UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

STATISTICAL TABLES, SAMPLE LOCALITY MAPS, AND AN EXPLANATION OF DATA SETS FOR SAMPLES FROM THE SELWAY-BITTERROOT WILDERNESS, IDAHO COUNTY, IDAHO, AND MISSOULA AND RAVALLI COUNTIES, MONTANA

By

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STUDIES RELATED TO WILDERNESS

The Wilderness Act (Public Law 88-577, September 3, 1964) and related acts require the U.S. Geological Survey and U.S. Bureau of Mines to survey certain areas on Federal lands to determine their mineral resource potential. Results must be made available to the public and be submitted to the President and Congress. This report presents the analytical and statistical data of a geochemical survey of the Selway-Bitterroot Wilderness in the Clearwater National Forest, Idaho County, Idaho; the Bitterroot National Forest, Ravalli County, Montana; and the Nez Perce National Forest, Idaho County, Idaho. The Selway-Bitterroot Wilderness was established as a primitive area by the U.S. Forest Service in 1932, received wilderness classification in 1963, and became a part of the National Wilderness Preservation System with the passage of the Wilderness Act in 1964.

Statistical Tables, Sample Locality Maps, and an Explanation of Data Sets for Samples from the Selway-Bitterroot Wilderness, Idaho County, Idaho, and Missoula and Ravalli Counties, Montana

By Berton W. Coxe and Margo I. Toth

INTRODUCTION

This report contains an explanation of data contained on a computer magnetic tape available through the National Technical Information Service (Coxe and others, 1982). The data consists of trace element spectrographic and delayed neutron activation analyses of 7,057 samples which include rock, stream sediment, and stream-sediment concentrates collected as part of a mineral evaluation of the Selway-Bitterroot Wilderness, Idaho County, Idaho, and Missoula and Ravalli Counties, Mont. The data is summarized on a set of geochemical maps by Coxe and Toth (1983). Also contained in this report are two maps showing the locations of analyzed samples. Plate 1 (in pocket) shows the location of rock samples, and plate 2 (in pocket) shows the locations of stream-sediment and stream-sediment-concentrate samples. Tables 1-3 show histograms, frequency distributions, and basic statistics of semiquantitative emission spectrographic data for three fractions of stream-sediment and stream-sediment-concentrate samples from the Selway-Bitterroot Wilderness.

Geochemical sampling was carried out by field parties of the U.S. Geological Survey during the summers of 1976 and 1978 through 1981.

LOCATION

The Selway-Bitterroot Wilderness Area occupies about 1.25 million acres in east-central Idaho and western Montana. It is bounded by the Bitterroot Valley on the east and lies north of the Salmon River and south of the Lochsa River (fig. 1). Cities within 80 km of the wilderness include Missoula, Hamilton, and Salmon on the east, and Orofino and Grangeville on the west.

SAMPLING AND SAMPLE PREPARATION PROCEDURES

Composite samples consisting of approximately 0.25 kg of rock chips were collected at each sample site. These samples were crushed and pulverized to less-than-100 mesh (<0.15 mm) in a vertical ceramic plate pulverizer. The analyses for these samples are contained in data set 1. (All reference to data set numbers refers to the relative location of each data set on the computer tape.)

Data set 2 contains analyses of stream-sediment samples. Approximately 0.3 kg of sediment less-than-10 mesh (1.0 mm) were collected at each sample site. The samples were then sieved to less-than-80 mesh (0.177 mm) and pulverized in the lab before analysis. Panned stream-sediment-concentrate samples were also taken and were further concentrated in the lab using heavy liquid (bromoform) techniques. They were then divided by magnetic properties using a Franz Isodynamic Magnetic Separator and hand magnet into four fractions and pulverized for spectrographic analysis.

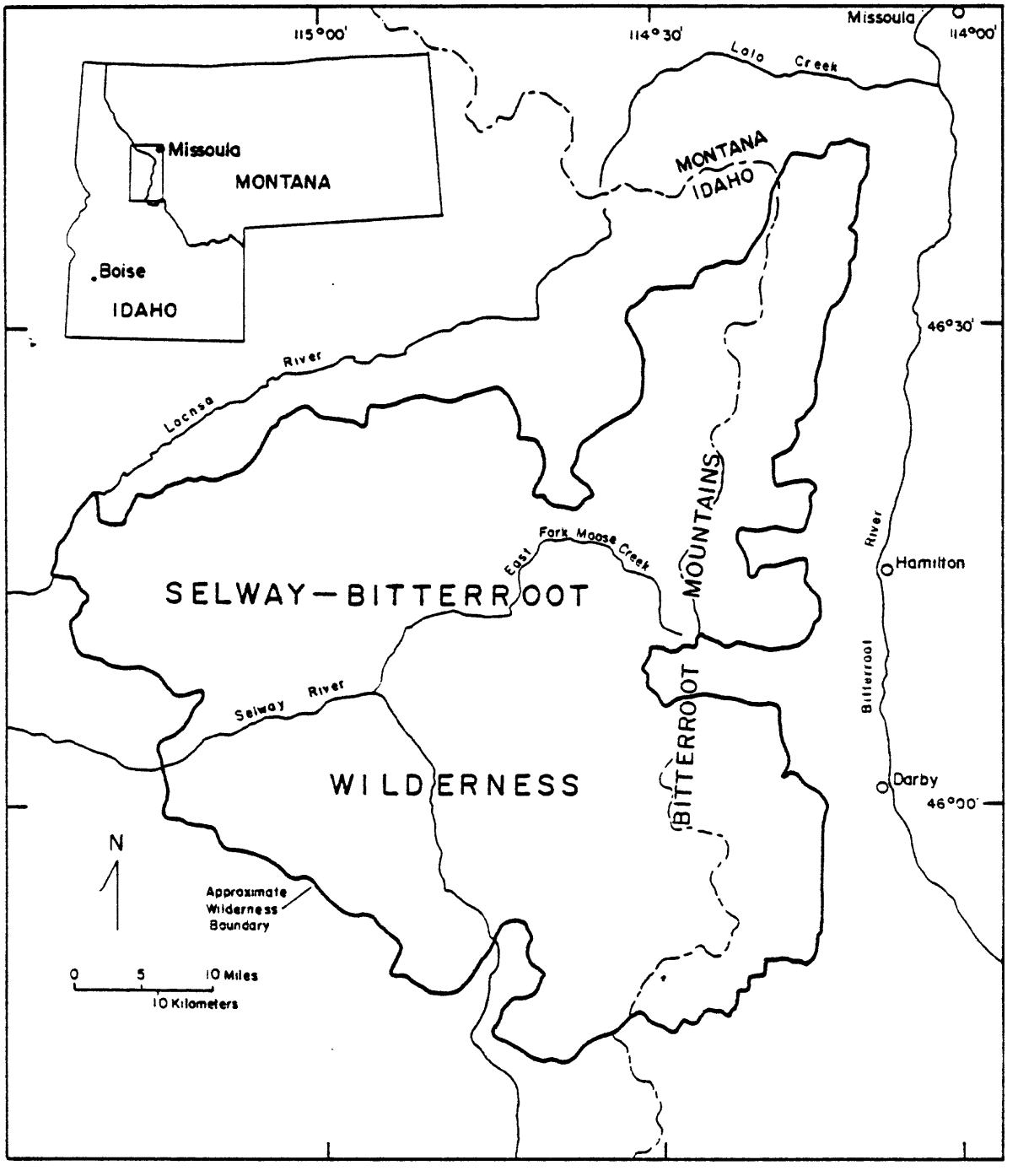

Figure 1.--Map showing location of the Selway-Bitterroot Wilderness.

Data set 6 contains analyses of the fraction of these concentrate samples that were attracted to a hand magnet. Data set 7 contains analyses of the fraction of these concentrates that were magnetic at 0.1 amps, data set 8 contains analyses of the fraction of these concentrates that were magnetic at 1.0 amps, and data set 9 contains analyses of the fraction of these concentrates that were not magnetic at 1.0 amps.

All five fractions from each sample site have the same first six characters of their respective sample numbers. The last one or two characters of the sample number identifies the type of separate (for example, 6BG001HM--the first six characters identify the sample site, and the last two characters identify it as the concentrate fraction from the site that was attracted to a hand magnet).

Data set 3 also contains analyses of stream-sediment samples. Composite samples of approximately 2 kg of sediment sieved to less-than-10 mesh (1.0 mm) were taken. In the lab, these samples were dried and sieved into three fractions: Less-than-170 mesh (<0.090 mm), greater-than-170 mesh but less-than-35 mesh (<0.5 mm), and greater-than-35 mesh. The less-than-170-mesh fraction was analyzed data set 3, without further preparation. The coarsest fraction (greater-than-35 mesh) was discarded. The intermediate fraction (less-than-35 mesh and greater-than-170 mesh) was density concentrated on a Wilfley concentrating table. The less dense material was discarded. From the concentrate, the ferromagnetic minerals were separated out with a hand magnet, pulverized, and analyzed by emission spectrographic techniques, and the results are summarized in data set 4. The remaining concentrate (nonmagnetic fraction) was treated identically, and the results are listed in data set 5.

The three separate fractions representing each of these sample sites have the same first six characters of their respective sample numbers. The last two characters of the sample number identifies the different fraction to which it belongs (for example, 9BC001SF--The first six characters identify the sample site, and the last two characters indicate the fraction is the less-than-170-mesh stream (F) sediment fraction (S). A suffix of N identifies the nonmagnetic fraction and a suffix of M identifies the magnetic fraction)

ANALYTICAL PROCEDURES

All samples were analyzed semiquantitatively for 30 elements by a six-step D.C.-arc optical emission spectrographic method (Grimes and Marranzino, 1968). A discussion of the precision of the technique can be found in Motooka and Grimes (1976). Spectrographic analyses were by E. L. Mosier, H. Barton, D. Risoli, and R. T. Hopkins of the U.S. Geological Survey and by Specomp Services, Inc., of Hayden, Colo. In addition to the 30 standard elements, many samples were analyzed for cerium and thorium.

The semiquantitative spectrographic values are reported as six steps per order of magnitude (1, 0.7, 0.5, 0.3, 0.2, 0.15, or multiples of ten of these numbers) and are approximate geometric midpoints of the concentration ranges. Due to the high concentration of iron, titanium, and zirconium in the heavy mineral concentrates, a modification of the analytical procedure, described by Grimes and Marranzino (1968), was necessary. To reduce spectral

interferences, each of these samples were diluted to half its original concentration by an equal amount of SiO_2. Consequently, the lower limits of detection for each element are doubled.

In addition to the spectrographic analyses, 196 of the less-than-170-mesh stream-sediment samples (data set 3) were quantitatively analyzed for uranium and thorium by the delayed-neutron-activation method described by Millard (1976, p. 61-65). A discussion of the precision and accuracy of the technique can be found in Stuckless and others (1977, p. 83-91).

EXPLANATION OF DATA SETS ON THE NTIS COMPUTER TAPE

The computer-readable magnetic tape is on one reel containing 35,538 words. Each record is 80 characters long. The character coding is EBCDIL, the frame parity is odd, the recording density is 800 BPI, the number of tracks on the recording is nine, the blocksize is 2,000, and the blocking factor is 25. The first five records of each data set give the data set name, number of variables, and all variable identifiers; for example, an identifier of sfe% indicates a spectrographic analysis of iron listed in units of percent. The only analyses listed here other than spectrographic analyses are 196 delayed neutron activation analyses of the less-than-170-mesh stream sediments for uranium and thorium (data set 3). The variable identifiers for these analyses are acu and acth, respectively.

Each sample is comprised of 5 records, 10 variables on each of records 1, 2, and 3, 1-4 variables on record 4, and 2 variables on record 5. The two variables on record 4 are always latitude and longitude in decimal degrees, and each has the data format F13.5. Records 1-4 have data formats 10 (a1, F6.0).

All data values are in units of parts per million except those for iron, magnesium, calcium, and titanium, which are in units of percent. Qualifying codes N, L, and G are used for values near or outside of the upper and lower detection limits. In these cases, the detection limit is reported with the qualifying code following. Code N indicates the element was not detected for that sample. Code L indicates the element was detected, but the value was below the lower quantifiable limit. Code G indicates the value was greater than the upper quantifiable limit. Two other qualifying codes were used in special cases. Code H indicates that spectral interference from other elements prevented a quantitative determination for that element. Code B indicates that the element was not analyzed for in that sample.

All records have the sample identifier, with a data format of A8 in columns 71-78, and the record sequence is in column 80 with a format of I1.

EXPLANATION OF STATISTICAL TABLES

Tables 1, 2, and 3, show summary statistics for three of the different fractions of stream-sediment and stream-sediment-concentrate samples and correspond to data sets 3, 4, and 5 on the computer tape, respectively. The frequency distributions and histograms shown in these tables are on logarithmic scales, and employ the same class intervals as are used in reporting six-step semiquantitative spectrographic analyses. The statistics given below each histogram (minimum, maximum, geometric mean, and geometric

deviation) are derived only from data values within the ranges of analytical determination, and are, therefore, biased if any qualified values are present in the data set. The last page of each of the statistical tables gives estimates of the geometric means and deviations that are unbiased in this respect. These estimates are based on a method developed by A. J. Cohen for treating censored distributions (Miesch, 1967). In some cases where the percentage of qualified values in the data set is extremely high, these estimates become unrealistic and, therefore, discretion should be used in accepting these estimates as the geometric mean and deviation values for the different data populations. The elements (As, Au, Bi, Cd, Sb, Sr, W, Zn) are omitted from some of the tables either because the maximum and minimum are the same or because there are no valid data points.

These statistical tables were generated on the U.S. Geological Survey Multics computer using a program writer by George Van Trump called a 470-Geochemical Summary (unpub. program, 1970).

EXPLANATION OF SAMPLE LOCALITY MAPS

Plates 1 and 2 (in pocket) are sample locality maps for rock samples (computer tape data set 1) and stream-sediment samples (computer data sets 2-9), respectively. The first two digits indicate the year that the sample was collected, and the first of these digits was omitted on the computer tape (for example, 79ME014 on the map is 9ME014 on the computer tape). Sample locations with consecutive numbers represent replicate sample sites (see Coxe and Toth, 1983, for a discussion on replication methods). A great deal of work was put into drafting and proofreading these maps and we wish to thank D. Ackerman, D. Birch, D. Hovorka, and M. E. Koesterer for their efforts.

REFERENCES

Coxe, B. W., and Toth, M. I., 1983, Geochemical maps of the Selway-Bitterroot Wilderness, Idaho County, Idaho, and Missoula and Ravalli Counties, Montana: U.S. Geological Survey Miscellaneous Field Studies Map MF-1495-C, scale 1:125,000 (in press).

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Grimes, D. J., and Marranzino, A. P., 1968, Direct-current arc and alternating current spark emission spectrographic field methods for the semiquantitative analyses of geologic materials: U.S. Geological Survey Circular 591, 6 p.

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

_____ 1967, Methods of computation for estimating geochemical abundance: U.S. Geological Survey Professional Paper 574-B, p. B1-B15.

Millard, H. T., Jr., 1976, Determination of uranium and thorium in U.S. Geological Survey standard rocks by the delayed neutron technique: U.S. Geological Survey Professional Paper 840, p. 61-65.

Motooka, J. M., and Grimes, D. J., 1976, Analytical precision of one-sixth order semiquantitative spectrograhic analyses: U.S. Geological Survey Circular 738, 25 p.

Stuckless, J. S., Millard, H. T., Bunker, C. M., Ukomo, I. T., Rosholt, J. N., Bush, C. A., Huffman, C., Jr., and Keil, R. L., 1977, A comparison of some analytical techniques for determining uranium, thorium and potassium in granitic rock: U.S. Geological Survey Journal of Research, v. 5, no. 1, p. 83-91.

Table 1.--Histograms, frequency distribution, and basic statistics of analyses for <170-mesh fraction of stream-sediment samples.

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 3 (sfe%)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-02 -	5.6E-02	0	0	0.00	100.00
5.6E-02 -	8.3E-02	0	0	0.00	100.00
8.3E-02 -	1.2E-01	0	0	0.00	100.00
1.2E-01 -	1.8E-01	0	0	0.00	100.00
1.8E-01 -	2.6E-01	0	0	0.00	100.00
2.6E-01 -	3.8E-01	0	0	0.00	100.00
3.8E-01 -	5.6E-01	0	0	0.00	100.00
5.6E-01 -	8.3E-01	1	1	0.09	100.00
8.3E-01 -	1.2E+00	5	6	0.44	99.91
1.2E+00 -	1.8E+00	61	67	5.34	99.47
1.8E+00 -	2.6E+00	322	389	28.20	94.13
2.6E+00 -	3.8E+00	420	809	36.78	65.94
3.8E+00 -	5.6E+00	301	1110	26.36	29.16
5.6E+00 -	8.3E+00	28	1138	2.45	2.80
8.3E+00 -	1.2E+01	4	1142	0.35	0.35

HISTOGRAM FOR COLUMN 3 (sfe%)

```
7.0E-01
1.0E+00
1.5E+00 XXXXX
2.0E+00 XXXXXXXXXXXXXXXXXXXXXXXXXX
3.0E+00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
5.0E+00 XXXXXXXXXXXXXXXXXXXXXXXX
7.0E+00 XX
1.0E+01
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	1142
0.00	0.00			0.00	0.00	

MAXIMUM = 1.00000E+01
MINIMUM = 7.00000E-01
GEOMETRIC MEAN = 3.00659E+00
GEOMETRIC DEVIATION = 1.51170E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 4 (smg%)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.00	100.00
2.6E-02 -	3.8E-02	0	0	0.00	100.00
3.8E-02 -	5.6E-02	0	0	0.00	100.00
5.6E-02 -	8.3E-02	0	0	0.00	100.00
8.3E-02 -	1.2E-01	1	1	0.09	100.00
1.2E-01 -	1.8E-01	1	2	0.09	99.91
1.8E-01 -	2.6E-01	5	7	0.44	99.82
2.6E-01 -	3.8E-01	34	41	2.98	99.39
3.8E-01 -	5.6E-01	182	223	15.94	96.41
5.6E-01 -	8.3E-01	321	544	28.11	80.47
8.3E-01 -	1.2E+00	418	962	36.60	52.36
1.2E+00 -	1.8E+00	133	1095	11.65	15.76
1.8E+00 -	2.6E+00	45	1140	3.94	4.12
2.6E+00 -	3.8E+00	1	1141	0.09	0.18
3.8E+00 -	5.6E+00	1	1142	0.09	0.09

HISTOGRAM FOR COLUMN 4 (smg%)

```
1.0E-01
1.5E-01
2.0E-01
3.0E-01 xxx
5.0E-01 xxxxxxxxxxxxxxx
7.0E-01 xxxxxxxxxxxxxxxxxxxxxxxxxxx
1.0E+00 xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
1.5E+00 xxxxxxxxxxxx
2.0E+00 xxxx
3.0E+00
5.0E+00
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	1142
0.00	0.00			0.00	0.00	

MAXIMUM = 5.00000E+00
MINIMUM = 1.00000E-01
GEOMETRIC MEAN = 8.34948E-01
GEOMETRIC DEVIATION = 1.53501E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 5 (sca%)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-02 -	5.6E-02	0	0	0.00	100.00
5.6E-02 -	8.3E-02	0	0	0.00	100.00
8.3E-02 -	1.2E-01	0	0	0.00	100.00
1.2E-01 -	1.8E-01	0	0	0.00	100.00
1.8E-01 -	2.6E-01	7	7	0.61	100.00
2.6E-01 -	3.8E-01	13	20	1.14	99.39
3.8E-01 -	5.6E-01	101	121	8.84	98.25
5.6E-01 -	8.3E-01	178	299	15.59	89.40
8.3E-01 -	1.2E+00	487	786	42.64	73.82
1.2E+00 -	1.8E+00	239	1025	20.93	31.17
1.8E+00 -	2.6E+00	106	1131	9.28	10.25
2.6E+00 -	3.8E+00	9	1140	0.79	0.96
3.8E+00 -	5.6E+00	2	1142	0.18	0.18

HISTOGRAM FOR COLUMN 5 (sca%)

```
2.0E-01 X
3.0E-01 X
5.0E-01 XXXXXXXXX
7.0E-01 XXXXXXXXXXXXXXX
1.0E+00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.5E+00 XXXXXXXXXXXXXXXXXXXX
2.0E+00 XXXXXXXXX
3.0E+00 X
5.0E+00
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	1142
0.00	0.00			0.00	0.00	

MAXIMUM = 5.00000E+00
MINIMUM = 2.00000E-01
GEOMETRIC MEAN = 1.02041E+00
GEOMETRIC DEVIATION = 1.54191E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 6 (sti%)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-03 -	2.6E-03	0	0	0.00	100.00
2.6E-03 -	3.8E-03	0	0	0.00	100.00
3.8E-03 -	5.6E-03	0	0	0.00	100.00
5.6E-03 -	8.3E-03	0	0	0.00	100.00
8.3E-03 -	1.2E-02	0	0	0.00	100.00
1.2E-02 -	1.8E-02	0	0	0.00	100.00
1.8E-02 -	2.6E-02	0	0	0.00	100.00
2.6E-02 -	3.8E-02	0	0	0.00	100.00
3.8E-02 -	5.6E-02	0	0	0.00	100.00
5.6E-02 -	8.3E-02	0	0	0.00	100.00
8.3E-02 -	1.2E-01	3	3	0.26	100.00
1.2E-01 -	1.8E-01	37	40	3.24	99.74
1.8E-01 -	2.6E-01	230	270	20.14	96.50
2.6E-01 -	3.8E-01	394	664	34.50	76.36
3.8E-01 -	5.6E-01	356	1020	31.17	41.86
5.6E-01 -	8.3E-01	71	1091	6.22	10.68
8.3E-01 -	1.2E+00	41	1132	3.59	4.47

HISTOGRAM FOR COLUMN 6 (sti%)

```
1.0E-01
1.5E-01 XXX
2.0E-01 XXXXXXXXXXXXXXXXXXX
3.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
5.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
7.0E-01 XXXXXX
1.0E+00 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	10	1132
0.00	0.00			0.00	0.88	

MAXIMUM = 1.00000E+00
MINIMUM = 1.00000E-01
GEOMETRIC MEAN = 3.48358E-01
GEOMETRIC DEVIATION = 1.59088E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 7 (smn)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	100.00
1.2E+01 -	1.8E+01	0	0	0.00	100.00
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	0	0	0.00	100.00
5.6E+01 -	8.3E+01	0	0	0.00	100.00
8.3E+01 -	1.2E+02	1	1	0.09	100.00
1.2E+02 -	1.8E+02	0	1	0.00	99.91
1.8E+02 -	2.6E+02	16	17	1.40	99.91
2.6E+02 -	3.8E+02	163	180	14.27	98.51
3.8E+02 -	5.6E+02	450	630	39.40	84.24
5.6E+02 -	8.3E+02	235	865	20.58	44.83
8.3E+02 -	1.2E+03	237	1102	20.75	24.26
1.2E+03 -	1.8E+03	33	1135	2.89	3.50
1.8E+03 -	2.6E+03	4	1139	0.35	0.61
2.6E+03 -	3.8E+03	1	1140	0.09	0.26
3.8E+03 -	5.6E+03	1	1141	0.09	0.18

HISTOGRAM FOR COLUMN 7 (smn)

```
1.0E+02
1.5E+02
2.0E+02 X
3.0E+02 XXXXXXXXXXXXX
5.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
7.0E+02 XXXXXXXXXXXXXXXXXXX
1.0E+03 XXXXXXXXXXXXXXXXXXX
1.5E+03 XXX
2.0E+03
3.0E+03
5.0E+03
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	1	1141
0.00	0.00			0.00	0.09	

MAXIMUM = 5.00000E+03
MINIMUM = 1.00000E+02
GEOMETRIC MEAN = 5.90442E+02
GEOMETRIC DEVIATION = 1.55708E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 8 (sag)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-01 -	5.6E-01	7	7	0.61	1.66
5.6E-01 -	8.3E-01	6	13	0.53	1.05
8.3E-01 -	1.2E+00	4	17	0.35	0.53
1.2E+00 -	1.8E+00	0	17	0.00	0.18
1.8E+00 -	2.6E+00	0	17	0.00	0.18
2.6E+00 -	3.8E+00	0	17	0.00	0.18
3.8E+00 -	5.6E+00	1	18	0.09	0.18

HISTOGRAM FOR COLUMN 8 (sag)

```
5.0E-01 X
7.0E-01 X
1.0E+00
1.5E+00
2.0E+00
3.0E+00
5.0E+00
```

N	L	H	B	T	G	ANALYTICAL VALUES
1118	5	0	0	0	0	19
97.90	0.44			0.00	0.00	

MAXIMUM = 5.00000E+00
MINIMUM = 1.00000E-01
GEOMETRIC MEAN = 6.67320E-01
GEOMETRIC DEVIATION = 2.02095E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 11 (sb)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	600	600	52.54	63.22
1.2E+01 -	1.8E+01	81	681	7.09	10.68
1.8E+01 -	2.6E+01	35	716	3.06	3.59
2.6E+01 -	3.8E+01	4	720	0.35	0.53
3.8E+01 -	5.6E+01	0	720	0.00	0.18
5.6E+01 -	8.3E+01	0	720	0.00	0.18
8.3E+01 -	1.2E+02	2	722	0.18	0.18

HISTOGRAM FOR COLUMN 11 (sb)

```
1.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXX
2.0E+01 XXX
3.0E+01
5.0E+01
7.0E+01
1.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
86	334	0	0	0	0	722
7.53	29.25			0.00	0.00	

MAXIMUM = 1.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.09588E+01
GEOMETRIC DEVIATION = 1.26377E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 12 (sba)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	0	0	0.00	100.00
5.6E+01 -	8.3E+01	0	0	0.00	100.00
8.3E+01 -	1.2E+02	1	1	0.09	100.00
1.2E+02 -	1.8E+02	2	3	0.18	99.91
1.8E+02 -	2.6E+02	49	52	4.29	99.74
2.6E+02 -	3.8E+02	196	248	17.16	95.45
3.8E+02 -	5.6E+02	334	582	29.25	78.28
5.6E+02 -	8.3E+02	342	924	29.95	49.04
8.3E+02 -	1.2E+03	207	1131	18.13	19.09
1.2E+03 -	1.8E+03	9	1140	0.79	0.96
1.8E+03 -	2.6E+03	2	1142	0.18	0.18

HISTOGRAM FOR COLUMN 12 (sba)

```
1.0E+02
1.5E+02
2.0E+02 XXXX
3.0E+02 XXXXXXXXXXXXXXXX
5.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
7.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.0E+03 XXXXXXXXXXXXXXXXX
1.5E+03 X
2.0E+03
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	1142
0.00	0.00			0.00	0.00	

MAXIMUM = 2.00000E+03
MINIMUM = 1.00000E+02
GEOMETRIC MEAN = 5.56458E+02
GEOMETRIC DEVIATION = 1.57829E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 13 (sbe)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E-01 -	1.2E+00	198	198	17.34	98.77
1.2E+00 -	1.8E+00	237	435	20.75	81.44
1.8E+00 -	2.6E+00	309	744	27.06	60.68
2.6E+00 -	3.8E+00	197	941	17.25	33.63
3.8E+00 -	5.6E+00	92	1033	8.06	16.37
5.6E+00 -	8.3E+00	33	1066	2.89	8.32
8.3E+00 -	1.2E+01	25	1091	2.19	5.43
1.2E+01 -	1.8E+01	7	1098	0.61	3.24
1.8E+01 -	2.6E+01	17	1115	1.49	2.63
2.6E+01 -	3.8E+01	13	1128	1.14	1.14

HISTOGRAM FOR COLUMN 13 (sbe)

```
1.0E+00 XXXXXXXXXXXXXXXX
1.5E+00 XXXXXXXXXXXXXXXXXXXX
2.0E+00 XXXXXXXXXXXXXXXXXXXXXXXXXX
3.0E+00 XXXXXXXXXXXXXXXX
5.0E+00 XXXXXXXX
7.0E+00 XXX
1.0E+01 XX
1.5E+01 X
2.0E+01 X
3.0E+01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	13	0	0	0	0	1128
0.09	1.14			0.00	0.00	

MAXIMUM = 3.00000E+01
MINIMUM = 1.00000E+00
GEOMETRIC MEAN = 2.24188E+00
GEOMETRIC DEVIATION = 1.99825E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 16 (sco)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	165	165	14.45	96.15
5.6E+00 -	8.3E+00	278	443	24.34	81.70
8.3E+00 -	1.2E+01	330	773	28.90	57.36
1.2E+01 -	1.8E+01	183	956	16.02	28.46
1.8E+01 -	2.6E+01	116	1072	10.16	12.43
2.6E+01 -	3.8E+01	19	1091	1.66	2.28
3.8E+01 -	5.6E+01	4	1095	0.35	0.61
5.6E+01 -	8.3E+01	1	1096	0.09	0.26
8.3E+01 -	1.2E+02	0	1096	0.00	0.18
1.2E+02 -	1.8E+02	0	1096	0.00	0.18
1.8E+02 -	2.6E+02	1	1097	0.09	0.18
2.6E+02 -	3.8E+02	0	1097	0.00	0.09
3.8E+02 -	5.6E+02	1	1098	0.09	0.09

HISTOGRAM FOR COLUMN 16 (sco)

```
5.0E+00 xxxxxxxxxxxxx
7.0E+00 xxxxxxxxxxxxxxxxxxxxxxx
1.0E+01 xxxxxxxxxxxxxxxxxxxxxxxxxxxx
1.5E+01 xxxxxxxxxxxxxxx
2.0E+01 xxxxxxxxxx
3.0E+01 xx
5.0E+01
7.0E+01
1.0E+02
1.5E+02
2.0E+02
3.0E+02
5.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
41	3	0	0	0	0	1098
3.59	0.26			0.00	0.00	

MAXIMUM = 5.00000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 9.79490E+00
GEOMETRIC DEVIATION = 1.62920E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 17 (scr)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	23	23	2.01	99.56
1.2E+01 -	1.8E+01	79	102	6.92	97.55
1.8E+01 -	2.6E+01	158	260	13.84	90.63
2.6E+01 -	3.8E+01	276	536	24.17	76.80
3.8E+01 -	5.6E+01	238	774	20.84	52.63
5.6E+01 -	8.3E+01	182	956	15.94	31.79
8.3E+01 -	1.2E+02	82	1038	7.18	15.85
1.2E+02 -	1.8E+02	49	1087	4.29	8.67
1.8E+02 -	2.6E+02	34	1121	2.98	4.38
2.6E+02 -	3.8E+02	7	1128	0.61	1.40
3.8E+02 -	5.6E+02	7	1135	0.61	0.79
5.6E+02 -	8.3E+02	1	1136	0.09	0.18
8.3E+02 -	1.2E+03	0	1136	0.00	0.09
1.2E+03 -	1.8E+03	0	1136	0.00	0.09
1.8E+03 -	2.6E+03	1	1137	0.09	0.09

HISTOGRAM FOR COLUMN 17 (scr)

```
1.0E+01 XX
1.5E+01 XXXXXXX
2.0E+01 XXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXXXXXXXXXXXXXXX
5.0E+01 XXXXXXXXXXXXXXXXXXXX
7.0E+01 XXXXXXXXXXXXXXX
1.0E+02 XXXXXXX
1.5E+02 XXXX
2.0E+02 XXX
3.0E+02 X
5.0E+02 X
7.0E+02
1.0E+03
1.5E+03
2.0E+03
```

N	L	H	B	T	G	ANALYTICAL VALUES
3	2,	0	0	0	0	1137
0.26	0.18			0.00	0.00	

MAXIMUM = 2.00000E+03
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 4.32893E+01
GEOMETRIC DEVIATION = 2.09309E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 18 (scu)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	128	128	11.21	98.69
5.6E+00 -	8.3E+00	299	427	26.18	87.48
8.3E+00 -	1.2E+01	333	760	29.16	61.30
1.2E+01 -	1.8E+01	157	917	13.75	32.14
1.8E+01 -	2.6E+01	122	1039	10.68	18.39
2.6E+01 -	3.8E+01	63	1102	5.52	7.71
3.8E+01 -	5.6E+01	20	1122	1.75	2.19
5.6E+01 -	8.3E+01	1	1123	0.09	0.44
8.3E+01 -	1.2E+02	2	1125	0.18	0.35
1.2E+02 -	1.8E+02	1	1126	0.09	0.18
1.8E+02 -	2.6E+02	0	1126	0.00	0.09
2.6E+02 -	3.8E+02	0	1126	0.00	0.09
3.8E+02 -	5.6E+02	1	1127	0.09	0.09

HISTOGRAM FOR COLUMN 18 (scu)

```
5.0E+00 xxxxxxxxxx
7.0E+00 xxxxxxxxxxxxxxxxxxxxxxxx
1.0E+01 xxxxxxxxxxxxxxxxxxxxxxxxxxxx
1.5E+01 xxxxxxxxxxxxx
2.0E+01 xxxxxxxxxx
3.0E+01 xxxxxx
5.0E+01 xx
7.0E+01
1.0E+02
1.5E+02
2.0E+02
3.0E+02
5.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	15	0	0	0	0	1127
0.00	1.31			0.00	0.00	

MAXIMUM = 5.00000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.06165E+01
GEOMETRIC DEVIATION = 1.73910E+00

1470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 19 (sla)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	14	14	1.23	98.86
2.6E+01 -	3.8E+01	18	32	1.58	97.64
3.8E+01 -	5.6E+01	60	92	5.25	96.06
5.6E+01 -	8.3E+01	130	222	11.38	90.81
8.3E+01 -	1.2E+02	238	460	20.84	79.42
1.2E+02 -	1.8E+02	227	687	19.88	58.58
1.8E+02 -	2.6E+02	249	936	21.80	38.70
2.6E+02 -	3.8E+02	109	1045	9.54	16.90
3.8E+02 -	5.6E+02	64	1109	5.60	7.36
5.6E+02 -	8.3E+02	13	1122	1.14	1.75
8.3E+02 -	1.2E+03	6	1128	0.53	0.61

HISTOGRAM FOR COLUMN 19 (sla)

```
2.0E+01 X
3.0E+01 XX
5.0E+01 XXXXX
7.0E+01 XXXXXXXXXXX
1.0E+02 XXXXXXXXXXXXXXXXXXXX
1.5E+02 XXXXXXXXXXXXXXXXXXX
2.0E+02 XXXXXXXXXXXXXXXXXXXXX
3.0E+02 XXXXXXXXXX
5.0E+02 XXXXXX
7.0E+02 X
1.0E+03 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
13	0	0	0	0	1	1128
1.14	0.00			0.00	0.09	

MAXIMUM = 1.00000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 1.41848E+02
GEOMETRIC DEVIATION = 1.95333E+00

470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 20 (smo)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	41	41	3.59	7.97
5.6E+00 -	8.3E+00	32	73	2.80	4.38
8.3E+00 -	1.2E+01	12	85	1.05	1.58
1.2E+01 -	1.8E+01	2	87	0.18	0.53
1.8E+01 -	2.6E+01	4	91	0.35	0.35

HISTOGRAM FOR COLUMN 20 (smo)

```
5.0E+00 XXXX
7.0E+00 XXX
1.0E+01 X
1.5E+01
2.0E+01
```

N	L	H	S	T	G	ANALYTICAL VALUES
1027	24	0	0	0	0	91
89.93	2.10			0.00	0.00	

MAXIMUM = 2.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 6.71432E+00
GEOMETRIC DEVIATION = 1.43148E+00

470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 21 (snb)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	75	75	6.57	21.80
2.6E+01 -	3.8E+01	56	131	4.90	15.24
3.8E+01 -	5.6E+01	70	201	6.13	10.33
5.6E+01 -	8.3E+01	35	236	3.06	4.20
8.3E+01 -	1.2E+02	12	248	1.05	1.14
1.2E+02 -	1.8E+02	1	249	0.09	0.09

HISTOGRAM FOR COLUMN 21 (snb)

```
       2.0E+01 XXXXXXX
       3.0E+01 XXXXX
       5.0E+01 XXXXXX
       7.0E+01 XXX
       1.0E+02 X
       1.5E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
759	134	0	0	0	0	249
66.46	11.73			0.00	0.00	

MAXIMUM = 1.50000E+02
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 3.68280E+01
GEOMETRIC DEVIATION = 1.67011E+00

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 22 (sni)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	48	48	4.20	97.72
5.6E+00 -	8.3E+00	99	147	8.67	93.52
8.3E+00 -	1.2E+01	289	436	25.31	84.85
1.2E+01 -	1.8E+01	337	773	29.51	59.54
1.8E+01 -	2.6E+01	191	964	16.73	30.04
2.6E+01 -	3.8E+01	71	1035	6.22	13.31
3.8E+01 -	5.6E+01	47	1082	4.12	7.09
5.6E+01 -	8.3E+01	25	1107	2.19	2.98
8.3E+01 -	1.2E+02	8	1115	0.70	0.79
1.2E+02 -	1.8E+02	0	1115	0.00	0.09
1.8E+02 -	2.6E+02	0	1115	0.00	0.09
2.6E+02 -	3.8E+02	1	1116	0.09	0.09

HISTOGRAM FOR COLUMN 22 (sni)

```
5.0E+00 XXXX
7.0E+00 XXXXXXXXX
1.0E+01 XXXXXXXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2.0E+01 XXXXXXXXXXXXXXXX
3.0E+01 XXXXXX
5.0E+01 XXXX
7.0E+01 XX
1.0E+02 X
1.5E+02
2.0E+02
3.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
23	3	0	0	0	0	1116
2.01	0.26			0.00	0.00	

MAXIMUM = 3.00000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.46292E+01
GEOMETRIC DEVIATION = 1.78922E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 23 (spb)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	69	69	6.04	98.95
1.2E+01 -	1.8E+01	195	264	17.08	92.91
1.8E+01 -	2.6E+01	527	791	46.15	75.83
2.6E+01 -	3.8E+01	264	1055	23.12	29.68
3.8E+01 -	5.6E+01	73	1128	6.39	6.57
5.6E+01 -	8.3E+01	2	1130	0.18	0.18

HISTOGRAM FOR COLUMN 23 (spb)

```
1.0E+01 XXXXXX
1.5E+01 XXXXXXXXXXXXXXXXX
2.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXXXXXXXXXXXXX
5.0E+01 XXXXXX
7.0E+01
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	11	0	0	0	0	1130
0.09	0.96			0.00	0.00	

MAXIMUM = 7.00000E+01
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 2.13255E+01
GEOMETRIC DEVIATION = 1.44407E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 25 (ssc)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	251	251	22.76	95.01
5.6E+00 -	8.3E+00	286	537	25.93	72.26
8.3E+00 -	1.2E+01	327	864	29.65	46.33
1.2E+01 -	1.8E+01	150	1014	13.60	16.68
1.8E+01 -	2.6E+01	34	1048	3.08	3.08

HISTOGRAM FOR COLUMN 25 (ssc)

```
5.0E+00 XXXXXXXXXXXXXXXXXXXXX
7.0E+00 XXXXXXXXXXXXXXXXXXXXXXXXX
1.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXXXXXXX
2.0E+01 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
13	42	39	0	0	0	1048
1.18	3.81			0.00	0.00	

MAXIMUM = 2.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 8.32913E+00
GEOMETRIC DEVIATION = 1.48364E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 26 (ssn)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	95	95	8.32	16.37
1.2E+01 -	1.8E+01	53	148	4.64	8.06
1.8E+01 -	2.6E+01	16	164	1.40	3.42
2.6E+01 -	3.8E+01	2	166	0.18	2.01
3.8E+01 -	5.6E+01	7	173	0.61	1.84
5.6E+01 -	8.3E+01	2	175	0.18	1.23
8.3E+01 -	1.2E+02	7	182	0.61	1.05
1.2E+02 -	1.8E+02	1	183	0.09	0.44
1.8E+02 -	2.6E+02	2	185	0.18	0.35
2.6E+02 -	3.8E+02	0	185	0.00	0.18
3.8E+02 -	5.6E+02	1	186	0.09	0.18
5.6E+02 -	8.3E+02	1	187	0.09	0.09

HISTOGRAM FOR COLUMN 26 (ssn)

```
1.0E+01 XXXXXXXX
1.5E+01 XXXXX
2.0E+01 X
3.0E+01
5.0E+01 X
7.0E+01
1.0E+02 X
1.5E+02
2.0E+02
3.0E+02
5.0E+02
7.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
866	89	0	0	0	0	187
75.33	7.79			0.00	0.00	

MAXIMUM = 7.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.55797E+01
GEOMETRIC DEVIATION = 2.10850E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 27 (ssr)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+01 -	1.2E+02	79	79	6.92	98.42
1.2E+02 -	1.8E+02	132	211	11.56	91.51
1.8E+02 -	2.6E+02	221	432	19.35	79.95
2.6E+02 -	3.8E+02	273	705	23.91	60.60
3.8E+02 -	5.6E+02	283	988	24.78	36.69
5.6E+02 -	8.3E+02	86	1074	7.53	11.91
8.3E+02 -	1.2E+03	48	1122	4.20	4.38
1.2E+03 -	1.8E+03	2	1124	0.18	0.18

HISTOGRAM FOR COLUMN 27 (ssr)

```
1.0E+02 XXXXXXX
1.5E+02 XXXXXXXXXXX
2.0E+02 XXXXXXXXXXXXXXXXXX
3.0E+02 XXXXXXXXXXXXXXXXXXXXXX
5.0E+02 XXXXXXXXXXXXXXXXXXXXXXX
7.0E+02 XXXXXXXX
1.0E+03 XXXX
1.5E+03
```

N	L	H	B	T	G	ANALYTICAL VALUES
4	14	0	0	0	0	1124
0.35	1.23			0.00	0.00	

MAXIMUM = 1.50000E+03
MINIMUM = 1.00000E+02
GEOMETRIC MEAN = 3.02828E+02
GEOMETRIC DEVIATION = 1.82355E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 28 (sv)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	1	1	0.09	100.00
1.2E+01 -	1.8E+01	1	2	0.09	99.91
1.8E+01 -	2.6E+01	14	16	1.23	99.82
2.6E+01 -	3.8E+01	143	159	12.52	98.60
3.8E+01 -	5.6E+01	432	591	37.83	86.08
5.6E+01 -	8.3E+01	337	928	29.51	48.25
8.3E+01 -	1.2E+02	200	1128	17.51	18.74
1.2E+02 -	1.8E+02	13	1141	1.14	1.23
1.8E+02 -	2.6E+02	1	1142	0.09	0.09

HISTOGRAM FOR COLUMN 28 (sv)

```
1.0E+01
1.5E+01
2.0E+01 X
3.0E+01 XXXXXXXXXXXX
5.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
7.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.0E+02 XXXXXXXXXXXXXXXX
1.5E+02 X
2.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	1142
0.00	0.00			0.00	0.00	

MAXIMUM = 2.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 5.84847E+01
GEOMETRIC DEVIATION = 1.48256E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 30 (sy)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	12	12	1.05	100.00
1.2E+01 -	1.8E+01	23	35	2.01	98.95
1.8E+01 -	2.6E+01	138	173	12.08	96.94
2.6E+01 -	3.8E+01	244	417	21.37	84.85
3.8E+01 -	5.6E+01	308	725	26.97	63.49
5.6E+01 -	8.3E+01	170	895	14.89	36.51
8.3E+01 -	1.2E+02	152	1047	13.31	21.63
1.2E+02 -	1.8E+02	47	1094	4.12	8.32
1.8E+02 -	2.6E+02	33	1127	2.89	4.20
2.6E+02 -	3.8E+02	5	1132	0.44	1.31
3.8E+02 -	5.6E+02	8	1140	0.70	0.88
5.6E+02 -	8.3E+02	0	1140	0.00	0.18
8.3E+02 -	1.2E+03	1	1141	0.09	0.18
1.2E+03 -	1.8E+03	0	1141	0.00	0.09
1.8E+03 -	2.6E+03	1	1142	0.09	0.09

HISTOGRAM FOR COLUMN 30 (sy)

```
1.0E+01 X
1.5E+01 XX
2.0E+01 XXXXXXXXXXX
3.0E+01 XXXXXXXXXXXXXXXXXXXX
5.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXX
7.0E+01 XXXXXXXXXXXXXX
1.0E+02 XXXXXXXXXXXX
1.5E+02 XXXX
2.0E+02 XXX
3.0E+02
5.0E+02 X
7.0E+02
1.0E+03
1.5E+03
2.0E+03
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	1142
0.00	0.00			0.00	0.00	

MAXIMUM = 2.00000E+03
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 4.98213E+01
GEOMETRIC DEVIATION = 1.98635E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 32 (szr)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	100.00
1.2E+01 -	1.8E+01	0	0	0.00	100.00
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	1	1	0.09	100.00
3.8E+01 -	5.6E+01	0	1	0.00	99.91
5.6E+01 -	8.3E+01	9	10	0.79	99.91
8.3E+01 -	1.2E+02	53	63	4.64	99.12
1.2E+02 -	1.8E+02	94	157	8.23	94.48
1.8E+02 -	2.6E+02	172	329	15.06	86.25
2.6E+02 -	3.8E+02	192	521	16.81	71.19
3.8E+02 -	5.6E+02	214	735	18.74	54.38
5.6E+02 -	8.3E+02	116	851	10.16	35.64
8.3E+02 -	1.2E+03	137	988	12.00	25.48

HISTOGRAM FOR COLUMN 32 (szr)

```
3.0E+01
5.0E+01
7.0E+01 X
1.0E+02 XXXXX
1.5E+02 XXXXXXXX
2.0E+02 XXXXXXXXXXXXXX
3.0E+02 XXXXXXXXXXXXXXXX
5.0E+02 XXXXXXXXXXXXXXXXXX
7.0E+02 XXXXXXXXXX
1.0E+03 XXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	154	988
0.00	0.00			0.00	13.49	

MAXIMUM = 1.00000E+03
MINIMUM = 3.00000E+01
GEOMETRIC MEAN = 3.54178E+02
GEOMETRIC DEVIATION = 1.99714E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 33 (sce)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+01 -	1.2E+02	0	0	0.00	40.40
1.2E+02 -	1.8E+02	0	0	0.00	40.40
1.8E+02 -	2.6E+02	58	58	16.62	40.40
2.6E+02 -	3.8E+02	24	82	6.88	23.78
3.8E+02 -	5.6E+02	27	109	7.74	16.91
5.6E+02 -	8.3E+02	14	123	4.01	9.17
8.3E+02 -	1.2E+03	12	135	3.44	5.16
1.2E+03 -	1.8E+03	5	140	1.43	1.72

HISTOGRAM FOR COLUMN 33 (sce)

```
2.0E+02 XXXXXXXXXXXXXXXX
3.0E+02 XXXXXXX
5.0E+02 XXXXXXXX
7.0E+02 XXXX
1.0E+03 XXX
1.5E+03 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
205	3	0	793	0	1	140
58.74	0.86			0.00	0.29	

MAXIMUM = 1.50000E+03
MINIMUM = 2.00000E+02
GEOMETRIC MEAN = 3.57712E+02
GEOMETRIC DEVIATION = 1.85043E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 1 - <170 Mesh Sediment

FREQUENCY TABLE FOR COLUMN 34 (sth)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+02 -	2.6E+02	4	4	0.35	7.27
2.6E+02 -	3.8E+02	0	4	0.00	6.92
3.8E+02 -	5.6E+02	1	5	0.09	6.92

HISTOGRAM FOR COLUMN 34 (sth)

2.0E+02
3.0E+02
5.0E+02

N	L	H	B	T	G	ANALYTICAL VALUES
892	167	0	0	0	0	83
78.11	14.62			0.00	0.00	

MAXIMUM = 5.00000E+02
MINIMUM = 1.00000E+02
GEOMETRIC MEAN = 1.13436E+02
GEOMETRIC DEVIATION = 1.30044E+00

TITLE
Table 1 - <170 Mesh Sediment

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
sfe%	0	0	0	0	0	0	1142
smg%	0	0	0	0	0	0	1142
sca%	0	0	0	0	0	0	1142
sti%	0	0	0	0	0	10	1132
smn	0	0	0	0	0	1	1141
sag	1118	5	0	0	0	0	19
sb	86	334	0	0	0	0	722
sba	0	0	0	0	0	0	1142
sbe	1	13	0	0	0	0	1128
sco	41	3	0	0	0	0	1098
scr	3	2	0	0	0	0	1137
scu	0	15	0	0	0	0	1127
sla	13	0	0	0	0	1	1128
smo	1027	24	0	0	0	0	91
snb	759	134	0	0	0	0	249
sni	23	3	0	0	0	0	1116
spb	1	11	0	0	0	0	1130
ssc	13	42	39	0	0	0	1048
ssn	866	89	0	0	0	0	187
ssr	4	14	0	0	0	0	1124
sv	0	0	0	0	0	0	1142
sy	0	0	0	0	0	0	1142
szr	0	0	0	0	0	154	988
sce	205	3	0	793	0	1	140
sth	892	167	0	0	0	0	83

TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
sfe%	3.006595	1.51	1142 SAMPLES AND 1142 ANALYTICAL VALUES.
smg%	0.834948	1.54	1142 SAMPLES AND 1142 ANALYTICAL VALUES.
sca%	1.020409	1.54	1142 SAMPLES AND 1142 ANALYTICAL VALUES.
sti%	********	******	10 GREATER THAN VALUES. NO COMPUTATIONS.
smh	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
sag	********	******	1 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.
sb	9.068523	1.39	420 NOT DETECTED, LESS THAN, OR TRACE VALUES. 722 REPORTED VALUES.
sba	556.458405	1.58	1142 SAMPLES AND 1142 ANALYTICAL VALUES.
sbe	2.205913	2.02	14 NOT DETECTED, LESS THAN, OR TRACE VALUES. 1128 REPORTED VALUES.
sco	9.368003	1.70	44 NOT DETECTED, LESS THAN, OR TRACE VALUES. 1098 REPORTED VALUES.
scr	42.927220	2.11	5 NOT DETECTED, LESS THAN, OR TRACE VALUES. 1137 REPORTED VALUES.
scu	10.443998	1.77	15 NOT DETECTED, LESS THAN, OR TRACE VALUES. 1127 REPORTED VALUES.
sla	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
smo	0.749004	3.21	1051 NOT DETECTED, LESS THAN, OR TRACE VALUES. 91 REPORTED VALUES.
snb	7.006377	3.36	893 NOT DETECTED, LESS THAN, OR TRACE VALUES. 249 REPORTED VALUES.
sni	14.117435	1.86	26 NOT DETECTED, LESS THAN, OR TRACE VALUES. 1116 REPORTED VALUES.
spb	21.086571	1.46	12 NOT DETECTED, LESS THAN, OR TRACE VALUES. 1130 REPORTED VALUES.
ssc	7.940146	1.55	55 NOT DETECTED, LESS THAN, OR TRACE VALUES. 1048 REPORTED VALUES.
ssn	2.148437	3.85	955 NOT DETECTED, LESS THAN, OR TRACE VALUES. 187 REPORTED VALUES.
ssr	295.611099	1.87	18 NOT DETECTED, LESS THAN, OR TRACE VALUES. 1124 REPORTED VALUES.
sv	58.484700	1.48	1142 SAMPLES AND 1142 ANALYTICAL VALUES.
sy	49.821321	1.99	1142 SAMPLES AND 1142 ANALYTICAL VALUES.
szr	********	******	154 GREATER THAN VALUES. NO COMPUTATIONS.
sce	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
sth	********	******	78 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.

Table 2.--Histograms, frequency distribution, and basic statistics of analyses for magnetic fraction of stream-sediment samples.

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 3 (sfe%)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E-02 - 1.2E-01	0	0	0.00	100.00
1.2E-01 - 1.8E-01	0	0	0.00	100.00
1.8E-01 - 2.6E-01	0	0	0.00	100.00
2.6E-01 - 3.8E-01	0	0	0.00	100.00
3.8E-01 - 5.6E-01	0	0	0.00	100.00
5.6E-01 - 8.3E-01	0	0	0.00	100.00
8.3E-01 - 1.2E+00	0	0	0.00	100.00
1.2E+00 - 1.8E+00	0	0	0.00	100.00
1.8E+00 - 2.6E+00	0	0	0.00	100.00
2.6E+00 - 3.8E+00	0	0	0.00	100.00
3.8E+00 - 5.6E+00	0	0	0.00	100.00
5.6E+00 - 8.3E+00	0	0	0.00	100.00
8.3E+00 - 1.2E+01	1	1	0.10	100.00
1.2E+01 - 1.8E+01	0	1	0.00	99.90
1.8E+01 - 2.6E+01	17	18	1.67	99.90
2.6E+01 - 3.8E+01	151	169	14.82	98.23
3.8E+01 - 5.6E+01	719	888	70.56	83.42

HISTOGRAM FOR COLUMN 3 (sfe%)

```
1.0E+01
1.5E+01
2.0E+01 XX
3.0E+01 XXXXXXXXXXXXXXX
5.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	20	0	131	888
0.00	0.00			0.00	12.86	

MAXIMUM = 5.00000E+01
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 4.49615E+01
GEOMETRIC DEVIATION = 1.25653E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 4 (smg%)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-02 -	5.6E-02	312	312	30.62	95.39
5.6E-02 -	8.3E-02	167	479	16.39	64.77
8.3E-02 -	1.2E-01	209	688	20.51	48.38
1.2E-01 -	1.8E-01	89	777	8.73	27.87
1.8E-01 -	2.6E-01	79	856	7.75	19.14
2.6E-01 -	3.8E-01	28	884	2.75	11.38
3.8E-01 -	5.6E-01	43	927	4.22	8.64
5.6E-01 -	8.3E-01	23	950	2.26	4.42
8.3E-01 -	1.2E+00	16	966	1.57	2.16
1.2E+00 -	1.8E+00	5	971	0.49	0.59
1.8E+00 -	2.6E+00	1	972	0.10	0.10

HISTOGRAM FOR COLUMN 4 (smg%)

```
5.0E-02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
7.0E-02 XXXXXXXXXXXXXXX
1.0E-01 XXXXXXXXXXXXXXXXXXXX
1.5E-01 XXXXXXXXX
2.0E-01 XXXXXXXX
3.0E-01 XXX
5.0E-01 XXXX
7.0E-01 XX
1.0E+00 XX
1.5E+00
2.0E+00
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	47	0	20	0	0	972
0.00	4.61			0.00	0.00	

MAXIMUM = 2.00000E+00
MINIMUM = 5.00000E-02
GEOMETRIC MEAN = 1.01359E-01
GEOMETRIC DEVIATION = 2.17505E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 5 (sca%)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E-02 -	1.2E-01	318	318	31.21	65.26
1.2E-01 -	1.8E-01	115	433	11.29	34.05
1.8E-01 -	2.6E-01	120	553	11.78	22.77
2.6E-01 -	3.8E-01	42	595	4.12	10.99
3.8E-01 -	5.6E-01	46	641	4.51	6.87
5.6E-01 -	8.3E-01	12	653	1.18	2.36
8.3E-01 -	1.2E+00	11	664	1.08	1.18
1.2E+00 -	1.8E+00	0	664	0.00	0.10
1.8E+00 -	2.6E+00	1	665	0.10	0.10

HISTOGRAM FOR COLUMN 5 (sca%)

```
1.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.5E-01 XXXXXXXXXXX
2.0E-01 XXXXXXXXXXX
3.0E-01 XXXX
5.0E-01 XXXXX
7.0E-01 X
1.0E+00 X
1.5E+00
2.0E+00
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	354	0	20	0	0	665
0.00	34.74			0.00	0.00	

MAXIMUM = 2.00000E+00
MINIMUM = 1.00000E-01
GEOMETRIC MEAN = 1.57400E-01
GEOMETRIC DEVIATION = 1.78356E+00

470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 6 (sti%)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-03 -	5.6E-03	0	0	0.00	100.00
5.6E-03 -	8.3E-03	0	0	0.00	100.00
8.3E-03 -	1.2E-02	0	0	0.00	100.00
1.2E-02 -	1.8E-02	0	0	0.00	100.00
1.8E-02 -	2.6E-02	0	0	0.00	100.00
2.6E-02 -	3.8E-02	0	0	0.00	100.00
3.8E-02 -	5.6E-02	0	0	0.00	100.00
5.6E-02 -	8.3E-02	0	0	0.00	100.00
8.3E-02 -	1.2E-01	0	0	0.00	100.00
1.2E-01 -	1.8E-01	0	0	0.00	100.00
1.8E-01 -	2.6E-01	0	0	0.00	100.00
2.6E-01 -	3.8E-01	1	1	0.10	100.00
3.8E-01 -	5.6E-01	27	28	2.65	99.90
5.6E-01 -	8.3E-01	60	88	5.89	97.25
8.3E-01 -	1.2E+00	136	224	13.35	91.36
1.2E+00 -	1.8E+00	107	331	10.50	78.02
1.8E+00 -	2.6E+00	222	553	21.79	67.52

HISTOGRAM FOR COLUMN 6 (sti%)

```
3.0E-01
5.0E-01 XXX
7.0E-01 XXXXXX
1.0E+00 XXXXXXXXXXXX
1.5E+00 XXXXXXXXXX
2.0E+00 XXXXXXXXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	20	0	466	553
0.00	0.00			0.00	45.73	

MAXIMUM = 2.00000E+00
MINIMUM = 3.00000E-01
GEOMETRIC MEAN = 1.32577E+00
GEOMETRIC DEVIATION = 1.53812E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 7 (smn)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	0	0	0.00	100.00
5.6E+01 -	8.3E+01	0	0	0.00	100.00
8.3E+01 -	1.2E+02	0	0	0.00	100.00
1.2E+02 -	1.8E+02	0	0	0.00	100.00
1.8E+02 -	2.6E+02	0	0	0.00	100.00
2.6E+02 -	3.8E+02	0	0	0.00	100.00
3.8E+02 -	5.6E+02	8	8	0.79	100.00
5.6E+02 -	8.3E+02	104	112	10.21	99.21
8.3E+02 -	1.2E+03	207	319	20.31	89.01
1.2E+03 -	1.8E+03	208	527	20.41	68.69
1.8E+03 -	2.6E+03	265	792	26.01	48.28
2.6E+03 -	3.8E+03	112	904	10.99	22.28
3.8E+03 -	5.6E+03	101	1005	9.91	11.29
5.6E+03 -	8.3E+03	11	1016	1.08	1.37
8.3E+03 -	1.2E+04	2	1018	0.20	0.29

HISTOGRAM FOR COLUMN 7 (smn)

```
5.0E+02 X
7.0E+02 XXXXXXXXXX
1.0E+03 XXXXXXXXXXXXXXXXXXX
1.5E+03 XXXXXXXXXXXXXXXXXXX
2.0E+03 XXXXXXXXXXXXXXXXXXXXXXXXX
3.0E+03 XXXXXXXXXXX
5.0E+03 XXXXXXXXXX
7.0E+03 X
1.0E+04
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	20	0	1	1018
0.00	0.00			0.00	0.10	

MAXIMUM = 1.00000E+04
MINIMUM = 5.00000E+02
GEOMETRIC MEAN = 1.69467E+03
GEOMETRIC DEVIATION = 1.78957E+00

\470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 8 (sag)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E-01 -	1.2E+00	1	1	0.10	0.49
1.2E+00 -	1.8E+00	0	1	0.00	0.39
1.8E+00 -	2.6E+00	1	2	0.10	0.39
2.6E+00 -	3.8E+00	0	2	0.00	0.29
3.8E+00 -	5.6E+00	1	3	0.10	0.29
5.6E+00 -	8.3E+00	0	3	0.00	0.20
8.3E+00 -	1.2E+01	0	3	0.00	0.20
1.2E+01 -	1.8E+01	1	4	0.10	0.20
1.8E+01 -	2.6E+01	0	4	0.00	0.10
2.6E+01 -	3.8E+01	0	4	0.00	0.10
3.8E+01 -	5.6E+01	0	4	0.00	0.10
5.6E+01 -	8.3E+01	1	5	0.10	0.10

HISTOGRAM FOR COLUMN 8 (sag)

1.0E+00
1.5E+00
2.0E+00
3.0E+00
5.0E+00
7.0E+00
1.0E+01
1.5E+01
2.0E+01
3.0E+01
5.0E+01
7.0E+01

N	L	H	B	T	G	ANALYTICAL VALUES
1014	0	0	20	0	0	5
99.51	0.00			0.00	0.00	

MAXIMUM = 7.00000E+01
MINIMUM = 1.00000E+00
GEOMETRIC MEAN = 6.37144E+00
GEOMETRIC DEVIATION = 5.37278E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 11 (sb)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	18	18	1.77	2.26
2.6E+01 -	3.8E+01	0	18	0.00	0.49
3.8E+01 -	5.6E+01	1	19	0.10	0.49
5.6E+01 -	8.3E+01	2	21	0.20	0.39
8.3E+01 -	1.2E+02	1	22	0.10	0.20
1.2E+02 -	1.8E+02	0	22	0.00	0.10
1.8E+02 -	2.6E+02	1	23	0.10	0.10

HISTOGRAM FOR COLUMN 11 (sb)

```
2.0E+01 XX
3.0E+01
5.0E+01
7.0E+01
1.0E+02
1.5E+02
2.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
994	2	0	20	0	0	23
97.55	0.20			0.00	0.00	

MAXIMUM = 2.00000E+02
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 2.75112E+01
GEOMETRIC DEVIATION = 1.93139E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 12 (sba)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+01 -	5.6E+01	179	179	17.57	33.27
5.6E+01 -	8.3E+01	70	249	6.87	15.70
8.3E+01 -	1.2E+02	50	299	4.91	8.83
1.2E+02 -	1.8E+02	27	326	2.65	3.93
1.8E+02 -	2.6E+02	4	330	0.39	1.28
2.6E+02 -	3.8E+02	3	333	0.29	0.88
3.8E+02 -	5.6E+02	0	333	0.00	0.59
5.6E+02 -	8.3E+02	1	334	0.10	0.59
8.3E+02 -	1.2E+03	0	334	0.00	0.49
1.2E+03 -	1.8E+03	1	335	0.10	0.49
1.8E+03 -	2.6E+03	0	335	0.00	0.39
2.6E+03 -	3.8E+03	1	336	0.10	0.39

HISTOGRAM FOR COLUMN 12 (sba)

```
5.0E+01 XXXXXXXXXXXXXXXXX
7.0E+01 XXXXXXX
1.0E+02 XXXXX
1.5E+02 XXX
2.0E+02
3.0E+02
5.0E+02
7.0E+02
1.0E+03
1.5E+03
2.0E+03
3.0E+03
```

N	L	H	B	T	G	ANALYTICAL VALUES
507	173	0	20	0	0	339
49.75	16.98			0.00	0.00	

MAXIMUM = 3.00000E+03
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 6.76238E+01
GEOMETRIC DEVIATION = 1.72610E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 13 (sbe)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+00 -	2.6E+00	31	31	3.04	14.72
2.6E+00 -	3.8E+00	40	71	3.93	11.68
3.8E+00 -	5.6E+00	33	104	3.24	7.75
5.6E+00 -	8.3E+00	28	132	2.75	4.51
8.3E+00 -	1.2E+01	11	143	1.08	1.77
1.2E+01 -	1.8E+01	6	149	0.59	0.69
1.8E+01 -	2.6E+01	1	150	0.10	0.10

HISTOGRAM FOR COLUMN 13 (sbe)

```
2.0E+00 XXX
3.0E+00 XXXX
5.0E+00 XXX
7.0E+00 XXX
1.0E+01 X
1.5E+01 X
2.0E+01
```

N	L	H	B	T	G	ANALYTICAL VALUES
861	8	0	20	0	0	150
84.49	0.79			0.00	0.00	

MAXIMUM = 2.00000E+01
MINIMUM = 2.00000E+00
GEOMETRIC MEAN = 4.26600E+00
GEOMETRIC DEVIATION = 1.73789E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 14 (sbi)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	0	0	0.00	0.39
2.6E+01 -	3.8E+01	1	1	0.10	0.39
3.8E+01 -	5.6E+01	1	2	0.10	0.29
5.6E+01 -	8.3E+01	0	2	0.00	0.20
8.3E+01 -	1.2E+02	1	3	0.10	0.20
1.2E+02 -	1.8E+02	0	3	0.00	0.10
1.8E+02 -	2.6E+02	1	4	0.10	0.10

HISTOGRAM FOR COLUMN 14 (sbi)

3.0E+01
5.0E+01
7.0E+01
1.0E+02
1.5E+02
2.0E+02

N	L	H	B	T	G	ANALYTICAL VALUES
1015	0	0	20	0	0	4
99.61	0.00			0.00	0.00	

MAXIMUM = 2.00000E+02
MINIMUM = 3.00000E+01
GEOMETRIC MEAN = 7.40083E+01
GEOMETRIC DEVIATION = 2.23474E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 16 (sco)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	51	51	5.00	95.68
1.2E+01 -	1.8E+01	51	102	5.00	90.68
1.8E+01 -	2.6E+01	262	364	25.71	85.67
2.6E+01 -	3.8E+01	330	694	32.38	59.96
3.8E+01 -	5.6E+01	220	914	21.59	27.58
5.6E+01 -	8.3E+01	44	958	4.32	5.99
8.3E+01 -	1.2E+02	12	970	1.18	1.67
1.2E+02 -	1.8E+02	4	974	0.39	0.49
1.8E+02 -	2.6E+02	1	975	0.10	0.10

HISTOGRAM FOR COLUMN 16 (sco)

```
1.0E+01 XXXXX
1.5E+01 XXXXX
2.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
5.0E+01 XXXXXXXXXXXXXXXXXXXX
7.0E+01 XXXX
1.0E+02 X
1.5E+02
2.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
39	5	0	20	0	0	975
3.83	0.49			0.00	0.00	

MAXIMUM = 2.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 2.92356E+01
GEOMETRIC DEVIATION = 1.65772E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 17 (scr)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	14	14	1.37	99.21
2.6E+01 -	3.8E+01	37	51	3.63	97.84
3.8E+01 -	5.6E+01	93	144	9.13	94.21
5.6E+01 -	8.3E+01	152	296	14.92	85.08
8.3E+01 -	1.2E+02	205	501	20.12	70.17
1.2E+02 -	1.8E+02	168	669	16.49	50.05
1.8E+02 -	2.6E+02	151	820	14.82	33.56
2.6E+02 -	3.8E+02	78	898	7.65	18.74
3.8E+02 -	5.6E+02	64	962	6.28	11.09
5.6E+02 -	8.3E+02	30	992	2.94	4.81
8.3E+02 -	1.2E+03	17	1009	1.67	1.86
1.2E+03 -	1.8E+03	1	1010	0.10	0.20
1.8E+03 -	2.6E+03	1	1011	0.10	0.10

HISTOGRAM FOR COLUMN 17 (scr)

```
2.0E+01 X
3.0E+01 XXXX
5.0E+01 XXXXXXXXX
7.0E+01 XXXXXXXXXXXXXX
1.0E+02 XXXXXXXXXXXXXXXXXX
1.5E+02 XXXXXXXXXXXXXX
2.0E+02 XXXXXXXXXXXXX
3.0E+02 XXXXXXXX
5.0E+02 XXXXXX
7.0E+02 XXX
1.0E+03 XX
1.5E+03
2.0E+03
```

N	L	H	B	T	G	ANALYTICAL VALUES
8	0	0	20	0	0	1011
0.79	0.00			0.00	0.00	

MAXIMUM = 2.00000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 1.31773E+02
GEOMETRIC DEVIATION = 2.24024E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 18 (scu)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	225	225	22.08	49.36
1.2E+01 -	1.8E+01	111	336	10.89	27.28
1.8E+01 -	2.6E+01	79	415	7.75	16.39
2.6E+01 -	3.8E+01	33	448	3.24	8.64
3.8E+01 -	5.6E+01	28	476	2.75	5.40
5.6E+01 -	8.3E+01	14	490	1.37	2.65
8.3E+01 -	1.2E+02	10	500	0.98	1.28
1.2E+02 -	1.8E+02	2	502	0.20	0.29
1.8E+02 -	2.6E+02	0	502	0.00	0.10
2.6E+02 -	3.8E+02	1	503	0.10	0.10

HISTOGRAM FOR COLUMN 18 (scu)

```
1.0E+01 XXXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXXX
2.0E+01 XXXXXXXX
3.0E+01 XXX
5.0E+01 XXX
7.0E+01 X
1.0E+02 X
1.5E+02
2.0E+02
3.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
98	418	0	20	0	0	503
9.62	41.02			0.00	0.00	

MAXIMUM = 3.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.61200E+01
GEOMETRIC DEVIATION = 1.83851E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 19 (sla)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+01 -	5.6E+01	18	18	1.77	95.88
5.6E+01 -	8.3E+01	18	36	1.77	94.11
8.3E+01 -	1.2E+02	47	83	4.61	92.35
1.2E+02 -	1.8E+02	61	144	5.99	87.73
1.8E+02 -	2.6E+02	112	256	10.99	81.75
2.6E+02 -	3.8E+02	167	423	16.39	70.76
3.8E+02 -	5.6E+02	239	662	23.45	54.37
5.6E+02 -	8.3E+02	125	787	12.27	30.91
8.3E+02 -	1.2E+03	92	879	9.03	18.65
1.2E+03 -	1.8E+03	34	913	3.34	9.62
1.8E+03 -	2.6E+03	52	965	5.10	6.28

HISTOGRAM FOR COLUMN 19 (sla)

```
5.0E+01 XX
7.0E+01 XX
1.0E+02 XXXXX
1.5E+02 XXXXXX
2.0E+02 XXXXXXXXXXX
3.0E+02 XXXXXXXXXXXXXXXX
5.0E+02 XXXXXXXXXXXXXXXXXXXXXXX
7.0E+02 XXXXXXXXXXXX
1.0E+03 XXXXXXXXX
1.5E+03 XXX
2.0E+03 XXXXX
```

N	L	H	S	T	G	ANALYTICAL VALUES
42	0	0	20	0	12	965
4.12	0.00			0.00	1.18	

MAXIMUM = 2.00000E+03
MINIMUM = 5.00000E+01
GEOMETRIC MEAN = 4.07002E+02
GEOMETRIC DEVIATION = 2.30357E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 20 (smo)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	19	19	1.86	18.06
1.2E+01 -	1.8E+01	12	31	1.18	16.19
1.8E+01 -	2.6E+01	24	55	2.36	15.01
2.6E+01 -	3.8E+01	24	79	2.36	12.66
3.8E+01 -	5.6E+01	33	112	3.24	10.30
5.6E+01 -	8.3E+01	49	161	4.81	7.07
8.3E+01 -	1.2E+02	22	183	2.16	2.26
1.2E+02 -	1.8E+02	0	183	0.00	0.10
1.8E+02 -	2.6E+02	1	184	0.10	0.10

HISTOGRAM FOR COLUMN 20 (smo)

```
1.0E+01 XX
1.5E+01 X
2.0E+01 XX
3.0E+01 XX
5.0E+01 XXX
7.0E+01 XXXXX
1.0E+02 XX
1.5E+02
2.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
835	0	0	20	0	0	184
81.94	0.00			0.00	0.00	

MAXIMUM = 2.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 3.89072E+01
GEOMETRIC DEVIATION = 2.09031E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 21 (snb)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+01 -	5.6E+01	173	173	16.98	55.64
5.6E+01 -	8.3E+01	120	293	11.78	38.67
8.3E+01 -	1.2E+02	100	393	9.81	26.89
1.2E+02 -	1.8E+02	68	461	6.67	17.08
1.8E+02 -	2.6E+02	75	536	7.36	10.40
2.6E+02 -	3.8E+02	20	556	1.96	3.04
3.8E+02 -	5.6E+02	8	564	0.79	1.08
5.6E+02 -	8.3E+02	2	566	0.20	0.29

HISTOGRAM FOR COLUMN 21 (snb)

```
5.0E+01 XXXXXXXXXXXXXXXX
7.0E+01 XXXXXXXXXXX
1.0E+02 XXXXXXXXXX
1.5E+02 XXXXXXX
2.0E+02 XXXXXXX
3.0E+02 XX
5.0E+02 X
7.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
279	173	0	20	0	0	567
27.38	16.98			0.00	0.00	

MAXIMUM = 7.00000E+02
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 9.22030E+01
GEOMETRIC DEVIATION = 1.80362E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 22 (sni)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	110	110	10.79	67.22
1.2E+01 -	1.8E+01	111	221	10.89	56.43
1.8E+01 -	2.6E+01	196	417	19.23	45.53
2.6E+01 -	3.8E+01	112	529	10.99	26.30
3.8E+01 -	5.6E+01	68	597	6.67	15.31
5.6E+01 -	8.3E+01	29	626	2.85	8.64
8.3E+01 -	1.2E+02	32	658	3.14	5.79
1.2E+02 -	1.8E+02	15	673	1.47	2.65
1.8E+02 -	2.6E+02	9	682	0.88	1.18
2.6E+02 -	3.8E+02	1	683	0.10	0.29
3.8E+02 -	5.6E+02	2	685	0.20	0.20

HISTOGRAM FOR COLUMN 22 (sni)

```
1.0E+01 XXXXXXXXXX
1.5E+01 XXXXXXXXXX
2.0E+01 XXXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXX
5.0E+01 XXXXXXX
7.0E+01 XXX
1.0E+02 XXX
1.5E+02 X
2.0E+02 X
3.0E+02
5.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
329	5	0	20	0	0	685
32.29	0.49			0.00	0.00	

MAXIMUM = 5.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 2.48042E+01
GEOMETRIC DEVIATION = 2.08828E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 23 (spb)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	79	79	7.75	17.08
2.6E+01 -	3.8E+01	37	116	3.63	9.32
3.8E+01 -	5.6E+01	45	161	4.42	5.69
5.6E+01 -	8.3E+01	8	169	0.79	1.28
8.3E+01 -	1.2E+02	3	172	0.29	0.49
1.2E+02 -	1.8E+02	1	173	0.10	0.20
1.8E+02 -	2.6E+02	1	174	0.10	0.10

HISTOGRAM FOR COLUMN 23 (spb)

```
2.0E+01 XXXXXXXX
3.0E+01 XXXX
5.0E+01 XXXX
7.0E+01 X
1.0E+02
1.5E+02
2.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
730	115	0	20	0	0	174
71.64	11.29			0.00	0.00	

MAXIMUM = 2.00000E+02
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 3.08484E+01
GEOMETRIC DEVIATION = 1.62594E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 25 (ssc)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	286	286	30.23	51.27
1.2E+01 -	1.8E+01	128	414	13.53	21.04
1.8E+01 -	2.6E+01	44	458	4.65	7.51
2.6E+01 -	3.8E+01	21	479	2.22	2.85
3.8E+01 -	5.6E+01	6	485	0.63	0.63

HISTOGRAM FOR COLUMN 25 (ssc)

```
1.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXXXXXX
2.0E+01 XXXXX
3.0E+01 XX
5.0E+01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
285	176	72	21	0	0	485
30.13	18.60			0.00	0.00	

MAXIMUM = 5.00000E+01
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.26791E+01
GEOMETRIC DEVIATION = 1.40407E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 26 (ssn)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	90	90	8.83	31.31
2.6E+01 -	3.8E+01	55	145	5.40	22.47
3.8E+01 -	5.6E+01	23	168	2.26	17.08
5.6E+01 -	8.3E+01	36	204	3.53	14.82
8.3E+01 -	1.2E+02	64	268	6.28	11.29
1.2E+02 -	1.8E+02	36	304	3.53	5.00
1.8E+02 -	2.6E+02	9	313	0.88	1.47
2.6E+02 -	3.8E+02	4	317	0.39	0.59
3.8E+02 -	5.6E+02	1	318	0.10	0.20

HISTOGRAM FOR COLUMN 26 (ssn)

```
2.0E+01 XXXXXXXXX
3.0E+01 XXXXX
5.0E+01 XX
7.0E+01 XXXX
1.0E+02 XXXXXX
1.5E+02 XXXX
2.0E+02 X
3.0E+02
5.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
674	26	0	20	0	0	319
66.14	2.55			0.00	0.00	

MAXIMUM = 5.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 5.09173E+01
GEOMETRIC DEVIATION = 2.23689E+00

\470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 28 (sv)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	1	1	0.10	100.00
5.6E+01 -	8.3E+01	0	1	0.00	99.90
8.3E+01 -	1.2E+02	8	9	0.79	99.90
1.2E+02 -	1.8E+02	25	34	2.45	99.12
1.8E+02 -	2.6E+02	115	149	11.29	96.66
2.6E+02 -	3.8E+02	181	330	17.76	85.38
3.8E+02 -	5.6E+02	444	774	43.57	67.62
5.6E+02 -	8.3E+02	127	901	12.46	24.04
8.3E+02 -	1.2E+03	89	990	8.73	11.58
1.2E+03 -	1.8E+03	22	1012	2.16	2.85
1.8E+03 -	2.6E+03	7	1019	0.69	0.69

HISTOGRAM FOR COLUMN 28 (sv)

```
5.0E+01
7.0E+01
1.0E+02 X
1.5E+02 XX
2.0E+02 XXXXXXXXXX
3.0E+02 XXXXXXXXXXXXXXXXX
5.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
7.0E+02 XXXXXXXXXXX
1.0E+03 XXXXXXXXX
1.5E+03 XX
2.0E+03 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	20	0	0	1019
0.00	0.00			0.00	0.00	

MAXIMUM = 2.00000E+03
MINIMUM = 5.00000E+01
GEOMETRIC MEAN = 4.51127E+02
GEOMETRIC DEVIATION = 1.70905E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 30 (sy)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	50	50	4.91	96.96
2.6E+01 -	3.8E+01	92	142	9.03	92.05
3.8E+01 -	5.6E+01	191	333	18.74	83.02
5.6E+01 -	8.3E+01	211	544	20.71	64.28
8.3E+01 -	1.2E+02	205	749	20.12	43.57
1.2E+02 -	1.8E+02	114	863	11.19	23.45
1.8E+02 -	2.6E+02	92	955	9.03	12.27
2.6E+02 -	3.8E+02	13	968	1.28	3.24
3.8E+02 -	5.6E+02	12	980	1.18	1.96
5.6E+02 -	8.3E+02	1	981	0.10	0.79
8.3E+02 -	1.2E+03	4	985	0.39	0.69

HISTOGRAM FOR COLUMN 30 (sy)

```
2.0E+01 XXXXX
3.0E+01 XXXXXXXXX
5.0E+01 XXXXXXXXXXXXXXXXXX
7.0E+01 XXXXXXXXXXXXXXXXXXXX
1.0E+02 XXXXXXXXXXXXXXXXXXX
1.5E+02 XXXXXXXXXXX
2.0E+02 XXXXXXXXX
3.0E+02 X
5.0E+02 X
7.0E+02
1.0E+03
```

N	L	H	B	T	G	ANALYTICAL VALUES
29	2	0	20	0	1	987
2.85	0.20			0.00	0.10	

MAXIMUM = 1.00000E+03
MINIMUM = 1.50000E+01
GEOMETRIC MEAN = 7.77864E+01
GEOMETRIC DEVIATION = 1.98152E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 31 (szn)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+02 -	5.6E+02	145	145	14.23	73.11
5.6E+02 -	8.3E+02	198	343	19.43	58.88
8.3E+02 -	1.2E+03	248	591	24.34	39.45
1.2E+03 -	1.8E+03	75	666	7.36	15.11
1.8E+03 -	2.6E+03	63	729	6.18	7.75
2.6E+03 -	3.8E+03	9	738	0.88	1.57
3.8E+03 -	5.6E+03	7	745	0.69	0.69

HISTOGRAM FOR COLUMN 31 (szn)

```
5.0E+02 XXXXXXXXXXXXX
7.0E+02 XXXXXXXXXXXXXXXXXX
1.0E+03 XXXXXXXXXXXXXXXXXXXXXXX
1.5E+03 XXXXXXX
2.0E+03 XXXXXX
3.0E+03 X
5.0E+03 x
```

N	L	H	B	T	G	ANALYTICAL VALUES
222	52	0	20	0	0	745
21.79	5.10			0.00	0.00	

MAXIMUM = 5.00000E+03
MINIMUM = 5.00000E+02
GEOMETRIC MEAN = 9.03142E+02
GEOMETRIC DEVIATION = 1.58708E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 32 (szr)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	0	0	0.00	99.90
2.6E+01 -	3.8E+01	0	0	0.00	99.90
3.8E+01 -	5.6E+01	1	1	0.10	99.90
5.6E+01 -	8.3E+01	2	3	0.20	99.80
8.3E+01 -	1.2E+02	9	12	0.88	99.61
1.2E+02 -	1.8E+02	20	32	1.96	98.72
1.8E+02 -	2.6E+02	62	94	6.08	96.76
2.6E+02 -	3.8E+02	85	179	8.34	90.68
3.8E+02 -	5.6E+02	171	350	16.78	82.34
5.6E+02 -	8.3E+02	152	502	14.92	65.55
8.3E+02 -	1.2E+03	162	664	15.90	50.64
1.2E+03 -	1.8E+03	92	756	9.03	34.74
1.8E+03 -	2.6E+03	149	905	14.62	25.71

HISTOGRAM FOR COLUMN 32 (szr)

```
5.0E+01
7.0E+01
1.0E+02 X
1.5E+02 XX
2.0E+02 XXXXXX
3.0E+02 XXXXXXXX
5.0E+02 XXXXXXXXXXXXXXXX
7.0E+02 XXXXXXXXXXXXXX
1.0E+03 XXXXXXXXXXXXXXX
1.5E+03 XXXXXXXXX
2.0E+03 XXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	0	0	20	0	113	905
0.10	0.00			0.00	11.09	

MAXIMUM = 2.00000E+03
MINIMUM = 5.00000E+01
GEOMETRIC MEAN = 7.16849E+02
GEOMETRIC DEVIATION = 2.12646E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 33 (sce)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+02 -	2.6E+02	0	0	0.00	61.54
2.6E+02 -	3.8E+02	0	0	0.00	61.54
3.8E+02 -	5.6E+02	58	58	15.38	61.54
5.6E+02 -	8.3E+02	38	96	10.08	46.15
8.3E+02 -	1.2E+03	49	145	13.00	36.07
1.2E+03 -	1.8E+03	39	184	10.34	23.08
1.8E+03 -	2.6E+03	32	216	8.49	12.73
2.6E+03 -	3.8E+03	13	229	3.45	4.24
3.8E+03 -	5.6E+03	3	232	0.80	0.80

HISTOGRAM FOR COLUMN 33 (sce)

```
5.0E+02 XXXXXXXXXXXXXXX
7.0E+02 XXXXXXXXXX
1.0E+03 XXXXXXXXXXXXX
1.5E+03 XXXXXXXXXX
2.0E+03 XXXXXXXX
3.0E+03 XXX
5.0E+03 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
141	4	0	662	0	0	232
37.40	1.06			0.00	0.00	

MAXIMUM = 5.00000E+03
MINIMUM = 5.00000E+02
GEOMETRIC MEAN = 1.01454E+03
GEOMETRIC DEVIATION = 1.78731E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 2 - Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 34 (sth)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+02 -	5.6E+02	4	4	0.39	5.69
5.6E+02 -	8.3E+02	1	5	0.10	5.30

HISTOGRAM FOR COLUMN 34 (sth)

5.0E+02
7.0E+02

N	L	H	B	T	G	ANALYTICAL VALUES
801	160	0	20	0	0	58
78.61	15.70			0.00	0.00	

MAXIMUM = 7.00000E+02
MINIMUM = 1.00000E+02
GEOMETRIC MEAN = 2.37230E+02
GEOMETRIC DEVIATION = 1.38399E+00

TITLE
Table 2 - Magnetic Fraction

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
sfe%	0	0	0	20	0	131	888
smg%	0	47	0	20	0	0	972
sca%	0	354	0	20	0	0	665
sti%	0	0	0	20	0	466	553
smn	0	0	0	20	0	1	1018
sag	1014	0	0	20	0	0	5
sb	994	2	0	20	0	0	23
sba	507	173	0	20	0	0	339
sbe	861	8	0	20	0	0	150
sbi	1015	0	0	20	0	0	4
sco	39	5	0	20	0	0	975
scr	8	0	0	20	0	0	1011
scu	98	418	0	20	0	0	503
sla	42	0	0	20	0	12	965
smo	835	0	0	20	0	0	184
snb	279	173	0	20	0	0	567
sni	329	5	0	20	0	0	685
spb	730	115	0	20	0	0	174
ssc	285	176	72	21	0	0	485
ssn	674	26	0	20	0	0	319
sv	0	0	0	20	0	0	1019
sy	29	2	0	20	0	1	987
szn	222	52	0	20	0	0	745
szr	1	0	0	20	0	113	905
sce	141	4	0	662	0	0	232
sth	801	160	0	20	0	0	58

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80) DATE 5/11/82

TITLE

ELEMENT.	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
sfe%	********	******	131 GREATER THAN VALUES. NO COMPUTATIONS.
smg%	0.095092	2.26	47 NOT DETECTED, LESS THAN, OR TRACE VALUES. 972 REPORTED VALUES.
sca%	0.104232	2.17	354 NOT DETECTED, LESS THAN, OR TRACE VALUES. 665 REPORTED VALUES.
sti%	********	******	466 GREATER THAN VALUES. NO COMPUTATIONS.
smn	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
sag	6.461027	5.33	1014 NOT DETECTED, LESS THAN, OR TRACE VALUES. 5 REPORTED VALUES.
sb	27.528671	1.93	996 NOT DETECTED, LESS THAN, OR TRACE VALUES. 23 REPORTED VALUES.
sba	********	******	3 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.
sbe	0.338262	4.95	869 NOT DETECTED, LESS THAN, OR TRACE VALUES. 150 REPORTED VALUES.
sbi	0.000147	81.86	1015 NOT DETECTED, LESS THAN, OR TRACE VALUES. 4 REPORTED VALUES.
sco	27.430813	1.79	44 NOT DETECTED, LESS THAN, OR TRACE VALUES. 975 REPORTED VALUES.
scr	129.440329	2.29	8 NOT DETECTED, LESS THAN, OR TRACE VALUES. 1011 REPORTED VALUES.
scu	7.828497	2.52	516 NOT DETECTED, LESS THAN, OR TRACE VALUES. 503 REPORTED VALUES.
sla	********	******	12 GREATER THAN VALUES. NO COMPUTATIONS.
smo	0.863221	12.67	835 NOT DETECTED, LESS THAN, OR TRACE VALUES. 184 REPORTED VALUES.
snb	********	******	1 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.
sni	13.694450	2.98	334 NOT DETECTED, LESS THAN, OR TRACE VALUES. 685 REPORTED VALUES.
spb	6.578873	2.84	845 NOT DETECTED, LESS THAN, OR TRACE VALUES. 174 REPORTED VALUES.
ssc	8.344419	1.72	461 NOT DETECTED, LESS THAN, OR TRACE VALUES. 485 REPORTED VALUES.
ssn	********	******	1 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.
sv	451.126591	1.71	1039 SAMPLES AND 1019 ANALYTICAL VALUES.
sy	********	******	2 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.
szn	641.155795	2.04	274 NOT DETECTED, LESS THAN, OR TRACE VALUES. 745 REPORTED VALUES.
szr	********	******	113 GREATER THAN VALUES. NO COMPUTATIONS.
sce	361.400562	4.31	145 NOT DETECTED, LESS THAN, OR TRACE VALUES. 232 REPORTED VALUES.
sth	********	******	53 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.

Table 3.--Histograms, frequency distribution, and basic statistics of analyses for nonmagnetic fraction of stream-sediment samples.

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 3 (sfe%)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E-02 -	1.2E-01	0	0	0.00	100.00
1.2E-01 -	1.8E-01	0	0	0.00	100.00
1.8E-01 -	2.6E-01	0	0	0.00	100.00
2.6E-01 -	3.8E-01	0	0	0.00	100.00
3.8E-01 -	5.6E-01	0	0	0.00	100.00
5.6E-01 -	8.3E-01	0	0	0.00	100.00
8.3E-01 -	1.2E+00	3	3	0.27	100.00
1.2E+00 -	1.8E+00	2	5	0.18	99.73
1.8E+00 -	2.6E+00	5	10	0.45	99.55
2.6E+00 -	3.8E+00	8	18	0.73	99.09
3.8E+00 -	5.6E+00	63	81	5.72	98.37
5.6E+00 -	8.3E+00	72	153	6.53	92.65
8.3E+00 -	1.2E+01	193	346	17.51	86.12
1.2E+01 -	1.8E+01	153	499	13.88	68.60
1.8E+01 -	2.6E+01	308	807	27.95	54.72
2.6E+01 -	3.8E+01	213	1020	19.33	26.77
3.8E+01 -	5.6E+01	73	1093	6.62	7.44

HISTOGRAM FOR COLUMN 3 (sfe%)

```
1.0E+00
1.5E+00
2.0E+00
3.0E+00 X
5.0E+00 XXXXXX
7.0E+00 XXXXXXX
1.0E+01 XXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXXXXXX
2.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXXXXXXXXX
5.0E+01 XXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	2	0	9	1093
0.00	0.00			0.00	0.82	

MAXIMUM = 5.00000E+01
MINIMUM = 1.00000E+00
GEOMETRIC MEAN = 1.62296E+01
GEOMETRIC DEVIATION = 1.90026E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 4 (smg%)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-02 -	5.6E-02	41	41	3.72	99.82
5.6E-02 -	8.3E-02	37	78	3.36	96.10
8.3E-02 -	1.2E-01	122	200	11.07	92.74
1.2E-01 -	1.8E-01	90	290	8.17	81.67
1.8E-01 -	2.6E-01	163	453	14.79	73.50
2.6E-01 -	3.8E-01	79	532	7.17	58.71
3.8E-01 -	5.6E-01	128	660	11.62	51.54
5.6E-01 -	8.3E-01	114	774	10.34	39.93
8.3E-01 -	1.2E+00	105	879	9.53	29.58
1.2E+00 -	1.8E+00	77	956	6.99	20.05
1.8E+00 -	2.6E+00	81	1037	7.35	13.07
2.6E+00 -	3.8E+00	34	1071	3.09	5.72
3.8E+00 -	5.6E+00	25	1096	2.27	2.63
5.6E+00 -	8.3E+00	3	1099	0.27	0.36
8.3E+00 -	1.2E+01	1	1100	0.09	0.09

HISTOGRAM FOR COLUMN 4 (smg%)

```
5.0E-02 XXXX
7.0E-02 XXX
1.0E-01 XXXXXXXXXX
1.5E-01 XXXXXXX
2.0E-01 XXXXXXXXXXXXXX
3.0E-01 XXXXXX
5.0E-01 XXXXXXXXXX
7.0E-01 XXXXXXXXX
1.0E+00 XXXXXXXXX
1.5E+00 XXXXXX
2.0E+00 XXXXXX
3.0E+00 XXX
5.0E+00 XX
7.0E+00
1.0E+01
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	2	0	2	0	0	1100
0.00	0.18			0.00	0.00	

MAXIMUM = 1.00000E+01
MINIMUM = 5.00000E-02
GEOMETRIC MEAN = 4.07823E-01
GEOMETRIC DEVIATION = 3.21920E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 5 (sca%)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E-02 -	1.2E-01	103	103	9.35	95.83
1.2E-01 -	1.8E-01	66	169	5.99	86.48
1.8E-01 -	2.6E-01	98	267	8.89	80.49
2.6E-01 -	3.8E-01	68	335	6.17	71.60
3.8E-01 -	5.6E-01	107	442	9.71	65.43
5.6E-01 -	8.3E-01	96	538	8.71	55.72
8.3E-01 -	1.2E+00	159	697	14.43	47.01
1.2E+00 -	1.8E+00	112	809	10.16	32.58
1.8E+00 -	2.6E+00	130	939	11.80	22.41
2.6E+00 -	3.8E+00	45	984	4.08	10.62
3.8E+00 -	5.6E+00	60	1044	5.44	6.53
5.6E+00 -	8.3E+00	10	1054	0.91	1.09
8.3E+00 -	1.2E+01	1	1055	0.09	0.18

HISTOGRAM FOR COLUMN 5 (sca%)

```
1.0E-01 XXXXXXXXX
1.5E-01 XXXXXX
2.0E-01 XXXXXXXXX
3.0E-01 XXXXXX
5.0E-01 XXXXXXXXXX
7.0E-01 XXXXXXXXX
1.0E+00 XXXXXXXXXXXXX
1.5E+00 XXXXXXXXXX
2.0E+00 XXXXXXXXXXX
3.0E+00 XXXX
5.0E+00 XXXXX
7.0E+00 X
1.0E+01
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	46	0	2	0	0	1056
0.00	4.17			0.00	0.00	

MAXIMUM = 1.00000E+01
MINIMUM = 5.00000E-02
GEOMETRIC MEAN = 6.78181E-01
GEOMETRIC DEVIATION = 3.14248E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 6 (sti%)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-03 -	5.6E-03	0	0	0.00	100.00
5.6E-03 -	8.3E-03	0	0	0.00	100.00
8.3E-03 -	1.2E-02	0	0	0.00	100.00
1.2E-02 -	1.8E-02	0	0	0.00	100.00
1.8E-02 -	2.6E-02	0	0	0.00	100.00
2.6E-02 -	3.8E-02	0	0	0.00	100.00
3.8E-02 -	5.6E-02	0	0	0.00	100.00
5.6E-02 -	8.3E-02	0	0	0.00	100.00
8.3E-02 -	1.2E-01	0	0	0.00	100.00
1.2E-01 -	1.8E-01	0	0	0.00	100.00
1.8E-01 -	2.6E-01	3	3	0.27	100.00
2.6E-01 -	3.8E-01	3	6	0.27	99.73
3.8E-01 -	5.6E-01	15	21	1.36	99.46
5.6E-01 -	8.3E-01	19	40	1.72	98.09
8.3E-01 -	1.2E+00	40	80	3.63	96.37
1.2E+00 -	1.8E+00	27	107	2.45	92.74
1.8E+00 -	2.6E+00	128	235	11.62	90.29

HISTOGRAM FOR COLUMN 6 (sti%)

```
2.0E-01
3.0E-01
5.0E-01 X
7.0E-01 XX
1.0E+00 XXXX
1.5E+00 XX
2.0E+00 XXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	2	0	867	235
0.00	0.00			0.00	78.68	

MAXIMUM = 2.00000E+00
MINIMUM = 2.00000E-01
GEOMETRIC MEAN = 1.37044E+00
GEOMETRIC DEVIATION = 1.68940E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 7 (smn)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	0	0	0.00	100.00
5.6E+01 -	8.3E+01	0	0	0.00	100.00
8.3E+01 -	1.2E+02	0	0	0.00	100.00
1.2E+02 -	1.8E+02	0	0	0.00	100.00
1.8E+02 -	2.6E+02	0	0	0.00	100.00
2.6E+02 -	3.8E+02	4	4	0.36	100.00
3.8E+02 -	5.6E+02	8	12	0.73	99.64
5.6E+02 -	8.3E+02	11	23	1.00	98.91
8.3E+02 -	1.2E+03	71	94	6.44	97.91
1.2E+03 -	1.8E+03	85	179	7.71	91.47
1.8E+03 -	2.6E+03	212	391	19.24	83.76
2.6E+03 -	3.8E+03	220	611	19.96	64.52
3.8E+03 -	5.6E+03	284	895	25.77	44.56
5.6E+03 -	8.3E+03	95	990	8.62	18.78
8.3E+03 -	1.2E+04	57	1047	5.17	10.16

HISTOGRAM FOR COLUMN 7 (smn)

```
3.0E+02
5.0E+02 X
7.0E+02 X
1.0E+03 XXXXXX
1.5E+03 XXXXXXXX
2.0E+03 XXXXXXXXXXXXXXXXXX
3.0E+03 XXXXXXXXXXXXXXXXXXX
5.0E+03 XXXXXXXXXXXXXXXXXXXXXXXXX
7.0E+03 XXXXXXXXX
1.0E+04 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	2	0	55	1047
0.00	0.00			0.00	4.99	

MAXIMUM = 1.00000E+04
MINIMUM = 3.00000E+02
GEOMETRIC MEAN = 3.09241E+03
GEOMETRIC DEVIATION = 1.93469E+00

4470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 8 (sag)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E-01 -	1.2E+00	1	1	0.09	0.36
1.2E+00 -	1.8E+00	0	1	0.00	0.27
1.8E+00 -	2.6E+00	2	3	0.18	0.27
2.6E+00 -	3.8E+00	0	3	0.00	0.09
3.8E+00 -	5.6E+00	0	3	0.00	0.09
5.6E+00 -	8.3E+00	0	3	0.00	0.09
8.3E+00 -	1.2E+01	1	4	0.09	0.09

HISTOGRAM FOR COLUMN 8 (sag)

1.0E+00
1.5E+00
2.0E+00
3.0E+00
5.0E+00
7.0E+00
1.0E+01

N	L	H	B	T	G	ANALYTICAL VALUES
1098	0	0	2	0	0	4
99.64	0.00			0.00	0.00	

MAXIMUM = 1.000000E+01
MINIMUM = 1.000000E+00
GEOMETRIC MEAN = 2.51487E+00
GEOMETRIC DEVIATION = 2.65523E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 11 (sb)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	86	86	7.80	12.89
2.6E+01 -	3.8E+01	30	116	2.72	5.08
3.8E+01 -	5.6E+01	14	130	1.27	2.36
5.6E+01 -	8.3E+01	7	137	0.64	1.09
8.3E+01 -	1.2E+02	5	142	0.45	0.45

HISTOGRAM FOR COLUMN 11 (sb)

```
       2.0E+01 XXXXXXXX
       3.0E+01 XXX
       5.0E+01 X
       7.0E+01 X
       1.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
397	563	0	2	0	0	142
36.03	51.09			0.00	0.00	

MAXIMUM = 1.00000E+02
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 2.68471E+01
GEOMETRIC DEVIATION = 1.56537E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 12 (sba)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+01 -	5.6E+01	106	106	9.62	87.66
5.6E+01 -	8.3E+01	104	210	9.44	78.04
8.3E+01 -	1.2E+02	153	363	13.88	68.60
1.2E+02 -	1.8E+02	148	511	13.43	54.72
1.8E+02 -	2.6E+02	250	761	22.69	41.29
2.6E+02 -	3.8E+02	124	885	11.25	18.60
3.8E+02 -	5.6E+02	59	944	5.35	7.35
5.6E+02 -	8.3E+02	17	961	1.54	2.00
8.3E+02 -	1.2E+03	4	965	0.36	0.45
1.2E+03 -	1.8E+03	0	965	0.00	0.09
1.8E+03 -	2.6E+03	0	965	0.00	0.09
2.6E+03 -	3.8E+03	0	965	0.00	0.09
3.8E+03 -	5.6E+03	1	966	0.09	0.09

HISTOGRAM FOR COLUMN 12 (sba)

```
5.0E+01 XXXXXXXXXX
7.0E+01 XXXXXXXXX
1.0E+02 XXXXXXXXXXXXX
1.5E+02 XXXXXXXXXXXX
2.0E+02 XXXXXXXXXXXXXXXXXXXXXX
3.0E+02 XXXXXXXXXX
5.0E+02 XXXXX
7.0E+02 XX
1.0E+03
1.5E+03
2.0E+03
3.0E+03
5.0E+03
```

N	L	H	B	T	G	ANALYTICAL VALUES
112	24	0	2	0	0	966
10.16	2.18			0.00	0.00	

MAXIMUM = 5.00000E+03
MINIMUM = 5.00000E+01
GEOMETRIC MEAN = 1.51316E+02
GEOMETRIC DEVIATION = 1.97395E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 13 (sbe)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+00 -	2.6E+00	79	79	7.17	23.50
2.6E+00 -	3.8E+00	58	137	5.26	16.33
3.8E+00 -	5.6E+00	57	194	5.17	11.07
5.6E+00 -	8.3E+00	31	225	2.81	5.90
8.3E+00 -	1.2E+01	16	241	1.45	3.09
1.2E+01 -	1.8E+01	14	255	1.27	1.63
1.8E+01 -	2.6E+01	1	256	0.09	0.36
2.6E+01 -	3.8E+01	1	257	0.09	0.27
3.8E+01 -	5.6E+01	2	259	0.18	0.18

HISTOGRAM FOR COLUMN 13 (sbe)

```
2.0E+00 XXXXXXX
3.0E+00 XXXXX
5.0E+00 XXXXX
7.0E+00 XXX
1.0E+01 X
1.5E+01 X
2.0E+01
3.0E+01
5.0E+01
```

N	L	H	B	T	G	ANALYTICAL VALUES
818	25	0	2	0	0	259
74.23	2.27			0.00	0.00	

MAXIMUM = 5.00000E+01
MINIMUM = 2.00000E+00
GEOMETRIC MEAN = 4.00717E+00
GEOMETRIC DEVIATION = 1.93603E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 14 (sbi)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	5	5	0.45	3.09
2.6E+01 -	3.8E+01	1	6	0.09	2.63
3.8E+01 -	5.6E+01	3	9	0.27	2.54
5.6E+01 -	8.3E+01	8	17	0.73	2.27
8.3E+01 -	1.2E+02	4	21	0.36	1.54
1.2E+02 -	1.8E+02	2	23	0.18	1.18
1.8E+02 -	2.6E+02	7	30	0.64	1.00
2.6E+02 -	3.8E+02	1	31	0.09	0.36
3.8E+02 -	5.6E+02	2	33	0.18	0.27
5.6E+02 -	8.3E+02	0	33	0.00	0.09
8.3E+02 -	1.2E+03	1	34	0.09	0.09

HISTOGRAM FOR COLUMN 14 (sbi)

```
2.0E+01
3.0E+01
5.0E+01
7.0E+01 X
1.0E+02
1.5E+02
2.0E+02 X
3.0E+02
5.0E+02
7.0E+02
1.0E+03
```

N	L	H	B	T	G	ANALYTICAL VALUES
1067	1	0	2	0	0	34
96.82	0.09			0.00	0.00	

MAXIMUM = 1.00000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 9.45623E+01
GEOMETRIC DEVIATION = 2.68266E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 16 (sco)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	59	59	5.35	65.25
1.2E+01 -	1.8E+01	134	193	12.16	59.89
1.8E+01 -	2.6E+01	269	462	24.41	47.73
2.6E+01 -	3.8E+01	144	606	13.07	23.32
3.8E+01 -	5.6E+01	100	706	9.07	10.25
5.6E+01 -	8.3E+01	6	712	0.54	1.18
8.3E+01 -	1.2E+02	4	716	0.36	0.64
1.2E+02 -	1.8E+02	1	717	0.09	0.27
1.8E+02 -	2.6E+02	1	718	0.09	0.18
2.6E+02 -	3.8E+02	0	718	0.00	0.09
3.8E+02 -	5.6E+02	1	719	0.09	0.09

HISTOGRAM FOR COLUMN 16 (sco)

```
1.0E+01 XXXXX
1.5E+01 XXXXXXXXXXX
2.0E+01 XXXXXXXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXXXX
5.0E+01 XXXXXXXXX
7.0E+01 X
1.0E+02
1.5E+02
2.0E+02
3.0E+02
5.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
377	6	0	2	0	0	719
34.21	0.54			0.00	0.00	

MAXIMUM = 5.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 2.27320E+01
GEOMETRIC DEVIATION = 1.63784E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 17 (scr)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	102	102	9.26	84.66
2.6E+01 -	3.8E+01	83	185	7.53	75.41
3.8E+01 -	5.6E+01	103	288	9.35	67.88
5.6E+01 -	8.3E+01	116	404	10.53	58.53
8.3E+01 -	1.2E+02	89	493	8.08	48.00
1.2E+02 -	1.8E+02	96	589	8.71	39.93
1.8E+02 -	2.6E+02	116	705	10.53	31.22
2.6E+02 -	3.8E+02	115	820	10.44	20.69
3.8E+02 -	5.6E+02	74	894	6.72	10.25
5.6E+02 -	8.3E+02	22	916	2.00	3.54
8.3E+02 -	1.2E+03	14	930	1.27	1.54
1.2E+03 -	1.8E+03	3	933	0.27	0.27

HISTOGRAM FOR COLUMN 17 (scr)

```
2.0E+01 XXXXXXXXX
3.0E+01 XXXXXXXX
5.0E+01 XXXXXXXXX
7.0E+01 XXXXXXXXXXX
1.0E+02 XXXXXXXX
1.5E+02 XXXXXXXXX
2.0E+02 XXXXXXXXXXX
3.0E+02 XXXXXXXXXX
5.0E+02 XXXXXXX
7.0E+02 XX
1.0E+03 X
1.5E+03
```

N	L	H	B	T	G	ANALYTICAL VALUES
100	69	0	2	0	0	933
9.07	6.26			0.00	0.00	

MAXIMUM = 1.50000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 1.07916E+02
GEOMETRIC DEVIATION = 2.85380E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 18 (scu)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	241	241	21.87	45.74
1.2E+01 -	1.8E+01	116	357	10.53	23.87
1.8E+01 -	2.6E+01	81	438	7.35	13.34
2.6E+01 -	3.8E+01	29	467	2.63	5.99
3.8E+01 -	5.6E+01	24	491	2.18	3.36
5.6E+01 -	8.3E+01	4	495	0.36	1.18
8.3E+01 -	1.2E+02	3	498	0.27	0.82
1.2E+02 -	1.8E+02	2	500	0.18	0.54
1.8E+02 -	2.6E+02	2	502	0.18	0.36
2.6E+02 -	3.8E+02	1	503	0.09	0.18
3.8E+02 -	5.6E+02	1	504	0.09	0.09

HISTOGRAM FOR COLUMN 18 (scu)

```
1.0E+01 XXXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXXX
2.0E+01 XXXXXXX
3.0E+01 XXX
5.0E+01 XX
7.0E+01
1.0E+02
1.5E+02
2.0E+02
3.0E+02
5.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
186	412	0	2	0	0	504
16.88	37.39			0.00	0.00	

MAXIMUM = 5.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.50813E+01
GEOMETRIC DEVIATION = 1.75959E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 19 (sla)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+01 -	5.6E+01	1	1	0.09	99.82
5.6E+01 -	8.3E+01	2	3	0.18	99.73
8.3E+01 -	1.2E+02	2	5	0.18	99.55
1.2E+02 -	1.8E+02	2	7	0.18	99.36
1.8E+02 -	2.6E+02	3	10	0.27	99.18
2.6E+02 -	3.8E+02	8	18	0.73	98.91
3.8E+02 -	5.6E+02	15	33	1.36	98.19
5.6E+02 -	8.3E+02	23	56	2.09	96.82
8.3E+02 -	1.2E+03	66	122	5.99	94.74
1.2E+03 -	1.8E+03	56	178	5.08	88.75
1.8E+03 -	2.6E+03	200	378	18.15	83.67

HISTOGRAM FOR COLUMN 19 (sla)

```
5.0E+01
7.0E+01
1.0E+02
1.5E+02
2.0E+02
3.0E+02 X
5.0E+02 X
7.0E+02 XX
1.0E+03 XXXXXX
1.5E+03 XXXXX
2.0E+03 XXXXXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	0	0	2	0	722	378
0.18	0.00			0.00	65.52	

MAXIMUM = 2.00000E+03
MINIMUM = 5.00000E+01
GEOMETRIC MEAN = 1.34331E+03
GEOMETRIC DEVIATION = 1.85043E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 20 (smo)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	66	66	5.99	14.25
1.2E+01 -	1.8E+01	45	111	4.08	8.26
1.8E+01 -	2.6E+01	39	150	3.54	4.17
2.6E+01 -	3.8E+01	3	153	0.27	0.64
3.8E+01 -	5.6E+01	4	157	0.36	0.36

HISTOGRAM FOR COLUMN 20 (smo)

```
1.0E+01 XXXXXX
1.5E+01 XXXX
2.0E+01 XXXX
3.0E+01
5.0E+01
```

N	L	H	B	T	G	ANALYTICAL VALUES
937	8	0	2	0	0	157
85.03	0.73			0.00	0.00	

MAXIMUM = 5.00000E+01
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.41963E+01
GEOMETRIC DEVIATION = 1.44125E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 21 (snb)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+01 -	5.6E+01	149	149	13.52	86.39
5.6E+01 -	8.3E+01	197	346	17.88	72.87
8.3E+01 -	1.2E+02	274	620	24.86	54.99
1.2E+02 -	1.8E+02	161	781	14.61	30.13
1.8E+02 -	2.6E+02	84	865	7.62	15.52
2.6E+02 -	3.8E+02	42	907	3.81	7.89
3.8E+02 -	5.6E+02	38	945	3.45	4.08
5.6E+02 -	8.3E+02	7	952	0.64	0.64

HISTOGRAM FOR COLUMN 21 (snb)

```
5.0E+01 XXXXXXXXXXXXX
7.0E+01 XXXXXXXXXXXXXXXXX
1.0E+02 XXXXXXXXXXXXXXXXXXXXXXXX
1.5E+02 XXXXXXXXXXXXXX
2.0E+02 XXXXXXXX
3.0E+02 XXXX
5.0E+02 XXX
7.0E+02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
77	73	0	2	0	0	952
6.99	6.62			0.00	0.00	

MAXIMUM = 7.000000E+02
MINIMUM = 5.000000E+01
GEOMETRIC MEAN = 1.077306E+02
GEOMETRIC DEVIATION = 1.808486E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 22 (sni)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	48	48	4.36	42.65
1.2E+01 -	1.8E+01	66	114	5.99	38.29
1.8E+01 -	2.6E+01	138	252	12.52	32.30
2.6E+01 -	3.8E+01	86	338	7.80	19.78
3.8E+01 -	5.6E+01	54	392	4.90	11.98
5.6E+01 -	8.3E+01	32	424	2.90	7.08
8.3E+01 -	1.2E+02	24	448	2.18	4.17
1.2E+02 -	1.8E+02	15	463	1.36	2.00
1.8E+02 -	2.6E+02	6	469	0.54	0.64
2.6E+02 -	3.8E+02	0	469	0.00	0.09
3.8E+02 -	5.6E+02	1	470	0.09	0.09

HISTOGRAM FOR COLUMN 22 (sni)

```
1.0E+01 XXXX
1.5E+01 XXXXXX
2.0E+01 XXXXXXXXXXXX
3.0E+01 XXXXXXXX
5.0E+01 XXXXX
7.0E+01 XXX
1.0E+02 XX
1.5E+02 X
2.0E+02 X
3.0E+02
5.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
630	2	0	2	0	0	470
57.17	0.18			0.00	0.00	

MAXIMUM = 5.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 2.79954E+01
GEOMETRIC DEVIATION = 2.07621E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 23 (spb)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	258	258	23.41	52.27
2.6E+01 -	3.8E+01	162	420	14.70	28.86
3.8E+01 -	5.6E+01	90	510	8.17	14.16
5.6E+01 -	8.3E+01	42	552	3.81	5.99
8.3E+01 -	1.2E+02	17	569	1.54	2.18
1.2E+02 -	1.8E+02	3	572	0.27	0.64
1.8E+02 -	2.6E+02	2	574	0.18	0.36
2.6E+02 -	3.8E+02	2	576	0.18	0.18

HISTOGRAM FOR COLUMN 23 (spb)

```
2.0E+01 XXXXXXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXXXXXX
5.0E+01 XXXXXXXX
7.0E+01 XXXX
1.0E+02 XX
1.5E+02
2.0E+02
3.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
276	250	0	2	0	0	576
25.05	22.69			0.00	0.00	

MAXIMUM = 3.00000E+02
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 3.05596E+01
GEOMETRIC DEVIATION = 1.05536E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 25 (ssc)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	37	37	4.86	94.09
1.2E+01 -	1.8E+01	109	146	14.32	89.22
1.8E+01 -	2.6E+01	306	452	40.21	74.90
2.6E+01 -	3.8E+01	178	630	23.39	34.69
3.8E+01 -	5.6E+01	59	689	7.75	11.30
5.6E+01 -	8.3E+01	19	708	2.50	3.55
8.3E+01 -	1.2E+02	8	716	1.05	1.05

HISTOGRAM FOR COLUMN 25 (ssc)

```
1.0E+01 XXXXX
1.5E+01 XXXXXXXXXXXXX
2.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXXXXXXXXXXXXX
5.0E+01 XXXXXXXX
7.0E+01 XX
1.0E+02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
34	11	340	3	0	0	716
4.47	1.45			0.00	0.00	

MAXIMUM = 1.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 2.31883E+01
GEOMETRIC DEVIATION = 1.55774E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 26 (ssn)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	143	143	12.98	69.87
2.6E+01 -	3.8E+01	136	279	12.34	56.90
3.8E+01 -	5.6E+01	255	534	23.14	44.56
5.6E+01 -	8.3E+01	144	678	13.07	21.42
8.3E+01 -	1.2E+02	34	712	3.09	8.35
1.2E+02 -	1.8E+02	13	725	1.18	5.26
1.8E+02 -	2.6E+02	19	744	1.72	4.08
2.6E+02 -	3.8E+02	5	749	0.45	2.36
3.8E+02 -	5.6E+02	8	757	0.73	1.91
5.6E+02 -	8.3E+02	3	760	0.27	1.18
8.3E+02 -	1.2E+03	5	765	0.45	0.91
1.2E+03 -	1.8E+03	3	768	0.27	0.45
1.8E+03 -	2.6E+03	2	770	0.18	0.18

HISTOGRAM FOR COLUMN 26 (ssn)

```
2.0E+01 XXXXXXXXXXXX
3.0E+01 XXXXXXXXXXX
5.0E+01 XXXXXXXXXXXXXXXXXXXXXX
7.0E+01 XXXXXXXXXXXX
1.0E+02 XXX
1.5E+02 X
2.0E+02 XX
3.0E+02
5.0E+02 X
7.0E+02
1.0E+03
1.5E+03
2.0E+03
```

N	L	H	B	T	G	ANALYTICAL VALUES
294	38	0	2	0	0	770
26.68	3.45			0.00	0.00	

MAXIMUM = 2.00000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 4.87177E+01
GEOMETRIC DEVIATION = 2.10501E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 27 (ssr)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+02 -	2.6E+02	61	61	5.54	10.63
2.6E+02 -	3.8E+02	35	96	3.18	5.09
3.8E+02 -	5.6E+02	19	115	1.73	1.91
5.6E+02 -	8.3E+02	1	116	0.09	0.18

HISTOGRAM FOR COLUMN 27 (ssr)

```
2.0E+02 XXXXXX
3.0E+02 XXX
5.0E+02 XX
7.0E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
936	48	1	2	0	0	117
85.01	4.36			0.00	0.00	

MAXIMUM = 7.00000E+02
MINIMUM = 1.00000E+02
GEOMETRIC MEAN = 2.63273E+02
GEOMETRIC DEVIATION = 1.43132E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 28 (sv)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ.	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	16	16	1.45	99.00
2.6E+01 -	3.8E+01	18	34	1.63	97.55
3.8E+01 -	5.6E+01	70	104	6.35	95.92
5.6E+01 -	8.3E+01	79	183	7.17	89.56
8.3E+01 -	1.2E+02	205	388	18.60	82.40
1.2E+02 -	1.8E+02	202	590	18.33	63.79
1.8E+02 -	2.6E+02	344	934	31.22	45.46
2.6E+02 -	3.8E+02	104	1038	9.44	14.25
3.8E+02 -	5.6E+02	40	1078	3.63	4.81
5.6E+02 -	8.3E+02	7	1085	0.64	1.18
8.3E+02 -	1.2E+03	5	1090	0.45	0.54
1.2E+03 -	1.8E+03	1	1091	0.09	0.09

HISTOGRAM FOR COLUMN 28 (sv)

```
2.0E+01 X
3.0E+01 XX
5.0E+01 XXXXXX
7.0E+01 XXXXXXX
1.0E+02 XXXXXXXXXXXXXXXXXX
1.5E+02 XXXXXXXXXXXXXXXXX
2.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3.0E+02 XXXXXXXXX
5.0E+02 XXXX
7.0E+02 X
1.0E+03
1.5E+03
```

N	L	H	B	T	G	ANALYTICAL VALUES
3	8	0	2	0	0	1091
0.27	0.73			0.00	0.00	

MAXIMUM = 1.50000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 1.44645E+02
GEOMETRIC DEVIATION = 1.90204E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 29 (sw)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+01 -	1.2E+02	3	3	0.27	1.00
1.2E+02 -	1.8E+02	4	7	0.36	0.73
1.8E+02 -	2.6E+02	2	9	0.18	0.36
2.6E+02 -	3.8E+02	0	9	0.00	0.18
3.8E+02 -	5.6E+02	1	10	0.09	0.18
5.6E+02 -	8.3E+02	0	10	0.00	0.09
8.3E+02 -	1.2E+03	0	10	0.00	0.09
1.2E+03 -	1.8E+03	0	10	0.00	0.09
1.8E+03 -	2.6E+03	1	11	0.09	0.09

HISTOGRAM FOR COLUMN 29 (sw)

1.0E+02
1.5E+02
2.0E+02
3.0E+02
5.0E+02
7.0E+02
1.0E+03
1.5E+03
2.0E+03

N	L	H	B	T	G	ANALYTICAL VALUES
1089	2	0	2	0	0	11
98.82	0.18			0.00	0.00	

MAXIMUM = 2.000000E+03
MINIMUM = 1.000000E+02
GEOMETRIC MEAN = 1.99795E+02
GEOMETRIC DEVIATION = 2.43416E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 30 (sy)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	0	0	0.00	99.91
2.6E+01 -	3.8E+01	2	2	0.18	99.91
3.8E+01 -	5.6E+01	4	6	0.36	99.73
5.6E+01 -	8.3E+01	10	16	0.91	99.36
8.3E+01 -	1.2E+02	29	45	2.63	98.46
1.2E+02 -	1.8E+02	36	81	3.27	95.83
1.8E+02 -	2.6E+02	115	196	10.44	92.56
2.6E+02 -	3.8E+02	128	324	11.62	82.12
3.8E+02 -	5.6E+02	234	558	21.23	70.51
5.6E+02 -	8.3E+02	119	677	10.80	49.27
8.3E+02 -	1.2E+03	143	820	12.98	38.48
1.2E+03 -	1.8E+03	74	894	6.72	25.50
1.8E+03 -	2.6E+03	95	989	8.62	18.78
2.6E+03 -	3.8E+03	37	1026	3.36	10.16
3.8E+03 -	5.6E+03	37	1063	3.36	6.81

HISTOGRAM FOR COLUMN 30 (sy)

```
3.0E+01
5.0E+01
7.0E+01 x
1.0E+02 xxx
1.5E+02 xxx
2.0E+02 xxxxxxxxxx
3.0E+02 xxxxxxxxxxx
5.0E+02 xxxxxxxxxxxxxxxxxxx
7.0E+02 xxxxxxxxxx
1.0E+03 xxxxxxxxxxx
1.5E+03 xxxxxx
2.0E+03 xxxxxxxxx
3.0E+03 xxx
5.0E+03 xxx
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	0	0	2	0	38	1063
0.09	0.00			0.00	3.45	

MAXIMUM = 5.00000E+03
MINIMUM = 3.00000E+01
GEOMETRIC MEAN = 6.08276E+02
GEOMETRIC DEVIATION = 2.56917E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 31 (szn)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+02 -	5.6E+02	3	3	0.27	0.91
5.6E+02 -	8.3E+02	3	6	0.27	0.64
8.3E+02 -	1.2E+03	4	10	0.36	0.36

HISTOGRAM FOR COLUMN 31 (szn)

5.0E+02
7.0E+02
1.0E+03

N	L	H	B	T	G	ANALYTICAL VALUES
1080	12	0	2	0	0	10
98.00	1.09			0.00	0.00	

MAXIMUM = 1.00000E+03
MINIMUM = 5.00000E+02
GEOMETRIC MEAN = 7.29828E+02
GEOMETRIC DEVIATION = 1.35511E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 32 (szr)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	0	0	0.00	100.00
5.6E+01 -	8.3E+01	0	0	0.00	100.00
8.3E+01 -	1.2E+02	1	1	0.09	100.00
1.2E+02 -	1.8E+02	1	2	0.09	99.91
1.8E+02 -	2.6E+02	8	10	0.73	99.82
2.6E+02 -	3.8E+02	8	18	0.73	99.09
3.8E+02 -	5.6E+02	46	64	4.17	98.37
5.6E+02 -	8.3E+02	72	136	6.53	94.19
8.3E+02 -	1.2E+03	193	329	17.51	87.66
1.2E+03 -	1.8E+03	142	471	12.89	70.15
1.8E+03 -	2.6E+03	226	697	20.51	57.26

HISTOGRAM FOR COLUMN 32 (szr)

```
1.0E+02
1.5E+02
2.0E+02 X
3.0E+02 X
5.0E+02 XXXX
7.0E+02 XXXXXXX
1.0E+03 XXXXXXXXXXXXXXXXX
1.5E+03 XXXXXXXXXXXXX
2.0E+03 XXXXXXXXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	2	0	405	697
0.00	0.00			0.00	36.75	

MAXIMUM = 2.00000E+03
MINIMUM = 1.00000E+02
GEOMETRIC MEAN = 1.20496E+03
GEOMETRIC DEVIATION = 1.66335E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 33 (sce)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+02 -	2.6E+02	0	0	0.00	99.74
2.6E+02 -	3.8E+02	0	0	0.00	99.74
3.8E+02 -	5.6E+02	1	1	0.26	99.74
5.6E+02 -	8.3E+02	2	3	0.52	99.48
8.3E+02 -	1.2E+03	3	6	0.78	98.96
1.2E+03 -	1.8E+03	12	18	3.13	98.18
1.8E+03 -	2.6E+03	28	46	7.29	95.05
2.6E+03 -	3.8E+03	61	107	15.89	87.76
3.8E+03 -	5.6E+03	100	207	26.04	71.88

HISTOGRAM FOR COLUMN 33 (sce)

```
5.0E+02
7.0E+02 X
1.0E+03 X
1.5E+03 XXX
2.0E+03 XXXXXXX
3.0E+03 XXXXXXXXXXXXXXX
5.0E+03 XXXXXXXXXXXXXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	0	0	720	0	176	207
0.26	0.00			0.00	45.83	

MAXIMUM = 5.00000E+03
MINIMUM = 5.00000E+02
GEOMETRIC MEAN = 3.35926E+03
GEOMETRIC DEVIATION = 1.59486E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (04/02/80)

TITLE
Table 3 - Nonmagnetic Fraction

FREQUENCY TABLE FOR COLUMN 34 (sth)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+02 -	5.6E+02	173	173	15.71	90.28
5.6E+02 -	8.3E+02	142	315	12.90	74.57
8.3E+02 -	1.2E+03	215	530	19.53	61.67
1.2E+03 -	1.8E+03	108	638	9.81	42.14
1.8E+03 -	2.6E+03	104	742	9.45	32.33
2.6E+03 -	3.8E+03	31	773	2.82	22.89
3.8E+03 -	5.6E+03	28	801	2.54	20.07
5.6E+03 -	8.3E+03	0	801	0.00	17.53
8.3E+03 -	1.2E+04	1	802	0.09	17.53

HISTOGRAM FOR COLUMN 34 (sth)

```
5.0E+02 XXXXXXXXXXXXXXX
7.0E+02 XXXXXXXXXXXXX
1.0E+03 XXXXXXXXXXXXXXXXXXX
1.5E+03 XXXXXXXXXX
2.0E+03 XXXXXXXXX
3.0E+03 XXX
5.0E+03 XXX
7.0E+03
1.0E+04
```

N	L	H	B	T	G	ANALYTICAL VALUES
49	58	0	3	0	8	986
4.45	5.27			0.00	0.73	

MAXIMUM = 1.00000E+04
MINIMUM = 2.00000E+02
GEOMETRIC MEAN = 7.92539E+02
GEOMETRIC DEVIATION = 2.17477E+00

TITLE
Table 3 - Nonmagnetic Fraction

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
sfe%	0	0	0	2	0	9	1093
smg%	0	2	0	2	0	0	1100
sca%	0	46	0	2	0	0	1056
sti%	0	0	0	2	0	867	235
smn	0	0	0	2	0	55	1047
sag	1098	0	0	2	0	0	4
sb	397	563	0	2	0	0	142
sba	112	24	0	2	0	0	966
sbe	818	25	0	2	0	0	259
sbi	1067	1	0	2	0	0	34
sco	377	6	0	2	0	0	719
scr	100	69	0	2	0	0	933
scu	186	412	0	2	0	0	504
sla	2	0	0	2	0	722	378
smo	937	8	0	2	0	0	157
snb	77	73	0	2	0	0	952
sni	630	2	0	2	0	0	470
spb	276	250	0	2	0	0	576
ssc	34	11	340	3	0	0	716
ssn	294	38	0	2	0	0	770
ssr	936	48	1	2	0	0	117
sv	3	8	0	2	0	0	1091
su	1089	2	0	2	0	0	11
sy	1	0	0	2	0	38	1063
szn	1080	12	0	2	0	0	10
szr	0	0	0	2	0	405	697
sce	1	0	0	720	0	176	207
sth	49	58	0	3	0	8	986

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TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
sfe%	********	******	9 GREATER THAN VALUES. NO COMPUTATIONS.
smg%	0.405755	3.24	2 NOT DETECTED, LESS THAN, OR TRACE VALUES. 1100 REPORTED VALUES.
sca%	********	******	1 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.
sti%	********	******	867 GREATER THAN VALUES. NO COMPUTATIONS.
smn	********	******	55 GREATER THAN VALUES. NO COMPUTATIONS.
sag	0.000052	36.61	1098 NOT DETECTED, LESS THAN, OR TRACE VALUES. 4 REPORTED VALUES.
sb	26.849622	1.57	960 NOT DETECTED, LESS THAN, OR TRACE VALUES. 142 REPORTED VALUES.
sba	121.440226	2.40	136 NOT DETECTED, LESS THAN, OR TRACE VALUES. 966 REPORTED VALUES.
sbe	0.657376	3.98	843 NOT DETECTED, LESS THAN, OR TRACE VALUES. 259 REPORTED VALUES.
sbi	0.009444	57.14	1068 NOT DETECTED, LESS THAN, OR TRACE VALUES. 34 REPORTED VALUES.
sco	13.115515	2.45	383 NOT DETECTED, LESS THAN, OR TRACE VALUES. 719 REPORTED VALUES.
scr	73.674202	3.81	169 NOT DETECTED, LESS THAN, OR TRACE VALUES. 933 REPORTED VALUES.
scu	7.261134	2.39	598 NOT DETECTED, LESS THAN, OR TRACE VALUES. 504 REPORTED VALUES.
sla	********	******	722 GREATER THAN VALUES. NO COMPUTATIONS.
smo	2.855476	2.72	945 NOT DETECTED, LESS THAN, OR TRACE VALUES. 157 REPORTED VALUES.
snb	88.997533	2.10	150 NOT DETECTED, LESS THAN, OR TRACE VALUES. 952 REPORTED VALUES.
sni	6.623371	4.55	632 NOT DETECTED, LESS THAN, OR TRACE VALUES. 470 REPORTED VALUES.
spb	17.816131	2.09	526 NOT DETECTED, LESS THAN, OR TRACE VALUES. 576 REPORTED VALUES.
ssc	21.552269	1.68	45 NOT DETECTED, LESS THAN, OR TRACE VALUES. 716 REPORTED VALUES.
ssn	29.446559	2.80	332 NOT DETECTED, LESS THAN, OR TRACE VALUES. 770 REPORTED VALUES.
ssr	********	******	1 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.
sv	141.394640	1.97	11 NOT DETECTED, LESS THAN, OR TRACE VALUES. 1091 REPORTED VALUES.
sw	200.383713	2.43	1091 NOT DETECTED, LESS THAN, OR TRACE VALUES. 11 REPORTED VALUES.
sy	********	******	38 GREATER THAN VALUES. NO COMPUTATIONS.
szn	5.449375	6.06	1092 NOT DETECTED, LESS THAN, OR TRACE VALUES. 10 REPORTED VALUES.
szr	********	******	405 GREATER THAN VALUES. NO COMPUTATIONS.
sce	********	******	176 GREATER THAN VALUES. NO COMPUTATIONS.
sth	********	******	184 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.