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ANALYSES OF ROCK AND STREAM-SEDIMENT SAMPLES FROM THE SUMDUM B-3 QUADRANGLE, ALASKA

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and Raymond Wehr

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INTRODUCTION

Analytical data for 125 rock and 32 stream-sediment samples from the Sumdum B-3 , 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 7. 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 B-3 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	AKD-882	Biotite schist and gneiss
2	-880	Quartz diorite
2	-881	Quartz vein with pyrite
3	AMG-590	Biotite quartz plagioclase gneiss
3	-591	Biotite quartz plagioclase gneiss
4	-589	Biotite quartz plagioclase gneiss
5	-560	Hornblende granodiorite
6	-561	Hornblende granodiorite
6	-562	Iron-stained gneiss
7	-563	Hornblende biotite plagioclase gneiss
8	-564	Biotite hornblende gneiss
9	-565	Foliated hornblende diorite
10	AKD-267	Iron-stained granodiorite
11	-268	Biotite hornblende gneiss
12	-288	Biotite hornblende gneiss
13	-287	Biotite quartz plagioclase gneiss
14	-281	Skarn with pyrite
14	-282	Iron-stained biotite quartz plagioclase gneiss
14	-283	Biotite quartz plagioclase gneiss
15	AMG-566	Foliated hornblende diorite
16	-567	Biotite quartz feldspar gneiss
17	AKD-915	Migmatite
18	-916	Biotite gneiss
19	-917	Migmatite
20	AMG-550	Biotite gneiss
21	AKD-269	Biotite quartz gneiss with pyrite and chalcopyrit
21	-270	Iron-stained gneiss
22	AMG-568	Biotite quartz feldspar gneiss
23	-569	Biotite quartz feldspar gneiss
24	-588	Hornblende quartz diorite
25	AKD-918	Hornblende quartz diorite
26	-925	Hornblende diorite gneiss
27	-924	Hornblende diorite gneiss
28	-284	Hornblende diorite
28	-285	Hornblende diorite
29	AMG-596	Iron-stained alaskite dike
29	-597	Biotite hornblende gneiss
30	AKD-923	Hornblende diorite
31	-922	Biotite hornblende gneiss
32	-921	Foliated hornblende diorite

Table 1.--Description of rock, vein, and altered zone samples from the Sumdum B-3 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
33	AKD-920	Hornblende diorite
34	-919	Biotite gneiss
35	AMG-551	Biotite hornblende tonalite
36	-587	Biotite hornblende quartz diorite
37	-586	Migmatite
38	-595	Biotite granodiorite
39	AKD-286	Biotite hornblende diorite
40	AMG-585	Biotite hornblende plagioclase gneiss
41	-766	Migmatite
41	-767	Epidotized fracture with pyrite
41	-786	Epidotized shear
42	-774	Hornblende biotite quartz diorite
43	-573	Biotite hornblende tonalite
44	-593	Biotite hornblende tonalite
45	-581	Migmatite
46	-594	Garnet biotite hornblende gneiss
47	-582	Hornblende biotite tonalite gneiss
47	-583	Epidotized fracture with pyrite
47	-584	Aplite dike
48	-572	Iron-stained hornblende andesite
49	-768	Hornblende biotite tonalite gneiss
50	-769	Hornblende biotite quartz diorite
50	-770	Aplite dike with minor bornite
50	-771	Quartz vein with bornite
50	-772	Epidotized fracture with minor bornite
50	-773	Pegmatite vein with minor bornite
51	AKD-097	Biotite hornblende quartz diorite
52	-099	Biotite hornblende quartz diorite
53	-496	Biotite hornblende quartz diorite
54	-280	Biotite hornblende quartz diorite
55	-100	Migmatite
55	-290	Pyritized migmatite
56	AMG-512	Biotite quartz feldspar migmatite
57	-513	Garnet biotite feldspathic gneiss
58	-514	Garnet biotite feldspathic gneiss
59	-515	Biotite feldspathic gneiss
60	-516	Garnet biotite feldspathic gneiss
61	-517	Hornblende gneiss
62	-518	Biotite gneiss
63	-519	Hornblende diorite

Table 1.--Description of rock, vein, and altered zone samples from the Sumdum B-3 quadrangle. (All samples are of representative material.) Sample localities are shown by sample number plotted on the accompany map, Plate 1.--Continued

Sample No.	Lab. No.	Sample Description
64	AKD-499	Foliated hornblend biotite quartz diorite
65	-500	Biotite quartz plagioclase gneiss
66	AMG-785	Schlieren (iron-stained)
67	-523	Biotite quartz feldspathic gneiss
67	-524	Biotite quartz feldspathic gneiss
68	-526	Hornblende diorite
69	-520	Hornblende diorite
70	-521	Hornblende diorite gneiss
71	-775	Hornblende biotite quartz diorite
72	-783	Epidotized fracture, iron-stained
73	-522	Biotite quartz plagioclase gneiss
74	-444	Hornfels with pyrrhotite
75	-570	Biotite hornblende tonalite
75	-571	Granodiorite dike
76	-556	Hornblende biotite quartz diorite
76	-765	Epidotized fracture with quartz
77	-776	Foliated biotite hornblend quartz diorite
78	-780	Biotite hornblende quartz diorite
78	-781	Epidotized fracture material
78	-782	Quartz epidote bornite veinlet
79	-580	Biotite quartz plagioclase gneiss
80	-579	Biotite quartz plagioclase gneiss
81	AKD-498	Biotite hornblende quartz plagioclase gneiss
82	AMG-592	Biotite granodiorite
83	AKD-936	Hornblende diorite gneiss
84	-935	Hornblende diorite
85	AMG-777	Foliated biotite hornblende quartz diorite
86	-557	Foliated biotite hornblende quartz diorite
87	-778	Biotite quartz plagioclase gneiss
87	-779	Pyritic quartz plagioclase gneiss
88	-552	Feldspathic gneiss
88	-553	Skarn
89	AKD-934	Biotite quartz feldspar gneiss
90	-933	Hornblende diorite
91	AMG-763	Epidote quartz bornite veinlet
91	-764	Quartz carbonate veinlets
92	-574	Hornblende biotite granodiorite
93	-577	Biotite granodiorite gneiss
94	-578	Biotite quartz plagioclase gneiss
95	-576	Biotite quartz plagioclase gneiss

Table 1.--Description of rock, vein, and altered zone samples from the Sumdum B-3 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
96	AKD-932	Biotite quartzite gneiss
97	-931	Hornblendite with pyrite
98	-929	Garnetiferous biotite schist
99	-928	Biotite quartz feldspar gneiss
100	-927	Biotite hornblende gneiss

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

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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. SUMOUM B-3 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	AKD882	5.0000	0.5000	1.0000	0.1500	150.0000	0.0 L	0.0 N	0.0 N	10.0000	200.0000
2	AKD880	10.0000	1.5000	5.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	15.0000	1500.0000
2	AKD881	7.0000	1.5000	2.0000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	10.0000	700.0000
3	AMG590	3.0000	1.0000	2.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	0.0 L	700.0000
3	AMG591	1.0000	0.3000	0.5000	0.0500	100.0000	0.0 N	0.0 N	0.0 N	0.0 N	700.0000
4	AMG589	5.0000	1.5000	2.0000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	0.0 L	500.0000
5	AMG560	3.0000	0.3000	1.0000	0.2000	500.0000	0.0 N	0.0 N	0.0 N	0.0 L	3000.0000
6	AMG561	3.0000	0.5000	1.5000	0.2000	500.0000	0.0 N	0.0 N	0.0 N	0.0 N	2000.0000
6	AMG562	7.0000	1.0000	1.5000	0.3000	700.0000	0.0 L	0.0 N	0.0 N	0.0 L	700.0000
7	AMG563	5.0000	1.5000	2.0000	0.3000	1000.0000	0.0 N	0.0 N	0.0 N	0.0 L	700.0000
8	AMG564	5.0000	1.5000	2.0000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	0.0 L	1500.0000
9	AMG565	5.0000	2.0000	3.0000	0.5000	700.0000	0.0 L	0.0 N	0.0 N	0.0 L	1500.0000
10	AKD267	0.7000	0.0700	0.7000	0.0500	150.0000	0.0 N	0.0 N	0.0 N	0.0 N	1500.0000
11	AKD268	7.0000	3.0000	5.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0 N	0.0 N	200.0000
12	AKD288	15.0000	5.0000	3.0000	1.0000	1500.0000	0.0 N	0.0 N	0.0 N	0.0 L	150.0000
13	AKD287	3.0000	0.3000	1.5000	0.1500	300.0000	0.0 N	0.0 N	0.0 N	0.0 N	300.0000
14	AKD281	15.0000	3.0000	10.0000	0.5000	5000.0000	0.0 N	0.0 N	0.0 N	0.0 L	0.0 L
14	AKD282	15.0000	5.0000	7.0000	0.3000	5000.0000	0.0 N	0.0 N	0.0 N	0.0 L	0.0 L
14	AKD283	1.5000	0.7000	1.5000	0.2000	300.0000	0.0 N	0.0 N	0.0 N	0.0 N	1000.0000
15	AMG566	5.0000	1.5000	2.0000	0.7000	700.0000	0.0 N	0.0 N	0.0 N	0.0 L	1500.0000
16	AMG567	3.0000	1.0000	1.5000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	0.0 L	1000.0000
17	AKD915	3.0000	1.0000	1.0000	0.3000	300.0000	0.0 N	0.0 N	0.0 N	0.0 L	500.0000
18	AKD916	5.0000	5.0000	1.5000	0.3000	500.0000	0.0 N	0.0 N	0.0 N	0.0 L	300.0000
19	AKD917	3.0000	1.0000	1.0000	0.3000	500.0000	0.0 N	0.0 N	0.0 N	0.0 N	700.0000
20	AMG550	5.0000	2.0000	2.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	0.0 L	1500.0000
21	AKD269	15.0000	3.0000	3.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0 N	0.0 L	700.0000
21	AKD270	3.0000	1.5000	3.0000	0.7000	700.0000	0.0 N	0.0 N	0.0 N	0.0 N	300.0000
22	AMG568	3.0000	1.5000	1.5000	0.5000	700.0000	0.0 N	0.0 N	0.0 N	0.0 N	700.0000
23	AMG569	3.0000	1.5000	2.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	0.0 L	300.0000
24	AMG588	3.0000	1.0000	1.5000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	10.0000	700.0000
25	AKD918	2.0000	0.3000	0.1000	0.1000	200.0000	0.0 N	0.0 N	0.0 N	0.0 N	1000.0000
26	AKD925	3.0000	0.7000	1.0000	0.1500	150.0000	0.0 N	0.0 N	0.0 N	0.0 N	700.0000
27	AKD924	7.0000	2.0000	3.0000	0.7000	500.0000	0.0 N	0.0 N	0.0 N	15.0000	1000.0000
28	AKD284	1.5000	0.7000	1.0000	0.1500	300.0000	0.0 L	0.0 N	0.0 N	0.0 N	1500.0000
28	AKD285	3.0000	2.0000	2.0000	0.3000	100.0000	0.0 N	0.0 N	0.0 N	0.0 L	700.0000
29	AMG596	3.0000	1.5000	2.0000	0.7000	500.0000	0.0 L	0.0 N	0.0 N	0.0 L	300.0000
29	AMG597	5.0000	1.5000	1.5000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	10.0000	300.0000
30	AKD923	10.0000	3.0000	5.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0 N	10.0000	1000.0000
31	AKD922	2.0000	0.7000	0.7000	0.2000	500.0000	0.0 N	0.0 N	0.0 N	0.0 N	200.0000
32	AKD921	5.0000	1.5000	1.5000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	0.0 L	700.0000
33	AKD920	10.0000	1.5000	1.5000	0.5000	700.0000	0.0 N	0.0 N	0.0 N	0.0 L	700.0000
34	AKD919	1.5000	0.7000	1.0000	0.2000	150.0000	0.0 N	0.0 N	0.0 N	0.0 N	1000.0000
35	AMG551	7.0000	1.5000	1.5000	0.5000	700.0000	0.0 N	0.0 N	0.0 N	0.0 L	700.0000
36	AMG587	3.0000	1.0000	1.5000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	0.0 N	700.0000
37	AMG586	5.0000	1.0000	0.7000	0.5000	500.0000	0.0 N	0.0 N	0.0 N	0.0 L	700.0000
38	AMG595	3.0000	0.7000	0.0500	0.2000	300.0000	0.0 N	0.0 N	0.0 N	15.0000	1500.0000
39	AKD286	5.0000	1.5000	1.5000	0.3000	100.0000	0.0 N	0.0 N	0.0 N	0.0 N	1500.0000
40	AMG585	3.0000	1.0000	2.0000	0.2000	500.0000	0.0 N	0.0 N	0.0 N	0.0 L	300.0000
41	AMG766	7.0000	2.0000	2.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	10.0000	1500.0000
41	AMG767	10.0000	2.0000	2.0000	0.5000	700.0000	0.0 N	0.0 N	0.0 N	10.0000	700.0000

SUMDUM B-3 ROCK SAMPLES

	SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
1	AKD882	0.0 L	0.0 N	0.0 N	20.0000	20.0000	150.0000	0.0 N	5.0000	0.0 L	70.0000
2	AKD880	0.0 L	0.0 N	0.0 N	20.0000	10.0000	10.0000	0.0 N	0.0 L	10.0000	10.0000
2	AKD881	0.0 N	0.0 N	0.0 N	20.0000	10.0000	70.0000	0.0 N	0.0 L	0.0 L	10.0000
3	AMG590	2.0000	0.0 N	0.0 N	5.0000	150.0000	20.0000	70.0000	0.0 L	10.0000	30.0000
3	AMG591	0.0 L	0.0 N	0.0 N	0.0 L	0.0 L	20.0000	150.0000	0.0 N	0.0 L	10.0000
4	AMG589	0.0 L	0.0 N	0.0 N	20.0000	30.0000	7.0000	0.0 L	0.0 N	10.0000	7.0000
5	AMG560	1.5000	0.0 N	0.0 N	0.0 L	0.0 L	5.0000	150.0000	0.0 N	10.0000	0.0 L
6	AMG561	1.0000	0.0 N	0.0 N	0.0 L	0.0 L	0.0 L	30.0000	0.0 N	10.0000	10.0000
6	AMG562	1.5000	0.0 N	0.0 N	10.0000	50.0000	70.0000	0.0 L	0.0 L	15.0000	30.0000
7	AMG563	1.5000	0.0 N	0.0 N	10.0000	20.0000	10.0000	30.0000	0.0 N	10.0000	10.0000
8	AMG564	1.5000	0.0 N	0.0 N	10.0000	30.0000	10.0000	0.0 L	0.0 N	10.0000	15.0000
9	AMG565	1.5000	0.0 N	0.0 N	15.0000	70.0000	30.0000	0.0 L	0.0 L	10.0000	30.0000
10	AKD267	0.0 N	0.0 N	0.0 N	0.0 N	10.0000	0.0 L	0.0 N	0.0 N	15.0000	0.0 L
11	AKD268	1.0000	0.0 N	0.0 N	5.0000	70.0000	70.0000	0.0 L	70.0000	0.0 L	7.0000
12	AKD288	0.0 L	0.0 N	0.0 N	20.0000	20.0000	70.0000	20.0000	7.0000	10.0000	10.0000
13	AKD287	1.0000	0.0 N	0.0 N	0.0 L	0.0 L	30.0000	0.0 N	0.0 L	0.0 L	10.0000
14	AKD281	1.5000	0.0 N	0.0 N	20.0000	150.0000	150.0000	70.0000	0.0 L	10.0000	70.0000
14	AKD282	0.0 L	0.0 N	0.0 N	15.0000	70.0000	70.0000	0.0 N	0.0 L	10.0000	30.0000
14	AKD283	0.0 L	0.0 N	0.0 N	0.0 N	10.0000	0.0 L	0.0 N	0.0 N	0.0 L	0.0 N
15	AMG566	1.5000	0.0 N	0.0 N	5.0000	30.0000	0.0 L	0.0 L	0.0 L	10.0000	20.0000
16	AMG567	1.5000	0.0 N	0.0 N	15.0000	0.0 L	10.0000	30.0000	0.0 N	10.0000	5.0000
17	AKD915	0.0 L	0.0 N	0.0 N	0.0 L	70.0000	10.0000	20.0000	0.0 L	10.0000	15.0000
18	AKD916	0.0 N	0.0 N	0.0 N	30.0000	150.0000	70.0000	0.0 N	0.0 L	10.0000	70.0000
19	AKD917	1.0000	0.0 N	0.0 N	5.0000	0.0 L	5.0000	30.0000	0.0 N	10.0000	0.0 L
20	AMG550	1.0000	0.0 N	0.0 N	20.0000	10.0000	20.0000	20.0000	0.0 L	10.0000	10.0000
21	AKD269	0.0 L	0.0 N	0.0 N	15.0000	150.0000	70.0000	20.0000	0.0 L	10.0000	30.0000
21	AKD270	0.0 N	0.0 N	0.0 N	10.0000	100.0000	70.0000	0.0 L	0.0 N	0.0 L	30.0000
22	AMG568	1.5000	0.0 N	0.0 N	10.0000	70.0000	0.0 L	0.0 L	0.0 L	15.0000	50.0000
23	AMG569	1.5000	0.0 N	0.0 N	20.0000	20.0000	0.0 L	0.0 L	0.0 N	10.0000	15.0000
24	AMG588	0.0 L	0.0 N	0.0 N	15.0000	10.0000	5.0000	0.0 L	0.0 N	10.0000	5.0000
25	AKD918	1.0000	0.0 N	0.0 N	7.0000	0.0 L	70.0000	0.0 N	0.0 N	0.0 L	10.0000
26	AKD925	0.0 N	0.0 N	0.0 N	10.0000	15.0000	15.0000	0.0 N	15.0000	0.0 L	30.0000
27	AKD924	0.0 L	0.0 N	0.0 N	20.0000	10.0000	5.0000	0.0 N	0.0 L	10.0000	10.0000
28	AKD284	0.0 L	0.0 N	0.0 N	0.0 L	10.0000	150.0000	0.0 N	0.0 N	0.0 L	0.0 L
28	AKD285	0.0 L	0.0 N	0.0 N	7.0000	0.0 L	20.0000	0.0 N	0.0 N	10.0000	0.0 L
29	AMG596	1.5000	0.0 N	0.0 N	0.0 L	100.0000	70.0000	70.0000	0.0 L	10.0000	10.0000
29	AMG597	0.0 L	0.0 N	0.0 N	10.0000	30.0000	70.0000	0.0 L	0.0 L	10.0000	7.0000
30	AKD923	0.0 L	0.0 N	0.0 N	20.0000	15.0000	7.0000	0.0 N	0.0 L	10.0000	15.0000
31	AKD922	0.0 N	0.0 N	0.0 N	0.0 L	0.0 L	5.0000	0.0 N	0.0 N	0.0 L	0.0 L
32	AKD921	0.0 L	0.0 N	0.0 N	15.0000	0.0 L	0.0 L	0.0 N	0.0 N	10.0000	0.0 L
33	AKD920	0.0 L	0.0 N	0.0 N	20.0000	10.0000	5.0000	50.0000	0.0 L	10.0000	10.0000
34	AKD919	1.0000	0.0 N	0.0 N	10.0000	15.0000	10.0000	0.0 N	0.0 N	0.0 L	30.0000
35	AMG551	0.0 L	0.0 N	0.0 N	15.0000	15.0000	10.0000	0.0 N	0.0 L	10.0000	10.0000
36	AMG587	0.0 L	0.0 N	0.0 N	15.0000	10.0000	7.0000	0.0 L	0.0 N	10.0000	5.0000
37	AMG586	2.0000	0.0 N	0.0 N	20.0000	70.0000	70.0000	150.0000	0.0 L	10.0000	50.0000
38	AMG595	0.0 L	0.0 N	0.0 N	70.0000	10.0000	15.0000	0.0 N	0.0 L	10.0000	15.0000
39	AKD286	0.0 N	0.0 N	0.0 N	10.0000	0.0 L	10.0000	0.0 N	0.0 N	0.0 L	10.0000
40	AMG585	0.0 L	0.0 N	0.0 N	10.0000	10.0000	5.0000	0.0 N	0.0 N	0.0 L	0.0 L
41	AMG766	1.0000	0.0 N	0.0 N	15.0000	20.0000	15.0000	0.0 L	0.0 N	10.0000	15.0000
41	AMG767	0.0 L	0.0 N	0.0 N	100.0000	15.0000	20.0000	0.0 N	0.0 L	10.0000	15.0000

SUMDUM B-3 ROCK SAMPLES

	SAMPLE	PB PPM	SB PPM	SC PPM	SN PPM	SR PPM	V PPM	W PPM	Y PPM	ZN PPM	ZR PPM
1	AKD882	0.0 N	0.0 N	0.0 L	0.0 N	150.0000	150.0000	0.0 N	15.0000	0.0 N	70.0000
2	AKD880	10.0000	0.0 N	15.0000	0.0 N	700.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000
2	AKD881	0.0 L	0.0 N	15.0000	0.0 N	300.0000	200.0000	0.0 N	15.0000	0.0 L	0.0 L
3	AMG590	0.0 L	0.0 N	15.0000	0.0 N	200.0000	200.0000	0.0 N	20.0000	0.0 L	70.0000
3	AMG591	30.0000	0.0 N	0.0 N	0.0 N	150.0000	15.0000	0.0 N	30.0000	0.0 N	70.0000
4	AMG589	0.0 L	0.0 N	20.0000	0.0 N	300.0000	200.0000	0.0 N	10.0000	0.0 L	70.0000
5	AMG560	30.0000	0.0 N	0.0 L	0.0 N	1500.0000	30.0000	0.0 N	10.0000	0.0 L	500.0000
6	AMG561	30.0000	0.0 N	0.0 L	0.0 N	1500.0000	20.0000	0.0 N	15.0000	0.0 N	100.0000
6	AMG562	15.0000	0.0 N	10.0000	0.0 N	700.0000	100.0000	0.0 N	30.0000	0.0 L	100.0000
7	AMG563	20.0000	0.0 N	15.0000	0.0 N	300.0000	100.0000	0.0 N	15.0000	0.0 L	70.0000
8	AMG564	20.0000	0.0 N	15.0000	0.0 N	300.0000	100.0000	0.0 N	15.0000	0.0 L	0.0 L
9	AMG565	10.0000	0.0 N	15.0000	0.0 N	500.0000	150.0000	0.0 N	15.0000	200.0000	70.0000
10	AKD267	70.0000	0.0 N	0.0 N	0.0 N	200.0000	15.0000	0.0 N	10.0000	0.0 N	50.0000
11	AKD268	15.0000	0.0 N	15.0000	0.0 N	300.0000	150.0000	0.0 N	20.0000	0.0 N	70.0000
12	AKD288	20.0000	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	0.0 L	70.0000
13	AKD287	20.0000	0.0 N	0.0 N	0.0 N	200.0000	20.0000	0.0 N	10.0000	0.0 N	500.0000
14	AKD281	0.0 L	0.0 N	20.0000	0.0 L	700.0000	150.0000	0.0 N	30.0000	200.0000	70.0000
14	AKD282	0.0 L	0.0 N	20.0000	0.0 N	1000.0000	150.0000	0.0 N	15.0000	200.0000	70.0000
14	AKD283	15.0000	0.0 N	0.0 N	0.0 N	700.0000	30.0000	0.0 N	10.0000	0.0 N	70.0000
15	AMG566	30.0000	0.0 N	15.0000	0.0 N	500.0000	150.0000	0.0 N	20.0000	0.0 L	70.0000
16	AMG567	30.0000	0.0 L	7.0000	0.0 N	700.0000	50.0000	0.0 N	20.0000	0.0 L	500.0000
17	AKD915	20.0000	0.0 N	5.0000	0.0 N	150.0000	30.0000	0.0 N	10.0000	0.0 N	150.0000
18	AKD916	10.0000	0.0 N	15.0000	0.0 N	200.0000	150.0000	0.0 N	15.0000	0.0 N	70.0000
19	AKD917	10.0000	0.0 N	7.0000	0.0 N	300.0000	50.0000	0.0 N	15.0000	0.0 N	200.0000
20	AMG550	15.0000	0.0 N	20.0000	0.0 N	500.0000	300.0000	0.0 N	20.0000	0.0 L	100.0000
21	AKD269	20.0000	0.0 N	20.0000	0.0 N	300.0000	150.0000	0.0 N	15.0000	0.0 L	200.0000
21	AKD270	20.0000	0.0 N	15.0000	0.0 N	200.0000	150.0000	0.0 N	15.0000	0.0 N	150.0000
22	AMG568	0.0 N	0.0 N	15.0000	0.0 N	300.0000	100.0000	0.0 N	15.0000	0.0 L	300.0000
23	AMG569	10.0000	0.0 N	15.0000	0.0 N	300.0000	100.0000	0.0 N	30.0000	0.0 L	300.0000
24	AMG588	15.0000	0.0 N	15.0000	0.0 N	300.0000	150.0000	0.0 N	10.0000	0.0 N	150.0000
25	AKD918	30.0000	0.0 N	0.0 N	0.0 N	150.0000	15.0000	0.0 N	15.0000	0.0 N	100.0000
26	AKD925	15.0000	0.0 N	10.0000	0.0 N	300.0000	200.0000	0.0 N	15.0000	0.0 N	70.0000
27	AKD924	15.0000	0.0 N	15.0000	0.0 N	700.0000	200.0000	0.0 N	10.0000	0.0 L	70.0000
28	AKD284	30.0000	0.0 N	0.0 N	0.0 N	300.0000	50.0000	0.0 N	10.0000	0.0 N	30.0000
28	AKD285	15.0000	0.0 N	15.0000	0.0 N	300.0000	150.0000	0.0 N	15.0000	0.0 N	50.0000
29	AMG596	30.0000	0.0 N	15.0000	0.0 N	150.0000	200.0000	0.0 N	20.0000	0.0 L	70.0000
29	AMG597	15.0000	0.0 N	15.0000	0.0 N	500.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000
30	AKD923	20.0000	0.0 N	20.0000	0.0 N	700.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000
31	AKD922	10.0000	0.0 N	0.0 L	0.0 N	150.0000	30.0000	0.0 N	10.0000	0.0 N	70.0000
32	AKD921	10.0000	0.0 N	10.0000	0.0 N	300.0000	150.0000	0.0 N	15.0000	0.0 N	100.0000
33	AKD920	15.0000	0.0 N	20.0000	0.0 N	200.0000	200.0000	0.0 N	20.0000	0.0 N	100.0000
34	AKD919	15.0000	0.0 N	7.0000	0.0 N	200.0000	70.0000	0.0 N	0.0 L	0.0 N	70.0000
35	AMG551	10.0000	0.0 N	15.0000	0.0 N	300.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000
36	AMG587	15.0000	0.0 N	15.0000	0.0 N	300.0000	150.0000	0.0 N	10.0000	0.0 L	70.0000
37	AMG586	15.0000	0.0 N	15.0000	0.0 N	200.0000	150.0000	0.0 N	15.0000	0.0 L	300.0000
38	AMG595	0.0 L	0.0 N	7.0000	0.0 N	100.0000	150.0000	0.0 N	10.0000	0.0 L	70.0000
39	AKD286	20.0000	0.0 N	15.0000	0.0 N	300.0000	150.0000	0.0 N	10.0000	0.0 N	70.0000
40	AMG585	15.0000	0.0 N	15.0000	0.0 N	500.0000	150.0000	0.0 N	10.0000	0.0 N	20.0000
41	AMG766	15.0000	0.0 N	15.0000	0.0 N	700.0000	300.0000	0.0 N	15.0000	0.0 L	70.0000
41	AMG767	15.0000	0.0 N	10.0000	0.0 N	700.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000

SUMDUM B-3 ROCK SAMPLES

	SAMPLE	AU PPM
1	AKD882	0.0200L
2	AKD880	0.0200L
2	AKD881	0.0200L
3	AMG590	0.0200L
3	AMG591	0.0200L
4	AMG589	0.0200L
5	AMG560	0.0200L
6	AMG561	0.0200L
6	AMG562	0.0200L
7	AMG563	0.0200L
8	AMG564	0.0200L
9	AMG565	0.0200L
10	AKD267	0.0200L
11	AKD268	0.0200L
12	AKD288	0.0200L
13	AKD287	0.0200L
14	AKD281	0.0200L
14	AKD282	0.0200L
14	AKD283	0.0200L
15	AMG566	0.0200L
16	AMG567	0.0200L
17	AKD915	0.0200L
18	AKD916	0.0200L
19	AKD917	0.0200L
20	AMG550	0.0200L
21	AKD269	0.0200L
21	AKD270	0.0200L
22	AMG568	0.0200L
23	AMG569	0.0200L
24	AMG588	0.0200L
25	AKD918	0.0200L
26	AKD925	0.0200L
27	AKD924	0.0200L
28	AKD284	0.0200L
28	AKD285	0.0200L
29	AMG596	0.0200L
29	AMG597	0.0200L
30	AKD923	0.0200L
31	AKD922	0.0200L
32	AKD921	0.0200L
33	AKD920	0.0200L
34	AKD919	0.0200L
35	AMG551	0.0200L
36	AMG587	0.0200L
37	AMG586	0.0200L
38	AMG595	0.4000
39	AKD286	0.0200L
40	AMG585	0.0200L
41	AMG766	0.0200L
41	AMG767	0.0200L

SUMDUM B-3 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
41	AMG786	3.0000	0.0700	0.0 L	0.0700	1000.0000	0.0 N	0.0 L	0.0 N	0.0 L	100.0000
42	AMG774	3.0000	0.7000	1.5000	0.2000	700.0000	0.0 N	0.0 N	0.0 N	0.0 N	700.0000
43	AMG573	3.0000	1.0000	1.5000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	0.0 L	1500.0000
44	AMG593	3.0000	1.5000	2.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	10.0000	1500.0000
45	AMG581	5.0000	1.5000	2.0000	0.5000	100.0000	0.0 N	0.0 N	0.0 N	0.0 L	700.0000
46	AMG594	5.0000	1.0000	1.0000	0.3000	500.0000	0.0 L	0.0 N	0.0 N	0.0 L	700.0000
47	AMG582	5.0000	1.5000	2.0000	0.3000	100.0000	0.0 N	0.0 N	0.0 N	0.0 L	700.0000
47	AMG583	3.0000	1.0000	0.7000	0.3000	300.0000	0.0 N	0.0 N	0.0 N	10.0000	700.0000
47	AMG584	0.2000	0.0 L	0.2000	0.0 L	70.0000	0.0 N	0.0 N	0.0 N	0.0 N	0.0 L
48	AMG572	3.0000	1.5000	1.5000	0.5000	700.0000	0.0 N	0.0 N	0.0 N	0.0 L	1500.0000
49	AMG768	15.0000	3.0000	2.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0 N	10.0000	3000.0000
50	AMG769	3.0000	1.5000	2.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	10.0000	1500.0000
50	AMG770	3.0000	1.0000	1.5000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	0.0 N	1000.0000
50	AMG771	15.0000	0.5000	0.7000	0.3000	1000.0000	0.0 N	0.0 L	0.0 N	15.0000	1500.0000
50	AMG772	5.0000	1.0000	1.5000	0.3000	700.0000	30.0000	0.0 L	0.0 N	10.0000	300.0000
50	AMG773	3.0000	1.0000	0.7000	0.3000	700.0000	7.0000	0.0 N	0.0 N	0.0 N	700.0000
51	AKD097	10.0000	3.0000	5.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0 N	10.0000	150.0000
52	AKD099	10.0000	3.0000	2.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0 N	0.0 L	1500.0000
53	AKD496	10.0000	3.0000	3.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0 N	0.0 L	1000.0000
54	AKD280	10.0000	1.5000	2.0000	0.3000	1500.0000	100.0000	0.0 N	0.0 N	10.0000	1500.0000
55	AKD100	7.0000	3.0000	1.0000	0.5000	700.0000	0.0 L	0.0 N	0.0 N	0.0 N	1500.0000
55	AKD290	10.0000	0.7000	1.5000	0.3000	150.0000	1.5000	0.0 N	0.0 N	0.0 L	700.0000
56	AMG512	3.0000	1.0000	1.5000	0.3000	300.0000	0.0 N	0.0 N	0.0 N	0.0 N	700.0000
57	AMG513	10.0000	1.5000	0.7000	0.5000	700.0000	0.0 N	0.0 L	0.0 N	10.0000	300.0000
58	AMG514	0.7000	0.1000	0.7000	0.0300	70.0000	0.0 N	0.0 L	0.0 N	0.0 N	700.0000
59	AMG515	7.0000	1.5000	0.7000	0.3000	1000.0000	0.0 N	0.0 L	0.0 N	15.0000	700.0000
60	AMG516	3.0000	1.0000	0.3000	0.3000	500.0000	0.0 N	0.0 N	0.0 N	0.0 N	300.0000
61	AMG517	10.0000	3.0000	2.0000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	10.0000	700.0000
62	AMG518	10.0000	3.0000	2.0000	0.5000	700.0000	0.0 N	0.0 N	0.0 N	0.0 L	1000.0000
63	AMG519	10.0000	3.0000	3.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	15.0000	1500.0000
64	AKD499	10.0000	5.0000	10.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0 N	30.0000	500.0000
65	AKD500	3.0000	0.7000	1.5000	0.3000	300.0000	0.0 L	0.0 N	0.0 N	0.0 L	2000.0000
66	AMG785	3.0000	0.7000	1.0000	0.3000	700.0000	5.0000	0.0 N	0.0 N	10.0000	500.0000
67	AMG523	0.7000	0.0300	0.3000	0.0200	700.0000	0.0 N	0.0 L	0.0 N	10.0000	0.0 L
67	AMG524	5.0000	1.5000	2.0000	0.3000	1000.0000	0.0 N	0.0 N	0.0 N	10.0000	300.0000
68	AMG526	5.0000	1.5000	2.0000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	10.0000	700.0000
69	AMG520	3.0000	1.0000	2.0000	0.3000	300.0000	0.0 N	0.0 N	0.0 N	0.0 N	700.0000
70	AMG521	5.0000	2.0000	2.0000	0.5000	500.0000	0.0 N	0.0 L	0.0 N	10.0000	700.0000
71	AMG775	7.0000	1.5000	2.0000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	10.0000	1500.0000
72	AMG783	5.0000	0.7000	2.0000	0.3000	700.0000	5.0000	0.0 L	0.0 N	20.0000	1000.0000
73	AMG522	5.0000	2.0000	1.5000	0.5000	500.0000	0.0 N	0.0 N	0.0 N	0.0 N	300.0000
74	AMG444	10.0000	3.0000	7.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0 N	0.0 L	300.0000
75	AMG570	10.0000	3.0000	2.0000	0.3000	1500.0000	0.0 N	0.0 N	0.0 N	0.0 L	1500.0000
75	AMG571	0.7000	0.0700	1.0000	0.0700	70.0000	0.0 N	0.0 N	0.0 N	0.0 N	1500.0000
76	AMG556	0.5000	0.0700	0.2000	0.0300	70.0000	0.0 N	0.0 N	0.0 N	0.0 N	700.0000
76	AMG765	10.0000	3.0000	3.0000	0.5000	700.0000	0.0 N	0.0 N	0.0 N	10.0000	1000.0000
77	AMG776	7.0000	1.0000	2.0000	0.3000	500.0000	0.0 N	0.0 N	0.0 N	0.0 N	700.0000
78	AMG780	0.3000	0.0 L	0.7000	0.0150	0.0 L	10.0000	0.0 L	0.0 N	0.0 L	3000.0000
78	AMG781	10.0000	1.5000	3.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	10.0000	1500.0000
78	AMG782	10.0000	1.5000	3.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	5.0000U	700.0000

SUMDUM B-3 ROCK SAMPLES

	SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
41	AMG786	0.0 N	0.0 N	0.0 N	10.0000	10.0000	70.0000	0.0 N	0.0 L	0.0 L	10.0000
42	AMG774	1.5000	0.0 N	0.0 N	0.0 L	10.0000	10.0000	0.0 L	0.0 N	10.0000	10.0000
43	AMG573	0.0 L	0.0 N	0.0 N	7.0000	0.0 L	5.0000	0.0 N	0.0 L	0.0 L	5.0000
44	AMG593	0.0 L	0.0 N	0.0 N	15.0000	10.0000	7.0000	0.0 N	0.0 N	10.0000	10.0000
45	AMG581	1.0000	0.0 N	0.0 N	10.0000	20.0000	10.0000	30.0000	0.0 L	10.0000	15.0000
46	AMG594	1.0000	0.0 N	0.0 N	30.0000	50.0000	150.0000	0.0 N	15.0000	10.0000	50.0000
47	AMG582	0.0 L	0.0 N	0.0 N	15.0000	15.0000	10.0000	0.0 N	0.0 L	10.0000	5.0000
47	AMG583	0.0 L	0.0 N	0.0 N	10.0000	10.0000	5.0000	0.0 N	0.0 L	10.0000	5.0000
47	AMG584	0.0 L	0.0 N	0.0 N	0.0 N	0.0 L	5.0000	0.0 N	0.0 N	0.0 L	0.0 L
48	AMG572	2.0000	0.0 N	0.0 N	5.0000	10.0000	7.0000	0.0 L	0.0 L	10.0000	5.0000
49	AMG768	0.0 L	0.0 N	0.0 N	70.0000	30.0000	5.0000	0.0 N	0.0 L	10.0000	20.0000
50	AMG769	1.0000	0.0 N	0.0 N	5.0000U	15.0000	5.0000	150.0000	0.0 N	10.0000	15.0000
50	AMG770	1.0000	0.0 N	0.0 N	7.0000	10.0000	5.0000	0.0 L	0.0 L	0.0 L	7.0000
50	AMG771	1.0000	0.0 N	0.0 N	7.0000	10.0000	150.0000	20.0000	0.0 L	15.0000	10.0000
50	AMG772	0.0 L	70.0000	0.0 N	10.0000	10.0000	7000.0000	0.0 N	500.0000	10.0000	10.0000
50	AMG773	0.0 L	0.0 N	0.0 N	15.0000	10.0000	500.0000	0.0 N	5.0000	10.0000	10.0000
51	AKD097	0.0 L	0.0 N	0.0 N	15.0000	15.0000	10.0000	0.0 N	0.0 N	10.0000	7.0000
52	AKD099	0.0 N	0.0 N	0.0 N	15.0000	10.0000	15.0000	0.0 N	0.0 N	10.0000	10.0000
53	AKD496	0.0 L	0.0 N	0.0 N	20.0000	30.0000	5.0000	0.0 N	0.0 L	10.0000	10.0000
54	AKD280	0.0 N	0.0 L	0.0 N	30.0000	10.0000	20001.0000G	0.0 L	10.0000	10.0000	15.0000
55	AKD100	0.0 N	0.0 N	0.0 N	15.0000	300.0000	70.0000	0.0 N	15.0000	10.0000	70.0000
55	AKD290	0.0 N	0.0 N	0.0 N	5.0000	10.0000	150.0000	0.0 N	15.0000	10.0000	10.0000
56	AMG512	0.0 L	0.0 N	0.0 N	0.0 L	0.0 L	10.0000	0.0 L	0.0 N	0.0 L	10.0000
57	AMG513	0.0 L	0.0 N	0.0 N	30.0000	70.0000	70.0000	0.0 L	0.0 L	10.0000	70.0000
58	AMG514	0.0 L	0.0 N	0.0 N	0.0 L	0.0 L	0.0 L	0.0 N	0.0 N	0.0 L	10.0000
59	AMG515	0.0 L	0.0 N	0.0 N	20.0000	70.0000	70.0000	150.0000	0.0 L	10.0000	70.0000
60	AMG516	0.0 L	0.0 N	0.0 N	10.0000	70.0000	10.0000	20.0000	0.0 L	10.0000	30.0000
61	AMG517	0.0 L	0.0 N	0.0 N	30.0000	30.0000	7.0000	20.0000	0.0 L	10.0000	20.0000
62	AMG518	0.0 L	0.0 N	0.0 N	30.0000	30.0000	30.0000	50.0000	0.0 L	10.0000	30.0000
63	AMG519	0.0 L	0.0 N	0.0 N	30.0000	20.0000	20.0000	0.0 L	0.0 L	10.0000	20.0000
64	AKD499	0.0 L	0.0 N	0.0 N	20.0000	20.0000	10.0000	0.0 L	0.0 N	0.0 L	15.0000
65	AKD500	0.0 L	0.0 N	0.0 N	0.0 L	10.0000	5.0000	0.0 N	0.0 N	0.0 L	10.0000
66	AMG785	0.0 L	0.0 N	0.0 N	10.0000	10.0000	150.0000	0.0 N	0.0 N	10.0000	7.0000
67	AMG523	0.0 L	0.0 N	0.0 N	0.0 N	0.0 L	0.0 L	0.0 N	0.0 N	10.0000	5.0000
67	AMG524	1.0000	0.0 N	0.0 N	20.0000	30.0000	5.0000	0.0 L	0.0 L	10.0000	10.0000
68	AMG526	1.5000	0.0 N	0.0 N	15.0000	10.0000	0.0 L	0.0 L	0.0 L	10.0000	10.0000
69	AMG520	0.0 L	0.0 N	0.0 N	10.0000	15.0000	0.0 L	0.0 N	0.0 L	0.0 L	10.0000
70	AMG521	0.0 L	0.0 N	0.0 N	30.0000	10.0000	50.0000	0.0 N	0.0 N	10.0000	15.0000
71	AMG775	1.0000	0.0 N	0.0 N	15.0000	10.0000	5.0000	0.0 L	0.0 N	10.0000	10.0000
72	AMG783	1.5000	30.0000	0.0 N	10.0000	10.0000	2000.0000	0.0 L	20.0000	15.0000	15.0000
73	AMG522	0.0 L	0.0 N	0.0 N	30.0000	100.0000	5.0000	0.0 N	0.0 L	10.0000	15.0000
74	AMG444	0.0 N	0.0 N	0.0 N	20.0000	150.0000	30.0000	0.0 N	15.0000	10.0000	30.0000
75	AMG570	1.0000	0.0 N	0.0 N	0.0 L	15.0000	10.0000	0.0 N	0.0 N	10.0000	15.0000
75	AMG571	2.0000	0.0 N	0.0 N	0.0 L	15.0000	10.0000	0.0 N	0.0 N	10.0000	5.0000
76	AMG556	1.0000	0.0 N	0.0 N	0.0 L	0.0 L	0.0 L	0.0 L	0.0 N	0.0 L	5.0000
76	AMG765	0.0 L	0.0 N	0.0 N	20.0000	10.0000	5.0000	70.0000	0.0 N	10.0000	15.0000
77	AMG776	0.0 L	0.0 N	0.0 N	15.0000	15.0000	7.0000	0.0 N	0.0 L	10.0000	10.0000
78	AMG780	0.0 N	30.0000	0.0 N	0.0 N	10.0000	100.0000	0.0 N	100.0000	0.0 L	15.0000
78	AMG781	1.5000	0.0 N	0.0 N	15.0000	0.0 L	5.0000	50.0000	0.0 N	15.0000	15.0000
78	AMG782	1.0000	0.0 N	0.0 N	20.0000	10.0000	10.0000	20.0000	0.0 N	15.0000	15.0000

SUMDUM B-3 ROCK SAMPLES

	SAMPLE	PB PPM	SB PPM	SC PPM	SN PPM	SR PPM	V PPM	W PPM	Y PPM	ZN PPM	ZR PPM
41	AMG786	10.0000	0.0 N	0.0 L	0.0 N	0.0 L	150.0000	0.0 N	10.0000	0.0 N	20.0000
42	AMG774	15.0000	0.0 N	7.0000	0.0 N	500.0000	150.0000	0.0 N	10.0000	0.0 L	50.0000
43	AMG573	20.0000	0.0 N	10.0000	0.0 N	500.0000	150.0000	0.0 N	10.0000	0.0 N	50.0000
44	AMG593	15.0000	0.0 N	15.0000	0.0 N	300.0000	150.0000	0.0 N	15.0000	0.0 L	70.0000
45	AMG581	0.0 L	0.0 N	15.0000	0.0 N	300.0000	150.0000	0.0 N	15.0000	0.0 L	100.0000
46	AMG594	15.0000	0.0 N	15.0000	0.0 N	150.0000	300.0000	0.0 N	15.0000	0.0 N	70.0000
47	AMG582	10.0000	0.0 N	15.0000	0.0 N	300.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000
47	AMG583	10.0000	0.0 N	15.0000	0.0 N	300.0000	150.0000	0.0 N	10.0000	0.0 L	50.0000
47	AMG584	30.0000	0.0 N	0.0 N	0.0 N	0.0 N	15.0000	0.0 N	10.0000	0.0 N	20.0000
48	AMG572	70.0000	0.0 N	10.0000	0.0 N	700.0000	150.0000	0.0 N	15.0000	0.0 L	100.0000
49	AMG768	15.0000	0.0 N	20.0000	0.0 N	500.0000	300.0000	0.0 N	20.0000	0.0 L	200.0000
50	AMG769	20.0000	0.0 N	15.0000	0.0 N	300.0000	150.0000	0.0 N	30.0000	0.0 L	70.0000
50	AMG770	20.0000	0.0 N	10.0000	0.0 N	300.0000	150.0000	0.0 N	10.0000	0.0 L	50.0000
50	AMG771	30.0000	0.0 N	7.0000	0.0 N	500.0000	200.0000	0.0 N	30.0000	0.0 L	200.0000
50	AMG772	15.0000	0.0 N	15.0000	0.0 N	300.0000	150.0000	0.0 N	15.0000	0.0 L	100.0000
50	AMG773	15.0000	0.0 N	10.0000	0.0 N	200.0000	150.0000	50.0000	15.0000	0.0 L	70.0000
51	AKD097	10.0000	0.0 N	15.0000	0.0 N	700.0000	150.0000	0.0 N	15.0000	0.0 L	30.0000
52	AKD099	20.0000	0.0 N	15.0000	0.0 N	500.0000	150.0000	0.0 N	15.0000	0.0 L	70.0000
53	AKD496	15.0000	0.0 N	30.0000	0.0 N	300.0000	200.0000	0.0 N	20.0000	0.0 L	20.0000
54	AKD280	30.0000	0.0 N	7.0000	0.0 N	200.0000	150.0000	0.0 N	10.0000	0.0 N	150.0000
55	AKD100	700.0000	0.0 N	15.0000	0.0 N	150.0000	150.0000	0.0 N	10.0000	0.0 N	70.0000
55	AKD290	200.0000	0.0 N	0.0 L	0.0 N	300.0000	20.0000	0.0 N	0.0 N	0.0 N	70.0000
56	AMG512	15.0000	0.0 L	0.0 L	0.0 N	500.0000	50.0000	0.0 N	10.0000	0.0 N	70.0000
57	AMG513	0.0 L	300.0000	15.0000	0.0 N	100.0000	200.0000	0.0 N	15.0000	0.0 L	200.0000
58	AMG514	30.0000	0.0 L	0.0 N	0.0 N	150.0000	15.0000	0.0 N	10.0000	0.0 N	70.0000
59	AMG515	20.0000	0.0 N	15.0000	0.0 N	200.0000	300.0000	0.0 N	30.0000	0.0 L	100.0000
60	AMG516	30.0000	0.0 N	15.0000	0.0 N	150.0000	100.0000	0.0 N	20.0000	0.0 L	70.0000
61	AMG517	15.0000	0.0 N	20.0000	0.0 N	300.0000	300.0000	0.0 N	30.0000	0.0 L	20.0000
62	AMG518	15.0000	0.0 N	20.0000	0.0 N	500.0000	300.0000	0.0 N	30.0000	0.0 L	30.0000
63	AMG519	15.0000	0.0 N	30.0000	0.0 N	500.0000	300.0000	0.0 N	20.0000	0.0 L	100.0000
64	AKD499	30.0000	0.0 N	20.0000	0.0 N	1000.0000	150.0000	0.0 N	15.0000	0.0 N	70.0000
65	AKD500	30.0000	0.0 N	0.0 N	0.0 N	500.0000	30.0000	0.0 N	0.0 L	0.0 N	70.0000
66	AMG785	50.0000	0.0 N	7.0000	0.0 N	300.0000	150.0000	0.0 N	10.0000	0.0 N	50.0000
67	AMG523	50.0000	0.0 N	0.0 N	0.0 N	0.0 N	15.0000	0.0 N	10.0000	0.0 N	30.0000
67	AMG524	10.0000	0.0 N	20.0000	0.0 N	300.0000	150.0000	0.0 N	20.0000	0.0 L	70.0000
68	AMG526	15.0000	0.0 N	20.0000	0.0 N	300.0000	150.0000	0.0 N	20.0000	0.0 L	100.0000
69	AMG520	15.0000	0.0 N	15.0000	0.0 N	500.0000	150.0000	0.0 N	15.0000	0.0 N	70.0000
70	AMG521	10.0000	0.0 N	15.0000	0.0 N	300.0000	200.0000	0.0 N	15.0000	0.0 L	20.0000
71	AMG775	20.0000	0.0 N	15.0000	0.0 N	700.0000	200.0000	0.0 N	30.0000	0.0 N	100.0000
72	AMG783	15.0000	0.0 N	15.0000	0.0 N	700.0000	150.0000	100.0000	30.0000	0.0 N	70.0000
73	AMG522	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
74	AMG444	0.0 N	0.0 N	15.0000	0.0 N	150.0000	150.0000	0.0 N	15.0000	300.0000	50.0000
75	AMG570	10.0000	0.0 N	20.0000	0.0 N	700.0000	150.0000	0.0 N	15.0000	0.0 L	70.0000
76	AMG571	30.0000	0.0 N	0.0 N	0.0 N	300.0000	15.0000	0.0 N	20.0000	0.0 L	70.0000
76	AMG556	30.0000	0.0 N	0.0 N	0.0 N	150.0000	15.0000	0.0 N	10.0000	0.0 N	50.0000
76	AMG765	15.0000	0.0 N	15.0000	0.0 N	700.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000
77	AMG776	15.0000	0.0 N	10.0000	0.0 N	300.0000	150.0000	0.0 N	15.0000	0.0 L	70.0000
78	AMG780	15001.0000	0.0 N	0.0 N	0.0 N	300.0000	10.0000	0.0 L	0.0 L	0.0 N	30.0000
78	AMG781	30.0000	0.0 N	15.0000	0.0 N	700.0000	150.0000	0.0 N	20.0000	0.0 L	100.0000
78	AMG782	15.0000	0.0 N	15.0000	0.0 N	700.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000

SUMDUM B-3 ROCK SAMPLES

	SAMPLE	AU PPM
41	AMG786	0.5000
42	AMG774	0.0200L
43	AMG573	0.0200L
44	AMG593	0.0200L
45	AMG581	0.0200L
46	AMG594	0.0200L
47	AMG582	0.0200L
47	AMG583	0.0200L
47	AMG584	0.0200L
48	AMG572	0.0200L
49	AMG768	0.0200L
50	AMG769	0.0200L
50	AMG770	0.0200L
50	AMG771	0.0200L
50	AMG772	0.4000
50	AMG773	0.1000
51	AKD097	0.0200L
52	AKD099	0.0200L
53	AKD496	0.0200L
54	AKD280	0.5000
55	AKD100	0.0200L
55	AKD290	0.0200L
56	AMG512	0.0200L
57	AMG513	0.0200L
58	AMG514	0.0200L
59	AMG515	0.0200L
60	AMG516	0.0200L
61	AMG517	0.0200L
62	AMG518	0.0200L
63	AMG519	0.0200L
64	AKD499	0.0200L
65	AKD500	0.0200L
66	AMG785	0.0400
67	AMG523	0.0200L
67	AMG524	0.0200L
68	AMG526	0.0200L
69	AMG520	0.0200L
70	AMG521	0.0200L
71	AMG775	0.0200L
72	AMG783	0.0400
73	AMG522	0.0200L
74	AMG444	0.0200L
75	AMG570	0.0200L
75	AMG571	0.0200L
76	AMG556	0.0200L
76	AMG765	0.0200L
77	AMG776	0.0200L
78	AMG780	0.6000
78	AMG781	0.0200L
78	AMG782	0.0200L

SUMDUM 8-3 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
79	AMG580	0.3000	0.0200	0.5000	0.0200	150.0000	0.0 N	0.0 N	0.0 N	0.0 N	500.0000
80	AMG579	1.5000	0.5000	0.1500	0.1500	150.0000	0.0 L	0.0 N	0.0 N	10.0000	3000.0000
81	AKD498	10.0000	3.0000	3.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0 N	10.0000	700.0000
82	AMG592	15.0000	1.5000	5.0000	0.5000	2000.0000	1.0000	0.0 N	0.0 N	10.0000	150.0000
83	AKD936	7.0000	3.0000	2.0000	0.5000	700.0000	0.0 L	0.0 N	0.0 N	10.0000	700.0000
84	AKD935	10.0000	3.0000	2.0000	0.3000	1000.0000	0.0 N	0.0 N	0.0 N	10.0000	700.0000
85	AMG777	10.0000	1.5000	5.0000	0.5000	700.0000	0.0 N	0.0 L	0.0 N	0.0 L	1500.0000
86	AMG557	3.0000	1.0000	3.0000	0.3000	500.0000	0.0 N	0.0 N	0.0 N	0.0 N	1000.0000
87	AMG778	7.0000	2.0000	3.0000	0.5000	1000.0000	0.0 N	0.0 L	0.0 N	15.0000	1500.0000
87	AMG779	15.0000	1.5000	1.5000	0.5000	500.0000	1.0000	0.0 N	0.0 N	15.0000	300.0000
88	AMG552	5.0000	1.5000	1.5000	0.5000	700.0000	0.0 N	0.0 N	0.0 N	0.0 L	700.0000
88	AMG553	10.0000	2.0000	1.0000	0.5000	300.0000	0.0 N	0.0 N	0.0 N	0.0 L	700.0000
89	AKD934	5.0000	1.5000	2.0000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	10.0000	700.0000
90	AKD933	5.0000	3.0000	2.0000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	0.0 L	700.0000
91	AMG763	7.0000	2.0000	3.0000	0.7000	1000.0000	20.0000	0.0 N	0.0 N	10.0000	1000.0000
91	AMG764	3.0000	3.0000	10.0000	0.3000	1500.0000	0.0 N	0.0 N	0.0 N	15.0000	300.0000
92	AMG574	3.0000	1.0000	2.0000	0.2000	700.0000	0.0 L	0.0 N	0.0 N	0.0 L	1500.0000
93	AMG577	1.5000	0.3000	1.0000	0.3000	700.0000	0.0 N	0.0 N	0.0 N	0.0 N	1500.0000
94	AMG578	7.0000	0.7000	1.0000	0.3000	200.0000	0.0 L	0.0 N	0.0 N	15.0000	300.0000
95	AMG576	3.0000	1.5000	2.0000	0.3000	1000.0000	0.0 N	0.0 N	0.0 N	0.0 L	500.0000
96	AKD932	10.0000	5.0000	5.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0 N	10.0000	100.0000
97	AKD931	15.0000	7.0000	7.0000	0.3000	1500.0000	0.0 N	0.0 N	0.0 N	15.0000	150.0000
98	AKD929	15.0000	2.0000	1.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0 N	10.0000	700.0000
99	AKD928	10.0000	0.7000	1.0000	0.2000	150.0000	0.0 N	0.0 N	0.0 N	15.0000	700.0000
100	AKD927	10.0000	2.0000	0.1500	0.7000	150.0000	1.0000	0.0 N	0.0 N	15.0000	1500.0000

SUMDUM B-3 ROCK SAMPLES

	SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
79	AMG580	0.0 L	0.0 N	0.0 N	0.0 L	10.0000	0.0 L	30.0000	0.0 N	0.0 3	5.0000
80	AMG579	0.0 N	0.0 N	0.0 N	0.0 L	20.0000	10.0000	150.0000	0.0 L	10.0000	15.0000
81	AKD498	0.0 L	0.0 N	0.0 N	20.0000	15.0000	5.0000	0.0 L	0.0 L	0.0 L	15.0000
82	AMG592	3.0000	0.0 N	0.0 N	0.0 N	70.0000	70.0000	5.0000	5.0000	5.0000	0.0 3
83	AKD936	0.0 L	0.0 N	0.0 N	20.0000	30.0000	30.0000	0.0 L	0.0 L	10.0000	7.0000
84	AKD935	0.0 L	0.0 N	0.0 N	20.0000	20.0000	30.0000	0.0 N	0.0 L	10.0000	10.0000
85	AMG777	1.0000	0.0 N	0.0 N	20.0000	20.0000	5.0000	20.0000	0.0 L	10.0000	15.0000
86	AMG557	1.0000	0.0 N	0.0 N	5.0000	0.0 L	0.0 L	0.0 L	0.0 N	10.0000	0.0 L
87	AMG778	1.5000	0.0 N	0.0 N	15.0000	10.0000	10.0000	50.0000	0.0 L	10.0000	15.0000
87	AMG779	0.0 L	0.0 N	0.0 N	30.0000	10.0000	200.0000	0.0 N	10.0000	10.0000	15.0000
88	AMG552	0.0 L	0.0 N	0.0 N	20.0000	10.0000	0.0 L	0.0 L	0.0 L	10.0000	5.0000
88	AMG553	0.0 L	0.0 N	0.0 N	20.0000	15.0000	100.0000	20.0000	0.0 L	10.0000	10.0000
89	AKD934	0.0 L	0.0 N	0.0 N	7.0000	10.0000	5.0000	0.0 L	0.0 N	10.0000	5.0000
90	AKD933	0.0 N	0.0 N	0.0 N	20.0000	50.0000	0.0 L	0.0 L	0.0 N	10.0000	10.0000
91	AMG763	1.0000	30.0000	0.0 N	15.0000	10.0000	1000.0000	0.0 L	150.0000	10.0000	15.0000
91	AMG764	1.0000	0.0 N	0.0 N	15.0000	0.0 L	7.0000	0.0 L	0.0 L	10.0000	15.0000
92	AMG574	1.5000	0.0 N	0.0 N	5.0000	10.0000	20.0000	0.0 N	0.0 L	0.0 L	5.0000
93	AMG577	1.5000	0.0 N	0.0 N	0.0 L	10.0000	0.0 L	0.0 L	0.0 N	10.0000	5.0000
94	AMG578	2.0000	0.0 N	0.0 N	20.0000	30.0000	200.0000	0.0 L	0.0 L	10.0000	30.0000
95	AMG576	1.5000	0.0 N	0.0 N	0.0 L	10.0000	7.0000	0.0 L	0.0 N	10.0000	5.0000
96	AKD932	0.0 N	0.0 N	0.0 N	30.0000	300.0000	0.0 L	0.0 N	0.0 L	10.0000	150.0000
97	AKD931	0.0 N	0.0 N	0.0 N	70.0000	700.0000	70.0000	0.0 N	0.0 L	10.0000	100.0000
98	AKD929	1.0000	0.0 N	0.0 N	20.0000	30.0000	70.0000	0.0 N	0.0 L	10.0000	30.0000
99	AKD928	0.0 L	0.0 N	0.0 N	30.0000	15.0000	70.0000	70.0000	5.0000	30.0000	20.0000
100	AKD927	0.0 N	0.0 N	0.0 N	30.0000	150.0000	100.0000	30.0000	5.0000	10.0000	100.0000

SUMDUM 8-3 ROCK SAMPLES

	SAMPLE	PB PPM	SB PPM	SC PPM	SN PPM	SR PPM	V PPM	W PPM	Y PPM	ZN PPM	ZR PPM
79	AMG580	30.0000	0.0 N	0.0 N	0.0 N	100.0000	15.0000	0.0 N	10.0000	0.0 N	70.0000
80	AMG579	0.0 N	0.0 N	5.0000	0.0 N	100.0000	150.0000	0.0 N	15.0000	0.0 N	70.0000
81	AKD498	20.0000	0.0 N	15.0000	0.0 N	500.0000	150.0000	0.0 N	10.0000	0.0 N	200.0000
82	AMG592	10.0000	0.0 N	15.0000	0.0 N	300.0000	150.0000	0.0 N	30.0000	0.0 L	150.0000
83	AKD936	15.0000	0.0 N	20.0000	0.0 N	500.0000	150.0000	0.0 N	15.0000	0.0 L	100.0000
84	AKD935	15.0000	0.0 N	20.0000	0.0 N	300.0000	150.0000	0.0 N	15.0000	0.0 L	100.0000
85	AMG777	15.0000	0.0 N	20.0000	0.0 N	700.0000	200.0000	0.0 N	20.0000	0.0 L	70.0000
86	AMG557	15.0000	0.0 N	10.0000	0.0 N	500.0000	70.0000	0.0 N	10.0000	0.0 L	30.0000
87	AMG778	20.0000	0.0 N	20.0000	0.0 N	700.0000	200.0000	0.0 N	20.0000	0.0 N	100.0000
87	AMG779	0.0 L	0.0 N	20.0000	0.0 N	150.0000	150.0000	0.0 N	10.0000	0.0 L	100.0000
89	AMG552	15.0000	0.0 N	15.0000	0.0 N	300.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000
88	AMG553	15.0000	0.0 N	20.0000	0.0 N	200.0000	200.0000	0.0 N	10.0000	300.0000	100.0000
89	AKD934	10.0000	0.0 N	10.0000	0.0 N	500.0000	100.0000	0.0 N	10.0000	0.0 L	50.0000
90	AKD933	15.0000	0.0 N	15.0000	0.0 N	300.0000	150.0000	0.0 N	15.0000	0.0 L	70.0000
91	AMG763	15.0000	0.0 N	15.0000	0.0 N	500.0000	200.0000	0.0 N	15.0000	0.0 L	70.0000
91	AMG764	20.0000	0.0 N	10.0000	0.0 N	200.0000	150.0000	0.0 N	15.0000	0.0 L	200.0000
92	AMG574	20.0000	0.0 N	15.0000	0.0 N	700.0000	150.0000	0.0 N	15.0000	0.0 N	500.0000
93	AMG577	20.0000	0.0 N	0.0 L	0.0 N	1000.0000	20.0000	0.0 N	10.0000	0.0 N	70.0000
94	AMG578	0.0 N	0.0 N	7.0000	0.0 N	150.0000	50.0000	0.0 N	15.0000	0.0 N	500.0000
95	AMG576	10.0000	0.0 N	10.0000	0.0 N	150.0000	30.0000	0.0 N	15.0000	0.0 N	50.0000
96	AKD932	0.0 L	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	30.0000	0.0 N	70.0000
97	AKD931	0.0 L	0.0 N	70.0000	0.0 N	100.0000	300.0000	0.0 N	15.0000	0.0 L	200.0000
98	AKD929	20.0000	0.0 N	15.0000	0.0 N	150.0000	200.0000	0.0 N	20.0000	0.0 L	70.0000
99	AKD928	10.0000	0.0 N	0.0 L	0.0 N	150.0000	70.0000	0.0 N	50.0000	0.0 L	1000.0000G
100	AKD927	10.0000	0.0 N	30.0000	0.0 N	150.0000	500.0000	0.0 N	20.0000	500.0000	200.0000

SUMDUM B-3 ROCK SAMPLES

	SAMPLE	AU PPM
79	AMG580	0.0200L
80	AMG579	0.0200L
81	AKD498	0.0200L
82	AMG592	0.0200L
83	AKD936	0.0200L
84	AKD935	0.0200L
85	AMG777	0.0200L
86	AMG557	0.0200L
87	AMG778	0.2000
87	AMG779	0.0200L
88	AMG552	0.0200L
88	AMG553	0.0200L
89	AKD934	0.0200L
90	AKD933	0.0200L
91	AMG763	0.0400
91	AMG764	0.0200L
92	AMG574	0.0200L
93	AMG577	0.0200L
94	AMG578	0.0200L
95	AMG576	0.0200L
96	AKD932	0.0200L
97	AKD931	0.0200L
98	AKD929	0.0200L
99	AKD928	0.0200L
100	AKD927	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	0	0	0.0	0.0
1.8E-01 -	2.6E-01	1	1	0.80	0.80
2.6E-01 -	3.8E-01	2	3	1.60	2.40
3.8E-01 -	5.6E-01	1	4	0.80	3.20
5.6E-01 -	8.3E-01	4	8	3.20	6.40
8.3E-01 -	1.2E 00	1	9	0.80	7.20
1.2E 00 -	1.8E 00	5	14	4.00	11.20
1.8E 00 -	2.6E 00	2	16	1.60	12.80
2.6E 00 -	3.8E 00	35	51	28.00	40.80
3.8E 00 -	5.6E 00	24	75	19.20	60.00
5.6E 00 -	8.3E 00	14	89	11.20	71.20
8.3E 00 -	1.2E 01	26	115	20.80	92.00
1.2E 01 -	1.8E 01	10	125	8.00	100.00

HISTOGRAM FOR COLUMN 1 (FE PCT)

```
2.0E-01 X

3.0E-01 XX

5.0E-01 X

7.0E-01 XXX

1.0E 00 X

1.5E 00 XXXX

2.0E 00 XX

3.0E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 00 XXXXXXXXXXXXXXXXXXX

7.0E 00 XXXXXXXXXXX

1.0E 01 XXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	125
0.0	0.0			0.0	0.0	

MAXIMUM = 1.50000E 01

MINIMUM = 2.00000E-01

GEOMETRIC MEAN = 4.51922E 00

GEOMETRIC DEVIATION = 2.37165E 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	1	1	0.80	0.80
2.6E-02 -	3.8E-02	1	2	0.80	1.60
3.8E-02 -	5.6E-02	0	2	0.0	1.60
5.6E-02 -	8.3E-02	4	6	3.20	4.80
8.3E-02 -	1.2E-01	1	7	0.80	5.60
1.2E-01 -	1.8E-01	0	7	0.0	5.60
1.8E-01 -	2.6E-01	0	7	0.0	5.60
2.6E-01 -	3.8E-01	5	12	4.00	9.60
3.8E-01 -	5.6E-01	4	16	3.20	12.80
5.6E-01 -	8.3E-01	13	29	10.40	23.20
8.3E-01 -	1.2E 00	21	50	16.80	40.00
1.2E 00 -	1.8E 00	34	84	27.20	67.20
1.8E 00 -	2.6E 00	13	97	10.40	77.60
2.6E 00 -	3.8E 00	20	117	16.00	93.60
3.8E 00 -	5.6E 00	5	122	4.00	97.60
5.6E 00 -	8.3E 00	1	123	0.80	98.40

HISTOGRAM FOR COLUMN 2 (MG PCT)

```
2.0E-02 X

3.0E-02 X

5.0E-02

7.0E-02 XXX

1.0E-01 X

1.5E-01

2.0E-01

3.0E-01 XXXX

5.0E-01 XXX

7.0E-01 XXXXXXXXXX

1.0E 00 XXXXXXXXXXXXXXXXX

1.5E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 00 XXXXXXXXXX

3.0E 00 XXXXXXXXXXXXXXXX

5.0E 00 XXXX

7.0E 00 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	2	0	0	0	0	123
0.0	1.60			0.0	0.0	

```
MAXIMUM =  7.00000E 00

MINIMUM =  2.00000E-02

GEOMETRIC MEAN =  1.18593E 00

GEOMETRIC DEVIATION =  2.70877E 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	1	1	0.80	0.80
5.6E-02 -	8.3E-02	0	1	0.0	0.80
8.3E-02 -	1.2E-01	1	2	0.80	1.60
1.2E-01 -	1.8E-01	2	4	1.60	3.20
1.8E-01 -	2.6E-01	2	6	1.60	4.80
2.6E-01 -	3.8E-01	2	8	1.60	6.40
3.8E-01 -	5.6E-01	2	10	1.60	8.00
5.6E-01 -	8.3E-01	10	20	8.00	16.00
8.3E-01 -	1.2E 00	16	36	12.80	28.80
1.2E 00 -	1.8E 00	25	61	20.00	48.80
1.8E 00 -	2.6E 00	36	97	28.80	77.60
2.6E 00 -	3.8E 00	14	111	11.20	88.80
3.8E 00 -	5.6E 00	7	118	5.60	94.40
5.6E 00 -	8.3E 00	3	121	2.40	96.80
8.3E 00 -	1.2E 01	3	124	2.40	99.20

HISTOGRAM FOR COLUMN 3 (CA PCT)

```
5.0E-02 X

7.0E-02

1.0E-01 X

1.5E-01 XX

2.0E-01 XX

3.0E-01 XX

5.0E-01 XX

7.0E-01 XXXXXXXX

1.0E 00 XXXXXXXXXXXXX

1.5E 00 XXXXXXXXXXXXXXXXXXXX

2.0E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 00 XXXXXXXXXXX

5.0E 00 XXXXXX

7.0E 00 XX

1.0E 01 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	0	124
0.0	0.80			0.0	0.0	

MAXIMUM = 1.00000E 01

MINIMUM = 5.00000E-02

GEOMETRIC MEAN = 1.55583E 00

GEOMETRIC DEVIATION = 2.36640E 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	1	1	0.80	0.80
1.8E-02 -	2.6E-02	2	3	1.60	2.40
2.6E-02 -	3.8E-02	2	5	1.60	4.00
3.8E-02 -	5.6E-02	2	7	1.60	5.60
5.6E-02 -	8.3E-02	2	9	1.60	7.20
8.3E-02 -	1.2E-01	1	10	0.80	8.00
1.2E-01 -	1.8E-01	5	15	4.00	12.00
1.8E-01 -	2.6E-01	10	25	8.00	20.00
2.6E-01 -	3.8E-01	47	72	37.60	57.60
3.8E-01 -	5.6E-01	35	107	28.00	85.60
5.6E-01 -	8.3E-01	16	123	12.80	98.40
8.3E-01 -	1.2E 00	1	124	0.80	99.20

HISTOGRAM FOR COLUMN 4 (TI PCT)

```
1.5E-02 X
2.0E-02 XX
3.0E-02 XX
5.0E-02 XX
7.0E-02 XX
1.0E-01 X
1.5E-01 XXXX
2.0E-01 XXXXXXXX
3.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
5.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
7.0E-01 XXXXXXXXXXXXX
1.0E 00 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	0	124
0.0	0.80			0.0	0.0	

MAXIMUM = 1.00000E 00

MINIMUM = 1.50000E-02

GEOMETRIC MEAN = 3.11115E-01

GEOMETRIC DEVIATION = 2.14987E 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	3.20	3.20
8.3E 01 -	1.2E 02	5	9	4.00	7.20
1.2E 02 -	1.8E 02	9	18	7.20	14.40
1.8E 02 -	2.6E 02	2	20	1.60	16.00
2.6E 02 -	3.8E 02	10	30	8.00	24.00
3.8E 02 -	5.6E 02	16	46	12.80	36.80
5.6E 02 -	8.3E 02	38	84	30.40	67.20
8.3E 02 -	1.2E 03	27	111	21.60	88.80
1.2E 03 -	1.8E 03	10	121	8.00	96.80
1.8E 03 -	2.6E 03	1	122	0.80	97.60
2.6E 03 -	3.8E 03	0	122	0.0	97.60
3.8E 03 -	5.6E 03	2	124	1.60	99.20

HISTOGRAM FOR COLUMN 5 (MN PPM)

```
7.0E 01 XXX

1.0E 02 XXXX

1.5E 02 XXXXXXX

2.0E 02 XX

3.0E 02 XXXXXXXX

5.0E 02 XXXXXXXXXXXX

7.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 03 XXXXXXXXXXXXXXXXXXXXX

1.5E 03 XXXXXXXX

2.0E 03 X

3.0E 03

5.0E 03 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	0	124
0.0	0.80			0.0	0.0	

MAXIMUM = 5.00000E 03

MINIMUM = 7.00000E 01

GEOMETRIC MEAN = 5.63307E 02

GEOMETRIC DEVIATION = 2.30654E 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	0	0	0.0	0.0
5.6E-01 -	8.3E-01	0	0	0.0	0.0
8.3E-01 -	1.2E 00	3	3	2.40	2.40
1.2E 00 -	1.8E 00	1	4	0.80	3.20
1.8E 00 -	2.6E 00	0	4	0.0	3.20
2.6E 00 -	3.8E 00	0	4	0.0	3.20
3.8E 00 -	5.6E 00	2	6	1.60	4.80
5.6E 00 -	8.3E 00	1	7	0.80	5.60
8.3E 00 -	1.2E 01	1	8	0.80	6.40
1.2E 01 -	1.8E 01	0	8	0.0	6.40
1.8E 01 -	2.6E 01	1	9	0.80	7.20
2.6E 01 -	3.8E 01	1	10	0.80	8.00
3.8E 01 -	5.6E 01	0	10	0.0	8.00
5.6E 01 -	8.3E 01	0	10	0.0	8.00
8.3E 01 -	1.2E 02	1	11	0.80	8.80

HISTOGRAM FOR COLUMN 6 (AG PPM)

```
1.0E 00 XX

1.5E 00 X

2.0E 00

3.0E 00

5.0E 00 XX

7.0E 00 X

1.0E 01 X

1.5E 01

2.0E 01 X

3.0E 01 X

5.0E 01

7.0E 01

1.0E 02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
102	12	0	0	0	0	11
81.60	9.60			0.0	0.0	

MAXIMUM = 1.00000E 02

MINIMUM = 1.00000E 00

GEOMETRIC MEAN = 5.56169E 00

GEOMETRIC DEVIATION = 4.67671E 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
113	12	0	0	0	0	0
90.40	9.60			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
125	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	33	33	26.61	26.61
1.2E 01 -	1.8E 01	13	46	10.48	37.10
1.8E 01 -	2.6E 01	1	47	0.81	37.90
2.6E 01 -	3.8E 01	1	48	0.81	38.71

HISTOGRAM FOR COLUMN 9 (B PPM)

```
1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXX

2.0E 01 X

3.0E 01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
32	44	0	0	0	0	48
25.81	35.48			0.0	0.0	

MAXIMUM = 3.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.15849E 01

GEOMETRIC DEVIATION = 1.27574E 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	2	2	1.60	1.60
1.2E 02 -	1.8E 02	4	6	3.20	4.80
1.8E 02 -	2.6E 02	3	9	2.40	7.20
2.6E 02 -	3.8E 02	16	25	12.80	20.00
3.8E 02 -	5.6E 02	6	31	4.80	24.80
5.6E 02 -	8.3E 02	43	74	34.40	59.20
8.3E 02 -	1.2E 03	13	87	10.40	69.60
1.2E 03 -	1.8E 03	28	115	22.40	92.00
1.8E 03 -	2.6E 03	2	117	1.60	93.60
2.6E 03 -	3.8E 03	4	121	3.20	96.80

HISTOGRAM FOR COLUMN 10 (BA PPM)

```
1.0E 02 XX

1.5E 02 XXX

2.0E 02 XX

3.0E 02 XXXXXXXXXXXXX

5.0E 02 XXXXX

7.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 03 XXXXXXXXXX

1.5E 03 XXXXXXXXXXXXXXXXXXXXX

2.0E 03 XX

3.0E 03 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	4	0	0	0	0	121
0.0	3.20			0.0	0.0	

MAXIMUM = 3.00000E 03

MINIMUM = 1.00000E 02

GEOMETRIC MEAN = 7.26534E 02

GEOMETRIC DEVIATION = 2.05696E 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	23	23	18.40	18.40
1.2E 00 - 1.8E 00	19	42	15.20	33.60
1.8E 00 - 2.6E 00	5	47	4.00	37.60
2.6E 00 - 3.8E 00	1	48	0.80	38.40

HISTOGRAM FOR COLUMN 11 (BE PPM)

```
1.0E 00 XXXXXXXXXXXXXXXXX

1.5E 00 XXXXXXXXXXXXXXX

2.0E 00 XXXX

3.0E 00 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
19	58	0	0	0	0	48
15.20	46.40			0.0	0.0	

MAXIMUM = 3.00000E 00

MINIMUM = 1.00000E 00

GEOMETRIC MEAN = 1.29122E 00

GEOMETRIC DEVIATION = 1.31871E 00

FREQUENCY TABLE FOR COLUMN 12 (BI 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	3	3	2.40	2.40
3.8E 01 -	5.6E 01	0	3	0.0	2.40
5.6E 01 -	8.3E 01	1	4	0.80	3.20

HISTOGRAM FOR COLUMN 12 (BI PPM)

```
3.0E 01 XX

5.0E 01

7.0E 01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
120	1	0	0	0	0	4
96.00	0.80			0.0	0.0	

MAXIMUM = 7.00000E 01

MINIMUM = 3.00000E 01

GEOMETRIC MEAN = 3.70778E 01

GEOMETRIC DEVIATION = 1.52751E 00

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
125	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	8	8	6.45	6.45
5.6E 00 -	8.3E 00	6	14	4.84	11.29
8.3E 00 -	1.2E 01	18	32	14.52	25.81
1.2E 01 -	1.8E 01	22	54	17.74	43.55
1.8E 01 -	2.6E 01	28	82	22.58	66.13
2.6E 01 -	3.8E 01	13	95	10.48	76.61
3.8E 01 -	5.6E 01	0	95	0.0	76.61
5.6E 01 -	8.3E 01	3	98	2.42	79.03
8.3E 01 -	1.2E 02	1	99	0.81	79.84

HISTOGRAM FOR COLUMN 14 (CO PPM)

```
5.0E 00 XXXXXX

7.0E 00 XXXXX

1.0E 01 XXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXX

5.0E 01

7.0E 01 XX

1.0E 02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
6	19	0	0	0	0	99
4.84	15.32			0.0	0.0	

MAXIMUM = 1.00000E 02

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 1.54494E 01

GEOMETRIC DEVIATION = 1.82241E 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	42	42	33.60	33.60
1.2E 01 -	1.8E 01	15	57	12.00	45.60
1.8E 01 -	2.6E 01	11	68	8.80	54.40
2.6E 01 -	3.8E 01	12	80	9.60	64.00
3.8E 01 -	5.6E 01	3	83	2.40	66.40
5.6E 01 -	8.3E 01	10	93	8.00	74.40
8.3E 01 -	1.2E 02	3	96	2.40	76.80
1.2E 02 -	1.8E 02	6	102	4.80	81.60
1.8E 02 -	2.6E 02	0	102	0.0	81.60
2.6E 02 -	3.8E 02	2	104	1.60	83.20
3.8E 02 -	5.6E 02	0	104	0.0	83.20
5.6E 02 -	8.3E 02	1	105	0.80	84.00

HISTOGRAM FOR COLUMN 15 (CR PPM)

```
1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXX

2.0E 01 XXXXXXXXX

3.0E 01 XXXXXXXXXX

5.0E 01 XX

7.0E 01 XXXXXXXX

1.0E 02 XX

1.5E 02 XXXXX

2.0E 02

3.0E 02 XX

5.0E 02

7.0E 02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	20	0	0	0	0	105
0.0	16.00			0.0	0.0	

MAXIMUM = 7.00000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 2.25503E 01

GEOMETRIC DEVIATION = 2.65997E 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	23	23	18.40	18.40
5.6E 00 -	8.3E 00	9	32	7.20	25.60
8.3E 00 -	1.2E 01	20	52	16.00	41.60
1.2E 01 -	1.8E 01	4	56	3.20	44.80
1.8E 01 -	2.6E 01	7	63	5.60	50.40
2.6E 01 -	3.8E 01	6	69	4.80	55.20
3.8E 01 -	5.6E 01	1	70	0.80	56.00
5.6E 01 -	8.3E 01	20	90	16.00	72.00
8.3E 01 -	1.2E 02	3	93	2.40	74.40
1.2E 02 -	1.8E 02	7	100	5.60	80.00
1.8E 02 -	2.6E 02	2	102	1.60	81.60
2.6E 02 -	3.8E 02	0	102	0.0	81.60
3.8E 02 -	5.6E 02	1	103	0.80	82.40
5.6E 02 -	8.3E 02	0	103	0.0	82.40
8.3E 02 -	1.2E 03	1	104	0.80	83.20
1.2E 03 -	1.8E 03	0	104	0.0	83.20
1.8E 03 -	2.6E 03	1	105	0.80	84.00
2.6E 03 -	3.8E 03	0	105	0.0	84.00
3.8E 03 -	5.6E 03	0	105	0.0	84.00
5.6E 03 -	8.3E 03	1	106	0.80	84.80

HISTOGRAM FOR COLUMN 16 (CU PPM)

```
5.0E 00 XXXXXXXXXXXXXXXXXX

7.0E 00 XXXXXXX

1.0E 01 XXXXXXXXXXXXXXXX

1.5E 01 XXX

2.0E 01 XXXXXX

3.0E 01 XXXXX

5.0E 01 X

7.0E 01 XXXXXXXXXXXXXXXX

1.0E 02 XX

1.5E 02 XXXXXX

2.0E 02 XX

3.0E 02

5.0E 02 X

7.0E 02

1.0E 03 X

1.5E 03

2.0E 03 X
```

3.0E 03

5.0E 03

7.0E 03 X

N	L	H	B	T	G	ANALYTICAL VALUES
0	18	0	0	0	1	106
0.0	14.40			0.0	0.80	

MAXIMUM = 7.00000E 03

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 2.26496E 01

GEOMETRIC DEVIATION = 4.30321E 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	10	10	8.00	8.00
2.6E 01 -	3.8E 01	7	17	5.60	13.60
3.8E 01 -	5.6E 01	4	21	3.20	16.80
5.6E 01 -	8.3E 01	5	26	4.00	20.80
8.3E 01 -	1.2E 02	0	26	0.0	20.80
1.2E 02 -	1.8E 02	6	32	4.80	25.60

HISTOGRAM FOR COLUMN 17 (LA PPM)

```
2.0E 01 XXXXXXXX

3.0E 01 XXXXXX

5.0E 01 XXX

7.0E 01 XXXX

1.0E 02

1.5E 02 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
55	37	0	0	0	0	33
44.00	29.60			0.0	0.0	

MAXIMUM = 1.50000E 02

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 4.07291E 01

GEOMETRIC DEVIATION = 2.28905E 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	5	5	4.00	4.00
5.6E 00 -	8.3E 00	1	6	0.80	4.80
8.3E 00 -	1.2E 01	2	8	1.60	6.40
1.2E 01 -	1.8E 01	5	13	4.00	10.40
1.8E 01 -	2.6E 01	1	14	0.80	11.20
2.6E 01 -	3.8E 01	0	14	0.0	11.20
3.8E 01 -	5.6E 01	0	14	0.0	11.20
5.6E 01 -	8.3E 01	1	15	0.80	12.00
8.3E 01 -	1.2E 02	1	16	0.80	12.80
1.2E 02 -	1.8E 02	1	17	0.80	13.60
1.8E 02 -	2.6E 02	0	17	0.0	13.60
2.6E 02 -	3.8E 02	0	17	0.0	13.60
3.8E 02 -	5.6E 02	1	18	0.80	14.40

HISTOGRAM FOR COLUMN 18 (MO PPM)

```
5.0E 00 XXXX

7.0E 00 X

1.0E 01 XX

1.5E 01 XXXX

2.0E 01 X

3.0E 01

5.0E 01

7.0E 01 X

1.0E 02 X

1.5E 02 X

2.0E 02

3.0E 02

5.0E 02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
49	58	0	0	0	0	18
39.20	46.40			0.0	0.0	

MAXIMUM = 5.00000E 02

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 1.72044E 01

GEOMETRIC DEVIATION = 3.79674E 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	88	88	70.97	70.97
1.2E 01 - 1.8E 01	7	95	5.65	76.61
1.8E 01 - 2.6E 01	0	95	0.0	76.61
2.6E 01 - 3.8E 01	1	96	0.81	77.42

HISTOGRAM FOR COLUMN 19 (NB PPM)

```
1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXX

2.0E 01

3.0E 01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	27	0	0	0	0	97
0.0	21.77			0.0	0.0	

MAXIMUM = 3.00000E 01

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 1.03397E 01

GEOMETRIC DEVIATION = 1.18392E 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	16	16	12.90	12.90
5.6E 00 -	8.3E 00	7	23	5.65	18.55
8.3E 00 -	1.2E 01	34	57	27.42	45.97
1.2E 01 -	1.8E 01	26	83	20.97	66.94
1.8E 01 -	2.6E 01	5	88	4.03	70.97
2.6E 01 -	3.8E 01	13	101	10.48	81.45
3.8E 01 -	5.6E 01	3	104	2.42	83.87
5.6E 01 -	8.3E 01	6	110	4.84	88.71
8.3E 01 -	1.2E 02	2	112	1.61	90.32
1.2E 02 -	1.8E 02	1	113	0.81	91.13

HISTOGRAM FOR COLUMN 20 (NI PPM)

```
5.0E 00 XXXXXXXXXXXXX

7.0E 00 XXXXXX

1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXX

3.0E 01 XXXXXXXXXX

5.0E 01 XX

7.0E 01 XXXXX

1.0E 02 XX

1.5E 02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	10	0	0	0	0	113
0.81	8.06			0.0	0.0	

MAXIMUM = 1.50000E 02

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 1.40616E 01

GEOMETRIC DEVIATION = 2.15780E 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	20	20	16.00	16.00
1.2E 01 -	1.8E 01	41	61	32.80	48.80
1.8E 01 -	2.6E 01	21	82	16.80	65.60
2.6E 01 -	3.8E 01	19	101	15.20	80.80
3.8E 01 -	5.6E 01	2	103	1.60	82.40
5.6E 01 -	8.3E 01	2	105	1.60	84.00
8.3E 01 -	1.2E 02	0	105	0.0	84.00
1.2E 02 -	1.8E 02	0	105	0.0	84.00
1.8E 02 -	2.6E 02	1	106	0.80	84.80
2.6E 02 -	3.8E 02	0	106	0.0	84.80
3.8E 02 -	5.6E 02	0	106	0.0	84.80
5.6E 02 -	8.3E 02	1	107	0.80	85.60
8.3E 02 -	1.2E 03	0	107	0.0	85.60
1.2E 03 -	1.8E 03	0	107	0.0	85.60
1.8E 03 -	2.6E 03	0	107	0.0	85.60
2.6E 03 -	3.8E 03	0	107	0.0	85.60
3.8E 03 -	5.6E 03	0	107	0.0	85.60
5.6E 03 -	8.3E 03	0	107	0.0	85.60
8.3E 03 -	1.2E 04	0	107	0.0	85.60
1.2E 04 -	1.8E 04	1	108	0.80	86.40

HISTOGRAM FOR COLUMN 21 (PB PPM)

```
1.0E 01 XXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXX

5.0E 01 XX

7.0E 01 XX

1.0E 02

1.5E 02

2.0E 02 X

3.0E 02

5.0E 02

7.0E 02 X

1.0E 03

1.5E 03

2.0E 03

3.0E 03

5.0E 03
```

7.0E 03

1.0E 04

1.5E 04 X

N	L	H	B	T	G	ANALYTICAL VALUES
5	12	0	0	0	0	108
4.00	9.60			0.0	0.0	

MAXIMUM = 1.50010E 04

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.97900E 01

GEOMETRIC DEVIATION = 2.40891E 00

FREQUENCY TABLE FOR COLUMN 22 (SB 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	0	0	0.0	0.0
2.6E 02 -	3.8E 02	1	1	0.80	0.80

HISTOGRAM FOR COLUMN 22 (SB PPM)

3.0E 02 X

N	L	H	B	T	G	ANALYTICAL VALUES
121	3	0	0	0	0	1
96.80	2.40			0.0	0.0	

MAXIMUM = 3.00000E 02

MINIMUM = 3.00000E 02

GEOMETRIC MEAN = 2.99999E 02

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	2	2	1.60	1.60
5.6E 00 -	8.3E 00	9	11	7.20	8.80
8.3E 00 -	1.2E 01	13	24	10.40	19.20
1.2E 01 -	1.8E 01	52	76	41.60	60.80
1.8E 01 -	2.6E 01	20	96	16.00	76.80
2.6E 01 -	3.8E 01	5	101	4.00	80.80
3.8E 01 -	5.6E 01	0	101	0.0	80.80
5.6E 01 -	8.3E 01	1	102	0.80	81.60

HISTOGRAM FOR COLUMN 23 (SC PPM)

```
5.0E 00 XX

7.0E 00 XXXXXXX

1.0E 01 XXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXX

3.0E 01 XXXX

5.0E 01

7.0E 01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
14	9	0	0	0	0	102
11.20	7.20			0.0	0.0	

MAXIMUM = 7.00000E 01

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 1.44842E 01

GEOMETRIC DEVIATION = 1.49048E 00

FREQUENCY TABLE FOR COLUMN 24 (SN PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	
N	L	H	B	T	G	ANALYTICAL VALUES
124	1	0	0	0	0	0
99.20	0.80			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	5	5	4.00	4.00
1.2E 02 -	1.8E 02	18	23	14.40	18.40
1.8E 02 -	2.6E 02	14	37	11.20	29.60
2.6E 02 -	3.8E 02	40	77	32.00	61.60
3.8E 02 -	5.6E 02	20	97	16.00	77.60
5.6E 02 -	8.3E 02	20	117	16.00	93.60
8.3E 02 -	1.2E 03	3	120	2.40	96.00
1.2E 03 -	1.8E 03	2	122	1.60	97.60

HISTOGRAM FOR COLUMN 25 (SR PPM)

```
1.0E 02 XXXX

1.5E 02 XXXXXXXXXXXXXX

2.0E 02 XXXXXXXXXXX

3.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 02 XXXXXXXXXXXXXXXX

7.0E 02 XXXXXXXXXXXXXXXX

1.0E 03 XX

1.5E 03 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	1	0	0	0	0	122
1.60	0.80			0.0	0.0	

MAXIMUM = 1.50000E 03

MINIMUM = 1.00000E 02

GEOMETRIC MEAN = 3.26537E 02

GEOMETRIC DEVIATION = 1.84319E 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	0.80	0.80
1.2E 01 -	1.8E 01	9	10	7.20	8.00
1.8E 01 -	2.6E 01	4	14	3.20	11.20
2.6E 01 -	3.8E 01	6	20	4.80	16.00
3.8E 01 -	5.6E 01	5	25	4.00	20.00
5.6E 01 -	8.3E 01	3	28	2.40	22.40
8.3E 01 -	1.2E 02	7	35	5.60	28.00
1.2E 02 -	1.8E 02	52	87	41.60	69.60
1.8E 02 -	2.6E 02	26	113	20.80	90.40
2.6E 02 -	3.8E 02	11	124	8.80	99.20
3.8E 02 -	5.6E 02	1	125	0.80	100.00

HISTOGRAM FOR COLUMN 26 (V PPM)

```
1.0E 01 X

1.5E 01 XXXXXXX

2.0E 01 XXX

3.0E 01 XXXXX

5.0E 01 XXXX

7.0E 01 XX

1.0E 02 XXXXXX

1.5E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 02 XXXXXXXXXXXXXXXXXXXX

3.0E 02 XXXXXXXXX

5.0E 02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	125
0.0	0.0			0.0	0.0	

MAXIMUM = 5.00000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.12952E 02

GEOMETRIC DEVIATION = 2.39499E 00

FREQUENCY TABLE FOR COLUMN 27 (W PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 01 -	5.6E 01	1	1	0.80	0.80
5.6E 01 -	8.3E 01	0	1	0.0	0.80
8.3E 01 -	1.2E 02	1	2	0.80	1.60

HISTOGRAM FOR COLUMN 27 (W PPM)

5.0E 01 X

7.0E 01

1.0E 02 X

N	L	H	B	T	G	ANALYTICAL VALUES
122	1	0	0	0	0	2
97.60	0.80			0.0	0.0	

MAXIMUM = 1.00000E 02

MINIMUM = 5.00000E 01

GEOMETRIC MEAN = 7.07105E 01

GEOMETRIC DEVIATION = 1.63253E 00

FREQUENCY TABLE FOR COLUMN 28 (Y PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	34	34	27.20	27.20
1.2E 01 -	1.8E 01	53	87	42.40	69.60
1.8E 01 -	2.6E 01	20	107	16.00	85.60
2.6E 01 -	3.8E 01	13	120	10.40	96.00
3.8E 01 -	5.6E 01	1	121	0.80	96.80

HISTOGRAM FOR COLUMN 28 (Y PPM)

```
1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXX

5.0E 01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	3	0	0	0	0	121
0.80	2.40			0.0	0.0	

MAXIMUM = 5.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.52727E 01

GEOMETRIC DEVIATION = 1.42254E 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	2.40	2.40
2.6E 02 -	3.8E 02	2	5	1.60	4.00
3.8E 02 -	5.6E 02	1	6	0.80	4.80

HISTOGRAM FOR COLUMN 29 (ZN PPM)

```
2.0E 02 XX

3.0E 02 XX

5.0E 02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
49	70	0	0	0	0	6
39.20	56.00			0.0	0.0	

MAXIMUM = 5.00000E 02

MINIMUM = 2.00000E 02

GEOMETRIC MEAN = 2.66716E 02

GEOMETRIC DEVIATION = 1.44246E 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	6	6	4.80	4.80
2.6E 01 -	3.8E 01	6	12	4.80	9.60
3.8E 01 -	5.6E 01	11	23	8.80	18.40
5.6E 01 -	8.3E 01	57	80	45.60	64.00
8.3E 01 -	1.2E 02	20	100	16.00	80.00
1.2E 02 -	1.8E 02	5	105	4.00	84.00
1.8E 02 -	2.6E 02	9	114	7.20	91.20
2.6E 02 -	3.8E 02	3	117	2.40	93.60
3.8E 02 -	5.6E 02	5	122	4.00	97.60

HISTOGRAM FOR COLUMN 30 (ZR PPM)

```
2.0E 01 XXXXX

3.0E 01 XXXXX

5.0E 01 XXXXXXXXX

7.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 02 XXXXXXXXXXXXXXXX

1.5E 02 XXXX

2.0E 02 XXXXXXX

3.0E 02 XX

5.0E 02 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	2	0	0	0	1	122
0.0	1.60			0.0	0.80	

MAXIMUM = 5.00000E 02

MINIMUM = 2.00000E 01

GEOMETRIC MEAN = 8.13190E 01

GEOMETRIC DEVIATION = 1.94162E 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	3	3	2.40	2.40
5.6E-02 -	8.3E-02	0	3	0.0	2.40
8.3E-02 -	1.2E-01	1	4	0.80	3.20
1.2E-01 -	1.8E-01	0	4	0.0	3.20
1.8E-01 -	2.6E-01	1	5	0.80	4.00
2.6E-01 -	3.8E-01	0	5	0.0	4.00
3.8E-01 -	5.6E-01	4	9	3.20	7.20
5.6E-01 -	8.3E-01	1	10	0.80	8.00

HISTOGRAM FOR COLUMN 31 (AU PPM)

```
5.0E-02 XX

7.0E-02

1.0E-01 X

1.5E-01

2.0E-01 X

3.0E-01

5.0E-01 XXX

7.0E-01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	115	0	0	0	0	10
0.0	92.00			0.0	0.0	

MAXIMUM = 6.00000E-01

MINIMUM = 4.00000E-02

GEOMETRIC MEAN = 1.77314E-01

GEOMETRIC DEVIATION = 3.16596E 00

A470 STATISTICAL SUMMARY DATE 4/22/70

ELEMENT	N	L	H	B	T	G	ANALYTICAL VALUES
FE PCT	0	0	0	0	0	0	125
MG PCT	0	2	0	0	0	0	123
CA PCT	0	1	0	0	0	0	124
TI PCT	0	1	0	0	0	0	124
MN PPM	0	1	0	0	0	0	124
AG PPM	102	12	0	0	0	0	11
AS PPM	113	12	0	0	0	0	0
AU PPM	125	0	0	0	0	0	0
B PPM	32	44	0	0	0	0	48
BA PPM	0	4	0	0	0	0	121
BE PPM	19	58	0	0	0	0	48
BI PPM	120	1	0	0	0	0	4
CD PPM	125	0	0	0	0	0	0
CO PPM	6	19	0	0	0	0	99
CR PPM	0	20	0	0	0	0	105
CU PPM	0	18	0	0	0	1	106
LA PPM	55	37	0	0	0	0	33
MO PPM	49	58	0	0	0	0	18
NB PPM	0	27	0	0	0	0	97
NI PPM	1	10	0	0	0	0	113
PB PPM	5	12	0	0	0	0	108
SB PPM	121	3	0	0	0	0	1
SC PPM	14	9	0	0	0	0	102
SN PPM	124	1	0	0	0	0	0
SR PPM	2	1	0	0	0	0	122
V PPM	0	0	0	0	0	0	125
W PPM	122	1	0	0	0	0	2
Y PPM	1	3	0	0	0	0	121
ZN PPM	49	70	0	0	0	0	6
ZR PPM	0	2	0	0	0	1	122
AU PPM	0	115	0	0	0	0	10

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
FE PCT	4.519214	2.37	125 SAMPLES AND 125 ANALYTICAL VALUES.
MG PCT	1.103849	3.12	2 NOT DETECTED, LESS THAN, OR TRACE VALUES. 123 REPORTED VALUES.
CA PCT	1.507793	2.53	1 NOT DETECTED, LESS THAN, OR TRACE VALUES. 124 REPORTED VALUES.
TI PCT	0.298155	2.45	1 NOT DETECTED, LESS THAN, OR TRACE VALUES. 124 REPORTED VALUES.
MN PPM	543.758789	2.51	1 NOT DETECTED, LESS THAN, OR TRACE VALUES. 124 REPORTED VALUES.
AG PPM	********	******	114 NOT DETECTED, LESS THAN, OR TRACE VALUES. 11 REPORTED VALUES. NO COMPUTATIONS.
AS PPM	********	******	125 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
AU PPM	********	******	125 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
B PPM	7.307479	1.59	76 NOT DETECTED, LESS THAN, OR TRACE VALUES. 49 REPORTED VALUES.
BA PPM	640.180420	2.70	4 NOT DETECTED, LESS THAN, OR TRACE VALUES. 121 REPORTED VALUES.
BE PPM	0.705947	1.80	77 NOT DETECTED, LESS THAN, OR TRACE VALUES. 48 REPORTED VALUES.
BI PPM	********	******	121 NOT DETECTED, LESS THAN, OR TRACE VALUES. 4 REPORTED VALUES. NO COMPUTATIONS.
CD PPM	********	******	125 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
CO PPM	10.625132	2.56	25 NOT DETECTED, LESS THAN, OR TRACE VALUES. 100 REPORTED VALUES.
CR PPM	15.282049	3.61	20 NOT DETECTED, LESS THAN, OR TRACE VALUES. 105 REPORTED VALUES.
CU PPM	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
LA PPM	********	******	1 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.
MO PPM	0.139658	20.12	107 NOT DETECTED, LESS THAN, OR TRACE VALUES. 18 REPORTED VALUES.
NB PPM	********	******	1 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.
NI PPM	12.087563	2.43	11 NOT DETECTED, LESS THAN, OR TRACE VALUES. 114 REPORTED VALUES.
PB PPM	********	******	17 NOT DETECTED, LESS THAN, OR TRACE VALUES. 108 REPORTED VALUES. NO COMPUTATIONS.

SB	PPM	********	******	124	NOT DETECTED,	LESS THAN,	OR TRACE VALUES.	1	REPORTED VALUES. NO COMPUTATIONS.
SC	PPM	10.626672	2.13	23	NOT DETECTED,	LESS THAN,	OR TRACE VALUES.	102	REPORTED VALUES.
SN	PPM	********	******	125	NOT DETECTED,	LESS THAN,	OR TRACE VALUES.	0	REPORTED VALUES. NO COMPUTATIONS.
SR	PPM	314.106201	1.92	3	NOT DETECTED,	LESS THAN,	OR TRACE VALUES.	122	REPORTED VALUES.
V	PPM	112.951477	2.39	125	SAMPLES AND	125 ANALYTICAL VALUES.			
W	PPM	********	******	123	NOT DETECTED,	LESS THAN,	OR TRACE VALUES.	2	REPORTED VALUES. NO COMPUTATIONS.
Y	PPM	14.898614	1.45	4	NOT DETECTED,	LESS THAN,	OR TRACE VALUES.	121	REPORTED VALUES.
ZN	PPM	********	******	119	NOT DETECTED,	LESS THAN,	OR TRACE VALUES.	6	REPORTED VALUES. NO COMPUTATIONS.
ZR	PPM	********	******	1	GREATER THAN VALUES. NO COMPUTATIONS.				
AU	PPM	********	******	115	NOT DETECTED,	LESS THAN,	OR TRACE VALUES.	10	REPORTED VALUES. NO COMPUTATIONS.

TABLE 3. SUMDUM B-3 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
101	AKD815	3.0000	1.0000	1.0000	0.3000	300.0000	0.0	N	0.0	N	0.0	N	0.0	N	500.0000
102	AKD814	5.0000	1.5000	1.5000	0.3000	500.0000	0.0	N	0.0	N	0.0	N	10.0000		500.0000
103	SB317GK	7.0000	1.5000	2.0000	0.5000	700.0000	0.0	N	0.0	N	0.0	N	0.0	L	700.0000
104	SB316GK	10.0000	1.5000	2.0000	0.5000	1000.0000	0.0	N	0.0	L	0.0	N	0.0	L	1500.0000
105	SB318GK	10.0000	2.0000	2.0000	0.5000	1000.0000	0.0	N	0.0	N	0.0	N	0.0	L	1500.0000
106	AKD303	7.0000	3.0000	3.0000	0.5000	1500.0000	0.0	N	0.0	N	0.0	N	0.0	L	700.0000
107	AKD304	5.0000	1.5000	1.5000	0.3000	700.0000	0.0	N	0.0	N	0.0	N	0.0	N	700.0000
108	AKD305	10.0000	5.0000	5.0000	0.7000	1500.0000	0.0	N	0.0	N	0.0	N	0.0	L	1000.0000
109	AKD306	7.0000	1.5000	2.0000	0.5000	1000.0000	0.0	N	0.0	N	0.0	N	10.0000		500.0000
110	SB319GK	5.0000	1.5000	2.0000	0.5000	700.0000	0.0	N	0.0	N	0.0	N	0.0	N	700.0000
111	SB320GK	7.0000	1.5000	1.5000	0.3000	700.0000	0.0	N	0.0	N	0.0	N	0.0	N	1000.0000
112	AKD301	7.0000	1.5000	1.5000	0.3000	500.0000	0.0	N	0.0	N	0.0	N	0.0	L	700.0000
113	AKD302	5.0000	1.5000	1.5000	0.3000	500.0000	0.0	N	0.0	N	0.0	N	0.0	N	700.0000
114	AKD840	5.0000	2.0000	3.0000	0.5000	1000.0000	0.0	N	0.0	N	0.0	N	0.0	L	700.0000
115	AKD841	7.0000	3.0000	3.0000	0.5000	1000.0000	0.0	L	0.0	N	0.0	N	10.0000		700.0000
116	AKD843	10.0000	2.0000	3.0000	0.3000	1000.0000	0.0	N	0.0	N	0.0	N	0.0	L	300.0000
117	AKD842	10.0000	3.0000	2.0000	0.7000	1500.0000	0.0	N	0.0	N	0.0	N	15.0000		500.0000
118	SB34128D	10.0000	1.5000	2.0000	0.3000	1500.0000	0.0	N	0.0	L	0.0	N	10.0000		500.0000
119	SB311GK	5.0000	1.5000	2.0000	0.3000	500.0000	0.0	N	0.0	N	0.0	N	0.0	N	700.0000
120	SB312GK	7.0000	1.5000	2.0000	0.3000	700.0000	0.0	N	0.0	L	0.0	N	10.0000		1000.0000
121	SB313GK	3.0000	1.5000	2.0000	0.3000	700.0000	0.0	L	200.0000		0.0	N	0.0	L	700.0000
122	SB314GK	10.0000	2.0000	3.0000	0.7000	1500.0000	0.0	N	0.0	L	0.0	N	15.0000		1500.0000
123	SB310GK	10.0000	2.0000	3.0000	0.3000	1000.0000	0.0	N	0.0	N	0.0	N	0.0	L	700.0000
124	AKD300	7.0000	2.0000	2.0000	0.3000	1000.0000	0.0	N	0.0	N	0.0	N	10.0000		700.0000
125	SB315GK	10.0000	1.5000	2.0000	0.5000	1000.0000	0.0	N	0.0	L	0.0	N	0.0	L	700.0000
126	SB39GK	20.0000	1.0000	1.5000	0.5000	2000.0000	0.0	N	0.0	N	0.0	N	15.0000		1000.0000
127	AMG447	5.0000	1.5000	2.0000	0.3000	700.0000	0.0	N	0.0	N	0.0	N	0.0	N	700.0000
128	AMG448	5.0000	3.0000	2.0000	0.3000	700.0000	0.0	L	0.0	N	0.0	N	0.0	L	1000.0000
129	AKD847	10.0000	2.0000	1.5000	0.5000	700.0000	0.0	N	0.0	N	0.0	N	0.0	L	700.0000
130	AKD846	3.0000	1.0000	1.5000	0.3000	700.0000	0.0	N	0.0	N	0.0	N	0.0	N	700.0000
131	AKD844	10.0000	1.5000	2.0000	0.5000	1500.0000	0.0	N	0.0	N	0.0	N	10.0000		700.0000
132	AKD845	3.0000	1.0000	1.5000	0.3000	500.0000	0.0	N	0.0	N	0.0	N	0.0	N	1500.0000

SUMDUM B-3 STREAM SEDIMENTS

	SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
101	AKD815	0.0 N	0.0 N	0.0 N	15.0000	30.0000	0.0 L	20.0000	0.0 L	10.0000	10.0000
102	AKD814	0.0 N	0.0 N	0.0 N	15.0000	10.0000	7.0000	20.0000	0.0 L	10.0000	5.0000
103	SB317GK	0.0 L	0.0 N	0.0 N	15.0000	70.0000	7.0000	30.0000	0.0 L	10.0000	30.0000
104	SB316GK	1.5000	0.0 N	0.0 N	20.0000	70.0000	7.0000	100.0000	0.0 L	10.0000	30.0000
105	SB318GK	1.0000	0.0 N	0.0 N	20.0000	150.0000	10.0000	150.0000	0.0 L	10.0000	150.0000
106	AKD303	0.0 N	0.0 N	0.0 N	15.0000	150.0000	15.0000	0.0 L	0.0 N	10.0000	20.0000
107	AKD304	0.0 N	0.0 N	0.0 N	10.0000	70.0000	5.0000	30.0000	0.0 N	10.0000	15.0000
108	AKD305	0.0 N	0.0 N	0.0 N	20.0000	300.0000	50.0000	50.0000	0.0 L	10.0000	70.0000
109	AKD306	0.0 N	0.0 N	0.0 N	10.0000	150.0000	10.0000	0.0 L	0.0 N	10.0000	30.0000
110	SB319GK	0.0 L	0.0 N	0.0 N	30.0000	100.0000	20.0000	70.0000	0.0 L	10.0000	50.0000
111	SB320GK	0.0 L	0.0 N	0.0 N	20.0000	15.0000	10.0000	20.0000	0.0 L	10.0000	15.0000
112	AKD301	0.0 N	0.0 N	0.0 N	5.0000	30.0000	15.0000	0.0 L	0.0 N	10.0000	0.0 L
113	AKD302	0.0 N	0.0 N	0.0 N	5.0000	15.0000	10.0000	0.0 N	0.0 N	10.0000	0.0 L
114	AKD840	1.0000	0.0 N	0.0 N	15.0000	70.0000	10.0000	20.0000	0.0 L	10.0000	15.0000
115	AKD841	1.0000	0.0 N	0.0 N	30.0000	150.0000	30.0000	30.0000	0.0 L	10.0000	50.0000
116	AKD843	0.0 L	0.0 N	0.0 N	20.0000	15.0000	5.0000	50.0000	0.0 L	0.0 L	10.0000
117	AKD842	1.5000	0.0 N	0.0 N	30.0000	150.0000	30.0000	50.0000	0.0 L	10.0000	30.0000
118	SB3412BD	1.0000	0.0 N	0.0 N	20.0000	30.0000	20.0000	100.0000	0.0 L	10.0000	15.0000
119	SB311GK	0.0 L	0.0 N	0.0 N	15.0000	150.0000	30.0000	20.0000	0.0 N	10.0000	30.0000
120	SB312GK	1.5000	0.0 N	0.0 N	15.0000	50.0000	10.0000	30.0000	0.0 L	15.0000	5.0000
121	SB313GK	1.0000	0.0 N	0.0 N	20.0000	70.0000	70.0000	0.0 L	0.0 L	10.0000	30.0000
122	SB314GK	1.0000	0.0 N	0.0 N	20.0000	70.0000	20.0000	20.0000	0.0 L	10.0000	50.0000
123	SB310GK	1.0000	0.0 N	0.0 N	15.0000	30.0000	5.0000	0.0 N	0.0 L	10.0000	15.0000
124	AKD300	0.0 N	0.0 N	0.0 N	15.0000	70.0000	30.0000	50.0000	0.0 L	10.0000	15.0000
125	SB315GK	0.0 L	0.0 N	0.0 N	20.0000	30.0000	10.0000	20.0000	0.0 L	10.0000	15.0000
126	SB39GK	2.0000	0.0 N	0.0 N	150.0000	70.0000	50.0000	100.0000	7.0000	10.0000	150.0000
127	AMG447	0.0 L	0.0 N	0.0 N	20.0000	100.0000	200.0000	20.0000	0.0 L	10.0000	50.0000
128	AMG448	0.0 L	0.0 N	0.0 N	20.0000	100.0000	50.0000	30.0000	0.0 L	10.0000	50.0000
129	AKD847	0.0 N	0.0 N	0.0 N	20.0000	150.0000	10.0000	0.0 L	0.0 L	10.0000	30.0000
130	AKD846	0.0 N	0.0 N	0.0 N	10.0000	30.0000	5.0000	20.0000	0.0 N	0.0 L	15.0000
131	AKD844	0.0 L	0.0 N	0.0 N	30.0000	70.0000	30.0000	20.0000	0.0 L	10.0000	30.0000
132	AKD845	7.0000	0.0 N	0.0 N	10.0000	15.0000	5.0000	30.0000	0.0 N	0.0 L	10.0000

SUMDUM B-3 STREAM SEDIMENTS

	SAMPLE	PB PPM	SB PPM		SC PPM	SN PPM		SR PPM	V PPM	W PPM		Y PPM	ZN PPM		ZR PPM
101	AKD815	15.0000	0.0	N	15.0000	0.0	N	300.0000	70.0000	0.0	N	15.0000	0.0	N	100.0000
102	AKD814	15.0000	0.0	N	15.0000	0.0	N	300.0000	100.0000	0.0	N	15.0000	0.0	N	70.0000
103	SB317GK	15.0000	0.0	N	15.0000	0.0	N	300.0000	150.0000	0.0	N	20.0000	0.0	N	300.0000
104	SB316GK	15.0000	0.0	N	15.0000	0.0	N	700.0000	150.0000	0.0	N	30.0000	0.0	N	100.0000
105	SB318GK	10.0000	0.0	N	30.0000	0.0	N	300.0000	200.0000	0.0	N	30.0000	0.0	L	100.0000
106	AKD303	15.0000	0.0	N	20.0000	0.0	N	300.0000	150.0000	0.0	N	15.0000	0.0	N	1000.0000
107	AKD304	20.0000	0.0	N	15.0000	0.0	N	300.0000	150.0000	0.0	N	15.0000	0.0	N	70.0000
108	AKD305	15.0000	0.0	N	30.0000	0.0	N	200.0000	200.0000	0.0	N	30.0000	0.0	N	200.0000
109	AKD306	15.0000	0.0	N	15.0000	0.0	N	200.0000	150.0000	0.0	N	20.0000	0.0	L	300.0000
110	SB319GK	15.0000	0.0	N	20.0000	0.0	N	300.0000	200.0000	0.0	N	20.0000	0.0	L	100.0000
111	SB320GK	15.0000	0.0	N	15.0000	0.0	N	300.0000	200.0000	0.0	N	15.0000	0.0	L	200.0000
112	AKD301	15.0000	0.0	N	15.0000	0.0	N	300.0000	150.0000	0.0	N	15.0000	0.0	N	70.0000
113	AKD302	15.0000	0.0	N	15.0000	0.0	N	300.0000	150.0000	0.0	N	10.0000	0.0	N	70.0000
114	AKD840	20.0000	0.0	N	20.0000	0.0	N	300.0000	150.0000	0.0	N	20.0000	0.0	L	70.0000
115	AKD841	20.0000	0.0	N	30.0000	0.0	N	300.0000	150.0000	0.0	N	20.0000	0.0	L	100.0000
116	AKD843	10.0000	0.0	N	30.0000	0.0	N	700.0000	200.0000	0.0	N	20.0000	0.0	N	100.0000
117	AKD842	30.0000	0.0	N	20.0000	0.0	N	200.0000	150.0000	0.0	N	30.0000	0.0	L	150.0000
118	SB3412BD	15.0000	0.0	N	30.0000	0.0	N	300.0000	300.0000	0.0	N	70.0000	0.0	L	200.0000
119	SB311GK	15.0000	0.0	N	15.0000	0.0	N	200.0000	150.0000	0.0	N	15.0000	0.0	N	70.0000
120	SB312GK	15.0000	0.0	N	20.0000	0.0	N	500.0000	200.0000	0.0	N	20.0000	0.0	L	300.0000
121	SB313GK	15.0000	0.0	N	15.0000	0.0	N	200.0000	100.0000	0.0	N	20.0000	200.0000		200.0000
122	SB314GK	20.0000	0.0	N	30.0000	0.0	N	500.0000	200.0000	0.0	N	30.0000	0.0	L	500.0000
123	SB310GK	15.0000	0.0	N	20.0000	0.0	N	700.0000	200.0000	0.0	N	20.0000	0.0	L	70.0000
124	AKD300	20.0000	0.0	N	20.0000	0.0	N	300.0000	150.0000	0.0	N	15.0000	0.0	N	70.0000
125	SB315GK	10.0000	0.0	N	30.0000	0.0	N	300.0000	200.0000	0.0	N	20.0000	0.0	L	300.0000
126	SB39GK	15.0000	0.0	N	20.0000	0.0	N	300.0000	500.0000	0.0	N	70.0000	700.0000		70.0000
127	AMG447	15.0000	0.0	N	15.0000	0.0	N	150.0000	150.0000	0.0	N	20.0000	0.0	N	100.0000
128	AMG448	20.0000	0.0	N	15.0000	0.0	N	200.0000	150.0000	0.0	N	20.0000	0.0	L	200.0000
129	AKD847	15.0000	0.0	N	15.0000	0.0	N	200.0000	150.0000	0.0	N	30.0000	0.0	N	300.0000
130	AKD846	15.0000	0.0	N	10.0000	0.0	N	200.0000	150.0000	0.0	N	15.0000	0.0	N	70.0000
131	AKD844	20.0000	0.0	N	15.0000	0.0	N	200.0000	200.0000	0.0	N	20.0000	300.0000		100.0000
132	AKD845	30.0000	0.0	N	7.0000	0.0	N	700.0000	150.0000	0.0	N	15.0000	0.0	N	70.0000

SUMDUM B-3 STREAM SEDIMENTS

	SAMPLE	AU PPM
101	AKD815	0.0200L
102	AKD814	0.0200L
103	SB317GK	0.0200L
104	SB316GK	0.0200L
105	SB318GK	0.0200L
106	AKD303	0.0200L
107	AKD304	0.0400L
108	AKD305	0.0200L
109	AKD306	0.0200L
110	SB319GK	0.0200L
111	SB320GK	0.0200L
112	AKD301	0.0200L
113	AKD302	0.0200L
114	AKD840	0.0200L
115	AKD841	0.0200L
116	AKD843	0.0200L
117	AKD842	0.0200L
118	SB3412BD	0.0200L
119	SB311GK	0.0200L
120	SB312GK	0.0200L
121	SB313GK	0.0200L
122	SB314GK	0.0200L
123	SB310GK	0.0200L
124	AKD300	0.0200L
125	SB315GK	0.0200L
126	SB39GK	0.0200L
127	AMG447	0.0200L
128	AMG448	0.0200L
129	AKD847	0.0200L
130	AKD846	0.0200L
131	AKD844	0.0200L
132	AKD845	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	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	0	0	0.0	0.0
1.8E 00 -	2.6E 00	0	0	0.0	0.0
2.6E 00 -	3.8E 00	4	4	12.50	12.50
3.8E 00 -	5.6E 00	8	12	25.00	37.50
5.6E 00 -	8.3E 00	8	20	25.00	62.50
8.3E 00 -	1.2E 01	11	31	34.38	96.88
1.2E 01 -	1.8E 01	0	31	0.0	96.88
1.8E 01 -	2.6E 01	1	32	3.12	100.00

HISTOGRAM FOR COLUMN 1 (FE PCT)

```
3.0E 00 XXXXXXXXXXXX

5.0E 00 XXXXXXXXXXXXXXXXXXXXXXXX

7.0E 00 XXXXXXXXXXXXXXXXXXXXXXXX

1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01

2.0E 01 XXX
```

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

MAXIMUM = 2.00000E 01

MINIMUM = 3.00000E 00

GEOMETRIC MEAN = 6.76175E 00

GEOMETRIC DEVIATION = 1.56628E 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	0	0	0.0	0.0
5.6E-01 -	8.3E-01	0	0	0.0	0.0
8.3E-01 -	1.2E 00	4	4	12.50	12.50
1.2E 00 -	1.8E 00	16	20	50.00	62.50
1.8E 00 -	2.6E 00	7	27	21.88	84.38
2.6E 00 -	3.8E 00	4	31	12.50	96.88
3.8E 00 -	5.6E 00	1	32	3.12	100.00

HISTOGRAM FOR COLUMN 2 (MG PCT)

```
1.0E 00 XXXXXXXXXXXXX

1.5E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 00 XXXXXXXXXXXXXXXXXXXXXX

3.0E 00 XXXXXXXXXXXXX

5.0E 00 XXX
```

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

MAXIMUM = 5.00000E 00

MINIMUM = 1.00000E 00

GEOMETRIC MEAN = 1.71941E 00

GEOMETRIC DEVIATION = 1.43297E 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	0	0	0.0	0.0
8.3E-01 -	1.2E 00	1	1	3.12	3.12
1.2E 00 -	1.8E 00	9	10	28.13	31.25
1.8E 00 -	2.6E 00	15	25	46.88	78.13
2.6E 00 -	3.8E 00	6	31	18.75	96.88
3.8E 00 -	5.6E 00	1	32	3.12	100.00

HISTOGRAM FOR COLUMN 3 (CA PCT)

```
1.0E 00 XXX

1.5E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 00 XXXXXXXXXXXXXXXXXXX

5.0E 00 XXX
```

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

MAXIMUM = 5.00000E 00

MINIMUM = 1.00000E 00

GEOMETRIC MEAN = 2.00418E 00

GEOMETRIC DEVIATION = 1.36852E 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	17	17	53.13	53.13
3.8E-01 -	5.6E-01	12	29	37.50	90.63
5.6E-01 -	8.3E-01	3	32	9.37	100.00

HISTOGRAM FOR COLUMN 4 (TI PCT)

```
3.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

7.0E-01 XXXXXXXXX
```

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

MAXIMUM = 7.00000E-01

MINIMUM = 3.00000E-01

GEOMETRIC MEAN = 3.93381E-01

GEOMETRIC DEVIATION = 1.36029E 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	3.12	3.12
3.8E 02 -	5.6E 02	5	6	15.62	18.75
5.6E 02 -	8.3E 02	10	16	31.25	50.00
8.3E 02 -	1.2E 03	9	25	28.13	78.13
1.2E 03 -	1.8E 03	6	31	18.75	96.88
1.8E 03 -	2.6E 03	1	32	3.12	100.00

HISTOGRAM FOR COLUMN 5 (MN PPM)

```
3.0E 02 XXX

5.0E 02 XXXXXXXXXXXXXXX

7.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 03 XXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 03 XXXXXXXXXXXXXXXXXXX

2.0E 03 XXX
```

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

MAXIMUM = 2.00000E 03

MINIMUM = 3.00000E 02

GEOMETRIC MEAN = 8.52387E 02

GEOMETRIC DEVIATION = 1.53981E 00

FREQUENCY TABLE FOR COLUMN 6 (AG PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	
N	L	H	B	T	G	ANALYTICAL VALUES
29	3	0	0	0	0	0
90.63	9.37			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
1.8E 02 - 2.6E 02	1	1	3.12	3.12

HISTOGRAM FOR COLUMN 7 (AS PPM)

2.0E 02 XXX

N	L	H	B	T	G	ANALYTICAL VALUES
26	5	0	0	0	0	1
81.25	15.62			0.0	0.0	

MAXIMUM = 2.00000E 02

MINIMUM = 2.00000E 02

GEOMETRIC MEAN = 2.00000E 02

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	
32	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	7	7	21.88	21.88
1.2E 01 - 1.8E 01	3	10	9.37	31.25

HISTOGRAM FOR COLUMN 9 (B PPM)

```
1.0E 01 XXXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
9	13	0	0	0	0	10
28.13	40.63			0.0	0.0	

MAXIMUM = 1.50000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.12934E 01

GEOMETRIC DEVIATION = 1.21636E 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	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	3.12	3.12
3.8E 02 -	5.6E 02	5	6	15.62	18.75
5.6E 02 -	8.3E 02	17	23	53.13	71.88
8.3E 02 -	1.2E 03	5	28	15.62	87.50
1.2E 03 -	1.8E 03	4	32	12.50	100.00

HISTOGRAM FOR COLUMN 10 (BA PPM)

```
3.0E 02 XXX

5.0E 02 XXXXXXXXXXXXXXXX

7.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 03 XXXXXXXXXXXXXXXX

1.5E 03 XXXXXXXXXXXXX
```

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

MAXIMUM = 1.50000E 03

MINIMUM = 3.00000E 02

GEOMETRIC MEAN = 7.52208E 02

GEOMETRIC DEVIATION = 1.43737E 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	7	7	21.88	21.88
1.2E 00 -	1.8E 00	3	10	9.37	31.25
1.8E 00 -	2.6E 00	1	11	3.12	34.38
2.6E 00 -	3.8E 00	0	11	0.0	34.38
3.8E 00 -	5.6E 00	0	11	0.0	34.38
5.6E 00 -	8.3E 00	1	12	3.12	37.50

HISTOGRAM FOR COLUMN 11 (BE PPM)

```
1.0E 00 XXXXXXXXXXXXXXXXXXXXX

1.5E 00 XXXXXXXXX

2.0E 00 XXX

3.0E 00

5.0E 00

7.0E 00 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
11	9	0	0	0	0	12
34.38	28.13			0.0	0.0	

MAXIMUM = 7.00000E 00

MINIMUM = 1.00000E 00

GEOMETRIC MEAN = 1.37890E 00

GEOMETRIC DEVIATION = 1.76087E 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	
32	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	ANALYTICAL VALUES
N	L	H	8	T	G	
32	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	2	2	6.25	6.25
5.6E 00 -	8.3E 00	0	2	0.0	6.25
8.3E 00 -	1.2E 01	4	6	12.50	18.75
1.2E 01 -	1.8E 01	9	15	28.13	46.88
1.8E 01 -	2.6E 01	12	27	37.50	84.38
2.6E 01 -	3.8E 01	4	31	12.50	96.88
3.8E 01 -	5.6E 01	0	31	0.0	96.88
5.6E 01 -	8.3E 01	0	31	0.0	96.88
8.3E 01 -	1.2E 02	0	31	0.0	96.88
1.2E 02 -	1.8E 02	1	32	3.12	100.00

HISTOGRAM FOR COLUMN 14 (CO PPM)

```
5.0E 00 XXXXXX

7.0E 00

1.0E 01 XXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXX

5.0E 01

7.0E 01

1.0E 02

1.5E 02 XXX
```

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

MAXIMUM = 1.50000E 02

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 1.73774E 01

GEOMETRIC DEVIATION = 1.79437E 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	1	1	3.12	3.12
1.2E 01 -	1.8E 01	4	5	12.50	15.62
1.8E 01 -	2.6E 01	0	5	0.0	15.62
2.6E 01 -	3.8E 01	6	11	18.75	34.38
3.8E 01 -	5.6E 01	1	12	3.12	37.50
5.6E 01 -	8.3E 01	9	21	28.13	65.63
8.3E 01 -	1.2E 02	3	24	9.37	75.00
1.2E 02 -	1.8E 02	7	31	21.88	96.88
1.8E 02 -	2.6E 02	0	31	0.0	96.88
2.6E 02 -	3.8E 02	1	32	3.12	100.00

HISTOGRAM FOR COLUMN 15 (CR PPM)

```
1.0E 01 XXX

1.5E 01 XXXXXXXXXXXXX

2.0E 01

3.0E 01 XXXXXXXXXXXXXXXXXXX

5.0E 01 XXX

7.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 02 XXXXXXXXX

1.5E 02 XXXXXXXXXXXXXXXXXXXXXX

2.0E 02

3.0E 02 XXX
```

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

MAXIMUM = 3.00000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 5.86373E 01

GEOMETRIC DEVIATION = 2.37798E 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	5	5	15.62	15.62
5.6E 00 -	8.3E 00	3	8	9.37	25.00
8.3E 00 -	1.2E 01	8	16	25.00	50.00
1.2E 01 -	1.8E 01	2	18	6.25	56.25
1.8E 01 -	2.6E 01	3	21	9.37	65.63
2.6E 01 -	3.8E 01	5	26	15.62	81.25
3.8E 01 -	5.6E 01	3	29	9.37	90.63
5.6E 01 -	8.3E 01	1	30	3.12	93.75
8.3E 01 -	1.2E 02	0	30	0.0	93.75
1.2E 02 -	1.8E 02	0	30	0.0	93.75
1.8E 02 -	2.6E 02	1	31	3.12	96.88

HISTOGRAM FOR COLUMN 16 (CU PPM)

```
5.0E 00 XXXXXXXXXXXXXXX

7.0E 00 XXXXXXXXX

1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXX

2.0E 01 XXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXX

5.0E 01 XXXXXXXXX

7.0E 01 XXX

1.0E 02

1.5E 02

2.0E 02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	0	31
0.0	3.12			0.0	0.0	

MAXIMUM = 2.00000E 02

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 1.55156E 01

GEOMETRIC DEVIATION = 2.49784E 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	10	10	31.25	31.25
2.6E 01 - 3.8E 01	6	16	18.75	50.00
3.8E 01 - 5.6E 01	4	20	12.50	62.50
5.6E 01 - 8.3E 01	1	21	3.12	65.63
8.3E 01 - 1.2E 02	3	24	9.37	75.00
1.2E 02 - 1.8E 02	1	25	3.12	78.13

HISTOGRAM FOR COLUMN 17 (LA PPM)

```
2.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXX

5.0E 01 XXXXXXXXXXXXX

7.0E 01 XXX

1.0E 02 XXXXXXXXX

1.5E 02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	5	0	0	0	0	25
6.25	15.62			0.0	0.0	

MAXIMUM = 1.50000E 02

MINIMUM = 2.00000E 01

GEOMETRIC MEAN = 3.52858E 01

GEOMETRIC DEVIATION = 1.88762E 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	0	0	0.0	0.0
5.6E 00 - 8.3E 00	1	1	3.12	3.12

HISTOGRAM FOR COLUMN 18 (MO PPM)

7.0E 00 XXX

N	L	H	B	T	G	ANALYTICAL VALUES
8	23	0	0	0	0	1
25.00	71.88			0.0	0.0	

MAXIMUM = 7.00000E 00

MINIMUM = 7.00000E 00

GEOMETRIC MEAN = 6.99999E 00

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN 19 (NB PPM)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 - 1.2E 01	28	28	87.50	87.50
1.2E 01 - 1.8E 01	1	29	3.12	90.63

HISTOGRAM FOR COLUMN 19 (NB PPM)

```
1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	3	0	0	0	0	29
0.0	9.37			0.0	0.0	

MAXIMUM = 1.50000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.01406E 01

GEOMETRIC DEVIATION = 1.07845E 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	2	2	6.25	6.25
5.6E 00 - 8.3E 00	0	2	0.0	6.25
8.3E 00 - 1.2E 01	3	5	9.37	15.62
1.2E 01 - 1.8E 01	8	13	25.00	40.63
1.8E 01 - 2.6E 01	1	14	3.12	43.75
2.6E 01 - 3.8E 01	8	22	25.00	68.75
3.8E 01 - 5.6E 01	5	27	15.62	84.38
5.6E 01 - 8.3E 01	1	28	3.12	87.50
8.3E 01 - 1.2E 02	0	28	0.0	87.50
1.2E 02 - 1.8E 02	2	30	6.25	93.75

HISTOGRAM FOR COLUMN 20 (NI PPM)

```
5.0E 00 XXXXXX

7.0E 00

1.0E 01 XXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXX

3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 01 XXXXXXXXXXXXXXXX

7.0E 01 XXX

1.0E 02

1.5E 02 XXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	2	0	0	0	0	30
0.0	6.25			0.0	0.0	

MAXIMUM = 1.50000E 02

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 2.43905E 01

GEOMETRIC DEVIATION = 2.29289E 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	3	3	9.37	9.37
1.2E 01 -	1.8E 01	20	23	62.50	71.88
1.8E 01 -	2.6E 01	7	30	21.88	93.75
2.6E 01 -	3.8E 01	2	32	6.25	100.00

HISTOGRAM FOR COLUMN 21 (PB PPM)

```
1.0E 01 XXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXX
```

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

MAXIMUM = 3.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.60591E 01

GEOMETRIC DEVIATION = 1.27965E 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	
32	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	1	1	3.12	3.12
8.3E 00 -	1.2E 01	1	2	3.12	6.25
1.2E 01 -	1.8E 01	15	17	46.88	53.13
1.8E 01 -	2.6E 01	8	25	25.00	78.13
2.6E 01 -	3.8E 01	7	32	21.88	100.00

HISTOGRAM FOR COLUMN 23 (SC PPM)

```
7.0E 00 XXX

1.0E 01 XXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXXXX
```

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

MAXIMUM = 3.00000E 01

MINIMUM = 7.00000E 00

GEOMETRIC MEAN = 1.80853E 01

GEOMETRIC DEVIATION = 1.40946E 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	
32	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	1	1	3.12	3.12
1.8E 02 -	2.6E 02	9	10	28.13	31.25
2.6E 02 -	3.8E 02	16	26	50.00	81.25
3.8E 02 -	5.6E 02	2	28	6.25	87.50
5.6E 02 -	8.3E 02	4	32	12.50	100.00

HISTOGRAM FOR COLUMN 25 (SR PPM)

```
1.5E 02 XXX

2.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 02 XXXXXX

7.0E 02 XXXXXXXXXXXXX
```

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

MAXIMUM = 7.00000E 02

MINIMUM = 1.50000E 02

GEOMETRIC MEAN = 3.00638E 02

GEOMETRIC DEVIATION = 1.51546E 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	1	1	3.12	3.12
8.3E 01 -	1.2E 02	2	3	6.25	9.37
1.2E 02 -	1.8E 02	17	20	53.13	62.50
1.8E 02 -	2.6E 02	10	30	31.25	93.75
2.6E 02 -	3.8E 02	1	31	3.12	96.88
3.8E 02 -	5.6E 02	1	32	3.12	100.00

HISTOGRAM FOR COLUMN 26 (V PPM)

```
7.0E 01 XXX

1.0E 02 XXXXXX

1.5E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 02 XXX

5.0E 02 XXX
```

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

MAXIMUM = 5.00000E 02

MINIMUM = 7.00000E 01

GEOMETRIC MEAN = 1.65778E 02

GEOMETRIC DEVIATION = 1.38920E 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	
32	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	1	1	3.12	3.12
1.2E 01 -	1.8E 01	10	11	31.25	34.38
1.8E 01 -	2.6E 01	13	24	40.63	75.00
2.6E 01 -	3.8E 01	6	30	18.75	93.75
3.8E 01 -	5.6E 01	0	30	0.0	93.75
5.6E 01 -	8.3E 01	2	32	6.25	100.00

HISTOGRAM FOR COLUMN 28 (Y PPM)

```
1.0E 01 XXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXX

5.0E 01

7.0E 01 XXXXXX
```

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

MAXIMUM = 7.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 2.08736E 01

GEOMETRIC DEVIATION = 1.51650E 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	1	1	3.12	3.12
2.6E 02 - 3.8E 02	1	2	3.12	6.25
3.8E 02 - 5.6E 02	0	2	0.0	6.25
5.6E 02 - 8.3E 02	1	3	3.12	9.37

HISTOGRAM FOR COLUMN 29 (ZN PPM)

```
2.0E 02 XXX

3.0E 02 XXX

5.0E 02

7.0E 02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
16	13	0	0	0	0	3
50.00	40.63			0.0	0.0	

MAXIMUM = 7.00000E 02

MINIMUM = 2.00000E 02

GEOMETRIC MEAN = 3.47602E 02

GEOMETRIC DEVIATION = 1.89500E 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	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	11	11	34.38	34.38
8.3E 01 -	1.2E 02	8	19	25.00	59.38
1.2E 02 -	1.8E 02	1	20	3.12	62.50
1.8E 02 -	2.6E 02	5	25	15.62	78.13
2.6E 02 -	3.8E 02	5	30	15.62	93.75
3.8E 02 -	5.6E 02	1	31	3.12	96.88
5.6E 02 -	8.3E 02	0	31	0.0	96.88
8.3E 02 -	1.2E 03	1	32	3.12	100.00

HISTOGRAM FOR COLUMN 30 (ZR PPM)

```
7.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 02 XXX

2.0E 02 XXXXXXXXXXXXXXXX

3.0E 02 XXXXXXXXXXXXXXXX

5.0E 02 XXX

7.0E 02

1.0E 03 XXX
```

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

MAXIMUM = 1.00000E 03

MINIMUM = 7.00000E 01

GEOMETRIC MEAN = 1.33946E 02

GEOMETRIC DEVIATION = 2.01243E 00

FREQUENCY TABLE FOR COLUMN 31 (AU PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	ANALYTICAL VALUES
N	L	H	B	T	G	
0	32	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

A470 STATISTICAL SUMMARY DATE 4/21/70

ELEMENT	N	L	H	B	T	G	ANALYTICAL VALUES
FE PCT	0	0	0	0	0	0	32
MG PCT	0	0	0	0	0	0	32
CA PCT	0	0	0	0	0	0	32
TI PCT	0	0	0	0	0	0	32
MN PPM	0	0	0	0	0	0	32
AG PPM	29	3	0	0	0	0	0
AS PPM	26	5	0	0	0	0	1
AU PPM	32	0	0	0	0	0	0
B PPM	9	13	0	0	0	0	10
BA PPM	0	0	0	0	0	0	32
BE PPM	11	9	0	0	0	0	12
BI PPM	32	0	0	0	0	0	0
CD PPM	32	0	0	0	0	0	0
CO PPM	0	0	0	0	0	0	32
CR PPM	0	0	0	0	0	0	32
CU PPM	0	1	0	0	0	0	31
LA PPM	2	5	0	0	0	0	25
MO PPM	8	23	0	0	0	0	1
NB PPM	0	3	0	0	0	0	29
NI PPM	0	2	0	0	0	0	30
PB PPM	0	0	0	0	0	0	32
SB PPM	32	0	0	0	0	0	0
SC PPM	0	0	0	0	0	0	32
SN PPM	32	0	0	0	0	0	0
SR PPM	0	0	0	0	0	0	32
V PPM	0	0	0	0	0	0	32
W PPM	32	0	0	0	0	0	0
Y PPM	0	0	0	0	0	0	32
ZN PPM	16	13	0	0	0	0	3
ZR PPM	0	0	0	0	0	0	32
AU PPM	0	32	0	0	0	0	0

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
FE PCT	6.761743	1.57	32 SAMPLES AND 32 ANALYTICAL VALUES.
MG PCT	1.719405	1.43	32 SAMPLES AND 32 ANALYTICAL VALUES.
CA PCT	2.004176	1.37	32 SAMPLES AND 32 ANALYTICAL VALUES.
TI PCT	0.393381	1.36	32 SAMPLES AND 32 ANALYTICAL VALUES.
MN PPM	852.385010	1.54	32 SAMPLES AND 32 ANALYTICAL VALUES.
AG PPM	********	******	32 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
AS PPM	********	******	31 NOT DETECTED, LESS THAN, OR TRACE VALUES. 1 REPORTED VALUES. NO COMPUTATIONS.
AU PPM	********	******	32 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
B PPM	6.692603	1.57	22 NOT DETECTED, LESS THAN, OR TRACE VALUES. 10 REPORTED VALUES.
BA PPM	752.207031	1.44	32 SAMPLES AND 32 ANALYTICAL VALUES.
BE PPM	********	******	20 NOT DETECTED, LESS THAN, OR TRACE VALUES. 12 REPORTED VALUES. NO COMPUTATIONS.
BI PPM	********	******	32 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
CD PPM	********	******	32 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
CO PPM	17.377411	1.79	32 SAMPLES AND 32 ANALYTICAL VALUES.
CR PPM	58.637131	2.38	32 SAMPLES AND 32 ANALYTICAL VALUES.
CU PPM	14.651332	2.61	1 NOT DETECTED, LESS THAN, OR TRACE VALUES. 31 REPORTED VALUES.
LA PPM	27.369965	2.14	7 NOT DETECTED, LESS THAN, OR TRACE VALUES. 25 REPORTED VALUES.
MO PPM	********	******	31 NOT DETECTED, LESS THAN, OR TRACE VALUES. 1 REPORTED VALUES. NO COMPUTATIONS.
NB PPM	9.908804	1.11	3 NOT DETECTED, LESS THAN, OR TRACE VALUES. 29 REPORTED VALUES.
NI PPM	21.199005	2.65	2 NOT DETECTED, LESS THAN, OR TRACE VALUES. 30 REPORTED VALUES.
PB PPM	16.059113	1.28	32 SAMPLES AND 32 ANALYTICAL VALUES.

SB	PPM	********	******	32 NOT DETECTED, LESS THAN, OR TRACE VALUES.	0 REPORTED VALUES. NO COMPUTATIONS.
SC	PPM	18.085220	1.41	32 SAMPLES AND 32 ANALYTICAL VALUES.	
SN	PPM	********	******	32 NOT DETECTED, LESS THAN, OR TRACE VALUES.	0 REPORTED VALUES. NO COMPUTATIONS.
SR	PPM	300.637451	1.52	32 SAMPLES AND 32 ANALYTICAL VALUES.	
V	PPM	165.777924	1.39	32 SAMPLES AND 32 ANALYTICAL VALUES.	
W	PPM	********	******	32 NOT DETECTED, LESS THAN, OR TRACE VALUES.	0 REPORTED VALUES. NO COMPUTATIONS.
Y	PPM	20.873520	1.52	32 SAMPLES AND 32 ANALYTICAL VALUES.	
ZN	PPM	********	******	29 NOT DETECTED, LESS THAN, OR TRACE VALUES.	3 REPORTED VALUES. NO COMPUTATIONS.
ZR	PPM	133.945663	2.01	32 SAMPLES AND 32 ANALYTICAL VALUES.	
AU	PPM	********	******	32 NOT DETECTED, LESS THAN, OR TRACE VALUES.	0 REPORTED VALUES. NO COMPUTATIONS.