UNITED STATES DEPARTMENT OF THE INTERIOR

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ANALYSES OF ROCK AND STREAM-SEDIMENT SAMPLES FROM THE

NORTHERN PART OF THE TAYLOR MOUNTAINS B-6 QUADRANGLE, ALASKA

By

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

and Dennis H. Sorg

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reviewed for conformity with
Geological Survey standards

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INTRODUCTION

Analytical data for 22 rock and 69 stream-sediment samples from the northern part of the Taylor Mountains B-6, 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 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 method.[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 B-6 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	AMM-703	Medium-grained quartz monzonite
2	-702	Dense black cherty hornfels
3	-701	Quartz monzonite, locally porphyritic
4	-701A	Quartz monzonite, locally porphyritic
5	-638	Biotite quartz monzonite porphyry
6	-637	Hornfels with quartz veinlets
7	-636	Hornfelsed shale with quartz veins
8	-639	Rhyolite
9	-630	Rhyolite
10	-629	Hornfels with abundant sulfides on shears
11	-628	Limonite hornfelsed graywacke with quartz veinlets and arsenopyrite
11	-626	Graywacke hornfels
11	-627	Graywacke hornfels with bindheimite
12	-625	Copper stained hornfels
13	-624	Limonite basaltic(?) dike rock
13	-623	Limonite basaltic(?) dike rock
14	-634	Rhyolite, strong manganese stain
14	-633	Rhyolite, strong manganese stain
15	-631	Rhyolite
16	-635	Rhyolite
17	-704	Biotite rich rhyolite
18	-632	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:

$$7.0E-01 \text{ means } 7.0 \times 10^{-1} \text{ or } 0.7$$

$$7.0E\ 00 \text{ means } 7.0 \times 10^{0} \text{ or } 7.0$$

$$7.0E\ 01 \text{ means } 7.0 \times 10^{1} \text{ or } 70.0$$

$$7.0E\ 02 \text{ means } 7.0 \times 10^{2} \text{ or } 700.0$$

$$7.0E\ 03 \text{ means } 7.0 \times 10^{3} \text{ or } 7,000.0$$

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,
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    Devil quicksilver mine: U.S. Geol. Survey Bull. 1142-G, 16 p.

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    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.

	SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
1	AMM703	2.0000	10.0000N	20.0000N	5.0000	15.0000	20.0000	20.0000	5.0000N	10.0000L	10.0000
2	AMM702	1.5000	10.0000N	20.0000N	15.0000	150.0000	20.0000	30.0000	5.0000N	10.0000	100.0000
3	AMM701	1.5000	10.0000N	20.0000N	10.0000	30.0000	15.0000	30.0000	5.0000N	10.0000	15.0000
4	AMM701A	1.5000	10.0000N	20.0000N	10.0000	30.0000	15.0000	30.0000	5.0000N	10.0000	15.0000
5	AMM638	1.5000	10.0000N	20.0000N	10.0000	15.0000	10.0000	20.0000	5.0000N	10.0000	15.0000
6	AMM637	1.0000	10.0000N	20.0000N	15.0000	70.0000	30.0000	20.0000L	5.0000N	10.0000L	70.0000
7	AMM636	1.0000L	10.0000N	20.0000N	5.0000	50.0000	300.0000	20.0000L	5.0000	10.0000	50.0000
8	AMM639	1.5000	10.0000N	20.0000N	5.0000L	10.0000	10.0000	30.0000	5.0000N	10.0000	15.0000
9	AMM630	1.5000	10.0000N	20.0000N	5.0000L	5.0000L	20.0000	20.0000L	5.0000N	10.0000L	15.0000
10	AMM629	3.0000	150.0000	20.0000N	5.0000L	70.0000	20.0000	30.0000	5.0000N	10.0000	15.0000
11	AMM628	1.0000	15.0000	20.0000N	5.0000L	70.0000	20.0000	20.0000	5.0000N	10.0000	15.0000
lt	AMM626	1.5000	30.0000	20.0000N	15.0000	100.0000	100.0000	20.0000L	5.0000L	10.0000	50.0000
11	AMM627	1.5000	70.0000	20.0000N	5.0000L	70.0000	70.0000	20.0000L	5.0000L	10.0000	15.0000
12	AMM625	1.0000L	30.0000	20.0000N	15.0000	70.0000	200.0000	20.0000N	5.0000L	10.0000	15.0000
13	AMM624	1.5000	10.0000N	20.0000N	5.0000L	30.0000	70.0000	100.0000	5.0000L	10.0000	30.0000
13	AMM623	1.0000	30.0000	20.0000N	10.0000	100.0000	15.0000	20.0000L	5.0000L	10.0000	30.0000
14	AMM634	1.5000	10.0000N	20.0000N	5.0000	15.0000	10.0000	20.0000L	5.0000L	10.0000L	20.0000
14	AMM633	3.0000	10.0000N	20.0000N	5.0000L	5.0000L	50.0000	20.0000L	5.0000N	10.0000	15.0000
15	AMM631	1.0000	10.0000N	20.0000N	5.0000L	5.0000L	5.0000	20.0000N	5.0000N	10.0000L	7.0000
16	AMM635	1.5000	10.0000N	20.0000N	5.0000L	5.0000L	10.0000	20.0000	5.0000N	10.0000L	7.0000
17	AMM704	1.5000	10.0000N	20.0000N	5.0000L	50.0000	20.0000	20.0000	5.0000N	10.0000	15.0000
18	AMM632	1.0000	10.0000N	20.0000N	30.0000	70.0000	30.0000	20.0000L	5.0000L	10.0000	70.0000

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

SAMPLE	FE PCT	MG PCT	CA PCT	TI PCT	MN PPM	AG PPM	AS PPM	AU PPM	B PPM	BA PPM
AMM703	3.0000	0.5000	0.7000	0.1500	300.0000	0.5000N	200.0000N	10.0000N	15.0000	700.0000
AMM702	7.0000	1.5000	0.7000	0.3000	1000.0000	0.5000N	200.0000N	10.0000N	150.0000	2000.0000
AMM701	7.0000	1.0000	1.0000	0.3000	700.0000	0.5000N	200.0000N	10.0000N	10.0000	700.0000
AMM701A	7.0000	1.0000	1.0000	0.3000	700.0000	0.5000N	200.0000N	10.0000N	10.0000	700.0000
AMM638	3.0000	0.7000	0.7000	0.3000	300.0000	0.5000N	200.0000N	10.0000N	15.0000	700.0000
AMM637	3.0000	1.0000	0.3000	0.2000	300.0000	0.5000L	200.0000L	10.0000N	30.0000	300.0000
AMM636	15.0000	1.0000	2.0000	0.2000	5000.0000G	1.5000	200.0000N	10.0000N	10.0000	300.0000
AMM639	1.5000	0.3000	0.5000	0.3000	70.0000	0.5000L	200.0000N	10.0000N	30.0000	1000.0000
AMM630	1.5000	0.2000	0.3000	0.1500	100.0000	0.5000L	200.0000N	10.0000N	100.0000	700.0000
AMM629	3.0000	0.7000	0.2000	0.5000	150.0000	1.5000	10001.0000G	10.0000N	2000.0000G	2000.0000
AMM628	3.0000	1.0000	0.5000	0.5000	150.0000	0.5000L	3000.0000	10.0000N	2000.0000G	200.0000
AMM626	3.0000	1.5000	0.7000	0.5000	500.0000	3.0000	10001.0000G	10.0000N	2000.0000G	700.0000
AMM627	5.0000	1.0000	0.3000	0.5000	300.0000	7.0000	10001.0000G	10.0000N	2000.0000G	3000.0000
AMM625	5.0000	0.7000	0.1500	0.3000	100.0000	0.7000	10001.0000G	10.0000N	2000.0000G	20.0000L
AMM624	5.0000	0.7000	0.1500	0.7000	200.0000	0.7000	200.0000L	10.0000N	2000.0000G	150.0000
AMM623	3.0000	1.0000	0.3000	0.3000	500.0000	2.0000	7000.0000	10.0000N	2000.0000G	500.0000
AMM634	2.0000	0.3000	0.2000	0.2000	300.0000	0.5000	200.0000N	10.0000N	150.0000	1000.0000
AMM633	3.0000	0.3000	0.7000	0.0700	1500.0000	1.5000	200.0000N	10.0000N	70.0000	200.0000
AMM631	1.5000	0.1500	0.3000	0.0700	70.0000	0.5000L	200.0000N	10.0000N	70.0000	500.0000
AMM635	1.0000	0.0700	0.0500	0.1500	70.0000	0.5000L	200.0000N	10.0000N	50.0000	700.0000
AMM704	5.0000	1.0000	0.7000	0.3000	300.0000	1.0000	500.0000	10.0000N	20.0000	700.0000
AMM632	10.0000	2.0000	1.5000	1.0000	1000.0000	0.5000L	200.0000N	10.0000N	20.0000	700.0000

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

	SAMPLE	PB PPM	SB PPM	SC PPM	SN PPM	SR PPM	V PPM	W PPM	Y PPM	ZN PPM	ZR PPM
1	AMM703	10.0000	100.0000N	5.0000	10.0000N	150.0000	50.0000	50.0000N	30.0000	200.0000N	150.0000
2	AMM702	10.0000	100.0000N	20.0000	10.0000N	150.0000	300.0000	50.0000N	20.0000	200.0000L	150.0000
3	AMM701	15.0000	100.0000N	15.0000	10.0000	150.0000	70.0000	50.0000N	30.0000	200.0000N	150.0000
4	AMM701A	15.0000	100.0000N	15.0000	10.0000	150.0000	70.0000	50.0000N	30.0000	200.0000N	150.0000
5	AMM638	30.0000	100.0000N	7.0000	10.0000L	100.0000	30.0000	50.0000N	30.0000	200.0000L	300.0000
6	AMM637	10.0000L	100.0000N	7.0000	10.0000N	100.0000L	150.0000	50.0000N	15.0000	200.0000L	70.0000
7	AMM636	10.0000L	100.0000N	7.0000	10.0000N	100.0000L	150.0000	50.0000N	30.0000	200.0000L	70.0000
8	AMM639	30.0000	100.0000N	5.0000N	10.0000L	100.0000L	20.0000	50.0000N	10.0000L	200.0000N	300.0000
9	AMM630	30.0000	100.0000N	5.0000N	10.0000L	100.0000L	15.0000	50.0000N	10.0000L	200.0000N	100.0000
10	AMM629	10.0000	300.0000	15.0000	70.0000	100.0000L	200.0000	50.0000N	20.0000	200.0000N	100.0000
11	AMM628	10.0000N	200.0000	15.0000	70.0000	100.0000L	200.0000	50.0000N	15.0000	200.0000N	150.0000
11	AMM626	30.0000	700.0000	15.0000	30.0000	100.0000	200.0000	50.0000N	20.0000	200.0000N	100.0000
11	AMM627	30.0000	300.0000	20.0000	100.0000	100.0000L	200.0000	50.0000N	30.0000	200.0000N	100.0000
12	AMM625	30.0000	3000.0000	15.0000	50.0000	100.0000L	150.0000	50.0000N	10.0000	200.0000N	100.0000
13	AMM624	100.0000	300.0000	15.0000	30.0000	100.0000L	150.0000	50.0000N	30.0000	200.0000N	200.0000
13	AMM623	15.0000	500.0000	15.0000	30.0000	100.0000L	200.0000	50.0000L	50.0000	200.0000N	150.0000
14	AMM634	30.0000	100.0000N	5.0000N	10.0000L	100.0000	15.0000	50.0000N	10.0000L	200.0000N	150.0000
14	AMM633	500.0000	100.0000N	5.0000N	15.0000	150.0000	15.0000	50.0000N	10.0000L	700.0000	70.0000
15	AMM631	30.0000	100.0000N	5.0000N	10.0000L	100.0000L	15.0000	50.0000N	10.0000L	200.0000L	70.0000
16	AMM635	30.0000	100.0000N	5.0000N	10.0000N	100.0000L	15.0000	50.0000N	10.0000L	200.0000L	100.0000
17	AMM704	20.0000	100.0000N	10.0000	10.0000	150.0000	100.0000	50.0000N	30.0000	200.0000L	150.0000
18	AMM632	20.0000	100.0000N	30.0000	10.0000N	200.0000	150.0000	50.0000N	30.0000	200.0000L	150.0000

10

	SAMPLE	AU PPM	HG PPM
1	AMM703	0.0200L	0.2400
2	AMM702	0.0200L	2.0000
3	AMM701	0.0200L	1.0000
4	AMM701A	0.0200L	1.0000
5	AMM638	0.0200L	7.0000
6	AMM637	0.0200L	10.0000G
7	AMM636	0.0200L	10.0000G
8	AMM639	0.0200L	7.5000
9	AMM630	0.0200L	10.0000G
10	AMM629	0.0200L	10.0000G
11	AMM628	0.0200L	10.0000G
11	AMM626	0.0200L	10.0000G
11	AMM627	0.1000	10.0000G
12	AMM625	0.1000	10.0000G
13	AMM624	0.0200L	10.0000G
13	AMM623	0.0200L	10.0000G
14	AMM634	0.0200L	7.5000
14	AMM633	0.0200L	10.0000G
15	AMM631	0.0200L	3.5000
16	AMM635	0.0200L	9.0000
17	AMM704	0.0200L	0.5000
18	AMM632	0.0200L	10.0000G

FREQUENCY TABLE FOR COLUMN   1 (FE PCT)

LIMITS		FREQ	FREQ	PERCENT	PERCENT
LOWER - UPPER			CUM	FREQ	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	4.55	4.55
1.2E 00 -	1.8E 00	3	4	13.64	18.18
1.8E 00 -	2.6E 00	1	5	4.55	22.73
2.6E 00 -	3.8E 00	8	13	36.36	59.09
3.8E 00 -	5.6E 00	4	17	18.18	77.27
5.6E 00 -	8.3E 00	3	20	13.64	90.91
8.3E 00 -	1.2E 01	1	21	4.55	95.45
1.2E 01 -	1.8E 01	1	22	4.55	100.00

HISTOGRAM FOR COLUMN   1 (FE PCT)

```
    1.0E 00 XXXXX

    1.5E 00 XXXXXXXXXXXXXX

    2.0E 00 XXXXX

    3.0E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

    5.0E 00 XXXXXXXXXXXXXXXXXX

    7.0E 00 XXXXXXXXXXXXXX

    1.0E 01 XXXXX

    1.5E 01 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	22
0.0	0.0			0.0	0.0	

MAXIMUM =   1.50000E 01

MINIMUM =   1.00000E 00

GEOMETRIC MEAN =   3.56806E 00

GEOMETRIC DEVIATION =   1.95157E 00

FREQUENCY TABLE FOR COLUMN   2 (MG PCT)

LIMITS		FREQ	FREQ	PERCENT	PERCENT
LOWER	UPPER		CUM	FREQ	FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.0	0.0
2.6E-02 -	3.8E-02	0	0	0.0	0.0
3.8E-02 -	5.6E-02	0	0	0.0	0.0
5.6E-02 -	8.3E-02	1	1	4.55	4.55
8.3E-02 -	1.2E-01	0	1	0.0	4.55
1.2E-01 -	1.8E-01	1	2	4.55	9.09
1.8E-01 -	2.6E-01	1	3	4.55	13.64
2.6E-01 -	3.8E-01	3	6	13.64	27.27
3.8E-01 -	5.6E-01	1	7	4.55	31.82
5.6E-01 -	8.3E-01	4	11	18.18	50.00
8.3E-01 -	1.2E 00	8	19	36.36	86.36
1.2E 00 -	1.8E 00	2	21	9.09	95.45
1.8E 00 -	2.6E 00	1	22	4.55	100.00

HISTOGRAM FOR COLUMN   2 (MG PCT)

```
        7.0E-02 XXXXX

        1.0E-01

        1.5E-01 XXXXX

        2.0E-01 XXXXX

        3.0E-01 XXXXXXXXXXXXX

        5.0E-01 XXXXX

        7.0E-01 XXXXXXXXXXXXXXXXXX

        1.0E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

        1.5E 00 XXXXXXXXX

        2.0E 00 XXXXX
```

						ANALYTICAL
N	L	H	B	T	G	VALUES
0	0	0	0	0	0	22
0.0	0.0			0.0	0.0	

MAXIMUM =   2.00000E 00

MINIMUM =   7.00000E-02

GEOMETRIC MEAN =   6.23484E-01

GEOMETRIC DEVIATION =   2.29536E 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	4.55	4.55
5.6E-02 -	8.3E-02	0	1	0.0	4.55
8.3E-02 -	1.2E-01	0	1	0.0	4.55
1.2E-01 -	1.8E-01	2	3	9.09	13.64
1.8E-01 -	2.6E-01	2	5	9.09	22.73
2.6E-01 -	3.8E-01	5	10	22.73	45.45
3.8E-01 -	5.6E-01	2	12	9.09	54.55
5.6E-01 -	8.3E-01	6	18	27.27	81.82
8.3E-01 -	1.2E 00	2	20	9.09	90.91
1.2E 00 -	1.8E 00	1	21	4.55	95.45
1.8E 00 -	2.6E 00	1	22	4.55	100.00

HISTOGRAM FOR COLUMN   3 (CA PCT)

```
    5.0E-02 XXXXX

    7.0E-02

    1.0E-01

    1.5E-01 XXXXXXXXX

    2.0E-01 XXXXXXXXX

    3.0E-01 XXXXXXXXXXXXXXXXXXXXXXXX

    5.0E-01 XXXXXXXXX

    7.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX

    1.0E 00 XXXXXXXXX

    1.5E 00 XXXXX

    2.0E 00 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	22
0.0	0.0			0.0	0.0	

MAXIMUM = 2.00000E 00

MINIMUM = 5.00000E-02

GEOMETRIC MEAN = 4.32173E-01

GEOMETRIC DEVIATION = 2.36019E 00

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FREQUENCY TABLE FOR COLUMN   4 (TI PCT)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER -	UPPER				
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	2	2	9.09	9.09
8.3E-02 -	1.2E-01	0	2	0.0	9.09
1.2E-01 -	1.8E-01	3	5	13.64	22.73
1.8E-01 -	2.6E-01	3	8	13.64	36.36
2.6E-01 -	3.8E-01	8	16	36.36	72.73
3.8E-01 -	5.6E-01	4	20	18.18	90.91
5.6E-01 -	8.3E-01	1	21	4.55	95.45
8.3E-01 -	1.2E 00	1	22	4.55	100.00

HISTOGRAM FOR COLUMN   4 (TI PCT)

```
7.0E-02 XXXXXXXXX

1.0E-01

1.5E-01 XXXXXXXXXXXXXX

2.0E-01 XXXXXXXXXXXXXX

3.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E-01 XXXXXXXXXXXXXXXXXX

7.0E-01 XXXXX

1.0E 00 XXXXX
```

						ANALYTICAL VALUES
N	L	H	B	T	G	
0	0	0	0	0	0	22
0.0	0.0			0.0	0.0	

MAXIMUM = 1.00000E 00

MINIMUM = 7.00000E-02

GEOMETRIC MEAN = 2.72542E-01

GEOMETRIC DEVIATION = 1.93697E 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	3	3	13.64	13.64
8.3E 01 – 1.2E 02	2	5	9.09	22.73
1.2E 02 – 1.8E 02	2	7	9.09	31.82
1.8E 02 – 2.6E 02	1	8	4.55	36.36
2.6E 02 – 3.8E 02	6	14	27.27	63.64
3.8E 02 – 5.6E 02	2	16	9.09	72.73
5.6E 02 – 8.3E 02	2	18	9.09	81.82
8.3E 02 – 1.2E 03	2	20	9.09	90.91
1.2E 03 – 1.8E 03	1	21	4.55	95.45

HISTOGRAM FOR COLUMN   5 (MN PPM)

```
7.0E 01 XXXXXXXXXXXXX

1.0E 02 XXXXXXXXX

1.5E 02 XXXXXXXXX

2.0E 02 XXXXX

3.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 02 XXXXXXXXX

7.0E 02 XXXXXXXXX

1.0E 03 XXXXXXXXX

1.5E 03 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	1	21
0.0	0.0			0.0	4.55	

MAXIMUM = 1.50000E 03

MINIMUM = 7.00000E 01

GEOMETRIC MEAN = 2.77708E 02

GEOMETRIC DEVIATION = 2.52895E 00

16

FREQUENCY TABLE FOR COLUMN   6 (AG PPM)

LIMITS		FREQ	FREQ	PERCENT	PERCENT
LOWER - UPPER			CUM	FREQ	FREQ CUM
3.8E-01 -	5.6E-01	1	1	4.55	4.55
5.6E-01 -	8.3E-01	2	3	9.09	13.64
8.3E-01 -	1.2E 00	1	4	4.55	18.18
1.2E 00 -	1.8E 00	3	7	13.64	31.82
1.8E 00 -	2.6E 00	1	8	4.55	36.36
2.6E 00 -	3.8E 00	1	9	4.55	40.91
3.8E 00 -	5.6E 00	0	9	0.0	40.91
5.6E 00 -	8.3E 00	1	10	4.55	45.45

HISTOGRAM FOR COLUMN   6 (AG PPM)

```
        5.0E-01 XXXXX

        7.0E-01 XXXXXXXXX

        1.0E 00 XXXXX

        1.5E 00 XXXXXXXXXXXXX

        2.0E 00 XXXXX

        3.0E 00 XXXXX

        5.0E 00

        7.0E 00 XXXXX
```

17

N	L	H	B	T	G	ANALYTICAL VALUES
5	7	0	0	0	0	10
22.73	31.82			0.0	0.0	

MAXIMUM = 7.00000E 00

MINIMUM = 5.00000E-01

GEOMETRIC MEAN = 1.42583E 00

GEOMETRIC DEVIATION = 2.17649E 00

FREQUENCY TABLE FOR COLUMN   7 (AS PPM)

LIMITS			FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	–	UPPER				
1.8E 02	–	2.6E 02	0	0	0.0	0.0
2.6E 02	–	3.8E 02	0	0	0.0	0.0
3.8E 02	–	5.6E 02	1	1	4.55	4.55
5.6E 02	–	8.3E 02	0	1	0.0	4.55
8.3E 02	–	1.2E 03	0	1	0.0	4.55
1.2E 03	–	1.8E 03	0	1	0.0	4.55
1.8E 03	–	2.6E 03	0	1	0.0	4.55
2.6E 03	–	3.8E 03	1	2	4.55	9.09
3.8E 03	–	5.6E 03	0	2	0.0	9.09
5.6E 03	–	8.3E 03	1	3	4.55	13.64

HISTOGRAM FOR COLUMN   7 (AS PPM)

```
     5.0E 02 XXXXX

     7.0E 02

     1.0E 03

     1.5E 03

     2.0E 03

     3.0E 03 XXXXX

     5.0E 03

     7.0E 03 XXXXX
```

						ANALYTICAL VALUES
N	L	H	B	T	G	
13	2	0	0	0	4	3
59.09	9.09			0.0	18.18	

MAXIMUM = 7.00000E 03

MINIMUM = 5.00000E 02

GEOMETRIC MEAN = 2.18975E 03

GEOMETRIC DEVIATION = 3.84733E 00

FREQUENCY TABLE FOR COLUMN   8 (AU PPM)

	LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM	
						ANALYTICAL
N	L	H	B	T	G	VALUES
22	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		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	-	UPPER				
8.3E 00	-	1.2E 01	3	3	13.64	13.64
1.2E 01	-	1.8E 01	2	5	9.09	22.73
1.8E 01	-	2.6E 01	2	7	9.09	31.82
2.6E 01	-	3.8E 01	2	9	9.09	40.91
3.8E 01	-	5.6E 01	1	10	4.55	45.45
5.6E 01	-	8.3E 01	2	12	9.09	54.55
8.3E 01	-	1.2E 02	1	13	4.55	59.09
1.2E 02	-	1.8E 02	2	15	9.09	68.18

HISTOGRAM FOR COLUMN   9 (B PPM)

```
1.0E 01 XXXXXXXXXXXXXX

1.5E 01 XXXXXXXXX

2.0E 01 XXXXXXXXX

3.0E 01 XXXXXXXXX

5.0E 01 XXXXX

7.0E 01 XXXXXXXXX

1.0E 02 XXXXX

1.5E 02 XXXXXXXXX
```

20

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	7	15
0.0	0.0			0.0	31.82	

MAXIMUM = 1.50000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 3.23583E 01

GEOMETRIC DEVIATION = 2.63591E 00

FREQUENCY TABLE FOR COLUMN   10 (BA PPM)

| LIMITS | | FREQ | FREQ | PERCENT | PERCENT |
LOWER	-	UPPER			CUM	FREQ	FREQ CUM
1.8E 01	-	2.6E 01		0	0	0.0	0.0
2.6E 01	-	3.8E 01		0	0	0.0	0.0
3.8E 01	-	5.6E 01		0	0	0.0	0.0
5.6E 01	-	8.3E 01		0	0	0.0	0.0
8.3E 01	-	1.2E 02		0	0	0.0	0.0
1.2E 02	-	1.8E 02		1	1	4.55	4.55
1.8E 02	-	2.6E 02		2	3	9.09	13.64
2.6E 02	-	3.8E 02		2	5	9.09	22.73
3.8E 02	-	5.6E 02		2	7	9.09	31.82
5.6E 02	-	8.3E 02		9	16	40.91	72.73
8.3E 02	-	1.2E 03		2	18	9.09	81.82
1.2E 03	-	1.8E 03		0	18	0.0	81.82
1.8E 03	-	2.6E 03		2	20	9.09	90.91
2.6E 03	-	3.8E 03		1	21	4.55	95.45

HISTOGRAM FOR COLUMN   10 (BA PPM)

```
        1.5E 02 XXXXX

        2.0E 02 XXXXXXXXX

        3.0E 02 XXXXXXXXX

        5.0E 02 XXXXXXXXX

        7.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

        1.0E 03 XXXXXXXXX

        1.5E 03

        2.0E 03 XXXXXXXXX

        3.0E 03 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	0	21
0.0	4.55			0.0	0.0	

MAXIMUM =   3.00000E 03

MINIMUM =   1.50000E 02

GEOMETRIC MEAN =   6.32016E 02

GEOMETRIC DEVIATION =   2.13696E 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	5	5	22.73	22.73
1.2E 00 -	1.8E 00	12	17	54.55	77.27
1.8E 00 -	2.6E 00	1	18	4.55	81.82
2.6E 00 -	3.8E 00	2	20	9.09	90.91

HISTOGRAM FOR COLUMN   11 (BE PPM)

1.0E 00 XXXXXXXXXXXXXXXXXXXXXXX

1.5E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 00 XXXXX

3.0E 00 XXXXXXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
0	2	0	0	0	0	20
0.0	9.09			0.0	0.0	

MAXIMUM = 3.00000E 00

MINIMUM = 1.00000E 00

GEOMETRIC MEAN = 1.47373E 00

GEOMETRIC DEVIATION = 1.36729E 00

FREQUENCY TABLE FOR COLUMN   12 (BI PPM)

| LIMITS | FREQ | FREQ | PERCENT | PERCENT |
LOWER - UPPER		CUM	FREQ	FREQ CUM
8.3E 00 - 1.2E 01	0	0	0.0	0.0
1.2E 01 - 1.8E 01	1	1	4.55	4.55
1.8E 01 - 2.6E 01	0	1	0.0	4.55
2.6E 01 - 3.8E 01	3	4	13.64	18.18
3.8E 01 - 5.6E 01	0	4	0.0	18.18
5.6E 01 - 8.3E 01	1	5	4.55	22.73
8.3E 01 - 1.2E 02	0	5	0.0	22.73
1.2E 02 - 1.8E 02	1	6	4.55	27.27

HISTOGRAM FOR COLUMN   12 (BI PPM)

    1.5E 01 XXXXX

    2.0E 01

    3.0E 01 XXXXXXXXXXXXXXX

    5.0E 01

    7.0E 01 XXXXX

    1.0E 02

    1.5E 02 XXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
16	0	0	0	0	0	6
72.73	0.0			0.0	0.0	

MAXIMUM = 1.50000E 02

MINIMUM = 1.50000E 01

GEOMETRIC MEAN = 4.02507E 01

GEOMETRIC DEVIATION = 2.24507E 00

FREQUENCY TABLE FOR COLUMN   13 (CO PPM)

| LIMITS | | FREQ | FREQ | PERCENT | PERCENT | |
| LOWER - UPPER | | | CUM | FREQ | FREQ CUM | |

N	L	H	B	T	G	ANALYTICAL VALUES
22	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

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FREQUENCY TABLE FOR COLUMN   14 (CO PPM)

	LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	-	UPPER				
3.8E 00	-	5.6E 00	3	3	13.64	13.64
5.6E 00	-	8.3E 00	0	3	0.0	13.64
8.3E 00	-	1.2E 01	4	7	18.18	31.82
1.2E 01	-	1.8E 01	4	11	18.18	50.00
1.8E 01	-	2.6E 01	0	11	0.0	50.00
2.6E 01	-	3.8E 01	1	12	4.55	54.55

HISTOGRAM FOR COLUMN   14 (CO PPM)

```
        5.0E 00 XXXXXXXXXXXXXX

        7.0E 00

        1.0E 01 XXXXXXXXXXXXXXXXXX

        1.5E 01 XXXXXXXXXXXXXXXXXX

        2.0E 01

        3.0E 01 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	10	0	0	0	0	12
0.0	45.45			0.0	0.0	

MAXIMUM = 3.00000E 01

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 1.05487E 01

GEOMETRIC DEVIATION = 1.72524E 00

FREQUENCY TABLE FOR COLUMN   15 (CR PPM)

| LIMITS | FREQ | FREQ | PERCENT | PERCENT |
LOWER - UPPER		CUM	FREQ	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	4.55	4.55
1.2E 01 - 1.8E 01	3	4	13.64	18.18
1.8E 01 - 2.6E 01	0	4	0.0	18.18
2.6E 01 - 3.8E 01	3	7	13.64	31.82
3.8E 01 - 5.6E 01	2	9	9.09	40.91
5.6E 01 - 8.3E 01	6	15	27.27	68.18
8.3E 01 - 1.2E 02	2	17	9.09	77.27
1.2E 02 - 1.8E 02	1	18	4.55	81.82

HISTOGRAM FOR COLUMN   15 (CR PPM)

```
        1.0E 01 XXXXX

        1.5E 01 XXXXXXXXXXXXXX

        2.0E 01

        3.0E 01 XXXXXXXXXXXXXX

        5.0E 01 XXXXXXXXX

        7.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX

        1.0E 02 XXXXXXXXX

        1.5E 02 XXXXX
```

| | | | | | | ANALYTICAL |
N	L	H	B	T	G	VALUES
0	4	0	0	0	0	18
0.0	18.18			0.0	0.0	

MAXIMUM = 1.50000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 4.41242E 01

GEOMETRIC DEVIATION = 2.17696E 00

FREQUENCY TABLE FOR COLUMN   16 (CU PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	1	1	4.55	4.55
5.6E 00 -	8.3E 00	0	1	0.0	4.55
8.3E 00 -	1.2E 01	4	5	18.18	22.73
1.2E 01 -	1.8E 01	3	8	13.64	36.36
1.8E 01 -	2.6E 01	6	14	27.27	63.64
2.6E 01 -	3.8E 01	2	16	9.09	72.73
3.8E 01 -	5.6E 01	1	17	4.55	77.27
5.6E 01 -	8.3E 01	2	19	9.09	86.36
8.3E 01 -	1.2E 02	1	20	4.55	90.91
1.2E 02 -	1.8E 02	0	20	0.0	90.91
1.8E 02 -	2.6E 02	1	21	4.55	95.45
2.6E 02 -	3.8E 02	1	22	4.55	100.00

HISTOGRAM FOR COLUMN   16 (CU PPM)

```
5.0E 00 XXXXX

7.0E 00

1.0E 01 XXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXX

5.0E 01 XXXXX

7.0E 01 XXXXXXXXX

1.0E 02 XXXXX

1.5E 02

2.0E 02 XXXXX

3.0E 02 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	22
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 02

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 2.60693E 01

GEOMETRIC DEVIATION = 2.78821E 00

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FREQUENCY TABLE FOR COLUMN   17 (LA PPM)

LIMITS LOWER – UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E 01 – 2.6E 01	5	5	22.73	22.73
2.6E 01 – 3.8E 01	5	10	22.73	45.45
3.8E 01 – 5.6E 01	0	10	0.0	45.45
5.6E 01 – 8.3E 01	0	10	0.0	45.45
8.3E 01 – 1.2E 02	1	11	4.55	50.00

HISTOGRAM FOR COLUMN   17 (LA PPM)

```
    2.0E 01 XXXXXXXXXXXXXXXXXXXXXXXX

    3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXX

    5.0E 01

    7.0E 01

    1.0E 02 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	9	0	0	0	0	11
9.09	40.91			0.0	0.0	

MAXIMUM = 1.00000E 02

MINIMUM = 2.00000E 01

GEOMETRIC MEAN = 2.78364E 01

GEOMETRIC DEVIATION = 1.60014E 00

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FREQUENCY TABLE FOR COLUMN   18 (MO PPM)

	LIMITS	FREQ	FREQ	PERCENT	PERCENT
LOWER	UPPER		CUM	FREQ	FREQ CUM
3.8E 00 -	5.6E 00	1	1	4.55	4.55

HISTOGRAM FOR COLUMN   18 (MO PPM)

    5.0E 00 XXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
14	7	0	0	0	0	1
63.64	31.82			0.0	0.0	

MAXIMUM = 5.00000E 00

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 5.00000E 00

GEOMETRIC DEVIATION = 9.99900E 48

FREQUENCY TABLE FOR COLUMN   19 (NB PPM)

LIMITS	FREQ	FREQ	PERCENT	PERCENT
LOWER - UPPER		CUM	FREQ	FREQ CUM
8.3E 00 - 1.2E 01	16	16	72.73	72.73

HISTOGRAM FOR COLUMN   19 (NB PPM)

1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

						ANALYTICAL
N	L	H	B	T	G	VALUES
0	6	0	0	0	0	16
0.0	27.27			0.0	0.0	

MAXIMUM = 1.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 9.99997E 00

GEOMETRIC DEVIATION = 1.00225E 00

30

FREQUENCY TABLE FOR COLUMN   20 (NI PPM)

	LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	-	UPPER				
3.8E 00	-	5.6E 00	0	0	0.0	0.0
5.6E 00	-	8.3E 00	2	2	9.09	9.09
8.3E 00	-	1.2E 01	1	3	4.55	13.64
1.2E 01	-	1.8E 01	11	14	50.00	63.64
1.8E 01	-	2.6E 01	1	15	4.55	68.18
2.6E 01	-	3.8E 01	2	17	9.09	77.27
3.8E 01	-	5.6E 01	2	19	9.09	86.36
5.6E 01	-	8.3E 01	2	21	9.09	95.45
8.3E 01	-	1.2E 02	1	22	4.55	100.00

HISTOGRAM FOR COLUMN   20 (NI PPM)

```
7.0E 00 XXXXXXXXX

1.0E 01 XXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXX

3.0E 01 XXXXXXXXX

5.0E 01 XXXXXXXXX

7.0E 01 XXXXXXXXX

1.0E 02 XXXXX
```

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N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	22
0.0	0.0			0.0	0.0	

MAXIMUM = 1.00000E 02

MINIMUM = 7.00000E 00

GEOMETRIC MEAN = 2.07416E 01

GEOMETRIC DEVIATION = 2.08268E 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	13.64	13.64
1.2E 01 -	1.8E 01	3	6	13.64	27.27
1.8E 01 -	2.6E 01	2	8	9.09	36.36
2.6E 01 -	3.8E 01	9	17	40.91	77.27
3.8E 01 -	5.6E 01	0	17	0.0	77.27
5.6E 01 -	8.3E 01	0	17	0.0	77.27
8.3E 01 -	1.2E 02	1	18	4.55	81.82
1.2E 02 -	1.8E 02	0	18	0.0	81.82
1.8E 02 -	2.6E 02	0	18	0.0	81.82
2.6E 02 -	3.8E 02	0	18	0.0	81.82
3.8E 02 -	5.6E 02	1	19	4.55	86.36

HISTOGRAM FOR COLUMN   21 (PB PPM)

```
1.0E 01 XXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXX

2.0E 01 XXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 01

7.0E 01

1.0E 02 XXXXX

1.5E 02

2.0E 02

3.0E 02

5.0E 02 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	2	0	0	0	0	19
4.55	9.09			0.0	0.0	

MAXIMUM = 5.00000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 2.67635E 01

GEOMETRIC DEVIATION = 2.45419E 00

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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	4.55	4.55
2.6E 02 -	3.8E 02	3	4	13.64	18.18
3.8E 02 -	5.6E 02	1	5	4.55	22.73
5.6E 02 -	8.3E 02	1	6	4.55	27.27
8.3E 02 -	1.2E 03	0	6	0.0	27.27
1.2E 03 -	1.8E 03	0	6	0.0	27.27
1.8E 03 -	2.6E 03	0	6	0.0	27.27
2.6E 03 -	3.8E 03	1	7	4.55	31.82

HISTOGRAM FOR COLUMN   22 (SB PPM)

```
        2.0E 02 XXXXX

        3.0E 02 XXXXXXXXXXXXXX

        5.0E 02 XXXXX

        7.0E 02 XXXXX

        1.0E 03

        1.5E 03

        2.0E 03

        3.0E 03 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
15	0	0	0	0	0	7
68.18	0.0			0.0	0.0	

MAXIMUM = 3.00000E 03

MINIMUM = 2.00000E 02

GEOMETRIC MEAN = 4.77615E 02

GEOMETRIC DEVIATION = 2.47597E 00

FREQUENCY TABLE FOR COLUMN   23 (SC PPM)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 - 5.6E 00	1	1	4.55	4.55
5.6E 00 - 8.3E 00	3	4	13.64	18.18
8.3E 00 - 1.2E 01	1	5	4.55	22.73
1.2E 01 - 1.8E 01	8	13	36.36	59.09
1.8E 01 - 2.6E 01	2	15	9.09	68.18
2.6E 01 - 3.8E 01	1	16	4.55	72.73

HISTOGRAM FOR COLUMN   23 (SC PPM)

```
5.0E 00 XXXXX

7.0E 00 XXXXXXXXXXXXX

1.0E 01 XXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXX

3.0E 01 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
6	0	0	0	0	0	16
27.27	0.0			0.0	0.0	

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MAXIMUM = 3.00000E 01

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 1.28125E 01

GEOMETRIC DEVIATION = 1.60554E 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		3	3	13.64	13.64
1.2E 01 -	1.8E	01		1	4	4.55	18.18
1.8E 01 -	2.6E	01		0	4	0.0	18.18
2.6E 01 -	3.8E	01		3	7	13.64	31.82
3.8E 01 -	5.6E	01		1	8	4.55	36.36
5.6E 01 -	8.3E	01		2	10	9.09	45.45
8.3E 01 -	1.2E	02		1	11	4.55	50.00

HISTOGRAM FOR COLUMN   24 (SN PPM)

        1.0E 01 XXXXXXXXXXXXXX

        1.5E 01 XXXXX

        2.0E 01

        3.0E 01 XXXXXXXXXXXXX

        5.0E 01 XXXXX

        7.0E 01 XXXXXXXXX

        1.0E 02 XXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
6	5	0	0	0	0	11
27.27	22.73			0.0	0.0	

MAXIMUM = 1.00000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 2.84602E 01

GEOMETRIC DEVIATION = 2.33852E 00

FREQUENCY TABLE FOR COLUMN   25 (SR PPM)

	LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	-	UPPER				
8.3E 01	-	1.2E 02	3	3	13.64	13.64
1.2E 02	-	1.8E 02	6	9	27.27	40.91
1.8E 02	-	2.6E 02	1	10	4.55	45.45

HISTOGRAM FOR COLUMN   25 (SR PPM)

    1.0E 02 XXXXXXXXXXXXXX

    1.5E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXX

    2.0E 02 XXXXX

						ANALYTICAL VALUES
N	L	H	B	T	G	
0	12	0	0	0	0	10
0.0	54.55			0.0	0.0	

MAXIMUM =   2.00000E 02

MINIMUM =   1.00000E 02

GEOMETRIC MEAN =   1.36696E 02

GEOMETRIC DEVIATION =   1.26278E 00

FREQUENCY TABLE FOR COLUMN   26 (V PPM)

| LIMITS | | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
LOWER - UPPER					
8.3E 00 -	1.2E 01	0	0	0.0	0.0
1.2E 01 -	1.8E 01	5	5	22.73	22.73
1.8E 01 -	2.6E 01	1	6	4.55	27.27
2.6E 01 -	3.8E 01	1	7	4.55	31.82
3.8E 01 -	5.6E 01	1	8	4.55	36.36
5.6E 01 -	8.3E 01	2	10	9.09	45.45
8.3E 01 -	1.2E 02	1	11	4.55	50.00
1.2E 02 -	1.8E 02	5	16	22.73	72.73
1.8E 02 -	2.6E 02	5	21	22.73	95.45
2.6E 02 -	3.8E 02	1	22	4.55	100.00

HISTOGRAM FOR COLUMN   26 (V PPM)

```
1.5E 01  XXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01  XXXXX

3.0E 01  XXXXX

5.0E 01  XXXXX

7.0E 01  XXXXXXXXX

1.0E 02  XXXXX

1.5E 02  XXXXXXXXXXXXXXXXXXXXXXXX

2.0E 02  XXXXXXXXXXXXXXXXXXXXXXXX

3.0E 02  XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	22
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 02

MINIMUM = 1.50000E 01

GEOMETRIC MEAN = 7.23710E 01

GEOMETRIC DEVIATION = 2.97113E 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	
21	1	0	0	0	0	0
95.45	4.55			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		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	- UPPER				
8.3E 00 -	1.2E 01	1	1	4.55	4.55
1.2E 01 -	1.8E 01	2	3	9.09	13.64
1.8E 01 -	2.6E 01	3	6	13.64	27.27
2.6E 01 -	3.8E 01	9	15	40.91	68.18
3.8E 01 -	5.6E 01	1	16	4.55	72.73

HISTOGRAM FOR COLUMN   28 (Y PPM)

1.0E 01 XXXXX

1.5E 01 XXXXXXXXX

2.0E 01 XXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 01 XXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
0	6	0	0	0	0	16
0.0	27.27			0.0	0.0	

MAXIMUM = 5.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 2.45763E 01

GEOMETRIC DEVIATION = 1.47760E 00

FREQUENCY TABLE FOR COLUMN   29 (ZN PPM)

	LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	–	UPPER				
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	4.55	4.55

HISTOGRAM FOR COLUMN   29 (ZN PPM)

7.0E 02 XXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
13	8	0	0	0	0	1
59.09	36.36			0.0	0.0	

MAXIMUM =   7.00000E 02

MINIMUM =   7.00000E 02

GEOMETRIC MEAN =   6.99998E 02

GEOMETRIC DEVIATION =   9.99900E 48

FREQUENCY TABLE FOR COLUMN   30 (ZR PPM)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER ~ UPPER					
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	18.18	18.18
8.3E 01 -	1.2E 02	6	10	27.27	45.45
1.2E 02 -	1.8E 02	9	19	40.91	86.36
1.8E 02 -	2.6E 02	1	20	4.55	90.91
2.6E 02 -	3.8E 02	2	22	9.09	100.00

HISTOGRAM FOR COLUMN   30 (ZR PPM)

```
7.0E 01 XXXXXXXXXXXXXXXXXXX

1.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 02 XXXXX

3.0E 02 XXXXXXXXX
```

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N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	22
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 02

MINIMUM = 7.00000E 01

GEOMETRIC MEAN = 1.26162E 02

GEOMETRIC DEVIATION = 1.52115E 00

FREQUENCY TABLE FOR COLUMN   31 (AU PPM)

LIMITS		FREQ	FREQ	PERCENT	PERCENT
LOWER -	UPPER		CUM	FREQ	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	2	2	9.09	9.09

HISTOGRAM FOR COLUMN   31 (AU PPM)

    1.0E-01 XXXXXXXXX

						ANALYTICAL
N	L	H	B	T	G	VALUES
0	20	0	0	0	0	2
0.0	90.91			0.0	0.0	

MAXIMUM = 1.00000E-01

MINIMUM = 1.00000E-01

GEOMETRIC MEAN = 1.00000E-01

GEOMETRIC DEVIATION = 1.00000E 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	1	1	4.55	4.55
2.6E-01 -	3.8E-01	0	1	0.0	4.55
3.8E-01 -	5.6E-01	1	2	4.55	9.09
5.6E-01 -	8.3E-01	0	2	0.0	9.09
8.3E-01 -	1.2E 00	2	4	9.09	18.18
1.2E 00 -	1.8E 00	0	4	0.0	18.18
1.8E 00 -	2.6E 00	1	5	4.55	22.73
2.6E 00 -	3.8E 00	1	6	4.55	27.27
3.8E 00 -	5.6E 00	0	6	0.0	27.27
5.6E 00 -	8.3E 00	3	9	13.64	40.91
8.3E 00 -	1.2E 01	1	10	4.55	45.45

HISTOGRAM FOR COLUMN   32 (HG PPM)

```
     2.0E-01 XXXXX

     3.0E-01

     5.0E-01 XXXXX

     7.0E-01

     1.0E 00 XXXXXXXXX

     1.5E 00

     2.0E 00 XXXXX

     3.0E 00 XXXXX

     5.0E 00

     7.0E 00 XXXXXXXXXXXXX

     1.0E 01 XXXXX
```

						ANALYTICAL
N	L	H	B	T	G	VALUES
0	0	0	0	0	12	10
0.0	0.0			0.0	54.55	

MAXIMUM = 9.00000E 00

MINIMUM = 2.40000E-01

GEOMETRIC MEAN = 2.22522E 00

GEOMETRIC DEVIATION = 3.62126E 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.

ELEMENT	N	L	H	B	T	G	ANALYTICAL VALUES
FE PCT	0	0	0	0	0	0	22
MG PCT	0	0	0	0	0	0	22
CA PCT	0	0	0	0	0	0	22
TI PCT	0	0	0	0	0	0	22
MN PPM	0	0	0	0	0	1	21
AG PPM	5	7	0	0	0	0	10
AS PPM	13	2	0	0	0	4	3
AU PPM	22	0	0	0	0	0	0
B PPM	0	0	0	0	0	7	15
BA PPM	0	1	0	0	0	0	21
BE PPM	0	2	0	0	0	0	20
BI PPM	16	0	0	0	0	0	6
CD PPM	22	0	0	0	0	0	0
CO PPM	0	10	0	0	0	0	12
CR PPM	0	4	0	0	0	0	18
CU PPM	0	0	0	0	0	0	22
LA PPM	2	9	0	0	0	0	11
MO PPM	14	7	0	0	0	0	1
NB PPM	0	6	0	0	0	0	16
NI PPM	0	0	0	0	0	0	22
PB PPM	1	2	0	0	0	0	19
SB PPM	15	0	0	0	0	0	7
SC PPM	6	0	0	0	0	0	16
SN PPM	6	5	0	0	0	0	11
SR PPM	0	12	0	0	0	0	10
V PPM	0	0	0	0	0	0	22
W PPM	21	1	0	0	0	0	0
Y PPM	0	6	0	0	0	0	16
ZN PPM	13	8	0	0	0	0	1
ZR PPM	0	0	0	0	0	0	22
AU PPM	0	20	0	0	0	0	2
HG PPM	0	0	0	0	0	12	10

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ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS		
FE PCT	3.568061	1.95	22 SAMPLES AND	22 ANALYTICAL VALUES.	
MG PCT	0.623484	2.30	22 SAMPLES AND	22 ANALYTICAL VALUES.	
CA PCT	0.432173	2.36	22 SAMPLES AND	22 ANALYTICAL VALUES.	
TI PCT	0.272542	1.94	22 SAMPLES AND	22 ANALYTICAL VALUES.	
MN PPM	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.		
AG PPM	0.343061	4.83	12 NOT DETECTED, LESS THAN, OR TRACE VALUES.	10 REPORTED VALUES.	
AS PPM	********	******	4 GREATER THAN VALUES. NO COMPUTATIONS.		
AU PPM	********	******	22 NOT DETECTED, LESS THAN, OR TRACE VALUES.	0 REPORTED VALUES. NO COMPUTATIONS.	
B PPM	********	******	7 GREATER THAN VALUES. NO COMPUTATIONS.		
BA PPM	529.932617	3.00	1 NOT DETECTED, LESS THAN, OR TRACE VALUES.	21 REPORTED VALUES.	
BE PPM	1.376712	1.45	2 NOT DETECTED, LESS THAN, OR TRACE VALUES.	20 REPORTED VALUES.	
BI PPM	2.149334	9.99	16 NOT DETECTED, LESS THAN, OR TRACE VALUES.	6 REPORTED VALUES.	
CD PPM	********	******	22 NOT DETECTED, LESS THAN, OR TRACE VALUES.	0 REPORTED VALUES. NO COMPUTATIONS.	
CO PPM	4.674788	2.88	10 NOT DETECTED, LESS THAN, OR TRACE VALUES.	12 REPORTED VALUES.	
CR PPM	25.080170	4.09	4 NOT DETECTED, LESS THAN, OR TRACE VALUES.	18 REPORTED VALUES.	
CU PPM	26.069244	2.79	22 SAMPLES AND	22 ANALYTICAL VALUES.	
LA PPM	********	******	11 NOT DETECTED, LESS THAN, OR TRACE VALUES.	11 REPORTED VALUES. NO COMPUTATIONS.	
MO PPM	********	******	21 NOT DETECTED, LESS THAN, OR TRACE VALUES.	1 REPORTED VALUES. NO COMPUTATIONS.	
NB PPM	9.338620	1.12	6 NOT DETECTED, LESS THAN, OR TRACE VALUES.	16 REPORTED VALUES.	
NI PPM	20.741531	2.08	22 SAMPLES AND	22 ANALYTICAL VALUES.	

PB PPM	21.083176	2.84	3 NOT DETECTED, LESS THAN, OR TRACE VALUES.	19 REPORTED VALUES.
SB PPM	29.096832	10.96	15 NOT DETECTED, LESS THAN, OR TRACE VALUES.	7 REPORTED VALUES.
SC PPM	8.044499	2.43	6 NOT DETECTED, LESS THAN, OR TRACE VALUES.	16 REPORTED VALUES.
SN PPM	8.510301	4.43	11 NOT DETECTED, LESS THAN, OR TRACE VALUES.	11 REPORTED VALUES.
SR PPM	80.817673	1.76	12 NOT DETECTED, LESS THAN, OR TRACE VALUES.	10 REPORTED VALUES.
V PPM	72.370743	2.97	22 SAMPLES AND 22 ANALYTICAL VALUES.	
W PPM	********	******	22 NOT DETECTED, LESS THAN, OR TRACE VALUES.	0 REPORTED VALUES. NO COMPUTATIONS.
Y PPM	16.217407	2.18	6 NOT DETECTED, LESS THAN, OR TRACE VALUES.	16 REPORTED VALUES.
ZN PPM	********	******	21 NOT DETECTED, LESS THAN, OR TRACE VALUES.	1 REPORTED VALUES. NO COMPUTATIONS.
ZR PPM	126.161713	1.52	22 SAMPLES AND 22 ANALYTICAL VALUES.	
AU PPM	********	0	20 NOT DETECTED, LESS THAN, OR TRACE VALUES.	2 REPORTED VALUES. NO COMPUTATIONS.
HG PPM	********	******	12 GREATER THAN VALUES. NO COMPUTATIONS.	

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

	SAMPLE	FE PCT	MG PCT	CA PCT	TI PCT	MN PPM	AG PPM	AS PPM	AU PPM	B PPM	BA PPM
19	AMM069	5.0000	1.5000	0.7000	0.7000	700.0000	0.5000N	200.0000L	10.0000N	200.0000	1000.0000
20	AMM068	3.0000	1.0000	0.7000	0.5000	500.0000	0.5000L	200.0000N	10.0000N	70.0000	700.0000
21	AMM067	5.0000	1.0000	0.5000	0.7000	1500.0000	0.5000L	200.0000N	10.0000N	150.0000	1000.0000
24	AMM066	3.0000	0.7000	0.7000	0.5000	1500.0000	0.5000N	200.0000N	10.0000N	150.0000	700.0C00
25	AMM065	1.5000	0.7000	0.5000	0.2000	500.0000	0.5000N	300.0000	10.0000N	300.0000	500.0000
27	AMM064	2.0000	0.7000	0.7000	0.2000	500.0000	0.5000N	200.0000L	10.0000N	200.0000	700.0000
26	AMM063	3.0000	0.7000	1.0000	0.3000	700.0000	0.5000N	200.0000L	10.0000N	200.0000	500.0000
30	AMM062	1.5000	0.3000	1.0000	0.1500	700.0000	0.5000N	200.0000N	10.0000N	150.0000	500.0000
37	AMM061	1.5000	0.5000	1.0000	0.2000	300.0000	0.5000N	200.0000L	10.0000N	200.0000	300.0000
42	AMM060	3.0000	0.7000	1.0000	0.3000	700.0000	1.5000	700.0000	10.0000N	300.0000	700.0000
49	AMM059	3.0000	0.7000	0.7000	0.3000	500.0000	1.0000	700.0000	10.0000N	200.0000	300.0C00
48	AMM058	5.0000	1.0000	0.7000	0.3000	1500.0000	0.5000N	300.0000	10.0000N	700.0000	1000.0000
50	AMM057	5.0000	0.7000	0.1000	0.3000	1500.0000	0.5000L	300.0000	10.C000N	500.0000	700.0000
60	AMM056	3.0000	0.7000	0.3000	0.5000	1000.0000	0.5000L	200.0000L	10.0000N	150.0000	300.0000
59	AMM055	7.0000	1.0000	0.7000	0.5000	5000.0000	0.5000L	200.0000L	10.0000N	700.0000	700.0C00
58	AMM054	3.0000	0.3000	0.7000	0.3000	300.0000	0.7000	700.0000	10.0000N	200.0000	300.0000
65	AMM053	5.0000	1.0000	0.7000	0.5000	1000.0000	0.5000L	300.0000	10.0000N	500.0000	700.0000
66	AMM052	5.0000	1.0000	0.7000	0.5000	500.0000	0.7000	3000.0000	10.0000N	1500.0000	700.0000
67	AMM051	5.0000	1.0000	0.3000	0.5000	1500.0000	0.5000L	700.0000	10.0000N	500.0000	700.0000
68	AMM050	2.0000	0.5000	0.3000	0.3000	300.0000	7.0000	3000.0000	10.0000N	700.0000	300.0000
72	AMM049	3.0000	0.7000	0.5000	0.5000	700.0000	0.5000L	200.0000L	10.0000N	200.0000	500.0000
71	AMM048	5.0000	1.0000	0.1000	0.5000	1500.0000	3.0000	2000.0000	10.0000N	300.0000	700.0000
77	AMM047	3.0000	1.0000	0.5000	0.5000	500.0000	0.5000N	200.0000L	10.0000N	300.C000	300.0000
80	AMM046	3.0000	0.7000	0.5000	0.5000	700.0000	0.5000L	200.0000	10.0000N	300.0000	500.0C00
81	AMM045	5.0000	1.0000	0.7000	0.5000	500.0000	2.0000	20001.0000	10.0000N	700.0000	500.0000
82	AMM044	5.0000	1.0000	0.5000	0.5000	3000.0000	0.5000L	200.0000	10.0000N	200.0000	700.0000
51	AMM092	5.0000	0.7000	1.0000	0.7000	2000.0000	0.5000N	200.0000L	10.0000N	300.0000	700.0000
47	AMM093	3.0000	1.0000	0.7000	0.5000	1000.0000	0.5000N	200.0000L	10.0000N	200.0000	700.0000
44	AMM094	5.0000	0.7000	0.5000	0.3000	1500.0000	0.5000N	200.0000L	10.0000N	100.0000	700.0C00
43	AMM095	5.0000	1.0000	0.5000	0.5000	1500.0000	0.5000N	200.0000N	10.0000N	150.0000	1000.0000
46	AMM096	5.0000	0.7000	0.5000	0.5000	2000.0000	0.5000N	200.0000N	10.0000N	70.0000	700.0000
45	AMM097	5.0000	1.0000	0.5000	0.5000	1500.0000	0.5000N	200.0000N	10.0000N	100.0000	1000.0000
39	AMM098	5.0000	1.0000	0.5000	0.5000	1500.0000	0.5000L	200.0000L	10.0000N	100.0000	1000.0000
38	AMM099	3.0000	0.7000	0.2000	0.3000	500.0000	0.5000L	200.0000N	10.0000N	70.0000	700.0000
35	AMM100	5.0000	0.5000	0.5000	0.3000	1500.0000	0.5000N	200.0000N	10.0000N	100.0000	500.0000
34	AMM101	5.0000	0.7000	0.1500	0.3000	500.0000	0.5000N	200.0000N	10.0000N	70.0000	700.0000
29	AMM102	5.0000	0.7000	0.3000	0.5000	1500.0000	0.5000L	200.0000L	10.0000N	100.0000	1000.0000
28	AMM103	5.0000	1.0000	0.5000	0.5000	1000.0000	0.5000N	200.0000L	10.0000N	100.0000	700.0000
31	AMM104	5.0000	1.0000	0.5000	0.5000	1500.0000	0.5000N	200.0000L	10.0000N	70.0000	700.0000
32	AMM105	3.0000	0.7000	0.5000	0.5000	1000.0000	0.5000N	200.0000L	10.0000N	70.0000	700.0C00
23	AMM106	3.0000	0.7000	0.5000	0.3000	300.0000	0.5000N	200.0000N	10.0000N	70.0000	300.0C00
22	AMM107	5.0000	0.7000	0.7000	0.5000	300.0000	0.5000N	200.0000N	10.0000N	70.0000	500.0000
36	AMM108	2.0000	0.3000	0.7000	0.3000	200.0000	0.5000N	200.0000N	10.0000N	70.0000	300.0000
40	AMM109	2.0000	0.7000	1.0000	0.2000	200.0000	0.5000N	200.0000N	10.0000N	500.0000	500.0000
84	AMM043	5.0000	1.0000	0.7000	0.3000	700.0000	0.5000L	200.0C00L	10.0000N	150.0000	700.0000
85	AMM042	5.0000	1.0000	0.7000	0.5000	500.0000	1.0000	2000.0000	10.0000N	700.0000	700.0000
87	AMM041	5.0000	1.0000	0.7000	0.5000	700.0000	0.5000L	1500.0000	10.0000N	70.0000	300.0000
33	AMM070	3.0000	0.7000	0.7000	0.3000	700.0000	0.5000L	700.0000	10.0000N	200.0000	500.0000
41	AMM071	3.0000	0.7000	0.5000	0.3000	1000.0000	0.5000L	500.0000	10.0000N	500.0000	500.0000
57	AMM072	3.0000	1.0000	0.5000	0.3000	1000.0000	1.0000	1500.0000	10.0000N	300.0000	700.0000

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

	SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
19	AMM069	2.0000	10.0000N	20.0000N	50.0000	150.0000	70.0000	50.0000	5.0000N	10.0000	100.0000
20	AMM068	1.5000	10.0000N	20.0000N	15.0000	100.0000	30.0000	20.0000L	5.0000N	10.0000	50.0000
21	AMM067	1.5000	10.0000N	20.0000N	30.0000	150.0000	50.0000	20.0000L	5.0000L	10.0000	100.0000
24	AMM066	1.5000	10.0000N	20.0000N	20.0000	100.0000	70.0000	20.0000L	5.0000N	10.0000	70.0000
25	AMM065	2.0000	10.0000N	20.0000N	7.0000	10.0000	10.0000	20.0000L	5.0000N	10.0000	10.0000
27	AMM064	1.5000	10.0000N	20.0000N	5.0000	70.0000	5.0000	20.0000N	5.0000N	10.0000	20.0000
26	AMM063	2.0000	10.0000N	20.0000N	10.0000	30.0000	10.0000	30.0000	5.0000N	10.0000	20.0000
30	AMM062	2.0000	10.0000N	20.0000N	5.0000	20.0000	5.0000	20.0000	5.0000N	10.0000L	15.0000
37	AMM061	2.0000	10.0000N	20.0000N	5.0000L	15.0000	7.0000	20.0000N	5.0000N	10.0000	15.0000
42	AMM060	2.0000	10.0000L	20.0000N	5.0000	10.0000	20.0000	20.0000L	5.0000N	10.0000	20.0000
49	AMM059	1.5000	10.0000L	20.0000N	20.0000	50.0000	100.0000	20.0000L	5.0000L	10.0000	50.0000
48	AMM058	1.0000	10.0000L	20.0000N	30.0000	70.0000	70.0000	20.0000L	5.0000L	10.0000	70.0000
50	AMM057	1.0000	10.0000L	20.0000N	70.0000	70.0000	100.0000	20.0000L	5.0000L	10.0000	70.0000
60	AMM056	1.0000	10.0000N	20.0000N	10.0000	150.0000	15.0000	20.0000	5.0000N	10.0000	30.0000
59	AMM055	1.5000	10.0000L	20.0000N	50.0000	70.0000	50.0000	20.0000L	5.0000L	10.0000	100.0000
58	AMM054	1.0000	10.0000L	20.0000N	5.0000L	50.0000	70.0000	20.0000L	5.0000L	10.0000	30.0000
65	AMM053	3.0000	10.0000N	20.0000N	30.0000	70.0000	30.0000	20.0000	5.0000L	10.0000	50.0000
66	AMM052	1.5000	50.0000	20.0000N	30.0000	100.0000	150.0000	20.0000L	5.0000L	10.0000	100.0000
67	AMM051	2.0000	10.0000L	20.0000N	50.0000	100.0000	70.0000	20.0000	5.0000L	10.0000	100.0000
68	AMM050	1.5000	30.0000	20.0000N	20.0000	50.0000	150.0000	20.0000	5.0000L	10.0000L	50.0000
72	AMM049	1.0000	10.0000N	20.0000N	20.0000	70.0000	20.0000	20.0000	5.0000L	10.0000	30.0000
71	AMM048	1.0000	10.0000N	20.0000N	50.0000	150.0000	200.0000	20.0000N	5.0000	10.0000	100.0000
77	AMM047	1.0000	10.0000N	20.0000N	15.0000	70.0000	20.0000	20.0000N	5.0000L	10.0000	30.0000
80	AMM046	1.0000	10.0000N	20.0000N	30.0000	70.0000	30.0000	20.0000N	5.0000L	10.0000	30.0000
81	AMM045	1.5000	10.0000N	20.0000N	20.0000	70.0000	100.0000	20.0000N	5.0000	10.0000	30.0000
82	AMM044	1.0000	10.0000N	20.0000N	100.0000	70.0000	50.0000	20.0000N	5.0000L	10.0000	100.0000
51	AMM092	2.0000	10.0000N	20.0000N	30.0000	70.0000	15.0000	20.0000	5.0000L	15.0000	30.0000
47	AMM093	1.0000	10.0000N	20.0000N	15.0000	70.0000	15.0000	20.0000L	5.0000N	15.0000	50.0000
44	AMM094	1.0000	10.0000N	20.0000N	30.0000	100.0000	20.0000	20.0000N	5.0000L	10.0000	50.0000
43	AMM095	1.5000	10.0000N	20.0000N	30.0000	150.0000	30.0000	20.0000L	5.0000L	15.0000	70.0000
46	AMM096	1.5000	10.0000N	20.0000N	30.0000	70.0000	15.0000	20.0000L	5.0000L	10.0000	50.0000
45	AMM097	2.0000	10.0000N	20.0000N	30.0000	70.0000	15.0000	20.0000L	5.0000L	15.0000	70.0000
39	AMM098	1.5000	10.0000N	20.0000N	30.0000	150.0000	30.0000	20.0000	5.0000L	15.0000	70.0000
38	AMM099	1.0000L	10.0000N	20.0000N	30.0000	70.0000	15.0000	70.0000	5.0000N	10.0000	50.0000
35	AMM100	1.0000L	10.0000N	20.0000N	20.0000	70.0000	10.0000	70.0000N	5.0000L	10.0000	30.0000
34	AMM101	1.0000L	10.0000N	20.0000N	30.0000	100.0000	20.0000	70.0000L	5.0000L	10.0000	70.0000
29	AMM102	1.5000	10.0000N	20.0000N	20.0000	70.0000	30.0000	70.0000L	5.0000N	10.0000	70.0000
28	AMM103	1.5000	10.0000N	20.0000N	20.0000	100.0000	20.0000	150.0000	5.0000N	10.0000	70.0000
31	AMM104	1.0000	10.0000N	20.0000N	30.0000	100.0000	15.0000	20.0000L	5.0000L	10.0000	50.0000
32	AMM105	1.0000	10.0000N	20.0000N	20.0000	70.0000	15.0000	20.0000L	5.0000L	10.0000L	30.0000
23	AMM106	1.5000	10.0000N	20.0000N	15.0000	50.0000	20.0000	20.0000L	5.0000N	10.0000L	30.0000
22	AMM107	1.0000	10.0000N	20.0000N	15.0000	100.0000	20.0000	20.0000L	5.0000L	10.0000	30.0000
36	AMM108	2.0000	10.0000N	20.0000N	7.0000	15.0000	7.0000	20.0000L	5.0000N	10.0000L	15.0000
40	AMM109	2.0000	10.0000N	20.0000N	7.0000	15.0000	5.0000	20.0000L	5.0000N	10.0000L	15.0000
84	AMM043	1.5000	10.0000N	20.0000N	20.0000	150.0000	30.0000	20.0000N	5.0000L	10.0000	70.0000
85	AMM042	1.0000	10.0000L	20.0000N	30.0000	100.0000	70.0000	20.0000N	5.0000L	10.0000	70.0000
87	AMM041	1.0000	10.0000N	20.0000N	20.0000	70.0000	30.0000	20.0000N	5.0000	10.0000	100.0000
33	AMM070	1.5000	10.0000N	20.0000N	10.0000	20.0000	30.0000	20.0000L	5.0000N	10.0000	15.0000
41	AMM071	2.0000	10.0000N	20.0000N	10.0000	30.0000	30.0000	20.0000L	5.0000N	10.0000	15.0000
57	AMM072	2.0000	10.0000L	20.0000N	30.0000	50.0000	150.0000	20.0000L	5.0000N	10.0000	50.0000

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

	SAMPLE	PB PPM	SB PPM	SC PPM	SN PPM	SR PPM	V PPM	W PPM	Y PPM	ZN PPM	ZR PPM
A	AMM069	20.0000	100.0000N	15.0000	10.0000N	150.0000	200.0000	50.0000N	30.0000	200.0000L	500.0000
20	AMM068	15.0000	100.0000N	15.0000	10.0000N	100.0000	150.0000	50.0000N	20.0000	200.0000L	150.0000
21	AMM067	15.0000	100.0000N	15.0000	10.0000N	100.0000	200.0000	50.0000N	30.0000	200.0000	150.0000
24	AMM066	30.0000	100.0000N	15.0000	10.0000N	100.0000	200.0000	50.0000N	30.0000	200.0000L	100.0000
25	AMM065	15.0000	100.0000N	5.0000	10.0000N	150.0000	30.0000	50.0000N	10.0000	200.0000N	50.0000
27	AMM064	30.0000	100.0000N	7.0000	10.0000N	150.0000	70.0000	50.0000N	15.0000	200.0000N	150.0000
26	AMM063	20.0000	100.0000N	7.0000	10.0000N	150.0000	50.0000	50.0000N	30.0000	200.0000N	500.0000
30	AMM062	15.0000	100.0000N	5.0000	10.0000N	150.0000	30.0000	50.0000N	15.0000	200.0000N	50.0000
37	AMM061	20.0000	100.0000N	5.0000	10.0000L	150.0000	30.0000	50.0000N	15.0000	200.0000N	70.0000
42	AMM060	15.0000	100.0000N	7.0000	10.0000N	200.0000	70.0000	50.0000N	20.0000	200.0000	300.0000
49	AMM059	30.0000	100.0000N	15.0000	10.0000N	150.0000	150.0000	50.0000N	20.0000	200.0000N	100.0000
48	AMM058	15.0000	100.0000N	15.0000	10.0000L	100.0000L	150.0000	50.0000N	15.0000	300.0000	70.0000
50	AMM057	30.0000	100.0000N	15.0000	10.0000N	100.0000L	150.0000	50.0000N	20.0000	200.0000L	200.0000
60	AMM056	10.0000	100.0000N	10.0000	10.0000N	150.0000	150.0000	50.0000N	15.0000	200.0000N	100.0000
59	AMM055	15.0000	100.0000N	15.0000	10.0000L	150.0000	200.0000	50.0000N	20.0000	200.0000N	150.0000
58	AMM054	15.0000	100.0000N	10.0000	10.0000N	100.0000	100.0000	50.0000N	20.0000	200.0000N	100.0000
65	AMM053	50.0000	100.0000N	15.0000	10.0000L	150.0000	150.0000	50.0000N	20.0000	200.0000	150.0000
66	AMM052	30.0000	100.0000L	15.0000	20.0000	100.0000	200.0000	50.0000N	20.0000	200.0000L	100.0000
67	AMM051	30.0000	100.0000N	15.0000	10.0000L	100.0000	200.0000	50.0000N	15.0000	200.0000	100.0000
68	AMM050	30.0000	100.0000L	10.0000	15.0000	100.0000	150.0000	50.0000N	15.0000	200.0000L	100.0000
72	AMM049	20.0000	100.0000N	15.0000	10.0000N	150.0000	150.0000	50.0000N	15.0000	200.0000L	200.0000
71	AMM048	50.0000	100.0000	15.0000	10.0000N	100.0000L	200.0000	50.0000N	15.0000	200.0000	100.0000
77	AMM047	15.0000	100.0000N	15.0000	10.0000L	150.0000	150.0000	50.0000N	15.0000	200.0000L	150.0000
80	AMM046	20.0000	100.0000N	15.0000	10.0000N	100.0000	150.0000	50.0000N	15.0000	200.0000L	150.0000
81	AMM045	30.0000	100.0000	15.0000	10.0000L	150.0000	150.0000	50.0000N	20.0000	200.0000L	150.0000
82	AMM044	20.0000	100.0000L	15.0000	10.0000N	150.0000	150.0000	50.0000N	15.0000	200.0000L	200.0000
51	AMM092	20.0000	100.0000N	15.0000	10.0000N	150.0000	150.0000	50.0000N	20.0000	200.0000L	500.0000
47	AMM093	10.0000	100.0000N	15.0000	10.0000N	100.0000	150.0000	50.0000N	30.0000	200.0000	100.0000
44	AMM094	15.0000	100.0000N	10.0000	10.0000N	100.0000L	150.0000	50.0000N	15.0000	200.0000L	150.0000
43	AMM095	10.0000	100.0000N	15.0000	10.0000N	100.0000	200.0000	50.0000N	15.0000	200.0000L	150.0000
46	AMM096	10.0000	100.0000N	10.0000	10.0000N	100.0000L	150.0000	50.0000N	15.0000	200.0000L	150.0000
45	AMM097	10.0000	100.0000N	15.0000	10.0000N	100.0000	200.0000	50.0000N	20.0000	200.0000L	100.0000
39	AMM098	15.0000	100.0000N	15.0000	10.0000N	100.0000L	200.0000	50.0000N	20.0000	200.0000L	100.0000
38	AMM099	10.0000N	100.0000N	10.0000	10.0000N	100.0000L	150.0000	50.0000N	15.0000	200.0000L	300.0000
35	AMM100	10.0000	100.0000N	10.0000	10.0000N	100.0000	100.0000	50.0000N	10.0000	200.0000N	100.0000
34	AMM101	10.0000	100.0000N	10.0000	10.0000N	100.0000L	150.0000	50.0000N	10.0000	200.0000N	100.0000
29	AMM102	10.0000	100.0000N	15.0000	10.0000N	100.0000	150.0000	50.0000N	30.0000	200.0000L	150.0000
28	AMM103	10.0000	100.0000N	15.0000	10.0000N	100.0000	150.0000	50.0000N	20.0000	200.0000L	100.0000
31	AMM104	10.0000L	100.0000N	15.0000	10.0000N	100.0000	150.0000	50.0000N	15.0000	200.0000L	150.0000
32	AMM105	10.0000	100.0000N	10.0000	10.0000N	100.0000L	150.0000	50.0000N	15.0000	200.0000N	200.0000
23	AMM106	15.0000	100.0000N	10.0000	10.0000N	100.0000L	100.0000	50.0000N	15.0000	200.0000N	100.0000
22	AMM107	15.0000	100.0000N	10.0000	10.0000N	100.0000	150.0000	50.0000N	15.0000	200.0000N	150.0000
36	AMM108	15.0000	100.0000N	5.0000	10.0000N	100.0000	30.0000	50.0000N	10.0000	200.0000N	50.0000
40	AMM109	20.0000	100.0000N	5.0000	10.0000N	100.0000	30.0000	50.0000N	30.0000	200.0000N	200.0000
84	AMM043	30.0000	100.0000L	20.0000	10.0000N	150.0000	150.0000	50.0000N	15.0000	200.0000L	200.0000
85	AMM042	30.0000	100.0000L	15.0000	10.0000	150.0000	150.0000	50.0000N	15.0000	200.0000L	300.0000
87	AMM041	30.0000	100.0000L	15.0000	10.0000N	150.0000	150.0000	50.0000N	15.0000	200.0000	100.0000
33	AMM070	15.0000	100.0000N	7.0000	10.0000N	150.0000	30.0000	50.0000N	20.0000	200.0000N	100.0000
41	AMM071	20.0000	100.0000N	7.0000	10.0000N	150.0000	70.0000	50.0000N	20.0000	200.0000N	200.0000
57	AMM072	30.0000	100.0000N	10.0000	10.0000L	150.0000	100.0000	50.0000N	20.0000	200.0000L	150.0000

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	SAMPLE	AU PPM	HG PPM	
19	AMM069	0.0200L	0.0	B
20	AMM068	0.0200L	0.0	B
21	AMM067	0.0400L	0.0	B
24	AMM066	0.2000L	0.0	B
25	AMM065	0.0400L	0.0	B
27	AMM064	0.0400L	0.0	B
26	AMM063	0.0400L	0.0	B
30	AMM062	0.1000L	0.0	B
37	AMM061	0.0200L	0.0	B
42	AMM060	0.0200L	0.0	B
49	AMM059	0.1000L	0.0	B
48	AMM058	0.1000L	0.0	B
50	AMM057	0.2000L	0.0	B
60	AMM056	0.0200L	0.0	B
59	AMM055	0.0200L	0.0	B
58	AMM054	0.0200L	0.0	B
65	AMM053	0.2000L	0.0	B
66	AMM052	0.0200L	0.0	B
67	AMM051	0.1000L	0.0	B
68	AMM050	0.0400L	0.0	B
72	AMM049	0.0200L	0.0	B
71	AMM048	0.2000L	0.0	B
77	AMM047	0.0200L	0.0	B
80	AMM046	0.0200L	0.0	B
81	AMM045	0.0200L	0.0	B
82	AMM044	0.1000L	0.0	B
51	AMM092	0.1000L	0.0	B
47	AMM093	0.0200L	0.0	B
44	AMM094	0.0200L	0.0	B
43	AMM095	0.0200L	0.0	B
46	AMM096	0.0400L	0.0	B
45	AMM097	0.0200L	0.0	B
39	AMM098	0.0400L	0.0	B
38	AMM099	0.0200L	0.0	B
35	AMM100	0.0200L	0.0	B
34	AMM101	0.0400L	0.0	B
29	AMM102	0.0400L	0.0	B
28	AMM103	0.0200L	0.0	B
31	AMM104	0.0400L	0.0	B
32	AMM105	0.0200L	0.0	B
23	AMM106	0.0200L	0.0	B
22	AMM107	0.0200L	0.0	B
36	AMM108	0.1000L	0.0	B
40	AMM109	0.0200L	0.0	B
84	AMM043	0.1000L	0.0	B
85	AMM042	0.0400L	0.0	B
87	AMM041	0.0400L	0.0	B
33	AMM070	0.0400L	0.0	B
41	AMM071	0.0400L	0.0	B
57	AMM072	0.0200L	0.0	B

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	SAMPLE	FE PCT	MG PCT	CA PCT	TI PCT	MN PPM	AG PPM	AS PPM	AU PPM	B PPM	BA PPM
56	AMM073	3.0000	0.7000	0.7000	0.3000	300.0000	0.7000	1000.0000	10.0000N	300.0000	700.0000
55	AMM074	1.5000	0.3000	0.5000	0.3000	700.0000	0.5000N	200.0000L	10.0000N	200.0000	700.0000
64	AMM075	10.0000	1.0000	0.5000	0.5000	1500.0000	0.5000N	200.0000N	10.0000N	200.0000	700.0000
76	AMM076	10.0000	1.5000	0.3000	0.7000	1500.0000	0.7000	200.0000L	10.0000N	300.0000	1500.0000
74	AMM077	3.0000	0.7000	0.7000	0.3000	1500.0000	0.5000L	200.0000L	10.0000N	300.0000	1000.0000
75	AMM078	10.0000	1.0000	0.2000	0.5000	1500.0000	0.5000	200.0000L	10.0000N	200.0000	1500.0000
83	AMM079	1.5000	0.1500	0.1500	0.1500	2000.0000	1.5000	3000.0000	10.0000N	700.0000	150.0000
86	AMM080	7.0000	1.5000	0.7000	0.7000	1500.0000	0.5000L	200.0000L	10.0000N	700.0000	1000.0000
79	AMM081	7.0000	0.5000	0.2000	0.3000	2000.0000	0.5000N	200.0000L	10.0000N	150.0000	700.0000
78	AMM082	5.0000	0.7000	0.3000	0.5000	1500.0000	0.5000L	200.0000L	10.0000N	300.0000	1500.0000
73	AMM083	5.0000	0.7000	0.3000	0.5000	3000.0000	0.5000N	200.0000N	10.0000N	70.0000	1000.0000
69	AMM084	7.0000	0.7000	0.3000	0.3000	5000.0000	0.5000N	200.0000N	10.0000N	70.0000	1500.0000
70	AMM085	7.0000	0.7000	0.3000	0.5000	3000.0000	0.5000L	200.0000N	10.0000N	70.0000	1000.0000
63	AMM086	5.0000	0.7000	0.2000	0.3000	1500.0000	0.5000N	200.0000N	10.0000N	50.0000	700.0000
54	AMM087	5.0000	1.0000	0.5000	0.7000	1500.0000	0.5000L	200.0000N	10.0000N	100.0000	1000.0000
53	AMM088	3.0000	0.5000	0.2000	0.2000	1500.0000	0.5000N	200.0000N	10.0000N	30.0000	300.0000
52	AMM089	7.0000	1.0000	0.3000	0.5000	2000.0000	0.5000L	200.0000N	10.0000N	100.0000	1500.0000
62	AMM090	7.0000	1.0000	0.2000	0.5000	1500.0000	0.5000L	200.0000N	10.0000N	70.0000	1000.0000
61	AMM091	3.0000	0.7000	0.7000	0.3000	1500.0000	0.5000N	200.0000N	10.0000N	100.0000	700.0000

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

	SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
56	AMM073	1.5000	10.0000L	20.0000N	20.0000	50.0000	70.0000	20.0000L	5.0000N	10.0000	30.0000
55	AMM074	1.5000	10.0000N	20.0000N	5.0000L	15.0000	5.0000	20.0000L	5.0000L	10.0000L	15.0000
64	AMM075	1.5000	10.0000N	20.0000N	30.0000	100.0000	20.0000	20.0000L	5.0000L	10.0000	50.0000
76	AMM076	2.0000	10.0000N	20.0000N	70.0000	150.0000	100.0000	20.0000	5.0000	10.0000	150.0000
74	AMM077	2.0000	10.0000N	20.0000N	20.0000	70.0000	30.0000	20.0000	5.0000L	10.0000	50.0000
75	AMM078	2.0000	10.0000N	20.0000N	30.0000	150.0000	70.0000	50.0000	5.0000L	10.0000	100.0000
83	AMM079	2.0000	10.0000N	20.0000N	150.0000	30.0000	200.0000	20.0000L	5.0000L	10.0000L	30.0000
86	AMM080	2.0000	10.0000N	20.0000N	20.0000	150.0000	50.0000	20.0000	5.0000L	10.0000	100.0000
79	AMM081	1.5000	10.0000N	20.0000N	20.0000	100.0000	30.0000	20.0000L	5.0000L	15.0000	50.0000
78	AMM082	1.5000	10.0000N	20.0000N	20.0000	150.0000	70.0000	20.0000L	5.0000L	15.0000	100.0000
73	AMM083	1.5000	10.0000N	20.0000N	20.0000	100.0000	30.0000	20.0000	5.0000L	15.0000	70.0000
69	AMM084	1.5000	10.0000N	20.0000N	30.0000	150.0000	50.0000	20.0000	5.0000L	15.0000	100.0000
70	AMM085	1.5000	10.0000N	20.0000N	30.0000	150.0000	70.0000	150.0000	5.0000L	15.0000	100.0000
63	AMM086	1.0000	10.0000N	20.0000N	20.0000	100.0000	30.0000	20.0000N	5.0000L	10.0000	70.0000
54	AMM087	1.5000	10.0000N	20.0000N	30.0000	150.0000	70.0000	20.0000	5.0000L	15.0000	70.0000
53	AMM088	1.0000	10.0000N	20.0000N	30.0000	70.0000	30.0000	20.0000L	5.0000L	10.0000	70.0000
52	AMM089	2.0000	10.0000N	20.0000N	50.0000	150.0000	70.0000	20.0000L	5.0000L	10.0000	100.0000
62	AMM090	1.5000	10.0000N	20.0000N	30.0000	150.0000	50.0000	70.0000	5.0000L	10.0000	100.0000
61	AMM091	1.5000	10.0000N	20.0000N	20.0000	50.0000	15.0000	70.0000	5.0000L	10.0000	30.0000

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

	SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
56	AMM073	1.5000	10.0000L	20.0000N	20.0000	50.0000	70.0000	20.0000L	5.0000N	10.0000	30.0000
55	AMM074	1.5000	10.0000N	20.0000N	5.0000L	15.0000	5.0000	20.0000L	5.0000L	10.0000L	15.0000
64	AMM075	1.5000	10.0000N	20.0000N	30.0000	100.0000	20.0000	20.0000L	5.0000L	10.0000	50.0000
76	AMM076	2.0000	10.0000N	20.0000N	70.0000	150.0000	100.0000	20.0000	5.0000	10.0000	150.0000
74	AMM077	2.0000	10.0000N	20.0000N	20.0000	70.0000	30.0000	20.0000	5.0000L	10.0000	50.0000
75	AMM078	2.0000	10.0000N	20.0000N	30.0000	150.0000	70.0000	50.0000	5.0000L	10.0000	100.0000
83	AMM079	2.0000	10.0000N	20.0000N	150.0000	30.0000	200.0000	20.0000L	5.0000L	10.0000L	30.0000
86	AMM080	2.0000	10.0000N	20.0000N	20.0000	150.0000	50.0000	20.0000	5.0000L	10.0000	100.0000
77	AMM081	1.5000	10.0000N	20.0000N	20.0000	100.0000	30.0000	20.0000L	5.0000L	15.0000	50.0000
78	AMM082	1.5000	10.0000N	20.0000N	20.0000	150.0000	70.0000	20.0000L	5.0000L	15.0000	100.0000
73	AMM083	1.5000	10.0000N	20.0000N	20.0000	100.0000	30.0000	20.0000	5.0000L	15.0000	70.0000
69	AMM084	1.5000	10.0000N	20.0000N	30.0000	150.0000	50.0000	20.0000	5.0000L	15.0000	100.0000
70	AMM085	1.5000	10.0000N	20.0000N	30.0000	150.0000	70.0000	150.0000	5.0000L	15.0000	100.0000
63	AMM086	1.0000	10.0000N	20.0000N	20.0000	100.0000	30.0000	20.0000N	5.0000L	10.0000	70.0000
54	AMM087	1.5000	10.0000N	20.0000N	30.0000	150.0000	70.0000	20.0000	5.0000L	15.0000	70.0000
53	AMM088	1.0000	10.0000N	20.0000N	30.0000	70.0000	30.0000	20.0000L	5.0000L	10.0000	70.0000
52	AMM089	2.0000	10.0000N	20.0000N	50.0000	150.0000	70.0000	20.0000L	5.0000L	10.0000	100.0000
62	AMM090	1.5000	10.0000N	20.0000N	30.0000	150.0000	50.0000	70.0000	5.0000L	10.0000	100.0000
61	AMM091	1.5000	10.0000N	20.0000N	20.0000	50.0000	15.0000	70.0000	5.0000L	10.0000	30.0000

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

	SAMPLE	PB PPM	SB PPM	SC PPM	SN PPM	SR PPM	V PPM	W PPM	Y PPM	ZN PPM	ZR PPM
56	AMM073	15.0000	100.0000N	7.0000	10.0000L	150.0000	100.0000	50.0000N	15.0000	200.0000L	100.0000
55	AMM074	15.0000	100.0000N	5.0000L	10.0000N	150.0000	50.0000	50.0000N	20.0000	200.0000N	50.0000
64	AMM075	15.0000	100.0000N	15.0000	10.0000L	150.0000	200.0000	50.0000N	20.0000	200.0000L	100.0000
76	AMM076	150.0000	300.0000	20.0000	20.0000	150.0000	300.0000	50.0000N	30.0000	700.0000	150.0000
74	AMM077	20.0000	100.0000N	15.0000	10.0000N	100.0000	150.0000	50.0000N	30.0000	700.0000L	70.0000
75	AMM078	70.0000	100.0000N	15.0000	10.0000L	100.0000	300.0000	50.0000N	30.0000	300.0000	70.0000
83	AMM079	15.0000	100.0000N	10.0000	10.0000L	100.0000L	70.0000	50.0000N	20.0000	200.0000L	50.0000
86	AMM080	30.0000	100.0000N	20.0000	10.0000	150.0000	300.0000	50.0000N	20.0000	200.0000L	150.0000
79	AMM081	15.0000	100.0000N	15.0000	10.0000N	100.0000L	200.0000	50.0000N	20.0000	200.0000L	70.0000
78	AMM082	20.0000	100.0000N	15.0000	10.0000L	100.0000L	200.0000	50.0000N	20.0000	200.0000L	150.0000
73	AMM083	15.0000	100.0000N	15.0000	10.0000N	100.0000	200.0000	50.0000N	20.0000	200.0000L	100.0000
69	AMM084	20.0000	100.0000N	15.0000	10.0000N	100.0000	200.0000	50.0000N	20.0000	200.0000	100.0000
70	AMM085	30.0000	100.0000N	15.0000	10.0000N	100.0000	200.0000	50.0000N	30.0000	200.0000	100.0000
63	AMM086	20.0000	100.0000N	10.0000	10.0000N	100.0000L	150.0000	50.0000N	15.0000	200.0000L	70.0000
54	AMM087	30.0000	100.0000N	15.0000	10.0000N	100.0000	200.0000	50.0000N	20.0000	200.0000L	70.0000
53	AMM088	20.0000	100.0000N	10.0000	10.0000N	100.0000L	150.0000	50.0000N	15.0000	200.0000L	70.0000
52	AMM089	30.0000	100.0000N	20.0000	10.0000N	100.0000	300.0000	50.0000N	30.0000	200.0000	300.0000
62	AMM090	20.0000	100.0000N	15.0000	10.0000N	100.0000L	200.0000	50.0000N	20.0000	200.0000L	100.0000
61	AMM091	15.0000	100.0000N	10.0000	10.0000N	100.0000	150.0000	50.0000L	20.0000	200.0000L	300.0000

	SAMPLE	AU PPM	HG PPM	
56	AMM073	0.0200L	0.0	B
55	AMM074	0.0200L	0.0	B
64	AMM075	0.0200L	0.0	B
76	AMM076	0.2000L	0.0	B
74	AMM077	0.1000L	0.0	B
75	AMM078	0.2000L	0.0	B
83	AMM079	0.2000L	0.0	B
86	AMM080	0.0200L	0.0	B
79	AMM081	0.0200L	0.0	B
78	AMM082	0.0400L	0.0	B
73	AMM083	0.0200L	0.0	B
69	AMM084	0.0400L	0.0	B
70	AMM085	0.1000L	0.0	B
63	AMM086	0.0400L	0.0	B
54	AMM087	0.0200L	0.0	B
53	AMM088	0.2000L	0.0	B
52	AMM089	0.0200L	0.0	B
62	AMM090	0.0400L	0.0	B
61	AMM091	0.0200L	0.0	B

FREQUENCY TABLE FOR COLUMN   1 (FE PCT)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER -	UPPER				
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	5	5	7.25	7.25
1.8E 00 -	2.6E 00	4	9	5.80	13.04
2.6E 00 -	3.8E 00	21	30	30.43	43.48
3.8E 00 -	5.6E 00	29	59	42.03	85.51
5.6E 00 -	8.3E 00	7	66	10.14	95.65
8.3E 00 -	1.2E 01	3	69	4.35	100.00

HISTOGRAM FOR COLUMN   1 (FE PCT)

```
        1.5E 00 XXXXXXX

        2.0E 00 XXXXXX

        3.0E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

        5.0E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

        7.0E 00 XXXXXXXXXX

        1.0E 01 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	69
0.0	0.0			0.0	0.0	

MAXIMUM = 1.00000E 01

MINIMUM = 1.50000E 00

GEOMETRIC MEAN = 3.96642E 00

GEOMETRIC DEVIATION = 1.58995E 00

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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	1	1	1.45	1.45
1.8E-01 -	2.6E-01	0	1	0.0	1.45
2.6E-01 -	3.8E-01	4	5	5.80	7.25
3.8E-01 -	5.6E-01	5	10	7.25	14.49
5.6E-01 -	8.3E-01	30	40	43.48	57.97
8.3E-01 -	1.2E 00	26	66	37.68	95.65
1.2E 00 -	1.8E 00	3	69	4.35	100.00

HISTOGRAM FOR COLUMN   2 (MG PCT)

```
1.5E-01 X

2.0E-01

3.0E-01 XXXXXX

5.0E-01 XXXXXXX

7.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 00 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	69
0.0	0.0			0.0	0.0	

MAXIMUM = 1.50000E 00

MINIMUM = 1.50000E-01

GEOMETRIC MEAN = 7.52041E-01

GEOMETRIC DEVIATION = 1.48152E 00

FREQUENCY TABLE FOR COLUMN   3 (CA PCT)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
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	2	2	2.90	2.90
1.2E-01 -	1.8E-01	2	4	2.90	5.80
1.8E-01 -	2.6E-01	6	10	8.70	14.49
2.6E-01 -	3.8E-01	10	20	14.49	28.99
3.8E-01 -	5.6E-01	21	41	30.43	59.42
5.6E-01 -	8.3E-01	22	63	31.88	91.30
8.3E-01 -	1.2E 00	6	69	8.70	100.00

HISTOGRAM FOR COLUMN   3 (CA PCT)

```
1.0E-01 XXX

1.5E-01 XXX

2.0E-01 XXXXXXXXX

3.0E-01 XXXXXXXXXXXXXX

5.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

7.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 00 XXXXXXXXX
```

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N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	69
0.0	0.0			0.0	0.0	

MAXIMUM = 1.00000E 00

MINIMUM = 1.00000E-01

GEOMETRIC MEAN = 4.67271E-01

GEOMETRIC DEVIATION = 1.73821E 00

FREQUENCY TABLE FOR COLUMN   4 (TI PCT)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER -	UPPER				
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	2	2	2.90	2.90
1.8E-01 -	2.6E-01	5	7	7.25	10.14
2.6E-01 -	3.8E-01	24	31	34.78	44.93
3.8E-01 -	5.6E-01	32	63	46.38	91.30
5.6E-01 -	8.3E-01	6	69	8.70	100.00

HISTOGRAM FOR COLUMN   4 (TI PCT)

```
1.5E-01 XXX

2.0E-01 XXXXXXX

3.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

7.0E-01 XXXXXXXXX
```

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N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	69
0.0	0.0			0.0	0.0	

MAXIMUM = 7.00000E-01

MINIMUM = 1.50000E-01

GEOMETRIC MEAN = 3.89514E-01

GEOMETRIC DEVIATION = 1.45995E 00

FREQUENCY TABLE FOR COLUMN   5 (MN PPM)

LIMITS			FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	-	UPPER				
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	2	2	2.90	2.90
2.6E 02	-	3.8E 02	6	8	8.70	11.59
3.8E 02	-	5.6E 02	10	18	14.49	26.09
5.6E 02	-	8.3E 02	10	28	14.49	40.58
8.3E 02	-	1.2E 03	7	35	10.14	50.72
1.2E 03	-	1.8E 03	24	59	34.78	85.51
1.8E 03	-	2.6E 03	5	64	7.25	92.75
2.6E 03	-	3.8E 03	3	67	4.35	97.10
3.8E 03	-	5.6E 03	2	69	2.90	100.00

HISTOGRAM FOR COLUMN   5 (MN PPM)

```
2.0E 02 XXX

3.0E 02 XXXXXXXXX

5.0E 02 XXXXXXXXXXXXX

7.0E 02 XXXXXXXXXXXXX

1.0E 03 XXXXXXXXXX

1.5E 03 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 03 XXXXXXX

3.0E 03 XXXX

5.0E 03 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	69
0.0	0.0			0.0	0.0	

MAXIMUM = 5.00000E 03

MINIMUM = 2.00000E 02

GEOMETRIC MEAN = 9.82328E 02

GEOMETRIC DEVIATION = 2.05067E 00

FREQUENCY TABLE FOR COLUMN   6 (AG PPM)

LIMITS		FREQ	FREQ	PERCENT	PERCENT
LOWER -	UPPER		CUM	FREQ	FREQ CUM
3.8E-01 -	5.6E-01	1	1	1.45	1.45
5.6E-01 -	8.3E-01	4	5	5.80	7.25
8.3E-01 -	1.2E 00	3	8	4.35	11.59
1.2E 00 -	1.8E 00	2	10	2.90	14.49
1.8E 00 -	2.6E 00	1	11	1.45	15.94
2.6E 00 -	3.8E 00	1	12	1.45	17.39
3.8E 00 -	5.6E 00	0	12	0.0	17.39
5.6E 00 -	8.3E 00	1	13	1.45	18.84

HISTOGRAM FOR COLUMN   6 (AG PPM)

```
        5.0E-01 X

        7.0E-01 XXXXXX

        1.0E 00 XXXX

        1.5E 00 XXX

        2.0E 00 X

        3.0E 00 X

        5.0E 00

        7.0E 00 X
```

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N	L	H	B	T	G	ANALYTICAL VALUES
31	25	0	0	0	0	13
44.93	36.23			0.0	0.0	

MAXIMUM = 7.00000E 00

MINIMUM = 5.00000E-01

GEOMETRIC MEAN = 1.20542E 00

GEOMETRIC DEVIATION = 2.06839E 00

FREQUENCY TABLE FOR COLUMN   7 (AS PPM)

LIMITS	FREQ	FREQ	PERCENT	PERCENT
LOWER - UPPER		CUM	FREQ	FREQ CUM
1.8E 02 - 2.6E 02	2	2	2.90	2.90
2.6E 02 - 3.8E 02	4	6	5.80	8.70
3.8E 02 - 5.6E 02	1	7	1.45	10.14
5.6E 02 - 8.3E 02	5	12	7.25	17.39
8.3E 02 - 1.2E 03	1	13	1.45	18.84
1.2E 03 - 1.8E 03	2	15	2.90	21.74
1.8E 03 - 2.6E 03	2	17	2.90	24.64
2.6E 03 - 3.8E 03	3	20	4.35	28.99
3.8E 03 - 5.6E 03	0	20	0.0	28.99
5.6E 03 - 8.3E 03	0	20	0.0	28.99
8.3E 03 - 1.2E 04	0	20	0.0	28.99
1.2E 04 - 1.8E 04	0	20	0.0	28.99
1.8E 04 - 2.6E 04	1	21	1.45	30.43

HISTOGRAM FOR COLUMN   7 (AS PPM)

```
2.0E 02 XXX

3.0E 02 XXXXXX

5.0E 02 X

7.0E 02 XXXXXXX

1.0E 03 X

1.5E 03 XXX

2.0E 03 XXX

3.0E 03 XXXX

5.0E 03

7.0E 03

1.0E 04

1.5E 04

2.0E 04 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
24	24	0	0	0	0	21
34.78	34.78			0.0	0.0	

MAXIMUM =   2.00010E 04

MINIMUM =   2.00000E 02

GEOMETRIC MEAN =   9.08172E 02

GEOMETRIC DEVIATION =   3.11279E 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	VALUES
69	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	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	1.45	1.45
3.8E 01 -	5.6E 01	1	2	1.45	2.90
5.6E 01 -	8.3E 01	14	16	20.29	23.19
8.3E 01 -	1.2E 02	9	25	13.04	36.23
1.2E 02 -	1.8E 02	7	32	10.14	46.38
1.8E 02 -	2.6E 02	13	45	18.84	65.22
2.6E 02 -	3.8E 02	11	56	15.94	81.16
3.8E 02 -	5.6E 02	5	61	7.25	88.41
5.6E 02 -	8.3E 02	7	68	10.14	98.55
8.3E 02 -	1.2E 03	0	68	0.0	98.55
1.2E 03 -	1.8E 03	1	69	1.45	100.00

HISTOGRAM FOR COLUMN   9 (B PPM)

```
        3.0E 01 X

        5.0E 01 X

        7.0E 01 XXXXXXXXXXXXXXXXXXXX

        1.0E 02 XXXXXXXXXXXXX

        1.5E 02 XXXXXXXXXX

        2.0E 02 XXXXXXXXXXXXXXXXXXXX

        3.0E 02 XXXXXXXXXXXXXXXX

        5.0E 02 XXXXXXX

        7.0E 02 XXXXXXXXXX

        1.0E 03

        1.5E 03 X
```

						ANALYTICAL VALUES
N	L	H	B	T	G	
0	0	0	0	0	0	69
0.0	0.0			0.0	0.0	

MAXIMUM = 1.50000E 03

MINIMUM = 3.00000E 01

GEOMETRIC MEAN = 1.82262E 02

GEOMETRIC DEVIATION = 2.28241E 00

FREQUENCY TABLE FOR COLUMN   10 (BA PPM)

	LIMITS	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	- UPPER				
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	1.45	1.45
1.8E 02 -	2.6E 02	0	1	0.0	1.45
2.6E 02 -	3.8E 02	10	11	14.49	15.94
3.8E 02 -	5.6E 02	11	22	15.94	31.88
5.6E 02 -	8.3E 02	29	51	42.03	73.91
8.3E 02 -	1.2E 03	13	64	18.84	92.75
1.2E 03 -	1.8E 03	5	69	7.25	100.00

HISTOGRAM FOR COLUMN   10 (BA PPM)

```
    1.5E 02 X

    2.0E 02

    3.0E 02 XXXXXXXXXXXXXX

    5.0E 02 XXXXXXXXXXXXXXXX

    7.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

    1.0E 03 XXXXXXXXXXXXXXXXXXX

    1.5E 03 XXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	69
0.0	0.0			0.0	0.0	

MAXIMUM = 1.50000E 03

MINIMUM = 1.50000E 02

GEOMETRIC MEAN = 6.48544E 02

GEOMETRIC DEVIATION = 1.59817E 00

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FREQUENCY TABLE FOR COLUMN   11 (GE PPM)

	LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	-	UPPER				
8.3E-01	-	1.2E 00	18	18	26.09	26.09
1.2E 00	-	1.8E 00	28	46	40.58	66.67
1.8E 00	-	2.6E 00	19	65	27.54	94.20
2.6E 00	-	3.8E 00	1	66	1.45	95.65

HISTOGRAM FOR COLUMN   11 (BE PPM)

```
    1.0E 00  XXXXXXXXXXXXXXXXXXXXXXXXXXX

    1.5E 00  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

    2.0E 00  XXXXXXXXXXXXXXXXXXXXXXXXXXXXX

    3.0E 00  X
```

						ANALYTICAL VALUES
N	L	H	B	T	G	
0	3	0	0	0	0	66
0.0	4.35			0.0	0.0	

MAXIMUM =   3.00000E 00

MINIMUM =   1.00000E 00

GEOMETRIC MEAN =   1.47433E 00

GEOMETRIC DEVIATION =   1.31935E 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		1	1	1.45	1.45
3.8E 01 -	5.6E 01		1	2	1.45	2.90

HISTOGRAM FOR COLUMN   12 (BI PPM)

        3.0E 01 X

        5.0E 01 X

N	L	H	B	T	G	ANALYTICAL VALUES
57	10	0	0	0	0	2
82.61	14.49			0.0	0.0	

MAXIMUM = 5.00000E 01

MINIMUM = 3.00000E 01

GEOMETRIC MEAN = 3.87297E 01

GEOMETRIC DEVIATION = 1.43505E 00

FREQUENCY TABLE FOR COLUMN   1 1 CU   4

LIMITS		FREQ	FREQ	PERCENT	PERCENT	
LOWER – UPPER			CUM	FREQ	FREQ CUM	
						ANALYTICAL
N	L	H	B	T	G	VALUES
69	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		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
3.8E 00 -	5.6E 00	3	3	4.35	4.35
5.6E 00 -	8.3E 00	3	6	4.35	8.70
8.3E 00 -	1.2E 01	4	10	5.80	14.49
1.2E 01 -	1.8E 01	5	15	7.25	21.74
1.8E 01 -	2.6E 01	19	34	27.54	49.28
2.6E 01 -	3.8E 01	23	57	33.33	82.61
3.8E 01 -	5.6E 01	5	62	7.25	89.86
5.6E 01 -	8.3E 01	2	64	2.90	92.75
8.3E 01 -	1.2E 02	1	65	1.45	94.20
1.2E 02 -	1.8E 02	1	66	1.45	95.65

HISTOGRAM FOR COLUMN   14 (CO PPM)

```
     5.0E 00 XXXX

     7.0E 00 XXXX

     1.0E 01 XXXXXX

     1.5E 01 XXXXXXX

     2.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXX

     3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

     5.0E 01 XXXXXXX

     7.0E 01 XXX

     1.0E 02 X

     1.5E 02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	3	0	0	0	0	66
0.0	4.35			0.0	0.0	

MAXIMUM = 1.50000E 02

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 2.27547E 01

GEOMETRIC DEVIATION = 1.92952E 00

FREQUENCY TABLE FOR COLUMN   15 (CR PPM)

	LIMITS	FREQ	FREQ	PERCENT	PERCENT
	LOWER - UPPER		CUM	FREQ	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	2.90	2.90
1.2E 01 -	1.8E 01	4	6	5.80	8.70
1.8E 01 -	2.6E 01	2	8	2.90	11.59
2.6E 01 -	3.8E 01	3	11	4.35	15.94
3.8E 01 -	5.6E 01	7	18	10.14	26.09
5.6E 01 -	8.3E 01	21	39	30.43	56.52
8.3E 01 -	1.2E 02	14	53	20.29	76.81
1.2E 02 -	1.8E 02	16	69	23.19	100.00

HISTOGRAM FOR COLUMN   15 (CR PPM)

        1.0E 01 XXX

        1.5E 01 XXXXXX

        2.0E 01 XXX

        3.0E 01 XXXX

        5.0E 01 XXXXXXXXXX

        7.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

        1.0E 02 XXXXXXXXXXXXXXXXXXXX

        1.5E 02 XXXXXXXXXXXXXXXXXXXXXXXX

						ANALYTICAL
N	L	H	B	T	G	VALUES
0	0	0	0	0	0	69
0.0	0.0			0.0	0.0	

MAXIMUM = 1.50000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 6.97271E 01

GEOMETRIC DEVIATION = 2.03290E 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	4	4	5.80	5.80
5.6E 00 -	8.3E 00	2	6	2.90	8.70
8.3E 00 -	1.2E 01	3	9	4.35	13.04
1.2E 01 -	1.8E 01	9	18	13.04	26.09
1.8E 01 -	2.6E 01	9	27	13.04	39.13
2.6E 01 -	3.8E 01	15	42	21.74	60.87
3.8E 01 -	5.6E 01	6	48	8.70	69.57
5.6E 01 -	8.3E 01	12	60	17.39	86.96
8.3E 01 -	1.2E 02	4	64	5.80	92.75
1.2E 02 -	1.8E 02	3	67	4.35	97.10
1.8E 02 -	2.6E 02	2	69	2.90	100.00

HISTOGRAM FOR COLUMN   16 (CU PPM)

```
5.0E 00 XXXXXX

7.0E 00 XXX

1.0E 01 XXXX

1.5E 01 XXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXXXX

5.0E 01 XXXXXXXXX

7.0E 01 XXXXXXXXXXXXXXXXX

1.0E 02 XXXXXX

1.5E 02 XXXX

2.0E 02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	69
0.0	0.0			0.0	0.0	

MAXIMUM = 2.00000E 02

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 3.15194E 01

GEOMETRIC DEVIATION = 2.50387E 00

FREQUENCY TABLE FOR COLUMN   17 (LA PPM)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER - UPPER					
1.8E 01 -	2.6E 01	14	14	20.29	20.29
2.6E 01 -	3.8E 01	1	15	1.45	21.74
3.8E 01 -	5.6E 01	2	17	2.90	24.64
5.6E 01 -	8.3E 01	3	20	4.35	28.99
8.3E 01 -	1.2E 02	0	20	0.0	28.99
1.2E 02 -	1.8E 02	2	22	2.90	31.88

HISTOGRAM FOR COLUMN   17 (LA PPM)

        2.0E 01 XXXXXXXXXXXXXXXXXXXX

        3.0E 01 X

        5.0E 01 XXX

        7.0E 01 XXXX

        1.0E 02

        1.5E 02 XXX

                                                    ANALYTICAL
N	L	H	B	T	G	VALUES
13	34	0	0	0	0	22
18.84	49.28			0.0	0.0	

MAXIMUM = 1.50000E 02

MINIMUM = 2.00000E 01

GEOMETRIC MEAN = 3.15463E 01

GEOMETRIC DEVIATION = 2.00091E 00

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FREQUENCY TABLE FOR COLUMN   18 (MO PPM)

```
            LIMITS            FREQ   FREQ    PERCENT   PERCENT
         LOWER - UPPER               CUM       FREQ    FREQ CUM
       3.8E 00 -     5.6E 00     4     4       5.80        5.80
```

HISTOGRAM FOR COLUMN   18 (MO PPM)

```
        5.0E 00 XXXXXX
```

```
                                                         ANALYTICAL
          N          L         H       B       T       G   VALUES
          21         44        0       0       0       0      4
        30.43      63.77                      0.0     0.0
```

MAXIMUM =   5.00000E 00

MINIMUM =   5.00000E 00

GEOMETRIC MEAN =   5.00000E 00

GEOMETRIC DEVIATION =   1.00113E 00

FREQUENCY TABLE FOR COLUMN   19 (NB PPM)

	LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	–	UPPER				
8.3E 00	–	1.2E 01	50	50	72.46	72.46
1.2E 01	–	1.8E 01	11	61	15.94	88.41

HISTOGRAM FOR COLUMN   19 (NB PPM)

1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
0	8	0	0	0	0	61
0.0	11.59			0.0	0.0	

MAXIMUM = 1.50000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.07583E 01

GEOMETRIC DEVIATION = 1.17038E 00

FREQUENCY TABLE FOR COLUMN   20 (NI PPM)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 - 5.6E 00	0	0	0.0	0.0
5.6E 00 - 8.3E 00	0	0	0.0	0.0
8.3E 00 - 1.2E 01	1	1	1.45	1.45
1.2E 01 - 1.8E 01	7	8	10.14	11.59
1.8E 01 - 2.6E 01	3	11	4.35	15.94
2.6E 01 - 3.8E 01	14	25	20.29	36.23
3.8E 01 - 5.6E 01	13	38	18.84	55.07
5.6E 01 - 8.3E 01	15	53	21.74	76.81
8.3E 01 - 1.2E 02	15	68	21.74	98.55
1.2E 02 - 1.8E 02	1	69	1.45	100.00

HISTOGRAM FOR COLUMN   20 (NI PPM)

```
1.0E 01 X

1.5E 01 XXXXXXXXXX

2.0E 01 XXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXX

5.0E 01 XXXXXXXXXXXXXXXXXX

7.0E 01 XXXXXXXXXXXXXXXXXXXXXX

1.0E 02 XXXXXXXXXXXXXXXXXXXXXX

1.5E 02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	69
0.0	0.0			0.0	0.0	

MAXIMUM = 1.50000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 4.75989E 01

GEOMETRIC DEVIATION = 1.91832E 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	10	10	14.49	14.49
1.2E 01 -	1.8E 01	22	32	31.88	46.38
1.8E 01 -	2.6E 01	15	47	21.74	68.12
2.6E 01 -	3.8E 01	16	63	23.19	91.30
3.8E 01 -	5.6E 01	2	65	2.90	94.20
5.6E 01 -	8.3E 01	1	66	1.45	95.65
8.3E 01 -	1.2E 02	0	66	0.0	95.65
1.2E 02 -	1.8E 02	1	67	1.45	97.10

HISTOGRAM FOR COLUMN   21 (PB PPM)

```
     1.0E 01  XXXXXXXXXXXXXX

     1.5E 01  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

     2.0E 01  XXXXXXXXXXXXXXXXXXXXXXX

     3.0E 01  XXXXXXXXXXXXXXXXXXXXXXXX

     5.0E 01  XXX

     7.0E 01  X

     1.0E 02

     1.5E 02  X
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	1	0	0	0	0	67
1.45	1.45			0.0	0.0	

MAXIMUM = 1.50000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.95065E 01

GEOMETRIC DEVIATION = 1.64936E 00

FREQUENCY TABLE FOR COLUMN   22 (SB PPM)

	LIMITS	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER -	UPPER				
8.3E 01 -	1.2E 02	2	2	2.90	2.90
1.2E 02 -	1.8E 02	0	2	0.0	2.90
1.8E 02 -	2.6E 02	0	2	0.0	2.90
2.6E 02 -	3.8E 02	1	3	1.45	4.35

HISTOGRAM FOR COLUMN   22 (SB PPM)

```
    1.0E 02 XXX

    1.5E 02

    2.0E 02

    3.0E 02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
60	6	0	0	0	0	3
86.96	8.70			0.0	0.0	

MAXIMUM = 3.00000E 02

MINIMUM = 1.00000E 02

GEOMETRIC MEAN = 1.44224E 02

GEOMETRIC DEVIATION = 1.88567E 00

FREQUENCY TABLE FOR COLUMN   23 (SC PPM)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER -	UPPER				
3.8E 00 -	5.6E 00	5	5	7.25	7.25
5.6E 00 -	8.3E 00	6	11	8.70	15.94
8.3E 00 -	1.2E 01	16	27	23.19	39.13
1.2E 01 -	1.8E 01	37	64	53.62	92.75
1.8E 01 -	2.6E 01	4	68	5.80	98.55

HISTOGRAM FOR COLUMN   23 (SC PPM)

5.0E 00 XXXXXXX

7.0E 00 XXXXXXXXX

1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	0	68
0.0	1.45			0.0	0.0	

MAXIMUM = 2.00000E 01

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 1.19595E 01

GEOMETRIC DEVIATION = 1.44252E 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	2	2	2.90	2.90
1.2E 01 -	1.8E 01	1	3	1.45	4.35
1.8E 01 -	2.6E 01	2	5	2.90	7.25

HISTOGRAM FOR COLUMN   24 (SN PPM)

        1.0E 01 XXX

        1.5E 01 X

        2.0E 01 XXX

N	L	H	B	T	G	ANALYTICAL VALUES
51	13	0	0	0	0	5
73.91	18.84			0.0	0.0	

MAXIMUM = 2.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.43096E 01

GEOMETRIC DEVIATION = 1.41563E 00

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FREQUENCY TABLE FOR COLUMN   25 (SR PPM)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E 01 -	1.2E 02	26	26	37.68	37.68
1.2E 02 -	1.8E 02	26	52	37.68	75.36
1.8E 02 -	2.6E 02	1	53	1.45	76.81

HISTOGRAM FOR COLUMN   25 (SR PPM)

    1.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

    1.5E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

    2.0E 02 X

N	L	H	B	T	G	ANALYTICAL VALUES
0	16	0	0	0	0	53
0.0	23.19			0.0	0.0	

MAXIMUM = 2.00000E 02

MINIMUM = 1.00000E 02

GEOMETRIC MEAN = 1.23612E 02

GEOMETRIC DEVIATION = 1.23825E 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		6	6	8.70	8.70
3.8E 01 -	5.6E 01		2	8	2.90	11.59
5.6E 01 -	8.3E 01		4	12	5.80	17.39
8.3E 01 -	1.2E 02		5	17	7.25	24.64
1.2E 02 -	1.8E 02		30	47	43.48	68.12
1.8E 02 -	2.6E 02		18	65	26.09	94.20
2.6E 02 -	3.8E 02		4	69	5.80	100.00

HISTOGRAM FOR COLUMN   26 (V PPM)

```
3.0E 01 XXXXXXXXX

5.0E 01 XXX

7.0E 01 XXXXXX

1.0E 02 XXXXXXX

1.5E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 02 XXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	69
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 02

MINIMUM = 3.00000E 01

GEOMETRIC MEAN = 1.31696E 02

GEOMETRIC DEVIATION = 1.79667E 00

FREQUENCY TABLE FOR COLUMN   27 (W PPM)

LIMITS LOWER – UPPER		FREQ	FREQ CUN	PERCENT FREQ	PERCENT FREQ CUM	
N	L	H	B	T	G	ANALYTICAL VALUES
68	1	0	0	0	0	0
98.55	1.45			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		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	- UPPER				
8.3E 00 -	1.2E 01	4	4	5.80	5.80
1.2E 01 -	1.8E 01	26	30	37.68	43.48
1.8E 01 -	2.6E 01	27	57	39.13	82.61
2.6E 01 -	3.8E 01	12	69	17.39	100.00

HISTOGRAM FOR COLUMN   28 (Y PPM)

1.0E 01 XXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXX

						ANALYTICAL VALUES
N	L	H	B	T	G	
0	0	0	0	0	0	69
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.84978E 01

GEOMETRIC DEVIATION = 1.33334E 00

FREQUENCY TABLE FOR COLUMN   29 (ZN PPM)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER -	UPPER				
1.8E 02 -	2.6E 02	9	9	13.04	13.04
2.6E 02 -	3.8E 02	2	11	2.90	15.94
3.8E 02 -	5.6E 02	0	11	0.0	15.94
5.6E 02 -	8.3E 02	1	12	1.45	17.39

HISTOGRAM FOR COLUMN   29 (ZN PPM)

        2.0E 02 XXXXXXXXXXXXX

        3.0E 02 XXX

        5.0E 02

        7.0E 02 X

						ANALYTICAL
N	L	H	B	T	G	VALUES
18	39	0	0	0	0	12
26.09	56.52			0.0	0.0	

MAXIMUM =   7.00000E 02

MINIMUM =   2.00000E 02

GEOMETRIC MEAN =   2.37527E 02

GEOMETRIC DEVIATION =   1.45450E 00

FREQUENCY TABLE FOR COLUMN   30 (ZR PPM)

LIMITS		FREQ	FREQ	PERCENT	PERCENT
LOWER - UPPER			CUM	FREQ	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	5	5	7.25	7.25
5.6E 01 -	8.3E 01	8	13	11.59	18.84
8.3E 01 -	1.2E 02	23	36	33.33	52.17
1.2E 02 -	1.8E 02	18	54	26.09	78.26
1.8E 02 -	2.6E 02	7	61	10.14	88.41
2.6E 02 -	3.8E 02	5	66	7.25	95.65
3.8E 02 -	5.6E 02	3	69	4.35	100.00

HISTOGRAM FOR COLUMN   30 (ZR PPM)

```
5.0E 01 XXXXXXX

7.0E 01 XXXXXXXXXXXX

1.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 02 XXXXXXXXXX

3.0E 02 XXXXXXX

5.0E 02 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	69
0.0	0.0			0.0	0.0	

MAXIMUM = 5.00000E 02

MINIMUM = 5.00000E 01

GEOMETRIC MEAN = 1.26375E 02

GEOMETRIC DEVIATION = 1.71457E 00

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FREQUENCY TABLE FOR COLUMN   31 (AU PPM)

| LIMITS | | FREQ | FREQ | PERCENT | PERCENT | |
| LOWER - UPPER | | | CUM | FREQ | FREQ CUM | |

						ANALYTICAL
N	L	H	B	T	G	VALUES
0	69	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   32 (HG PPM)

            LIMITS   FREQ   FREQ   PERCENT   PERCENT
         LOWER - UPPER   CUM   FREQ   FREQ CUM

IHC209I IBCOM - PROGRAM INTERRUPT- DIVIDE CHECK OLD PSW IS FF95000F82087C88 . REGISTER CONTAINED   0000000000000000

TRACEBACK FOLLOWS-   ROUTINE   ISN   REG. 14   REG. 15   REG.   0   REG.   1

                      MAIN   0000E42E   0106ED68   FFFFFFA6   00093FF8

ENTRY POINT= 0106ED68

STANDARD FIXUP TAKEN , EXECUTION CONTINUING

IHC209I IBCOM - PROGRAM INTERRUPT- DIVIDE CHECK OLD PSW IS FF95000F82087CBC . REGISTER CONTAINED   0000000000000000

TRACEBACK FOLLOWS-   ROUTINE   ISN   REG. 14   REG. 15   REG.   0   REG.   1

                      MAIN   0000E42E   0106ED68   FFFFFFA6   00093FF8

ENTRY POINT= 0106ED68

STANDARD FIXUP TAKEN , EXECUTION CONTINUING

IHC209I IBCOM - PROGRAM INTERRUPT- DIVIDE CHECK OLD PSW IS FF95000F82087CF4 . REGISTER CONTAINED   0000000000000000

TRACEBACK FOLLOWS-   ROUTINE   ISN   REG. 14   REG. 15   REG.   0   REG.   1

                      MAIN   0000E42E   0106ED68   FFFFFFA6   00093FF8

ENTRY POINT= 0106ED68

STANDARD FIXUP TAKEN , EXECUTION CONTINUING

IHC209I IBCOM - PROGRAM INTERRUPT- DIVIDE CHECK OLD PSW IS FF95000F82087D2C . REGISTER CONTAINED   0000000000000000

TRACEBACK FOLLOWS-   ROUTINE   ISN   REG. 14   REG. 15   REG.   0   REG.   1

                      MAIN   0000E42E   0106ED68   FFFFFFA6   00093FF8

ENTRY POINT= 0106ED68

STANDARD FIXUP TAKEN , EXECUTION CONTINUING

                                                    ANALYTICAL
     N   L   H   B   T   G   VALUES
     0   0   0   69   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

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.

ELEMENT	N	L	H	B	T	G	ANALYTICAL VALUES
FE PCT	0	0	0	0	0	0	69
MG PCT	0	0	0	0	0	0	69
CA PCT	0	0	0	0	0	0	69
TI PCT	0	0	0	.0	0	0	69
MN PPM	0	0	0	0	0	0	69
AG PPM	31	25	0	0	0	0	13
AS PPM	24	24	0	0	0	0	21
AU PPM	69	0	0	0	0	0	0
B PPM	0	0	0	0	0	0	69
BA PPM	0	0	0	0	0	0	69
BE PPM	0	3	0	0	0	0	66
BI PPM	57	10	0	0	0	0	2
CD PPM	69	0	0	0	0	0	0
CO PPM	0	3	0	0	0	0	66
CR PPM	0	0	0	0	0	0	69
CU PPM	0	0	0	0	0	0	69
LA PPM	13	34	0	0	0	0	22
MO PPM	21	44	0	0	0	0	4
NB PPM	0	8	0	0	0	0	61
NI PPM	0	0	0	0	0	0	69
P8 PPM	1	1	0	0	0	0	67
SB PPM	60	6	0	0	0	0	3
SC PPM	0	1	0	0	0	0	68
SN PPM	51	13	0	0	0	0	5
SR PPM	0	16	0	0	0	0	53
V PPM	0	0	0	0	0	0	69
W PPM	68	1	0	0	0	0	0
Y PPM	0	0	0	0	0	0	69
ZN PPM	18	39	0	0	0	0	12
ZR PPM	0	0	0	0	0	0	69
AU PPM	0	69	0	0	0	0	0
HG PPM	0	0	0	69	0	0	0

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS	
FE PCT	3.966420	1.59	69 SAMPLES AND 69 ANALYTICAL VALUES.	
MG PCT	0.752041	1.48	69 SAMPLES AND 69 ANALYTICAL VALUES.	
CA PCT	0.467271	1.74	69 SAMPLES AND 69 ANALYTICAL VALUES.	
TI PCT	0.389514	1.46	69 SAMPLES AND 69 ANALYTICAL VALUES.	
MN PPM	982.325928	2.05	69 SAMPLES AND 69 ANALYTICAL VALUES.	
AG PPM	0.067898	7.07	56 NOT DETECTED, LESS THAN, OR TRACE VALUES.	13 REPORTED VALUES.
AS PPM	52.920914	11.41	48 NOT DETECTED, LESS THAN, OR TRACE VALUES.	21 REPORTED VALUES.
AU PPM	********	******	69 NOT DETECTED, LESS THAN, OR TRACE VALUES.	0 REPORTED VALUES. NO COMPUTATIONS.
B PPM	182.261490	2.28	69 SAMPLES AND 69 ANALYTICAL VALUES.	
BA PPM	648.542480	1.60	69 SAMPLES AND 69 ANALYTICAL VALUES.	
BE PPM	1.429955	1.36	3 NOT DETECTED, LESS THAN, OR TRACE VALUES.	66 REPORTED VALUES.
BI PPM	********	******	67 NOT DETECTED, LESS THAN, OR TRACE VALUES.	2 REPORTED VALUES. NO COMPUTATIONS.
CD PPM	********	******	69 NOT DETECTED, LESS THAN, OR TRACE VALUES.	.0 REPORTED VALUES. NO COMPUTATIONS.
CO PPM	20.812424	2.16	3 NOT DETECTED, LESS THAN, OR TRACE VALUES.	66 REPORTED VALUES.
CR PPM	69.726883	2.03	69 SAMPLES AND 69 ANALYTICAL VALUES.	
CU PPM	31.519318	2.50	69 SAMPLES AND 69 ANALYTICAL VALUES.	
LA PPM	********	******	47 NOT DETECTED, LESS THAN, OR TRACE VALUES.	22 REPORTED VALUES. NO COMPUTATIONS.
MO PPM	********	******	65 NOT DETECTED, LESS THAN, OR TRACE VALUES.	4 REPORTED VALUES. NO COMPUTATIONS.
NB PPM	10.319555	1.21	8 NOT DETECTED, LESS THAN, OR TRACE VALUES.	61 REPORTED VALUES.
NI PPM	47.598740	1.92	69 SAMPLES AND 69 ANALYTICAL VALUES.	

```
PB PPM      18.902206     1.69        2 NOT DETECTED, LESS THAN, OR TRACE VALUES.    67 REPORTED VALUES.
SB PPM      ********     ******       66 NOT DETECTED, LESS THAN, OR TRACE VALUES.    3 REPORTED VALUES. NO COMPUTATIONS.
SC PPM      11.743745     1.48        1 NOT DETECTED, LESS THAN, OR TRACE VALUES.   68 REPORTED VALUES.
SN PPM      ********     ******       64 NOT DETECTED, LESS THAN, OR TRACE VALUES.    5 REPORTED VALUES. NO COMPUTATIONS.
SR PPM     108.033020     1.37       16 NOT DETECTED, LESS THAN, OR TRACE VALUES.   53 REPORTED VALUES.
 V PPM     131.695602     1.80       69 SAMPLES AND     69 ANALYTICAL VALUES.
 W PPM      ********     ******       69 NOT DETECTED, LESS THAN, OR TRACE VALUES.    0 REPORTED VALUES. NO COMPUTATIONS.
 Y PPM      18.497711     1.33       69 SAMPLES AND     69 ANALYTICAL VALUES.
ZN PPM      ********     ******       57 NOT DETECTED, LESS THAN, OR TRACE VALUES.   12 REPORTED VALUES. NO COMPUTATIONS.
ZR PPM     126.374969     1.71       69 SAMPLES AND     69 ANALYTICAL VALUES.
AU PPM      ********     ******       69 NOT DETECTED, LESS THAN, OR TRACE VALUES.    0 REPORTED VALUES. NO COMPUTATIONS.
```

IHC252I EXP ARG= 0.2302354E 50, GT 174.673

```
TRACEBACK FOLLOWS-    ROUTINE     ISN    REG.  14    REG.  15    REG.   0    REG.   1

                     EXP                4208806A    0008E3B0    00000104    0008B114

                     FRXPR#   0221      42088196    0008B010    00000000    0006F198

                     MAIN               0000E42E    0106ED68    FFFFFFA6    00093FF8
```

ENTRY POINT= 0106ED68

STANDARD FIXUP TAKEN , EXECUTION CONTINUING

IHC252I EXP ARG= 0.7281046E 25, GT 174.673

```
TRACEBACK FOLLOWS-    ROUTINE     ISN    REG.  14    REG.  15    REG.   0    REG.   1

                     EXP                4208B06A    0008E3B0    00000104    0008B114

                     FRXPR#   0223      62088102    0008B010    F1905F1E    0006F1A4

                     MAIN               0000E42E    0106ED68    FFFFFFA6    00093FF8
```

ENTRY POINT= 0106ED68

STANDARD FIXUP TAKEN , EXECUTION CONTINUING
HG PPM *************   *****   69 SAMPLES AND   0 ANALYTICAL VALUES.

SUMMARY OF ERRORS FOR THIS JOB   ERROR NUMBER   NUMBER OF ERRORS

                                     252   2

                                     209   4