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ANALYSES OF ROCK AND STREAM-SEDIMENT SAMPLES FROM THE SUMDUM A-4 QUADRANGLE, ALASKA

By

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and Raymond Wehr

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INTRODUCTION

Analytical data for 118 rock and 34 stream-sediment samples from the Sumdum A-4 , 1:63,360 scale quadrangle are presented in this report, together with a statistical treatment of the data. The samples were collected in 1969 as part of the Heavy Metals Program of the U.S. Geological Survey.

The most comprehensive discussion of the geology of the study area is a report by A. F. Buddington and Theodore Chapin (1929). Known metalliferous lodes of the area are described and additional references to specific areas are given by Berg and Cobb (1967). Additional data is given in reports by Herbert and Race (1964) and Alaska Department of Mines (1950). Supplemental publications are being prepared on the general geology and mineral occurrences of the study area.

Procedures and treatment of data

Standard procedures were followed in the collection and preparation of samples.

Rock samples are primarily grab samples from mineral occurrences and outcrops. They were chosen for analysis to provide data on background, because they were in the area of mineral occurrences or stream-sediment anomalies, because they were strongly iron stained, or contained visible sulfides.

Stream-sediment samples were generally collected from the active stream channel; where this was not possible, samples were collected from bank or terrace deposits adjacent to the channel.

Rock samples were crushed and pulverized and the minus 80 mesh fraction analyzed. Stream-sediment samples were dried, sieved, and the minus 80 mesh fraction analyzed. The minus 80 mesh fractions of the

samples were analyzed for 30 elements by the six-step semiquantitative spectrographic method and for gold by the atomic absorption method.[1/]

The spectrographic analyses were reported in percentage (pct) or parts per million (ppm) to the nearest number in the series 1.0, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. The precision of a reported value is approximately plus 100 percent or minus 50 percent. Analyses for gold by the atomic absorption method are accurate to ± 100 percent. Minimum limits of determination for each element are given on page 6. Semiquantitative spectrographic analyses were done by K. J. Curry and atomic absorption analyses were done by R. L. Miller, R. B. Tripp, H. D. King, and A. L. Meier.

Locations of the rock and stream-sediment samples are shown on Plate 1. Rock sample descriptions are given in table 1 and rock sample analyses are tabulated in table 2 and stream-sediment analyses are tabulated in table 3.

The results of the analyses of the rock and stream-sediment analyses have been processed by means of a computer program known as GEOSUM and are presented in tables 2 and 3. The GEOSUM program is designed primarily for summarizing and tabulating geochemical data--especially data from semiquantitative spectrographic analyses (commonly referred to as six-step spectrographic analyses) by the laboratories of the U.S. Geological Survey.

The program output consists of: (a) a tabulation of the data, (b) histograms and cumulative frequency distributions for all elements except tungsten, and (c) a statistical summary which includes geometric means and geometric deviations.

[1/] Analyses for 29 elements by semiquantitative analyses and for gold by atomic absorption are given in the tables. Semiquantitative analyses for gold are omitted.

Table 1.--Description of rock, vein, and altered zone samples from the Sumdum A-4 quadrangle. (All samples are of representative material.) Sample localities are shown by sample number plotted on the accompanying map, Plate 1.

Sample No.	Lab. No.	Sample Description
1	AMG-657	Platy phyllite
2	AKD-768	Iron-stained biotite schist
3	AMG-655	Biotite quartz phyllite
4	-687	Biotite feldspar garnet quartz gneiss
5	AKD-769	Biotite garnet kyanite gneiss
6	AMG-686	Phyllite
7	-685	Phyllite
8	-652	Biotite garnet quartz gneiss
8	-653	Biotite feldspar quartz gneiss
8	-654	Quartz vein
9	-693	Pyrrhotite bearing biotite hornblende quartz gneiss
10	-690	Pyrrhotite bearing biotite hornblende quartz gneiss
11	-689	Iron-stained biotite feldspar garnet quartz gneiss
12	-688	Iron-stained biotite feldspar garnet quartz gneiss
13	AKD-752	Muscovite quartz phyllite
14	-639	Sheared and silicific muscovite quartz garnet
15	AMG-684	Epidotized greenstone breccia
16	AKD-640	Sheared and silicified greenstone
17	-641	Sheared and silicified greenstone
18	-642	Sheared and silicified greenstone
19	-753	Sheared phyllite
20	-644	Greenstone
21	AMG-650	Greenschist
22	AKD-645	Pyritic greenstone conglomerate
22	-646	Pyritic greenstone conglomerate
23	-647	Pyritized micaceous quartz greenschist
23	-648	Pyritized micaceous quartz greenschist
23	-649	Pyritized micaceous quartz greenschist
23	-650	Pyritized micaceous quartz greenschist
23	-744	Pyritized micaceous quartz greenschist
23	-745	Pyritized greenstone
23	-746	Pyritized greenstone
24	AMG-680	Feldspar hornblende gneiss
24	-681	Biotite quartzite
25	-679	Biotite garnet hornblende quartz schist
26	-678	Greenschist
27	-677	Greenschist
28	-676	Greenschist
29	-675	Greenschist

Table 1.--Description of rock, vein, and altered zone samples from the Sumdum A-4 quadrangle. (All samples are of representative material.) Sample localities are shown by sample number plotted on the accompanying map, Plate 1 --Continued

Sample No.	Lab. No.	Sample Description
30	AKD-755	Pyritic greenschist
31	-747	Pyritic greenschist
31	-748	Pyritic greenschist
31	-749	Pyritic greenschist
32	-756	Pyritized argillite
33	-757	Quartz vein
34	-759	Pyritized argillite
34	-758	Pyritized argillite
34	-760	Pyritized argillite
35	-762	Iron-stained greenstone
36	-761	Iron-stained argillite
37	-750	Sheared greenstone
38	AMG-674	Sheared greenstone
39	AKD-664	Biotite garnet schist
40	-665	Iron-stained biotite quartzite
41	AMG-673	Phyllite
42	-672	Phyllite
43	-670	Hornblende greenstone
44	-658	Greenschist
45	-659	Biotite schist
46	-660	Phyllite
46	-661	Quartz pods
47	-648	Greenstone
47	-649	Greenstone
48	AKD-754	Pyritic greenstone
49	AMG-683	Phyllite
50	AKD-667	Biotite schist
51	AMG-671	Hornblende greenstone
52	AKD-675	Greenschist
53	AMG-668	Greenschist
54	-669	Greenschist
55	-662	Phyllite
56	-663	Phyllite
57	AKD-450	Greenschist
57	-451	Iron-stained bleached greenschist
58	-449	Iron-stained silicified greenschist
59	-447	Iron-stained greenschist
59	-448	Pyrrhotite bearing foliated greenstone
60	-443	Iron-stained greenschist
60	-444	Malachite stained graywacke

Table 1.--Description of rock, vein, and altered zone samples from the Sumdum A-4 quadrangle. (All samples are of representative material.) Sample localities are shown by sample number plotted on the accompanying map, Plate 1 --Continued

Sample No.	Lab. No.	Sample Description
30	AKD-755	Pyritic greenschist
31	-747	Pyritic greenschist
31	-748	Pyritic greenschist
31	-749	Pyritic greenschist
32	-756	Pyritized argillite
33	-757	Quartz vein
34	-759	Pyritized argillite
34	-758	Pyritized argillite
34	-760	Pyritized argillite
35	-762	Iron-stained greenstone
36	-761	Iron-stained argillite
37	-750	Sheared greenstone
38	AMG-674	Sheared greenstone
39	AKD-664	Biotite garnet schist
40	-665	Iron-stained biotite quartzite
41	AMG-673	Phyllite
42	-672	Phyllite
43	-670	Hornblende greenstone
44	-658	Greenschist
45	-659	Biotite schist
46	-660	Phyllite
46	-661	Quartz pods
47	-648	Greenstone
47	-649	Greenstone
48	AKD-754	Pyritic greenstone
49	AMG-683	Phyllite
50	AKD-667	Biotite schist
51	AMG-671	Hornblende greenstone
52	AKD-675	Greenschist
53	AMG-668	Greenschist
54	-669	Greenschist
55	-662	Phyllite
56	-663	Phyllite
57	AKD-450	Greenschist
57	-451	Iron-stained bleached greenschist
58	-449	Iron-stained silicified greenschist
59	-447	Iron-stained greenschist
59	-448	Pyrrhotite bearing foliated greenstone
60	-443	Iron-stained greenschist
60	-444	Malachite stained graywacke

Table 1.--Description of rock, vein, and altered zone samples from the Sumdum A-4 quadrangle. (All samples are of representative material.) Sample localities are shown by sample number plotted on the accompanying map, Plate 1.--Continued

Sample No.	Lab. No.	Sample Description
60	AKD-445	Copper stained bleached graywacke
60	-446	Iron-stained bleached graywacke
60	-492	Biotite hornblende quartz gneiss
61	AMG-682	Quartose greenstone
62	AKD-437	Iron-stained greenschist
62	-438	Bleached greenschist
62	-439	Iron-stained greenschist
63	-436	Greenschist
64	-435	Greenschist
65	-433	Andesite dike
65	-434	Iron-stained argillite
66	AMG-667	Phyllite
67	AKD-742	Phyllite
68	AMG-666	Phyllite
69	-664	Phyllite
69	-665	Quartz pods
70	AKD-741	Phyllite
71	-740	Phyllite
72	-739	Phyllite
72	-738	Quartzite
73	-737	Phyllite (quartzose)
74	-736	Greenschist
75	-735	Biotite amphibolite
76	-734	Biotite chlorite schist
77	-733	Biotite chlorite schist
78	-731	Biotite schist
78	-732	Pyritic quartz pods
79	-730	Argillite
80	-729	Biotite garnet amphibolite
81	-728	Biotite schist
82	-727	Biotite schist
83	-725	Biotite schist
83	-726	Pyrrhotite bearing quartz pod
84	-723	Pyrrhotite bearing quartz pod
84	-724	Biotite gneiss
85	-722	Biotite schist
86	-720	Biotite schist
86	-721	Quartz pod
87	-719	Biotite schist

Explanation of Tables 2 and 3

Analytical results from rock and stream-sediment samples are given in Tables 2 and 3 as analytical values such as 7.0000 ppm, 10.0000 percent, etc., or as qualified values expressed as a letter. These letter codes are N = not detected, L = less than specified limit of detection, G = greater than value shown, B = no data, H = interference. The term T = trace, but does not occur in these data. Note that the right-most zero digits for each analytical value may or may not be significant. The specified limits of detection are as follows:

Specified limits of detection

FE PCT	MG PCT	CA PCT	TI PCT	MN PPM	AG PPM
0.05000	0.02000	0.05000	0.00200	20.00000	0.10000
AS PPM	AU PPM	B PPM	BA PPM	BE PPM	BI PPM
0.20000	0.02000	10.00000	20.00000	1.00000	10.00000
CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM
5.00000	5.00000	2.00000	20.00000	2.00000	10.00000
NI PPM	PB PPM	SB PPM	SC PPM	SN PPM	SR PPM
2.00000	10.00000	0.50000	5.00000	10.00000	50.00000
V PPM	W PPM	Y PPM	ZN PPM	ZR PPM	
5.00000	50.00000	5.00000	25.00000	10.00000	

Semiquantitative spectrographic analyses by the U.S. Geological Survey are reported as geometric midpoints (1.0, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc.) of geometric backets having the boundaries 1.2, 0.83, 0.56, 0.38, 0.26, 0.18, 0.12, 0.083, etc. The frequency distributions and histograms are on logarithmic scales and are computed using these brackets as class intervals, for example:

Reported value (ppm)	Limits	
1.0	.83	1.2
1.5	1.2	1.8
2.0	1.8	2.6
3.0	2.6	3.8
5.0	3.8	5.6
7.0	5.6	8.3
10 0	8.3	12.0

On the histograms decimal numbers are shown as powers of 10, for example:

7.0E-01 means 7.0×10^{-1} or 0.7

7.0E 00 means 7.0×10^{0} or 7.0

7.0E 01 means 7.0×10^{1} or 70.0

7.0E 02 means 7.0×10^{2} or 700.0

7.0E 03 means 7.0×10^{3} or 7,000.0

The histograms are constructed of X's, each of which represents 1 percent of the total number (309) of samples.

The histograms and the statistics given below them are derived only from data values within the ranges of analytical determination ("analytical values"). The histograms are, therefore, incomplete, and the statistics are biased if data values qualified with N, L, C, T, or H codes are present. (See the histogram and statistics below it for tin, which are calculated from only one sample.) Statistical estimates that are unbiased in this regard are given at the end of Table 1. The geometric means is the antilogarithm of the arithmetic mean of the logs of the analyses and an estimate of "central tendency," or of a characteristic value, of a frequency distribution that is approximately symmetrical on a log scale, and is therefore useful for characterizing many geochemical distributions. The geometric mean is not an estimate of geochemical abundance. The geometric deviation is the antilogarithm of the standard deviation of the logs of the analyses. See USGS Professional Paper 574-B for further discussion and USGS Bulletin 1147E, p. 20-23, for further discussion and explanation of geometric deviation.

In the computations performed to produce the statistical summary at the end of Tables 2 and 3 all elements are ignored where one or more of the unqualified data values is less than the analytical limit of detection specified on input or where any data values are qualified with the G (greater than) code. Data values qualified with B or H are not used in the computations. Where none of the data values for an element are qualified the mean and deviation should be the same as those given in the preceding section. Where data are qualified with the codes N, L, or T, the estimates of geometric mean and deviation are based on a method by A. J. Cohen for treating censored distributions. The application of this method of geochemical problems is described in USGS Professional Paper 574-B. The estimates are unbiased in a strict sense only where the data are derived from a lognormal parent population, but experiments have shown that large departures from this requirement may not greatly invalidate the results. Acceptance and use of the estimates, however, is the responsibility of the individual.

Selected References

Alaska Dept. Mines, 1950, Rept. Commissioner of Mines, bienniun Dec. 31, 1950, 57 p.

Berg, H. C., and Cobb, E. H., 1967, Metalliferous lode deposits of Alaska: U.S. Geol. Survey Bull. 1246, p. 164-184.

Buddington, A. F., and Chapin, Theodore, 1929, Geology and mineral deposits of southeastern Alaska: U.S. Geol. Survey Bull. 800, 398 p.

Herbert, C. F., and Race, W. H., 1964, Geochemical investigations of selected areas in southeastern Alaska, 1964: Alaska Div. Mines and Minerals Geochem. Rept. 1, 27 p.

Miesch, A. T., 1963, Distribution of elements in Colorado Plateau uranium deposits--A preliminary report: U.S. Geol. Survey Bull. 1147-E, 57 p.

_____1967, Methods of computation for estimating geochemical abundance: U.S. Geol. Survey Prof. Paper 574-B, 15 p.

TABLE 2. SUMDUM A-4 ROCK SAMPLES

MAP NUMBER	SAMPLE	FE PCT	MG PCT	CA PCT	TI PCT	MN PPM	AG PPM	AS PPM	AU PPM	B PPM	BA PPM
1	AMG657	7.0000	1.5000	0.3000	0.3000	500.0000	0.0 N	0.0 N	0.0 N	30.0000	300.0000
2	AKD768	5.0000	1.0000	1.5000	0.7000	700.0000	1.5000	0.0 N	0.0 N	10.0000	2000.0000
3	AMG655	7.0000	1.0000	0.7000	0.3000	1500.0000	0.0 N	0.0 N	0.0 N	20.0000	300.0000
4	AMG687	5.0000	0.7000	1.0000	1.0000	200.0000	0.0 N	0.0 N	0.0 N	20.0000	700.0000
5	AKD769	1.5000	0.3000	0.0700	0.1000	150.0000	0.0 N	0.0 N	0.0 N	0.0 N	150.0000
6	AMG686	3.0000	0.3000	2.0000	0.3000	300.0000	0.0 N	0.0 N	0.0 N	15.0000	150.0000
7	AMG685	7.0000	2.0000	1.5000	0.0700	1500.0000	0.0 N	0.0 N	0.0 N	15.0000	500.0000
8	AMG652	10.0000	3.0000	1.5000	1.0000	1000.0000	0.0 N	0.0 N	0.0 N	0.0 L	3000.0000
8	AMG653	15.0000	3.0000	1.5000	1.0000G	500.0000	0.7000	0.0 N	0.0 N	0.0 L	3000.0000
8	AMG654	1.5000	0.3000	0.1500	0.3000	300.0000	0.0 N	0.0 N	0.0 N	10.0000	150.0000
9	AMG693	7.0000	3.0000	7.0000	0.5000	700.0000	0.0 N	0.0 N	0.0 N	10.0000	150.0000
10	AMG690	3.0000	1.5000	1.5000	0.3000	500.0000	0.0 L	0.0 N	0.0 N	0.0 L	1500.0000
11	AMG689	7.0000	1.5000	1.5000	0.3000	500.0000	0.0 N	0.0 N	0.0 N	15.0000	1000.0000
12	AMG688	15.0000	2.0000	5.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0 N	10.0000	150.0000
13	AKD752	3.0000	2.0000	3.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	30.0000	700.0000
14	AKD639	20.0000G	3.0000	5.0000	0.2000	1500.0000	1.5000	0.0 N	0.0 N	15.0000	0.0 L
15	AMG684	5.0000	1.5000	3.0000	0.5000	500.0000	0.0 N	0.0 N	0.0 N	15.0000	0.0 L
16	AKD640	2.0000	0.7000	5.0000	0.1000	700.0000	0.0 N	0.0 N	0.0 N	0.0 N	0.0 L
17	AKD641	10.0000	3.0000	15.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	150.0000	100.0000
18	AKD642	15.0000	5.0000	7.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	15.0000	200.0000
19	AKD753	2.0000	1.0000	10.0000	0.1500	1500.0000	0.0 N	0.0 N	0.0 N	15.0000	100.0000
20	AKD644	15.0000	5.0000	7.0000	0.5000	2000.0000	0.0 N	0.0 N	0.0 N	0.0 L	300.0000
21	AMG650	5.0000	1.5000	1.5000	0.5000	700.0000	0.0 N	0.0 N	0.0 N	20.0000	300.0000
22	AKD645	10.0000	3.0000	5.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0 N	15.0000	200.0000
22	AKD646	15.0000	5.0000	5.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	15.0000	150.0000
23	AKD647	10.0000	3.0000	2.0000	0.7000	500.0000	0.0 N	0.0 N	0.0 N	20.0000	300.0000
23	AKD648	15.0000	3.0000	2.0000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	20.0000	150.0000
23	AKD649	7.0000	3.0000	3.0000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	15.0000	100.0000
23	AKD650	5.0000	3.0000	0.7000	0.5000	300.0000	0.0 N	0.0 N	0.0 N	20.0000	300.0000
23	AKD744	7.0000	2.0000	1.5000	0.3000	500.0000	0.0 N	0.0 N	0.0 N	15.0000	150.0000
23	AKD745	15.0000	7.0000	10.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	15.0000	0.0 L
23	AKD746	15.0000	3.0000	5.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	15.0000	200.0000
24	AMG680	3.0000	1.5000	2.0000	0.1500	500.0000	0.0 N	0.0 N	0.0 N	0.0 L	300.0000
24	AMG681	1.5000	0.7000	0.7000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	0.0 L	500.0000
25	AMG679	3.0000	1.0000	1.0000	0.3000	500.0000	0.0 N	0.0 N	0.0 N	30.0000	150.0000
26	AMG678	10.0000	3.0000	3.0000	0.3000	1000.0000	0.0 N	0.0 N	0.0 N	0.0 L	100.0000
27	AMG677	15.0000	5.0000	2.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	15.0000	150.0000
28	AMG676	15.0000	5.0000	7.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	10.0000	200.0000
29	AMG675	15.0000	3.0000	7.0000	0.5000	5000.0000	0.0 N	0.0 N	0.0 N	10.0000	150.0000
30	AKD755	1.0000	0.3000	0.1500	0.0300	200.0000	0.0 N	0.0 N	0.0 N	0.0 N	0.0 L
31	AKD747	10.0000	1.0000	15.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	15.0000	200.0000
31	AKD748	15.0000	7.0000	7.0000	0.3000	2000.0000	0.0 N	0.0 N	0.0 N	10.0000	100.0000
31	AKD749	10.0000	7.0000	7.0000	0.3000	1500.0000	0.0 N	0.0 N	0.0 N	10.0000	100.0000
32	AKD756	5.0000	1.5000	2.0000	0.3000	1000.0000	0.0 N	0.0 N	0.0 N	20.0000	300.0000
33	AKD757	10.0000	2.0000	1.5000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	15.0000	150.0000
34	AKD758	15.0000	2.0000	7.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	30.0000	500.0000
34	AKD759	15.0000	3.0000	3.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	30.0000	700.0000
34	AKD760	15.0000	3.0000	2.0000	0.3000	1000.0000	0.0 N	0.0 N	0.0 N	15.0000	300.0000
35	AKD762	10.0000	2.0000	5.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	50.0000	300.0000
36	AKD761	5.0000	1.0000	10.0000	0.3000	1000.0000	0.0 N	0.0 N	0.0 N	20.0000	300.0000

SUMDUM A-4 ROCK SAMPLES

	SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
1	AMG657	0.0 L	0.0 N	0.0 N	15.0000	100.0000	30.0000	0.0 L	0.0 L	10.0000	50.0000
2	AKD768	0.0 L	0.0 N	0.0 N	0.0 L	70.0000	100.0000	0.0 N	30.0000	10.0000	20.0000
3	AMG655	0.0 L	0.0 N	0.0 N	15.0000	50.0000	30.0000	0.0 L	0.0 L	10.0000	30.0000
4	AMG687	1.5000	0.0 N	0.0 N	0.0 L	15.0000	10.0000	0.0 N	0.0 L	10.0000	5.0000
5	AKD769	0.0 N	0.0 N	0.0 N	0.0 L	30.0000	5.0000	0.0 L	0.0 N	0.0 L	20.0000
6	AMG686	0.0 L	0.0 N	0.0 N	5.0000	10.0000	0.0 L	0.0 N	0.0 L	0.0 L	10.0000
7	AMG685	0.0 L	0.0 N	0.0 N	30.0000	70.0000	70.0000	0.0 N	0.0 L	10.0000	30.0000
8	AMG652	0.0 L	0.0 N	0.0 N	30.0000	10.0000	70.0000	0.0 L	0.0 L	10.0000	50.0000
8	AMG653	1.0000	0.0 N	0.0 N	30.0000	15.0000	200.0000	20.0000	15.0000	10.0000	30.0000
8	AMG654	0.0 N	0.0 N	0.0 N	15.0000	10.0000	15.0000	0.0 N	0.0 N	0.0 L	30.0000
9	AMG693	0.0 N	0.0 N	0.0 N	50.0000	200.0000	10.0000	0.0 N	0.0 L	15.0000	100.0000
10	AMG690	1.5000	0.0 N	0.0 N	15.0000	100.0000	70.0000	20.0000	5.0000	15.0000	100.0000
11	AMG689	1.0000	0.0 N	0.0 N	30.0000	70.0000	70.0000	0.0 L	0.0 L	10.0000	50.0000
12	AMG688	1.0000	0.0 N	0.0 N	50.0000	10.0000	20.0000	0.0 N	5.0000	10.0000	15.0000
13	AKD752	1.0000	0.0 N	0.0 N	10.0000	70.0000	70.0000	0.0 L	0.0 N	10.0000	50.0000
14	AKD639	0.0 N	0.0 N	0.0 N	150.0000	200.0000	1500.0000	20.0000	10.0000	10.0000	100.0000
15	AMG684	0.0 L	0.0 N	0.0 N	20.0000	300.0000	20.0000	0.0 N	0.0 L	10.0000	100.0000
16	AKD640	0.0 N	0.0 N	0.0 N	0.0 L	15.0000	20.0000	0.0 N	0.0 N	0.0 L	5.0000
17	AKD641	0.0 L	0.0 N	0.0 N	30.0000	50.0000	150.0000	0.0 L	0.0 L	0.0 L	30.0000
18	AKD642	0.0 L	0.0 N	0.0 N	70.0000	50.0000	150.0000	0.0 N	0.0 L	0.0 L	50.0000
19	AKD753	0.0 N	0.0 N	0.0 N	0.0 L	50.0000	20.0000	0.0 L	0.0 N	0.0 L	20.0000
20	AKD644	0.0 L	0.0 N	0.0 N	70.0000	200.0000	150.0000	0.0 L	0.0 L	0.0 L	70.0000
21	AMG650	1.0000	0.0 N	0.0 N	20.0000	0.0 L	100.0000	30.0000	0.0 L	10.0000	10.0000
22	AKD645	1.0000	0.0 N	0.0 N	50.0000	200.0000	150.0000	0.0 L	0.0 L	10.0000	70.0000
22	AKD646	0.0 L	0.0 N	0.0 N	70.0000	300.0000	150.0000	0.0 N	0.0 L	10.0000	70.0000
23	AKD647	1.0000	0.0 N	0.0 N	20.0000	100.0000	70.0000	0.0 L	0.0 L	10.0000	50.0000
23	AKD648	0.0 L	0.0 N	0.0 N	50.0000	150.0000	150.0000	0.0 L	0.0 L	10.0000	70.0000
23	AKD649	0.0 N	0.0 N	0.0 N	30.0000	150.0000	100.0000	0.0 N	0.0 N	0.0 L	50.0000
23	AKD650	0.0 L	0.0 N	0.0 N	30.0000	150.0000	70.0000	0.0 N	0.0 L	10.0000	50.0000
23	AKD744	0.0 L	0.0 N	0.0 N	20.0000	70.0000	100.0000	0.0 N	0.0 L	10.0000	30.0000
23	AKD745	1.0000	0.0 N	0.0 N	50.0000	300.0000	150.0000	0.0 L	0.0 L	10.0000	150.0000
23	AKD746	1.0000	0.0 N	0.0 N	30.0000	50.0000	100.0000	0.0 L	0.0 L	10.0000	30.0000
24	AMG680	1.5000	0.0 N	0.0 N	5.0000	15.0000	0.0 L	0.0 N	0.0 N	10.0000	5.0000
24	AMG681	0.0 L	0.0 N	0.0 N	0.0 L	15.0000	0.0 L	0.0 N	0.0 N	0.0 L	5.0000
25	AMG679	1.0000	0.0 N	0.0 N	10.0000	20.0000	20.0000	0.0 N	7.0000	10.0000	10.0000
26	AMG678	0.0 N	0.0 N	0.0 N	50.0000	150.0000	7.0000	0.0 N	0.0 N	10.0000	70.0000
27	AMG677	1.0000	0.0 N	0.0 N	50.0000	500.0000	70.0000	0.0 N	0.0 L	10.0000	150.0000
28	AMG676	0.0 L	0.0 N	0.0 N	50.0000	300.0000	30.0000	0.0 N	0.0 L	10.0000	100.0000
29	AMG675	1.0000	0.0 N	0.0 N	20.0000	50.0000	150.0000	0.0 N	0.0 L	10.0000	30.0000
30	AKD755	0.0 N	0.0 N	0.0 N	5.0000	10.0000	15.0000	0.0 N	0.0 N	0.0 L	15.0000
31	AKD747	1.0000	0.0 N	0.0 N	10.0000	10.0000	10.0000	0.0 L	0.0 N	10.0000	0.0 N
31	AKD748	0.0 N	0.0 N	0.0 N	70.0000	1500.0000	100.0000	0.0 L	0.0 L	10.0000	300.0000
31	AKD749	0.0 L	0.0 N	0.0 N	50.0000	700.0000	70.0000	0.0 L	0.0 L	0.0 L	200.0000
32	AKD756	1.0000	0.0 N	0.0 N	20.0000	30.0000	150.0000	0.0 L	0.0 L	0.0 L	30.0000
33	AKD757	0.0 L	0.0 N	0.0 N	20.0000	15.0000	70.0000	0.0 N	0.0 L	0.0 L	15.0000
34	AKD758	0.0 L	0.0 N	0.0 N	50.0000	150.0000	150.0000	0.0 L	0.0 L	0.0 L	70.0000
34	AKD759	0.0 L	0.0 N	0.0 N	30.0000	70.0000	150.0000	0.0 N	0.0 L	0.0 L	30.0000
34	AKD760	0.0 L	0.0 N	0.0 N	20.0000	30.0000	150.0000	0.0 N	0.0 L	10.0000	15.0000
35	AKD762	1.5000	0.0 N	0.0 N	50.0000	10.0000	200.0000	0.0 L	0.0 L	10.0000	15.0000
36	AKD761	1.0000	0.0 N	0.0 N	15.0000	30.0000	50.0000	0.0 L	0.0 N	0.0 L	20.0000

SUMDUM A-4 ROCK SAMPLES

	SAMPLE	PB PPM	SB PPM	SC PPM	SN PPM	SR PPM	V PPM	W PPM	Y PPM	ZN PPM	ZR PPM
1	AMG657	10.0000	0.0 N	15.0000	0.0 N	150.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000
2	AKD768	10.0000	0.0 N	20.0000	0.0 N	200.0000	300.0000	0.0 N	50.0000	500.0000	200.0000
3	AMG655	0.0 L	0.0 N	15.0000	0.0 N	150.0000	150.0000	0.0 N	15.0000	0.0 L	100.0000
4	AMG687	10.0000	0.0 N	15.0000	0.0 N	200.0000	150.0000	0.0 N	15.0000	0.0 L	70.0000
5	AKD769	0.0 N	0.0 N	0.0 L	0.0 N	0.0 L	70.0000	0.0 N	10.0000	0.0 N	30.0000
6	AMG686	0.0 N	0.0 N	0.0 L	0.0 N	200.0000	50.0000	0.0 N	15.0000	0.0 L	50.0000
7	AMG685	15.0000	0.0 N	15.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	0.0 L	70.0000
8	AMG652	0.0 N	0.0 N	20.0000	0.0 N	100.0000	300.0000	0.0 N	20.0000	300.0000	100.0000
8	AMG653	0.0 N	0.0 N	30.0000	0.0 N	150.0000	500.0000	0.0 N	30.0000	0.0 L	150.0000
8	AMG654	0.0 N	0.0 N	5.0000	0.0 N	0.0 L	100.0000	0.0 N	10.0000	0.0 L	0.0 L
9	AMG693	0.0 L	0.0 N	30.0000	0.0 N	150.0000	200.0000	0.0 N	20.0000	0.0 L	30.0000
10	AMG690	10.0000	0.0 N	10.0000	0.0 N	200.0000	200.0000	0.0 N	30.0000	700.0000	70.0000
11	AMG689	20.0000	0.0 N	30.0000	0.0 N	200.0000	200.0000	0.0 N	30.0000	300.0000	70.0000
12	AMG688	0.0 L	0.0 N	50.0000	0.0 N	150.0000	500.0000	0.0 N	70.0000	200.0000	150.0000
13	AKD752	20.0000	0.0 N	15.0000	0.0 N	150.0000	200.0000	0.0 N	20.0000	0.0 L	100.0000
14	AKD639	30.0000	0.0 N	20.0000	0.0 N	300.0000	150.0000	0.0 N	15.0000	300.0000	0.0 L
15	AMG684	0.0 N	0.0 N	15.0000	0.0 N	1000.0000	200.0000	0.0 N	10.0000	0.0 N	50.0000
16	AKD640	0.0 N	0.0 N	0.0 L	0.0 N	500.0000	200.0000	0.0 N	0.0 L	0.0 L	0.0 L
17	AKD641	0.0 L	0.0 N	30.0000	0.0 N	700.0000	300.0000	0.0 N	15.0000	0.0 L	30.0000
18	AKD642	0.0 L	0.0 N	30.0000	0.0 N	200.0000	300.0000	0.0 N	20.0000	0.0 L	70.0000
19	AKD753	0.0 N	0.0 N	0.0 L	0.0 N	500.0000	50.0000	0.0 N	10.0000	0.0 N	0.0 L
20	AKD644	0.0 L	0.0 N	30.0000	0.0 N	500.0000	300.0000	0.0 N	15.0000	0.0 L	50.0000
21	AMG650	0.0 L	0.0 N	15.0000	0.0 N	300.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000
22	AKD645	0.0 L	0.0 N	30.0000	0.0 N	200.0000	300.0000	0.0 N	15.0000	0.0 L	50.0000
22	AKD646	0.0 L	0.0 N	30.0000	0.0 N	200.0000	500.0000	0.0 N	15.0000	0.0 L	70.0000
23	AKD647	10.0000	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	0.0 L	70.0000
23	AKD648	10.0000	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	0.0 L	70.0000
23	AKD649	0.0 L	0.0 N	20.0000	0.0 N	300.0000	200.0000	0.0 N	10.0000	0.0 L	50.0000
23	AKD650	0.0 L	0.0 N	30.0000	0.0 N	200.0000	300.0000	0.0 N	15.0000	0.0 L	70.0000
23	AKD744	0.0 L	0.0 N	15.0000	0.0 N	200.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000
23	AKD745	0.0 N	0.0 N	50.0000	0.0 N	300.0000	300.0000	0.0 N	15.0000	0.0 L	70.0000
23	AKD746	10.0000	0.0 N	30.0000	0.0 N	500.0000	300.0000	0.0 N	15.0000	0.0 L	70.0000
24	AMG680	20.0000	0.0 N	5.0000	0.0 N	700.0000	100.0000	0.0 N	10.0000	300.0000	50.0000
24	AMG681	15.0000	0.0 N	0.0 L	0.0 N	300.0000	50.0000	0.0 N	10.0000	0.0 N	50.0000
25	AMG679	10.0000	0.0 N	10.0000	0.0 N	300.0000	100.0000	0.0 N	10.0000	0.0 L	70.0000
26	AMG678	0.0 L	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	15.0000	0.0 L	70.0000
27	AMG677	15.0000	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	15.0000	300.0000	70.0000
28	AMG676	0.0 L	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	15.0000	0.0 L	70.0000
29	AMG675	0.0 L	0.0 N	20.0000	0.0 N	300.0000	300.0000	0.0 N	15.0000	0.0 L	70.0000
30	AKD755	0.0 N	0.0 N	0.0 N	0.0 N	0.0 L	30.0000	0.0 N	0.0 L	0.0 N	0.0 L
31	AKD747	15.0000	0.0 N	15.0000	0.0 N	5000.0000G	200.0000	0.0 N	20.0000	0.0 N	70.0000
31	AKD748	15.0000	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	15.0000	0.0 L	50.0000
31	AKD749	20.0000	0.0 N	30.0000	0.0 N	300.0000	200.0000	0.0 N	10.0000	0.0 N	30.0000
32	AKD756	0.0 L	0.0 N	15.0000	0.0 N	700.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000
33	AKD757	0.0 L	0.0 N	15.0000	0.0 N	700.0000	200.0000	0.0 N	20.0000	0.0 L	70.0000
34	AKD758	0.0 L	0.0 N	30.0000	0.0 N	700.0000	300.0000	0.0 N	20.0000	0.0 L	70.0000
34	AKD759	0.0 L	0.0 N	20.0000	0.0 N	700.0000	300.0000	0.0 N	20.0000	0.0 L	70.0000
34	AKD760	0.0 L	0.0 N	20.0000	0.0 N	700.0000	300.0000	0.0 N	15.0000	0.0 L	70.0000
35	AKD762	10.0000	0.0 N	15.0000	0.0 N	2000.0000	300.0000	0.0 N	20.0000	0.0 L	70.0000
36	AKD761	0.0 N	0.0 N	7.0000	0.0 N	2000.0000	150.0000	0.0 N	10.0000	0.0 N	50.0000

SUMDUM A-4 ROCK SAMPLES

	SAMPLE	AU PPM
1	AMG657	0.0200L
2	AKD768	0.0200L
3	AMG655	0.0200L
4	AMG687	0.0200L
5	AKD769	0.0200L
6	AMG686	0.0200L
7	AMG685	0.0200L
8	AMG652	0.0200L
8	AMG653	0.0200L
8	AMG654	0.0200L
9	AMG693	0.0200L
10	AMG690	0.0200L
11	AMG689	0.0200L
12	AMG688	0.0200L
13	AKD752	0.0200L
14	AKD639	0.0400
15	AMG684	0.0200L
16	AKD640	0.0200L
17	AKD641	0.0200L
18	AKD642	0.0200L
19	AKD753	0.0200L
20	AKD644	0.0200L
21	AMG650	0.0200L
22	AKD645	0.0200L
22	AKD646	0.0200L
23	AKD647	0.0200L
23	AKD648	0.0200L
23	AKD649	0.0200L
23	AKD650	0.0200L
23	AKD744	0.0200L
23	AKD745	0.0200L
23	AKD746	0.0200L
24	AMG680	0.0200L
24	AMG681	0.0200L
25	AMG679	0.0200L
26	AMG678	0.0200L
27	AMG677	0.0200L
28	AMG676	0.0200L
29	AMG675	0.0200L
30	AKD755	0.0200L
31	AKD747	0.0200L
31	AKD748	0.0200L
31	AKD749	0.0200L
32	AKD756	0.0200L
33	AKD757	0.0200L
34	AKD758	0.0200L
34	AKD759	0.0200L
34	AKD760	0.0200L
35	AKD762	0.0200L
36	AKD761	0.0200L

SUMDUM A-4 ROCK SAMPLES

MAP NUMBER	SAMPLE	FE PCT	MG PCT	CA PCT	TI PCT	MN PPM	AG PPM	AS PPM	AU PPM	B PPM	BA PPM
37	AKD750	10.0000	3.0000	5.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	20.0000	300.0000
38	AMG674	3.0000	1.5000	0.3000	0.7000	2000.0000	0.0 N	0.0 N	0.0 N	15.0000	500.0000
39	AKD664	3.0000	0.7000	1.5000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	0.0 N	300.0000
40	AKD665	7.0000	3.0000	15.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0 N	0.0 L	3000.0000
41	AMG673	3.0000	1.0000	0.1500	0.5000	500.0000	0.0 N	0.0 N	0.0 N	20.0000	300.0000
42	AMG672	3.0000	1.5000	0.5000	0.5000	300.0000	0.0 N	0.0 N	0.0 N	30.0000	300.0000
43	AMG670	10.0000	5.0000	2.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	0.0 L	150.0000
44	AMG658	5.0000	1.5000	1.0000	0.3000	300.0000	0.0 N	0.0 N	0.0 N	10.0000	700.0000
45	AMG659	1.5000	0.3000	0.0700	0.0700	70.0000	0.0 N	0.0 N	0.0 N	10.0000	100.0000
46	AMG660	5.0000	1.0000	1.0000	0.5000	500.0000	0.0 N	0.0 N	0.0 N	0.0 L	300.0000
46	AMG661	1.5000	0.3000	0.2000	0.0500	150.0000	0.0 N	0.0 N	0.0 N	0.0 L	100.0000
47	AMG648	10.0000	3.0000	7.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	2000.0000G	0.0 L
47	AMG649	10.0000	5.0000	5.0000	0.3000	1000.0000	0.0 N	0.0 N	0.0 N	10.0000	150.0000
48	AKD754	15.0000	3.0000	7.0000	0.7000	3000.0000	0.0 N	0.0 N	0.0 N	2000.0000	150.0000
49	AMG683	10.0000	1.5000	0.5000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	50.0000	300.0000
50	AKD667	20.0000	7.0000	3.0000	1.0000G	1500.0000	0.0 N	0.0 N	0.0 N	0.0 L	1500.0000
51	AMG671	15.0000	3.0000	5.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	50.0000	150.0000
52	AKD743	15.0000	7.0000	10.0000	0.2000	1000.0000	0.0 N	0.0 N	0.0 N	10.0000	300.0000
53	AMG668	10.0000	1.5000	1.0000	0.5000	700.0000	0.0 N	0.0 N	0.0 N	15.0000	500.0000
54	AMG669	10.0000	1.5000	1.5000	0.5000	2000.0000	0.0 N	0.0 N	0.0 N	10.0000	300.0000
55	AMG662	3.0000	1.5000	1.0000	0.5000	500.0000	0.0 N	0.0 N	0.0 N	30.0000	1000.0000
56	AMG663	5.0000	2.0000	10.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	15.0000	300.0000
57	AKD450	5.0000	1.5000	3.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	10.0000	200.0000
57	AKD451	5.0000	2.0000	2.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	10.0000	300.0000
58	AKD449	15.0000	1.5000	1.5000	0.3000	1500.0000	1.0000	0.0 N	0.0 N	0.0 L	100.0000
59	AKD447	7.0000	1.5000	2.0000	0.3000	1500.0000	0.0 N	0.0 N	0.0 N	150.0000	300.0000
59	AKD448	5.0000	1.5000	2.0000	0.3000	1500.0000	0.0 L	0.0 N	0.0 N	0.0 N	300.0000
60	AKD443	15.0000	3.0000	5.0000	0.3000	1500.0000	0.0 N	0.0 N	0.0 N	20.0000	300.0000
60	AKD444	5.0000	1.0000	0.7000	0.3000	200.0000	1.5000	0.0 N	0.0 N	10.0000	500.0000
60	AKD445	3.0000	1.0000	1.0000	0.3000	200.0000	0.5000	0.0 N	0.0 N	10.0000	700.0000
60	AKD446	10.0000	2.0000	3.0000	0.3000	1000.0000	0.0 L	0.0 N	0.0 N	15.0000	150.0000
60	AKD492	10.0000	3.0000	10.0000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	0.0 L	300.0000
61	AMG682	15.0000	3.0000	3.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	0.0 L	0.0 L
62	AKD437	3.0000	1.0000	1.0000	0.3000	700.0000	3.0000	0.0 N	0.0 N	0.0 N	300.0000
62	AKD438	5.0000	2.0000	2.0000	0.3000	1500.0000	1.5000	0.0 N	0.0 N	30.0000	700.0000
62	AKD439	10.0000	1.5000	3.0000	0.5000	1500.0000	0.0 L	0.0 N	0.0 N	50.0000	500.0000
63	AKD436	10.0000	3.0000	2.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0 N	15.0000	1000.0000
64	AKD435	7.0000	2.0000	1.5000	0.3000	300.0000	0.0 L	0.0 N	0.0 N	0.0 L	150.0000
65	AKD433	5.0000	1.0000	2.0000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	15.0000	300.0000
65	AKD434	10.0000	3.0000	1.0000	0.5000	2000.0000	0.0 N	0.0 N	0.0 N	15.0000	300.0000
66	AMG667	3.0000	1.0000	0.2000	0.3000	500.0000	0.0 N	0.0 N	0.0 N	20.0000	500.0000
67	AKD742	10.0000	2.0000	3.0000	0.5000	2000.0000	0.0 N	0.0 N	0.0 N	15.0000	700.0000
68	AMG666	3.0000	1.0000	0.7000	0.3000	500.0000	0.0 N	0.0 N	0.0 N	10.0000	300.0000
69	AMG664	2.0000	1.5000	0.5000	0.3000	200.0000	0.0 N	0.0 N	0.0 N	15.0000	300.0000
69	AMG665	0.1500	0.0700	0.7000	0.0100	70.0000	0.0 N	0.0 N	0.0 N	0.0 N	0.0 L
70	AKD741	3.0000	3.0000	0.7000	0.7000	500.0000	0.0 N	0.0 N	0.0 N	70.0000	700.0000
71	AKD740	7.0000	2.0000	0.5000	0.5000	300.0000	0.0 N	0.0 N	0.0 N	30.0000	700.0000
72	AKD738	7.0000	3.0000	0.5000	0.0200	500.0000	0.0 N	0.0 N	0.0 N	30.0000	700.0000
72	AKD739	0.3000	0.1500	5.0000	0.5000	150.0000	0.0 N	0.0 N	0.0 N	0.0 N	0.0 L
73	AKD737	5.0000	1.5000	0.7000	0.5000	500.0000	0.0 N	0.0 N	0.0 N	20.0000	500.0000

SUMDUM A-4 ROCK SAMPLES

	SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
37	AKD750	1.0000	0.0 N	0.0 N	30.0000	150.0000	70.0000	20.0000	0.0 L	10.0000	70.0000
38	AMG674	0.0 L	0.0 N	0.0 N	20.0000	100.0000	70.0000	0.0 N	0.0 N	10.0000	50.0000
39	AKD664	1.0000	0.0 N	0.0 N	0.0 N	0.0 L	30.0000	0.0 L	0.0 N	10.0000	0.0 L
40	AKD665	1.0000	0.0 N	0.0 N	15.0000	500.0000	50.0000	30.0000	0.0 N	10.0000	70.0000
41	AMG673	1.0000	0.0 N	0.0 N	10.0000	30.0000	20.0000	0.0 N	0.0 N	0.0 L	30.0000
42	AMG672	0.0 L	0.0 N	0.0 N	15.0000	70.0000	0.0 L	0.0 N	0.0 L	10.0000	30.0000
43	AMG670	0.0 L	0.0 N	0.0 N	30.0000	150.0000	30.0000	0.0 N	0.0 L	10.0000	30.0000
44	AMG658	0.0 L	0.0 N	0.0 N	20.0000	50.0000	0.0 L	0.0 N	0.0 N	10.0000	30.0000
45	AMG659	0.0 L	0.0 N	0.0 N	0.0 L	30.0000	0.0 L	0.0 N	0.0 N	10.0000	10.0000
46	AMG660	0.0 L	0.0 N	0.0 N	20.0000	50.0000	15.0000	0.0 L	0.0 N	10.0000	30.0000
46	AMG661	0.0 N	0.0 N	0.0 N	5.0000	10.0000	0.0 L	0.0 N	0.0 N	0.0 L	10.0000
47	AMG648	0.0 L	0.0 N	0.0 N	70.0000	300.0000	70.0000	0.0 L	0.0 L	10.0000	70.0000
47	AMG649	0.0 N	0.0 N	0.0 N	70.0000	300.0000	70.0000	0.0 N	0.0 L	10.0000	150.0000
48	AKD754	5.0000	0.0 N	0.0 N	50.0000	20.0000	150.0000	0.0 L	0.0 L	10.0000	30.0000
49	AMG683	0.0 L	0.0 N	0.0 N	15.0000	70.0000	20.0000	0.0 N	0.0 L	10.0000	50.0000
50	AKD667	0.0 N	0.0 N	0.0 N	70.0000	20.0000	10.0000	0.0 N	0.0 L	0.0 L	50.0000
51	AMG671	0.0 N	0.0 N	0.0 N	30.0000	70.0000	70.0000	0.0 N	0.0 N	10.0000	30.0000
52	AKD743	0.0 N	0.0 N	0.0 N	70.0000	700.0000	70.0000	0.0 N	0.0 L	10.0000	150.0000
53	AMG668	0.0 L	0.0 N	0.0 N	50.0000	70.0000	50.0000	0.0 N	0.0 N	10.0000	30.0000
54	AMG669	0.0 N	0.0 N	0.0 N	30.0000	70.0000	100.0000	0.0 N	0.0 L	10.0000	30.0000
55	AMG662	1.5000	0.0 N	0.0 N	5.0000	50.0000	5.0000	30.0000	0.0 N	10.0000	30.0000
56	AMG663	0.0 L	0.0 N	0.0 N	30.0000	70.0000	15.0000	0.0 L	0.0 N	10.0000	50.0000
57	AKD450	0.0 L	0.0 N	0.0 N	0.0 L	15.0000	300.0000	0.0 L	0.0 L	0.0 L	0.0 L
57	AKD451	0.0 N	0.0 N	0.0 N	0.0 N	10.0000	30.0000	0.0 L	0.0 L	10.0000	0.0 L
58	AKD449	0.0 L	0.0 N	0.0 L	70.0000	150.0000	500.0000	50.0000	0.0 L	10.0000	100.0000
59	AKD447	1.0000	0.0 N	0.0 N	5.0000	0.0 L	100.0000	0.0 N	0.0 N	10.0000	0.0 L
59	AKD448	0.0 L	0.0 N	0.0 N	5.0000	0.0 L	500.0000	0.0 L	0.0 N	0.0 L	0.0 L
60	AKD443	0.0 L	0.0 N	0.0 N	70.0000	15.0000	300.0000	0.0 N	5.0000	10.0000	15.0000
60	AKD444	0.0 N	0.0 N	0.0 N	0.0 L	0.0 L	3000.0000	0.0 N	50.0000	0.0 L	0.0 L
60	AKD445	0.0 N	0.0 N	0.0 N	0.0 L	0.0 L	2000.0000	0.0 N	70.0000	0.0 L	0.0 L
60	AKD446	0.0 N	0.0 N	0.0 N	30.0000	0.0 L	300.0000	0.0 N	0.0 L	10.0000	0.0 L
60	AKD492	0.0 L	0.0 N	0.0 N	15.0000	150.0000	15.0000	0.0 L	0.0 L	0.0 L	30.0000
61	AMG682	0.0 N	0.0 N	0.0 N	50.0000	70.0000	150.0000	0.0 N	0.0 L	10.0000	30.0000
62	AKD437	0.0 N	0.0 N	0.0 N	0.0 N	0.0 L	1500.0000	0.0 N	50.0000	0.0 L	0.0 N
62	AKD438	0.0 N	0.0 N	0.0 N	5.0000	0.0 L	1500.0000	0.0 L	7.0000	0.0 L	0.0 L
62	AKD439	0.0 N	0.0 N	0.0 N	0.0 L	0.0 L	200.0000	0.0 N	0.0 L	0.0 L	5.0000
63	AKD436	0.0 L	0.0 N	0.0 N	30.0000	0.0 L	70.0000	0.0 N	0.0 L	10.0000	50.0000
64	AKD435	0.0 N	0.0 N	0.0 N	20.0000	30.0000	200.0000	0.0 N	5.0000	10.0000	20.0000
65	AKD433	1.0000	0.0 N	0.0 N	15.0000	15.0000	70.0000	0.0 L	0.0 L	0.0 L	15.0000
65	AKD434	0.0 N	0.0 N	0.0 N	20.0000	100.0000	50.0000	0.0 N	0.0 L	10.0000	50.0000
66	AMG667	1.0000	0.0 N	0.0 N	20.0000	150.0000	30.0000	0.0 N	0.0 N	10.0000	70.0000
67	AKD742	1.0000	0.0 N	0.0 N	30.0000	70.0000	150.0000	0.0 L	0.0 L	10.0000	50.0000
68	AMG666	1.0000	0.0 N	0.0 N	20.0000	50.0000	15.0000	0.0 N	0.0 N	10.0000	30.0000
69	AMG664	0.0 L	0.0 N	0.0 N	10.0000	150.0000	7.0000	0.0 N	0.0 N	10.0000	100.0000
69	AMG665	0.0 N	0.0 N	0.0 N	0.0 L	0.0 L	0.0 L	0.0 N	0.0 N	0.0 L	15.0000
70	AKD741	1.0000	0.0 N	0.0 N	10.0000	200.0000	10.0000	0.0 L	0.0 N	0.0 L	150.0000
71	AKD740	0.0 L	0.0 N	0.0 N	15.0000	300.0000	30.0000	0.0 N	0.0 L	10.0000	150.0000
72	AKD738	0.0 L	0.0 N	0.0 N	20.0000	150.0000	30.0000	0.0 N	0.0 L	10.0000	70.0000
72	AKD739	0.0 N	0.0 N	0.0 N	0.0 N	0.0 L	0.0 L	0.0 N	0.0 N	0.0 L	5.0000
73	AKD737	0.0 L	0.0 N	0.0 N	20.0000	70.0000	50.0000	0.0 N	0.0 L	0.0 L	30.0000

SUMDUM A-4 ROCK SAMPLES

	SAMPLE	PB PPM	SB PPM	SC PPM	SN PPM	SR PPM	V PPM	W PPM	Y PPM	ZN PPM	ZR PPM
37	AKD750	15.0000	0.0 N	30.0000	0.0 N	700.0000	300.0000	0.0 N	20.0000	0.0 L	150.0000
38	AMG674	0.0 N	0.0 N	15.0000	0.0 N	100.0000	200.0000	0.0 N	10.0000	0.0 L	70.0000
39	AKD664	30.0000	0.0 N	5.0000	0.0 N	200.0000	30.0000	0.0 N	15.0000	0.0 N	150.0000
40	AKD665	30.0000	0.0 N	30.0000	0.0 N	700.0000	150.0000	0.0 N	20.0000	0.0 N	70.0000
41	AMG673	30.0000	0.0 N	10.0000	0.0 N	100.0000	150.0000	0.0 N	10.0000	0.0 L	70.0000
42	AMG672	0.0 N	0.0 N	15.0000	0.0 N	100.0000	200.0000	0.0 N	10.0000	0.0 L	100.0000
43	AMG670	0.0 N	0.0 N	30.0000	0.0 N	150.0000	300.0000	0.0 N	15.0000	0.0 L	70.0000
44	AMG658	10.0000	0.0 N	15.0000	0.0 N	200.0000	200.0000	0.0 N	15.0000	0.0 N	70.0000
45	AMG659	0.0 N	0.0 N	5.0000	0.0 N	100.0000	70.0000	0.0 N	10.0000	0.0 N	150.0000
46	AMG660	10.0000	0.0 N	20.0000	0.0 N	300.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000
46	AMG661	10.0000	0.0 N	0.0 L	0.0 N	0.0 L	20.0000	0.0 N	0.0 L	0.0 N	20.0000
47	AMG648	0.0 N	0.0 N	30.0000	0.0 N	500.0000	200.0000	0.0 N	15.0000	0.0 L	50.0000
47	AMG649	0.0 N	0.0 N	30.0000	0.0 N	150.0000	200.0000	0.0 N	10.0000	0.0 L	50.0000
48	AKD754	10.0000	0.0 N	30.0000	0.0 N	3000.0000	300.0000	0.0 N	20.0000	0.0 L	70.0000
49	AMG683	0.0 L	0.0 N	15.0000	0.0 N	150.0000	200.0000	0.0 N	20.0000	200.0000	70.0000
50	AKD667	0.0 L	0.0 N	20.0000	0.0 N	300.0000	200.0000	0.0 N	15.0000	0.0 N	100.0000
51	AMG671	20.0000	0.0 N	20.0000	0.0 N	700.0000	300.0000	0.0 N	10.0000	0.0 L	50.0000
52	AKD743	0.0 N	0.0 N	50.0000	0.0 N	300.0000	300.0000	0.0 N	15.0000	0.0 L	30.0000
53	AMG668	0.0 N	0.0 N	20.0000	0.0 N	300.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000
54	AMG669	0.0 N	0.0 N	15.0000	0.0 N	300.0000	300.0000	0.0 N	15.0000	0.0 L	70.0000
55	AMG662	0.0 L	0.0 N	30.0000	0.0 N	500.0000	300.0000	0.0 N	20.0000	0.0 N	100.0000
56	AMG663	15.0000	0.0 N	20.0000	0.0 N	500.0000	200.0000	0.0 N	20.0000	0.0 L	50.0000
57	AKD450	10.0000	0.0 N	15.0000	0.0 N	1000.0000	200.0000	0.0 N	15.0000	0.0 N	70.0000
57	AKD451	30.0000	0.0 N	15.0000	0.0 N	1000.0000	300.0000	0.0 N	10.0000	0.0 L	70.0000
58	AKD449	70.0000	0.0 N	10.0000	0.0 N	200.0000	70.0000	0.0 N	10.0000	5000.0000	100.0000
59	AKD447	0.0 N	0.0 N	7.0000	0.0 N	700.0000	150.0000	0.0 N	10.0000	0.0 N	50.0000
59	AKD448	20.0000	0.0 N	5.0000	0.0 N	1000.0000	200.0000	0.0 N	15.0000	0.0 N	50.0000
60	AKD443	20.0000	0.0 N	20.0000	0.0 N	1500.0000	300.0000	0.0 N	15.0000	0.0 L	70.0000
60	AKD444	20.0000	0.0 N	5.0000	0.0 N	500.0000	300.0000	0.0 N	10.0000	0.0 N	70.0000
60	AKD445	15.0000	0.0 N	5.0000	0.0 N	300.0000	200.0000	0.0 N	10.0000	0.0 N	70.0000
60	AKD446	15.0000	0.0 N	15.0000	0.0 N	1500.0000	300.0000	0.0 N	0.0 L	0.0 N	20.0000
60	AKD492	15.0000	0.0 N	30.0000	0.0 N	700.0000	150.0000	0.0 N	20.0000	0.0 L	50.0000
61	AMG682	10.0000	0.0 N	30.0000	0.0 N	500.0000	300.0000	0.0 N	20.0000	200.0000	50.0000
62	AKD437	30.0000	0.0 N	5.0000	0.0 N	300.0000	150.0000	0.0 N	10.0000	0.0 N	70.0000
62	AKD438	30.0000	0.0 N	7.0000	0.0 N	1000.0000	300.0000	0.0 N	15.0000	0.0 N	150.0000
62	AKD439	30.0000	0.0 N	10.0000	0.0 N	1500.0000	300.0000	0.0 N	15.0000	0.0 N	70.0000
63	AKD436	0.0 N	0.0 N	20.0000	0.0 N	1500.0000	200.0000	0.0 N	10.0000	0.0 N	150.0000
64	AKD435	0.0 N	0.0 N	15.0000	0.0 N	300.0000	200.0000	0.0 N	10.0000	0.0 N	70.0000
65	AKD433	10.0000	0.0 N	7.0000	0.0 N	1500.0000	200.0000	0.0 N	15.0000	0.0 N	100.0000
65	AKD434	0.0 N	0.0 N	15.0000	0.0 N	200.0000	300.0000	0.0 N	15.0000	0.0 L	100.0000
66	AMG667	0.0 N	0.0 N	15.0000	0.0 N	150.0000	150.0000	0.0 N	10.0000	0.0 L	100.0000
67	AKD742	10.0000	0.0 N	20.0000	0.0 N	700.0000	300.0000	0.0 N	20.0000	0.0 L	100.0000
68	AMG666	0.0 N	0.0 N	15.0000	0.0 N	150.0000	150.0000	0.0 N	15.0000	0.0 N	100.0000
69	AMG664	0.0 N	0.0 N	10.0000	0.0 N	150.0000	100.0000	0.0 N	0.0 L	0.0 N	70.0000
69	AMG665	0.0 N	0.0 N	0.0 N	0.0 N	100.0000	10.0000	0.0 N	0.0 L	0.0 N	0.0 L
70	AKD741	0.0 L	0.0 N	15.0000	0.0 N	150.0000	200.0000	0.0 N	15.0000	0.0 L	100.0000
71	AKD740	0.0 L	0.0 N	15.0000	0.0 N	150.0000	200.0000	0.0 N	15.0000	0.0 L	100.0000
72	AKD738	10.0000	0.0 N	15.0000	0.0 N	150.0000	200.0000	0.0 N	15.0000	0.0 N	100.0000
72	AKD739	0.0 N	0.0 N	0.0 L	0.0 N	300.0000	15.0000	0.0 N	0.0 L	0.0 N	0.0 L
73	AKD737	0.0 L	0.0 N	15.0000	0.0 N	200.0000	150.0000	0.0 N	15.0000	0.0 N	70.0000

SUMDUM A-4 ROCK SAMPLES

	SAMPLE	AU PPM
37	AKD750	0.0200L
38	AMG674	0.0200L
39	AKD664	0.0200L
40	AKD665	0.0200L
41	AMG673	0.0200L
42	AMG672	0.0200L
43	AMG670	0.0200L
44	AMG658	0.0200L
45	AMG659	0.0200L
46	AMG660	0.0200L
46	AMG661	0.0200L
47	AMG648	0.0200L
47	AMG649	0.0200L
48	AKD754	0.0200L
49	AMG683	0.0200L
50	AKD667	0.0200L
51	AMG671	0.0200L
52	AKD743	0.0200L
53	AMG668	0.0200L
54	AMG669	0.0200L
55	AMG662	0.0200L
56	AMG663	0.0200L
57	AKD450	0.0200L
57	AKD451	0.0200L
58	AKD449	0.2000
59	AKD447	0.0200L
59	AKD448	0.2000
60	AKD443	0.0200L
60	AKD444	0.0200L
60	AKD445	0.0200L
60	AKD446	0.0200L
60	AKD492	0.0200L
61	AMG682	0.0200L
62	AKD437	0.0200L
62	AKD438	0.0200L
62	AKD439	0.0200L
63	AKD436	0.0200L
64	AKD435	0.0200L
65	AKD433	0.0200L
65	AKD434	0.0200L
66	AMG667	0.0200L
67	AKD742	0.0200L
68	AMG666	0.0200L
69	AMG664	0.0200L
69	AMG665	0.0200L
70	AKD741	0.0200L
71	AKD740	0.0200L
72	AKD738	0.0200L
72	AKD739	0.0200L
73	AKD737	0.0200L

SUMDUM A-4 ROCK SAMPLES

REF NUMBER	SAMPLE	FE PCT	MG PCT	CA PCT	TI PCT	MN PPM	AG PPM	AS PPM	AU PPM	B PPM	BA PPM
74	AKD736	10.0000	5.0000	5.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	10.0000	150.0000
75	AKD735	10.0000	3.0000	5.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0 N	10.0000	100.0000
76	AKD734	1.5000	0.5000	0.7000	0.7000	300.0000	0.0 N	0.0 N	0.0 N	30.0000	150.0000
77	AKD733	10.0000	2.0000	0.5000	0.5000	500.0000	0.0 N	0.0 N	0.0 N	30.0000	300.0000
78	AKD731	5.0000	1.5000	1.0000	0.5000	500.0000	0.0 N	0.0 N	0.0 N	30.0000	1000.0000
78	AKD732	3.0000	1.0000	2.0000	0.3000	1500.0000	0.0 N	0.0 N	0.0 N	0.0 N	300.0000
79	AKD730	15.0000	3.0000	1.5000	0.5000	2000.0000	0.0 N	0.0 N	0.0 N	15.0000	1000.0000
80	AKD729	15.0000	3.0000	5.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0 N	0.0 L	0.0 L
81	AKD728	5.0000	1.0000	0.5000	0.3000	300.0000	0.0 N	0.0 N	0.0 N	0.0 L	700.0000
82	AKD727	10.0000	2.0000	1.5000	0.3000	1500.0000	0.0 N	0.0 N	0.0 N	10.0000	700.0000
83	AKD725	15.0000	3.0000	1.5000	0.7000	1500.0000	0.0 N	0.0 N	0.0 N	15.0000	700.0000
83	AKD726	1.0000	0.5000	0.7000	0.1500	70.0000	0.0 N	0.0 N	0.0 N	0.0 N	150.0000
84	AKD723	7.0000	1.5000	1.5000	0.5000	700.0000	0.0 L	0.0 N	0.0 N	15.0000	500.0000
84	AKD724	15.0000	3.0000	1.5000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	100.0000	1500.0000
85	AKD722	10.0000	2.0000	1.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	70.0000	700.0000
86	AKD720	7.0000	1.5000	2.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	10.0000	500.0000
86	AKD721	0.5000	0.1000	0.5000	0.0300	70.0000	0.0 N	0.0 N	0.0 N	0.0 N	100.0000
87	AKD719	10.0000	1.5000	0.7000	0.5000	700.0000	0.0 N	0.0 N	0.0 N	100.0000	700.0000

SUMDUM A-4 ROCK SAMPLES

	SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
74	AKD736	0.0 N	0.0 N	0.0 N	50.0000	300.0000	30.0000	0.0 N	0.0 L	10.0000	100.0000
75	AKD735	0.0 N	0.0 N	0.0 N	20.0000	100.0000	50.0000	0.0 L	0.0 L	0.0 L	20.0000
76	AKD734	0.0 N	0.0 N	0.0 N	0.0 L	15.0000	0.0 L	0.0 N	0.0 N	0.0 L	10.0000
77	AKD733	0.0 N	0.0 N	0.0 N	15.0000	70.0000	30.0000	0.0 N	0.0 N	10.0000	30.0000
78	AKD731	0.0 L	0.0 N	0.0 N	20.0000	150.0000	20.0000	0.0 N	0.0 L	10.0000	50.0000
78	AKD732	0.0 N	0.0 N	0.0 N	10.0000	20.0000	15.0000	0.0 N	0.0 N	0.0 L	15.0000
79	AKD730	0.0 N	0.0 N	0.0 N	50.0000	150.0000	70.0000	0.0 N	0.0 L	10.0000	50.0000
80	AKD729	0.0 N	0.0 N	0.0 N	70.0000	70.0000	100.0000	0.0 N	0.0 L	10.0000	50.0000
81	AKD728	0.0 N	0.0 N	0.0 N	10.0000	30.0000	30.0000	0.0 N	0.0 N	0.0 L	30.0000
82	AKD727	0.0 L	0.0 N	0.0 N	15.0000	70.0000	50.0000	0.0 N	0.0 L	10.0000	30.0000
83	AKD725	0.0 L	0.0 N	0.0 N	30.0000	150.0000	50.0000	0.0 N	0.0 L	10.0000	50.0000
83	AKD726	0.0 N	0.0 N	0.0 N	30.0000	15.0000	30.0000	0.0 N	0.0 N	0.0 L	30.0000
84	AKD723	1.0000	0.0 N	0.0 N	50.0000	70.0000	300.0000	0.0 N	0.0 L	10.0000	100.0000
84	AKD724	0.0 L	0.0 N	0.0 N	50.0000	150.0000	100.0000	0.0 N	0.0 L	10.0000	70.0000
85	AKD722	0.0 N	0.0 N	0.0 N	20.0000	100.0000	50.0000	0.0 N	0.0 L	10.0000	30.0000
86	AKD720	0.0 L	0.0 N	0.0 N	20.0000	100.0000	50.0000	0.0 L	0.0 L	0.0 L	30.0000
86	AKD721	0.0 N	0.0 N	0.0 N	0.0 L	0.0 L	0.0 L	0.0 N	0.0 N	0.0 L	5.0000
87	AKD719	0.0 N	0.0 N	0.0 N	15.0000	70.0000	50.0000	0.0 N	0.0 L	0.0 L	30.0000

SUMDUM A-4 ROCK SAMPLES

	SAMPLE	PB PPM	SB PPM	SC PPM	SN PPM	SR PPM	V PPM	W PPM	Y PPM	ZN PPM	ZR PPM
74	AKD736	0.0 N	0.0 N	30.0000	0.0 N	700.0000	300.0000	0.0 N	15.0000	0.0 N	70.0000
75	AKD735	0.0 L	0.0 N	15.0000	0.0 N	700.0000	300.0000	0.0 N	20.0000	0.0 N	70.0000
76	AKD734	0.0 N	0.0 N	0.0 N	0.0 N	100.0000	20.0000	0.0 N	0.0 L	0.0 N	30.0000
77	AKD733	15.0000	0.0 N	15.0000	0.0 N	100.0000	150.0000	0.0 N	15.0000	0.0 L	100.0000
78	AKD731	10.0000	0.0 N	15.0000	0.0 N	200.0000	300.0000	0.0 N	15.0000	0.0 L	70.0000
79	AKD732	0.0 L	0.0 N	10.0000	0.0 N	200.0000	150.0000	0.0 N	10.0000	0.0 L	30.0000
79	AKD730	10.0000	0.0 N	15.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	0.0 L	100.0000
80	AKD729	0.0 L	0.0 N	30.0000	0.0 N	200.0000	300.0000	0.0 N	20.0000	0.0 L	70.0000
81	AKD728	0.0 N	0.0 N	7.0000	0.0 N	0.0 L	200.0000	0.0 N	10.0000	0.0 L	70.0000
82	AKD727	10.0000	0.0 N	15.0000	0.0 N	300.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000
83	AKD725	10.0000	0.0 N	20.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	0.0 L	150.0000
83	AKD726	0.0 N	0.0 N	0.0 N	0.0 N	100.0000	30.0000	0.0 N	0.0 L	0.0 N	0.0 L
84	AKD723	15.0000	0.0 N	15.0000	0.0 N	500.0000	150.0000	0.0 N	15.0000	0.0 N	70.0000
84	AKD724	10.0000	0.0 N	20.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	0.0 L	200.0000
85	AKD722	10.0000	0.0 N	20.0000	0.0 N	200.0000	300.0000	0.0 N	15.0000	0.0 L	150.0000
86	AKD720	10.0000	0.0 N	15.0000	0.0 N	500.0000	200.0000	0.0 N	15.0000	0.0 L	100.0000
86	AKD721	0.0 N	0.0 N	0.0 N	0.0 N	0.0 L	15.0000	0.0 N	10.0000	0.0 N	0.0 L
87	AKD719	0.0 L	0.0 N	15.0000	0.0 N	150.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000

SUMDUM A-4 ROCK SAMPLES

	SAMPLE	AU PPM
74	AKD736	0.0200L
75	AKD735	0.0200L
76	AKD734	0.0200L
77	AKD733	0.0200L
78	AKD731	0.0200L
78	AKD732	0.0200L
79	AKD730	0.0200L
80	AKD729	0.0200L
81	AKD728	0.0200L
82	AKD727	0.0200L
83	AKD725	0.0200L
83	AKD726	0.0200L
84	AKD723	0.0200L
84	AKD724	0.0200L
85	AKD722	0.0200L
86	AKD720	0.0200L
86	AKD721	0.0200L
87	AKD719	0.0200L

FREQUENCY TABLE FOR COLUMN 1 (FE PCT)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-02 -	5.6E-02	0	0	0.0	0.0
5.6E-02 -	8.3E-02	0	0	0.0	0.0
8.3E-02 -	1.2E-01	0	0	0.0	0.0
1.2E-01 -	1.8E-01	1	1	0.85	0.85
1.8E-01 -	2.6E-01	0	1	0.0	0.85
2.6E-01 -	3.8E-01	1	2	0.85	1.69
3.8E-01 -	5.6E-01	1	3	0.85	2.54
5.6E-01 -	8.3E-01	0	3	0.0	2.54
8.3E-01 -	1.2E 00	2	5	1.69	4.24
1.2E 00 -	1.8E 00	6	11	5.08	9.32
1.8E 00 -	2.6E 00	3	14	2.54	11.86
2.6E 00 -	3.8E 00	16	30	13.56	25.42
3.8E 00 -	5.6E 00	19	49	16.10	41.53
5.6E 00 -	8.3E 00	14	63	11.86	53.39
8.3E 00 -	1.2E 01	28	91	23.73	77.12
1.2E 01 -	1.8E 01	25	116	21.19	98.31
1.8E 01 -	2.6E 01	1	117	0.85	99.15

HISTOGRAM FOR COLUMN 1 (FE PCT)

```
1.5E-01 X

2.0E-01

3.0E-01 X

5.0E-01 X

7.0E-01

1.0E 00 XX

1.5E 00 XXXXX

2.0E 00 XXX

3.0E 00 XXXXXXXXXXXXX

5.0E 00 XXXXXXXXXXXXXXXX

7.0E 00 XXXXXXXXXXXX

1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXX

2.0E 01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	1	117
0.0	0.0			0.0	0.85	

MAXIMUM = 2.00000E 01

MINIMUM = 1.50000E-01

GEOMETRIC MEAN = 6.08517E 00

GEOMETRIC DEVIATION = 2.39761E 00

FREQUENCY TABLE FOR COLUMN 2 (MG PCT)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.0	0.0
2.6E-02 -	3.8E-02	0	0	0.0	0.0
3.8E-02 -	5.6E-02	0	0	0.0	0.0
5.6E-02 -	8.3E-02	1	1	0.85	0.85
8.3E-02 -	1.2E-01	1	2	0.85	1.69
1.2E-01 -	1.8E-01	1	3	0.85	2.54
1.8E-01 -	2.6E-01	0	3	0.0	2.54
2.6E-01 -	3.8E-01	6	9	5.08	7.63
3.8E-01 -	5.6E-01	2	11	1.69	9.32
5.6E-01 -	8.3E-01	4	15	3.39	12.71
8.3E-01 -	1.2E 00	16	31	13.56	26.27
1.2E 00 -	1.8E 00	25	56	21.19	47.46
1.8E 00 -	2.6E 00	17	73	14.41	61.86
2.6E 00 -	3.8E 00	32	105	27.12	88.98
3.8E 00 -	5.6E 00	8	113	6.78	95.76
5.6E 00 -	8.3E 00	5	118	4.24	100.00

HISTOGRAM FOR COLUMN 2 (MG PCT)

```
7.0E-02 X

1.0E-01 X

1.5E-01 X

2.0E-01

3.0E-01 XXXXX

5.0E-01 XX

7.0E-01 XXX

1.0E 00 XXXXXXXXXXXXXX

1.5E 00 XXXXXXXXXXXXXXXXXXXXX

2.0E 00 XXXXXXXXXXXXXX

3.0E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 00 XXXXXXX

7.0E 00 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	118
0.0	0.0			0.0	0.0	

MAXIMUM = 7.00000E 00

MINIMUM = 7.00000E-02

GEOMETRIC MEAN = 1.70245E 00

GEOMETRIC DEVIATION = 2.32500E 00

FREQUENCY TABLE FOR COLUMN 3 (CA PCT)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-02 -	5.6E-02	0	0	0.0	0.0
5.6E-02 -	8.3E-02	2	2	1.69	1.69
8.3E-02 -	1.2E-01	0	2	0.0	1.69
1.2E-01 -	1.8E-01	3	5	2.54	4.24
1.8E-01 -	2.6E-01	2	7	1.69	5.93
2.6E-01 -	3.8E-01	2	9	1.69	7.63
3.8E-01 -	5.6E-01	8	17	6.78	14.41
5.6E-01 -	8.3E-01	11	28	9.32	23.73
8.3E-01 -	1.2E 00	11	39	9.32	33.05
1.2E 00 -	1.8E 00	18	57	15.25	48.31
1.8E 00 -	2.6E 00	16	73	13.56	61.86
2.6E 00 -	3.8E 00	11	84	9.32	71.19
3.8E 00 -	5.6E 00	15	99	12.71	83.90
5.6E 00 -	8.3E 00	10	109	8.47	92.37
8.3E 00 -	1.2E 01	6	115	5.08	97.46
1.2E 01 -	1.8E 01	3	118	2.54	100.00

HISTOGRAM FOR COLUMN 3 (CA PCT)

```
7.0E-02 XX

1.0E-01

1.5E-01 XXX

2.0E-01 XX

3.0E-01 XX

5.0E-01 XXXXXXX

7.0E-01 XXXXXXXXX

1.0E 00 XXXXXXXXX

1.5E 00 XXXXXXXXXXXXXXX

2.0E 00 XXXXXXXXXXXXXX

3.0E 00 XXXXXXXXX

5.0E 00 XXXXXXXXXXXXX

7.0E 00 XXXXXXXX

1.0E 01 XXXXX

1.5E 01 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	118
0.0	0.0			0.0	0.0	

MAXIMUM = 1.50000E 01

MINIMUM = 7.00000E-02

GEOMETRIC MEAN = 1.80839E 00

GEOMETRIC DEVIATION = 3.11793E 00

FREQUENCY TABLE FOR COLUMN 4 (TI PCT)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-03 -	2.6E-03	0	0	0.0	0.0
2.6E-03 -	3.8E-03	0	0	0.0	0.0
3.8E-03 -	5.6E-03	0	0	0.0	0.0
5.6E-03 -	8.3E-03	0	0	0.0	0.0
8.3E-03 -	1.2E-02	1	1	0.85	0.85
1.2E-02 -	1.8E-02	0	1	0.0	0.85
1.8E-02 -	2.6E-02	1	2	0.85	1.69
2.6E-02 -	3.8E-02	2	4	1.69	3.39
3.8E-02 -	5.6E-02	1	5	0.85	4.24
5.6E-02 -	8.3E-02	2	7	1.69	5.93
8.3E-02 -	1.2E-01	2	9	1.69	7.63
1.2E-01 -	1.8E-01	3	12	2.54	10.17
1.8E-01 -	2.6E-01	2	14	1.69	11.86
2.6E-01 -	3.8E-01	37	51	31.36	43.22
3.8E-01 -	5.6E-01	50	101	42.37	85.59
5.6E-01 -	8.3E-01	13	114	11.02	96.61
8.3E-01 -	1.2E 00	2	116	1.69	98.31

HISTOGRAM FOR COLUMN 4 (TI PCT)

```
1.0E-02 X

1.5E-02

2.0E-02 X

3.0E-02 XX

5.0E-02 X

7.0E-02 XX

1.0E-01 XX

1.5E-01 XXX

2.0E-01 XX

3.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

7.0E-01 XXXXXXXXXXX

1.0E 00 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	2	116
0.0	0.0			0.0	1.69	

MAXIMUM = 1.00000E 00

MINIMUM = 1.00000E-02

GEOMETRIC MEAN = 3.51753E-01

GEOMETRIC DEVIATION = 2.10211E 00

FREQUENCY TABLE FOR COLUMN 5 (MN PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	0	0	0.0	0.0
1.2E 01 -	1.8E 01	0	0	0.0	0.0
1.8E 01 -	2.6E 01	0	0	0.0	0.0
2.6E 01 -	3.8E 01	0	0	0.0	0.0
3.8E 01 -	5.6E 01	0	0	0.0	0.0
5.6E 01 -	8.3E 01	4	4	3.39	3.39
8.3E 01 -	1.2E 02	0	4	0.0	3.39
1.2E 02 -	1.8E 02	3	7	2.54	5.93
1.8E 02 -	2.6E 02	5	12	4.24	10.17
2.6E 02 -	3.8E 02	9	21	7.63	17.80
3.8E 02 -	5.6E 02	19	40	16.10	33.90
5.6E 02 -	8.3E 02	13	53	11.02	44.92
8.3E 02 -	1.2E 03	19	72	16.10	61.02
1.2E 03 -	1.8E 03	37	109	31.36	92.37
1.8E 03 -	2.6E 03	7	116	5.93	98.31
2.6E 03 -	3.8E 03	1	117	0.85	99.15
3.8E 03 -	5.6E 03	1	118	0.85	100.00

HISTOGRAM FOR COLUMN 5 (MN PPM)

```
7.0E 01 XXX

1.0E 02

1.5E 02 XXX

2.0E 02 XXXX

3.0E 02 XXXXXXXX

5.0E 02 XXXXXXXXXXXXXXXX

7.0E 02 XXXXXXXXXXX

1.0E 03 XXXXXXXXXXXXXXXX

1.5E 03 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 03 XXXXXX

3.0E 03 X

5.0E 03 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	118
0.0	0.0			0.0	0.0	

MAXIMUM = 5.00000E 03

MINIMUM = 7.00000E 01

GEOMETRIC MEAN = 7.72460E 02

GEOMETRIC DEVIATION = 2.30184E 00

FREQUENCY TABLE FOR COLUMN 6 (AG PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-01 -	5.6E-01	1	1	0.85	0.85
5.6E-01 -	8.3E-01	1	2	0.85	1.69
8.3E-01 -	1.2E 00	1	3	0.85	2.54
1.2E 00 -	1.8E 00	4	7	3.39	5.93
1.8E 00 -	2.6E 00	0	7	0.0	5.93
2.6E 00 -	3.8E 00	1	8	0.85	6.78

HISTOGRAM FOR COLUMN 6 (AG PPM)

```
5.0E-01 X

7.0E-01 X

1.0E 00 X

1.5E 00 XXX

2.0E 00

3.0E 00 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
104	6	0	0	0	0	8
88.14	5.08			0.0	0.0	

MAXIMUM = 3.00000E 00

MINIMUM = 5.00000E-01

GEOMETRIC MEAN = 1.23224E 00

GEOMETRIC DEVIATION = 1.73457E 00

FREQUENCY TABLE FOR COLUMN 7 (AS PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	
N	L	H	B	T	G	ANALYTICAL VALUES
118	0	0	0	0	0	0
*****	0.0			0.0	0.0	

MAXIMUM = -9.99900E 48

MINIMUM = 9.99900E 48

GEOMETRIC MEAN = 9.99900E 48

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN 8 (AU PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	
N	L	H	B	T	G	ANALYTICAL VALUES
118	0	0	0	0	0	0
*****	0.0			0.0	0.0	

MAXIMUM = -9.99900E 48

MINIMUM = 9.99900E 48

GEOMETRIC MEAN = 9.99900E 48

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN 9 (B PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	22	22	18.64	18.64
1.2E 01 -	1.8E 01	29	51	24.58	43.22
1.8E 01 -	2.6E 01	13	64	11.02	54.24
2.6E 01 -	3.8E 01	13	77	11.02	65.25
3.8E 01 -	5.6E 01	4	81	3.39	68.64
5.6E 01 -	8.3E 01	2	83	1.69	70.34
8.3E 01 -	1.2E 02	2	85	1.69	72.03
1.2E 02 -	1.8E 02	2	87	1.69	73.73
1.8E 02 -	2.6E 02	0	87	0.0	73.73
2.6E 02 -	3.8E 02	0	87	0.0	73.73
3.8E 02 -	5.6E 02	0	87	0.0	73.73
5.6E 02 -	8.3E 02	0	87	0.0	73.73
8.3E 02 -	1.2E 03	0	87	0.0	73.73
1.2E 03 -	1.8E 03	0	87	0.0	73.73
1.8E 03 -	2.6E 03	1	88	0.85	74.58

HISTOGRAM FOR COLUMN 9 (B PPM)

```
1.0E 01 XXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXX

3.0E 01 XXXXXXXXXXX

5.0E 01 XXX

7.0E 01 XX

1.0E 02 XX

1.5E 02 XX

2.0E 02

3.0E 02

5.0E 02

7.0E 02

1.0E 03

1.5E 03

2.0E 03 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
11	18	0	0	0	1	88
9.32	15.25			0.0	0.85	

MAXIMUM = 2.00000E 03

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.99324E 01

GEOMETRIC DEVIATION = 2.23250E 00

GEOMETRIC MEAN = 1.99324E 01

GEOMETRIC DEVIATION = 2.23250E 00

FREQUENCY TABLE FOR COLUMN 10 (BA PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E 01 -	2.6E 01	0	0	0.0	0.0
2.6E 01 -	3.8E 01	0	0	0.0	0.0
3.8E 01 -	5.6E 01	0	0	0.0	0.0
5.6E 01 -	8.3E 01	0	0	0.0	0.0
8.3E 01 -	1.2E 02	11	11	9.32	9.32
1.2E 02 -	1.8E 02	21	32	17.80	27.12
1.8E 02 -	2.6E 02	6	38	5.08	32.20
2.6E 02 -	3.8E 02	32	70	27.12	59.32
3.8E 02 -	5.6E 02	11	81	9.32	68.64
5.6E 02 -	8.3E 02	15	96	12.71	81.36
8.3E 02 -	1.2E 03	5	101	4.24	85.59
1.2E 03 -	1.8E 03	3	104	2.54	88.14
1.8E 03 -	2.6E 03	1	105	0.85	88.98
2.6E 03 -	3.8E 03	3	108	2.54	91.53

HISTOGRAM FOR COLUMN 10 (BA PPM)

```
1.0E 02 XXXXXXXXX

1.5E 02 XXXXXXXXXXXXXXXXXX

2.0E 02 XXXXX

3.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 02 XXXXXXXXX

7.0E 02 XXXXXXXXXXXXX

1.0E 03 XXXX

1.5E 03 XXX

2.0E 03 X

3.0E 03 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	10	0	0	0	0	108
0.0	8.47			0.0	0.0	

MAXIMUM = 3.00000E 03

MINIMUM = 1.00000E 02

GEOMETRIC MEAN = 3.25783E 02

GEOMETRIC DEVIATION = 2.26840E 00

FREQUENCY TABLE FOR COLUMN 11 (BE PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E-01 -	1.2E 00	26	26	22.03	22.03
1.2E 00 -	1.8E 00	5	31	4.24	26.27
1.8E 00 -	2.6E 00	0	31	0.0	26.27
2.6E 00 -	3.8E 00	0	31	0.0	26.27
3.8E 00 -	5.6E 00	1	32	0.85	27.12

HISTOGRAM FOR COLUMN 11 (BE PPM)

```
1.0E 00 XXXXXXXXXXXXXXXXXXXXX

1.5E 00 XXXX

2.0E 00

3.0E 00

5.0E 00 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
40	46	0	0	0	0	32
33.90	38.98			0.0	0.0	

MAXIMUM = 5.00000E 00

MINIMUM = 1.00000E 00

GEOMETRIC MEAN = 1.12036E 00

GEOMETRIC DEVIATION = 1.36483E 00

FREQUENCY TABLE FOR COLUMN 12 (BI PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	ANALYTICAL VALUES
N	L	H	B	T	G	
118	0	0	0	0	0	0
*****	0.0			0.0	0.0	

MAXIMUM = -9.99900E 48

MINIMUM = 9.99900E 48

GEOMETRIC MEAN = 9.99900E 48

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN 13 (CD PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	
N	L	H	B	T	G	ANALYTICAL VALUES
117	1	0	0	0	0	0
99.15	0.85			0.0	0.0	

MAXIMUM = -9.99900E 48

MINIMUM = 9.99900E 48

GEOMETRIC MEAN = 9.99900E 48

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN 14 (CO PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	8	8	6.78	6.78
5.6E 00 -	8.3E 00	0	8	0.0	6.78
8.3E 00 -	1.2E 01	8	16	6.78	13.56
1.2E 01 -	1.8E 01	14	30	11.86	25.42
1.8E 01 -	2.6E 01	21	51	17.80	43.22
2.6E 01 -	3.8E 01	19	70	16.10	59.32
3.8E 01 -	5.6E 01	18	88	15.25	74.58
5.6E 01 -	8.3E 01	11	99	9.32	83.90
8.3E 01 -	1.2E 02	0	99	0.0	83.90
1.2E 02 -	1.8E 02	1	100	0.85	84.75

HISTOGRAM FOR COLUMN 14 (CO PPM)

```
5.0E 00 XXXXXXX

7.0E 00

1.0E 01 XXXXXXX

1.5E 01 XXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXX

5.0E 01 XXXXXXXXXXXXXX

7.0E 01 XXXXXXXXX

1.0E 02

1.5E 02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
4	14	0	0	0	0	100
3.39	11.86			0.0	0.0	

MAXIMUM = 1.50000E 02

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 2.42643E 01

GEOMETRIC DEVIATION = 2.12439E 00

FREQUENCY TABLE FOR COLUMN 15 (CR PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	0	0	0.0	0.0
5.6E 00 -	8.3E 00	0	0	0.0	0.0
8.3E 00 -	1.2E 01	9	9	7.63	7.63
1.2E 01 -	1.8E 01	11	20	9.32	16.95
1.8E 01 -	2.6E 01	4	24	3.39	20.34
2.6E 01 -	3.8E 01	8	32	6.78	27.12
3.8E 01 -	5.6E 01	10	42	8.47	35.59
5.6E 01 -	8.3E 01	20	62	16.95	52.54
8.3E 01 -	1.2E 02	8	70	6.78	59.32
1.2E 02 -	1.8E 02	16	86	13.56	72.88
1.8E 02 -	2.6E 02	5	91	4.24	77.12
2.6E 02 -	3.8E 02	8	99	6.78	83.90
3.8E 02 -	5.6E 02	2	101	1.69	85.59
5.6E 02 -	8.3E 02	2	103	1.69	87.29
8.3E 02 -	1.2E 03	0	103	0.0	87.29
1.2E 03 -	1.8E 03	1	104	0.85	88.14

HISTOGRAM FOR COLUMN 15 (CR PPM)

```
1.0E 01 XXXXXXXX

1.5E 01 XXXXXXXXX

2.0E 01 XXX

3.0E 01 XXXXXXX

5.0E 01 XXXXXXXX

7.0E 01 XXXXXXXXXXXXXXXXX

1.0E 02 XXXXXXX

1.5E 02 XXXXXXXXXXXXXX

2.0E 02 XXXX

3.0E 02 XXXXXXX

5.0E 02 XX

7.0E 02 XX

1.0E 03

1.5E 03 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	14	0	0	0	0	104
0.0	11.86			0.0	0.0	

MAXIMUM = 1.50000E 03

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 6.60296E 01

GEOMETRIC DEVIATION = 3.12162E 00

FREQUENCY TABLE FOR COLUMN 16 (CU PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	2	2	1.69	1.69
5.6E 00 -	8.3E 00	2	4	1.69	3.39
8.3E 00 -	1.2E 01	5	9	4.24	7.63
1.2E 01 -	1.8E 01	7	16	5.93	13.56
1.8E 01 -	2.6E 01	8	24	6.78	20.34
2.6E 01 -	3.8E 01	13	37	11.02	31.36
3.8E 01 -	5.6E 01	11	48	9.32	40.68
5.6E 01 -	8.3E 01	19	67	16.10	56.78
8.3E 01 -	1.2E 02	10	77	8.47	65.25
1.2E 02 -	1.8E 02	15	92	12.71	77.97
1.8E 02 -	2.6E 02	4	96	3.39	81.36
2.6E 02 -	3.8E 02	4	100	3.39	84.75
3.8E 02 -	5.6E 02	2	102	1.69	86.44
5.6E 02 -	8.3E 02	0	102	0.0	86.44
8.3E 02 -	1.2E 03	0	102	0.0	86.44
1.2E 03 -	1.8E 03	3	105	2.54	88.98
1.8E 03 -	2.6E 03	1	106	0.85	89.83
2.6E 03 -	3.8E 03	1	107	0.85	90.68

HISTOGRAM FOR COLUMN 16 (CU PPM)

```
5.0E 00 XX

7.0E 00 XX

1.0E 01 XXXX

1.5E 01 XXXXXX

2.0E 01 XXXXXXX

3.0E 01 XXXXXXXXXXX

5.0E 01 XXXXXXXXX

7.0E 01 XXXXXXXXXXXXXXXX

1.0E 02 XXXXXXXX

1.5E 02 XXXXXXXXXXXXX

2.0E 02 XXX

3.0E 02 XXX

5.0E 02 XX

7.0E 02

1.0E 03

1.5E 03 XXX

2.0E 03 X

3.0E 03 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	11	0	0	0	0	107
0.0	9.32			0.0	0.0	

MAXIMUM = 3.00000E 03

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 6.38260E 01

GEOMETRIC DEVIATION = 3.50095E 00

FREQUENCY TABLE FOR COLUMN 17 (LA PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E 01 -	2.6E 01	4	4	3.39	3.39
2.6E 01 -	3.8E 01	3	7	2.54	5.93
3.8E 01 -	5.6E 01	1	8	0.85	6.78

HISTOGRAM FOR COLUMN 17 (LA PPM)

```
2.0E 01 XXX

3.0E 01 XXX

5.0E 01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
74	36	0	0	0	0	8
62.71	30.51			0.0	0.0	

MAXIMUM = 5.00000E 01

MINIMUM = 2.00000E 01

GEOMETRIC MEAN = 2.61099E 01

GEOMETRIC DEVIATION = 1.39153E 00

FREQUENCY TABLE FOR COLUMN 18 (MO PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	4	4	3.39	3.39
5.6E 00 -	8.3E 00	2	6	1.69	5.08
8.3E 00 -	1.2E 01	1	7	0.85	5.93
1.2E 01 -	1.8E 01	1	8	0.85	6.78
1.8E 01 -	2.6E 01	0	8	0.0	6.78
2.6E 01 -	3.8E 01	1	9	0.85	7.63
3.8E 01 -	5.6E 01	2	11	1.69	9.32
5.6E 01 -	8.3E 01	1	12	0.85	10.17

HISTOGRAM FOR COLUMN 18 (MO PPM)

```
5.0E 00 XXX

7.0E 00 XX

1.0E 01 X

1.5E 01 X

2.0E 01

3.0E 01 X

5.0E 01 XX

7.0E 01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
38	68	0	0	0	0	12
32.20	57.63			0.0	0.0	

MAXIMUM = 7.00000E 01

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 1.30375E 01

GEOMETRIC DEVIATION = 2.80113E 00

FREQUENCY TABLE FOR COLUMN 19 (NB PPM)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 - 1.2E 01	75	75	63.56	63.56
1.2E 01 - 1.8E 01	2	77	1.69	65.25

HISTOGRAM FOR COLUMN 19 (NB PPM)

```
1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	41	0	0	0	0	77
0.0	34.75			0.0	0.0	

MAXIMUM = 1.50000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.01055E 01

GEOMETRIC DEVIATION = 1.06763E 00

FREQUENCY TABLE FOR COLUMN 19 (NB PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	75	75	63.56	63.56
1.2E 01 -	1.8E 01	2	77	1.69	65.25

HISTOGRAM FOR COLUMN 19 (NB PPM)

```
1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	41	0	0	0	0	77
0.0	34.75			0.0	0.0	

MAXIMUM = 1.50000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.01055E 01

GEOMETRIC DEVIATION = 1.06763E 00

FREQUENCY TABLE FOR COLUMN 20 (NI PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	7	7	5.93	5.93
5.6E 00 -	8.3E 00	0	7	0.0	5.93
8.3E 00 -	1.2E 01	6	13	5.08	11.02
1.2E 01 -	1.8E 01	9	22	7.63	18.64
1.8E 01 -	2.6E 01	6	28	5.08	23.73
2.6E 01 -	3.8E 01	31	59	26.27	50.00
3.8E 01 -	5.6E 01	19	78	16.10	66.10
5.6E 01 -	8.3E 01	12	90	10.17	76.27
8.3E 01 -	1.2E 02	9	99	7.63	83.90
1.2E 02 -	1.8E 02	6	105	5.08	88.98
1.8E 02 -	2.6E 02	1	106	0.85	89.83
2.6E 02 -	3.8E 02	1	107	0.85	90.68

HISTOGRAM FOR COLUMN 20 (NI PPM)

```
5.0E 00 XXXXXX

7.0E 00

1.0E 01 XXXXX

1.5E 01 XXXXXXXX

2.0E 01 XXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 01 XXXXXXXXXXXXXXX

7.0E 01 XXXXXXXXXX

1.0E 02 XXXXXXXX

1.5E 02 XXXXX

2.0E 02 X

3.0E 02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	9	0	0	0	0	107
1.69	7.63			0.0	0.0	

MAXIMUM = 3.00000E 02

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 3.50865E 01

GEOMETRIC DEVIATION = 2.42876E 00

FREQUENCY TABLE FOR COLUMN 21 (PB PPM)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 - 1.2E 01	25	25	21.19	21.19
1.2E 01 - 1.8E 01	12	37	10.17	31.36
1.8E 01 - 2.6E 01	8	45	6.78	38.14
2.6E 01 - 3.8E 01	8	53	6.78	44.92
3.8E 01 - 5.6E 01	0	53	0.0	44.92
5.6E 01 - 8.3E 01	1	54	0.85	45.76

HISTOGRAM FOR COLUMN 21 (PB PPM)

```
1.0E 01 XXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXX

2.0E 01 XXXXXXX

3.0E 01 XXXXXXX

5.0E 01

7.0E 01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
34	30	0	0	0	0	54
28.81	25.42			0.0	0.0	

MAXIMUM = 7.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.47929E 01

GEOMETRIC DEVIATION = 1.57645E 00

FREQUENCY TABLE FOR COLUMN 22 (SB PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	
N	L	H	B	T	G	ANALYTICAL VALUES
118	0	0	0	0	0	0
*****	0.0			0.0	0.0	

MAXIMUM = -9.99900E 48

MINIMUM = 9.99900E 48

GEOMETRIC MEAN = 9.99900E 48

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN 23 (SC PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	8	8	6.78	6.78
5.6E 00 -	8.3E 00	5	13	4.24	11.02
8.3E 00 -	1.2E 01	7	20	5.93	16.95
1.2E 01 -	1.8E 01	36	56	30.51	47.46
1.8E 01 -	2.6E 01	18	74	15.25	62.71
2.6E 01 -	3.8E 01	29	103	24.58	87.29
3.8E 01 -	5.6E 01	3	106	2.54	89.83

HISTOGRAM FOR COLUMN 23 (SC PPM)

```
5.0E 00 XXXXXXX

7.0E 00 XXXX

1.0E 01 XXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXX

5.0E 01 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
5	7	0	0	0	0	106
4.24	5.93			0.0	0.0	

MAXIMUM = 5.00000E 01

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 1.70296E 01

GEOMETRIC DEVIATION = 1.73352E 00

FREQUENCY TABLE FOR COLUMN 24 (SN PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	ANALYTICAL VALUES
N	L	H	B	T	G	
118	0	0	0	0	0	0
*****	0.0			0.0	0.0	

MAXIMUM = -9.99900E 48

MINIMUM = 9.99900E 48

GEOMETRIC MEAN = 9.99900E 48

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN 25 (SR PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 01 -	1.2E 02	9	9	7.63	7.63
1.2E 02 -	1.8E 02	16	25	13.56	21.19
1.8E 02 -	2.6E 02	19	44	16.10	37.29
2.6E 02 -	3.8E 02	28	72	23.73	61.02
3.8E 02 -	5.6E 02	11	83	9.32	70.34
5.6E 02 -	8.3E 02	15	98	12.71	83.05
8.3E 02 -	1.2E 03	5	103	4.24	87.29
1.2E 03 -	1.8E 03	5	108	4.24	91.53
1.8E 03 -	2.6E 03	2	110	1.69	93.22
2.6E 03 -	3.8E 03	1	111	0.85	94.07

HISTOGRAM FOR COLUMN 25 (SR PPM)

```
1.0E 02 XXXXXXXX

1.5E 02 XXXXXXXXXXXXXX

2.0E 02 XXXXXXXXXXXXXXXX

3.0E 02 XXXXXXXXXXXXXXXXXXXXXXXX

5.0E 02 XXXXXXXXX

7.0E 02 XXXXXXXXXXXXX

1.0E 03 XXXX

1.5E 03 XXXX

2.0E 03 XX

3.0E 03 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	6	0	0	0	1	111
0.0	5.08			0.0	0.85	

MAXIMUM = 3.00000E 03

MINIMUM = 1.00000E 02

GEOMETRIC MEAN = 3.27711E 02

GEOMETRIC DEVIATION = 2.18444E 00

FREQUENCY TABLE FOR COLUMN 26 (V PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	1	1	0.85	0.85
1.2E 01 -	1.8E 01	2	3	1.69	2.54
1.8E 01 -	2.6E 01	2	5	1.69	4.24
2.6E 01 -	3.8E 01	3	8	2.54	6.78
3.8E 01 -	5.6E 01	3	11	2.54	9.32
5.6E 01 -	8.3E 01	3	14	2.54	11.86
8.3E 01 -	1.2E 02	4	18	3.39	15.25
1.2E 02 -	1.8E 02	15	33	12.71	27.97
1.8E 02 -	2.6E 02	37	70	31.36	59.32
2.6E 02 -	3.8E 02	45	115	38.14	97.46
3.8E 02 -	5.6E 02	3	118	2.54	100.00

HISTOGRAM FOR COLUMN 26 (V PPM)

```
1.0E 01 X

1.5E 01 XX

2.0E 01 XX

3.0E 01 XXX

5.0E 01 XXX

7.0E 01 XXX

1.0E 02 XXX

1.5E 02 XXXXXXXXXXXXX

2.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	118
0.0	0.0			0.0	0.0	

MAXIMUM = 5.00000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.80850E 02

GEOMETRIC DEVIATION = 2.10402E 00

FREQUENCY TABLE FOR COLUMN 27 (W PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	ANALYTICAL VALUES
N	L	H	B	T	G	
118	0	0	0	0	0	0
*****	0.0			0.0	0.0	

MAXIMUM = -9.99900E 48

MINIMUM = 9.99900E 48

GEOMETRIC MEAN = 9.99900E 48

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN 28 (Y PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	28	28	23.73	23.73
1.2E 01 -	1.8E 01	50	78	42.37	66.10
1.8E 01 -	2.6E 01	26	104	22.03	88.14
2.6E 01 -	3.8E 01	3	107	2.54	90.68
3.8E 01 -	5.6E 01	1	108	0.85	91.53
5.6E 01 -	8.3E 01	1	109	0.85	92.37

HISTOGRAM FOR COLUMN 28 (Y PPM)

```
1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXX

5.0E 01 X

7.0E 01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	9	0	0	0	0	109
0.0	7.63			0.0	0.0	

MAXIMUM = 7.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.51311E 01

GEOMETRIC DEVIATION = 1.39588E 00

FREQUENCY TABLE FOR COLUMN 29 (ZN PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E 02 -	2.6E 02	3	3	2.54	2.54
2.6E 02 -	3.8E 02	5	8	4.24	6.78
3.8E 02 -	5.6E 02	1	9	0.85	7.63
5.6E 02 -	8.3E 02	1	10	0.85	8.47
8.3E 02 -	1.2E 03	0	10	0.0	8.47
1.2E 03 -	1.8E 03	0	10	0.0	8.47
1.8E 03 -	2.6E 03	0	10	0.0	8.47
2.6E 03 -	3.8E 03	0	10	0.0	8.47
3.8E 03 -	5.6E 03	1	11	0.85	9.32

HISTOGRAM FOR COLUMN 29 (ZN PPM)

```
2.0E 02 XXX

3.0E 02 XXXX

5.0E 02 X

7.0E 02 X

1.0E 03

1.5E 03

2.0E 03

3.0E 03

5.0E 03 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
39	68	0	0	0	0	11
33.05	57.63			0.0	0.0	

MAXIMUM = 5.00000E 03

MINIMUM = 2.00000E 02

GEOMETRIC MEAN = 3.92455E 02

GEOMETRIC DEVIATION = 2.52707E 00

FREQUENCY TABLE FOR COLUMN 30 (ZR PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	0	0	0.0	0.0
1.2E 01 -	1.8E 01	0	0	0.0	0.0
1.8E 01 -	2.6E 01	2	2	1.69	1.69
2.6E 01 -	3.8E 01	7	9	5.93	7.63
3.8E 01 -	5.6E 01	17	26	14.41	22.03
5.6E 01 -	8.3E 01	54	80	45.76	67.80
8.3E 01 -	1.2E 02	18	98	15.25	83.05
1.2E 02 -	1.8E 02	9	107	7.63	90.68
1.8E 02 -	2.6E 02	2	109	1.69	92.37

HISTOGRAM FOR COLUMN 30 (ZR PPM)

```
2.0E 01 XX

3.0E 01 XXXXXX

5.0E 01 XXXXXXXXXXXXXX

7.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 02 XXXXXXXXXXXXXXX

1.5E 02 XXXXXXXX

2.0E 02 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	9	0	0	0	0	109
0.0	7.63			0.0	0.0	

MAXIMUM = 2.00000E 02

MINIMUM = 2.00000E 01

GEOMETRIC MEAN = 7.07885E 01

GEOMETRIC DEVIATION = 1.53438E 00

FREQUENCY TABLE FOR COLUMN 31 (AU PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.0	0.0
2.6E-02 -	3.8E-02	0	0	0.0	0.0
3.8E-02 -	5.6E-02	1	1	0.85	0.85
5.6E-02 -	8.3E-02	0	1	0.0	0.85
8.3E-02 -	1.2E-01	0	1	0.0	0.85
1.2E-01 -	1.8E-01	0	1	0.0	0.85
1.8E-01 -	2.6E-01	2	3	1.69	2.54

HISTOGRAM FOR COLUMN 31 (AU PPM)

```
5.0E-02 X

7.0E-02

1.0E-01

1.5E-01

2.0E-01 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	115	0	0	0	0	3
0.0	97.46			0.0	0.0	

MAXIMUM = 2.00000E-01

MINIMUM = 4.00000E-02

GEOMETRIC MEAN = 1.16961E-01

GEOMETRIC DEVIATION = 2.53250E 00

A470 STATISTICAL SUMMARY DATE 4/30/70

ELEMENT	N	L	H	B	T	G	ANALYTICAL VALUES
FE PCT	0	0	0	0	0	1	117
MG PCT	0	0	0	0	0	0	118
CA PCT	0	0	0	0	0	0	118
TI PCT	0	0	0	0	0	2	116
MN PPM	0	0	0	0	0	0	118
AG PPM	104	6	0	0	0	0	8
AS PPM	118	0	0	0	0	0	0
AU PPM	118	0	0	0	0	0	0
B PPM	11	18	0	0	0	1	88
BA PPM	0	10	0	0	0	0	108
BE PPM	40	46	0	0	0	0	32
BI PPM	118	0	0	0	0	0	0
CD PPM	117	1	0	0	0	0	0
CO PPM	4	14	0	0	0	0	100
CR PPM	0	14	0	0	0	0	104
CU PPM	0	11	0	0	0	0	107
LA PPM	74	36	0	0	0	0	8
MO PPM	38	68	0	0	0	0	12
NB PPM	0	41	0	0	0	0	77
NI PPM	2	9	0	0	0	0	107
PB PPM	34	30	0	0	0	0	54
SB PPM	118	0	0	0	0	0	0
SC PPM	5	7	0	0	0	0	106
SN PPM	118	0	0	0	0	0	0
SR PPM	0	6	0	0	0	1	111
V PPM	0	0	0	0	0	0	118
W PPM	118	0	0	0	0	0	0
Y PPM	0	9	0	0	0	0	109
ZN PPM	39	68	0	0	0	0	11
ZR PPM	0	9	0	0	0	0	109
AU PPM	0	115	0	0	0	0	3

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
FE PCT	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
MG PCT	1.702452	2.32	118 SAMPLES AND 118 ANALYTICAL VALUES.
CA PCT	1.808385	3.12	118 SAMPLES AND 118 ANALYTICAL VALUES.
TI PCT	********	******	2 GREATER THAN VALUES. NO COMPUTATIONS.
MN PPM	772.457520	2.30	118 SAMPLES AND 118 ANALYTICAL VALUES.
AG PPM	********	******	110 NOT DETECTED, LESS THAN, OR TRACE VALUES. 8 REPORTED VALUES. NO COMPUTATIONS.
AS PPM	********	******	118 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
AU PPM	********	******	118 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
B PPM	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
BA PPM	245.380600	3.40	10 NOT DETECTED, LESS THAN, OR TRACE VALUES. 108 REPORTED VALUES.
BE PPM	********	******	86 NOT DETECTED, LESS THAN, OR TRACE VALUES. 32 REPORTED VALUES. NO COMPUTATIONS.
BI PPM	********	******	118 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
CD PPM	********	******	118 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
CO PPM	16.922516	3.04	18 NOT DETECTED, LESS THAN, OR TRACE VALUES. 100 REPORTED VALUES.
CR PPM	43.360352	4.85	14 NOT DETECTED, LESS THAN, OR TRACE VALUES. 104 REPORTED VALUES.
CU PPM	46.113922	4.84	11 NOT DETECTED, LESS THAN, OR TRACE VALUES. 107 REPORTED VALUES.
LA PPM	********	******	110 NOT DETECTED, LESS THAN, OR TRACE VALUES. 8 REPORTED VALUES. NO COMPUTATIONS.
MO PPM	0.146894	12.94	106 NOT DETECTED, LESS THAN, OR TRACE VALUES. 12 REPORTED VALUES.
NB PPM	9.106081	1.17	41 NOT DETECTED, LESS THAN, OR TRACE VALUES. 77 REPORTED VALUES.
NI PPM	27.301483	3.19	11 NOT DETECTED, LESS THAN, OR TRACE VALUES. 107 REPORTED VALUES.
PB PPM	7.577806	2.17	64 NOT DETECTED, LESS THAN, OR TRACE VALUES. 54 REPORTED VALUES.

SB PPM	********	******	118 NOT DETECTED, LESS THAN, OR TRACE VALUES.	0 REPORTED VALUES.	NO COMPUTATIONS.
SC PPM	14.178554	2.14	12 NOT DETECTED, LESS THAN, OR TRACE VALUES.	106 REPORTED VALUES.	
SN PPM	********	******	118 NOT DETECTED, LESS THAN, OR TRACE VALUES.	0 REPORTED VALUES.	NO COMPUTATIONS.
SR PPM	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.		
V PPM	180.849670	2.10	118 SAMPLES AND 118 ANALYTICAL VALUES.		
W PPM	********	******	118 NOT DETECTED, LESS THAN, OR TRACE VALUES.	0 REPORTED VALUES.	NO COMPUTATIONS.
Y PPM	14.258299	1.47	9 NOT DETECTED, LESS THAN, OR TRACE VALUES.	109 REPORTED VALUES.	
ZN PPM	********	******	107 NOT DETECTED, LESS THAN, OR TRACE VALUES.	11 REPORTED VALUES.	NO COMPUTATIONS.
ZR PPM	59.004623	2.13	9 NOT DETECTED, LESS THAN, OR TRACE VALUES.	109 REPORTED VALUES.	
AU PPM	********	******	115 NOT DETECTED, LESS THAN, OR TRACE VALUES.	3 REPORTED VALUES.	NO COMPUTATIONS.

TABLE 3. SUMDUM A-4 STREAM SEDIMENTS

MAP NUMBER	SAMPLE	FE PCT	MG PCT	CA PCT	TI PCT	MN PPM	AG PPM	AS PPM	AU PPM	B PPM	BA PPM
88	SA421	10.0000	1.0000	1.5000	1.0000G	3000.0000	0.0 N	0.0 N	0.0 N	50.0000	300.0000
89	SA422	7.0000	1.5000	1.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0 N	30.0000	700.0000
90	SA419	10.0000	1.5000	2.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0 N	20.0000	300.0000
91	SA420	7.0000	1.5000	1.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0 N	30.0000	300.0000
92	SA417	15.0000	1.5000	2.0000	1.0000G	1500.0000	0.0 N	0.0 N	0.0 N	15.0000	300.0000
93	AKD636	7.0000	1.5000	1.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0 N	20.0000	300.0000
94	AKD637	15.0000	2.0000	1.5000	1.0000	1500.0000	0.0 N	0.0 N	0.0 N	20.0000	300.0000
95	SA416	10.0000	1.5000	1.5000	0.7000	1000.0000	0.0 N	0.0 N	0.0 N	20.0000	700.0000
96	SA418	7.0000	1.0000	1.5000	0.7000	700.0000	0.0 N	0.0 N	0.0 N	15.0000	500.0000
97	SA414	5.0000	1.5000	1.5000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	20.0000	300.0000
98	SA415	10.0000	1.5000	1.5000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	30.0000	3000.0000
99	AKD464	15.0000	1.5000	1.5000	1.0000G	1500.0000	0.0 N	0.0 N	0.0 N	15.0000	500.0000
100	AKD462	15.0000	2.0000	1.5000	0.7000	1500.0000	0.0 N	0.0 N	0.0 N	10.0000	1000.0000
101	AKD461	5.0000	1.0000	1.5000	0.7000	1500.0000	0.0 N	0.0 N	0.0 N	10.0000	300.0000
102	AKD629	10.0000	2.0000	1.5000	0.7000	1500.0000	0.0 N	0.0 N	0.0 N	10.0000	300.0000
103	AKD630	15.0000	3.0000	2.0000	0.7000	2000.0000	0.0 N	0.0 N	0.0 N	10.0000	300.0000
104	SA4445BD	15.0000	2.0000	3.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	15.0000	300.0000
105	SA4443BD	7.0000	1.0000	1.5000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	10.0000	300.0000
106	SA4442BD	7.0000	1.5000	1.5000	0.3000	2000.0000	0.0 N	0.0 N	0.0 N	15.0000	700.0000
107	SA413	10.0000	2.0000	2.0000	0.7000	1000.0000	0.0 L	0.0 N	0.0 N	15.0000	700.0000
108	SA412	10.0000	1.5000	1.5000	1.0000G	1000.0000	0.0 N	0.0 N	0.0 N	15.0000	700.0000
109	AKD634	7.0000	1.5000	1.5000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	15.0000	300.0000
110	AKD631	10.0000	3.0000	1.5000	0.3000	2000.0000	0.0 N	0.0 N	0.0 N	20.0000	150.0000
111	AKD635	3.0000	1.5000	1.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	10.0000	700.0000
112	AKD632	10.0000	2.0000	1.5000	0.7000	1500.0000	0.0 N	0.0 N	0.0 N	20.0000	300.0000
113	AKD633	10.0000	3.0000	1.5000	0.7000	1500.0000	0.0 N	0.0 N	0.0 N	50.0000	500.0000
114	SA423	3.0000	0.7000	0.7000	0.7000	700.0000	0.0 N	0.0 N	0.0 N	15.0000	700.0000
115	AKD432	15.0000	3.0000	2.0000	0.7000	2000.0000	0.0 N	0.0 N	0.0 N	100.0000	300.0000
116	AKD431	7.0000	1.5000	1.5000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	15.0000	300.0000
117	AKD430	5.0000	1.0000	1.5000	0.7000	1500.0000	0.0 N	0.0 N	0.0 N	20.0000	300.0000
118	AKD429	1.5000	0.5000	1.0000	0.3000	300.0000	0.0 N	0.0 N	0.0 N	20.0000	300.0000
119	AKD428	5.0000	1.0000	1.5000	0.7000	1500.0000	0.0 N	0.0 N	0.0 N	20.0000	300.0000
120	AKD427	3.0000	1.5000	0.7000	0.5000	700.0000	0.0 N	0.0 N	0.0 N	15.0000	300.0000
121	AKD426	10.0000	1.0000	0.7000	0.5000	2000.0000	0.0 N	0.0 N	0.0 N	15.0000	200.0000

SUMDUM A-4 STREAM SEDIMENTS

	SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
88	SA421	0.0 L	0.0 N	0.0 N	10.0000	70.0000	10.0000	0.0 N	0.0 L	15.0000	15.0000
89	SA422	1.0000	0.0 N	0.0 N	20.0000	70.0000	30.0000	0.0 N	0.0 N	10.0000	50.0000
90	SA419	1.0000	0.0 N	0.0 N	30.0000	100.0000	30.0000	0.0 N	0.0 L	10.0000	70.0000
91	SA420	0.0 L	0.0 N	0.0 N	15.0000	70.0000	20.0000	0.0 N	0.0 L	15.0000	30.0000
92	SA417	1.0000	0.0 N	0.0 N	30.0000	100.0000	10.0000	0.0 L	0.0 L	10.0000	30.0000
93	AKD636	0.0 L	0.0 N	0.0 N	15.0000	70.0000	20.0000	0.0 N	0.0 L	10.0000	30.0000
94	AKD637	0.0 L	0.0 N	0.0 N	20.0000	150.0000	30.0000	20.0000	0.0 L	10.0000	30.0000
95	SA416	1.0000	0.0 N	0.0 N	20.0000	50.0000	50.0000	0.0 L	0.0 L	15.0000	20.0000
96	SA418	0.0 L	0.0 N	0.0 N	15.0000	70.0000	7.0000	0.0 L	0.0 L	10.0000	20.0000
97	SA414	0.0 L	0.0 N	0.0 N	15.0000	70.0000	30.0000	50.0000	0.0 L	10.0000	30.0000
98	SA415	1.0000	0.0 N	0.0 N	20.0000	100.0000	70.0000	0.0 L	7.0000	10.0000	70.0000
99	AKD464	0.0 L	0.0 N	0.0 N	30.0000	70.0000	30.0000	0.0 L	0.0 L	10.0000	30.0000
100	AKD462	0.0 L	0.0 N	0.0 N	30.0000	150.0000	50.0000	150.0000	7.0000	10.0000	70.0000
101	AKD461	0.0 L	0.0 N	0.0 N	10.0000	70.0000	0.0 L	0.0 L	0.0 L	0.0 L	15.0000
102	AKD629	0.0 L	0.0 N	0.0 N	20.0000	100.0000	30.0000	0.0 N	0.0 L	10.0000	30.0000
103	AKD630	0.0 N	0.0 N	0.0 N	50.0000	300.0000	50.0000	0.0 N	0.0 L	10.0000	100.0000
104	SA4445BD	0.0 N	0.0 N	0.0 N	30.0000	150.0000	7.0000	0.0 N	0.0 L	10.0000	50.0000
105	SA4443BD	0.0 L	0.0 N	0.0 N	10.0000	70.0000	0.0 L	0.0 N	0.0 L	10.0000	30.0000
106	SA4442BD	0.0 L	0.0 N	0.0 N	50.0000	70.0000	10.0000	0.0 N	0.0 L	10.0000	30.0000
107	SA413	1.0000	0.0 N	0.0 N	30.0000	150.0000	30.0000	0.0 L	5.0000	10.0000	70.0000
108	SA412	1.0000	0.0 N	0.0 N	30.0000	150.0000	20.0000	0.0 N	7.0000	10.0000	100.0000
109	AKD634	0.0 L	0.0 N	0.0 N	50.0000	100.0000	50.0000	0.0 L	0.0 L	10.0000	30.0000
110	AKD631	0.0 L	0.0 N	0.0 N	70.0000	150.0000	30.0000	0.0 N	0.0 L	10.0000	70.0000
111	AKD635	0.0 L	0.0 N	0.0 N	10.0000	50.0000	5.0000	0.0 N	0.0 N	10.0000	15.0000
112	AKD632	0.0 L	0.0 N	0.0 N	20.0000	150.0000	30.0000	0.0 N	0.0 L	10.0000	30.0000
113	AKD633	0.0 L	0.0 N	0.0 N	20.0000	150.0000	50.0000	70.0000	0.0 L	10.0000	50.0000
114	SA423	0.0 L	0.0 N	0.0 N	5.0000	150.0000	0.0 L	0.0 N	0.0 N	15.0000	15.0000
115	AKD432	0.0 N	0.0 N	0.0 N	100.0000	150.0000	70.0000	0.0 N	0.0 L	10.0000	30.0000
116	AKD431	0.0 L	0.0 N	0.0 N	15.0000	70.0000	20.0000	0.0 L	0.0 L	0.0 L	20.0000
117	AKD430	0.0 L	0.0 N	0.0 N	5.0000	50.0000	10.0000	0.0 N	0.0 N	0.0 L	20.0000
118	AKD429	1.0000	0.0 N	0.0 N	0.0 N	30.0000	15.0000	0.0 N	0.0 N	0.0 L	0.0 L
119	AKD428	1.0000	0.0 N	0.0 N	15.0000	150.0000	15.0000	0.0 L	0.0 L	10.0000	30.0000
120	AKD427	0.0 L	0.0 N	0.0 N	5.0000	30.0000	70.0000	0.0 N	0.0 L	0.0 L	15.0000
121	AKD426	1.5000	0.0 N	0.0 N	50.0000	50.0000	70.0000	0.0 L	7.0000	10.0000	20.0000

SUMDUM A-4 STREAM SEDIMENTS

	SAMPLE	PB PPM	SB PPM	SC PPM	SN PPM	SR PPM	V PPM	W PPM	Y PPM	ZN PPM	ZR PPM
88	SA421	10.0000	0.0 N	30.0000	0.0 N	300.0000	200.0000	0.0 N	30.0000	0.0 L	100.0000
89	SA422	10.0000	0.0 N	20.0000	0.0 N	300.0000	200.0000	0.0 N	20.0000	0.0 L	100.0000
90	SA419	10.0000	0.0 N	20.0000	0.0 N	300.0000	200.0000	0.0 N	20.0000	0.0 L	70.0000
91	SA420	0.0 L	0.0 N	15.0000	0.0 N	200.0000	150.0000	0.0 N	15.0000	0.0 L	100.0000
92	SA417	0.0 L	0.0 N	30.0000	0.0 N	200.0000	200.0000	0.0 N	30.0000	0.0 L	100.0000
93	AKD636	10.0000	0.0 N	15.0000	0.0 N	200.0000	150.0000	0.0 N	15.0000	0.0 L	70.0000
94	AKD637	0.0 L	0.0 N	30.0000	0.0 N	300.0000	200.0000	0.0 N	20.0000	0.0 L	70.0000
95	SA416	20.0000	0.0 N	15.0000	0.0 N	500.0000	200.0000	0.0 N	20.0000	0.0 L	70.0000
96	SA418	10.0000	0.0 N	15.0000	0.0 N	300.0000	150.0000	0.0 N	15.0000	0.0 L	200.0000
97	SA414	10.0000	0.0 N	15.0000	0.0 N	200.0000	150.0000	0.0 N	20.0000	0.0 L	100.0000
98	SA415	20.0000	0.0 N	15.0000	0.0 N	200.0000	300.0000	0.0 N	30.0000	700.0000	100.0000
99	AKD464	0.0 L	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	30.0000	200.0000	200.0000
100	AKD462	10.0000	0.0 N	20.0000	0.0 N	200.0000	500.0000	0.0 N	30.0000	200.0000	100.0000
101	AKD461	0.0 L	0.0 N	20.0000	0.0 N	200.0000	150.0000	0.0 N	15.0000	0.0 N	200.0000
102	AKD629	15.0000	0.0 N	20.0000	0.0 N	300.0000	200.0000	0.0 N	30.0000	0.0 L	70.0000
103	AKD630	15.0000	0.0 N	30.0000	0.0 N	700.0000	300.0000	0.0 N	20.0000	0.0 L	70.0000
104	SA44458D	10.0000	0.0 N	30.0000	0.0 N	700.0000	300.0000	0.0 N	20.0000	0.0 L	50.0000
105	SA44438D	0.0 L	0.0 N	20.0000	0.0 N	300.0000	150.0000	0.0 N	20.0000	0.0 N	100.0000
106	SA44428D	20.0000	0.0 N	15.0000	0.0 N	500.0000	300.0000	0.0 N	15.0000	0.0 N	70.0000
107	SA413	15.0000	0.0 N	20.0000	0.0 N	300.0000	300.0000	0.0 N	15.0000	0.0 L	100.0000
108	SA412	10.0000	0.0 N	20.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	0.0 L	10.0000
109	AKD634	15.0000	0.0 N	15.0000	0.0 N	300.0000	300.0000	0.0 N	15.0000	0.0 N	100.0000
110	AKD631	10.0000	0.0 N	20.0000	0.0 N	300.0000	300.0000	0.0 N	15.0000	0.0 N	70.0000
111	AKD635	10.0000	0.0 N	15.0000	0.0 N	500.0000	150.0000	0.0 N	15.0000	0.0 N	500.0000
112	AKD632	10.0000	0.0 N	20.0000	0.0 N	300.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000
113	AKD633	10.0000	0.0 N	30.0000	0.0 N	500.0000	200.0000	0.0 N	20.0000	300.0000	70.0000
114	SA423	10.0000	0.0 N	15.0000	0.0 N	300.0000	200.0000	0.0 N	15.0000	0.0 N	150.0000
115	AKD432	10.0000	0.0 N	30.0000	0.0 N	500.0000	300.0000	0.0 N	15.0000	0.0 L	70.0000
116	AKD431	30.0000	0.0 N	15.0000	0.0 N	300.0000	200.0000	0.0 N	15.0000	300.0000	70.0000
117	AKD430	10.0000	0.0 N	15.0000	0.0 N	300.0000	150.0000	0.0 N	10.0000	0.0 L	70.0000
118	AKD429	20.0000	0.0 N	10.0000	0.0 N	300.0000	150.0000	0.0 N	10.0000	0.0 N	70.0000
119	AKD428	15.0000	0.0 N	15.0000	0.0 N	500.0000	200.0000	0.0 N	15.0000	0.0 N	70.0000
120	AKD427	20.0000	0.0 N	15.0000	0.0 N	500.0000	200.0000	0.0 N	10.0000	0.0 N	70.0000
121	AKD426	15.0000	0.0 N	15.0000	0.0 N	500.0000	300.0000	0.0 N	15.0000	0.0 N	70.0000

SUMDUM A-4 STREAM SEDIMENTS

	SAMPLE	AU PPM
88	SA421	0.0200L
89	SA422	0.0200L
90	SA419	0.0200L
91	SA420	0.0200L
92	SA417	0.0200L
93	AKD636	0.0200L
94	AKD637	0.0200L
95	SA416	0.0200L
96	SA418	0.0200L
97	SA414	0.0200L
98	SA415	0.0200L
99	AKD464	0.0200L
100	AKD462	0.0200L
101	AKD461	0.0200L
102	AKD629	0.0200L
103	AKD630	0.0400L
104	SA4445BD	0.0200L
105	SA4443BD	0.0200L
106	SA4442BD	0.0200L
107	SA413	0.0200L
108	SA412	0.0200L
109	AKD634	0.0200L
110	AKD631	0.0200L
111	AKD635	0.0200L
112	AKD632	0.0200L
113	AKD633	0.0200L
114	SA423	0.0200L
115	AKD432	0.0200L
116	AKD431	0.0200L
117	AKD430	0.0200L
118	AKD429	0.0200L
119	AKD428	0.0200L
120	AKD427	0.0200
121	AKD426	0.7000

FREQUENCY TABLE FOR COLUMN 1 (FE PCT)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-02 -	5.6E-02	0	0	0.0	0.0
5.6E-02 -	8.3E-02	0	0	0.0	0.0
8.3E-02 -	1.2E-01	0	0	0.0	0.0
1.2E-01 -	1.8E-01	0	0	0.0	0.0
1.8E-01 -	2.6E-01	0	0	0.0	0.0
2.6E-01 -	3.8E-01	0	0	0.0	0.0
3.8E-01 -	5.6E-01	0	0	0.0	0.0
5.6E-01 -	8.3E-01	0	0	0.0	0.0
8.3E-01 -	1.2E 00	0	0	0.0	0.0
1.2E 00 -	1.8E 00	1	1	2.94	2.94
1.8E 00 -	2.6E 00	0	1	0.0	2.94
2.6E 00 -	3.8E 00	3	4	8.82	11.76
3.8E 00 -	5.6E 00	4	8	11.76	23.53
5.6E 00 -	8.3E 00	8	16	23.53	47.06
8.3E 00 -	1.2E 01	11	27	32.35	79.41
1.2E 01 -	1.8E 01	7	34	20.59	100.00

HISTOGRAM FOR COLUMN 1 (FE PCT)

```
1.5E 00 XXX

2.0E 00

3.0E 00 XXXXXXXXX

5.0E 00 XXXXXXXXXXXX

7.0E 00 XXXXXXXXXXXXXXXXXXXXXXX

1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	34
0.0	0.0			0.0	0.0	

MAXIMUM = 1.50000E 01

MINIMUM = 1.50000E 00

GEOMETRIC MEAN = 7.83459E 00

GEOMETRIC DEVIATION = 1.73477E 00

FREQUENCY TABLE FOR COLUMN 2 (MG PCT)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.0	0.0
2.6E-02 -	3.8E-02	0	0	0.0	0.0
3.8E-02 -	5.6E-02	0	0	0.0	0.0
5.6E-02 -	8.3E-02	0	0	0.0	0.0
8.3E-02 -	1.2E-01	0	0	0.0	0.0
1.2E-01 -	1.8E-01	0	0	0.0	0.0
1.8E-01 -	2.6E-01	0	0	0.0	0.0
2.6E-01 -	3.8E-01	0	0	0.0	0.0
3.8E-01 -	5.6E-01	1	1	2.94	2.94
5.6E-01 -	8.3E-01	1	2	2.94	5.88
8.3E-01 -	1.2E 00	7	9	20.59	26.47
1.2E 00 -	1.8E 00	15	24	44.12	70.59
1.8E 00 -	2.6E 00	6	30	17.65	88.24
2.6E 00 -	3.8E 00	4	34	11.76	100.00

HISTOGRAM FOR COLUMN 2 (MG PCT)

```
5.0E-01 XXX

7.0E-01 XXX

1.0E 00 XXXXXXXXXXXXXXXXXXXXX

1.5E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 00 XXXXXXXXXXXXXXXXXX

3.0E 00 XXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	34
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 00

MINIMUM = 5.00000E-01

GEOMETRIC MEAN = 1.49119E 00

GEOMETRIC DEVIATION = 1.49610E 00

FREQUENCY TABLE FOR COLUMN 3 (CA PCT)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-02 -	5.6E-02	0	0	0.0	0.0
5.6E-02 -	8.3E-02	0	0	0.0	0.0
8.3E-02 -	1.2E-01	0	0	0.0	0.0
1.2E-01 -	1.8E-01	0	0	0.0	0.0
1.8E-01 -	2.6E-01	0	0	0.0	0.0
2.6E-01 -	3.8E-01	0	0	0.0	0.0
3.8E-01 -	5.6E-01	0	0	0.0	0.0
5.6E-01 -	8.3E-01	3	3	8.82	8.82
8.3E-01 -	1.2E 00	5	8	14.71	23.53
1.2E 00 -	1.8E 00	20	28	58.82	82.35
1.8E 00 -	2.6E 00	5	33	14.71	97.06
2.6E 00 -	3.8E 00	1	34	2.94	100.00

HISTOGRAM FOR COLUMN 3 (CA PCT)

```
7.0E-01 XXXXXXXXX

1.0E 00 XXXXXXXXXXXXXXX

1.5E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 00 XXXXXXXXXXXXXXX

3.0E 00 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	34
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 00

MINIMUM = 7.00000E-01

GEOMETRIC MEAN = 1.40675E 00

GEOMETRIC DEVIATION = 1.37318E 00

FREQUENCY TABLE FOR COLUMN 4 (TI PCT)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-03 -	2.6E-03	0	0	0.0	0.0
2.6E-03 -	3.8E-03	0	0	0.0	0.0
3.8E-03 -	5.6E-03	0	0	0.0	0.0
5.6E-03 -	8.3E-03	0	0	0.0	0.0
8.3E-03 -	1.2E-02	0	0	0.0	0.0
1.2E-02 -	1.8E-02	0	0	0.0	0.0
1.8E-02 -	2.6E-02	0	0	0.0	0.0
2.6E-02 -	3.8E-02	0	0	0.0	0.0
3.8E-02 -	5.6E-02	0	0	0.0	0.0
5.6E-02 -	8.3E-02	0	0	0.0	0.0
8.3E-02 -	1.2E-01	0	0	0.0	0.0
1.2E-01 -	1.8E-01	0	0	0.0	0.0
1.8E-01 -	2.6E-01	0	0	0.0	0.0
2.6E-01 -	3.8E-01	3	3	8.82	8.82
3.8E-01 -	5.6E-01	9	12	26.47	35.29
5.6E-01 -	8.3E-01	17	29	50.00	85.29
8.3E-01 -	1.2E 00	1	30	2.94	88.24

HISTOGRAM FOR COLUMN 4 (TI PCT)

```
3.0E-01 XXXXXXXXX

5.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXX

7.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 00 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	4	30
0.0	0.0			0.0	11.76	

MAXIMUM = 1.00000E 00

MINIMUM = 3.00000E-01

GEOMETRIC MEAN = 5.88337E-01

GEOMETRIC DEVIATION = 1.33284E 00

FREQUENCY TABLE FOR COLUMN 5 (MN PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	0	0	0.0	0.0
1.2E 01 -	1.8E 01	0	0	0.0	0.0
1.8E 01 -	2.6E 01	0	0	0.0	0.0
2.6E 01 -	3.8E 01	0	0	0.0	0.0
3.8E 01 -	5.6E 01	0	0	0.0	0.0
5.6E 01 -	8.3E 01	0	0	0.0	0.0
8.3E 01 -	1.2E 02	0	0	0.0	0.0
1.2E 02 -	1.8E 02	0	0	0.0	0.0
1.8E 02 -	2.6E 02	0	0	0.0	0.0
2.6E 02 -	3.8E 02	1	1	2.94	2.94
3.8E 02 -	5.6E 02	0	1	0.0	2.94
5.6E 02 -	8.3E 02	3	4	8.82	11.76
8.3E 02 -	1.2E 03	8	12	23.53	35.29
1.2E 03 -	1.8E 03	16	28	47.06	82.35
1.8E 03 -	2.6E 03	5	33	14.71	97.06
2.6E 03 -	3.8E 03	1	34	2.94	100.00

HISTOGRAM FOR COLUMN 5 (MN PPM)

```
3.0E 02 XXX

5.0E 02

7.0E 02 XXXXXXXXX

1.0E 03 XXXXXXXXXXXXXXXXXXXXXXX

1.5E 03 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 03 XXXXXXXXXXXXXXX

3.0E 03 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	34
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 03

MINIMUM = 3.00000E 02

GEOMETRIC MEAN = 1.29454E 03

GEOMETRIC DEVIATION = 1.52094E 00

FREQUENCY TABLE FOR COLUMN 6 (AG PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	ANALYTICAL VALUES
N	L	H	B	T	G	
33	1	0	0	0	0	0
97.06	2.94			0.0	0.0	

MAXIMUM = -9.99900E 48

MINIMUM = 9.99900E 48

GEOMETRIC MEAN = 9.99900E 48

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN 7 (AS PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	
N	L	H	B	T	G	ANALYTICAL VALUES
34	0	0	0	0	0	0
*****	0.0			0.0	0.0	

MAXIMUM = -9.99900E 48

MINIMUM = 9.99900E 48

GEOMETRIC MEAN = 9.99900E 48

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN 8 (AU PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	ANALYTICAL VALUES
N	L	H	B	T	G	
34	0	0	0	0	0	0
*****	0.0			0.0	0.0	

MAXIMUM = -9.99900E 48

MINIMUM = 9.99900E 48

GEOMETRIC MEAN = 9.99900E 48

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN 9 (B PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	6	6	17.65	17.65
1.2E 01 -	1.8E 01	12	18	35.29	52.94
1.8E 01 -	2.6E 01	10	28	29.41	82.35
2.6E 01 -	3.8E 01	3	31	8.82	91.18
3.8E 01 -	5.6E 01	2	33	5.88	97.06
5.6E 01 -	8.3E 01	0	33	0.0	97.06
8.3E 01 -	1.2E 02	1	34	2.94	100.00

HISTOGRAM FOR COLUMN 9 (B PPM)

```
1.0E 01 XXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXX

5.0E 01 XXXXXX

7.0E 01

1.0E 02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	34
0.0	0.0			0.0	0.0	

MAXIMUM = 1.00000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.83362E 01

GEOMETRIC DEVIATION = 1.65536E 00

FREQUENCY TABLE FOR COLUMN 10 (BA PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E 01 -	2.6E 01	0	0	0.0	0.0
2.6E 01 -	3.8E 01	0	0	0.0	0.0
3.8E 01 -	5.6E 01	0	0	0.0	0.0
5.6E 01 -	8.3E 01	0	0	0.0	0.0
8.3E 01 -	1.2E 02	0	0	0.0	0.0
1.2E 02 -	1.8E 02	1	1	2.94	2.94
1.8E 02 -	2.6E 02	1	2	2.94	5.88
2.6E 02 -	3.8E 02	20	22	58.82	64.71
3.8E 02 -	5.6E 02	3	25	8.82	73.53
5.6E 02 -	8.3E 02	7	32	20.59	94.12
8.3E 02 -	1.2E 03	1	33	2.94	97.06
1.2E 03 -	1.8E 03	0	33	0.0	97.06
1.8E 03 -	2.6E 03	0	33	0.0	97.06
2.6E 03 -	3.8E 03	1	34	2.94	100.00

HISTOGRAM FOR COLUMN 10 (BA PPM)

```
1.5E 02 XXX

2.0E 02 XXX

3.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 02 XXXXXXXXX

7.0E 02 XXXXXXXXXXXXXXXXXXXX

1.0E 03 XXX

1.5E 03

2.0E 03

3.0E 03 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	34
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 03

MINIMUM = 1.50000E 02

GEOMETRIC MEAN = 4.01057E 02

GEOMETRIC DEVIATION = 1.75043E 00

FREQUENCY TABLE FOR COLUMN 11 (BE PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E-01 -	1.2E 00	9	9	26.47	26.47
1.2E 00 -	1.8E 00	1	10	2.94	29.41

HISTOGRAM FOR COLUMN 11 (BE PPM)

```
1.0E 00 XXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 00 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
3	21	0	0	0	0	10
8.82	61.76			0.0	0.0	

MAXIMUM = 1.50000E 00

MINIMUM = 1.00000E 00

GEOMETRIC MEAN = 1.04138E 00

GEOMETRIC DEVIATION = 1.13680E 00

FREQUENCY TABLE FOR COLUMN 12 (BI PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	ANALYTICAL VALUES
N	L	H	B	T	G	
34	0	0	0	0	0	0
*****	0.0			0.0	0.0	

MAXIMUM = -9.99900E 48

MINIMUM = 9.99900E 48

GEOMETRIC MEAN = 9.99900E 48

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN 13 (CO PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	ANALYTICAL VALUES
N	L	H	B	T	G	
34	0	0	0	0	0	0
*****	0.0			0.0	0.0	

MAXIMUM = -9.99900E 48

MINIMUM = 9.99900E 48

GEOMETRIC MEAN = 9.99900E 48

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN 14 (CO PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	3	3	8.82	8.82
5.6E 00 -	8.3E 00	0	3	0.0	8.82
8.3E 00 -	1.2E 01	4	7	11.76	20.59
1.2E 01 -	1.8E 01	6	13	17.65	38.24
1.8E 01 -	2.6E 01	7	20	20.59	58.82
2.6E 01 -	3.8E 01	7	27	20.59	79.41
3.8E 01 -	5.6E 01	4	31	11.76	91.18
5.6E 01 -	8.3E 01	1	32	2.94	94.12
8.3E 01 -	1.2E 02	1	33	2.94	97.06

HISTOGRAM FOR COLUMN 14 (CO PPM)

```
5.0E 00 XXXXXXXXX

7.0E 00

1.0E 01 XXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXXX

5.0E 01 XXXXXXXXXXXX

7.0E 01 XXX

1.0E 02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	0	0	0	0	0	33
2.94	0.0			0.0	0.0	

MAXIMUM = 1.00000E 02

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 2.04334E 01

GEOMETRIC DEVIATION = 2.06558E 00

FREQUENCY TABLE FOR COLUMN 15 (CR PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	0	0	0.0	0.0
5.6E 00 -	8.3E 00	0	0	0.0	0.0
8.3E 00 -	1.2E 01	0	0	0.0	0.0
1.2E 01 -	1.8E 01	0	0	0.0	0.0
1.8E 01 -	2.6E 01	0	0	0.0	0.0
2.6E 01 -	3.8E 01	2	2	5.88	5.88
3.8E 01 -	5.6E 01	4	6	11.76	17.65
5.6E 01 -	8.3E 01	11	17	32.35	50.00
8.3E 01 -	1.2E 02	5	22	14.71	64.71
1.2E 02 -	1.8E 02	11	33	32.35	97.06
1.8E 02 -	2.6E 02	0	33	0.0	97.06
2.6E 02 -	3.8E 02	1	34	2.94	100.00

HISTOGRAM FOR COLUMN 15 (CR PPM)

```
3.0E 01 XXXXXX

5.0E 01 XXXXXXXXXXXX

7.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 02 XXXXXXXXXXXXXXX

1.5E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 02

3.0E 02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	34
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 02

MINIMUM = 3.00000E 01

GEOMETRIC MEAN = 9.00970E 01

GEOMETRIC DEVIATION = 1.67931E 00

FREQUENCY TABLE FOR COLUMN 16 (CU PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	1	1	2.94	2.94
5.6E 00 -	8.3E 00	2	3	5.88	8.82
8.3E 00 -	1.2E 01	4	7	11.76	20.59
1.2E 01 -	1.8E 01	2	9	5.88	26.47
1.8E 01 -	2.6E 01	4	13	11.76	38.24
2.6E 01 -	3.8E 01	9	22	26.47	64.71
3.8E 01 -	5.6E 01	5	27	14.71	79.41
5.6E 01 -	8.3E 01	4	31	11.76	91.18

HISTOGRAM FOR COLUMN 16 (CU PPM)

```
5.0E 00 XXX

7.0E 00 XXXXXX

1.0E 01 XXXXXXXXXXXX

1.5E 01 XXXXXX

2.0E 01 XXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 01 XXXXXXXXXXXXXX

7.0E 01 XXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	3	0	0	0	0	31
0.0	8.82			0.0	0.0	

MAXIMUM = 7.00000E 01

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 2.45920E 01

GEOMETRIC DEVIATION = 2.11562E 00

FREQUENCY TABLE FOR COLUMN 17 (LA PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E 01 -	2.6E 01	1	1	2.94	2.94
2.6E 01 -	3.8E 01	0	1	0.0	2.94
3.8E 01 -	5.6E 01	1	2	2.94	5.88
5.6E 01 -	8.3E 01	1	3	2.94	8.82
8.3E 01 -	1.2E 02	0	3	0.0	8.82
1.2E 02 -	1.8E 02	1	4	2.94	11.76

HISTOGRAM FOR COLUMN 17 (LA PPM)

```
2.0E 01 XXX

3.0E 01

5.0E 01 XXX

7.0E 01 XXX

1.0E 02

1.5E 02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
19	11	0	0	0	0	4
55.88	32.35			0.0	0.0	

MAXIMUM = 1.50000E 02

MINIMUM = 2.00000E 01

GEOMETRIC MEAN = 5.69241E 01

GEOMETRIC DEVIATION = 2.30517E 00

FREQUENCY TABLE FOR COLUMN 17 (LA PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E 01 -	2.6E 01	1	1	2.94	2.94
2.6E 01 -	3.8E 01	0	1	0.0	2.94
3.8E 01 -	5.6E 01	1	2	2.94	5.88
5.6E 01 -	8.3E 01	1	3	2.94	8.82
8.3E 01 -	1.2E 02	0	3	0.0	8.82
1.2E 02 -	1.8E 02	1	4	2.94	11.76

HISTOGRAM FOR COLUMN 17 (LA PPM)

```
2.0E 01 XXX

3.0E 01

5.0E 01 XXX

7.0E 01 XXX

1.0E 02

1.5E 02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
19	11	0	0	0	0	4
55.88	32.35			0.0	0.0	

MAXIMUM = 1.50000E 02

MINIMUM = 2.00000E 01

GEOMETRIC MEAN = 5.69241E 01

GEOMETRIC DEVIATION = 2.30517E 00

FREQUENCY TABLE FOR COLUMN 18 (MO PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	1	1	2.94	2.94
5.6E 00 -	8.3E 00	4	5	11.76	14.71

HISTOGRAM FOR COLUMN 18 (MO PPM)

```
5.0E 00 XXX

7.0E 00 XXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
5	24	0	0	0	0	5
14.71	70.59			0.0	0.0	

MAXIMUM = 7.00000E 00

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 6.54443E 00

GEOMETRIC DEVIATION = 1.16238E 00

FREQUENCY TABLE FOR COLUMN 19 (NB PPM)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 - 1.2E 01	25	25	73.53	73.53
1.2E 01 - 1.8E 01	4	29	11.76	85.29

HISTOGRAM FOR COLUMN 19 (NB PPM)

```
1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	5	0	0	0	0	29
0.0	14.71			0.0	0.0	

MAXIMUM = 1.50000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.05750E 01

GEOMETRIC DEVIATION = 1.15308E 00

FREQUENCY TABLE FOR COLUMN 20 (NI PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	0	0	0.0	0.0
5.6E 00 -	8.3E 00	0	0	0.0	0.0
8.3E 00 -	1.2E 01	0	0	0.0	0.0
1.2E 01 -	1.8E 01	5	5	14.71	14.71
1.8E 01 -	2.6E 01	5	10	14.71	29.41
2.6E 01 -	3.8E 01	13	23	38.24	67.65
3.8E 01 -	5.6E 01	3	26	8.82	76.47
5.6E 01 -	8.3E 01	5	31	14.71	91.18
8.3E 01 -	1.2E 02	2	33	5.88	97.06

HISTOGRAM FOR COLUMN 20 (NI PPM)

```
1.5E 01 XXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 01 XXXXXXXXX

7.0E 01 XXXXXXXXXXXXXXX

1.0E 02 XXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	0	33
0.0	2.94			0.0	0.0	

MAXIMUM = 1.00000E 02

MINIMUM = 1.50000E 01

GEOMETRIC MEAN = 3.25414E 01

GEOMETRIC DEVIATION = 1.76255E 00

FREQUENCY TABLE FOR COLUMN 21 (PB PPM)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 - 1.2E 01	16	16	47.06	47.06
1.2E 01 - 1.8E 01	6	22	17.65	64.71
1.8E 01 - 2.6E 01	5	27	14.71	79.41
2.6E 01 - 3.8E 01	1	28	2.94	82.35

HISTOGRAM FOR COLUMN 21 (PB PPM)

```
1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXX

3.0E 01 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	6	0	0	0	0	28
0.0	17.65			0.0	0.0	

MAXIMUM = 3.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.28388E 01

GEOMETRIC DEVIATION = 1.38371E 00

FREQUENCY TABLE FOR COLUMN 22 (SB PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	ANALYTICAL VALUES
N	L	H	B	T	G	
34	0	0	0	0	0	0
*****	0.0			0.0	0.0	

MAXIMUM = -9.99900E 48

MINIMUM = 9.99900E 48

GEOMETRIC MEAN = 9.99900E 48

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN 23 (SC PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	0	0	0.0	0.0
5.6E 00 -	8.3E 00	0	0	0.0	0.0
8.3E 00 -	1.2E 01	1	1	2.94	2.94
1.2E 01 -	1.8E 01	15	16	44.12	47.06
1.8E 01 -	2.6E 01	10	26	29.41	76.47
2.6E 01 -	3.8E 01	8	34	23.53	100.00

HISTOGRAM FOR COLUMN 23 (SC PPM)

```
1.0E 01 XXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	34
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.89882E 01

GEOMETRIC DEVIATION = 1.34825E 00

FREQUENCY TABLE FOR COLUMN 24 (SN PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	ANALYTICAL VALUES
N	L	H	B	T	G	
34	0	0	0	0	0	0
*****	0.0			0.0	0.0	

MAXIMUM = -9.99900E 48

MINIMUM = 9.99900E 48

GEOMETRIC MEAN = 9.99900E 48

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN 25 (SR PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 01 -	1.2E 02	0	0	0.0	0.0
1.2E 02 -	1.8E 02	0	0	0.0	0.0
1.8E 02 -	2.6E 02	7	7	20.59	20.59
2.6E 02 -	3.8E 02	17	24	50.00	70.59
3.8E 02 -	5.6E 02	8	32	23.53	94.12
5.6E 02 -	8.3E 02	2	34	5.88	100.00

HISTOGRAM FOR COLUMN 25 (SR PPM)

```
2.0E 02 XXXXXXXXXXXXXXXXXXXX

3.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 02 XXXXXXXXXXXXXXXXXXXXXXX

7.0E 02 XXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	34
0.0	0.0			0.0	0.0	

MAXIMUM = 7.00000E 02

MINIMUM = 2.00000E 02

GEOMETRIC MEAN = 3.27118E 02

GEOMETRIC DEVIATION = 1.44221E 00

FREQUENCY TABLE FOR COLUMN 26 (V PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	0	0	0.0	0.0
1.2E 01 -	1.8E 01	0	0	0.0	0.0
1.8E 01 -	2.6E 01	0	0	0.0	0.0
2.6E 01 -	3.8E 01	0	0	0.0	0.0
3.8E 01 -	5.6E 01	0	0	0.0	0.0
5.6E 01 -	8.3E 01	0	0	0.0	0.0
8.3E 01 -	1.2E 02	0	0	0.0	0.0
1.2E 02 -	1.8E 02	9	9	26.47	26.47
1.8E 02 -	2.6E 02	13	22	38.24	64.71
2.6E 02 -	3.8E 02	11	33	32.35	97.06
3.8E 02 -	5.6E 02	1	34	2.94	100.00

HISTOGRAM FOR COLUMN 26 (V PPM)

```
1.5E 02 XXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	34
0.0	0.0			0.0	0.0	

MAXIMUM = 5.00000E 02

MINIMUM = 1.50000E 02

GEOMETRIC MEAN = 2.17083E 02

GEOMETRIC DEVIATION = 1.36321E 00

FREQUENCY TABLE FOR COLUMN 27 (W PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	ANALYTICAL VALUES
N	L	H	8	T	G	
34	0	0	0	0	0	0
*****	0.0			0.0	0.0	

MAXIMUM = -9.99900E 48

MINIMUM = 9.99900E 48

GEOMETRIC MEAN = 9.99900E 48

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN 28 (Y PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	3	3	8.82	8.82
1.2E 01 -	1.8E 01	15	18	44.12	52.94
1.8E 01 -	2.6E 01	10	28	29.41	82.35
2.6E 01 -	3.8E 01	6	34	17.65	100.00

HISTOGRAM FOR COLUMN 28 (Y PPM)

```
1.0E 01 XXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	34
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.77999E 01

GEOMETRIC DEVIATION = 1.36587E 00

FREQUENCY TABLE FOR COLUMN 29 (ZN PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E 02 -	2.6E 02	2	2	5.88	5.88
2.6E 02 -	3.8E 02	2	4	5.88	11.76
3.8E 02 -	5.6E 02	0	4	0.0	11.76
5.6E 02 -	8.3E 02	1	5	2.94	14.71

HISTOGRAM FOR COLUMN 29 (ZN PPM)

```
2.0E 02 XXXXXX

3.0E 02 XXXXXX

5.0E 02

7.0E 02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
11	18	0	0	0	0	5
32.35	52.94			0.0	0.0	

MAXIMUM = 7.00000E 02

MINIMUM = 2.00000E 02

GEOMETRIC MEAN = 3.02189E 02

GEOMETRIC DEVIATION = 1.66774E 00

FREQUENCY TABLE FOR COLUMN 30 (ZR PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	1	1	2.94	2.94
1.2E 01 -	1.8E 01	0	1	0.0	2.94
1.8E 01 -	2.6E 01	0	1	0.0	2.94
2.6E 01 -	3.8E 01	0	1	0.0	2.94
3.8E 01 -	5.6E 01	1	2	2.94	5.88
5.6E 01 -	8.3E 01	17	19	50.00	55.88
8.3E 01 -	1.2E 02	10	29	29.41	85.29
1.2E 02 -	1.8E 02	1	30	2.94	88.24
1.8E 02 -	2.6E 02	3	33	8.82	97.06
2.6E 02 -	3.8E 02	0	33	0.0	97.06
3.8E 02 -	5.6E 02	1	34	2.94	100.00

HISTOGRAM FOR COLUMN 30 (ZR PPM)

```
1.0E 01 XXX

1.5E 01

2.0E 01

3.0E 01

5.0E 01 XXX

7.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 02 XXX

2.0E 02 XXXXXXXXX

3.0E 02

5.0E 02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	34
0.0	0.0			0.0	0.0	

MAXIMUM = 5.00000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 8.64127E 01

GEOMETRIC DEVIATION = 1.80073E 00

FREQUENCY TABLE FOR COLUMN 31 (AU PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	1	1	2.94	2.94
2.6E-02 -	3.8E-02	0	1	0.0	2.94
3.8E-02 -	5.6E-02	0	1	0.0	2.94
5.6E-02 -	8.3E-02	0	1	0.0	2.94
8.3E-02 -	1.2E-01	0	1	0.0	2.94
1.2E-01 -	1.8E-01	0	1	0.0	2.94
1.8E-01 -	2.6E-01	0	1	0.0	2.94
2.6E-01 -	3.8E-01	0	1	0.0	2.94
3.8E-01 -	5.6E-01	0	1	0.0	2.94
5.6E-01 -	8.3E-01	1	2	2.94	5.88

HISTOGRAM FOR COLUMN 31 (AU PPM)

```
2.0E-02 XXX

3.0E-02

5.0E-02

7.0E-02

1.0E-01

1.5E-01

2.0E-01

3.0E-01

5.0E-01

7.0E-01 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	32	0	0	0	0	2
0.0	94.12			0.0	0.0	

MAXIMUM = 7.00000E-01

MINIMUM = 2.00000E-02

GEOMETRIC MEAN = 1.18322E-01

GEOMETRIC DEVIATION = 1.23544E 01

A470 STATISTICAL SUMMARY DATE 4/16/70

ELEMENT	N	L	H	B	T	G	ANALYTICAL VALUES
FE PCT	0	0	0	0	0	0	34
MG PCT	0	0	0	0	0	0	34
CA PCT	0	0	0	0	0	0	34
TI PCT	0	0	0	0	0	4	30
MN PPM	0	0	0	0	0	0	34
AG PPM	33	1	0	0	0	0	0
AS PPM	34	0	0	0	0	0	0
AU PPM	34	0	0	0	0	0	0
B PPM	0	0	0	0	0	0	34
BA PPM	0	0	0	0	0	0	34
BE PPM	3	21	0	0	0	0	10
BI PPM	34	0	0	0	0	0	0
CD PPM	34	0	0	0	0	0	0
CO PPM	1	0	0	0	0	0	33
CR PPM	0	0	0	0	0	0	34
CU PPM	0	3	0	0	0	0	31
LA PPM	19	11	0	0	0	0	4
MO PPM	5	24	0	0	0	0	5
NB PPM	0	5	0	0	0	0	29
NI PPM	0	1	0	0	0	0	33
PB PPM	0	6	0	0	0	0	28
SB PPM	34	0	0	0	0	0	0
SC PPM	0	0	0	0	0	0	34
SN PPM	34	0	0	0	0	0	0
SR PPM	0	0	0	0	0	0	34
V PPM	0	0	0	0	0	0	34
W PPM	34	0	0	0	0	0	0
Y PPM	0	0	0	0	0	0	34
ZN PPM	11	18	0	0	0	0	5
ZR PPM	0	0	0	0	0	0	34
AU PPM	0	32	0	0	0	0	2

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
FE PCT	7.834571	1.73	34 SAMPLES AND 34 ANALYTICAL VALUES.
MG PCT	1.491187	1.50	34 SAMPLES AND 34 ANALYTICAL VALUES.
CA PCT	1.406751	1.37	34 SAMPLES AND 34 ANALYTICAL VALUES.
TI PCT	********	******	4 GREATER THAN VALUES. NO COMPUTATIONS.
MN PPM	1294.541260	1.52	34 SAMPLES AND 34 ANALYTICAL VALUES.
AG PPM	********	******	34 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
AS PPM	********	******	34 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
AU PPM	********	******	34 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
B PPM	18.336121	1.66	34 SAMPLES AND 34 ANALYTICAL VALUES.
BA PPM	401.055908	1.75	34 SAMPLES AND 34 ANALYTICAL VALUES.
BE PPM	0.696243	1.39	24 NOT DETECTED, LESS THAN, OR TRACE VALUES. 10 REPORTED VALUES.
BI PPM	********	******	34 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
CD PPM	********	******	34 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
CO PPM	19.286362	2.20	1 NOT DETECTED, LESS THAN, OR TRACE VALUES. 33 REPORTED VALUES.
CR PPM	90.096832	1.68	34 SAMPLES AND 34 ANALYTICAL VALUES.
CU PPM	20.159424	2.62	3 NOT DETECTED, LESS THAN, OR TRACE VALUES. 31 REPORTED VALUES.
LA PPM	1.116516	9.93	30 NOT DETECTED, LESS THAN, OR TRACE VALUES. 4 REPORTED VALUES.
MO PPM	1.455310	2.48	29 NOT DETECTED, LESS THAN, OR TRACE VALUES. 5 REPORTED VALUES.
NB PPM	10.059835	1.20	5 NOT DETECTED, LESS THAN, OR TRACE VALUES. 29 REPORTED VALUES.
NI PPM	30.385117	1.98	1 NOT DETECTED, LESS THAN, OR TRACE VALUES. 33 REPORTED VALUES.
PB PPM	11.412786	1.49	6 NOT DETECTED, LESS THAN, OR TRACE VALUES. 28 REPORTED VALUES.

SB	PPM	********	******	34 NOT DETECTED, LESS THAN, OR TRACE VALUES.	0 REPORTED VALUES. NO COMPUTATIONS.
SC	PPM	18.988174	1.35	34 SAMPLES AND 34 ANALYTICAL VALUES.	
SN	PPM	********	******	34 NOT DETECTED, LESS THAN, OR TRACE VALUES.	0 REPORTED VALUES. NO COMPUTATIONS.
SR	PPM	327.116943	1.44	34 SAMPLES AND 34 ANALYTICAL VALUES.	
V	PPM	217.082748	1.36	34 SAMPLES AND 34 ANALYTICAL VALUES.	
W	PPM	********	******	34 NOT DETECTED, LESS THAN, OR TRACE VALUES.	0 REPORTED VALUES. NO COMPUTATIONS.
Y	PPM	17.799896	1.37	34 SAMPLES AND 34 ANALYTICAL VALUES.	
ZN	PPM	54.460129	2.95	29 NOT DETECTED, LESS THAN, OR TRACE VALUES.	5 REPORTED VALUES.
ZR	PPM	86.412399	1.80	34 SAMPLES AND 34 ANALYTICAL VALUES.	
AU	PPM	********	******	32 NOT DETECTED, LESS THAN, OR TRACE VALUES.	2 REPORTED VALUES. NO COMPUTATIONS.