COR COEF= 0.65--PREDICT 42%

AREA 52 FLOW SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF HCO3 VS U-S



HCO3
MG/L
20.0-

U-S
PPM
1.0 2.8 7.5 20.0 55.0 150.0 400.0 1100

37 SETS USED--VALUES<DETECTION: 16 U-S 0 HCO3--COR COEF= 0.32--PREDICT 10

PAGE 1

AREA 52 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 %
13426	6.5	78	0.5	83	6.4	83	134	83	32.4	83
13427	5.0	89	-0.1	0	-0.1	0	0	0	-0.1	0
13428	32.0	56	-0.1	0	-0.1	0	0	0	-0.1	0
13467	56.0	33	9.5	17	7.3	33	410	17	110.0	33
13468	56.0	33	0.3	100	6.8	67	405	33	112.0	17
13469	46.0	44	-0.1	0	-0.1	0	0	0	-0.1	0
13470	80.0	11	1.0	50	7.1	50	350	50	101.0	50
13484	3.0	100	1.0	50	8.0	17	230	67	82.0	67
13521	9.5	67	0.8	67	6.1	100	109	100	31.3	100
VALUES	9		6		6		6		6	

HEAVY MINERAL VALUES AND RANK IN % FROM THE TOP

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

AREA 82 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY

STATISTICAL SUMMARY OF ALL SAMPLES

ELEMENT	AR. MEAN	STD DEV	GEOM MEAN	LN DEV	RANGE MIN	RANGE MAX	SMPLS	<DET LIM
U-S	32.7	28.2	19.1	3.5	3.0	80.0	9	0
U-W	2.2	3.6	1.0	3.3	0.3	9.5	6	0
PH	6.9	0.7	6.9	1.1	6.1	8.0	6	0
COND	273.0	134.3	240.9	1.8	109.0	410.0	6	0
HCO3	78.1	37.4	68.5	1.8	31.3	112.0	6	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 VALUE	MEAN-2 DEV %	MEAN-1 DEV VALUE	MEAN-1 DEV %	MEAN VALUE	MEAN %	MEAN+1 DEV VALUE	MEAN+1 DEV %	MEAN+2 DEV VALUE	MEAN+2 DEV %	
U-S	-23.8	0	4.4	89	32.7	44	60.9	11	89.1	0	ARITH
U-S	1.6	100	5.5	78	19.1	56	66.0	11	227.8	0	LOG
U-W	-5.0	0	-1.4	0	2.2	17	5.8	17	9.4	17	ARITH
U-W	0.1	100	0.3	83	1.0	17	3.3	17	11.0	0	LOG
PH	5.6	100	6.3	83	6.9	50	7.6	17	8.3	0	ARITH
PH	5.7	100	6.3	83	6.9	50	7.6	17	8.4	0	LOG
COND	4.4	100	138.7	67	273.0	50	407.3	17	541.6	0	ARITH
COND	75.9	100	135.2	67	240.9	50	429.1	0	764.4	0	LOG
HCO3	3.4	100	40.7	67	78.1	67	115.5	0	152.9	0	ARITH
HCO3	20.5	100	37.5	67	68.5	67	125.3	0	229.2	0	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

AREA 52 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY

CORRELATION COEFFICIENTS, LEVEL OF SIGNIFICNCE, NUMBER OF SAMPLES

	U-S	U-W	PH	COND	HCO3	AG	AU	U-HM	W	SN
U-S	*****	0.25	-0.03	0.74	0.63	*****	*****	*****	*****	*****
	-	0-50	C-5C	90-95	80-90	**-**	**-**	**-**	**-**	**-**
	*****	6	6	6	6	0	0	0	0	0
U-W	0.25	*****	0.39	0.34	0.33	*****	*****	*****	*****	*****
	0-50	**-**	50-60	0-50	0-50	**-**	**-**	**-**	**-**	**-**
	6	*****	6	6	6	0	0	0	0	0
PH	-0.03	0.39	*****	0.60	0.72	*****	*****	*****	*****	*****
	0-50	50-60	**-**	60-80	80-90	**-**	**-**	**-**	**-**	**-**
	6	6	*****	6	6	0	0	0	0	0
CCND	0.74	0.34	0.60	*****	0.98	*****	*****	*****	*****	*****
	90-95	0-50	60-80	**-**	99-**	**-**	**-**	**-**	**-**	**-**
	6	6	6	*****	6	0	0	0	0	0
HCO3	0.63	0.33	0.72	C.98	*****	*****	*****	*****	*****	*****
	80-90	0-50	80-9C	99-**	**-**	**-**	**-**	**-**	**-**	**-**
	6	6	6	6	*****	0	0	0	0	0
AG	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
	-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	0	0	0	0	0	*****	0	0	0	0
AU	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
	-	**-**	**-**	**-**	**-**	**-**	*****	**-**	**-**	**-**
	0	0	0	0	0	0	*****	0	0	0
U-HM	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
	-	**-**	**-**	**-**	**-**	**-**	**-**	*****	**-**	**-**
	0	0	0	0	0	0	0	*****	0	0
W	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
	-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	0	0	0	0	0	0	0	0	*****	0
SN	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
	-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	0	0	0	0	0	0	0	0	0	*****

AREA 52 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY

U-S HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV PPM	SAMPLES	CUM FR %	
	0		
0.50		0.00	
	0		
3.00		0.00	
	1		*
3.50		11.11	+
	0		
4.00		11.11	+
	0		
4.50		11.11	+
	0		
5.00		11.11	+
	1		*
5.50		22.22	+
	0		
6.00		22.22	+
	1		*
7.00		33.33	+
	0		
8.00		33.33	+
	0		
9.00		33.33	+
	1		*
10.00		44.44	+
	0		
11.00		44.44	+
	0		
12.50		44.44	+
	0		
14.00		44.44	+
	0		
16.00		44.44	+
	0		
18.00		44.44	+
	0		
20.00		44.44	+
	0		
22.50		44.44	+
	0		
25.00		44.44	+
	0		
28.00		44.44	+
	0		
32.00		44.44	+
	1		*
36.00		55.56	+
	0		
40.00		55.56	+
	0		
45.00		55.56	+
	1		*
50.00		66.67	+
	3		*
99999.00		100.00	+

TOTAL SAMPLES= 9 VALUES < DETECTION = 0 RANGE= 3.0 TO 80.0

AREA 52 LAKE SITE PRINC 1978 GEOCHEMICAL SURVEY

U W HISTOGRAM AND CUMULATIVE FREQUENCY

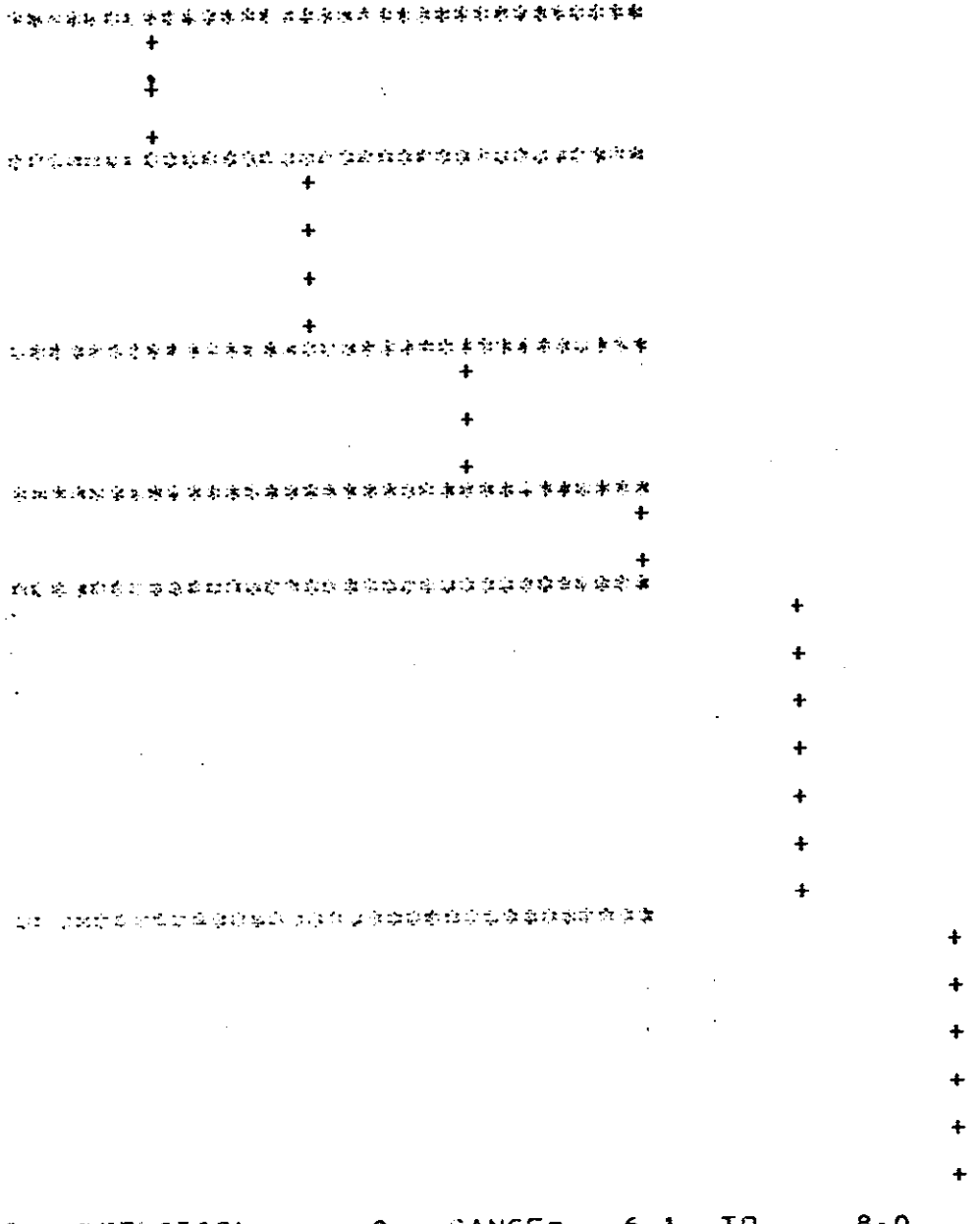
INTERV PPB	SAMPLES	CUM FR %
0.20	0	0.00
0.30	0	0.00
0.40	1	16.67
0.50	0	16.67
0.60	1	33.33
0.80	0	33.33
1.00	1	50.00
1.20	2	83.33
1.60	0	83.33
2.00	0	83.33
2.50	0	83.33
3.20	0	83.33
4.00	0	83.33
5.00	0	83.33
6.30	0	83.33
8.00	0	83.33
10.00	1	100.00
12.50	0	100.00
16.00	0	100.00
20.00	0	100.00
25.00	0	100.00
32.00	0	100.00
40.00	0	100.00
50.00	0	100.00
63.00	0	100.00
80.00	0	100.00
99999.00	0	100.00

TOTAL SAMPLES= 6 VALUES < DETECTION = 0 RANGE= 0.3 TO 9.5

AREA 52 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY

PH HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV	SAMPLES	CUM FR %
	0	
4.00		0.00
	0	
6.10		0.00
	1	
6.20		16.67
	0	
6.30		16.67
	0	
6.40		16.67
	1	
6.50		33.33
	0	
6.60		33.33
	0	
6.70		33.33
	0	
6.80		33.33
	1	
6.90		50.00
	0	
7.00		50.00
	0	
7.10		50.00
	1	
7.20		66.67
	0	
7.30		66.67
	1	
7.40		83.33
	0	
7.50		83.33
	0	
7.60		83.33
	0	
7.70		83.33
	0	
7.80		83.33
	0	
7.90		83.33
	0	
8.00		83.33
	1	
8.10		100.00
	0	
8.20		100.00
	0	
8.30		100.00
	0	
8.40		100.00
	0	
8.50		100.00
	0	
99999.00		100.00

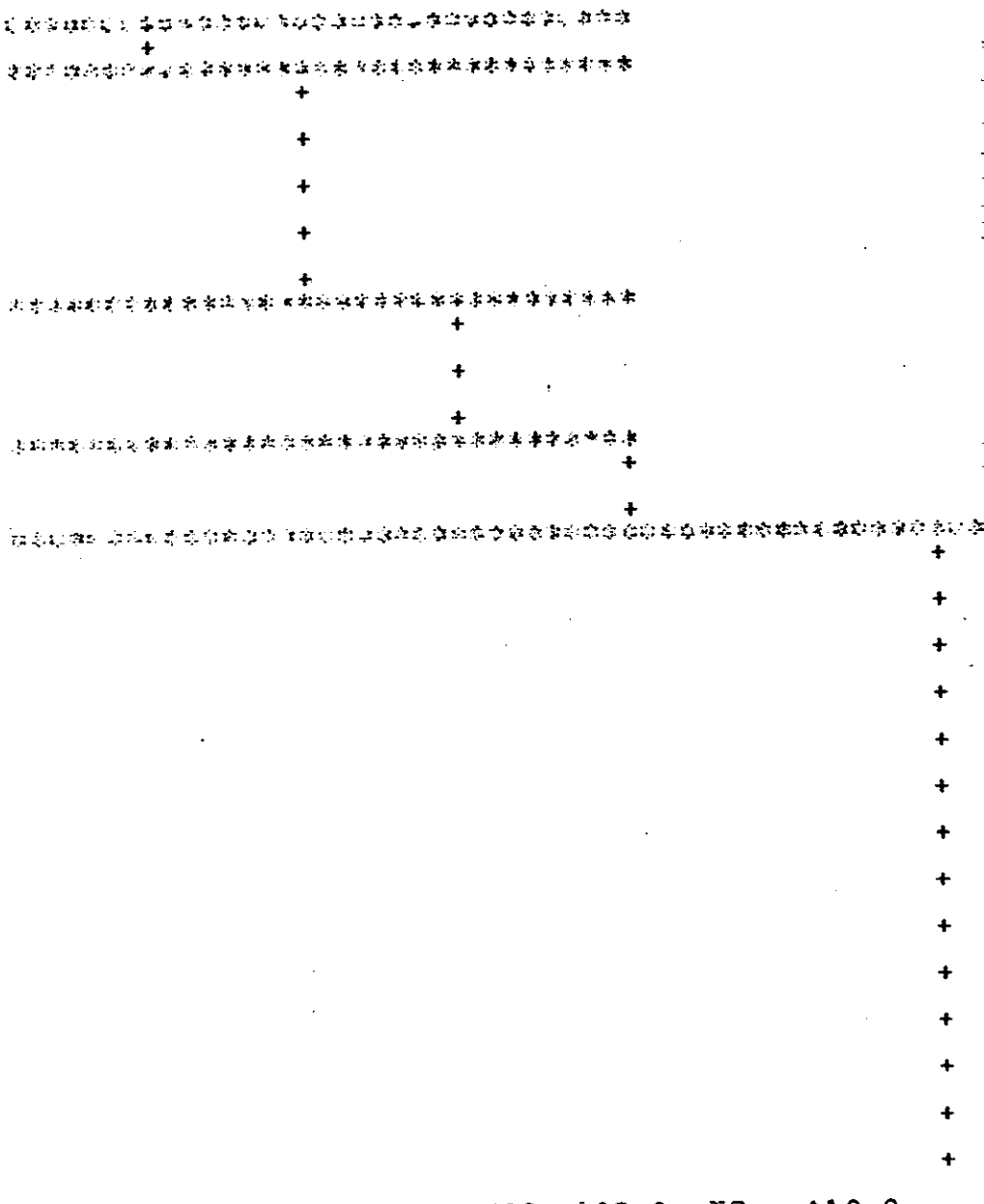


TOTAL SAMPLES= 6 VALUES < DETECTION = 0 RANGE= 6.1 TO 8.0

AREA 52 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY

COND HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV MMHO	SAMPLES	CUM FR %
1.00	0	0.00
100.00	0	0.00
125.00	1	16.67
140.00	1	33.33
160.00	0	33.33
180.00	0	33.33
200.00	0	33.33
225.00	0	33.33
250.00	1	50.00
280.00	0	50.00
320.00	0	50.00
360.00	1	66.67
400.00	0	66.67
450.00	2	100.00
500.00	0	100.00
560.00	0	100.00
630.00	0	100.00
710.00	0	100.00
800.00	0	100.00
900.00	0	100.00
1000.00	0	100.00
1250.00	0	100.00
1400.00	0	100.00
1600.00	0	100.00
2000.00	0	100.00
2500.00	0	100.00
99999.00	0	100.00



TOTAL SAMPLES= 6 VALUES < DETECTION = 0 RANGE= 109.0 TO 410.0

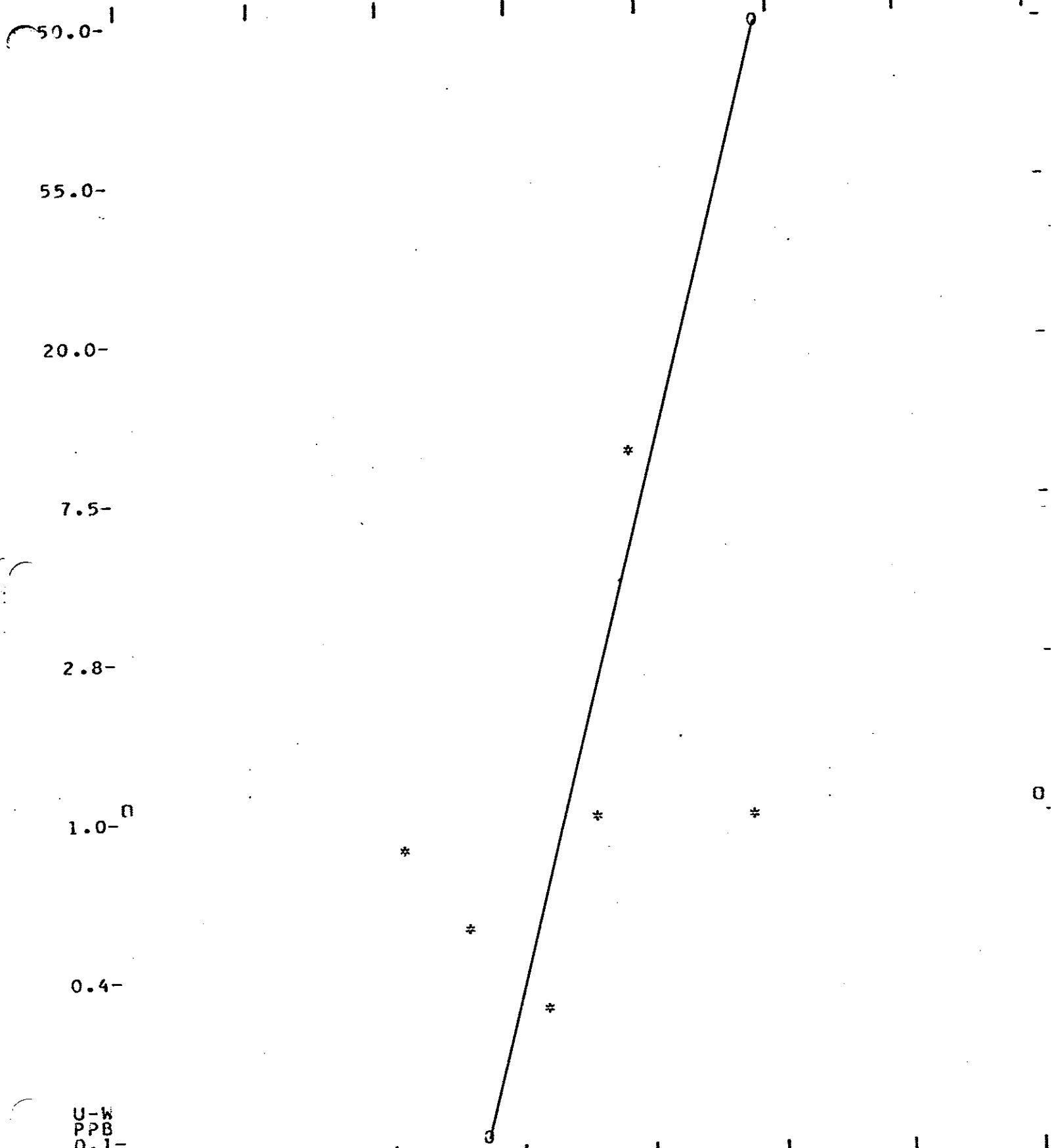
AREA 52 LAKE SITE PFINIC 1978 GEOCHEMICAL SURVEY

HCO3 HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV MG/L	SAMPLES	CUM FR %	
	0		
1.00		0.00	
	0		
28.00		0.00	
	1		*
32.00		16.67	+
	1		*
35.00		33.33	+
	0		
40.00		33.33	+
	0		
45.00		33.33	+
	0		
50.00		33.33	+
	0		
56.00		33.33	+
	0		
63.00		33.33	+
	0		
71.00		33.33	+
	0		
80.00		33.33	+
	1		*
90.00		50.00	+
	0		
100.00		50.00	+
	2		*
112.00		83.33	+
	1		*
125.00		100.00	+
	0		
140.00		100.00	+
	0		
60.00		100.00	+
	0		
180.00		100.00	+
	0		
200.00		100.00	+
	0		
225.00		100.00	+
	0		
250.00		100.00	+
	0		
280.00		100.00	+
	0		
320.00		100.00	+
	0		
360.00		100.00	+
	0		
400.00		100.00	+
	0		
450.00		100.00	+
	0		
99999.00		100.00	+

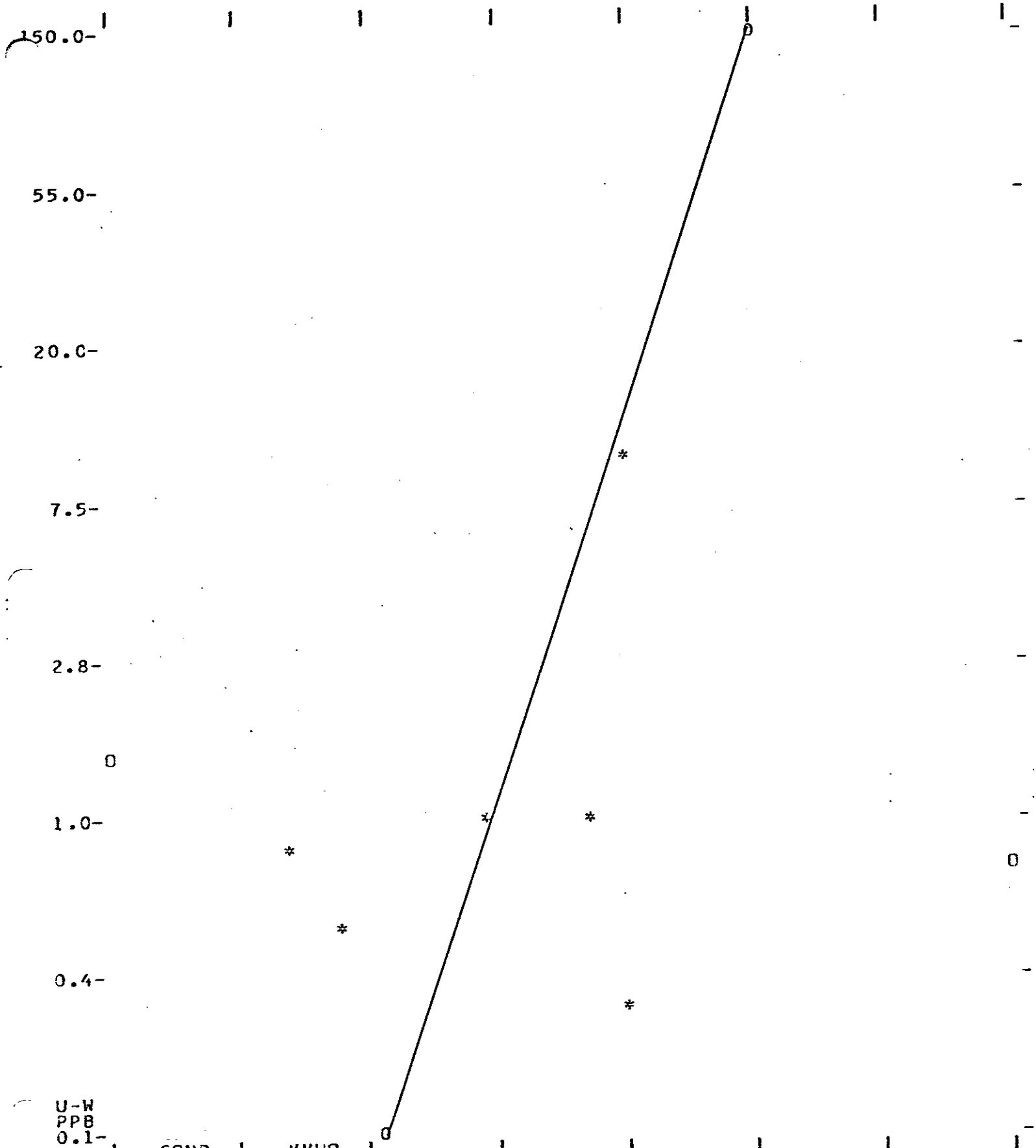
TOTAL SAMPLES= 6 VALUES < DETECTION = 0 RANGE= 31.3 TO 112.0

AREA 52 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF U-W VS PH



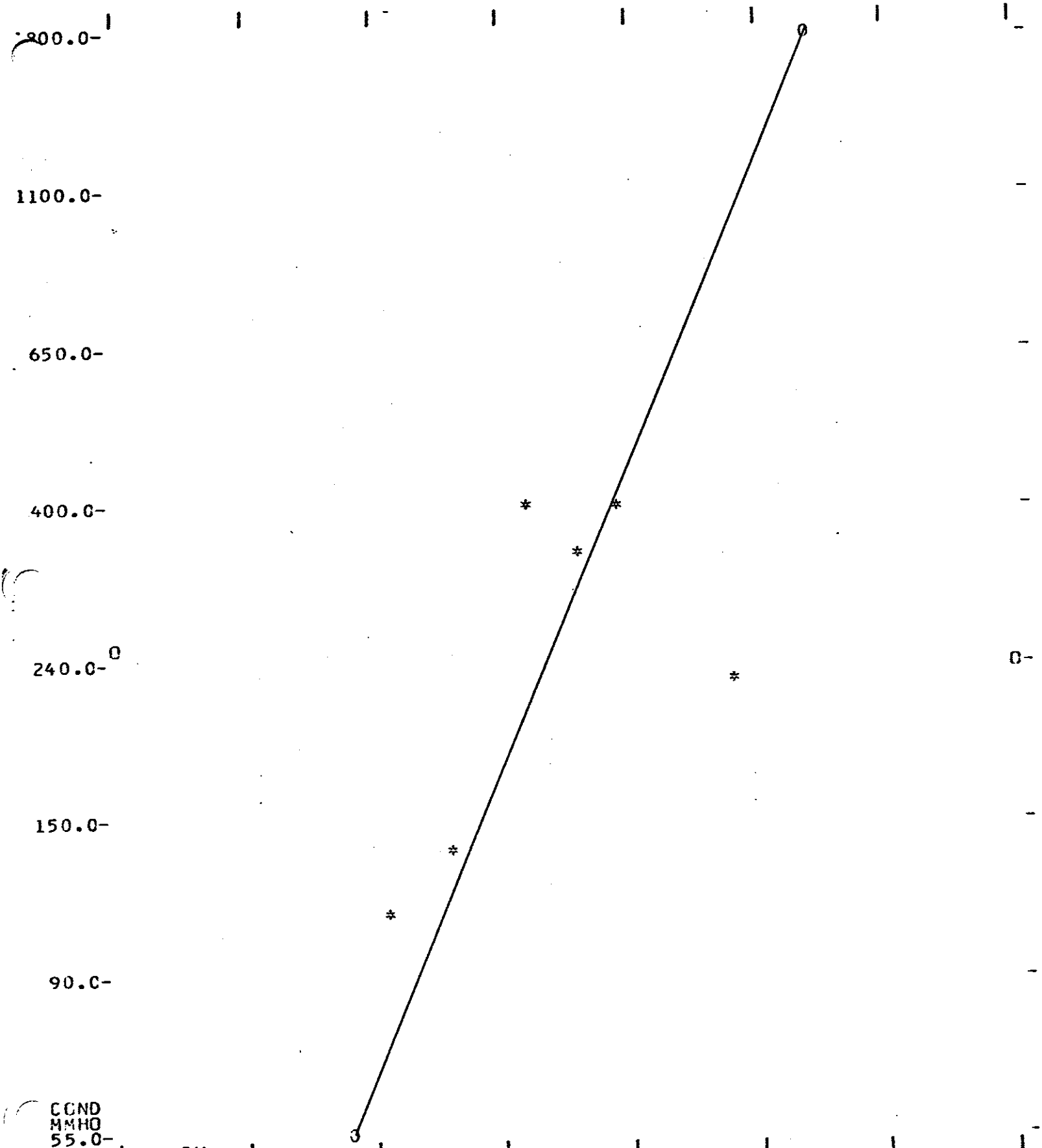
6 SETS USED--VALUES<DETECTION: 0 PH 0 U-W--COR COEF= 0.39--PREDICT 15

AREA 52 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF U-W VS COND



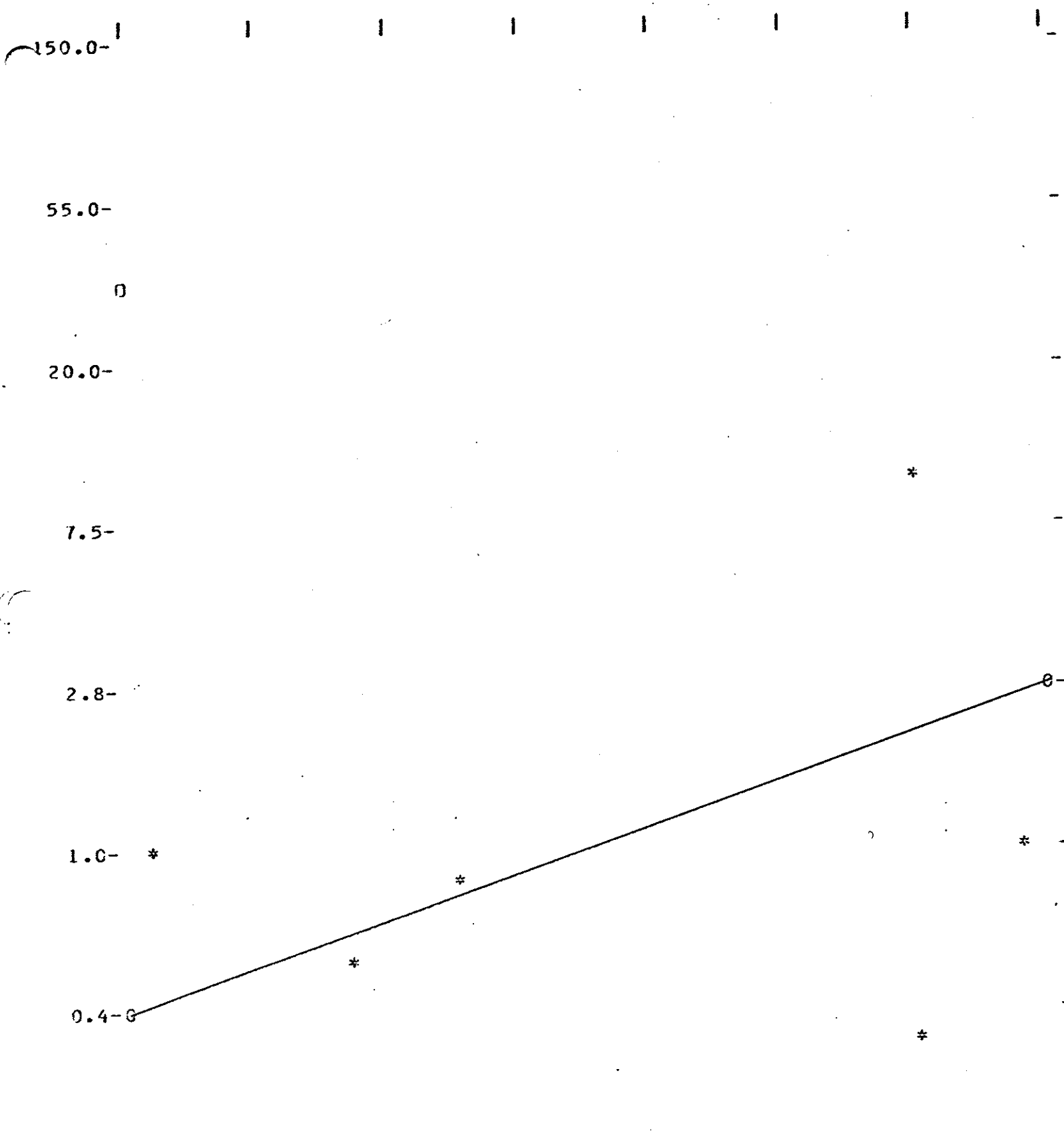
6 SETS USED--VALUES<DETECTION: 0 COND 0 U-W--COR COEF= 0.34--PREDICT 11%

AREA 52 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF COND VS PH



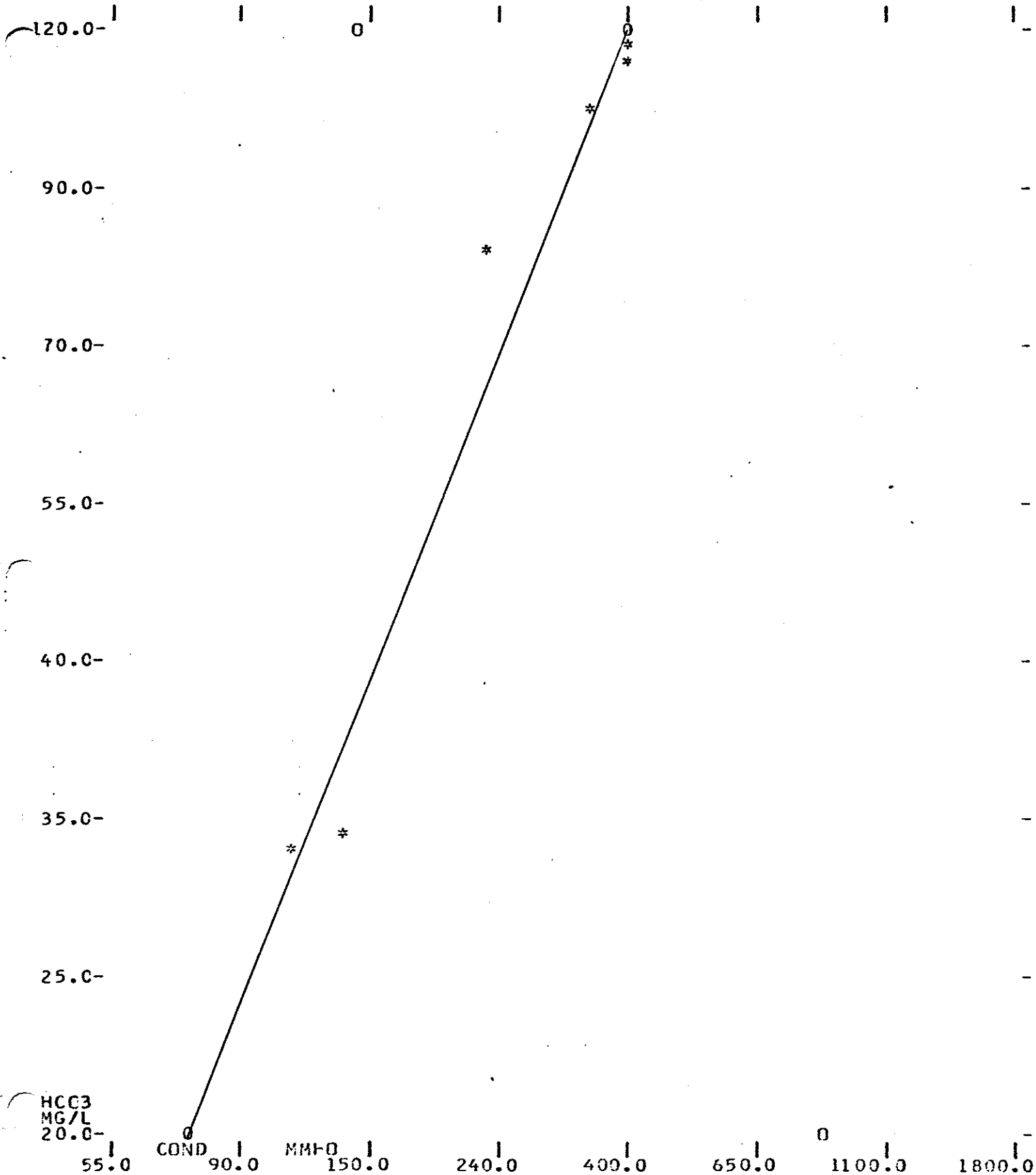
6 SETS USED--VALUES<DETECTION: 0 PH 0 COND--COR COEF= 0.60--PREDICT 36%

AREA 52 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF U-W VS U-S



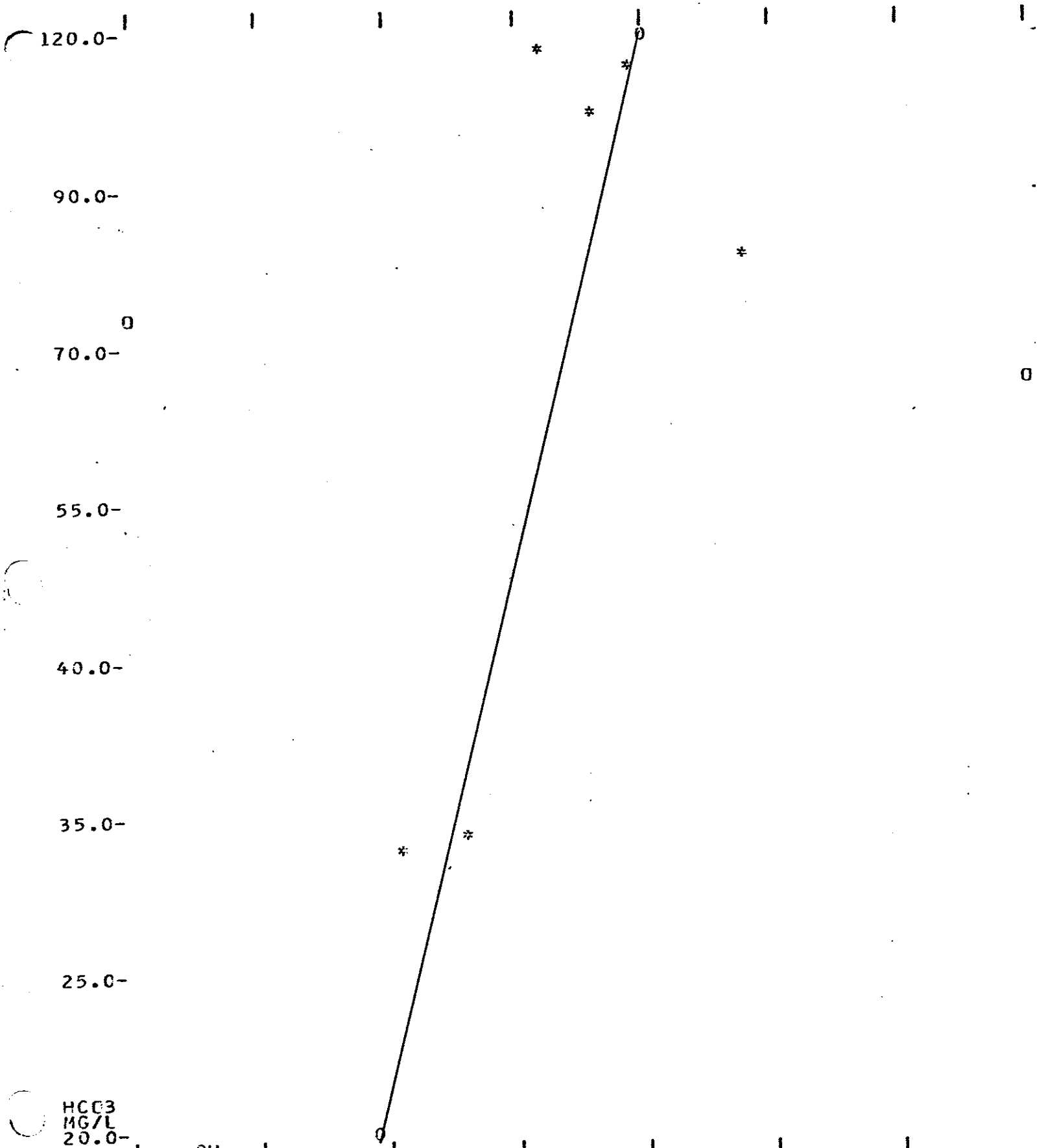
6 SETS USED--VALUES<DETECTION: 0 U-S 0 U-W--COR COEF= 0.25--PREDICT 6%

AREA 52 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF HCO3 VS COND



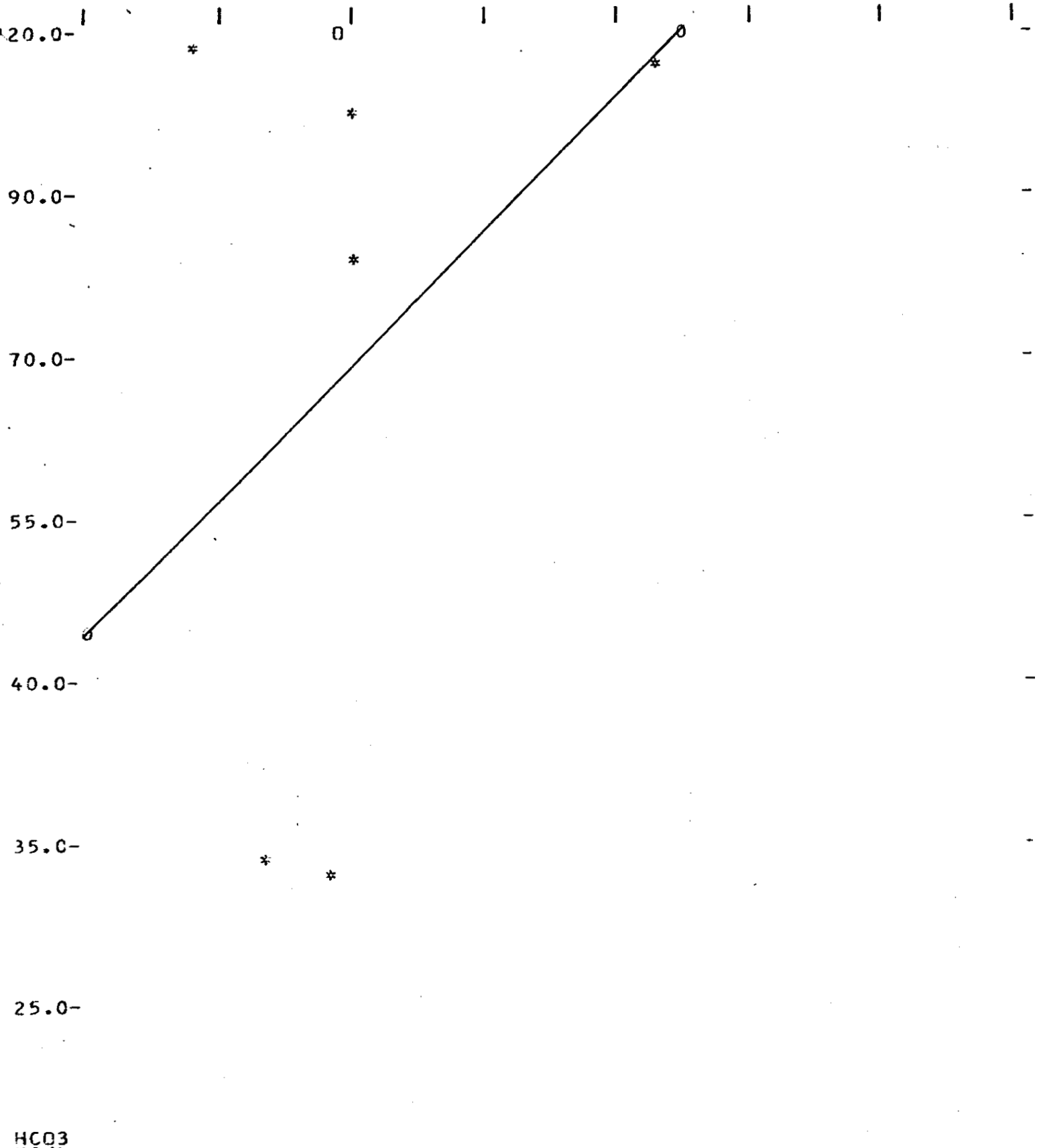
6 SETS USED--VALUES<DETECTION: 0 COND 0 HCO3--COR COEF= 0.98--PREDICT 96%

AREA 52 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF HCO3 VS PH



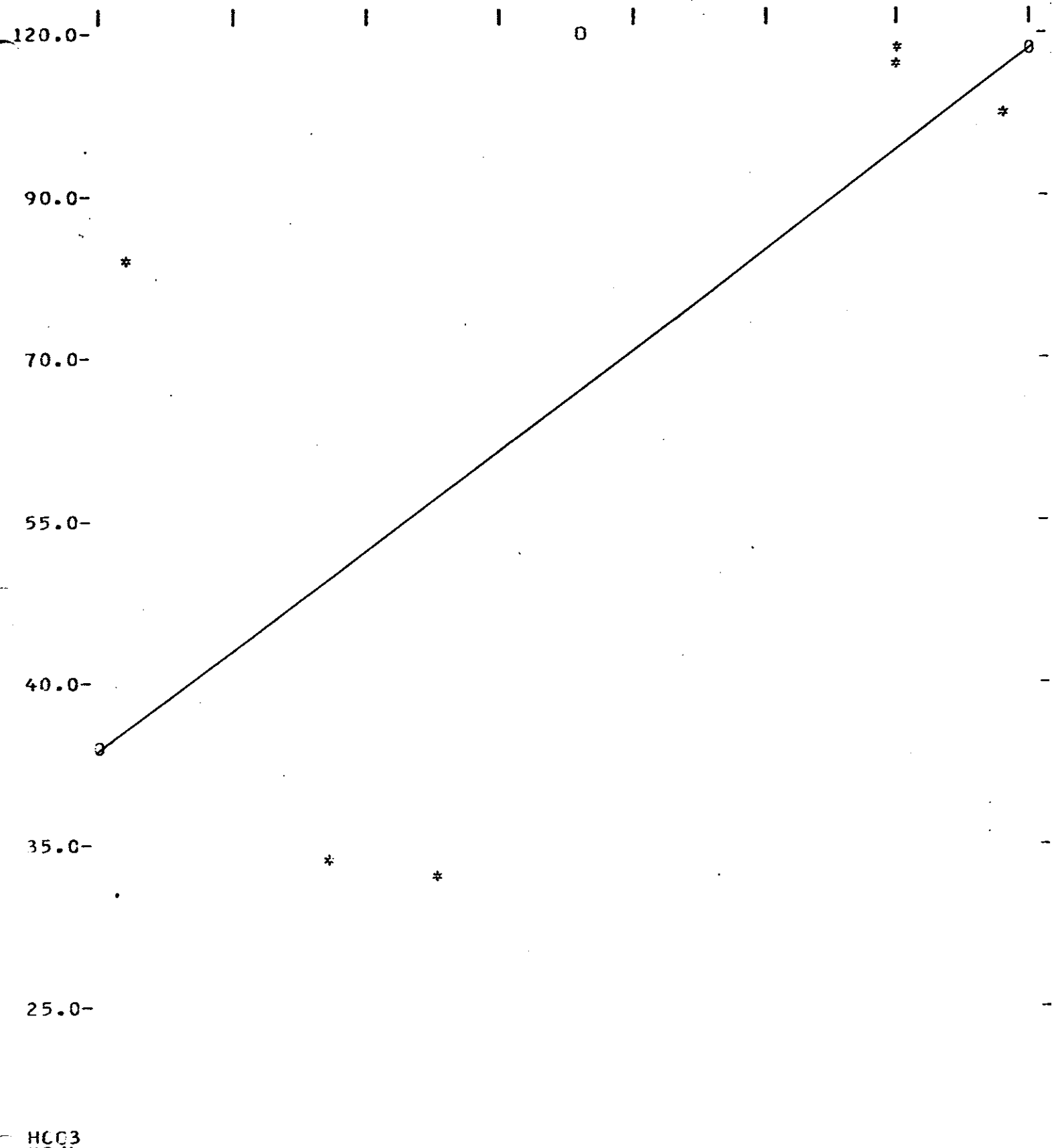
6 SETS USED--VALUES<DETECTION: 0 PH 0 HCO3--COR COEF= 0.72--PREDICT 52

AREA 52 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF HCO3 VS U-W



6 SETS USED--VALUES<DETECTION: 0 U-W 0 HCO3--COR COEF= 0.33--PREDICT 11%

AREA 52 LAKE SITE PRINIC 1978 GEOCHEMICAL SURVEY
SCATTERGRAM AND LINEAR REGRESSION OF HCO3 VS U-S



6 SETS USED--VALUES<DETECTION: 0 U-S 0 HCO3--COR COEF= 0.63--PREDICT 40%

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: $MG = \mathrm{Exp}\left[\frac{1}{N} \sum \ln (E)\right]$

d) LN DEV (Deviation of the Logarithms):

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

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 x 15 = 40 ppm
LOG - VALUE is $\text{Exp}\left[\ln (MG) + 2 \times \ln (LD)\right] = \text{Exp}\ (3.33) = 28$ ppm

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

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

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 occurrance 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 occurrances 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.

STATEMENT OF EXPENDITURES

BALD 1-4 Claims

Salaries	8 man days @ $158/m.d.	$ 1,264
Travel and accommodation		873
Geochemical analysis		897
Computer analysis		625
Consultant fees		366
Drafting and reproduction		219
Camp costs and supplies		258
Rental of equipment		50
Other work		408
	Total	$ 4,960

Note:

1) Above expenditures pro-rated on basis of 8 man days work on claims out of total 107 man days work on Prinic claims. See also Prinic Statement of Expenditures attached.

2) Above expenditures are allocated equally to surveys as follows:

i) Geological survey	$1,653	$206/m.d.	or $27/unit
ii) Geochemical "	1,653	206/m.d.	27/ "
iii) Geophysical "	1,654	206/m.d.	27/ "
Total	$4,960	$620/m.d.	80/ "

7332

PROJECT PRINIC CLAIMS - 1978

Name	No. of Units	Man-Days	Work filed	PAC	Cash in lieu	Total
Bald	62	8	$4,960	$1,490	-	$ 6,450
Short	12	5	3,100	930	-	4,030
Coma	36	11	6,820	2,045	-	8,865
Dark	76	4	2,480	745	4,400	7,625
Demuth	20	2	1,240	370	400	2,010
Tok	80	8	4,960	1,490	1,600	8,050
Shin	33	4	2,480	745	100	3,325
Clark	83	15	9,300	2,790		12,090
Fred	30	8	4,960	1,490		6,450
Stake	30	7	4,340	1,300		5,640
Link	42	14	8,680	2,600		11,280
Fox	12	9	5,580	1,675		7,255
Eneas	66	12	7,440	2,230		9,670
	582	107	$66,340	$19,900	$6,500	$92,740

Project PRINIC Assessment Expenditures - 1978

Salaries	$ 16,905
Travel and accommodation	11,671
Geochemical analyses	12,002
Computer analysis	8,365
Consultant fees	4,901
Drafting and reproduction	2,925
Camp costs and supplies	3,455
Rental of Equipment	665
Other work	5,451
Total	$ 66,340

Notes

1) Salaries - Canadian Oxy field personnel salaries and benefits while engaged on project and report writing. Avg. cost ($16,905 ÷ 107 man days) = $158/m.d. or $29.05/claim unit.

2) Travel and accommodation - Costs of moving men, material and equipment to various claim areas and living costs while completing surveys. Avg. cost ($11,671 ÷ 107 m.d.) = $109/m.d. or $20.05 per claim unit.

3) Geochemical analyses - Samples analyzed by Chemex Labs, Vancouver. Total of 1807 samples analyzed for U, W, Ag. Au, HCO_3, etc., at cost of $12,002. Avg. cost $6.64/sample.

4) Computer analysis - computer plotting of 1807 determinations by C.A.S.E. Ltd., Toronto. Total cost of $8,365 or avg. cost of $4.63/determination.

5) Consultant fees - student instruction, and data interpretation by C.F. Gleeson and Associates Ltd. Avg. cost ($4,901 ÷ 12 days) = $408/day.

6) Drafting and reproduction - report and map compilation and drafting by R. Paluoja Mapping. Toronto. Reproduction completed by Paragon Reproduction Services, Toronto. Avg. cost ($2,925 ÷ 582) = $5.03/unit.

7) Camp costs and supplies - food and field items purchased for the project - Avg. cost ($3,455 ÷ 107) = $32.29/m.d. or $5.94/unit.

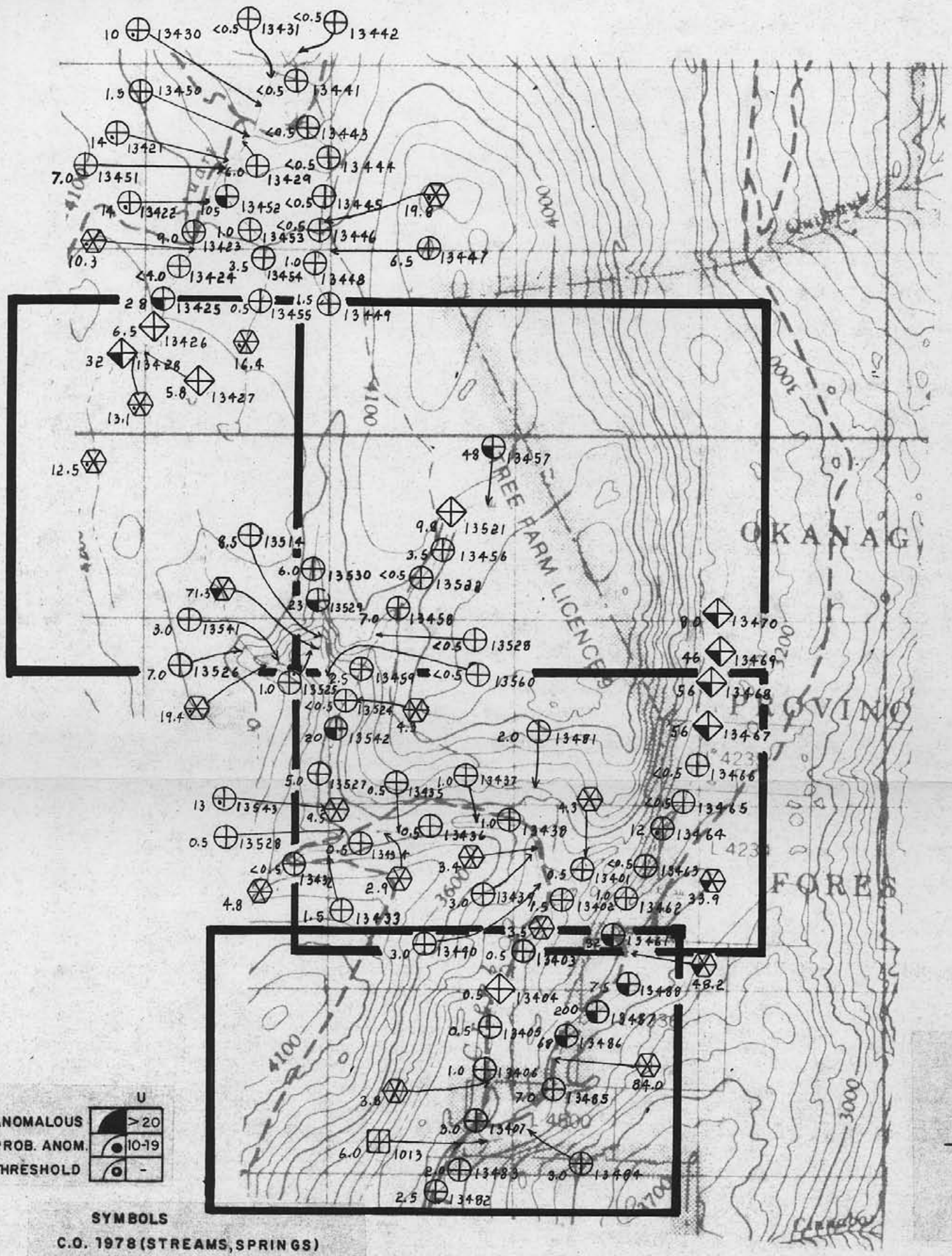
8) Rental of Equipment - company truck (1900 miles @ 35¢/mi)=$665.

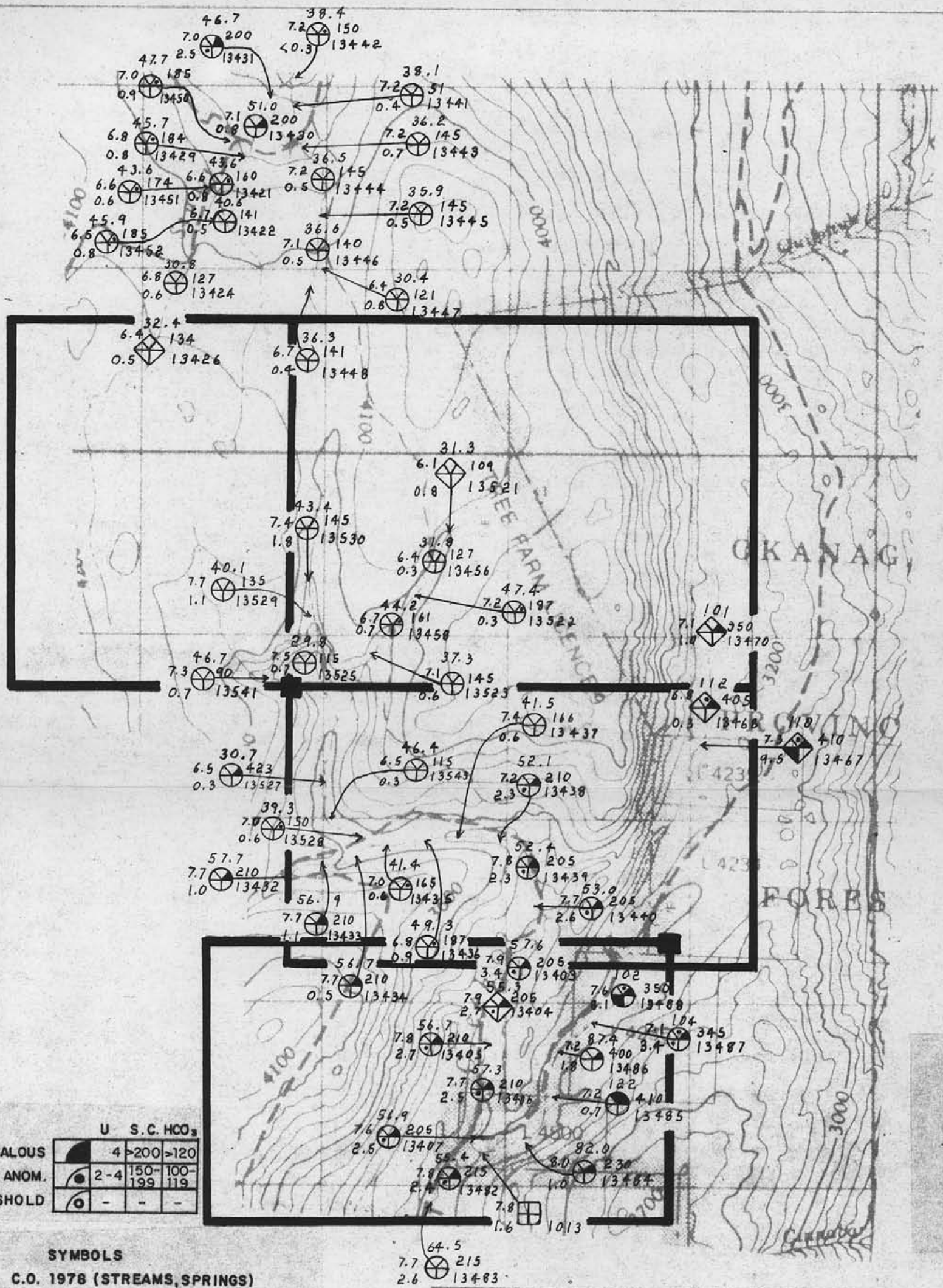
9) Other work - Sundry project expenses (communications, typing) and project supervision and administration. Avg. cost ($5,451 ÷ 107) = $50.94/m.d. or $9.37/unit.

...2

The above expenditures cover geological, geophysical and geochemical surveys and could be broken down as follows:

Geological Surveys -	$22,113	or $620/m.d.	or $38/unit
Geochemical Surveys -	22,112	"	"
Geophysical Surveys -	22,114	"	"
Total	$66,340	$620/m.d.	$38/unit


U
ANOMALOUS >20
PROB. ANOM. 10-19
THRESHOLD -
SYMBOLS
C.O. 1978 (STREAMS, SPRINGS)
ppm U Sample Nº
C.O. 1978 (LAKES, SWAMPS)
ppm U Sample Nº
G.S.C. [URP] 1976
ppm U Sample Nº
C.O. PRINCETON / NICKY 1973, 1974
ppm U
7332
CANADIAN OCCIDENTAL PETROLEUM LTD
MINERALS DIVISION
PROJECT PRINIC
SOUTHERN BRITISH COLUMBIA
AREA ——— 52,53
SEDIMENT GEOCHEMISTRY
BALD CLAIMS
Scale 1:25,000
September 1978
N.T.S. 82-L/4E
PLAN 17A
-N-
OKANAGAN
PROVINCIAL FOREST
TREE FARM LICENCE



	U	S.C.	HCO_3
ANOMALOUS	4	>200	>120
PROB. ANOM.	2-4	150-199	100-119
THRESHOLD	-	-	-

SYMBOLS

C.O. 1978 (STREAMS, SPRINGS)

pH S.C. / ppbU Sample N° — pH HCO_3 S.C. / ppbU Sample N°

C.O. 1978 (LAKES, SWAMPS)

pH S.C. / ppb U Sample N° — pH HCO_3 S.C. / ppbU Sample N°

G.S.C. [URP] 1976

pH / ppbU Sample N°

HCO_3 in mg/l
S.C. in μ mhos

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CANADIAN OCCIDENTAL PETROLEUM LTD
MINERALS DIVISION

PROJECT PRINIC
SOUTHERN BRITISH COLUMBIA
AREA ——— 52,53

WATER GEOCHEMISTRY

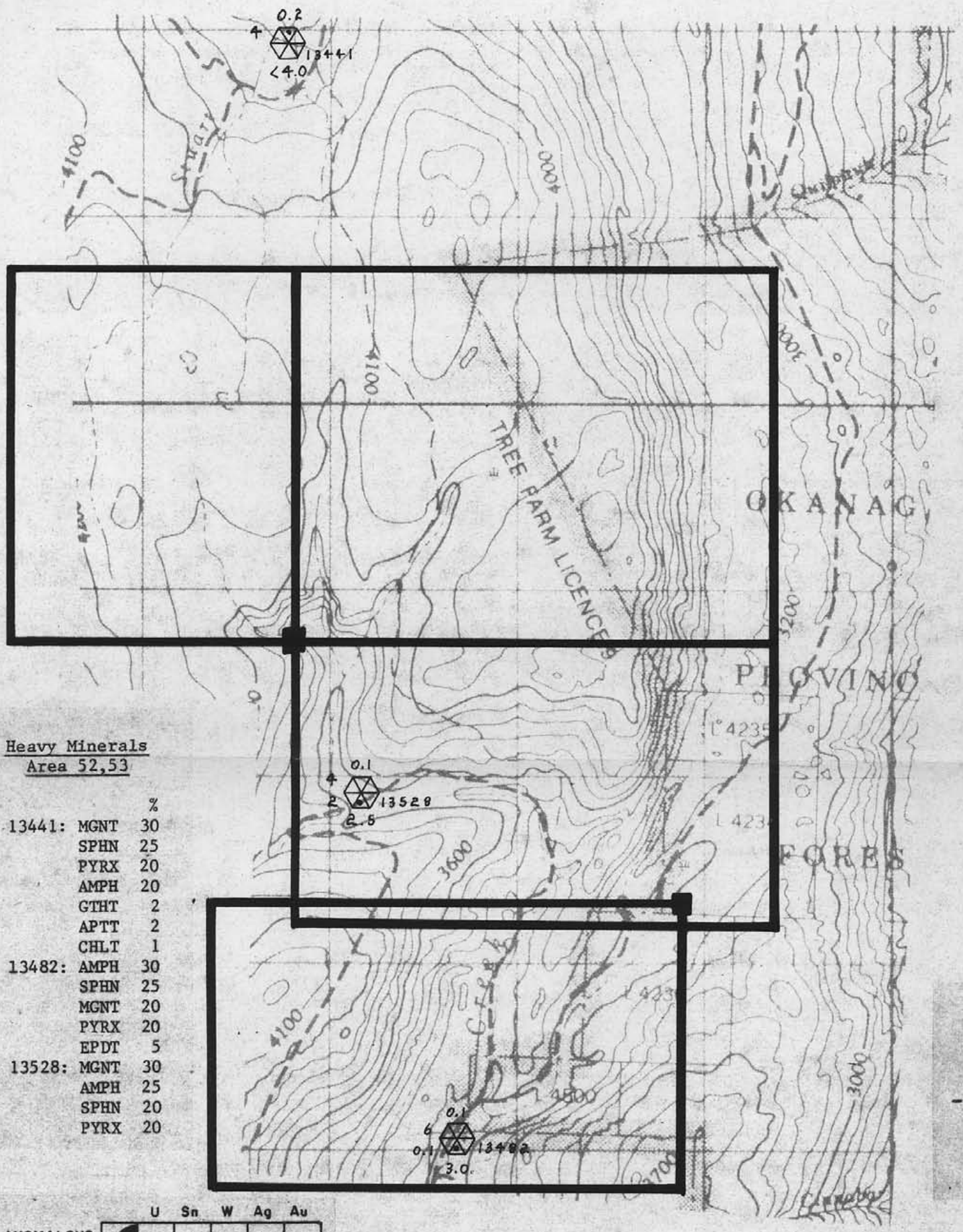
BALD CLAIMS

Scale 1:25,000

September 1978

N.T.S. 82-L/4E

PLAN 17B



Heavy Minerals
Area 52,53

		%
13441:	MGNT	30
	SPHN	25
	PYRX	20
	AMPH	20
	GTHT	2
	APTT	2
	CHLT	1
13482:	AMPH	30
	SPHN	25
	MGNT	20
	PYRX	20
	EPDT	5
13528:	MGNT	30
	AMPH	25
	SPHN	20
	PYRX	20

	U	Sn	W	Ag	Au
ANOMALOUS	-	-	-	-	-
PROB. ANOM	>2.5	-	-	>0.2	-
THRESHOLD	-	-	-	-	-

SYMBOLS
C.O. 1978

ppm Ag
ppm W — ppb Au
ppm Sn — Sample Nº
ppm U

7332

CANADIAN OCCIDENTAL PETROLEUM LTD
MINERALS DIVISION

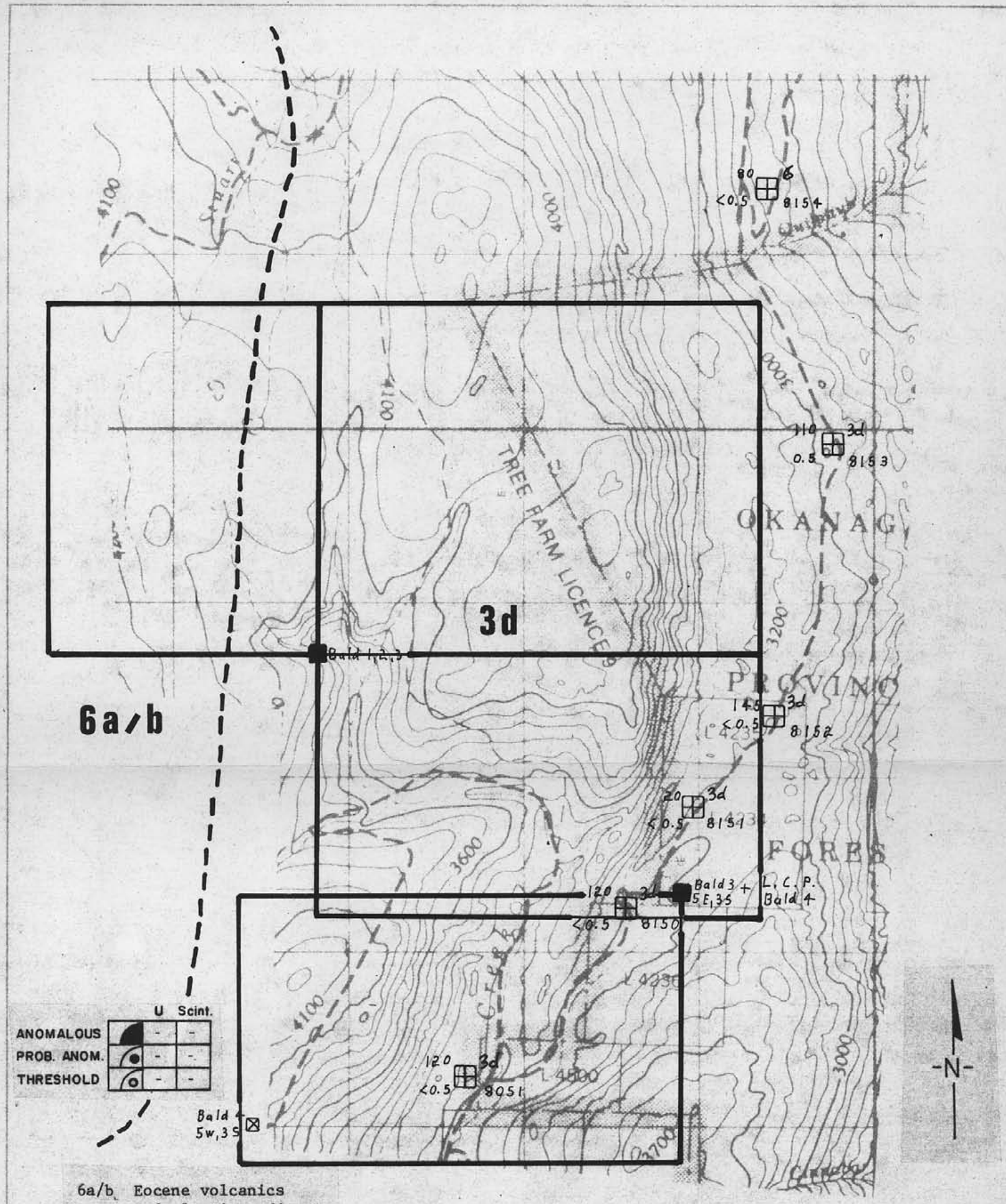
PROJECT PRINIC
SOUTHERN BRITISH COLUMBIA
AREA ——— 52,53

HEAVY MINERAL GEOCHEMISTRY

BALD CLAIMS

Scale 1:25,000

September 1978 N.T.S. 82-L/4E PLAN 17C



6a/b Eocene volcanics and clastic sediments

3d Jurassic-Similkameen quartz diorite

7332

SYMBOLS
C.O. 1978

Scintillometer (cps) ppmU — Rock Unit — Sample No.

CANADIAN OCCIDENTAL PETROLEUM LTD
MINERALS DIVISION

PROJECT PRINIC
SOUTHERN BRITISH COLUMBIA
AREA ——— 52,53

GEOLOGY & ROCK GEOCHEMISTRY

BALD CLAIMS

Scale 1:25,000

September 1978 N.T.S. 82-L/4E PLAN 17D