R.C'D. COLLEGE
AUG 14 1970
DIV. MINES & GEOLOGY

UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

ANALYSES OF ROCK AND STREAM-SEDIMENT SAMPLES FROM THE TAYLOR MOUNTAINS A-6 AND SOUTHERN PART OF TAYLOR MOUNTAINS B-6 QUADRANGLES, ALASKA

By

Allen L. Clark, W. H. Condon, J. M. Hoare,

and Dennis H. Sorg

PROPERTY OF DGGS LIBRARY

Open-file Report

1970

This report is preliminary
and has not been edited or
reviewed for conformity with
Geological Survey standards

ANALYSES OF ROCK AND STREAM-SEDIMENT SAMPLES FROM THE TAYLOR MOUNTAINS A-6 AND SOUTHERN PART OF TAYLOR MOUNTAINS B-6 QUADRANGLES, ALASKA

By

Allen L. Clark, W. H. Condon, J. M. Hoare,

and Dennis H. Sorg

INTRODUCTION

Analytical data for 19 rock and 59 stream-sediment samples from the Taylor Mountains A-6 and part of B-6, 1:63,360-scale quadrangles are presented in this report, together with a statistical treatment of the data. The samples were collected in 1969 as part of the program of the U.S. Geological Survey.

The most comprehensive discussion of the geology of part of the study area is a report by W. M. Cady and others (1955). Additional data of interest is given in Sainsbury and MacKevett (1965) and MacKevett and Berg (1963).

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 and mercury by the atomic absorption methods.[1/]

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

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 4. Semi-quantitative spectrographic analyses were done by K. J. Curry and atomic absorption analyses were done by R. L. Miller, R. B. Tripp, H. D. King, A. L. Meier, D. G. Murrey, and J. R. Hassemer.

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.

Table 1.--Description of rock, vein, and altered zone samples from the Taylor Mountains A-6 and B-6 quadrangles. (All samples are of representative material.) Sample localities are shown by sample number plotted on the accompanying map, Plate 1.

Sample No.	Lab. No.	Sample Description
1	AMG-890	Porphyritic rhyolite dike
2	AMM-786	Hornfelsed graywacke with arsenopyrite
3	-787	Arsenopyrite-rich quartz vein
4	-788	Hornfelsed argillite with minor arsenopyrite
5	-789	Quartz vein with arsenopyrite
6	-790	Quartz-veined hornfelsed argillite with arsenopyrite
7	-791	Quartz-veined hornfelsed argillite with arsenopyrite
8	-709	Quartz-veined hornfelsed argillite with arsenopyrite
9	-710	Quartz vein with arsenopyrite
10	-792	Hornfelsed graywacke with minor arsenopyrite
11	-793	Rhyolite dike with disseminated arsenopyrite
12	AMG-889	Pyritic quartz monzonite
13	AMM-705	Graywacke
14	-775	Hornfelsed carbonaceous shale with pyrite
14	-776	Hornfelsed carbonaceous shale with pyrite
15	-774	Pyritic hornfelsed graywacke
16	-771	Porphyritic quartz monzonite
16	-772	Tourmaline-rich aplite dike
16	-773	Hornfelsed graywacke

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	HG PPM
5.00000	50.00000	5.00000	25.00000	10.00000	0.01000

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 brackets 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 Tables 2 and 3. The geometric mean 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.

Hornfelsed contacts

Geochemically anomalous areas are almost without exception located in or associated with hornfelsed graywackes and shales at the contact with igneous intrusives.

A typical mineralized hornfels is strongly limonite stained and shows numerous limonite casts. The hornfels is cut by numerous small quartz veins rarely exceeding 1/8 inch in width. Approximately 1/4 of the quartz veinlets carry minor amounts, generally less than 1 percent, of arsenopyrite. In addition to occurring in quartz veinlets, locally arsenopyrite is disseminated throughout the hornfelsed country rock. The most common alteration product observed is scorodite associated with arsenopyrite. Locally, a weak copper staining, primarily malachite, can be observed on fractural surfaces.

Selected References

Cady, W. M., Wallace, R. E., Hoare, J. M., and Weber, E. J., 1955, The central Kuskokwim region, Alaska: U.S. Geol. Survey Prof. Paper 268, 132 p.

MacKevett, E. M., Jr., and Berg, H. C., 1963, Geology of the Red Devil quicksilver mine: U.S. Geol. Survey Bull. 1142-G, 16 p.

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

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

Sainsbury, C. L., and MacKevett, E. M., Jr., 1965, Quicksilver deposits of southwestern Alaska: U.S. Geol. Survey Bull. 1187, 89 p.

T. M. A-6 AND B-6 ROCK

	SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
1	AMG890	3.0000	10.0000N	20.0000N	5.0000L	15.0000	15.0000	20.0000L	20.0000L	10.0000	15.0000
2	AMM786	1.0000	10.0000N	20.0000N	20.0000	150.0000	100.0000	30.0000	5.0000N	10.0000	100.0000
3	AMM787	1.0000	100.0000	20.0000N	7.0000	50.0000	50.0000	30.0000	5.0000N	10.0000	10.0000
4	AMM788	1.5000	10.0000N	20.0000N	15.0000	150.0000	150.0000	30.0000	5.0000N	10.0000	100.0000
5	AMM789	1.0000	50.0000	20.0000N	70.0000	10.0000	300.0000	20.0000N	5.0000N	10.0000N	30.0000
6	AMM790	1.0000	30.0000	20.0000N	10.0000	50.0000	50.0000	20.0000	5.0000N	10.0000	10.0000
7	AMM791	1.0000	15.0000	20.0000N	15.0000	100.0000	15.0000	30.0000	5.0000N	10.0000	20.0000
8	AMM709	1.0000	10.0000N	20.0000N	5.0000	100.0000	10.0000	20.0000	5.0000N	10.0000L	10.0000
9	AMM710	1.0000L	15.0000	20.0000N	5.0000N	5.0000	200.0000	20.0000	5.0000N	10.0000L	5.0000
10	AMM792	1.0000	10.0000N	20.0000N	15.0000	100.0000	15.0000	20.0000	5.0000N	10.0000L	30.0000
11	AMM793	1.0000	10.0000N	20.0000N	20.0000	300.0000	100.0000	20.0000	5.0000N	10.0000L	30.0000
12	AMG889	1.0000L	10.0000N	20.0000N	5.0000	150.0000	20.0000	20.0000	20.0000	10.0000	20.0000
13	AMM705	1.0000	10.0000N	20.0000N	70.0000	1000.0000	70.0000	20.0000N	5.0000N	10.0000L	300.0000
14	AMM775	1.0000	10.0000N	20.0000N	15.0000	100.0000	50.0000	20.0000	5.0000N	10.0000L	20.0000
14	AMM776	1.0000N	10.0000N	20.0000N	5.0000N	5.0000L	7.0000	20.0000	5.0000N	10.0000L	5.0000
15	AMM774	1.0000	10.0000N	20.0000N	15.0000	100.0000	50.0000	20.0000	5.0000N	10.0000L	50.0000
16	AMM771	5.0000	10.0000N	20.0000N	5.0000N	5.0000L	10.0000	30.0000	5.0000N	10.0000	5.0000
16	AMM772	5.0000	10.0000N	20.0000N	5.0000N	5.0000L	10.0000	20.0000	5.0000N	15.0000	5.0000
16	AMM773	1.0000	10.0000N	20.0000N	15.0000	70.0000	20.0000	20.0000	5.0000N	10.0000L	30.0000

TABLE 2. T. M. A-6 AND B-6 ROCK

	SAMPLE	FE PCT	MG PCT	CA PCT	TI PCT	MN PPM	AG PPM	AS PPM	AU PPM	B PPM	BA PPM
1	AMG890	3.0000	1.0000	1.0000	0.3000	1500.0000	0.5000N	200.0000N	10.0000N	70.0000	700.0000
2	AMM786	10.0000	1.5000	0.7000	0.3000	700.0000	0.5000L	200.0000N	10.0000N	2000.0000G	300.0000
3	AMM787	7.0000	0.7000	0.2000	0.2000	100.0000	3.0000	10001.0000G	10.0000N	2000.0000G	50.0000
4	AMM788	15.0000	1.0000	1.0000	0.5000	700.0000	0.5000L	200.0000N	10.0000N	300.0000	500.0000
5	AMM789	20.0000	0.7000	0.0500	0.1000	70.0000	1.0000	10001.0000G	10.0000N	1000.0000	50.0000
6	AMM790	5.0000	1.0000	0.1000	0.3000	70.0000	2.0000	10001.0000	10.0000N	2000.0000G	50.0000
7	AMM791	7.0000	1.5000	0.1500	0.5000	100.0000	0.5000N	10001.0000	10.0000N	2000.0000G	20.0000
8	AMM709	7.0000	1.5000	0.2000	0.3000	700.0000	0.5000N	200.0000	10.0000N	300.0000	700.0000
9	AMM710	3.0000	0.0500	0.0500L	0.0050	20.0000	0.5000L	10001.0000G	10.0000N	10.0000	20.0000
10	AMM792	10.0000	1.5000	0.3000	0.5000	1000.0000	0.5000N	200.0000N	10.0000N	150.0000	500.0000
11	AMM793	15.0000	3.0000	5.0000	0.5000	2000.0000	0.5000L	500.0000	10.0000N	10.0000	20.0000
12	AMG889	3.0000	0.2000	0.0500L	0.7000	70.0000	0.5000N	200.0000N	10.0000N	50.0000	1500.0000
13	AMM705	10.0000	5.0000	7.0000	0.1500	700.0000	0.5000N	200.0000N	10.0000N	10.0000L	700.0000
14	AMM775	15.0000	1.5000	0.7000	0.5000	300.0000	0.5000N	200.0000N	10.0000N	30.0000	500.0000
14	AMM776	0.5000	0.0200	0.0500L	0.0050	50.0000	0.5000N	200.0000N	10.0000N	10.0000	20.0000N
15	AMM774	15.0000	1.5000	0.5000	0.5000	700.0000	0.5000N	200.0000N	10.0000N	10.0000	300.0000
16	AMM771	3.0000	0.3000	0.3000	0.1500	200.0000	0.5000N	200.0000N	10.0000N	20.0000	300.0000
16	AMM772	0.7000	0.1000	0.3000	0.0700	100.0000	0.5000N	200.0000N	10.0000N	200.0000	100.0000
16	AMM773	10.0000	1.5000	0.3000	0.3000	500.0000	0.5000N	200.0000N	10.0000N	500.0000	700.0000

T. M. A-6 AND B-6 ROCK

	SAMPLE	PB PPM	SB PPM	SC PPM	SN PPM	SR PPM	V PPM	W PPM	Y PPM	ZN PPM	ZR PPM
1	AMG890	70.0000	100.0000N	10.0000	10.0000N	200.0000	100.0000	50.0000N	15.0000	200.0000L	100.0000
2	AMM786	10.0000N	100.0000N	20.0000	10.0000L	300.0000	200.0000	50.0000N	30.0000	200.0000N	100.0000
3	AMM787	50.0000	100.0000N	15.0000	10.0000L	100.0000	100.0000	50.0000L	10.0000	200.0000N	70.0000
4	AMM788	10.0000L	100.0000N	20.0000	20.0000	300.0000	300.0000	50.0000N	30.0000	200.0000N	100.0000
5	AMM789	10.0000N	200.0000	5.0000L	10.0000N	300.0000	20.0000	50.0000N	10.0000L	200.0000N	20.0000
6	AMM790	10.0000L	100.0000N	15.0000	10.0000L	100.0000	100.0000	50.0000N	15.0000	200.0000N	150.0000
7	AMM791	10.0000N	100.0000N	30.0000	10.0000	150.0000	150.0000	50.0000L	30.0000	200.0000N	150.0000
8	AMM709	10.0000L	100.0000N	20.0000	10.0000L	150.0000	150.0000	50.0000N	20.0000	200.0000N	150.0000
9	AMM710	10.0000N	100.0000N	5.0000L	10.0000N	100.0000N	10.0000L	50.0000N	10.0000N	200.0000N	10.0000N
10	AMM792	10.0000L	100.0000N	20.0000	10.0000N	150.0000	200.0000	50.0000N	20.0000	200.0000N	150.0000
11	AMM793	10.0000L	100.0000N	30.0000	50.0000	300.0000	300.0000	50.0000N	20.0000	200.0000N	100.0000
12	AMG889	20.0000	100.0000N	7.0000	10.0000N	2000.0000	300.0000	50.0000N	15.0000	300.0000	300.0000
13	AMM705	10.0000L	100.0000N	30.0000	10.0000N	700.0000	200.0000	50.0000N	15.0000	200.0000N	30.0000
14	AMM775	10.0000L	100.0000N	20.0000	10.0000N	300.0000	300.0000	50.0000N	20.0000	200.0000N	100.0000
14	AMM776	10.0000L	100.0000N	5.0000L	10.0000N	100.0000N	10.0000N	50.0000N	10.0000N	200.0000N	10.0000N
15	AMM774	10.0000	100.0000N	20.0000	10.0000N	200.0000	300.0000	50.0000N	20.0000	200.0000N	100.0000
16	AMM771	15.0000	100.0000N	5.0000L	10.0000L	100.0000L	15.0000	50.0000N	30.0000	200.0000L	50.0000
16	AMM772	15.0000	100.0000N	5.0000L	10.0000N	100.0000L	10.0000	50.0000N	70.0000	200.0000N	70.0000
16	AMM773	10.0000L	100.0000N	20.0000	10.0000N	150.0000	300.0000	50.0000N	20.0000	200.0000N	100.0000

T. M. A-6 AND B-6 ROCK

	SAMPLE	AU PPM	HG PPM
1	AMG890	0.0200L	0.0 B
2	AMM786	0.0200L	10.0000G
3	AMM787	0.0200L	9.0000
4	AMM788	0.0200L	10.0000G
5	AMM789	0.4000	7.0000
6	AMM790	0.7000	5.0000
7	AMM791	0.2000	10.0000G
8	AMM709	0.0200L	0.4500
9	AMM710	0.2000	2.8000
10	AMM792	0.0200L	4.5000
11	AMM793	0.0200L	6.5000
12	AMG889	0.0200L	0.0 B
13	AMM705	0.0200L	5.0000
14	AMM775	0.0200L	5.0000
14	AMM776	0.0200L	9.0000
15	AMM774	0.0200L	3.0000
16	AMM771	0.0200L	1.4000
16	AMM772	0.0200L	1.1000
16	AMM773	0.0200L	6.5000

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	1	1	5.26	5.26
5.6E-01 -	8.3E-01	1	2	5.26	10.53
8.3E-01 -	1.2E 00	0	2	0.0	10.53
1.2E 00 -	1.8E 00	0	2	0.0	10.53
1.8E 00 -	2.6E 00	0	2	0.0	10.53
2.6E 00 -	3.8E 00	4	6	21.05	31.58
3.8E 00 -	5.6E 00	1	7	5.26	36.84
5.6E 00 -	8.3E 00	3	10	15.79	52.63
8.3E 00 -	1.2E 01	4	14	21.05	73.68
1.2E 01 -	1.8E 01	4	18	21.05	94.74
1.8E 01 -	2.6E 01	1	19	5.26	100.00

HISTOGRAM FOR COLUMN 1 (FE PCT)

```
5.0E-01 XXXXX

7.0E-01 XXXXX

1.0E 00

1.5E 00

2.0E 00

3.0E 00 XXXXXXXXXXXXXXXXXXXX

5.0E 00 XXXXX

7.0E 00 XXXXXXXXXXXXXXX

1.0E 01 XXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	19
0.0	0.0			0.0	0.0	

MAXIMUM = 2.00000E 01

MINIMUM = 5.00000E-01

GEOMETRIC MEAN = 5.93298E 00

GEOMETRIC DEVIATION = 2.76858E 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	5.26	5.26
2.6E-02 -	3.8E-02	0	1	0.0	5.26
3.8E-02 -	5.6E-02	1	2	5.26	10.53
5.6E-02 -	8.3E-02	0	2	0.0	10.53
8.3E-02 -	1.2E-01	1	3	5.26	15.79
1.2E-01 -	1.8E-01	0	3	0.0	15.79
1.8E-01 -	2.6E-01	1	4	5.26	21.05
2.6E-01 -	3.8E-01	1	5	5.26	26.32
3.8E-01 -	5.6E-01	0	5	0.0	26.32
5.6E-01 -	8.3E-01	2	7	10.53	36.84
8.3E-01 -	1.2E 00	3	10	15.79	52.63
1.2E 00 -	1.8E 00	7	17	36.84	89.47
1.8E 00 -	2.6E 00	0	17	0.0	89.47
2.6E 00 -	3.8E 00	1	18	5.26	94.74
3.8E 00 -	5.6E 00	1	19	5.26	100.00

HISTOGRAM FOR COLUMN 2 (MG PCT)

```
2.0E-02 XXXXX

3.0E-02

5.0E-02 XXXXX

7.0E-02

1.0E-01 XXXXX

1.5E-01

2.0E-01 XXXXX

3.0E-01 XXXXX

5.0E-01

7.0E-01 XXXXXXXXXXX

1.0E 00 XXXXXXXXXXXXXXXX

1.5E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 00

3.0E 00 XXXXX

5.0E 00 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	19
0.0	0.0			0.0	0.0	

MAXIMUM = 5.00000E 00

MINIMUM = 2.00000E-02

GEOMETRIC MEAN = 6.84914E-01

GEOMETRIC DEVIATION = 4.12142E 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	5.26	5.26
5.6E-02 -	8.3E-02	0	1	0.0	5.26
8.3E-02 -	1.2E-01	1	2	5.26	10.53
1.2E-01 -	1.8E-01	1	3	5.26	15.79
1.8E-01 -	2.6E-01	2	5	10.53	26.32
2.6E-01 -	3.8E-01	4	9	21.05	47.37
3.8E-01 -	5.6E-01	1	10	5.26	52.63
5.6E-01 -	8.3E-01	2	12	10.53	63.16
8.3E-01 -	1.2E 00	2	14	10.53	73.68
1.2E 00 -	1.8E 00	0	14	0.0	73.68
1.8E 00 -	2.6E 00	0	14	0.0	73.68
2.6E 00 -	3.8E 00	0	14	0.0	73.68
3.8E 00 -	5.6E 00	1	15	5.26	78.95
5.6E 00 -	8.3E 00	1	16	5.26	84.21

HISTOGRAM FOR COLUMN 3 (CA PCT)

```
5.0E-02 XXXXX

7.0E-02

1.0E-01 XXXXX

1.5E-01 XXXXX

2.0E-01 XXXXXXXXXXX

3.0E-01 XXXXXXXXXXXXXXXXXXXX

5.0E-01 XXXXX

7.0E-01 XXXXXXXXXXX

1.0E 00 XXXXXXXXXXX

1.5E 00

2.0E 00

3.0E 00

5.0E 00 XXXXX

7.0E 00 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	3	0	0	0	0	16
0.0	15.79			0.0	0.0	

MAXIMUM = 7.00000E 00

MINIMUM = 5.00000E-02

GEOMETRIC MEAN = 4.41497E-01

GEOMETRIC DEVIATION = 3.66184E 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	2	2	10.53	10.53
5.6E-03 -	8.3E-03	0	2	0.0	10.53
8.3E-03 -	1.2E-02	0	2	0.0	10.53
1.2E-02 -	1.8E-02	0	2	0.0	10.53
1.8E-02 -	2.6E-02	0	2	0.0	10.53
2.6E-02 -	3.8E-02	0	2	0.0	10.53
3.8E-02 -	5.6E-02	0	2	0.0	10.53
5.6E-02 -	8.3E-02	1	3	5.26	15.79
8.3E-02 -	1.2E-01	1	4	5.26	21.05
1.2E-01 -	1.8E-01	2	6	10.53	31.58
1.8E-01 -	2.6E-01	1	7	5.26	36.84
2.6E-01 -	3.8E-01	5	12	26.32	63.16
3.8E-01 -	5.6E-01	6	18	31.58	94.74
5.6E-01 -	8.3E-01	1	19	5.26	100.00

HISTOGRAM FOR COLUMN 4 (TI PCT)

```
5.0E-03 XXXXXXXXXXX

7.0E-03

1.0E-02

1.5E-02

2.0E-02

3.0E-02

5.0E-02

7.0E-02 XXXXX

1.0E-01 XXXXX

1.5E-01 XXXXXXXXXXX

2.0E-01 XXXXX

3.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXX

5.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

7.0E-01 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	19
0.0	0.0			0.0	0.0	

MAXIMUM = 7.00000E-01

MINIMUM = 5.00000E-03

GEOMETRIC MEAN = 1.90564E-01

GEOMETRIC DEVIATION = 4.14140E 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	1	1	5.26	5.26
2.6E 01 -	3.8E 01	0	1	0.0	5.26
3.8E 01 -	5.6E 01	1	2	5.26	10.53
5.6E 01 -	8.3E 01	3	5	15.79	26.32
8.3E 01 -	1.2E 02	3	8	15.79	42.11
1.2E 02 -	1.8E 02	0	8	0.0	42.11
1.8E 02 -	2.6E 02	1	9	5.26	47.37
2.6E 02 -	3.8E 02	1	10	5.26	52.63
3.8E 02 -	5.6E 02	1	11	5.26	57.89
5.6E 02 -	8.3E 02	5	16	26.32	84.21
8.3E 02 -	1.2E 03	1	17	5.26	89.47
1.2E 03 -	1.8E 03	1	18	5.26	94.74
1.8E 03 -	2.6E 03	1	19	5.26	100.00

HISTOGRAM FOR COLUMN 5 (MN PPM)

```
2.0E 01 XXXXX

3.0E 01

5.0E 01 XXXXX

7.0E 01 XXXXXXXXXXXXXXX

1.0E 02 XXXXXXXXXXXXXXX

1.5E 02

2.0E 02 XXXXX

3.0E 02 XXXXX

5.0E 02 XXXXX

7.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 03 XXXXX

1.5E 03 XXXXX

2.0E 03 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	19
0.0	0.0			0.0	0.0	

MAXIMUM = 2.00000E 03

MINIMUM = 2.00000E 01

GEOMETRIC MEAN = 2.54712E 02

GEOMETRIC DEVIATION = 3.76718E 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	1	1	5.26	5.26
1.2E 00 -	1.8E 00	0	1	0.0	5.26
1.8E 00 -	2.6E 00	1	2	5.26	10.53
2.6E 00 -	3.8E 00	1	3	5.26	15.79

HISTOGRAM FOR COLUMN 6 (AG PPM)

```
1.0E 00 XXXXX

1.5E 00

2.0E 00 XXXXX

3.0E 00 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
12	4	0	0	0	0	3
63.16	21.05			0.0	0.0	

MAXIMUM = 3.00000E 00

MINIMUM = 1.00000E 00

GEOMETRIC MEAN = 1.81712E 00

GEOMETRIC DEVIATION = 1.74290E 00

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	5.26	5.26
2.6E 02 -	3.8E 02	0	1	0.0	5.26
3.8E 02 -	5.6E 02	1	2	5.26	10.53
5.6E 02 -	8.3E 02	0	2	0.0	10.53
8.3E 02 -	1.2E 03	0	2	0.0	10.53
1.2E 03 -	1.8E 03	0	2	0.0	10.53
1.8E 03 -	2.6E 03	0	2	0.0	10.53
2.6E 03 -	3.8E 03	0	2	0.0	10.53
3.8E 03 -	5.6E 03	0	2	0.0	10.53
5.6E 03 -	8.3E 03	0	2	0.0	10.53
8.3E 03 -	1.2E 04	2	4	10.53	21.05

HISTOGRAM FOR COLUMN 7 (AS PPM)

```
2.0E 02 XXXXX

3.0E 02

5.0E 02 XXXXX

7.0E 02

1.0E 03

1.5E 03

2.0E 03

3.0E 03

5.0E 03

7.0E 03

1.0E 04 XXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
12	0	0	0	0	3	4
63.16	0.0			0.0	15.79	

MAXIMUM = 1.00010E 04

MINIMUM = 2.00000E 02

GEOMETRIC MEAN = 1.77837E 03

GEOMETRIC DEVIATION = 7.60595E 00

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	
19	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 (8 PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	4	4	21.05	21.05
1.2E 01 -	1.8E 01	0	4	0.0	21.05
1.8E 01 -	2.6E 01	1	5	5.26	26.32
2.6E 01 -	3.8E 01	1	6	5.26	31.58
3.8E 01 -	5.6E 01	1	7	5.26	36.84
5.6E 01 -	8.3E 01	1	8	5.26	42.11
8.3E 01 -	1.2E 02	0	8	0.0	42.11
1.2E 02 -	1.8E 02	1	9	5.26	47.37
1.8E 02 -	2.6E 02	1	10	5.26	52.63
2.6E 02 -	3.8E 02	2	12	10.53	63.16
3.8E 02 -	5.6E 02	1	13	5.26	68.42
5.6E 02 -	8.3E 02	0	13	0.0	68.42
8.3E 02 -	1.2E 03	1	14	5.26	73.68

HISTOGRAM FOR COLUMN 9 (8 PPM)

```
1.0E 01 XXXXXXXXXXXXXXXXXXXX

1.5E 01

2.0E 01 XXXXX

3.0E 01 XXXXX

5.0E 01 XXXXX

7.0E 01 XXXXX

1.0E 02

1.5E 02 XXXXX

2.0E 02 XXXXX

3.0E 02 XXXXXXXXXXX

5.0E 02 XXXXX

7.0E 02

1.0E 03 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	4	14
0.0	5.26			0.0	21.05	

MAXIMUM = 1.00000E 03

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 6.57709E 01

GEOMETRIC DEVIATION = 5.08093E 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	3	3	15.79	15.79
2.6E 01 -	3.8E 01	0	3	0.0	15.79
3.8E 01 -	5.6E 01	3	6	15.79	31.58
5.6E 01 -	8.3E 01	0	6	0.0	31.58
8.3E 01 -	1.2E 02	1	7	5.26	36.84
1.2E 02 -	1.8E 02	0	7	0.0	36.84
1.8E 02 -	2.6E 02	0	7	0.0	36.84
2.6E 02 -	3.8E 02	3	10	15.79	52.63
3.8E 02 -	5.6E 02	3	13	15.79	68.42
5.6E 02 -	8.3E 02	4	17	21.05	89.47
8.3E 02 -	1.2E 03	0	17	0.0	89.47
1.2E 03 -	1.8E 03	1	18	5.26	94.74

HISTOGRAM FOR COLUMN 10 (BA PPM)

```
2.0E 01 XXXXXXXXXXXXXXXX

3.0E 01

5.0E 01 XXXXXXXXXXXXXXXX

7.0E 01

1.0E 02 XXXXX

1.5E 02

2.0E 02

3.0E 02 XXXXXXXXXXXXXXXX

5.0E 02 XXXXXXXXXXXXXXXX

7.0E 02 XXXXXXXXXXXXXXXXXXXX

1.0E 03

1.5E 03 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	0	0	0	0	0	18
5.26	0.0			0.0	0.0	

MAXIMUM = 1.50000E 03

MINIMUM = 2.00000E 01

GEOMETRIC MEAN = 1.91638E 02

GEOMETRIC DEVIATION = 4.23950E 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	12	12	63.16	63.16
1.2E 00 -	1.8E 00	1	13	5.26	68.42
1.8E 00 -	2.6E 00	0	13	0.0	68.42
2.6E 00 -	3.8E 00	1	14	5.26	73.68
3.8E 00 -	5.6E 00	2	16	10.53	84.21

HISTOGRAM FOR COLUMN 11 (BE PPM)

```
1.0E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 00 XXXXX

2.0E 00

3.0E 00 XXXXX

5.0E 00 XXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	2	0	0	0	0	16
5.26	10.53			0.0	0.0	

MAXIMUM = 5.00000E 00

MINIMUM = 1.00000E 00

GEOMETRIC MEAN = 1.34337E 00

GEOMETRIC DEVIATION = 1.79749E 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	2	2	10.53	10.53
1.8E 01 -	2.6E 01	0	2	0.0	10.53
2.6E 01 -	3.8E 01	1	3	5.26	15.79
3.8E 01 -	5.6E 01	1	4	5.26	21.05
5.6E 01 -	8.3E 01	0	4	0.0	21.05
8.3E 01 -	1.2E 02	1	5	5.26	26.32

HISTOGRAM FOR COLUMN 12 (BI PPM)

```
1.5E 01 XXXXXXXXXXX

2.0E 01

3.0E 01 XXXXX

5.0E 01 XXXXX

7.0E 01

1.0E 02 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
14	0	0	0	0	0	5
73.68	0.0			0.0	0.0	

MAXIMUM = 1.00000E 02

MINIMUM = 1.50000E 01

GEOMETRIC MEAN = 3.20371E 01

GEOMETRIC DEVIATION = 2.25672E 00

FREQUENCY TABLE FOR COLUMN 13 (CD PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	ANALYTICAL VALUES
N	L	H	B	T	G	
19	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	10.53	10.53
5.6E 00 -	8.3E 00	1	3	5.26	15.79
8.3E 00 -	1.2E 01	1	4	5.26	21.05
1.2E 01 -	1.8E 01	6	10	31.58	52.63
1.8E 01 -	2.6E 01	2	12	10.53	63.16
2.6E 01 -	3.8E 01	0	12	0.0	63.16
3.8E 01 -	5.6E 01	0	12	0.0	63.16
5.6E 01 -	8.3E 01	2	14	10.53	73.68

HISTOGRAM FOR COLUMN 14 (CO PPM)

```
5.0E 00 XXXXXXXXXXX

7.0E 00 XXXXX

1.0E 01 XXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXX

3.0E 01

5.0E 01

7.0E 01 XXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
4	1	0	0	0	0	14
21.05	5.26			0.0	0.0	

MAXIMUM = 7.00000E 01

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 1.53154E 01

GEOMETRIC DEVIATION = 2.19815E 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	1	1	5.26	5.26
5.6E 00 -	8.3E 00	0	1	0.0	5.26
8.3E 00 -	1.2E 01	1	2	5.26	10.53
1.2E 01 -	1.8E 01	1	3	5.26	15.79
1.8E 01 -	2.6E 01	0	3	0.0	15.79
2.6E 01 -	3.8E 01	0	3	0.0	15.79
3.8E 01 -	5.6E 01	2	5	10.53	26.32
5.6E 01 -	8.3E 01	1	6	5.26	31.58
8.3E 01 -	1.2E 02	5	11	26.32	57.89
1.2E 02 -	1.8E 02	3	14	15.79	73.68
1.8E 02 -	2.6E 02	0	14	0.0	73.68
2.6E 02 -	3.8E 02	1	15	5.26	78.95
3.8E 02 -	5.6E 02	0	15	0.0	78.95
5.6E 02 -	8.3E 02	0	15	0.0	78.95
8.3E 02 -	1.2E 03	1	16	5.26	84.21

HISTOGRAM FOR COLUMN 15 (CR PPM)

```
5.0E 00 XXXXX

7.0E 00

1.0E 01 XXXXX

1.5E 01 XXXXX

2.0E 01

3.0E 01

5.0E 01 XXXXXXXXXXX

7.0E 01 XXXXX

1.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 02 XXXXXXXXXXXXXXXX

2.0E 02

3.0E 02 XXXXX

5.0E 02

7.0E 02

1.0E 03 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	3	0	0	0	0	16
0.0	15.79			0.0	0.0	

MAXIMUM = 1.00000E 03

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 7.63336E 01

GEOMETRIC DEVIATION = 3.61756E 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	0	0	0.0	0.0
5.6E 00 -	8.3E 00	1	1	5.26	5.26
8.3E 00 -	1.2E 01	3	4	15.79	21.05
1.2E 01 -	1.8E 01	3	7	15.79	36.84
1.8E 01 -	2.6E 01	2	9	10.53	47.37
2.6E 01 -	3.8E 01	0	9	0.0	47.37
3.8E 01 -	5.6E 01	4	13	21.05	68.42
5.6E 01 -	8.3E 01	1	14	5.26	73.68
8.3E 01 -	1.2E 02	2	16	10.53	84.21
1.2E 02 -	1.8E 02	1	17	5.26	89.47
1.8E 02 -	2.6E 02	1	18	5.26	94.74
2.6E 02 -	3.8E 02	1	19	5.26	100.00

HISTOGRAM FOR COLUMN 16 (CU PPM)

```
7.0E 00 XXXXX

1.0E 01 XXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXX

3.0E 01

5.0E 01 XXXXXXXXXXXXXXXXXXXX

7.0E 01 XXXXX

1.0E 02 XXXXXXXXXXX

1.5E 02 XXXXX

2.0E 02 XXXXX

3.0E 02 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	19
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 02

MINIMUM = 7.00000E 00

GEOMETRIC MEAN = 3.60035E 01

GEOMETRIC DEVIATION = 3.09907E 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	11	11	57.89	57.89
2.6E 01 -	3.8E 01	5	16	26.32	84.21

HISTOGRAM FOR COLUMN 17 (LA PPM)

```
2.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	1	0	0	0	0	16
10.53	5.26			0.0	0.0	

MAXIMUM = 3.00000E 01

MINIMUM = 2.00000E 01

GEOMETRIC MEAN = 2.27016E 01

GEOMETRIC DEVIATION = 1.21426E 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	0	0	0.0	0.0
8.3E 00 -	1.2E 01	0	0	0.0	0.0
1.2E 01 -	1.8E 01	0	0	0.0	0.0
1.8E 01 -	2.6E 01	1	1	5.26	5.26

HISTOGRAM FOR COLUMN 18 (MO PPM)

2.0E 01 XXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
17	1	0	0	0	0	1
89.47	5.26			0.0	0.0	

MAXIMUM = 2.00000E 01

MINIMUM = 2.00000E 01

GEOMETRIC MEAN = 1.99999E 01

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	8	8	42.11	42.11
1.2E 01 -	1.8E 01	1	9	5.26	47.37

HISTOGRAM FOR COLUMN 19 (NB PPM)

```
1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	9	0	0	0	0	9
5.26	47.37			0.0	0.0	

MAXIMUM = 1.50000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.04608E 01

GEOMETRIC DEVIATION = 1.14473E 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	4	4	21.05	21.05
5.6E 00 -	8.3E 00	0	4	0.0	21.05
8.3E 00 -	1.2E 01	3	7	15.79	36.84
1.2E 01 -	1.8E 01	1	8	5.26	42.11
1.8E 01 -	2.6E 01	3	11	15.79	57.89
2.6E 01 -	3.8E 01	4	15	21.05	78.95
3.8E 01 -	5.6E 01	1	16	5.26	84.21
5.6E 01 -	8.3E 01	0	16	0.0	84.21
8.3E 01 -	1.2E 02	2	18	10.53	94.74
1.2E 02 -	1.8E 02	0	18	0.0	94.74
1.8E 02 -	2.6E 02	0	18	0.0	94.74
2.6E 02 -	3.8E 02	1	19	5.26	100.00

HISTOGRAM FOR COLUMN 20 (NI PPM)

```
5.0E 00 XXXXXXXXXXXXXXXXXXXX

7.0E 00

1.0E 01 XXXXXXXXXXXXXXXX

1.5E 01 XXXXX

2.0E 01 XXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXX

5.0E 01 XXXXX

7.0E 01

1.0E 02 XXXXXXXXXXX

1.5E 02

2.0E 02

3.0E 02 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	19
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 02

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 2.05902E 01

GEOMETRIC DEVIATION = 3.11263E 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	1	1	5.26	5.26
1.2E 01 -	1.8E 01	2	3	10.53	15.79
1.8E 01 -	2.6E 01	1	4	5.26	21.05
2.6E 01 -	3.8E 01	0	4	0.0	21.05
3.8E 01 -	5.6E 01	1	5	5.26	26.32
5.6E 01 -	8.3E 01	1	6	5.26	31.58

HISTOGRAM FOR COLUMN 21 (PB PPM)

```
1.0E 01 XXXXX

1.5E 01 XXXXXXXXXXX

2.0E 01 XXXXX

3.0E 01

5.0E 01 XXXXX

7.0E 01 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
4	9	0	0	0	0	6
21.05	47.37			0.0	0.0	

MAXIMUM = 7.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 2.32387E 01

GEOMETRIC DEVIATION = 2.14722E 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	1	1	5.26	5.26

HISTOGRAM FOR COLUMN 22 (SB PPM)

2.0E 02 XXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
18	0	0	0	0	0	1
94.74	0.0			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 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	5.26	5.26
8.3E 00 -	1.2E 01	1	2	5.26	10.53
1.2E 01 -	1.8E 01	2	4	10.53	21.05
1.8E 01 -	2.6E 01	7	11	36.84	57.89
2.6E 01 -	3.8E 01	3	14	15.79	73.68

HISTOGRAM FOR COLUMN 23 (SC PPM)

```
7.0E 00 XXXXX

1.0E 01 XXXXX

1.5E 01 XXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	5	0	0	0	0	14
0.0	26.32			0.0	0.0	

MAXIMUM = 3.00000E 01

MINIMUM = 7.00000E 00

GEOMETRIC MEAN = 1.84861E 01

GEOMETRIC DEVIATION = 1.50246E 00

FREQUENCY TABLE FOR COLUMN 24 (SN PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	1	1	5.26	5.26
1.2E 01 -	1.8E 01	0	1	0.0	5.26
1.8E 01 -	2.6E 01	1	2	5.26	10.53
2.6E 01 -	3.8E 01	0	2	0.0	10.53
3.8E 01 -	5.6E 01	1	3	5.26	15.79

HISTOGRAM FOR COLUMN 24 (SN PPM)

```
1.0E 01 XXXXX

1.5E 01

2.0E 01 XXXXX

3.0E 01

5.0E 01 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
11	5	0	0	0	0	3
57.89	26.32			0.0	0.0	

MAXIMUM = 5.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 2.15443E 01

GEOMETRIC DEVIATION = 2.24183E 00

FREQUENCY TABLE FOR COLUMN 25 (SR PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 01 -	1.2E 02	2	2	10.53	10.53
1.2E 02 -	1.8E 02	4	6	21.05	31.58
1.8E 02 -	2.6E 02	2	8	10.53	42.11
2.6E 02 -	3.8E 02	5	13	26.32	68.42
3.8E 02 -	5.6E 02	0	13	0.0	68.42
5.6E 02 -	8.3E 02	1	14	5.26	73.68
8.3E 02 -	1.2E 03	0	14	0.0	73.68
1.2E 03 -	1.8E 03	0	14	0.0	73.68
1.8E 03 -	2.6E 03	1	15	5.26	78.95

HISTOGRAM FOR COLUMN 25 (SR PPM)

```
1.0E 02 XXXXXXXXXXX

1.5E 02 XXXXXXXXXXXXXXXXXXXX

2.0E 02 XXXXXXXXXXX

3.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 02

7.0E 02 XXXXX

1.0E 03

1.5E 03

2.0E 03 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	2	0	0	0	0	15
10.53	10.53			0.0	0.0	

MAXIMUM = 2.00000E 03

MINIMUM = 1.00000E 02

GEOMETRIC MEAN = 2.45023E 02

GEOMETRIC DEVIATION = 2.16650E 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	5.26	5.26
1.2E 01 -	1.8E 01	1	2	5.26	10.53
1.8E 01 -	2.6E 01	1	3	5.26	15.79
2.6E 01 -	3.8E 01	0	3	0.0	15.79
3.8E 01 -	5.6E 01	0	3	0.0	15.79
5.6E 01 -	8.3E 01	0	3	0.0	15.79
8.3E 01 -	1.2E 02	3	6	15.79	31.58
1.2E 02 -	1.8E 02	2	8	10.53	42.11
1.8E 02 -	2.6E 02	3	11	15.79	57.89
2.6E 02 -	3.8E 02	6	17	31.58	89.47

HISTOGRAM FOR COLUMN 26 (V PPM)

```
1.0E 01 XXXXX

1.5E 01 XXXXX

2.0E 01 XXXXX

3.0E 01

5.0E 01

7.0E 01

1.0E 02 XXXXXXXXXXXXXXXX

1.5E 02 XXXXXXXXXXX

2.0E 02 XXXXXXXXXXXXXXXX

3.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	1	0	0	0	0	17
5.26	5.26			0.0	0.0	

MAXIMUM = 3.00000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.24115E 02

GEOMETRIC DEVIATION = 3.03414E 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	
17	2	0	0	0	0	0
89.47	10.53			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	5.26	5.26
1.2E 01 -	1.8E 01	4	5	21.05	26.32
1.8E 01 -	2.6E 01	6	11	31.58	57.89
2.6E 01 -	3.8E 01	4	15	21.05	78.95
3.8E 01 -	5.6E 01	0	15	0.0	78.95
5.6E 01 -	8.3E 01	1	16	5.26	84.21

HISTOGRAM FOR COLUMN 28 (Y PPM)

```
1.0E 01 XXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXX

5.0E 01

7.0E 01 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	1	0	0	0	0	16
10.53	5.26			0.0	0.0	

MAXIMUM = 7.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 2.13307E 01

GEOMETRIC DEVIATION = 1.56069E 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	0	0	0.0	0.0
2.6E 02 - 3.8E 02	1	1	5.26	5.26

HISTOGRAM FOR COLUMN 29 (ZN PPM)

3.0E 02 XXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
16	2	0	0	0	0	1
84.21	10.53			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 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	1	1	5.26	5.26
2.6E 01 -	3.8E 01	1	2	5.26	10.53
3.8E 01 -	5.6E 01	1	3	5.26	15.79
5.6E 01 -	8.3E 01	2	5	10.53	26.32
8.3E 01 -	1.2E 02	7	12	36.84	63.16
1.2E 02 -	1.8E 02	4	16	21.05	84.21
1.8E 02 -	2.6E 02	0	16	0.0	84.21
2.6E 02 -	3.8E 02	1	17	5.26	89.47

HISTOGRAM FOR COLUMN 30 (ZR PPM)

```
2.0E 01 XXXXX

3.0E 01 XXXXX

5.0E 01 XXXXX

7.0E 01 XXXXXXXXXXX

1.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 02 XXXXXXXXXXXXXXXXXXXX

2.0E 02

3.0E 02 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	0	0	0	0	0	17
10.53	0.0			0.0	0.0	

MAXIMUM = 3.00000E 02

MINIMUM = 2.00000E 01

GEOMETRIC MEAN = 9.15568E 01

GEOMETRIC DEVIATION = 1.89223E 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	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	2	2	10.53	10.53
2.6E-01 -	3.8E-01	0	2	0.0	10.53
3.8E-01 -	5.6E-01	1	3	5.26	15.79
5.6E-01 -	8.3E-01	1	4	5.26	21.05

HISTOGRAM FOR COLUMN 31 (AU PPM)

```
2.0E-01 XXXXXXXXXXX

3.0E-01

5.0E-01 XXXXX

7.0E-01 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	15	0	0	0	0	4
0.0	78.95			0.0	0.0	

MAXIMUM = 7.00000E-01

MINIMUM = 2.00000E-01

GEOMETRIC MEAN = 3.25316E-01

GEOMETRIC DEVIATION = 1.83385E 00

FREQUENCY TABLE FOR COLUMN 32 (HG PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
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	0	0	0.0	0.0
3.8E-01 -	5.6E-01	1	1	5.88	5.88
5.6E-01 -	8.3E-01	0	1	0.0	5.88
8.3E-01 -	1.2E 00	1	2	5.88	11.76
1.2E 00 -	1.8E 00	1	3	5.88	17.65
1.8E 00 -	2.6E 00	0	3	0.0	17.65
2.6E 00 -	3.8E 00	2	5	11.76	29.41
3.8E 00 -	5.6E 00	4	9	23.53	52.94
5.6E 00 -	8.3E 00	3	12	17.65	70.59
8.3E 00 -	1.2E 01	2	14	11.76	82.35

HISTOGRAM FOR COLUMN 32 (HG PPM)

```
5.0E-01 XXXXXX

7.0E-01

1.0E 00 XXXXXX

1.5E 00 XXXXXX

2.0E 00

3.0E 00 XXXXXXXXXXXX

5.0E 00 XXXXXXXXXXXXXXXXXXXXXXXX

7.0E 00 XXXXXXXXXXXXXXXXX

1.0E 01 XXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	2	0	3	14
0.0	0.0			0.0	17.65	

MAXIMUM = 9.00000E 00

MINIMUM = 4.50000E-01

GEOMETRIC MEAN = 3.66349E 00

GEOMETRIC DEVIATION = 2.39402E 00

IN THE COMPUTATIONS PERFORMED TO PRODUCE THE FOLLOWING TABLE OF GEOMETRIC MEANS AND DEVIATIONS, 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 TO 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.

A470 STATISTICAL SUMMARY DATE 6/ 9/70

ELEMENT	N	L	H	B	T	G	ANALYTICAL VALUES
FE PCT	0	0	0	0	0	0	19
MG PCT	0	0	0	0	0	0	19
CA PCT	0	3	0	0	0	0	16
TI PCT	0	0	0	0	0	0	19
MN PPM	0	0	0	0	0	0	19
AG PPM	12	4	0	0	0	0	3
AS PPM	12	0	0	0	0	3	4
AU PPM	19	0	0	0	0	0	0
B PPM	0	1	0	0	0	4	14
BA PPM	1	0	0	0	0	0	18
BE PPM	1	2	0	0	0	0	16
BI PPM	14	0	0	0	0	0	5
CD PPM	19	0	0	0	0	0	0
CO PPM	4	1	0	0	0	0	14
CR PPM	0	3	0	0	0	0	16
CU PPM	0	0	0	0	0	0	19
LA PPM	2	1	0	0	0	0	16
MO PPM	17	1	0	0	0	0	1
NB PPM	1	9	0	0	0	0	9
NI PPM	0	0	0	0	0	0	19
PB PPM	4	9	0	0	0	0	6
SB PPM	18	0	0	0	0	0	1
SC PPM	0	5	0	0	0	0	14
SN PPM	11	5	0	0	0	0	3
SR PPM	2	2	0	0	0	0	15
V PPM	1	1	0	0	0	0	17
W PPM	17	2	0	0	0	0	0
Y PPM	2	1	0	0	0	0	16
ZN PPM	16	2	0	0	0	0	1
ZR PPM	2	0	0	0	0	0	17
AU PPM	0	15	0	0	0	0	4
HG PPM	0	0	0	2	0	3	14

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
FE PCT	5.932978	2.77	19 SAMPLES AND 19 ANALYTICAL VALUES.
MG PCT	0.684914	4.12	19 SAMPLES AND 19 ANALYTICAL VALUES.
CA PCT	0.261565	5.59	3 NOT DETECTED, LESS THAN, OR TRACE VALUES. 16 REPORTED VALUES.
TI PCT	0.190565	4.14	19 SAMPLES AND 19 ANALYTICAL VALUES.
MN PPM	254.711273	3.77	19 SAMPLES AND 19 ANALYTICAL VALUES.
AG PPM	0.026570	13.79	16 NOT DETECTED, LESS THAN, OR TRACE VALUES. 3 REPORTED VALUES.
AS PPM	********	******	3 GREATER THAN VALUES. NO COMPUTATIONS.
AU PPM	********	******	19 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
B PPM	********	******	4 GREATER THAN VALUES. NO COMPUTATIONS.
BA PPM	162.874878	4.82	1 NOT DETECTED, LESS THAN, OR TRACE VALUES. 18 REPORTED VALUES.
BE PPM	********	******	3 NOT DETECTED, LESS THAN, OR TRACE VALUES. 16 REPORTED VALUES. NO COMPUTATIONS.
BI PPM	2.266676	7.87	14 NOT DETECTED, LESS THAN, OR TRACE VALUES. 5 REPORTED VALUES.
CD PPM	********	******	19 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
CO PPM	8.864196	3.23	5 NOT DETECTED, LESS THAN, OR TRACE VALUES. 14 REPORTED VALUES.
CR PPM	41.333923	6.47	3 NOT DETECTED, LESS THAN, OR TRACE VALUES. 16 REPORTED VALUES.
CU PPM	36.003403	3.10	19 SAMPLES AND 19 ANALYTICAL VALUES.
LA PPM	21.400833	1.26	3 NOT DETECTED, LESS THAN, OR TRACE VALUES. 16 REPORTED VALUES.
MO PPM	********	******	18 NOT DETECTED, LESS THAN, OR TRACE VALUES. 1 REPORTED VALUES. NO COMPUTATIONS.
NB PPM	8.219185	1.32	10 NOT DETECTED, LESS THAN, OR TRACE VALUES. 9 REPORTED VALUES.
NI PPM	20.590134	3.11	19 SAMPLES AND 19 ANALYTICAL VALUES.

PB	PPM	3.960187	4.73	13 NOT DETECTED, LESS THAN, OR TRACE VALUES.	6 REPORTED VALUES.	
SB	PPM	********	******	18 NOT DETECTED, LESS THAN, OR TRACE VALUES.	1 REPORTED VALUES.	NO COMPUTATIONS.
SC	PPM	10.599658	2.77	5 NOT DETECTED, LESS THAN, OR TRACE VALUES.	14 REPORTED VALUES.	
SN	PPM	1.206681	6.35	16 NOT DETECTED, LESS THAN, OR TRACE VALUES.	3 REPORTED VALUES.	
SR	PPM	172.600388	2.69	4 NOT DETECTED, LESS THAN, OR TRACE VALUES.	15 REPORTED VALUES.	
V	PPM	87.286469	4.39	2 NOT DETECTED, LESS THAN, OR TRACE VALUES.	17 REPORTED VALUES.	
W	PPM	********	******	19 NOT DETECTED, LESS THAN, OR TRACE VALUES.	0 REPORTED VALUES.	NO COMPUTATIONS.
Y	PPM	17.500946	1.86	3 NOT DETECTED, LESS THAN, OR TRACE VALUES.	16 REPORTED VALUES.	
ZN	PPM	********	******	18 NOT DETECTED, LESS THAN, OR TRACE VALUES.	1 REPORTED VALUES.	NO COMPUTATIONS.
ZR	PPM	68.143311	2.88	2 NOT DETECTED, LESS THAN, OR TRACE VALUES.	17 REPORTED VALUES.	
AU	PPM	0.000658	72.93	15 NOT DETECTED, LESS THAN, OR TRACE VALUES.	4 REPORTED VALUES.	
HG	PPM	********	******	3 GREATER THAN VALUES. NO COMPUTATIONS.		

TABLE 3. T. M. A-6 AND B-6 ST. SED.

	SAMPLE	FE PCT	MG PCT	CA PCT	TI PCT	MN PPM	AG PPM	AS PPM	AU PPM	B PPM	BA PPM
17	AMM189	5.0000	1.0000	0.7000	0.5000	1500.0000	0.5000N	200.0000N	10.0000N	50.0000	500.0000
18	AMM188	5.0000	0.7000	0.7000	0.5000	500.0000	0.5000N	200.0000N	10.0000N	30.0000	500.0000
19	AMM190	3.0000	0.7000	0.7000	0.5000	700.0000	0.5000N	200.0000N	10.0000N	70.0000	300.0000
20	AMM191	1.5000	0.2000	0.5000	0.3000	150.0000	0.5000N	200.0000	10.0000N	50.0000	150.0000
21	AMM187	3.0000	0.7000	0.7000	0.5000	700.0000	0.5000N	200.0000N	10.0000N	50.0000	500.0000
22	AMM186	3.0000	0.7000	0.5000	0.5000	500.0000	0.5000N	200.0000N	10.0000N	50.0000	300.0000
23	AMM192	7.0000	1.0000	0.3000	0.5000	1500.0000	0.7000	3000.0000	10.0000N	200.0000	700.0000
24	AMM194	5.0000	0.7000	0.7000	0.5000	700.0000	0.5000N	200.0000L	10.0000N	50.0000	300.0000
25	AMM193	1.5000	0.3000	0.5000	0.3000	200.0000	0.5000N	200.0000L	10.0000N	50.0000	150.0000
26	AMM196	3.0000	0.7000	0.7000	0.5000	700.0000	0.5000N	200.0000N	10.0000N	70.0000	300.0000
27	AMM197	3.0000	0.7000	0.7000	0.5000	1000.0000	0.5000N	200.0000N	10.0000N	30.0000	300.0000
28	AMM195	3.0000	0.7000	0.7000	0.5000	300.0000	0.5000N	200.0000N	10.0000N	30.0000	300.0000
29	AMM209	7.0000	0.7000	1.0000	0.7000	1500.0000	0.5000N	200.0000L	10.0000N	70.0000	500.0000
30	AMM206	5.0000	0.7000	0.7000	0.7000	1500.0000	0.5000N	200.0000	10.0000N	70.0000	500.0000
31	AMM207	10.0000	1.0000	1.0000	0.7000	1500.0000	0.5000N	200.0000L	10.0000N	150.0000	300.0000
32	AMM208	7.0000	1.0000	0.7000	0.7000	1000.0000	0.5000N	1500.0000	10.0000N	300.0000	300.0000
33	AMM210	3.0000	0.7000	1.0000	0.5000	700.0000	0.5000N	200.0000N	10.0000N	30.0000	300.0000
34	AMM211	5.0000	1.5000	1.5000	0.7000	1500.0000	0.5000N	200.0000N	10.0000N	30.0000	300.0000
35	AMM212	5.0000	0.7000	0.7000	0.7000	1500.0000	0.5000N	200.0000N	10.0000N	150.0000	700.0000
36	AMM205	20.0000	3.0000	7.0000	1.0000	2000.0000	0.5000N	200.0000N	10.0000N	15.0000	300.0000
37	AMM215	3.0000	0.7000	0.3000	0.7000	700.0000	0.5000N	200.0000N	10.0000N	70.0000	700.0000
38	AMM216	5.0000	1.0000	0.7000	0.5000	1500.0000	0.5000N	200.0000N	10.0000N	50.0000	500.0000
39	AMM213	2.0000	0.5000	0.7000	0.5000	700.0000	0.5000N	200.0000N	10.0000N	30.0000	300.0000
40	AMM214	1.5000	0.3000	0.5000	0.3000	700.0000	0.5000N	200.0000N	10.0000N	30.0000	300.0000
41	AMM204	5.0000	0.7000	0.5000	0.7000	1000.0000	0.5000N	200.0000N	10.0000N	70.0000	700.0000
42	AMM200	3.0000	0.7000	0.3000	0.3000	700.0000	0.5000N	200.0000N	10.0000N	30.0000	700.0000
43	AMM201	20.0000G	3.0000	7.0000	1.0000	2000.0000	0.5000N	200.0000N	10.0000N	15.0000	150.0000
44	AMM203	5.0000	0.7000	0.7000	0.5000	1000.0000	0.5000N	200.0000N	10.0000N	30.0000	700.0000
45	AMM202	5.0000	0.7000	0.3000	0.7000	1000.0000	0.5000N	200.0000N	10.0000N	20.0000	700.0000
46	AMM199	5.0000	1.0000	0.7000	0.7000	1000.0000	0.5000N	200.0000N	10.0000N	30.0000	700.0000
47	AMM217	5.0000	0.7000	0.5000	0.5000	1000.0000	0.5000N	200.0000N	10.0000N	50.0000	300.0000
48	AMM218	5.0000	0.5000	0.3000	0.5000	1000.0000	0.5000L	200.0000N	10.0000N	30.0000	300.0000
49	AMM219	5.0000	0.7000	0.7000	0.7000	3000.0000	0.5000N	200.0000N	10.0000N	70.0000	500.0000
50	AMM198	3.0000	0.5000	0.5000	0.3000	500.0000	0.5000N	200.0000N	10.0000N	20.0000	300.0000
51	AMM226	10.0000	1.0000	0.7000	0.7000	1500.0000	0.5000N	200.0000N	10.0000N	30.0000	300.0000
52	AMM224	10.0000	0.7000	1.0000	0.5000	5000.0000G	0.5000N	200.0000N	10.0000N	20.0000	500.0000
53	AMM225	7.0000	1.0000	0.7000	0.7000	1500.0000	0.5000L	200.0000N	10.0000N	50.0000	300.0000
54	AMM223	7.0000	1.0000	0.3000	0.7000	700.0000	0.5000N	200.0000N	10.0000N	50.0000	300.0000
55	AMM222	5.0000	0.7000	0.7000	0.7000	1500.0000	0.5000N	200.0000N	10.0000N	30.0000	300.0000
56	AMM220	5.0000	0.5000	0.7000	0.5000	1500.0000	0.5000N	200.0000N	10.0000N	30.0000	300.0000
57	AMM221	5.0000	0.7000	0.7000	0.7000	3000.0000	0.5000N	200.0000N	10.0000N	50.0000	500.0000
58	AMM227	7.0000	1.0000	0.7000	0.5000	1000.0000	0.5000N	200.0000N	10.0000N	20.0000	300.0000
59	AMM228	3.0000	0.5000	0.5000	0.3000	1000.0000	0.5000N	200.0000N	10.0000N	20.0000	200.0000
60	AMM233	7.0000	1.0000	0.7000	0.7000	1000.0000	0.5000N	200.0000N	10.0000N	30.0000	300.0000
61	AMM229	3.0000	0.7000	1.0000	0.5000	1500.0000	0.5000N	200.0000N	10.0000N	20.0000	300.0000
62	AMM232	7.0000	1.0000	1.0000	0.7000	1500.0000	0.5000N	200.0000N	10.0000N	30.0000	300.0000
63	AMM231	10.0000	0.7000	1.0000	0.7000	2000.0000	0.5000N	200.0000N	10.0000N	30.0000	300.0000
64	AMM230	10.0000	1.0000	1.5000	1.0000	1500.0000	0.5000N	200.0000N	10.0000N	50.0000	300.0000
65	AMM695	5.0000	0.5000	0.7000	0.3000	700.0000	20.0000N	200.0000N	10.0000N	70.0000	150.0000
66	AMM694	5.0000	0.5000	0.7000	0.3000	700.0000	20.0000N	200.0000N	10.0000N	30.0000	150.0000

T. M. A-6 AND B-6 ST. SED.

	SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
17	AMM189	1.0000	10.0000N	20.0000N	15.0000	70.0000	10.0000	20.0000L	5.0000N	10.0000	30.0000
18	AMM188	1.0000L	10.0000N	20.0000N	15.0000	70.0000	10.0000	20.0000N	5.0000N	10.0000	30.0000
19	AMM190	1.0000	10.0000N	20.0000N	20.0000	70.0000	30.0000	20.0000N	5.0000N	10.0000	30.0000
20	AMM191	1.0000	10.0000N	20.0000N	5.0000N	20.0000	50.0000	20.0000N	5.0000N	10.0000L	10.0000
21	AMM187	1.5000	10.0000N	20.0000N	20.0000	70.0000	20.0000	20.0000L	5.0000N	10.0000	30.0000
22	AMM186	1.0000	10.0000N	20.0000N	20.0000	70.0000	30.0000	20.0000L	5.0000N	10.0000	30.0000
23	AMM192	1.5000	10.0000L	20.0000N	70.0000	100.0000	30.0000	20.0000L	7.0000	10.0000	70.0000
24	AMM194	1.0000	10.0000N	20.0000N	10.0000	70.0000	15.0000	20.0000L	5.0000N	10.0000	30.0000
25	AMM193	1.0000	10.0000N	20.0000N	5.0000N	30.0000	7.0000	20.0000L	5.0000N	10.0000L	15.0000
26	AMM196	1.5000	10.0000N	20.0000N	10.0000	70.0000	20.0000	20.0000L	5.0000N	10.0000L	30.0000
27	AMM197	1.5000	10.0000N	20.0000N	10.0000	70.0000	15.0000	20.0000L	5.0000N	10.0000	30.0000
28	AMM195	1.0000L	10.0000N	20.0000N	5.0000N	30.0000	10.0000	20.0000L	5.0000N	10.0000L	15.0000
29	AMM209	1.5000	10.0000N	20.0000N	20.0000	100.0000	30.0000	20.0000L	5.0000L	10.0000	30.0000
30	AMM206	1.5000	10.0000N	20.0000N	30.0000	70.0000	70.0000	20.0000L	5.0000	10.0000	50.0000
31	AMM207	1.5000	10.0000N	20.0000N	70.0000	150.0000	70.0000	20.0000L	5.0000L	10.0000	70.0000
32	AMM208	1.5000	10.0000N	20.0000N	30.0000	150.0000	100.0000	20.0000L	5.0000L	10.0000	70.0000
33	AMM210	1.5000	10.0000N	20.0000N	15.0000	70.0000	20.0000	20.0000L	5.0000L	10.0000	50.0000
34	AMM211	1.0000	10.0000N	20.0000N	15.0000	70.0000	10.0000	20.0000N	5.0000N	10.0000	30.0000
35	AMM212	1.5000	10.0000N	20.0000N	30.0000	100.0000	30.0000	20.0000L	5.0000L	10.0000L	70.0000
36	AMM205	1.0000L	10.0000N	20.0000N	70.0000	100.0000	50.0000	20.0000L	5.0000L	10.0000	50.0000
37	AMM215	1.0000	10.0000N	20.0000N	30.0000	100.0000	30.0000	20.0000N	5.0000N	10.0000	70.0000
38	AMM216	1.0000L	10.0000N	20.0000N	20.0000	70.0000	20.0000	20.0000N	5.0000N	10.0000	30.0000
39	AMM213	1.0000	10.0000N	20.0000N	15.0000	70.0000	20.0000	20.0000L	5.0000L	10.0000L	30.0000
40	AMM214	1.0000	10.0000N	20.0000N	10.0000	30.0000	15.0000	20.0000N	5.0000N	10.0000	30.0000
41	AMM204	1.0000	10.0000N	20.0000N	20.0000	100.0000	30.0000	20.0000L	5.0000L	10.0000	70.0000
42	AMM200	1.0000	10.0000N	20.0000N	10.0000	150.0000	50.0000	20.0000L	5.0000N	10.0000	50.0000
43	AMM201	1.0000N	10.0000N	20.0000N	70.0000	150.0000	200.0000	20.0000L	5.0000N	10.0000L	30.0000
44	AMM203	1.0000	10.0000N	20.0000N	30.0000	150.0000	30.0000	20.0000L	5.0000L	10.0000	70.0000
45	AMM202	1.0000	10.0000N	20.0000N	30.0000	150.0000	50.0000	20.0000N	7.0000	10.0000	70.0000
46	AMM199	1.5000	10.0000N	20.0000N	15.0000	100.0000	30.0000	20.0000L	5.0000N	10.0000	50.0000
47	AMM217	1.0000L	10.0000N	20.0000N	20.0000	100.0000	20.0000	20.0000N	5.0000N	10.0000	70.0000
48	AMM218	1.0000L	10.0000N	20.0000N	30.0000	100.0000	30.0000	20.0000N	5.0000N	10.0000L	100.0000
49	AMM219	2.0000	10.0000N	20.0000N	30.0000	150.0000	70.0000	20.0000L	5.0000L	10.0000	150.0000
50	AMM198	1.0000	10.0000N	20.0000N	5.0000	70.0000	20.0000	20.0000L	5.0000N	10.0000	30.0000
51	AMM226	1.0000	10.0000N	20.0000N	20.0000	70.0000	30.0000	20.0000N	5.0000L	10.0000	70.0000
52	AMM224	2.0000	10.0000N	20.0000N	200.0000	150.0000	100.0000	20.0000L	50.0000	10.0000	700.0000
53	AMM225	1.0000	10.0000N	20.0000N	20.0000	100.0000	50.0000	20.0000N	5.0000L	10.0000	70.0000
54	AMM223	1.0000L	10.0000N	20.0000N	20.0000	100.0000	30.0000	20.0000N	5.0000L	10.0000	70.0000
55	AMM222	1.0000	10.0000N	20.0000N	30.0000	70.0000	30.0000	20.0000L	5.0000N	10.0000L	70.0000
56	AMM220	1.0000	10.0000N	20.0000N	15.0000	70.0000	30.0000	20.0000L	5.0000N	10.0000	100.0000
57	AMM221	1.5000	10.0000N	20.0000N	70.0000	150.0000	50.0000	20.0000L	5.0000L	10.0000	150.0000
58	AMM227	1.0000N	10.0000N	20.0000N	20.0000	150.0000	30.0000	20.0000N	5.0000L	10.0000	70.0000
59	AMM228	1.0000L	10.0000N	20.0000N	20.0000	70.0000	15.0000	20.0000N	5.0000N	10.0000	30.0000
60	AMM233	1.0000L	10.0000N	20.0000N	20.0000	70.0000	30.0000	20.0000N	5.0000N	10.0000	30.0000
61	AMM229	1.0000	10.0000N	20.0000N	15.0000	70.0000	15.0000	20.0000N	5.0000N	10.0000	30.0000
62	AMM232	1.0000L	10.0000N	20.0000N	20.0000	70.0000	30.0000	20.0000N	5.0000L	10.0000	30.0000
63	AMM231	1.0000L	10.0000N	20.0000N	20.0000	70.0000	20.0000	20.0000L	5.0000L	10.0000	30.0000
64	AMM230	1.0000	10.0000N	20.0000N	20.0000	70.0000	20.0000	20.0000L	5.0000L	10.0000	30.0000
65	AMM695	7.0000	10.0000N	20.0000N	10.0000	20.0000	10.0000	20.0000L	5.0000L	10.0000	10.0000
66	AMM694	5.0000	10.0000N	20.0000N	10.0000	15.0000	10.0000	500.0000	5.0000L	10.0000L	15.0000

T. M. A-6 AND B-6 ST. SED.

	SAMPLE	PB PPM	SB PPM	SC PPM	SN PPM	SR PPM	V PPM	W PPM	Y PPM	ZN PPM	ZR PPM
17	AMM189	10.0000	100.0000N	15.0000	10.0000N	150.0000	150.0000	50.0000N	15.0000	200.0000N	150.0000
18	AMM188	15.0000	100.0000N	15.0000	10.0000N	150.0000	150.0000	50.0000N	15.0000	200.0000N	200.0000
19	AMM190	15.0000	100.0000N	15.0000	10.0000N	150.0000	150.0000	50.0000N	15.0000	200.0000N	150.0000
20	AMM191	10.0000	100.0000N	7.0000	10.0000N	100.0000	50.0000	50.0000N	15.0000	200.0000N	100.0000
21	AMM187	20.0000	100.0000N	15.0000	10.0000N	100.0000	150.0000	50.0000N	15.0000	200.0000N	150.0000
22	AMM186	15.0000	100.0000N	15.0000	10.0000N	100.0000L	150.0000	50.0000N	20.0000	200.0000L	100.0000
23	AMM192	30.0000	100.0000N	15.0000	10.0000	150.0000	200.0000	50.0000N	30.0000	200.0000L	150.0000
24	AMM194	10.0000	100.0000N	10.0000	10.0000N	100.0000L	150.0000	50.0000N	15.0000	200.0000N	150.0000
25	AMM193	10.0000L	100.0000N	7.0000	10.0000N	100.0000	100.0000	50.0000N	15.0000	200.0000N	100.0000
26	AMM196	10.0000	100.0000N	15.0000	10.0000N	100.0000L	200.0000	50.0000N	15.0000	200.0000N	100.0000
27	AMM197	15.0000	100.0000N	15.0000	10.0000N	100.0000L	150.0000	50.0000N	15.0000	200.0000N	150.0000
28	AMM195	10.0000	100.0000N	10.0000	10.0000N	100.0000L	100.0000	50.0000N	15.0000	200.0000N	150.0000
29	AMM209	20.0000	100.0000N	20.0000	10.0000N	100.0000	200.0000	50.0000N	30.0000	200.0000N	200.0000
30	AMM206	15.0000	100.0000N	15.0000	10.0000N	200.0000	200.0000	50.0000N	20.0000	200.0000L	150.0000
31	AMM207	30.0000	100.0000N	20.0000	10.0000N	100.0000	300.0000	50.0000N	30.0000	200.0000N	300.0000
32	AMM208	15.0000	100.0000N	15.0000	10.0000N	100.0000	200.0000	50.0000N	20.0000	200.0000N	150.0000
33	AMM210	20.0000	100.0000N	15.0000	10.0000N	100.0000	150.0000	50.0000N	20.0000	200.0000N	300.0000
34	AMM211	15.0000	100.0000N	20.0000	10.0000N	150.0000	150.0000	50.0000N	20.0000	200.0000N	150.0000
35	AMM212	15.0000	100.0000N	15.0000	10.0000N	100.0000	200.0000	50.0000N	20.0000	200.0000N	150.0000
36	AMM205	10.0000L	100.0000N	30.0000	10.0000N	700.0000	1000.0000	50.0000N	30.0000	200.0000N	100.0000
37	AMM215	10.0000	100.0000N	15.0000	10.0000N	100.0000	200.0000	50.0000N	10.0000	200.0000N	150.0000
38	AMM216	10.0000	100.0000N	15.0000	10.0000N	150.0000	200.0000	50.0000N	15.0000	200.0000N	150.0000
39	AMM213	15.0000	100.0000N	10.0000	10.0000N	100.0000L	150.0000	50.0000N	20.0000	200.0000N	150.0000
40	AMM214	15.0000	100.0000N	7.0000	10.0000N	100.0000L	150.0000	50.0000N	15.0000	200.0000N	70.0000
41	AMM204	20.0000	100.0000N	15.0000	10.0000N	100.0000	200.0000	50.0000N	15.0000	200.0000N	150.0000
42	AMM200	50.0000	100.0000N	10.0000	10.0000N	150.0000	200.0000	50.0000N	10.0000	200.0000N	100.0000
43	AMM201	10.0000L	100.0000N	30.0000	10.0000N	300.0000	1000.0000	50.0000N	30.0000	200.0000L	70.0000
44	AMM203	30.0000	100.0000N	15.0000	10.0000N	150.0000	200.0000	50.0000N	20.0000	200.0000L	200.0000
45	AMM202	50.0000	100.0000N	15.0000	10.0000N	150.0000	200.0000	50.0000N	20.0000	200.0000L	100.0000
46	AMM199	20.0000	100.0000N	15.0000	10.0000N	100.0000	200.0000	50.0000N	20.0000	200.0000N	200.0000
47	AMM217	10.0000	100.0000N	15.0000	10.0000N	100.0000	200.0000	50.0000N	15.0000	200.0000N	100.0000
48	AMM218	15.0000	100.0000N	15.0000	10.0000N	100.0000L	200.0000	50.0000N	15.0000	200.0000L	100.0000
49	AMM219	30.0000	100.0000N	20.0000	10.0000N	100.0000L	300.0000	50.0000N	20.0000	200.0000L	200.0000
50	AMM198	15.0000	100.0000N	10.0000	10.0000N	100.0000L	150.0000	50.0000N	15.0000	200.0000N	150.0000
51	AMM226	10.0000	100.0000N	20.0000	10.0000N	150.0000	300.0000	50.0000N	15.0000	200.0000L	300.0000
52	AMM224	15.0000	100.0000N	20.0000	10.0000N	200.0000	300.0000	50.0000N	30.0000	2000.0000	70.0000
53	AMM225	15.0000	100.0000N	20.0000	10.0000N	150.0000	300.0000	50.0000N	15.0000	200.0000L	200.0000
54	AMM223	10.0000	100.0000N	20.0000	10.0000N	150.0000	300.0000	50.0000N	15.0000	200.0000N	150.0000
55	AMM222	15.0000	100.0000N	15.0000	10.0000N	100.0000	200.0000	50.0000N	15.0000	200.0000N	200.0000
56	AMM220	20.0000	100.0000N	15.0000	10.0000N	150.0000	200.0000	50.0000N	15.0000	200.0000L	150.0000
57	AMM221	20.0000	100.0000N	15.0000	10.0000N	100.0000	300.0000	50.0000N	20.0000	200.0000L	200.0000
58	AMM227	10.0000N	100.0000N	15.0000	10.0000N	150.0000	200.0000	50.0000N	10.0000	200.0000N	70.0000
59	AMM228	10.0000	100.0000N	10.0000	10.0000N	100.0000	200.0000	50.0000N	15.0000	200.0000N	100.0000
60	AMM233	10.0000L	100.0000N	15.0000	10.0000N	150.0000	200.0000	50.0000N	15.0000	200.0000N	150.0000
61	AMM229	10.0000	100.0000N	15.0000	10.0000N	200.0000	200.0000	50.0000N	15.0000	200.0000N	300.0000
62	AMM232	10.0000L	100.0000N	15.0000	10.0000N	200.0000	200.0000	50.0000N	20.0000	200.0000N	300.0000
63	AMM231	10.0000	100.0000N	15.0000	10.0000N	200.0000	300.0000	50.0000N	15.0000	200.0000N	150.0000
64	AMM230	10.0000L	100.0000N	20.0000	10.0000N	300.0000	300.0000	50.0000N	20.0000	200.0000N	300.0000
65	AMM695	20.0000	100.0000N	10.0000	10.0000N	100.0000	50.0000	50.0000N	150.0000	200.0000N	300.0000
66	AMM694	30.0000	100.0000N	10.0000	10.0000N	100.0000	70.0000	50.0000N	30.0000	200.0000N	100.0000

T. M. A-6 AND B-6 ST. SED.

	SAMPLE	AU PPM	HG PPM
17	AMM189	0.2000L	0.1100
18	AMM188	0.0200L	0.1300
19	AMM190	0.0400L	1.3000
20	AMM191	0.3000	0.8000
21	AMM187	0.0400L	0.2600
22	AMM186	0.0200L	0.4500
23	AMM192	0.1000L	0.1000
24	AMM194	0.2000L	1.1000
25	AMM193	0.1000L	0.7000
26	AMM196	0.0400L	0.1800
27	AMM197	0.0400L	0.3500
28	AMM195	0.0040L	0.2600
29	AMM209	0.0400L	0.1500
30	AMM206	0.0200L	0.1400
31	AMM207	0.0400L	0.2600
32	AMM208	0.0200L	0.1400
33	AMM210	0.0200L	0.3500
34	AMM211	0.0200L	0.1500
35	AMM212	0.1000L	0.2200
36	AMM205	0.0200L	0.2200
37	AMM215	0.1000L	0.1500
38	AMM216	0.0400L	0.1400
39	AMM213	0.1000L	0.4500
40	AMM214	0.2000L	0.6500
41	AMM204	0.2000L	0.5500
42	AMM200	0.2000L	0.3200
43	AMM201	0.0200L	0.1600
44	AMM203	0.1000L	1.1000
45	AMM202	0.0200L	1.3000
46	AMM199	0.0200L	0.2700
47	AMM217	0.0400L	0.3000
48	AMM218	0.1000L	0.3500
49	AMM219	0.1000L	0.5500
50	AMM198	0.0400L	0.5500
51	AMM226	0.0200L	0.2500
52	AMM224	0.2000L	0.5500
53	AMM225	0.0400L	0.1600
54	AMM223	0.1000L	0.1400
55	AMM222	0.0400L	0.7500
56	AMM220	0.2000L	1.1000
57	AMM221	0.0400L	0.8000
58	AMM227	0.1000L	0.1800
59	AMM228	0.1000L	0.8000
60	AMM233	0.0200L	0.1000
61	AMM229	0.2000L	0.7500
62	AMM232	0.0200L	0.1200
63	AMM231	0.0400L	0.1600
64	AMM230	0.0200L	0.0800
65	AMM695	0.1000L	0.2400
66	AMM694	0.1000L	0.7000

T. M. A-6 AND B-6 ST. SED.

	SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
67	AMM691	2.0000	10.0000N	20.0000N	20.0000	70.0000	20.0000	20.0000L	5.0000L	10.0000	30.0000
68	AMM692	7.0000	10.0000N	20.0000N	20.0000	70.0000	30.0000	30.0000	5.0000L	10.0000	30.0000
69	AMM690	1.5000	10.0000N	20.0000N	15.0000	70.0000	20.0000	20.0000L	5.0000L	10.0000	30.0000
70	AMM689	1.5000	10.0000N	20.0000N	20.0000	50.0000	15.0000	20.0000L	5.0000N	10.0000	30.0000
71	AMM687	5.0000	10.0000N	20.0000N	15.0000	30.0000	30.0000	20.0000L	5.0000L	10.0000	30.0000
72	AMM688	1.5000	10.0000N	20.0000N	30.0000	70.0000	30.0000	300.0000	5.0000L	10.0000	30.0000
73	AMM686	1.5000	10.0000N	20.0000N	30.0000	50.0000	30.0000	20.0000L	5.0000L	10.0000	30.0000
74	AMM685	2.0000	10.0000N	20.0000N	20.0000	70.0000	30.0000	100.0000	5.0000L	10.0000	50.0000
75	AMM684	3.0000	10.0000N	20.0000N	15.0000	30.0000	10.0000	20.0000L	5.0000L	10.0000	20.0000

T. M. A-6 AND B-6 ST. SED.

	SAMPLE	FE PCT	MG PCT	CA PCT	TI PCT	MN PPM	AG PPM	AS PPM	AU PPM	B PPM	BA PPM
67	AMM691	5.0000	1.0000	0.7000	0.5000	1000.0000	20.0000L	200.0000N	10.0000N	50.0000	300.0000
68	AMM692	5.0000	0.7000	0.7000	0.3000	1500.0000	20.0000N	200.0000N	10.0000N	100.0000	300.0000
69	AMM690	5.0000	1.0000	0.7000	0.5000	700.0000	20.0000N	200.0000N	10.0000N	50.0000	300.0000
70	AMM689	5.0000	0.7000	0.7000	0.3000	1000.0000	20.0000N	200.0000N	10.0000N	30.0000	300.0000
71	AMM687	5.0000	0.5000	0.7000	0.3000	700.0000	20.0000N	200.0000N	10.0000N	70.0000	300.0000
72	AMM688	5.0000	1.0000	0.7000	0.5000	1000.0000	20.0000N	200.0000N	10.0000N	30.0000	300.0000
73	AMM686	5.0000	0.7000	0.7000	0.3000	700.0000	20.0000N	200.0000N	10.0000N	70.0000	300.0000
74	AMM685	5.0000	1.0000	0.7000	0.5000	1000.0000	20.0000N	200.0000N	10.0000N	30.0000	300.0000
75	AMM684	5.0000	0.7000	0.7000	0.5000	1500.0000	20.0000N	200.0000N	10.0000N	30.0000	300.0000

T. M. A-6 AND B-6 ST. SED.

	SAMPLE	PB PPM	SB PPM	SC PPM	SN PPM	SR PPM	V PPM	W PPM	Y PPM	ZN PPM	ZR PPM
67	AMM691	15.0000	100.0000N	15.0000	10.0000N	150.0000	150.0000	50.0000N	15.0000	200.0000N	150.0000
68	AMM692	15.0000	100.0000N	15.0000	10.0000N	150.0000	150.0000	50.0000N	30.0000	200.0000N	100.0000
69	AMM690	15.0000	100.0000N	15.0000	10.0000N	150.0000	150.0000	50.0000N	15.0000	200.0000N	200.0000
70	AMM689	10.0000	100.0000N	15.0000	10.0000N	100.0000	150.0000	50.0000N	15.0000	200.0000N	100.0000
71	AMM687	10.0000	100.0000N	15.0000	10.0000N	100.0000	150.0000	50.0000N	150.0000	200.0000N	150.0000
72	AMM688	10.0000	100.0000N	15.0000	10.0000N	150.0000	150.0000	50.0000N	30.0000	200.0000N	150.0000
73	AMM686	20.0000	100.0000N	15.0000	10.0000N	150.0000	150.0000	50.0000N	15.0000	200.0000N	100.0000
74	AMM685	15.0000	100.0000N	15.0000	10.0000N	150.0000	150.0000	50.0000N	20.0000	200.0000N	150.0000
75	AMM684	15.0000	100.0000N	10.0000	10.0000N	150.0000	70.0000	50.0000N	20.0000	200.0000N	200.0000

T. M. A-6 AND B-6 ST. SED.

	SAMPLE	AU PPM	HG PPM
67	AMM691	0.0200L	0.3500
68	AMM692	0.0 B	1.6000
69	AMM690	0.0200L	0.3500
70	AMM689	0.0400L	0.3500
71	AMM687	0.0 B	10.0000
72	AMM688	0.1000L	6.0000
73	AMM686	0.1000L	0.6000
74	AMM685	0.0400L	0.5500
75	AMM684	0.0200L	0.3000

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	3	3	5.08	5.08
1.8E 00 -	2.6E 00	1	4	1.69	6.78
2.6E 00 -	3.8E 00	12	16	20.34	27.12
3.8E 00 -	5.6E 00	28	44	47.46	74.58
5.6E 00 -	8.3E 00	8	52	13.56	88.14
8.3E 00 -	1.2E 01	5	57	8.47	96.61
1.2E 01 -	1.8E 01	0	57	0.0	96.61
1.8E 01 -	2.6E 01	1	58	1.69	98.31

HISTOGRAM FOR COLUMN 1 (FE PCT)

```
1.5E 00 XXXXX

2.0E 00 XX

3.0E 00 XXXXXXXXXXXXXXXXXXXX

5.0E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

7.0E 00 XXXXXXXXXXXXXX

1.0E 01 XXXXXXXX

1.5E 01

2.0E 01 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	1	58
0.0	0.0			0.0	1.69	

MAXIMUM = 2.00000E 01

MINIMUM = 1.50000E 00

GEOMETRIC MEAN = 4.73854E 00

GEOMETRIC DEVIATION = 1.62347E 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	1	1	1.69	1.69
2.6E-01 -	3.8E-01	2	3	3.39	5.08
3.8E-01 -	5.6E-01	8	11	13.56	18.64
5.6E-01 -	8.3E-01	28	39	47.46	66.10
8.3E-01 -	1.2E 00	17	56	28.81	94.92
1.2E 00 -	1.8E 00	1	57	1.69	96.61
1.8E 00 -	2.6E 00	0	57	0.0	96.61
2.6E 00 -	3.8E 00	2	59	3.39	100.00

HISTOGRAM FOR COLUMN 2 (MG PCT)

```
2.0E-01 XX

3.0E-01 XXX

5.0E-01 XXXXXXXXXXXXXX

7.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 00 XX

2.0E 00

3.0E 00 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	59
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 00

MINIMUM = 2.00000E-01

GEOMETRIC MEAN = 7.50337E-01

GEOMETRIC DEVIATION = 1.53360E 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	6	6	10.17	10.17
3.8E-01 -	5.6E-01	8	14	13.56	23.73
5.6E-01 -	8.3E-01	34	48	57.63	81.36
8.3E-01 -	1.2E 00	7	55	11.86	93.22
1.2E 00 -	1.8E 00	2	57	3.39	96.61
1.8E 00 -	2.6E 00	0	57	0.0	96.61
2.6E 00 -	3.8E 00	0	57	0.0	96.61
3.8E 00 -	5.6E 00	0	57	0.0	96.61
5.6E 00 -	8.3E 00	2	59	3.39	100.00

HISTOGRAM FOR COLUMN 3 (CA PCT)

```
3.0E-01 XXXXXXXXXX

5.0E-01 XXXXXXXXXXXXXX

7.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 00 XXXXXXXXXXXX

1.5E 00 XXX

2.0E 00

3.0E 00

5.0E 00

7.0E 00 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	59
0.0	0.0			0.0	0.0	

MAXIMUM = 7.00000E 00

MINIMUM = 3.00000E-01

GEOMETRIC MEAN = 7.10166E-01

GEOMETRIC DEVIATION = 1.74171E 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	12	12	20.34	20.34
3.8E-01 -	5.6E-01	25	37	42.37	62.71
5.6E-01 -	8.3E-01	19	56	32.20	94.92
8.3E-01 -	1.2E 00	3	59	5.08	100.00

HISTOGRAM FOR COLUMN 4 (TI PCT)

```
3.0E-01 XXXXXXXXXXXXXXXXXXX

5.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

7.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 00 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	59
0.0	0.0			0.0	0.0	

MAXIMUM = 1.00000E 00

MINIMUM = 3.00000E-01

GEOMETRIC MEAN = 5.20252E-01

GEOMETRIC DEVIATION = 1.40230E 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	1	1	1.69	1.69
1.8E 02 -	2.6E 02	1	2	1.69	3.39
2.6E 02 -	3.8E 02	1	3	1.69	5.08
3.8E 02 -	5.6E 02	3	6	5.08	10.17
5.6E 02 -	8.3E 02	15	21	25.42	35.59
8.3E 02 -	1.2E 03	15	36	25.42	61.02
1.2E 03 -	1.8E 03	17	53	28.81	89.83
1.8E 03 -	2.6E 03	3	56	5.08	94.92
2.6E 03 -	3.8E 03	2	58	3.39	98.31

HISTOGRAM FOR COLUMN 5 (MN PPM)

```
1.5E 02 XX

2.0E 02 XX

3.0E 02 XX

5.0E 02 XXXXX

7.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 03 XXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 03 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 03 XXXXX

3.0E 03 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	1	58
0.0	0.0			0.0	1.69	

MAXIMUM = 3.00000E 03

MINIMUM = 1.50000E 02

GEOMETRIC MEAN = 9.83396E 02

GEOMETRIC DEVIATION = 1.74356E 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	1	1	1.69	1.69

HISTOGRAM FOR COLUMN 6 (AG PPM)

7.0E-01 XX

N	L	H	B	T	G	ANALYTICAL VALUES
55	3	0	0	0	0	1
93.22	5.08			0.0	0.0	

MAXIMUM = 7.00000E-01

MINIMUM = 7.00000E-01

GEOMETRIC MEAN = 7.00000E-01

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	2	2	3.39	3.39
2.6E 02 -	3.8E 02	0	2	0.0	3.39
3.8E 02 -	5.6E 02	0	2	0.0	3.39
5.6E 02 -	8.3E 02	0	2	0.0	3.39
8.3E 02 -	1.2E 03	0	2	0.0	3.39
1.2E 03 -	1.8E 03	1	3	1.69	5.08
1.8E 03 -	2.6E 03	0	3	0.0	5.08
2.6E 03 -	3.8E 03	1	4	1.69	6.78

HISTOGRAM FOR COLUMN 7 (AS PPM)

```
2.0E 02 XXX

3.0E 02

5.0E 02

7.0E 02

1.0E 03

1.5E 03 XX

2.0E 03

3.0E 03 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
51	4	0	0	0	0	4
86.44	6.78			0.0	0.0	

MAXIMUM = 3.00000E 03

MINIMUM = 2.00000E 02

GEOMETRIC MEAN = 6.51354E 02

GEOMETRIC DEVIATION = 4.02469E 00

FREQUENCY TABLE FOR COLUMN 8 (AU PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	ANALYTICAL VALUES
N	L	H	8	T	G	
59	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	0	0	0.0	0.0
1.2E 01 -	1.8E 01	2	2	3.39	3.39
1.8E 01 -	2.6E 01	6	8	10.17	13.56
2.6E 01 -	3.8E 01	22	30	37.29	50.85
3.8E 01 -	5.6E 01	14	44	23.73	74.58
5.6E 01 -	8.3E 01	10	54	16.95	91.53
8.3E 01 -	1.2E 02	1	55	1.69	93.22
1.2E 02 -	1.8E 02	2	57	3.39	96.61
1.8E 02 -	2.6E 02	1	58	1.69	98.31
2.6E 02 -	3.8E 02	1	59	1.69	100.00

HISTOGRAM FOR COLUMN 9 (B PPM)

```
1.5E 01 XXX

2.0E 01 XXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 01 XXXXXXXXXXXXXXXXXXXXXXXX

7.0E 01 XXXXXXXXXXXXXXXXX

1.0E 02 XX

1.5E 02 XXX

2.0E 02 XX

3.0E 02 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	59
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 02

MINIMUM = 1.50000E 01

GEOMETRIC MEAN = 4.24114E 01

GEOMETRIC DEVIATION = 1.83160E 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	5	5	8.47	8.47
1.8E 02 -	2.6E 02	1	6	1.69	10.17
2.6E 02 -	3.8E 02	36	42	61.02	71.19
3.8E 02 -	5.6E 02	9	51	15.25	86.44
5.6E 02 -	8.3E 02	8	59	13.56	100.00

HISTOGRAM FOR COLUMN 10 (BA PPM)

```
1.5E 02 XXXXXXXX

2.0E 02 XX

3.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 02 XXXXXXXXXXXXXXX

7.0E 02 XXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	59
0.0	0.0			0.0	0.0	

MAXIMUM = 7.00000E 02

MINIMUM = 1.50000E 02

GEOMETRIC MEAN = 3.40685E 02

GEOMETRIC DEVIATION = 1.50527E 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	21	21	35.59	35.59
1.2E 00 -	1.8E 00	16	37	27.12	62.71
1.8E 00 -	2.6E 00	4	41	6.78	69.49
2.6E 00 -	3.8E 00	1	42	1.69	71.19
3.8E 00 -	5.6E 00	2	44	3.39	74.58
5.6E 00 -	8.3E 00	2	46	3.39	77.97

HISTOGRAM FOR COLUMN 11 (BE PPM)

```
1.0E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 00 XXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 00 XXXXXXX

3.0E 00 XX

5.0E 00 XXX

7.0E 00 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	11	0	0	0	0	46
3.39	18.64			0.0	0.0	

MAXIMUM = 7.00000E 00

MINIMUM = 1.00000E 00

GEOMETRIC MEAN = 1.46194E 00

GEOMETRIC DEVIATION = 1.67160E 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	
58	1	0	0	0	0	0
98.31	1.69			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	B	T	G	
59	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	1	1	1.69	1.69
5.6E 00 -	8.3E 00	0	1	0.0	1.69
8.3E 00 -	1.2E 01	7	8	11.86	13.56
1.2E 01 -	1.8E 01	11	19	18.64	32.20
1.8E 01 -	2.6E 01	20	39	33.90	66.10
2.6E 01 -	3.8E 01	11	50	18.64	84.75
3.8E 01 -	5.6E 01	0	50	0.0	84.75
5.6E 01 -	8.3E 01	5	55	8.47	93.22
8.3E 01 -	1.2E 02	0	55	0.0	93.22
1.2E 02 -	1.8E 02	0	55	0.0	93.22
1.8E 02 -	2.6E 02	1	56	1.69	94.92

HISTOGRAM FOR COLUMN 14 (CO PPM)

```
5.0E 00 XX

7.0E 00

1.0E 01 XXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXX

5.0E 01

7.0E 01 XXXXXXXX

1.0E 02

1.5E 02

2.0E 02 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
3	0	0	0	0	0	56
5.08	0.0			0.0	0.0	

MAXIMUM = 2.00000E 02

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 2.13366E 01

GEOMETRIC DEVIATION = 1.85289E 00

FREQUENCY TABLE FOR COLUMN 15 (CR PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	0	0	0.0	0.0
5.6E 00 -	8.3E 00	0	0	0.0	0.0
8.3E 00 -	1.2E 01	0	0	0.0	0.0
1.2E 01 -	1.8E 01	1	1	1.69	1.69
1.8E 01 -	2.6E 01	2	3	3.39	5.08
2.6E 01 -	3.8E 01	5	8	8.47	13.56
3.8E 01 -	5.6E 01	2	10	3.39	16.95
5.6E 01 -	8.3E 01	28	38	47.46	64.41
8.3E 01 -	1.2E 02	11	49	18.64	83.05
1.2E 02 -	1.8E 02	10	59	16.95	100.00

HISTOGRAM FOR COLUMN 15 (CR PPM)

```
1.5E 01 XX

2.0E 01 XXX

3.0E 01 XXXXXXXX

5.0E 01 XXX

7.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 02 XXXXXXXXXXXXXXXXXX

1.5E 02 XXXXXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	59
0.0	0.0			0.0	0.0	

MAXIMUM = 1.50000E 02

MINIMUM = 1.50000E 01

GEOMETRIC MEAN = 7.31397E 01

GEOMETRIC DEVIATION = 1.70257E 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	0	0	0.0	0.0
5.6E 00 -	8.3E 00	1	1	1.69	1.69
8.3E 00 -	1.2E 01	7	8	11.86	13.56
1.2E 01 -	1.8E 01	6	14	10.17	23.73
1.8E 01 -	2.6E 01	11	25	18.64	42.37
2.6E 01 -	3.8E 01	22	47	37.29	79.66
3.8E 01 -	5.6E 01	6	53	10.17	89.83
5.6E 01 -	8.3E 01	3	56	5.08	94.92
8.3E 01 -	1.2E 02	2	58	3.39	98.31
1.2E 02 -	1.8E 02	0	58	0.0	98.31
1.8E 02 -	2.6E 02	1	59	1.69	100.00

HISTOGRAM FOR COLUMN 16 (CU PPM)

```
7.0E 00 XX

1.0E 01 XXXXXXXXXXXX

1.5E 01 XXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 01 XXXXXXXXXX

7.0E 01 XXXXX

1.0E 02 XXX

1.5E 02

2.0E 02 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	59
0.0	0.0			0.0	0.0	

MAXIMUM = 2.00000E 02

MINIMUM = 7.00000E 00

GEOMETRIC MEAN = 2.62610E 01

GEOMETRIC DEVIATION = 1.91374E 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	0	0	0.0	0.0
2.6E 01 -	3.8E 01	1	1	1.69	1.69
3.8E 01 -	5.6E 01	0	1	0.0	1.69
5.6E 01 -	8.3E 01	0	1	0.0	1.69
8.3E 01 -	1.2E 02	1	2	1.69	3.39
1.2E 02 -	1.8E 02	0	2	0.0	3.39
1.8E 02 -	2.6E 02	0	2	0.0	3.39
2.6E 02 -	3.8E 02	1	3	1.69	5.08
3.8E 02 -	5.6E 02	1	4	1.69	6.78

HISTOGRAM FOR COLUMN 17 (LA PPM)

```
3.0E 01 XX

5.0E 01

7.0E 01

1.0E 02 XX

1.5E 02

2.0E 02

3.0E 02 XX

5.0E 02 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
18	37	0	0	0	0	4
30.51	62.71			0.0	0.0	

MAXIMUM = 5.00000E 02

MINIMUM = 3.00000E 01

GEOMETRIC MEAN = 1.45647E 02

GEOMETRIC DEVIATION = 3.48741E 00

FREQUENCY TABLE FOR COLUMN 18 (MO PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	1	1	1.69	1.69
5.6E 00 -	8.3E 00	2	3	3.39	5.08
8.3E 00 -	1.2E 01	0	3	0.0	5.08
1.2E 01 -	1.8E 01	0	3	0.0	5.08
1.8E 01 -	2.6E 01	0	3	0.0	5.08
2.6E 01 -	3.8E 01	0	3	0.0	5.08
3.8E 01 -	5.6E 01	1	4	1.69	6.78

HISTOGRAM FOR COLUMN 18 (MO PPM)

```
5.0E 00 XX

7.0E 00 XXX

1.0E 01

1.5E 01

2.0E 01

3.0E 01

5.0E 01 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
27	28	0	0	0	0	4
45.76	47.46			0.0	0.0	

MAXIMUM = 5.00000E 01

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 1.05204E 01

GEOMETRIC DEVIATION = 2.86100E 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	49	49	83.05	83.05

HISTOGRAM FOR COLUMN 19 (NB PPM)

1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
0	10	0	0	0	0	49
0.0	16.95			0.0	0.0	

MAXIMUM = 1.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 9.99976E 00

GEOMETRIC DEVIATION = 1.00748E 00

77

FREQUENCY TABLE FOR COLUMN 20 (NI PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	0	0	0.0	0.0
5.6E 00 -	8.3E 00	0	0	0.0	0.0
8.3E 00 -	1.2E 01	2	2	3.39	3.39
1.2E 01 -	1.8E 01	3	5	5.08	8.47
1.8E 01 -	2.6E 01	1	6	1.69	10.17
2.6E 01 -	3.8E 01	28	34	47.46	57.63
3.8E 01 -	5.6E 01	6	40	10.17	67.80
5.6E 01 -	8.3E 01	14	54	23.73	91.53
8.3E 01 -	1.2E 02	2	56	3.39	94.92
1.2E 02 -	1.8E 02	2	58	3.39	98.31
1.8E 02 -	2.6E 02	0	58	0.0	98.31
2.6E 02 -	3.8E 02	0	58	0.0	98.31
3.8E 02 -	5.6E 02	0	58	0.0	98.31
5.6E 02 -	8.3E 02	1	59	1.69	100.00

HISTOGRAM FOR COLUMN 20 (NI PPM)

```
1.0E 01 XXX

1.5E 01 XXXXX

2.0E 01 XX

3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 01 XXXXXXXXXX

7.0E 01 XXXXXXXXXXXXXXXXXXXXXXX

1.0E 02 XXX

1.5E 02 XXX

2.0E 02

3.0E 02

5.0E 02

7.0E 02 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	59
0.0	0.0			0.0	0.0	

MAXIMUM = 7.00000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 4.14124E 01

GEOMETRIC DEVIATION = 1.99111E 00

FREQUENCY TABLE FOR COLUMN 21 (PB PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	16	16	27.12	27.12
1.2E 01 -	1.8E 01	20	36	33.90	61.02
1.8E 01 -	2.6E 01	9	45	15.25	76.27
2.6E 01 -	3.8E 01	5	50	8.47	84.75
3.8E 01 -	5.6E 01	2	52	3.39	88.14

HISTOGRAM FOR COLUMN 21 (PB PPM)

```
1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXX

3.0E 01 XXXXXXXX

5.0E 01 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	6	0	0	0	0	52
1.69	10.17			0.0	0.0	

MAXIMUM = 5.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.55805E 01

GEOMETRIC DEVIATION = 1.50791E 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	
59	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	3	3	5.08	5.08
8.3E 00 -	1.2E 01	9	12	15.25	20.34
1.2E 01 -	1.8E 01	36	48	61.02	81.36
1.8E 01 -	2.6E 01	9	57	15.25	96.61
2.6E 01 -	3.8E 01	2	59	3.39	100.00

HISTOGRAM FOR COLUMN 23 (SC PPM)

```
7.0E 00 XXXXX

1.0E 01 XXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXX

3.0E 01 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	59
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 01

MINIMUM = 7.00000E 00

GEOMETRIC MEAN = 1.45096E 01

GEOMETRIC DEVIATION = 1.33587E 00

FREQUENCY TABLE FOR COLUMN 24 (SN PPM)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 - 1.2E 01	1	1	1.69	1.69

HISTOGRAM FOR COLUMN 24 (SN PPM)

1.0E 01 XX

N	L	H	B	T	G	ANALYTICAL VALUES
58	0	0	0	0	0	1
98.31	0.0			0.0	0.0	

MAXIMUM = 1.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 9.99999E 00

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	19	19	32.20	32.20
1.2E 02 -	1.8E 02	22	41	37.29	69.49
1.8E 02 -	2.6E 02	5	46	8.47	77.97
2.6E 02 -	3.8E 02	2	48	3.39	81.36
3.8E 02 -	5.6E 02	0	48	0.0	81.36
5.6E 02 -	8.3E 02	1	49	1.69	83.05

HISTOGRAM FOR COLUMN 25 (SR PPM)

```
1.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 02 XXXXXXXX

3.0E 02 XXX

5.0E 02

7.0E 02 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	10	0	0	0	0	49
0.0	16.95			0.0	0.0	

MAXIMUM = 7.00000E 02

MINIMUM = 1.00000E 02

GEOMETRIC MEAN = 1.40119E 02

GEOMETRIC DEVIATION = 1.45079E 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	2	2	3.39	3.39
5.6E 01 -	8.3E 01	2	4	3.39	6.78
8.3E 01 -	1.2E 02	2	6	3.39	10.17
1.2E 02 -	1.8E 02	20	26	33.90	44.07
1.8E 02 -	2.6E 02	22	48	37.29	81.36
2.6E 02 -	3.8E 02	9	57	15.25	96.61
3.8E 02 -	5.6E 02	0	57	0.0	96.61
5.6E 02 -	8.3E 02	0	57	0.0	96.61
8.3E 02 -	1.2E 03	2	59	3.39	100.00

HISTOGRAM FOR COLUMN 26 (V PPM)

```
5.0E 01 XXX

7.0E 01 XXX

1.0E 02 XXX

1.5E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 02 XXXXXXXXXXXXXXX

5.0E 02

7.0E 02

1.0E 03 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	59
0.0	0.0			0.0	0.0	

MAXIMUM = 1.00000E 03

MINIMUM = 5.00000E 01

GEOMETRIC MEAN = 1.83299E 02

GEOMETRIC DEVIATION = 1.65947E 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	
59	0	0	0	0	0	0
*****	0.0			0.0	0.0	

MAXIMUM = -9.99900E 48

MINIMUM = 9.99900E 48

GEOMETRIC MEAN = 9.99900E 48

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN 28 (Y PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	3	3	5.08	5.08
1.2E 01 -	1.8E 01	29	32	49.15	54.24
1.8E 01 -	2.6E 01	16	48	27.12	81.36
2.6E 01 -	3.8E 01	9	57	15.25	96.61
3.8E 01 -	5.6E 01	0	57	0.0	96.61
5.6E 01 -	8.3E 01	0	57	0.0	96.61
8.3E 01 -	1.2E 02	0	57	0.0	96.61
1.2E 02 -	1.8E 02	2	59	3.39	100.00

HISTOGRAM FOR COLUMN 28 (Y PPM)

```
1.0E 01 XXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXX

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	59
0.0	0.0			0.0	0.0	

MAXIMUM = 1.50000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.90911E 01

GEOMETRIC DEVIATION = 1.61467E 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	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 03	0	0	0.0	0.0
1.2E 03 -	1.8E 03	0	0	0.0	0.0
1.8E 03 -	2.6E 03	1	1	1.69	1.69

HISTOGRAM FOR COLUMN 29 (ZN PPM)

2.0E 03 XX

N	L	H	B	T	G	ANALYTICAL VALUES
46	12	0	0	0	0	1
77.97	20.34			0.0	0.0	

MAXIMUM = 2.00000E 03

MINIMUM = 2.00000E 03

GEOMETRIC MEAN = 2.00000E 03

GEOMETRIC DEVIATION = 9.99900E 48

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	4	4	6.78	6.78
8.3E 01 -	1.2E 02	14	18	23.73	30.51
1.2E 02 -	1.8E 02	24	42	40.68	71.19
1.8E 02 -	2.6E 02	10	52	16.95	88.14
2.6E 02 -	3.8E 02	7	59	11.86	100.00

HISTOGRAM FOR COLUMN 30 (ZR PPM)

```
7.0E 01 XXXXXXX

1.0E 02 XXXXXXXXXXXXXXXXXXXXXXX

1.5E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 02 XXXXXXXXXXXXXXXXX

3.0E 02 XXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	59
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 02

MINIMUM = 7.00000E 01

GEOMETRIC MEAN = 1.47487E 02

GEOMETRIC DEVIATION = 1.47632E 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	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	1	1	1.75	1.75

HISTOGRAM FOR COLUMN 31 (AU PPM)

3.0E-01 XX

N	L	H	B	T	G	ANALYTICAL VALUES
0	56	0	2	0	0	1
0.0	98.25			0.0	0.0	

MAXIMUM = 3.00000E-01

MINIMUM = 3.00000E-01

GEOMETRIC MEAN = 3.00000E-01

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN 32 (HG PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
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	1	1	1.69	1.69
8.3E-02 -	1.2E-01	4	5	6.78	8.47
1.2E-01 -	1.8E-01	11	16	18.64	27.12
1.8E-01 -	2.6E-01	9	25	15.25	42.37
2.6E-01 -	3.8E-01	10	35	16.95	59.32
3.8E-01 -	5.6E-01	7	42	11.86	71.19
5.6E-01 -	8.3E-01	9	51	15.25	86.44
8.3E-01 -	1.2E 00	3	54	5.08	91.53
1.2E 00 -	1.8E 00	3	57	5.08	96.61
1.8E 00 -	2.6E 00	0	57	0.0	96.61
2.6E 00 -	3.8E 00	0	57	0.0	96.61
3.8E 00 -	5.6E 00	0	57	0.0	96.61
5.6E 00 -	8.3E 00	1	58	1.69	98.31
8.3E 00 -	1.2E 01	1	59	1.69	100.00

HISTOGRAM FOR COLUMN 32 (HG PPM)

```
7.0E-02 XX

1.0E-01 XXXXXXX

1.5E-01 XXXXXXXXXXXXXXXXXX

2.0E-01 XXXXXXXXXXXXXX

3.0E-01 XXXXXXXXXXXXXXXX

5.0E-01 XXXXXXXXXXXX

7.0E-01 XXXXXXXXXXXXXX

1.0E 00 XXXXX

1.5E 00 XXXXX

2.0E 00

3.0E 00

5.0E 00

7.0E 00 XX

1.0E 01 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	59
0.0	0.0			0.0	0.0	

MAXIMUM = 1.00000E 01

MINIMUM = 8.00000E-02

GEOMETRIC MEAN = 3.67066E-01

GEOMETRIC DEVIATION = 2.60001E 00

IN THE COMPUTATIONS PERFORMED TO PRODUCE THE FOLLOWING TABLE OF GEOMETRIC MEANS AND DEVIATIONS, 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 TO 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.

A470 STATISTICAL SUMMARY DATE 6/ 9/70

ELEMENT	N	L	H	B	T	G	ANALYTICAL VALUES
FE PCT	0	0	0	0	0	1	58
MG PCT	0	0	0	0	0	0	59
CA PCT	0	0	0	0	0	0	59
TI PCT	0	0	0	0	0	0	59
MN PPM	0	0	0	0	0	1	58
AG PPM	55	3	0	0	0	0	1
AS PPM	51	4	0	0	0	0	4
AU PPM	59	0	0	0	0	0	0
B PPM	0	0	0	0	0	0	59
BA PPM	0	0	0	0	0	0	59
BE PPM	2	11	0	0	0	0	46
BI PPM	58	1	0	0	0	0	0
CD PPM	59	0	0	0	0	0	0
CO PPM	3	0	0	0	0	0	56
CR PPM	0	0	0	0	0	0	59
CU PPM	0	0	0	0	0	0	59
LA PPM	18	37	0	0	0	0	4
MO PPM	27	28	0	0	0	0	4
NB PPM	0	10	0	0	0	0	49
NI PPM	0	0	0	0	0	0	59
PB PPM	1	6	0	0	0	0	52
SB PPM	59	0	0	0	0	0	0
SC PPM	0	0	0	0	0	0	59
SN PPM	58	0	0	0	0	0	1
SR PPM	0	10	0	0	0	0	49
V PPM	0	0	0	0	0	0	59
W PPM	59	0	0	0	0	0	0
Y PPM	0	0	0	0	0	0	59
ZN PPM	46	12	0	0	0	0	1
ZR PPM	0	0	0	0	0	0	59
AU PPM	0	56	0	2	0	0	1
HG PPM	0	0	0	0	0	0	59

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
FE PCT	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
MG PCT	0.750337	1.53	59 SAMPLES AND 59 ANALYTICAL VALUES.
CA PCT	0.710166	1.74	59 SAMPLES AND 59 ANALYTICAL VALUES.
TI PCT	0.520252	1.40	59 SAMPLES AND 59 ANALYTICAL VALUES.
MN PPM	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
AG PPM	********	******	58 NOT DETECTED, LESS THAN, OR TRACE VALUES. 1 REPORTED VALUES. NO COMPUTATIONS.
AS PPM	********	******	55 NOT DETECTED, LESS THAN, OR TRACE VALUES. 4 REPORTED VALUES. NO COMPUTATIONS.
AU PPM	********	******	59 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
B PPM	42.411331	1.83	59 SAMPLES AND 59 ANALYTICAL VALUES.
BA PPM	340.684082	1.51	59 SAMPLES AND 59 ANALYTICAL VALUES.
BE PPM	1.183768	1.86	13 NOT DETECTED, LESS THAN, OR TRACE VALUES. 46 REPORTED VALUES.
BI PPM	********	******	59 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
CD PPM	********	******	59 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
CO PPM	19.292587	2.10	3 NOT DETECTED, LESS THAN, OR TRACE VALUES. 56 REPORTED VALUES.
CR PPM	73.139587	1.70	59 SAMPLES AND 59 ANALYTICAL VALUES.
CU PPM	26.260941	1.91	59 SAMPLES AND 59 ANALYTICAL VALUES.
LA PPM	********	******	55 NOT DETECTED, LESS THAN, OR TRACE VALUES. 4 REPORTED VALUES. NO COMPUTATIONS.
MO PPM	********	******	55 NOT DETECTED, LESS THAN, OR TRACE VALUES. 4 REPORTED VALUES. NO COMPUTATIONS.
NB PPM	9.622168	1.09	10 NOT DETECTED, LESS THAN, OR TRACE VALUES. 49 REPORTED VALUES.
NI PPM	41.412323	1.99	59 SAMPLES AND 59 ANALYTICAL VALUES.

PB PPM	14.028532	1.62	7 NOT DETECTED, LESS THAN, OR TRACE VALUES.	52 REPORTED VALUES.	
SB PPM	********	******	59 NOT DETECTED, LESS THAN, OR TRACE VALUES.	0 REPORTED VALUES.	NO COMPUTATIONS.
SC PPM	14.509584	1.34	59 SAMPLES AND 59 ANALYTICAL VALUES.		
SN PPM	********	******	58 NOT DETECTED, LESS THAN, OR TRACE VALUES.	1 REPORTED VALUES.	NO COMPUTATIONS.
SR PPM	122.690002	1.58	10 NOT DETECTED, LESS THAN, OR TRACE VALUES.	49 REPORTED VALUES.	
V PPM	183.298126	1.66	59 SAMPLES AND 59 ANALYTICAL VALUES.		
W PPM	********	******	59 NOT DETECTED, LESS THAN, OR TRACE VALUES.	0 REPORTED VALUES.	NO COMPUTATIONS.
Y PPM	19.091110	1.61	59 SAMPLES AND 59 ANALYTICAL VALUES.		
ZN PPM	********	******	58 NOT DETECTED, LESS THAN, OR TRACE VALUES.	1 REPORTED VALUES.	NO COMPUTATIONS.
ZR PPM	147.486450	1.48	59 SAMPLES AND 59 ANALYTICAL VALUES.		
AU PPM	********	******	56 NOT DETECTED, LESS THAN, OR TRACE VALUES.	1 REPORTED VALUES.	NO COMPUTATIONS.
HG PPM	0.367066	2.60	59 SAMPLES AND 59 ANALYTICAL VALUES.		