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ANALYSES OF STREAM-SEDIMENT SAMPLES FROM THE McCARTHY C-8 QUADRANGLE, SOUTHERN WRANGELL MOUNTAINS, ALASKA

By

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General summary

This report gives analyses of 153 stream-sediment samples from the McCarthy C-8 quadrangle, Alaska, that were analyzed for 30 elements by semiquantitative spectrographic methods and for gold by atomic absorption. The report also includes statistical summaries of the analytical data. Locations of the samples are plotted on the accompanying map (fig. 1). The samples were collected during 1969 as part of the U.S. Geological Survey Heavy Metals Program concomitantly with geologic mapping and related investigations in the quadrangle.

Geologic knowledge of the quadrangle is based largely on the investigations of Moffit and Mertie (1923) and Moffit (1938). Recent studies mainly by MacKevett and his coworkers (MacKevett, 1970a,b, in press; Armstrong, MacKevett, and Silberling, 1970) largely in nearby parts of the southern Wrangell Mountains, and by Grantz, Jones, and Lanphere (1966) provide considerable additional information pertinent to the geology of the C-8 quadrangle.

The diverse bedrock in the quadrangle ranges in age from Late Paleozoic to Cenozoic. It includes a generally metamorphosed Late Paleozoic sequence of submarine volcanic rocks and their associated overlying marine sedimentary rocks that are partly of volcaniclastic derivation; Mesozoic subaerial lavas and overlying shelf deposits that include some carbonate rocks near their base but mainly consist of diverse noncarbonate clastic rocks; and intrusive rocks that reflect both Mesozoic and Tertiary plutonism. Diverse surficial deposits that are mainly related to glacial and periglacial

processes are widespread in the quadrangle.

The quadrangle contains numerous mines and prospects, chiefly for copper, but it has yielded only minor production. The sampling disclosed numerous, generally minor, anomalous concentrations of copper, and some minor anomalous concentrations of silver, gold, molybdenum, and zinc. Most anomalies were detected in samples from streams draining areas containing known deposits. Locations of the known mines and prospects are plotted on the accompanying generalized geologic map (fig. 1).

Procedures and treatment of data

Standard procedures were followed in the collection and preparation of the stream-sediment samples. Generally, the samples were collected from the active stream channel; often, however, high-water stream deposits immediately adjacent to the active channel were collected. Duplicate samples were collected from most localities in order to test the reliability of the analyses. The duplicate samples are indicated in table 1 by locality numbers such as WK 29G-1 and WK 29G-2, where -1 and -2 indicate separate samples. The samples were dried, sieved, and the finer than 80 mesh (Tyler) fractions were analyzed for 30 elements by the six-step semiquantitative spectrographic method and for gold by the quantitative atomic absorption method. (Analyses for 29 elements by the spectrographic method and for gold by atomic absorption are given in table 1. Spectrographic analyses for gold have been omitted.) The semiquantitative spectrographic analyses are 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, and so forth. The precision of a single reported value is approximately plus 100 percent or minus 50 percent. Spectrographic analyses were done by K. J. Curry; atomic absorption analyses were done by R. L. Miller, A. L. Meier, and H. D. King.

Explanation of table 1

The table has three parts: (1) a listing of the analytical data, (2) cumulative frequency distributions and histograms for elements on which there is sufficient data, and (3) a statistical summary that includes geometric means and deviations.

(1) The analytical data is given as values, such as 10.0000 pct. or 7.0000 ppm, which may be qualified by letters, coded as follows: N = not detected, L = present, but less than specified limits of detection (given on page 4), or G = greater than value shown. Note that the right-most zero digits for each analytical value may or may not be significant. (Normally they will not be significant.)

(2) The frequency distributions and histograms are given on logarithmic scales and are computed using the reported values as geometric midpoints of classes with the following limits:

Reported value	Limits
1.0	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

The statistics given below the histograms are derived only from data values within the ranges of analytical determination, and are biased if qualified data values are present. Unbiased statistical estimates are given in the statistical summary at the end of table 1.

The frequency tables and histograms for gold have been omitted because the classes used in calculating these tables are those used in the semiquantitative spectrographic method and gold was analyzed by the quantitative atomic absorption method. Statistical summaries for antimony, arsenic, bismuth, cadmium, tin, and tungsten have been omitted because no values, or too few values for meaningful computations, were reported for these elements in stream-sediment samples.

(3) In the statistical summary, an element is ignored when any data value is qualified with the G (greater than) codes. When none of the data values for an element are qualified, the mean and deviation should be the same as those given below the histograms. Where data are qualified with the codes N or L, the estimates of geometric mean and deviation are based on a special method for treating censored distributions.

Specified limits of detection

FE PCT. (Iron)	MG PCT. (Magnesium)	CA PCT. (Calcium)	TI PCT. (Titanium)	MN PPM (Manganese)	AG PPM (Silver)
0.0500	0.0200	0.0500	0.0020	10.0000	0.5000
AS PPM (Arsenic)	AU PPM (Gold)	B PPM (Boron)	BA PPM (Barium)	BE PPM (Beryllium)	BI PPM (Bismuth)
200.0000	0.0200	10.0000	20.0000	1.0000	10.0000
CD PPM (Cadmium)	CO PPM (Cobalt)	CR PPM (Chromium)	CU PPM (Copper)	LA PPM (Lanthanum)	MO PPM (Molybdenum)
20.0000	5.0000	5.0000	5.0000	20.0000	5.0000
NB PPM (Niobium)	NI PPM (Nickel)	PB PPM (Lead)	SB PPM (Antimony)	SC PPM (Scandium)	SN PPM (Tin)
10.0000	5.0000	10.0000	100.0000	5.0000	10.0000
SR PPM (Strontium)	V PPM (Vanadium)	W PPM (Tungsten)	Y PPM (Yttrium)	ZN PPM (Zinc)	ZR PPM (Zirconium)
100.0000	10.0000	50.0000	10.0000	200.0000	10.0000

Interpretation of table 1

The histogram and statistical summary for each element should be interpreted with caution. Because of the wide variety of geologic terranes from which these sediments were derived, it is not practicable to set overall upper limits for background values.

References cited

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Moffit, F. H., 1938, Geology of the Chitina Valley and adjacent areas, Alaska: U.S. Geol. Survey Bull. 894, 137 p.

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TABLE 1.--STREAM SEDIMENT SAMPLES

SAMPLE	FE PCT.	MG PCT.	CA PCT.	TI PCT.	MN PPM	AG PPM	AS PPM	AU PPM	B PPM	BA PPM
WK 26A-1	10.0000	3.0000	3.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0200L	70.0000	300.0000
WK 26A-2	10.0000	3.0000	3.0000	0.7000	1500.0000	0.5000L	0.0 N	0.0200L	30.0000	300.0000
WK 26B-1	3.0000	1.5000	20.0000	0.3000	300.0000	0.5000L	0.0 N	0.0200L	70.0000	200.0000
WK 26B-2	3.0000	1.5000	20.0000	0.3000	300.0000	0.5000L	0.0 N	0.0200L	70.0000	150.0000
WK 26C-1	5.0000	1.5000	15.0000	0.3000	500.0000	0.0 N	0.0 N	0.0200L	50.0000	300.0000
WK 26C-2	5.0000	1.5000	15.0000	0.3000	500.0000	0.0 N	0.0 N	0.0200L	70.0000	300.0000
WK 26D-1	5.0000	3.0000	7.0000	0.3000	700.0000	0.5000L	0.0 N	0.0200L	30.0000	300.0000
WK 26D-2	5.0000	2.0000	7.0000	0.3000	1000.0000	0.0 N	0.0 N	0.0200L	20.0000	500.0000
WK 26E-1	7.0000	2.0000	7.0000	0.3000	700.0000	0.0 N	0.0 N	0.0200L	30.0000	700.0000
WK 26E-2	5.0000	1.5000	7.0000	0.5000	700.0000	0.5000L	0.0 N	0.0200L	30.0000	700.0000
WK 26F-1	3.0000	1.5000	15.0000	0.2000	200.0000	0.0 N	0.0 N	0.0200L	70.0000	20.0000L
WK 26F-2	3.0000	1.5000	20.0000	0.2000	200.0000	0.0 N	0.0 N	0.2000	70.0000	150.0000
WK 26G-1	3.0000	1.5000	10.0000	0.5000	700.0000	0.5000L	0.0 N	0.0200L	150.0000	700.0000
WK 26G-2	5.0000	2.0000	7.0000	0.5000	700.0000	0.5000L	0.0 N	0.0200L	150.0000	500.0000
WK 26H-1	3.0000	2.0000	15.0000	0.3000	700.0000	0.0 N	0.0 N	0.0200L	100.0000	500.0000
WK 26H-2	5.0000	1.5000	15.0000	0.3000	500.0000	0.5000L	0.0 N	0.0200L	70.0000	300.0000
WK 27A-1	15.0000	3.0000	7.0000	1.0000	1500.0000	0.0 N	0.0 N	0.0200L	15.0000	300.0000
WK 27A-2	20.0000	5.0000	7.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0200L	30.0000	150.0000
WK 27B-1	15.0000	5.0000	5.0000	1.0000	1500.0000	0.0 N	0.0 N	0.0200L	20.0000	150.0000
WK 27B-2	10.0000	5.0000	7.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0200L	15.0000	300.0000
WK 27C-1	15.0000	3.0000	5.0000	1.0000	1500.0000	0.0 N	0.0 N	0.0200L	15.0000	200.0000
WK 27C-2	10.0000	3.0000	5.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0200L	15.0000	300.0000
WK 27D-1	7.0000	3.0000	3.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0200L	20.0000	300.0000
WK 27D-2	7.0000	2.0000	5.0000	1.0000	1500.0000	0.0 N	0.0 N	0.0200L	20.0000	300.0000
WK 27E-1	15.0000	3.0000	7.0000	1.0000	1500.0000	0.0 N	0.0 N	0.0200L	15.0000	20.0000L
WK 27E-2	10.0000	3.0000	7.0000	1.0000	1500.0000	0.0 N	0.0 N	0.0200L	15.0000	20.0000L
WK 27F-1	10.0000	3.0000	7.0000	0.7000	1000.0000	0.5000L	0.0 N	0.0200L	70.0000	700.0000
WK 27F-2	10.0000	3.0000	10.0000	0.7000	1000.0000	0.7000	0.0 N	0.0200L	100.0000	1500.0000
WK 27G-1	10.0000	3.0000	7.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0200L	70.0000	300.0000
WK 27G-2	10.0000	3.0000	10.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0200L	70.0000	700.0000
WK 29B-1	5.0000	1.5000	7.0000	0.5000	700.0000	0.0 N	0.0 N	0.0200L	30.0000	500.0000
WK 29B-2	5.0000	2.0000	7.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0200L	20.0000	700.0000
WK 29C-1	7.0000	3.0000	10.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0200L	15.0000	300.0000
WK 29C-2	7.0000	3.0000	15.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0200L	15.0000	300.0000
WK 29D-1	15.0000	3.0000	7.0000	1.0000	1500.0000	0.0 N	0.0 N	0.0400	15.0000	200.0000
WK 29D-2	15.0000	5.0000	7.0000	1.0000G	1500.0000	0.0 N	0.0 N	0.0200L	20.0000	150.0000
WK 29E-1	15.0000	7.0000	7.0000	1.0000G	1500.0000	0.0 N	0.0 N	0.0200L	20.0000	300.0000
WK 29E-2	15.0000	5.0000	7.0000	1.0000	1500.0000	0.0 N	0.0 N	0.0200L	20.0000	300.0000
WK 29F-1	15.0000	5.0000	7.0000	1.0000	1500.0000	0.5000L	0.0 N	0.0200L	20.0000	150.0000
WK 29F-2	15.0000	7.0000	7.0000	1.0000	1500.0000	0.0 N	0.0 N	0.0200L	30.0000	100.0000
WK 29G-1	15.0000	3.0000	7.0000	1.0000	1500.0000	0.0 N	0.0 N	0.0200L	15.0000	150.0000
WK 29G-2	15.0000	3.0000	7.0000	1.0000	1500.0000	0.0 N	0.0 N	0.0200L	15.0000	150.0000
WK 30A-1	10.0000	7.0000	15.0000	0.5000	1000.0000	0.5000L	0.0 N	0.0200L	30.0000	200.0000
WK 30A-2	7.0000	5.0000	15.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0200L	30.0000	150.0000
WK 30B-1	5.0000	3.0000	15.0000	0.3000	700.0000	0.0 N	0.0 N	0.0200L	70.0000	300.0000
WK 30B-2	5.0000	5.0000	15.0000	0.3000	500.0000	0.5000L	0.0 N	0.0200L	100.0000	300.0000
WK 30C-1	10.0000	1.5000	7.0000	0.7000	500.0000	0.0 N	0.0 N	0.0200L	70.0000	700.0000
WK 30C-2	10.0000	1.5000	7.0000	0.7000	700.0000	0.0 N	0.0 N	0.0200L	70.0000	700.0000
WK 30D-1	5.0000	1.5000	7.0000	0.5000	1000.0000	0.5000L	0.0 N	0.0200L	100.0000	1500.0000
WK 30D-2	5.0000	1.5000	7.0000	0.5000	700.0000	0.5000L	0.0 N	0.0200L	70.0000	1500.0000

TABLE 1.--STREAM SEDIMENT SAMPLES

SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
WK 26A-1	1.0000	0.0 N	0.0 N	50.0000	150.0000	100.0000	20.0000L	5.0000L	10.0000	70.0000
WK 26A-2	1.0000	0.0 N	0.0 N	50.0000	150.0000	70.0000	20.0000L	5.0000L	10.0000	70.0000
WK 26B-1	1.0000L	0.0 N	0.0 N	15.0000	150.0000	30.0000	20.0000L	5.0000L	10.0000	70.0000
WK 26B-2	0.0 N	0.0 N	0.0 N	15.0000	150.0000	30.0000	20.0000L	5.0000L	10.0000	70.0000
WK 26C-1	1.0000L	0.0 N	0.0 N	30.0000	70.0000	30.0000	20.0000L	0.0 N	10.0000	50.0000
WK 26C-2	1.0000L	0.0 N	0.0 N	30.0000	100.0000	30.0000	20.0000L	0.0 N	10.0000	50.0000
WK 26D-1	1.0000L	0.0 N	0.0 N	20.0000	30.0000	1500.0000	20.0000L	10.0000	10.0000L	30.0000
WK 26D-2	1.0000L	0.0 N	0.0 N	20.0000	50.0000	150.0000	20.0000L	7.0000	10.0000	30.0000
WK 26E-1	1.0000L	0.0 N	0.0 N	30.0000	70.0000	30.0000	20.0000L	5.0000L	10.0000	50.0000
WK 26E-2	1.0000L	0.0 N	0.0 N	30.0000	70.0000	30.0000	20.0000L	0.0 N	10.0000	30.0000
WK 26F-1	1.0000L	0.0 N	0.0 N	10.0000	70.0000	30.0000	20.0000L	5.0000L	10.0000L	50.0000
WK 26F-2	0.0 N	0.0 N	0.0 N	15.0000	100.0000	30.0000	20.0000L	5.0000L	10.0000L	70.0000
WK 26G-1	1.0000L	0.0 N	0.0 N	20.0000	100.0000	50.0000	20.0000L	5.0000	10.0000	70.0000
WK 26G-2	1.0000L	0.0 N	0.0 N	30.0000	150.0000	70.0000	20.0000L	5.0000L	10.0000	70.0000
WK 26H-1	1.0000L	0.0 N	0.0 N	20.0000	70.0000	50.0000	20.0000L	5.0000L	10.0000	70.0000
WK 26H-2	1.0000L	0.0 N	0.0 N	20.0000	100.0000	70.0000	20.0000L	5.0000L	10.0000	70.0000
WK 27A-1	1.0000L	0.0 N	0.0 N	70.0000	200.0000	150.0000	0.0 N	5.0000L	10.0000	150.0000
WK 27A-2	1.0000L	0.0 N	0.0 N	100.0000	300.0000	300.0000	0.0 N	5.0000L	10.0000	150.0000
WK 27B-1	1.0000L	0.0 N	0.0 N	70.0000	150.0000	500.0000	0.0 N	5.0000L	10.0000	100.0000
WK 27B-2	0.0 N	0.0 N	0.0 N	50.0000	150.0000	200.0000	0.0 N	5.0000L	10.0000	100.0000
WK 27C-1	1.0000	0.0 N	0.0 N	30.0000	150.0000	70.0000	20.0000L	5.0000L	10.0000	70.0000
WK 27C-2	1.0000L	0.0 N	0.0 N	30.0000	100.0000	70.0000	20.0000L	5.0000L	10.0000	70.0000
WK 27D-1	1.0000	0.0 N	0.0 N	30.0000	70.0000	70.0000	20.0000L	5.0000L	10.0000	50.0000
WK 27D-2	1.0000L	0.0 N	0.0 N	30.0000	70.0000	150.0000	20.0000L	5.0000	10.0000	70.0000
WK 27E-1	1.0000L	0.0 N	0.0 N	50.0000	150.0000	150.0000	20.0000L	5.0000L	10.0000	70.0000
WK 27E-2	1.0000L	0.0 N	0.0 N	30.0000	150.0000	100.0000	20.0000L	5.0000L	10.0000	70.0000
WK 27F-1	1.0000L	0.0 N	0.0 N	30.0000	150.0000	70.0000	20.0000L	10.0000	10.0000	100.0000
WK 27F-2	1.0000L	0.0 N	0.0 N	30.0000	150.0000	100.0000	20.0000L	10.0000	10.0000	100.0000
WK 27G-1	1.0000L	0.0 N	0.0 N	30.0000	100.0000	70.0000	20.0000L	5.0000L	10.0000	70.0000
WK 27G-2	1.0000L	0.0 N	0.0 N	50.0000	150.0000	70.0000	20.0000L	5.0000L	10.0000	150.0000
WK 29B-1	1.0000	0.0 N	0.0 N	20.0000	30.0000	30.0000	20.0000L	0.0 N	10.0000	30.0000
WK 29B-2	1.0000L	0.0 N	0.0 N	30.0000	30.0000	50.0000	20.0000L	5.0000L	10.0000	30.0000
WK 29C-1	1.0000L	0.0 N	0.0 N	50.0000	70.0000	150.0000	0.0 N	5.0000L	10.0000	70.0000
WK 29C-2	1.0000L	0.0 N	0.0 N	50.0000	150.0000	100.0000	20.0000L	5.0000L	10.0000	70.0000
WK 29D-1	0.0 N	0.0 N	0.0 N	70.0000	150.0000	100.0000	20.0000L	5.0000L	10.0000	100.0000
WK 29D-2	1.0000L	0.0 N	0.0 N	70.0000	200.0000	200.0000	20.0000L	5.0000L	10.0000	150.0000
WK 29E-1	1.0000L	0.0 N	0.0 N	70.0000	300.0000	150.0000	0.0 N	5.0000L	10.0000	150.0000
WK 29E-2	1.0000L	0.0 N	0.0 N	70.0000	300.0000	150.0000	0.0 N	5.0000L	10.0000	150.0000
WK 29F-1	1.0000L	0.0 N	0.0 N	70.0000	200.0000	150.0000	0.0 N	5.0000L	10.0000	150.0000
WK 29F-2	1.0000L	0.0 N	0.0 N	70.0000	300.0000	200.0000	0.0 N	5.0000L	10.0000	150.0000
WK 29G-1	1.0000L	0.0 N	0.0 N	70.0000	150.0000	150.0000	0.0 N	5.0000L	10.0000	100.0000
WK 29G-2	1.0000L	0.0 N	0.0 N	70.0000	150.0000	150.0000	0.0 N	5.0000L	10.0000	100.0000
WK 30A-1	1.0000L	0.0 N	0.0 N	50.0000	150.0000	150.0000	0.0 N	5.0000L	10.0000	70.0000
WK 30A-2	1.0000L	0.0 N	0.0 N	50.0000	150.0000	150.0000	0.0 N	5.0000L	10.0000	70.0000
WK 30B-1	1.0000L	0.0 N	0.0 N	30.0000	70.0000	30.0000	0.0 N	5.0000L	10.0000	70.0000
WK 30B-2	1.0000L	0.0 N	0.0 N	30.0000	100.0000	50.0000	0.0 N	5.0000L	10.0000	70.0000
WK 30C-1	1.0000	0.0 N	0.0 N	30.0000	150.0000	50.0000	20.0000L	5.0000L	10.0000	70.0000
WK 30C-2	1.0000	0.0 N	0.0 N	30.0000	150.0000	50.0000	20.0000L	5.0000L	10.0000	70.0000
WK 30D-1	1.0000L	0.0 N	0.0 N	30.0000	70.0000	70.0000	20.0000L	5.0000	10.0000	100.0000
WK 30D-2	1.0000L	0.0 N	0.0 N	30.0000	150.0000	70.0000	20.0000L	7.0000	10.0000	100.0000

TABLE 1.--STREAM SEDIMENT SAMPLES

SAMPLE	PB PPM	SB PPM	SC PPM	SN PPM	SR PPM	V PPM	W PPM	Y PPM	ZN PPM	ZR PPM
WK 26A-1	10.0000	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	30.0000	200.0000L	70.0000
WK 26A-2	15.0000	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	200.0000L	100.0000
WK 26B-1	0.0 N	0.0 N	15.0000	0.0 N	1500.0000	150.0000	0.0 N	20.0000	0.0 N	50.0000
WK 26B-2	0.0 N	0.0 N	15.0000	0.0 N	1500.0000	150.0000	0.0 N	20.0000	200.0000L	50.0000
WK 26C-1	10.0000L	0.0 N	15.0000	0.0 N	1000.0000	200.0000	0.0 N	20.0000	200.0000L	50.0000
WK 26C-2	10.0000L	0.0 N	15.0000	0.0 N	700.0000	150.0000	0.0 N	20.0000	200.0000L	70.0000
WK 26D-1	10.0000L	0.0 N	10.0000	0.0 N	700.0000	150.0000	0.0 N	15.0000	0.0 N	70.0000
WK 26D-2	0.0 N	0.0 N	15.0000	0.0 N	700.0000	200.0000	0.0 N	15.0000	0.0 N	70.0000
WK 26E-1	10.0000L	0.0 N	15.0000	0.0 N	700.0000	200.0000	0.0 N	20.0000	0.0 N	70.0000
WK 26E-2	10.0000	0.0 N	15.0000	0.0 N	700.0000	200.0000	0.0 N	20.0000	0.0 N	70.0000
WK 26F-1	0.0 N	0.0 N	10.0000	0.0 N	1500.0000	100.0000	0.0 N	30.0000	0.0 N	50.0000
WK 26F-2	0.0 N	0.0 N	15.0000	0.0 N	1500.0000	150.0000	0.0 N	30.0000	0.0 N	50.0000
WK 26G-1	10.0000L	0.0 N	15.0000	0.0 N	700.0000	300.0000	0.0 N	30.0000	200.0000L	70.0000
WK 26G-2	10.0000L	0.0 N	15.0000	0.0 N	700.0000	300.0000	0.0 N	30.0000	200.0000L	70.0000
WK 26H-1	0.0 N	0.0 N	15.0000	0.0 N	1000.0000	200.0000	0.0 N	30.0000	200.0000L	70.0000
WK 26H-2	10.0000L	0.0 N	15.0000	0.0 N	1000.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 27A-1	10.0000L	0.0 N	30.0000	0.0 N	200.0000	500.0000	0.0 N	30.0000	200.0000L	70.0000
WK 27A-2	10.0000L	0.0 N	30.0000	0.0 N	300.0000	500.0000	0.0 N	30.0000	200.0000L	70.0000
WK 27B-1	10.0000L	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	30.0000	200.0000L	70.0000
WK 27B-2	0.0 N	0.0 N	30.0000	0.0 N	200.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 27C-1	10.0000L	0.0 N	30.0000	0.0 N	300.0000	500.0000	0.0 N	20.0000	200.0000L	150.0000
WK 27C-2	10.0000L	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	15.0000	0.0 N	70.0000
WK 27D-1	10.0000	0.0 N	20.0000	0.0 N	300.0000	200.0000	0.0 N	15.0000	0.0 N	100.0000
WK 27D-2	10.0000L	0.0 N	30.0000	0.0 N	500.0000	300.0000	0.0 N	20.0000	0.0 N	100.0000
WK 27E-1	0.0 N	0.0 N	30.0000	0.0 N	200.0000	500.0000	0.0 N	20.0000	0.0 N	70.0000
WK 27E-2	0.0 N	0.0 N	30.0000	0.0 N	200.0000	500.0000	0.0 N	30.0000	0.0 N	70.0000
WK 27F-1	10.0000L	0.0 N	30.0000	0.0 N	300.0000	500.0000	0.0 N	30.0000	300.0000	70.0000
WK 27F-2	10.0000L	0.0 N	30.0000	0.0 N	300.0000	500.0000	0.0 N	30.0000	500.0000	100.0000
WK 27G-1	10.0000L	0.0 N	20.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	200.0000	70.0000
WK 27G-2	10.0000L	0.0 N	30.0000	0.0 N	500.0000	500.0000	0.0 N	30.0000	200.0000	100.0000
WK 29B-1	10.0000	0.0 N	15.0000	0.0 N	500.0000	150.0000	0.0 N	15.0000	0.0 N	70.0000
WK 29B-2	10.0000	0.0 N	20.0000	0.0 N	700.0000	200.0000	0.0 N	15.0000	0.0 N	70.0000
WK 29C-1	15.0000	0.0 N	20.0000	0.0 N	700.0000	300.0000	0.0 N	15.0000	200.0000L	70.0000
WK 29C-2	15.0000	0.0 N	20.0000	0.0 N	700.0000	300.0000	0.0 N	15.0000	0.0 N	70.0000
WK 29D-1	10.0000	0.0 N	30.0000	0.0 N	200.0000	500.0000	0.0 N	20.0000	200.0000L	70.0000
WK 29D-2	10.0000L	0.0 N	30.0000	0.0 N	200.0000	700.0000	0.0 N	30.0000	200.0000L	70.0000
WK 29E-1	10.0000L	0.0 N	30.0000	0.0 N	200.0000	500.0000	0.0 N	30.0000	200.0000L	70.0000
WK 29E-2	10.0000L	0.0 N	30.0000	0.0 N	200.0000	500.0000	0.0 N	30.0000	200.0000L	70.0000
WK 29F-1	10.0000L	0.0 N	30.0000	0.0 N	200.0000	500.0000	0.0 N	30.0000	200.0000L	70.0000
WK 29F-2	0.0 N	0.0 N	30.0000	0.0 N	200.0000	500.0000	0.0 N	30.0000	200.0000L	70.0000
WK 29G-1	10.0000L	0.0 N	30.0000	0.0 N	500.0000	500.0000	0.0 N	30.0000	200.0000L	70.0000
WK 29G-2	0.0 N	0.0 N	30.0000	0.0 N	500.0000	500.0000	0.0 N	30.0000	200.0000L	70.0000
WK 30A-1	20.0000	0.0 N	20.0000	15.0000	700.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 30A-2	15.0000	0.0 N	20.0000	0.0 N	700.0000	200.0000	0.0 N	20.0000	200.0000L	70.0000
WK 30B-1	10.0000L	0.0 N	15.0000	0.0 N	700.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 30B-2	10.0000L	0.0 N	20.0000	0.0 N	700.0000	200.0000	0.0 N	30.0000	200.0000L	100.0000
WK 30C-1	10.0000L	0.0 N	20.0000	0.0 N	500.0000	300.0000	0.0 N	20.0000	200.0000L	300.0000
WK 30C-2	10.0000L	0.0 N	20.0000	0.0 N	500.0000	300.0000	0.0 N	20.0000	200.0000	200.0000
WK 30D-1	10.0000L	0.0 N	15.0000	0.0 N	500.0000	300.0000	0.0 N	30.0000	300.0000	70.0000
WK 30D-2	0.0 N	0.0 N	20.0000	0.0 N	700.0000	300.0000	0.0 N	30.0000	300.0000	70.0000

TABLE 1.--STREAM SEDIMENT SAMPLES

SAMPLE	FE PCT.	MG PCT.	CA PCT.	TI PCT.	MN PPM	AG PPM	AS PPM	AU PPM	B PPM	BA PPM
WK 30E-1	5.0000	3.0000	10.0000	0.5000	700.0000	0.5000L	0.0 N	0.0200L	50.0000	1000.0000
WK 30E-2	5.0000	3.0000	10.0000	0.7000	700.0000	0.5000L	0.0 N	0.0200L	30.0000	700.0000
WK 30F-1	5.0000	1.5000	10.0000	0.5000	300.0000	0.5000L	0.0 N	0.0200L	100.0000	700.0000
WK 30F-2	5.0000	1.5000	7.0000	0.5000	300.0000	0.0 N	0.0 N	0.0200L	70.0000	700.0000
WK 30G-1	7.0000	1.5000	7.0000	0.5000	700.0000	0.5000L	0.0 N	0.0200L	70.0000	500.0000
WK 30G-2	7.0000	1.5000	7.0000	0.5000	300.0000	0.0 N	0.0 N	0.0200L	70.0000	1000.0000
WK 32C-3	15.0000	7.0000	7.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0200L	150.0000	300.0000
WK 32C-4	15.0000	7.0000	7.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0200L	70.0000	700.0000
WK 33B-1	15.0000	7.0000	10.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0200L	70.0000	300.0000
WK 33B-2	15.0000	5.0000	10.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0200L	100.0000	300.0000
WK 35B-1	10.0000	5.0000	7.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0200L	30.0000	20.0000L
WK 35B-2	15.0000	7.0000	10.0000	1.0000	1500.0000	0.0 N	0.0 N	0.0200L	50.0000	20.0000L
WK 40B-1	10.0000	7.0000	7.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0200L	70.0000	300.0000
WK 40B-2	10.0000	5.0000	5.0000	0.5000	1500.0000	0.0 N	0.0 N	0.0200L	100.0000	200.0000
WK 41A-1	10.0000	3.0000	2.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0200L	20.0000	300.0000
WK 41A-2	10.0000	2.0000	1.5000	0.5000	1500.0000	0.0 N	0.0 N	0.0600	20.0000	300.0000
WK 41B-1	5.0000	1.5000	1.0000	0.3000	1000.0000	0.0 N	0.0 N	0.0400	15.0000	700.0000
WK 41B-2	10.0000	2.0000	1.5000	0.5000	1500.0000	0.0 N	0.0 N	0.0200L	15.0000	700.0000
WK 41C-1	10.0000	3.0000	2.0000	1.0000	1500.0000	0.0 N	0.0 N	0.0200L	30.0000	200.0000
WK 41C-2	10.0000	3.0000	2.0000	1.0000	1500.0000	0.0 N	0.0 N	0.0200L	20.0000	200.0000
WK 41D-1	10.0000	5.0000	3.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0200L	15.0000	500.0000
WK 41D-2	10.0000	5.0000	3.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0200L	15.0000	500.0000
WK 41E-1	7.0000	3.0000	2.0000	0.7000	1000.0000	0.5000	0.0 N	0.0200L	20.0000	700.0000
WK 41E-2	10.0000	3.0000	3.0000	0.7000	1000.0000	0.5000L	0.0 N	0.0200L	20.0000	1000.0000
WK 41F-1	7.0000	3.0000	5.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0200L	15.0000	300.0000
WK 41F-2	10.0000	3.0000	5.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0200L	15.0000	300.0000
WK 42A-1	15.0000	3.0000	3.0000	1.0000	1000.0000	0.0 N	0.0 N	0.0200L	15.0000	100.0000
WK 42A-2	15.0000	3.0000	5.0000	1.0000	1000.0000	0.0 N	0.0 N	0.0200L	15.0000	100.0000
WK 42B-1	7.0000	2.0000	1.5000	0.7000	1500.0000	0.0 N	0.0 N	0.0200L	50.0000	300.0000
WK 42B-2	5.0000	1.5000	1.5000	0.7000	1000.0000	0.0 N	0.0 N	0.0200L	50.0000	300.0000
WK 42C-1	10.0000	3.0000	5.0000	1.0000	1000.0000	0.0 N	0.0 N	0.0200L	15.0000	150.0000
WK 42C-2	10.0000	5.0000	5.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0200L	15.0000	200.0000
WK 42D-1	15.0000	5.0000	5.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0200L	15.0000	100.0000
WK 42D-2	15.0000	3.0000	3.0000	0.7000	700.0000	0.0 N	0.0 N	0.0200L	15.0000	100.0000
WK 42E-1	15.0000	5.0000	3.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0200L	15.0000	100.0000
WK 42E-2	15.0000	5.0000	3.0000	0.7000	1000.0000	0.5000	0.0 N	0.0200L	30.0000	150.0000
WK 42F-1	15.0000	7.0000	7.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0200L	10.0000	150.0000
WK 42F-2	15.0000	7.0000	7.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0200L	10.0000	150.0000
WK 42G-1	2.0000	1.5000	10.0000	0.1500	150.0000	0.5000L	0.0 N	0.0200L	50.0000	100.0000
WK 42G-2	2.0000	2.0000	15.0000	0.1500	150.0000	0.5000L	0.0 N	0.0200L	50.0000	100.0000
WK 42H-1	10.0000	5.0000	5.0000	0.5000	1000.0000	0.5000L	0.0 N	0.0400	15.0000	300.0000
WK 42H-2	10.0000	5.0000	5.0000	0.7000	1000.0000	0.5000L	0.0 N	0.0200	15.0000	300.0000
WK 43A-1	3.0000	3.0000	10.0000	0.1500	150.0000	0.0 N	0.0 N	0.0200L	15.0000	200.0000
WK 43A-2	3.0000	3.0000	10.0000	0.1500	150.0000	0.0 N	0.0 N	0.0200L	30.0000	150.0000
WK 43C-1	15.0000	7.0000	7.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0200L	50.0000	100.0000
WK 43C-2	10.0000	5.0000	5.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0200L	70.0000	100.0000
WK 50B-1	3.0000	0.7000	10.0000	0.2000	200.0000	0.5000L	0.0 N	0.0200L	50.0000	700.0000
WK 50B-2	3.0000	0.7000	10.0000	0.3000	200.0000	0.5000L	0.0 N	0.0200L	50.0000	700.0000
WK 50E-1	5.0000	1.5000	5.0000	0.3000	300.0000	0.5000L	0.0 N	0.0200L	50.0000	700.0000
WK 50E-2	7.0000	2.0000	7.0000	0.3000	300.0000	0.0 N	0.0 N	0.0200L	70.0000	700.0000

TABLE 1.--STREAM SEDIMENT SAMPLES

SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
WK 30E-1	1.0000L	0.0 N	0.0 N	30.0000	100.0000	50.0000	20.0000L	5.0000L	10.0000	70.0000
WK 30E-2	1.0000L	0.0 N	0.0 N	30.0000	150.0000	50.0000	20.0000L	5.0000	10.0000	70.0000
WK 30F-1	1.0000L	0.0 N	0.0 N	30.0000	70.0000	50.0000	20.0000L	5.0000	10.0000	70.0000
WK 30F-2	1.0000L	0.0 N	0.0 N	30.0000	70.0000	50.0000	20.0000L	5.0000	10.0000	70.0000
WK 30G-1	1.0000L	0.0 N	0.0 N	30.0000	70.0000	70.0000	20.0000L	5.0000	10.0000	70.0000
WK 30G-2	1.0000L	0.0 N	0.0 N	30.0000	70.0000	50.0000	20.0000L	5.0000	10.0000	70.0000
WK 32C-3	1.0000L	0.0 N	0.0 N	70.0000	300.0000	70.0000	0.0 N	5.0000L	10.0000	150.0000
WK 32C-4	0.0 N	0.0 N	0.0 N	70.0000	300.0000	70.0000	20.0000L	5.0000L	10.0000	150.0000
WK 33B-1	0.0 N	0.0 N	0.0 N	70.0000	200.0000	150.0000	0.0 N	5.0000L	10.0000	150.0000
WK 33B-2	0.0 N	0.0 N	0.0 N	70.0000	300.0000	70.0000	0.0 N	5.0000L	10.0000	150.0000
WK 35B-1	1.0000L	0.0 N	0.0 N	50.0000	200.0000	100.0000	0.0 N	5.0000L	10.0000	150.0000
WK 35B-2	1.0000L	0.0 N	0.0 N	70.0000	300.0000	100.0000	20.0000L	5.0000L	10.0000	150.0000
WK 40B-1	0.0 N	0.0 N	0.0 N	70.0000	300.0000	200.0000	0.0 N	5.0000L	10.0000	150.0000
WK 40B-2	0.0 N	0.0 N	0.0 N	50.0000	300.0000	150.0000	0.0 N	5.0000L	10.0000	150.0000
WK 41A-1	1.0000L	0.0 N	0.0 N	30.0000	150.0000	150.0000	0.0 N	5.0000L	10.0000	70.0000
WK 41A-2	1.0000L	0.0 N	0.0 N	30.0000	150.0000	150.0000	0.0 N	5.0000L	10.0000	70.0000
WK 41B-1	1.0000L	0.0 N	0.0 N	30.0000	50.0000	150.0000	30.0000	7.0000	10.0000	30.0000
WK 41B-2	1.0000L	0.0 N	0.0 N	30.0000	70.0000	150.0000	20.0000L	7.0000	10.0000	30.0000
WK 41C-1	1.0000L	0.0 N	0.0 N	30.0000	150.0000	150.0000	0.0 N	5.0000L	10.0000	70.0000
WK 41C-2	1.0000L	0.0 N	0.0 N	50.0000	150.0000	150.0000	0.0 N	5.0000L	10.0000	100.0000
WK 41D-1	0.0 N	0.0 N	0.0 N	50.0000	300.0000	150.0000	0.0 N	5.0000L	10.0000	150.0000
WK 41D-2	0.0 N	0.0 N	0.0 N	50.0000	300.0000	100.0000	0.0 N	5.0000L	10.0000	150.0000
WK 41E-1	1.0000L	0.0 N	0.0 N	30.0000	150.0000	100.0000	0.0 N	5.0000	10.0000	100.0000
WK 41E-2	1.0000L	0.0 N	0.0 N	30.0000	150.0000	150.0000	0.0 N	5.0000	10.0000	100.0000
WK 41F-1	0.0 N	0.0 N	0.0 N	30.0000	200.0000	100.0000	0.0 N	5.0000L	10.0000	100.0000
WK 41F-2	0.0 N	0.0 N	0.0 N	50.0000	200.0000	100.0000	0.0 N	5.0000L	10.0000	150.0000
WK 42A-1	0.0 N	0.0 N	0.0 N	70.0000	150.0000	150.0000	0.0 N	5.0000L	10.0000	100.0000
WK 42A-2	1.0000L	0.0 N	0.0 N	70.0000	200.0000	150.0000	0.0 N	5.0000L	10.0000	100.0000
WK 42B-1	1.0000L	0.0 N	0.0 N	50.0000	150.0000	150.0000	0.0 N	5.0000L	10.0000	70.0000
WK 42B-2	1.0000L	0.0 N	0.0 N	30.0000	70.0000	100.0000	0.0 N	5.0000L	10.0000	30.0000
WK 42C-1	1.0000L	0.0 N	0.0 N	30.0000	150.0000	70.0000	0.0 N	5.0000L	10.0000	100.0000
WK 42C-2	1.0000L	0.0 N	0.0 N	50.0000	150.0000	100.0000	0.0 N	5.0000L	10.0000	100.0000
WK 42D-1	0.0 N	0.0 N	0.0 N	70.0000	150.0000	100.0000	0.0 N	5.0000L	10.0000	100.0000
WK 42D-2	0.0 N	0.0 N	0.0 N	50.0000	150.0000	70.0000	0.0 N	5.0000L	10.0000	70.0000
WK 42E-1	1.0000L	0.0 N	0.0 N	50.0000	150.0000	100.0000	0.0 N	5.0000L	10.0000	100.0000
WK 42E-2	1.0000L	0.0 N	0.0 N	70.0000	150.0000	150.0000	0.0 N	5.0000L	10.0000	100.0000
WK 42F-1	0.0 N	0.0 N	0.0 N	50.0000	200.0000	300.0000	0.0 N	5.0000L	10.0000	100.0000
WK 42F-2	1.0000L	0.0 N	0.0 N	50.0000	150.0000	150.0000	0.0 N	5.0000L	10.0000	100.0000
WK 42G-1	1.0000L	0.0 N	0.0 N	10.0000	100.0000	30.0000	0.0 N	5.0000L	10.0000L	50.0000
WK 42G-2	1.0000L	0.0 N	0.0 N	10.0000	150.0000	30.0000	0.0 N	5.0000L	10.0000L	50.0000
WK 42H-1	1.0000L	0.0 N	0.0 N	50.0000	150.0000	150.0000	0.0 N	5.0000L	10.0000	70.0000
WK 42H-2	1.0000L	0.0 N	0.0 N	70.0000	150.0000	150.0000	0.0 N	5.0000L	10.0000	100.0000
WK 43A-1	1.0000L	0.0 N	0.0 N	10.0000	100.0000	30.0000	0.0 N	5.0000L	10.0000L	30.0000
WK 43A-2	1.0000L	0.0 N	0.0 N	10.0000	100.0000	30.0000	0.0 N	5.0000L	10.0000L	30.0000
WK 43C-1	0.0 N	0.0 N	0.0 N	70.0000	300.0000	150.0000	0.0 N	5.0000L	10.0000	150.0000
WK 43C-2	0.0 N	0.0 N	0.0 N	70.0000	300.0000	100.0000	0.0 N	5.0000L	10.0000	150.0000
WK 50B-1	1.0000L	0.0 N	0.0 N	10.0000	150.0000	30.0000	20.0000L	5.0000L	10.0000L	70.0000
WK 50B-2	1.0000L	0.0 N	0.0 N	10.0000	150.0000	50.0000	20.0000L	5.0000L	10.0000L	100.0000
WK 50E-1	1.0000L	0.0 N	0.0 N	20.0000	150.0000	70.0000	0.0 N	5.0000	10.0000L	100.0000
WK 50E-2	1.0000L	0.0 N	0.0 N	30.0000	150.0000	70.0000	20.0000L	5.0000	10.0000	100.0000

TABLE 1.--STREAM SEDIMENT SAMPLES

SAMPLE	PB PPM	SB PPM	SC PPM	SN PPM	SR PPM	V PPM	W PPM	Y PPM	ZN PPM	ZR PPM
WK 30E-1	10.0000L	0.0 N	15.0000	0.0 N	700.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 30E-2	10.0000L	0.0 N	20.0000	0.0 N	500.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 30F-1	0.0 N	0.0 N	15.0000	0.0 N	500.0000	300.0000	0.0 N	20.0000	300.0000	70.0000
WK 30F-2	10.0000L	0.0 N	15.0000	0.0 N	700.0000	300.0000	0.0 N	30.0000	200.0000	70.0000
WK 30G-1	10.0000L	0.0 N	15.0000	0.0 N	500.0000	300.0000	0.0 N	20.0000	200.0000	70.0000
WK 30G-2	10.0000L	0.0 N	15.0000	0.0 N	700.0000	300.0000	0.0 N	30.0000	200.0000	70.0000
WK 32C-3	0.0 N	0.0 N	30.0000	0.0 N	200.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 32C-4	0.0 N	0.0 N	50.0000	0.0 N	200.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 33B-1	0.0 N	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 33B-2	0.0 N	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 35B-1	0.0 N	0.0 N	30.0000	0.0 N	150.0000	300.0000	0.0 N	15.0000	200.0000L	70.0000
WK 35B-2	0.0 N	0.0 N	30.0000	0.0 N	150.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 40B-1	10.0000L	0.0 N	30.0000	0.0 N	150.0000	300.0000	0.0 N	20.0000	0.0 N	50.0000
WK 40B-2	0.0 N	0.0 N	30.0000	0.0 N	150.0000	300.0000	0.0 N	20.0000	200.0000L	50.0000
WK 41A-1	15.0000	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 41A-2	15.0000	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	0.0 N	70.0000
WK 41B-1	20.0000	0.0 N	15.0000	0.0 N	700.0000	200.0000	0.0 N	15.0000	0.0 N	70.0000
WK 41B-2	20.0000	0.0 N	15.0000	0.0 N	700.0000	300.0000	0.0 N	15.0000	0.0 N	70.0000
WK 41C-1	10.0000L	0.0 N	30.0000	0.0 N	200.0000	300.0000	0.0 N	30.0000	200.0000L	70.0000
WK 41C-2	10.0000L	0.0 N	30.0000	0.0 N	200.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 41D-1	10.0000L	0.0 N	30.0000	0.0 N	200.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 41D-2	10.0000L	0.0 N	30.0000	0.0 N	150.0000	300.0000	0.0 N	15.0000	200.0000L	70.0000
WK 41E-1	10.0000	0.0 N	30.0000	0.0 N	150.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 41E-2	10.0000	0.0 N	30.0000	0.0 N	150.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 41F-1	0.0 N	0.0 N	30.0000	0.0 N	200.0000	200.0000	0.0 N	15.0000	200.0000L	70.0000
WK 41F-2	10.0000L	0.0 N	30.0000	0.0 N	200.0000	200.0000	0.0 N	15.0000	200.0000L	70.0000
WK 42A-1	10.0000L	0.0 N	30.0000	0.0 N	150.0000	300.0000	0.0 N	20.0000	0.0 N	70.0000
WK 42A-2	10.0000L	0.0 N	30.0000	0.0 N	150.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 42B-1	10.0000L	0.0 N	20.0000	0.0 N	150.0000	200.0000	0.0 N	20.0000	200.0000L	70.0000
WK 42B-2	10.0000L	0.0 N	20.0000	0.0 N	150.0000	200.0000	0.0 N	20.0000	200.0000L	70.0000
WK 42C-1	10.0000L	0.0 N	30.0000	0.0 N	200.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 42C-2	10.0000L	0.0 N	30.0000	0.0 N	200.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 42D-1	0.0 N	0.0 N	30.0000	0.0 N	150.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 42D-2	10.0000L	0.0 N	30.0000	0.0 N	150.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 42E-1	0.0 N	0.0 N	30.0000	0.0 N	200.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 42E-2	0.0 N	0.0 N	30.0000	0.0 N	200.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 42F-1	10.0000L	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 42F-2	10.0000L	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 42G-1	10.0000L	0.0 N	7.0000	0.0 N	1000.0000	50.0000	0.0 N	20.0000	0.0 N	50.0000
WK 42G-2	10.0000L	0.0 N	7.0000	0.0 N	1000.0000	50.0000	0.0 N	20.0000	0.0 N	50.0000
WK 42H-1	20.0000	0.0 N	20.0000	0.0 N	300.0000	200.0000	0.0 N	15.0000	200.0000L	70.0000
WK 42H-2	20.0000	0.0 N	20.0000	0.0 N	300.0000	200.0000	0.0 N	20.0000	200.0000L	70.0000
WK 43A-1	10.0000	0.0 N	7.0000	0.0 N	1000.0000	100.0000	0.0 N	20.0000	0.0 N	70.0000
WK 43A-2	10.0000L	0.0 N	7.0000	0.0 N	1000.0000	70.0000	0.0 N	20.0000	0.0 N	70.0000
WK 43C-1	10.0000L	0.0 N	30.0000	0.0 N	200.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 43C-2	10.0000L	0.0 N	30.0000	0.0 N	200.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 50B-1	10.0000L	0.0 N	15.0000	0.0 N	1000.0000	150.0000	0.0 N	30.0000	200.0000L	70.0000
WK 50B-2	10.0000L	0.0 N	15.0000	0.0 N	700.0000	150.0000	0.0 N	30.0000	200.0000L	70.0000
WK 50E-1	10.0000L	0.0 N	20.0000	0.0 N	500.0000	200.0000	0.0 N	20.0000	200.0000L	70.0000
WK 50E-2	10.0000L	0.0 N	20.0000	0.0 N	700.0000	200.0000	0.0 N	30.0000	200.0000L	70.0000

TABLE 1.--STREAM SEDIMENT SAMPLES

SAMPLE	FE PCT.	MG PCT.	CA PCT.	TI PCT.	MN PPM	AG PPM	AS PPM	AU PPM	B PPM	BA PPM
WK 51A-1	3.0000	1.0000	10.0000	0.3000	200.0000	0.5000L	0.0 N	0.0200L	50.0000	700.0000
WK 51A-2	3.0000	0.7000	7.0000	0.2000	150.0000	0.5000L	0.0 N	0.0200L	50.0000	700.0000
WK 51B-1	5.0000	1.0000	7.0000	0.3000	300.0000	0.5000L	0.0 N	0.0200L	50.0000	700.0000
WK 51B-2	5.0000	1.0000	5.0000	0.3000	300.0000	0.5000	0.0 N	0.0200L	50.0000	700.0000
WK 51C-1	3.0000	0.7000	7.0000	0.3000	150.0000	0.5000L	0.0 N	0.0200L	50.0000	500.0000
WK 51C-2	3.0000	1.0000	7.0000	0.2000	200.0000	0.5000L	0.0 N	0.0200L	50.0000	700.0000
WK 51D-1	7.0000	1.5000	5.0000	0.5000	700.0000	0.0 N	0.0 N	0.0200L	70.0000	300.0000
WK 51D-2	10.0000	2.0000	7.0000	0.7000	700.0000	0.0 N	0.0 N	0.0200L	100.0000	300.0000
WK 51E-1	5.0000	1.5000	7.0000	0.3000	300.0000	0.0 N	0.0 N	0.0200L	50.0000	700.0000
WK 51E-2	5.0000	1.5000	7.0000	0.3000	300.0000	0.0 N	0.0 N	0.0200L	50.0000	500.0000
WK 51G-1	15.0000	3.0000	2.0000	1.0000	1000.0000	0.0 N	0.0 N	0.0400	15.0000	200.0000
WK 51G-2	15.0000	3.0000	2.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0600	15.0000	300.0000
WK 51H-1	10.0000	3.0000	3.0000	0.7000	1500.0000	0.5000L	0.0 N	0.0200L	15.0000	150.0000
WK 51H-2	15.0000	3.0000	5.0000	1.0000	1500.0000	0.0 N	0.0 N	0.0200L	15.0000	150.0000
WK 52A-1	5.0000	1.5000	0.7000	0.5000	500.0000	0.0 N	0.0 N	0.0200L	50.0000	700.0000
WK 52A-2	5.0000	1.5000	0.7000	0.5000	300.0000	0.0 N	0.0 N	0.0200L	30.0000	700.0000
WK 52B-1	5.0000	1.5000	0.7000	0.7000	500.0000	0.0 N	0.0 N	0.0200L	50.0000	700.0000
WK 52B-2	5.0000	1.5000	0.7000	0.5000	500.0000	0.0 N	0.0 N	0.0200L	50.0000	700.0000
WK 52C-1	5.0000	1.5000	0.5000	0.3000	300.0000	0.0 N	0.0 N	0.0200L	30.0000	300.0000
WK 52C-2	5.0000	1.5000	0.7000	0.3000	300.0000	0.0 N	0.0 N	0.0200L	50.0000	700.0000
WK 53A-3	5.0000	1.0000	7.0000	0.3000	500.0000	0.0 N	0.0 N	0.0200L	20.0000	300.0000
WK 53A-4	5.0000	1.5000	7.0000	0.5000	700.0000	0.0 N	0.0 N	0.0200L	20.0000	300.0000
WK 54B-1	5.0000	2.0000	10.0000	0.3000	700.0000	0.0 N	0.0 N	0.0200L	15.0000	300.0000
WK 54B-2	7.0000	3.0000	10.0000	0.3000	700.0000	0.0 N	0.0 N	0.0200L	20.0000	300.0000
WK 55C-1	7.0000	3.0000	3.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0200L	20.0000	300.0000
WK 55C-2	7.0000	2.0000	3.0000	0.3000	1000.0000	0.0 N	0.0 N	0.0200L	20.0000	300.0000
WK 55D-1	5.0000	1.0000	2.0000	0.3000	1500.0000	0.0 N	0.0 N	0.0200L	30.0000	700.0000
WK 55D-2	5.0000	1.0000	2.0000	0.3000	1500.0000	0.0 N	0.0 N	0.0200L	30.0000	500.0000
MK 62B-1	3.0000	1.5000	10.0000	0.3000	200.0000	0.7000	0.0 N	0.0200L	100.0000	700.0000
MK 62B-2	3.0000	1.5000	10.0000	0.3000	300.0000	0.7000	0.0 N	0.0200L	150.0000	1000.0000
MK 62B-3	3.0000	3.0000	15.0000	0.3000	300.0000	0.5000L	0.0 N	0.0200L	100.0000	300.0000
MK 62B-4	3.0000	3.0000	15.0000	0.3000	300.0000	0.5000L	0.0 N	0.0200L	70.0000	200.0000
MK 62B-5	3.0000	1.5000	7.0000	0.3000	200.0000	0.5000L	0.0 N	0.0200L	70.0000	700.0000
MK 62C-1	3.0000	1.0000	10.0000	0.3000	150.0000	0.5000L	0.0 N	0.0200L	70.0000	700.0000
MK 62C-2	3.0000	1.5000	15.0000	0.3000	200.0000	0.7000	0.0 N	0.0200L	70.0000	700.0000
MK 63B-2	5.0000	1.0000	5.0000	0.5000	300.0000	0.5000L	0.0 N	0.0200L	70.0000	1000.0000
MK 63B-3	7.0000	1.5000	3.0000	0.7000	700.0000	0.5000L	0.0 N	0.0200L	70.0000	1500.0000
MK 63D-1	10.0000	2.0000	2.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0200L	100.0000	1500.0000
MK 63D-2	10.0000	2.0000	1.5000	0.7000	700.0000	0.0 N	0.0 N	0.0200L	70.0000	1500.0000
MK 64C-1	5.0000	1.5000	10.0000	0.5000	700.0000	0.0 N	0.0 N	0.0200L	70.0000	700.0000
MK 64C-2	7.0000	1.5000	10.0000	0.5000	500.0000	0.5000L	0.0 N	0.0200L	70.0000	700.0000
MK 73B-1	7.0000	2.0000	7.0000	0.5000	1000.0000	0.0 N	0.0 N	0.0200L	100.0000	300.0000
MK 73B-2	10.0000	3.0000	7.0000	0.7000	1000.0000	0.0 N	0.0 N	0.0200L	50.0000	300.0000
MK 73B-3	7.0000	2.0000	5.0000	0.5000	1000.0000	0.5000L	0.0 N	0.0200L	150.0000	300.0000
MK 73B-4	5.0000	2.0000	7.0000	0.3000	1000.0000	0.5000L	0.0 N	0.0200L	30.0000	300.0000
MK 82B-1	2.0000	2.0000	10.0000	0.1500	300.0000	0.0 N	0.0 N	0.0200L	30.0000	300.0000
MK 82B-2	2.0000	3.0000	15.0000	0.1500	300.0000	0.0 N	0.0 N	0.0200L	30.0000	300.0000
MK 82B-3	2.0000	1.5000	15.0000	0.1500	150.0000	0.0 N	0.0 N	0.0200L	50.0000	150.0000
MK 82B-4	1.5000	1.0000	15.0000	0.1500	150.0000	0.0 N	0.0 N	0.0200L	50.0000	100.0000
MK 82C-1	3.0000	3.0000	15.0000	0.1500	200.0000	0.0 N	0.0 N	0.0200L	50.0000	200.0000

TABLE 1.--STREAM SEDIMENT SAMPLES

SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
WK 51A-1	1.0000L	0.0 N	0.0 N	20.0000	150.0000	30.0000	20.0000L	10.0000	10.0000	100.0000
WK 51A-2	1.0000L	0.0 N	0.0 N	15.0000	100.0000	30.0000	20.0000L	7.0000	10.0000	70.0000
WK 51B-1	1.0000L	0.0 N	0.0 N	20.0000	150.0000	50.0000	20.0000L	5.0000	10.0000	70.0000
WK 51B-2	1.0000L	0.0 N	0.0 N	20.0000	150.0000	50.0000	20.0000L	7.0000	10.0000	100.0000
WK 51C-1	0.0 N	0.0 N	0.0 N	15.0000	100.0000	30.0000	0.0 N	5.0000	10.0000L	70.0000
WK 51C-2	1.0000L	0.0 N	0.0 N	10.0000	100.0000	30.0000	0.0 N	7.0000	10.0000L	70.0000
WK 51D-1	1.0000L	0.0 N	0.0 N	30.0000	150.0000	70.0000	0.0 N	5.0000L	10.0000	70.0000
WK 51D-2	1.0000L	0.0 N	0.0 N	30.0000	150.0000	50.0000	0.0 N	5.0000L	10.0000	70.0000
WK 51E-1	1.0000L	0.0 N	0.0 N	20.0000	150.0000	30.0000	0.0 N	5.0000	10.0000	100.0000
WK 51E-2	1.0000L	0.0 N	0.0 N	15.0000	70.0000	30.0000	0.0 N	5.0000L	10.0000	70.0000
WK 51G-1	1.0000L	0.0 N	0.0 N	50.0000	150.0000	100.0000	0.0 N	5.0000L	10.0000	70.0000
WK 51G-2	1.0000L	0.0 N	0.0 N	50.0000	100.0000	150.0000	0.0 N	5.0000	10.0000	100.0000
WK 51H-1	1.0000L	0.0 N	0.0 N	50.0000	150.0000	150.0000	0.0 N	5.0000L	10.0000	70.0000
WK 51H-2	0.0 N	0.0 N	0.0 N	70.0000	200.0000	150.0000	0.0 N	5.0000L	10.0000	150.0000
WK 52A-1	1.0000	0.0 N	0.0 N	30.0000	100.0000	50.0000	0.0 N	5.0000L	10.0000	70.0000
WK 52A-2	1.0000	0.0 N	0.0 N	30.0000	150.0000	30.0000	0.0 N	5.0000L	10.0000	70.0000
WK 52B-1	1.0000	0.0 N	0.0 N	30.0000	100.0000	30.0000	0.0 N	5.0000L	10.0000	70.0000
WK 52B-2	1.0000	0.0 N	0.0 N	30.0000	150.0000	50.0000	0.0 N	5.0000L	10.0000	100.0000
WK 52C-1	1.0000	0.0 N	0.0 N	30.0000	100.0000	30.0000	0.0 N	5.0000L	10.0000	50.0000
WK 52C-2	1.0000	0.0 N	0.0 N	30.0000	150.0000	30.0000	20.0000L	5.0000L	10.0000	70.0000
WK 53A-3	1.0000L	0.0 N	0.0 N	30.0000	100.0000	30.0000	0.0 N	5.0000L	10.0000	50.0000
WK 53A-4	1.0000L	0.0 N	0.0 N	30.0000	150.0000	30.0000	0.0 N	5.0000L	10.0000	50.0000
WK 54B-1	1.0000L	0.0 N	0.0 N	30.0000	150.0000	50.0000	0.0 N	5.0000L	10.0000	50.0000
WK 54B-2	1.0000L	0.0 N	0.0 N	30.0000	150.0000	70.0000	0.0 N	5.0000L	10.0000	50.0000
WK 55C-1	1.0000L	0.0 N	0.0 N	30.0000	30.0000	70.0000	0.0 N	5.0000L	10.0000	30.0000
WK 55C-2	1.0000L	0.0 N	0.0 N	30.0000	30.0000	100.0000	0.0 N	5.0000L	10.0000	30.0000
WK 55D-1	1.0000	0.0 N	0.0 N	20.0000	15.0000	30.0000	20.0000L	5.0000L	10.0000	20.0000
WK 55D-2	1.0000	0.0 N	0.0 N	15.0000	20.0000	30.0000	20.0000L	5.0000L	10.0000	30.0000
MK 62B-1	1.0000L	0.0 N	0.0 N	15.0000	150.0000	50.0000	20.0000L	7.0000	10.0000	100.0000
MK 62B-2	1.0000L	0.0 N	0.0 N	15.0000	150.0000	50.0000	20.0000L	7.0000	10.0000	100.0000
MK 62B-3	1.0000L	0.0 N	0.0 N	20.0000	100.0000	30.0000	20.0000L	5.0000	10.0000	70.0000
MK 62B-4	1.0000L	0.0 N	0.0 N	20.0000	150.0000	70.0000	20.0000L	70.0000	10.0000	70.0000
MK 62B-5	1.0000L	0.0 N	0.0 N	15.0000	150.0000	50.0000	20.0000L	10.0000	10.0000	70.0000
MK 62C-1	1.0000L	0.0 N	0.0 N	10.0000	70.0000	30.0000	20.0000L	5.0000	10.0000	70.0000
MK 62C-2	1.0000L	0.0 N	0.0 N	20.0000	150.0000	50.0000	20.0000L	7.0000	10.0000	70.0000
MK 63B-2	1.0000	0.0 N	0.0 N	15.0000	100.0000	50.0000	20.0000L	15.0000	10.0000	100.0000
MK 63B-3	1.0000L	0.0 N	0.0 N	20.0000	150.0000	70.0000	20.0000L	15.0000	10.0000	100.0000
MK 63D-1	1.0000	0.0 N	0.0 N	30.0000	70.0000	70.0000	20.0000L	5.0000	10.0000	70.0000
MK 63D-2	1.0000	0.0 N	0.0 N	30.0000	70.0000	70.0000	20.0000L	5.0000	10.0000	70.0000
MK 64C-1	1.0000L	0.0 N	0.0 N	30.0000	100.0000	50.0000	20.0000L	5.0000	10.0000	70.0000
MK 64C-2	1.0000L	0.0 N	0.0 N	20.0000	100.0000	70.0000	0.0 N	5.0000L	10.0000	70.0000
MK 73B-1	1.0000L	0.0 N	0.0 N	30.0000	150.0000	70.0000	20.0000L	10.0000	10.0000	100.0000
MK 73B-2	1.0000L	0.0 N	0.0 N	30.0000	150.0000	70.0000	20.0000L	10.0000	10.0000	100.0000
MK 73B-3	1.0000L	0.0 N	0.0 N	30.0000	150.0000	100.0000	0.0 N	7.0000	10.0000	70.0000
MK 73B-4	0.0 N	0.0 N	0.0 N	30.0000	100.0000	70.0000	0.0 N	7.0000	10.0000	70.0000
MK 82B-1	1.0000L	0.0 N	0.0 N	5.0000	70.0000	30.0000	20.0000L	5.0000L	10.0000L	30.0000
MK 82B-2	1.0000L	0.0 N	0.0 N	5.0000L	70.0000	30.0000	20.0000L	5.0000L	10.0000L	30.0000
MK 82B-3	1.0000L	0.0 N	0.0 N	5.0000	150.0000	30.0000	20.0000L	5.0000L	10.0000L	50.0000
MK 82B-4	1.0000L	0.0 N	0.0 N	5.0000L	150.0000	30.0000	20.0000L	5.0000L	10.0000L	50.0000
MK 82C-1	1.0000L	0.0 N	0.0 N	5.0000L	70.0000	30.0000	20.0000L	5.0000L	10.0000L	30.0000

TABLE 1.--STREAM SEDIMENT SAMPLES

SAMPLE	PB PPM	SB PPM	SC PPM	SN PPM	SR PPM	V PPM	W PPM	Y PPM	ZN PPM	ZR PPM
WK 51A-1	10.0000L	0.0 N	15.0000	0.0 N	700.0000	200.0000	0.0 N	30.0000	200.0000L	70.0000
WK 51A-2	10.0000L	0.0 N	15.0000	0.0 N	700.0000	200.0000	0.0 N	30.0000	200.0000L	70.0000
WK 51B-1	10.0000L	0.0 N	20.0000	0.0 N	500.0000	200.0000	0.0 N	30.0000	200.0000L	70.0000
WK 51B-2	10.0000L	0.0 N	20.0000	0.0 N	300.0000	200.0000	0.0 N	30.0000	200.0000	70.0000
WK 51C-1	10.0000L	0.0 N	15.0000	0.0 N	700.0000	200.0000	0.0 N	20.0000	200.0000	70.0000
WK 51C-2	10.0000L	0.0 N	15.0000	0.0 N	700.0000	200.0000	0.0 N	20.0000	200.0000L	70.0000
WK 51D-1	10.0000L	0.0 N	20.0000	0.0 N	300.0000	200.0000	0.0 N	20.0000	200.0000L	70.0000
WK 51D-2	10.0000L	0.0 N	30.0000	0.0 N	300.0000	200.0000	0.0 N	20.0000	200.0000L	70.0000
WK 51E-1	10.0000L	0.0 N	15.0000	0.0 N	700.0000	150.0000	0.0 N	30.0000	200.0000L	70.0000
WK 51E-2	10.0000L	0.0 N	15.0000	0.0 N	700.0000	150.0000	0.0 N	20.0000	200.0000L	70.0000
WK 51G-1	10.0000L	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	200.0000L	100.0000
WK 51G-2	10.0000L	0.0 N	30.0000	0.0 N	300.0000	300.0000	0.0 N	15.0000	200.0000L	100.0000
WK 51H-1	0.0 N	0.0 N	30.0000	0.0 N	150.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
WK 51H-2	10.0000L	0.0 N	50.0000	0.0 N	200.0000	300.0000	0.0 N	30.0000	200.0000L	70.0000
WK 52A-1	15.0000	0.0 N	15.0000	0.0 N	200.0000	150.0000	0.0 N	15.0000	200.0000L	100.0000
WK 52A-2	10.0000	0.0 N	15.0000	0.0 N	150.0000	150.0000	0.0 N	15.0000	200.0000L	100.0000
WK 52B-1	10.0000	0.0 N	15.0000	0.0 N	150.0000	200.0000	0.0 N	20.0000	200.0000L	150.0000
WK 52B-2	20.0000	0.0 N	15.0000	0.0 N	150.0000	200.0000	0.0 N	15.0000	200.0000L	100.0000
WK 52C-1	15.0000	0.0 N	15.0000	0.0 N	150.0000	150.0000	0.0 N	15.0000	0.0 N	70.0000
WK 52C-2	15.0000	0.0 N	10.0000	0.0 N	150.0000	200.0000	0.0 N	15.0000	0.0 N	70.0000
WK 53A-3	10.0000L	0.0 N	10.0000	0.0 N	300.0000	150.0000	0.0 N	10.0000	0.0 N	70.0000
WK 53A-4	10.0000L	0.0 N	15.0000	0.0 N	300.0000	200.0000	0.0 N	10.0000	0.0 N	70.0000
WK 54B-1	10.0000L	0.0 N	15.0000	0.0 N	300.0000	200.0000	0.0 N	10.0000	0.0 N	70.0000
WK 54B-2	10.0000	0.0 N	15.0000	0.0 N	300.0000	200.0000	0.0 N	10.0000	0.0 N	70.0000
WK 55C-1	10.0000L	0.0 N	20.0000	0.0 N	700.0000	300.0000	0.0 N	30.0000	0.0 N	70.0000
WK 55C-2	10.0000L	0.0 N	15.0000	0.0 N	700.0000	200.0000	0.0 N	15.0000	0.0 N	70.0000
WK 55D-1	10.0000	0.0 N	10.0000	0.0 N	300.0000	150.0000	0.0 N	15.0000	0.0 N	100.0000
WK 55D-2	10.0000	0.0 N	7.0000	0.0 N	300.0000	150.0000	0.0 N	15.0000	0.0 N	70.0000
MK 62B-1	10.0000L	0.0 N	15.0000	0.0 N	700.0000	300.0000	0.0 N	20.0000	300.0000	70.0000
MK 62B-2	10.0000L	0.0 N	15.0000	0.0 N	700.0000	200.0000	0.0 N	30.0000	300.0000	70.0000
MK 62B-3	0.0 N	0.0 N	15.0000	0.0 N	1000.0000	200.0000	0.0 N	30.0000	200.0000	70.0000
MK 62B-4	10.0000	0.0 N	15.0000	0.0 N	700.0000	200.0000	0.0 N	30.0000	200.0000	70.0000
MK 62B-5	0.0 N	0.0 N	15.0000	0.0 N	500.0000	300.0000	0.0 N	30.0000	300.0000	70.0000
MK 62C-1	10.0000L	0.0 N	15.0000	0.0 N	300.0000	200.0000	0.0 N	20.0000	200.0000	70.0000
MK 62C-2	10.0000	0.0 N	15.0000	0.0 N	700.0000	300.0000	0.0 N	30.0000	300.0000	70.0000
MK 63B-2	0.0 N	0.0 N	20.0000	0.0 N	300.0000	500.0000	0.0 N	30.0000	300.0000	100.0000
MK 63B-3	0.0 N	0.0 N	20.0000	0.0 N	300.0000	500.0000	0.0 N	30.0000	300.0000	100.0000
MK 63D-1	10.0000L	0.0 N	20.0000	0.0 N	200.0000	500.0000	0.0 N	20.0000	300.0000	100.0000
MK 63D-2	10.0000L	0.0 N	20.0000	0.0 N	200.0000	500.0000	0.0 N	20.0000	300.0000	100.0000
MK 64C-1	10.0000L	0.0 N	15.0000	0.0 N	700.0000	300.0000	0.0 N	20.0000	200.0000	70.0000
MK 64C-2	10.0000L	0.0 N	15.0000	0.0 N	500.0000	300.0000	0.0 N	20.0000	200.0000	70.0000
MK 73B-1	10.0000	0.0 N	20.0000	0.0 N	200.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
MK 73B-2	10.0000L	0.0 N	20.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
MK 73B-3	10.0000L	0.0 N	20.0000	0.0 N	300.0000	300.0000	0.0 N	20.0000	200.0000L	70.0000
MK 73B-4	10.0000L	0.0 N	20.0000	0.0 N	300.0000	200.0000	0.0 N	20.0000	200.0000L	70.0000
MK 82B-1	10.0000	0.0 N	7.0000	0.0 N	500.0000	100.0000	0.0 N	15.0000	0.0 N	50.0000
MK 82B-2	10.0000	0.0 N	7.0000	0.0 N	700.0000	100.0000	0.0 N	15.0000	0.0 N	50.0000
MK 82B-3	10.0000L	0.0 N	10.0000	0.0 N	1000.0000	70.0000	0.0 N	20.0000	0.0 N	50.0000
MK 82B-4	10.0000L	0.0 N	7.0000	0.0 N	1000.0000	70.0000	0.0 N	20.0000	0.0 N	50.0000
MK 82C-1	10.0000L	0.0 N	7.0000	0.0 N	700.0000	70.0000	0.0 N	20.0000	0.0 N	50.0000

TABLE 1.--STREAM SEDIMENT SAMPLES

SAMPLE	FE PCT.	MG PCT.	CA PCT.	TI PCT.	MN PPM	AG PPM	AS PPM	AU PPM	B PPM	BA PPM
MK 82C-2	3.0000	3.0000	15.0000	0.1500	300.0000	0.0 N	0.0 N	0.0200L	30.0000	200.0000
MK 85E-1	15.0000	3.0000	3.0000	0.7000	1500.0000	0.0 N	0.0 N	0.0200L	15.0000	150.0000
MK 85E-2	15.0000	3.0000	5.0000	1.0000	1500.0000	0.0 N	0.0 N	0.0200L	15.0000	150.0000

TABLE 1.--STREAM SEDIMENT SAMPLES

SAMPLE	BE PPM	BI PPM	CD PPM	CO PPM	CR PPM	CU PPM	LA PPM	MO PPM	NB PPM	NI PPM
MK 82C-2	1.0000L	0.0 N	0.0 N	5.0000	100.0000	30.0000	20.0000L	5.0000L	10.0000L	30.0000
MK 85E-1	1.0000L	0.0 N	0.0 N	50.0000	150.0000	100.0000	0.0 N	50.0000L	10.0000	100.0000
MK 85E-2	1.0000L	0.0 N	0.0 N	70.0000	150.0000	150.0000	0.0 N	5.0000L	10.0000	70.0000

TABLE 1.--STREAM SEDIMENT SAMPLES

SAMPLE	PB PPM	SB PPM	SC PPM	SN PPM	SR PPM	V PPM	W PPM	Y PPM	ZN PPM	ZR PPM
MK B2C-2	10.0000	0.0 N	7.0000	0.0 N	700.0000	100.0000	0.0 N	20.0000	0.0 N	50.0000
MK 85E-1	10.0000L	0.0 N	30.0000	0.0 N	500.0000	300.0000	0.0 N	20.0000	0.0 N	70.0000
MK 85E-2	10.0000L	0.0 N	30.0000	0.0 N	500.0000	300.0000	0.0 N	30.0000	200.0000L	70.0000

TABLE 1

THE FREQUENCY DISTRIBUTIONS AND HISTOGRAMS ON THE FOLLOWING PAGES ARE ON LOGARITHMIC SCALES,AND EMPLOY THE SAME CLASS INTERVALS AS USED IN REPORTING 6-STEP SEMIQUANTITATIVE SPECTROGRAPHIC ANALYSES. IMPORTANT NOTE- THE STATISTICS GIVEN BELOW THE HISTOGRAMS ARE DERIVED ONLY FROM DATA VALUES WITHIN THE RANGES OF ANALYTICAL DETERMINATION, AND ARE, THEREFORE, BIASED IF DATA VALUES QUALIFIED WITH N, L, G, T, OR H CODES ARE PRESENT. SEE LATER SECTION OF OUTPUT FOR STATISTICAL ESTIMATES THAT ARE UNBIASED IN THIS REGARD. THE GEOMETRIC MEAN IS 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 AND IS OF NO VALUE IN ESTIMATING RESERVES OR TOTAL AMOUNTS OF ELEMENTS PRESENT. SEE USGS PROFESSIONAL PAPER 574-B FOR FURTHER DISCUSSION. SEE USGS BULLETIN 1147E, PAGE 23, FOR EXPLANATION OF GEOMETRIC DEVIATION.

TABLE 1

FREQUENCY TABLE FOR COLUMN 1 (FE PCT.)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-02 -	5.6E-02	0	0	0.0	0.0
5.6E-02 -	8.3E-02	0	0	0.0	0.0
8.3E-02 -	1.2E-01	0	0	0.0	0.0
1.2E-01 -	1.8E-01	0	0	0.0	0.0
1.8E-01 -	2.6E-01	0	0	0.0	0.0
2.6E-01 -	3.8E-01	0	0	0.0	0.0
3.8E-01 -	5.6E-01	0	0	0.0	0.0
5.6E-01 -	8.3E-01	0	0	0.0	0.0
8.3E-01 -	1.2E 00	0	0	0.0	0.0
1.2E 00 -	1.8E 00	1	1	0.65	0.65
1.8E 00 -	2.6E 00	5	6	3.27	3.92
2.6E 00 -	3.8E 00	23	29	15.03	18.95
3.8E 00 -	5.6E 00	38	67	24.84	43.79
5.6E 00 -	8.3E 00	20	87	13.07	56.86
8.3E 00 -	1.2E 01	34	121	22.22	79.08
1.2E 01 -	1.8E 01	31	152	20.26	99.35
1.8E 01 -	2.6E 01	1	153	0.65	100.00

HISTOGRAM FOR COLUMN 1 (FE PCT.)

```
      1.5E 00 X
      2.0E 00 XXX
      3.0E 00 XXXXXXXXXXXXXXX
      5.0E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXX
      7.0E 00 XXXXXXXXXXXXX
      1.0E 01 XXXXXXXXXXXXXXXXXXXXX
      1.5E 01 XXXXXXXXXXXXXXXXXXX
      2.0E 01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	153
0.0	0.0			0.0	0.0	

MAXIMUM = 2.00000E 01

MINIMUM = 1.50000E 00

GEOMETRIC MEAN = 6.85162E 00

GEOMETRIC DEVIATION = 1.81894E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0×10^{-1} or 0.1, a value 1.0E 01 means 1.0×10^{1} or 10.0, a value 1.0E-02 means 1.0×10^{-2} or 0.01, a value 1.0E 02 means 1.0×10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 2 (MG PCT.)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.0	0.0
2.6E-02 -	3.8E-02	0	0	0.0	0.0
3.8E-02 -	5.6E-02	0	0	0.0	0.0
5.6E-02 -	8.3E-02	0	0	0.0	0.0
8.3E-02 -	1.2E-01	0	0	0.0	0.0
1.2E-01 -	1.8E-01	0	0	0.0	0.0
1.8E-01 -	2.6E-01	0	0	0.0	0.0
2.6E-01 -	3.8E-01	0	0	0.0	0.0
3.8E-01 -	5.6E-01	0	0	0.0	0.0
5.6E-01 -	8.3E-01	4	4	2.61	2.61
8.3E-01 -	1.2E 00	10	14	6.54	9.15
1.2E 00 -	1.8E 00	40	54	26.14	35.29
1.8E 00 -	2.6E 00	20	74	13.07	48.37
2.6E 00 -	3.8E 00	48	122	31.37	79.74
3.8E 00 -	5.6E 00	20	142	13.07	92.81
5.6E 00 -	8.3E 00	11	153	7.19	100.00

HISTOGRAM FOR COLUMN 2 (MG PCT.)

```
7.0E-01 XXX

1.0E 00 XXXXXXX

1.5E 00 XXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 00 XXXXXXXXXXXXX

3.0E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 00 XXXXXXXXXXXXX

7.0E 00 XXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	153
0.0	0.0			0.0	0.0	

MAXIMUM = 7.00000E 00

MINIMUM = 7.00000E-01

GEOMETRIC MEAN = 2.41627E 00

GEOMETRIC DEVIATION = 1.76433E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0 x 10^{-1} or 0.1, a value 1.0E 01 means 1.0 x 10^{1} or 10.0, a value 1.0E-02 means 1.0 x 10^{-2} or 0.01, a value 1.0E 02 means 1.0 x 10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 3 (CA PCT.)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-02 -	5.6E-02	0	0	0.0	0.0
5.6E-02 -	8.3E-02	0	0	0.0	0.0
8.3E-02 -	1.2E-01	0	0	0.0	0.0
1.2E-01 -	1.8E-01	0	0	0.0	0.0
1.8E-01 -	2.6E-01	0	0	0.0	0.0
2.6E-01 -	3.8E-01	0	0	0.0	0.0
3.8E-01 -	5.6E-01	1	1	0.65	0.65
5.6E-01 -	8.3E-01	5	6	3.27	3.92
8.3E-01 -	1.2E 00	1	7	0.65	4.58
1.2E 00 -	1.8E 00	5	12	3.27	7.84
1.8E 00 -	2.6E 00	9	21	5.88	13.73
2.6E 00 -	3.8E 00	15	36	9.80	23.53
3.8E 00 -	5.6E 00	21	57	13.73	37.25
5.6E 00 -	8.3E 00	50	107	32.68	69.93
8.3E 00 -	1.2E 01	24	131	15.69	85.62
1.2E 01 -	1.8E 01	19	150	12.42	98.04
1.8E 01 -	2.6E 01	3	153	1.96	100.00

HISTOGRAM FOR COLUMN 3 (CA PCT.)

```
5.0E-01 X
7.0E-01 XXX
1.0E 00 X
1.5E 00 XXX
2.0E 00 XXXXXX
3.0E 00 XXXXXXXXXX
5.0E 00 XXXXXXXXXXXXXX
7.0E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.0E 01 XXXXXXXXXXXXXXXX
1.5E 01 XXXXXXXXXXXX
2.0E 01 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	153
0.0	0.0			0.0	0.0	

MAXIMUM = 2.00000E 01

MINIMUM = 5.00000E-01

GEOMETRIC MEAN = 5.80414E 00

GEOMETRIC DEVIATION = 2.14412E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0×10^{-1} or 0.1, a value 1.0E 01 means 1.0×10^{1} or 10.0, a value 1.0E-02 means 1.0×10^{-2} or 0.01, a value 1.0E 02 means 1.0×10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 4 (TI PCT.)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-03 -	2.6E-03	0	0	0.0	0.0
2.6E-03 -	3.8E-03	0	0	0.0	0.0
3.8E-03 -	5.6E-03	0	0	0.0	0.0
5.6E-03 -	8.3E-03	0	0	0.0	0.0
8.3E-03 -	1.2E-02	0	0	0.0	0.0
1.2E-02 -	1.8E-02	0	0	0.0	0.0
1.8E-02 -	2.6E-02	0	0	0.0	0.0
2.6E-02 -	3.8E-02	0	0	0.0	0.0
3.8E-02 -	5.6E-02	0	0	0.0	0.0
5.6E-02 -	8.3E-02	0	0	0.0	0.0
8.3E-02 -	1.2E-01	0	0	0.0	0.0
1.2E-01 -	1.8E-01	10	10	6.54	6.54
1.8E-01 -	2.6E-01	5	15	3.27	9.80
2.6E-01 -	3.8E-01	37	52	24.18	33.99
3.8E-01 -	5.6E-01	31	83	20.26	54.25
5.6E-01 -	8.3E-01	47	130	30.72	84.97
8.3E-01 -	1.2E 00	21	151	13.73	98.69

HISTOGRAM FOR COLUMN 4 (TI PCT.)

```
      1.5E-01 XXXXXXX

      2.0E-01 XXX

      3.0E-01 XXXXXXXXXXXXXXXXXXXXXXX

      5.0E-01 XXXXXXXXXXXXXXXXXXX

      7.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

      1.0E 00 XXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	2	151
0.0	0.0			0.0	1.31	

MAXIMUM = 1.00000E 00

MINIMUM = 1.50000E-01

GEOMETRIC MEAN = 4.83235E-01

GEOMETRIC DEVIATION = 1.71435E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0 x 10^{-1} or 0.1, a value 1.0E 01 means 1.0 x 10^{1} or 10.0, a value 1.0E-02 means 1.0 x 10^{-2} or 0.01, a value 1.0E 02 means 1.0 x 10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 5 (MN PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	0	0	0.0	0.0
1.2E 01 -	1.8E 01	0	0	0.0	0.0
1.8E 01 -	2.6E 01	0	0	0.0	0.0
2.6E 01 -	3.8E 01	0	0	0.0	0.0
3.8E 01 -	5.6E 01	0	0	0.0	0.0
5.6E 01 -	8.3E 01	0	0	0.0	0.0
8.3E 01 -	1.2E 02	0	0	0.0	0.0
1.2E 02 -	1.8E 02	9	9	5.88	5.88
1.8E 02 -	2.6E 02	10	19	6.54	12.42
2.6E 02 -	3.8E 02	21	40	13.73	26.14
3.8E 02 -	5.6E 02	10	50	6.54	32.68
5.6E 02 -	8.3E 02	22	72	14.38	47.06
8.3E 02 -	1.2E 03	39	111	25.49	72.55
1.2E 03 -	1.8E 03	42	153	27.45	100.00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0×10^{-1} or 0.1, a value 1.0E 01 means 1.0×10^{1} or 10.0, a value 1.0E-02 means 1.0×10^{-2} or 0.01, a value 1.0E 02 means 1.0×10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

HISTOGRAM FOR COLUMN 5 (MN PPM)

```
      1.5E 02 XXXXXX

      2.0E 02 XXXXXXX

      3.0E 02 XXXXXXXXXXXXX

      5.0E 02 XXXXXXX

      7.0E 02 XXXXXXXXXXXXX

      1.0E 03 XXXXXXXXXXXXXXXXXXXXXXXX

      1.5E 03 XXXXXXXXXXXXXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	153
0.0	0.0			0.0	0.0	

MAXIMUM = 1.50000E 03

MINIMUM = 1.50000E 02

GEOMETRIC MEAN = 6.92533E 02

GEOMETRIC DEVIATION = 2.09086E 00

TABLE 1

FREQUENCY TABLE FOR COLUMN 6 (AG PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-01 -	5.6E-01	3	3	1.96	1.96
5.6E-01 -	8.3E-01	4	7	2.61	4.58

HISTOGRAM FOR COLUMN 6 (AG PPM)

5.0E-01 XX

7.0E-01 XXX

N	L	H	B	T	G	ANALYTICAL VALUES
105	41	0	0	0	0	7
68.63	26.80			0.0	0.0	

MAXIMUM = 7.00000E-01

MINIMUM = 5.00000E-01

GEOMETRIC MEAN = 6.05999E-01

GEOMETRIC DEVIATION = 1.19704E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0 x 10^{-1} or 0.1, a value 1.0E 01 means 1.0 x 10^{1} or 10.0, a value 1.0E-02 means 1.0 x 10^{-2} or 0.01, a value 1.0E 02 means 1.0 x 10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 9 (B PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	2	2	1.31	1.31
1.2E 01 -	1.8E 01	34	36	22.22	23.53
1.8E 01 -	2.6E 01	19	55	12.42	35.95
2.6E 01 -	3.8E 01	22	77	14.38	50.33
3.8E 01 -	5.6E 01	27	104	17.65	67.97
5.6E 01 -	8.3E 01	32	136	20.92	88.89
8.3E 01 -	1.2E 02	12	148	7.84	96.73
1.2E 02 -	1.8E 02	5	153	3.27	100.00

HISTOGRAM FOR COLUMN 9 (B PPM)

```
1.0E 01 X
1.5E 01 XXXXXXXXXXXXXXXXXXXXX
2.0E 01 XXXXXXXXXXXX
3.0E 01 XXXXXXXXXXXXXX
5.0E 01 XXXXXXXXXXXXXXXXXX
7.0E 01 XXXXXXXXXXXXXXXXXXXXX
1.0E 02 XXXXXXXX
1.5E 02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	153
0.0	0.0			0.0	0.0	

MAXIMUM = 1.50000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 3.64820E 01

GEOMETRIC DEVIATION = 2.03169E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0×10^{-1} or 0.1, a value 1.0E 01 means 1.0×10^{1} or 10.0, a value 1.0E-02 means 1.0×10^{-2} or 0.01, a value 1.0E 02 means 1.0×10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 10 (BA PPM)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E 01 -	2.6E 01	0	0	0.0	0.0
2.6E 01 -	3.8E 01	0	0	0.0	0.0
3.8E 01 -	5.6E 01	0	0	0.0	0.0
5.6E 01 -	8.3E 01	0	0	0.0	0.0
8.3E 01 -	1.2E 02	11	11	7.19	7.19
1.2E 02 -	1.8E 02	19	30	12.42	19.61
1.8E 02 -	2.6E 02	13	43	8.50	28.10
2.6E 02 -	3.8E 02	47	90	30.72	58.82
3.8E 02 -	5.6E 02	10	100	6.54	65.36
5.6E 02 -	8.3E 02	37	137	24.18	89.54
8.3E 02 -	1.2E 03	5	142	3.27	92.81
1.2E 03 -	1.8E 03	6	148	3.92	96.73

HISTOGRAM FOR COLUMN 10 (BA PPM)

```
1.0E 02 XXXXXXX
1.5E 02 XXXXXXXXXXXX
2.0E 02 XXXXXXXX
3.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
5.0E 02 XXXXXXX
7.0E 02 XXXXXXXXXXXXXXXXXXXXXX
1.0E 03 XXX
1.5E 03 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	5	0	0	0	0	148
0.0	3.27			0.0	0.0	

MAXIMUM = 1.50000E 03

MINIMUM = 1.00000E 02

GEOMETRIC MEAN = 3.47136E 02

GEOMETRIC DEVIATION = 2.02736E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0×10^{-1} or 0.1, a value 1.0E 01 means 1.0×10^{1} or 10.0, a value 1.0E-02 means 1.0×10^{-2} or 0.01, a value 1.0E 02 means 1.0×10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 11 (BE PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E-01 -	1.2E 00	18	18	11.76	11.76

HISTOGRAM FOR COLUMN 11 (BE PPM)

1.0E 00 XXXXXXXXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
22	113	0	0	0	0	18
14.38	73.86			0.0	0.0	

MAXIMUM = 1.00000E 00

MINIMUM = 1.00000E 00

GEOMETRIC MEAN = 1.00000E 00

GEOMETRIC DEVIATION = 1.00000E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0 x 10^{-1} or 0.1, a value 1.0E 01 means 1.0 x 10^{1} or 10.0, a value 1.0E-02 means 1.0 x 10^{-2} or 0.01, a value 1.0E 02 means 1.0 x 10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 14 (CO PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	3	3	1.96	1.96
5.6E 00 -	8.3E 00	0	3	0.0	1.96
8.3E 00 -	1.2E 01	9	12	5.88	7.84
1.2E 01 -	1.8E 01	11	23	7.19	15.03
1.8E 01 -	2.6E 01	17	40	11.11	26.14
2.6E 01 -	3.8E 01	58	98	37.91	64.05
3.8E 01 -	5.6E 01	26	124	16.99	81.05
5.6E 01 -	8.3E 01	25	149	16.34	97.39
8.3E 01 -	1.2E 02	1	150	0.65	98.04

HISTOGRAM FOR COLUMN 14 (CO PPM)

```
5.0E 00 XX

7.0E 00

1.0E 01 XXXXXX

1.5E 01 XXXXXXX

2.0E 01 XXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 01 XXXXXXXXXXXXXXXXX

7.0E 01 XXXXXXXXXXXXXXXX

1.0E 02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	3	0	0	0	0	150
0.0	1.96			0.0	0.0	

MAXIMUM = 1.00000E 02

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 3.12003E 01

GEOMETRIC DEVIATION = 1.83114E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0×10^{-1} or 0.1, a value 1.0E 01 means 1.0×10^{1} or 10.0, a value 1.0E-02 means 1.0×10^{-2} or 0.01, a value 1.0E 02 means 1.0×10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 15 (CR PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	0	0	0.0	0.0
5.6E 00 -	8.3E 00	0	0	0.0	0.0
8.3E 00 -	1.2E 01	0	0	0.0	0.0
1.2E 01 -	1.8E 01	1	1	0.65	0.65
1.8E 01 -	2.6E 01	1	2	0.65	1.31
2.6E 01 -	3.8E 01	5	7	3.27	4.58
3.8E 01 -	5.6E 01	2	9	1.31	5.88
5.6E 01 -	8.3E 01	23	32	15.03	20.92
8.3E 01 -	1.2E 02	25	57	16.34	37.25
1.2E 02 -	1.8E 02	72	129	47.06	84.31
1.8E 02 -	2.6E 02	10	139	6.54	90.85
2.6E 02 -	3.8E 02	14	153	9.15	100.00

HISTOGRAM FOR COLUMN 15 (CR PPM)

```
1.5E 01 X
2.0E 01 X
3.0E 01 XXX
5.0E 01 X
7.0E 01 XXXXXXXXXXXXXX
1.0E 02 XXXXXXXXXXXXXXX
1.5E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2.0E 02 XXXXXXX
3.0E 02 XXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	153
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 02

MINIMUM = 1.50000E 01

GEOMETRIC MEAN = 1.23572E 02

GEOMETRIC DEVIATION = 1.71311E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0×10^{-1} or 0.1, a value 1.0E 01 means 1.0×10^{1} or 10.0, a value 1.0E-02 means 1.0×10^{-2} or 0.01, a value 1.0E 02 means 1.0×10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 16 (CU PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	0	0	0.0	0.0
5.6E 00 -	8.3E 00	0	0	0.0	0.0
8.3E 00 -	1.2E 01	0	0	0.0	0.0
1.2E 01 -	1.8E 01	0	0	0.0	0.0
1.8E 01 -	2.6E 01	0	0	0.0	0.0
2.6E 01 -	3.8E 01	37	37	24.18	24.18
3.8E 01 -	5.6E 01	24	61	15.69	39.87
5.6E 01 -	8.3E 01	30	91	19.61	59.48
8.3E 01 -	1.2E 02	20	111	13.07	72.55
1.2E 02 -	1.8E 02	34	145	22.22	94.77
1.8E 02 -	2.6E 02	4	149	2.61	97.39
2.6E 02 -	3.8E 02	2	151	1.31	98.69
3.8E 02 -	5.6E 02	1	152	0.65	99.35
5.6E 02 -	8.3E 02	0	152	0.0	99.35
8.3E 02 -	1.2E 03	0	152	0.0	99.35
1.2E 03 -	1.8E 03	1	153	0.65	100.00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0×10^{-1} or 0.1, a value 1.0E 01 means 1.0×10^{1} or 10.0, a value 1.0E-02 means 1.0×10^{-2} or 0.01, a value 1.0E 02 means 1.0×10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

HISTOGRAM FOR COLUMN 16 (CU PPM)

```
      3.0E 01 XXXXXXXXXXXXXXXXXXXXXXX

      5.0E 01 XXXXXXXXXXXXXXXX

      7.0E 01 XXXXXXXXXXXXXXXXXXXX

      1.0E 02 XXXXXXXXXXXXX

      1.5E 02 XXXXXXXXXXXXXXXXXXXXXX

      2.0E 02 XXX

      3.0E 02 X

      5.0E 02 X

      7.0E 02

      1.0E 03

      1.5E 03 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	153
0.0	0.0			0.0	0.0	

MAXIMUM = 1.50000E 03

MINIMUM = 3.00000E 01

GEOMETRIC MEAN = 7.26834E 01

GEOMETRIC DEVIATION = 2.00251E 00

TABLE 1

FREQUENCY TABLE FOR COLUMN 18 (MO PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	21	21	13.73	13.73
5.6E 00 -	8.3E 00	12	33	7.84	21.57
8.3E 00 -	1.2E 01	7	40	4.58	26.14
1.2E 01 -	1.8E 01	2	42	1.31	27.45
1.8E 01 -	2.6E 01	0	42	0.0	27.45
2.6E 01 -	3.8E 01	0	42	0.0	27.45
3.8E 01 -	5.6E 01	0	42	0.0	27.45
5.6E 01 -	8.3E 01	1	43	0.65	28.10

HISTOGRAM FOR COLUMN 18 (MO PPM)

```
5.0E 00 XXXXXXXXXXXXXX

7.0E 00 XXXXXXXX

1.0E 01 XXXXX

1.5E 01 X

2.0E 01

3.0E 01

5.0E 01

7.0E 01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
4	106	0	0	0	0	43
2.61	69.28			0.0	0.0	

MAXIMUM = 7.00000E 01

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 6.88011E 00

GEOMETRIC DEVIATION = 1.61780E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0×10^{-1} or 0.1, a value 1.0E 01 means 1.0×10^{1} or 10.0, a value 1.0E-02 means 1.0×10^{-2} or 0.01, a value 1.0E 02 means 1.0×10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 17 (LA PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E 01 -	2.6E 01	0	0	0.0	0.0
2.6E 01 -	3.8E 01	1	1	0.65	0.65

HISTOGRAM FOR COLUMN 17 (LA PPM)

3.0E 01 X

N	L	H	B	T	G	ANALYTICAL VALUES
78	74	0	0	0	0	1
50.98	48.37			0.0	0.0	

MAXIMUM = 3.00000E 01

MINIMUM = 3.00000E 01

GEOMETRIC MEAN = 3.00000E 01

GEOMETRIC DEVIATION = 9.99900E 48

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0 x 10^{-1} or 0.1, a value 1.0E 01 means 1.0 x 10^{1} or 10.0, a value 1.0E-02 means 1.0 x 10^{-2} or 0.01, a value 1.0E 02 means 1.0 x 10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 19 (NB PPM)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 - 1.2E 01	135	135	88.24	88.24

HISTOGRAM FOR COLUMN 19 (NB PPM)

1.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
0	18	0	0	0	0	135
0.0	11.76			0.0	0.0	

MAXIMUM = 1.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 9.99968E 00

GEOMETRIC DEVIATION = 1.00853E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0×10^{-1} or 0.1, a value 1.0E 01 means 1.0×10^{1} or 10.0, a value 1.0E-02 means 1.0×10^{-2} or 0.01, a value 1.0E 02 means 1.0×10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 20 (NI PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	0	0	0.0	0.0
5.6E 00 -	8.3E 00	0	0	0.0	0.0
8.3E 00 -	1.2E 01	0	0	0.0	0.0
1.2E 01 -	1.8E 01	0	0	0.0	0.0
1.8E 01 -	2.6E 01	1	1	0.65	0.65
2.6E 01 -	3.8E 01	17	18	11.11	11.76
3.8E 01 -	5.6E 01	14	32	9.15	20.92
5.6E 01 -	8.3E 01	61	93	39.87	60.78
8.3E 01 -	1.2E 02	38	131	24.84	85.62
1.2E 02 -	1.8E 02	22	153	14.38	100.00

HISTOGRAM FOR COLUMN 20 (NI PPM)

```
2.0E 01 X
3.0E 01 XXXXXXXXXXX
5.0E 01 XXXXXXXXX
7.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.0E 02 XXXXXXXXXXXXXXXXXXXXXXXX
1.5E 02 XXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	153
0.0	0.0			0.0	0.0	

MAXIMUM = 1.50000E 02

MINIMUM = 2.00000E 01

GEOMETRIC MEAN = 7.47024E 01

GEOMETRIC DEVIATION = 1.58620E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0×10^{-1} or 0.1, a value 1.0E 01 means 1.0×10^{1} or 10.0, a value 1.0E-02 means 1.0×10^{-2} or 0.01, a value 1.0E 02 means 1.0×10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 21 (PB PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	20	20	13.07	13.07
1.2E 01 -	1.8E 01	9	29	5.88	18.95
1.8E 01 -	2.6E 01	6	35	3.92	22.88

HISTOGRAM FOR COLUMN 21 (PB PPM)

1.0E 01 XXXXXXXXXXXX

1.5E 01 XXXXXX

2.0E 01 XXXX

N	L	H	B	T	G	ANALYTICAL VALUES
29	89	0	0	0	0	35
18.95	58.17			0.0	0.0	

MAXIMUM = 2.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.24991E 01

GEOMETRIC DEVIATION = 1.32008E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0×10^{-1} or 0.1, a value 1.0E 01 means 1.0×10^{1} or 10.0, a value 1.0E-02 means 1.0×10^{-2} or 0.01, a value 1.0E 02 means 1.0×10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 23 (SC PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E 00 -	5.6E 00	0	0	0.0	0.0
5.6E 00 -	8.3E 00	10	10	6.54	6.54
8.3E 00 -	1.2E 01	6	16	3.92	10.46
1.2E 01 -	1.8E 01	48	64	31.37	41.83
1.8E 01 -	2.6E 01	30	94	19.61	61.44
2.6E 01 -	3.8E 01	57	151	37.25	98.69
3.8E 01 -	5.6E 01	2	153	1.31	100.00

HISTOGRAM FOR COLUMN 23 (SC PPM)

```
      7.0E 00 XXXXXXX

      1.0E 01 XXXX

      1.5E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

      2.0E 01 XXXXXXXXXXXXXXXXXX

      3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

      5.0E 01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	153
0.0	0.0			0.0	0.0	

MAXIMUM = 5.00000E 01

MINIMUM = 7.00000E 00

GEOMETRIC MEAN = 1.95445E 01

GEOMETRIC DEVIATION = 1.54602E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0×10^{-1} or 0.1, a value 1.0E 01 means 1.0×10^{1} or 10.0, a value 1.0E-02 means 1.0×10^{-2} or 0.01, a value 1.0E 02 means 1.0×10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 25 (SR PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 01 -	1.2E 02	0	0	0.0	0.0
1.2E 02 -	1.8E 02	19	19	12.42	12.42
1.8E 02 -	2.6E 02	28	47	18.30	30.72
2.6E 02 -	3.8E 02	35	82	22.88	53.59
3.8E 02 -	5.6E 02	18	100	11.76	65.36
5.6E 02 -	8.3E 02	38	138	24.84	90.20
8.3E 02 -	1.2E 03	11	149	7.19	97.39
1.2E 03 -	1.8E 03	4	153	2.61	100.00

HISTOGRAM FOR COLUMN 25 (SR PPM)

```
1.5E 02 XXXXXXXXXXX

2.0E 02 XXXXXXXXXXXXXXXXX

3.0E 02 XXXXXXXXXXXXXXXXXXXXXX

5.0E 02 XXXXXXXXXXX

7.0E 02 XXXXXXXXXXXXXXXXXXXXXXXX

1.0E 03 XXXXXXX

1.5E 03 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	153
0.0	0.0			0.0	0.0	

MAXIMUM = 1.50000E 03

MINIMUM = 1.50000E 02

GEOMETRIC MEAN = 3.80920E 02

GEOMETRIC DEVIATION = 1.90752E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0×10^{-1} or 0.1, a value 1.0E 01 means 1.0×10^{1} or 10.0, a value 1.0E-02 means 1.0×10^{-2} or 0.01, a value 1.0E 02 means 1.0×10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 26 (V PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	0	0	0.0	0.0
1.2E 01 -	1.8E 01	0	0	0.0	0.0
1.8E 01 -	2.6E 01	0	0	0.0	0.0
2.6E 01 -	3.8E 01	0	0	0.0	0.0
3.8E 01 -	5.6E 01	2	2	1.31	1.31
5.6E 01 -	8.3E 01	4	6	2.61	3.92
8.3E 01 -	1.2E 02	5	11	3.27	7.19
1.2E 02 -	1.8E 02	16	27	10.46	17.65
1.8E 02 -	2.6E 02	38	65	24.84	42.48
2.6E 02 -	3.8E 02	68	133	44.44	86.93
3.8E 02 -	5.6E 02	19	152	12.42	99.35
5.6E 02 -	8.3E 02	1	153	0.65	100.00

HISTOGRAM FOR COLUMN 26 (V PPM)

```
5.0E 01 X
7.0E 01 XXX
1.0E 02 XXX
1.5E 02 XXXXXXXXXX
2.0E 02 XXXXXXXXXXXXXXXXXXXXXXXX
3.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
5.0E 02 XXXXXXXXXXXX
7.0E 02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	153
0.0	0.0			0.0	0.0	

MAXIMUM = 7.00000E 02

MINIMUM = 5.00000E 01

GEOMETRIC MEAN = 2.45215E 02

GEOMETRIC DEVIATION = 1.60874E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0×10^{-1} or 0.1, a value 1.0E 01 means 1.0×10^{1} or 10.0, a value 1.0E-02 means 1.0×10^{-2} or 0.01, a value 1.0E 02 means 1.0×10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 28 (Y PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 -	1.2E 01	4	4	2.61	2.61
1.2E 01 -	1.8E 01	26	30	16.99	19.61
1.8E 01 -	2.6E 01	79	109	51.63	71.24
2.6E 01 -	3.8E 01	44	153	28.76	100.00

HISTOGRAM FOR COLUMN 28 (Y PPM)

1.0E 01 XXX

1.5E 01 XXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	153
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 2.10166E 01

GEOMETRIC DEVIATION = 1.30763E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0 x 10^{-1} or 0.1, a value 1.0E 01 means 1.0 x 10^{1} or 10.0, a value 1.0E-02 means 1.0 x 10^{-2} or 0.01, a value 1.0E 02 means 1.0 x 10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 29 (ZN PPM)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E 02 -	2.6E 02	13	13	8.50	8.50
2.6E 02 -	3.8E 02	12	25	7.84	16.34
3.8E 02 -	5.6E 02	1	26	0.65	16.99

HISTOGRAM FOR COLUMN 29 (ZN PPM)

2.0E 02 XXXXXXXX

3.0E 02 XXXXXXXX

5.0E 02 X

N	L	H	B	T	G	ANALYTICAL VALUES
41	86	0	0	0	0	26
26.80	56.21			0.0	0.0	

MAXIMUM = 5.00000E 02

MINIMUM = 2.00000E 02

GEOMETRIC MEAN = 2.49805E 02

GEOMETRIC DEVIATION = 1.28065E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0 x 10^{-1} or 0.1, a value 1.0E 01 means 1.0 x 10^{1} or 10.0, a value 1.0E-02 means 1.0 x 10^{-2} or 0.01, a value 1.0E 02 means 1.0 x 10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

FREQUENCY TABLE FOR COLUMN 30 (ZR PPM)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E 00 - 1.2E 01	0	0	0.0	0.0
1.2E 01 - 1.8E 01	0	0	0.0	0.0
1.8E 01 - 2.6E 01	0	0	0.0	0.0
2.6E 01 - 3.8E 01	0	0	0.0	0.0
3.8E 01 - 5.6E 01	15	15	9.80	9.80
5.6E 01 - 8.3E 01	118	133	77.12	86.93
8.3E 01 - 1.2E 02	16	149	10.46	97.39
1.2E 02 - 1.8E 02	2	151	1.31	98.69
1.8E 02 - 2.6E 02	1	152	0.65	99.35
2.6E 02 - 3.8E 02	1	153	0.65	100.00

HISTOGRAM FOR COLUMN 30 (ZR PPM)

```
5.0E 01 XXXXXXXXXX

7.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 02 XXXXXXXXXX

1.5E 02 X

2.0E 02 X

3.0E 02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	153
0.0	0.0			0.0	0.0	

MAXIMUM = 3.00000E 02

MINIMUM = 5.00000E 01

GEOMETRIC MEAN = 7.21749E 01

GEOMETRIC DEVIATION = 1.25787E 00

Explanation

The letter E after a value stands for decimal exponent and is followed by a signed or unsigned, one- or two-digit integer. For example, a value of 1.0E-01 means 1.0×10^{-1} or 0.1, a value 1.0E 01 means 1.0×10^{1} or 10.0, a value 1.0E-02 means 1.0×10^{-2} or 0.01, a value 1.0E 02 means 1.0×10^{2} or 100, etc.

Histograms represent percent frequency distribution where each X equals one percent.

TABLE 1

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.

TABLE 1

A470 STATISTICAL SUMMARY DATE 4/20/70

ELEMENT	N	L	H	B	T	G	ANALYTICAL VALUES
FE PCT.	0	0	0	0	0	0	153
MG PCT.	0	0	0	0	0	0	153
CA PCT.	0	0	0	0	0	0	153
TI PCT.	0	0	0	0	0	2	151
MN PPM	0	0	0	0	0	0	153
AG PPM	105	41	0	0	0	0	7
AS PPM	153	0	0	0	0	0	0
AU PPM	0	145	0	0	0	0	8
B PPM	0	0	0	0	0	0	153
BA PPM	0	5	0	0	0	0	148
BE PPM	22	113	0	0	0	0	18
BI PPM	153	0	0	0	0	0	0
CD PPM	153	0	0	0	0	0	0
CO PPM	0	3	0	0	0	0	150
CR PPM	0	0	0	0	0	0	153
CU PPM	0	0	0	0	0	0	153
LA PPM	78	74	0	0	0	0	1
MO PPM	4	106	0	0	0	0	43
NB PPM	0	18	0	0	0	0	135
NI PPM	0	0	0	0	0	0	153
PB PPM	29	89	0	0	0	0	35
SB PPM	153	0	0	0	0	0	0
SC PPM	0	0	0	0	0	0	153
SN PPM	152	0	0	0	0	0	1
SR PPM	0	0	0	0	0	0	153
V PPM	0	0	0	0	0	0	153
W PPM	153	0	0	0	0	0	0
Y PPM	0	0	0	0	0	0	153
ZN PPM	41	86	0	0	0	0	26
ZR PPM	0	0	0	0	0	0	153

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
FE PCT.	6.851607	1.82	153 SAMPLES AND 153 ANALYTICAL VALUES.
MG PCT.	2.416266	1.76	153 SAMPLES AND 153 ANALYTICAL VALUES.
CA PCT.	5.804135	2.14	153 SAMPLES AND 153 ANALYTICAL VALUES.
TI PCT.	********	******	2 GREATER THAN VALUES. NO COMPUTATIONS.
MN PPM	692.532227	2.09	153 SAMPLES AND 153 ANALYTICAL VALUES.
AG PPM	********	******	146 NOT DETECTED, LESS THAN, OR TRACE VALUES. 7 REPORTED VALUES. NO COMPUTATIONS.
AS PPM	********	******	153 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
AU PPM	********	******	145 NOT DETECTED, LESS THAN, OR TRACE VALUES. 8 REPORTED VALUES. NO COMPUTATIONS.
B PPM	36.481934	2.03	153 SAMPLES AND 153 ANALYTICAL VALUES.
BA PPM	312.499023	2.46	5 NOT DETECTED, LESS THAN, OR TRACE VALUES. 148 REPORTED VALUES.
BE PPM	0.552963	1.40	135 NOT DETECTED, LESS THAN, OR TRACE VALUES. 18 REPORTED VALUES.
BI PPM	********	******	153 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
CD PPM	********	******	153 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.
CO PPM	29.831787	1.97	3 NOT DETECTED, LESS THAN, OR TRACE VALUES. 150 REPORTED VALUES.
CR PPM	123.571289	1.71	153 SAMPLES AND 153 ANALYTICAL VALUES.
CU PPM	72.683243	2.00	153 SAMPLES AND 153 ANALYTICAL VALUES.
LA PPM	********	******	152 NOT DETECTED, LESS THAN, OR TRACE VALUES. 1 REPORTED VALUES. NO COMPUTATIONS.
MO PPM	2.185964	2.59	110 NOT DETECTED, LESS THAN, OR TRACE VALUES. 43 REPORTED VALUES.
NB PPM	9.748309	1.07	18 NOT DETECTED, LESS THAN, OR TRACE VALUES. 135 REPORTED VALUES.
NI PPM	74.702225	1.59	153 SAMPLES AND 153 ANALYTICAL VALUES.
PB PPM	4.992324	1.97	118 NOT DETECTED, LESS THAN, OR TRACE VALUES. 35 REPORTED VALUES.
SB PPM	********	******	153 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS.

TABLE 1

SC PPM	19.544510	1.55	153 SAMPLES AND	153 ANALYTICAL VALUES.	
SN PPM	********	******	152 NOT DETECTED,	LESS THAN, OR TRACE VALUES.	1 REPORTED VALUES. NO COMPUTATIONS.
SR PPM	380.918945	1.91	153 SAMPLES AND	153 ANALYTICAL VALUES.	
V PPM	245.214279	1.61	153 SAMPLES AND	153 ANALYTICAL VALUES.	
W PPM	********	******	153 NOT DETECTED,	LESS THAN, OR TRACE VALUES.	0 REPORTED VALUES. NO COMPUTATIONS.
Y PPM	21.016571	1.31	153 SAMPLES AND	153 ANALYTICAL VALUES.	
ZN PPM	97.052261	1.86	127 NOT DETECTED,	LESS THAN, OR TRACE VALUES.	26 REPORTED VALUES.
ZR PPM	72.174789	1.26	153 SAMPLES AND	153 ANALYTICAL VALUES.	