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# RESULTS OF STREAM SEDIMENT SAMPLING IN THE NORTHERN MELOZITNA, THE HUGHES, AND THE SOUTHERN SHUNGNAK QUADRANGLES, WEST-CENTRAL ALASKA

By

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## INTRODUCTION

Analytical data for 267 stream sediment samples from the northern Melozitna, the Hughes, and the southern Shungnak 1:250,000-scale quadrangles are presented in this report together with a statistical treatment of the data. Most of the samples were collected in 1967 during investigations conducted as part of the Heavy Metals program of the U.S. Geological Survey. This report is intended to supplement Geological Survey Circular 570 (Miller and Ferrians, 1968) which discussed several localities in this region where anomalous amounts of metals were found, and to provide background data concerning the abundance of certain elements in stream sediments of this area.

Recent geologic maps of the region have been published by Patton and Miller (1966), Patton, Miller, and Tailleur (1968), and Miller and Ferrians (1968) and should be referred to for a more thorough discussion of the geology. In general, however, streams from which the samples were taken drain one or more of the following units: (a) quartz monzonite, granodiorite, and syenite of mid-Cretaceous age, (b) volcanic rocks, ranging in composition from andesite to rhyolite and in age from Late Jurassic(?)-Early Cretaceous to Late Cretaceous, and (c) volcanic graywacke and intercalated mudstone of Early Cretaceous age.

## PROCEDURES AND TREATMENT OF DATA

Standard procedures were followed in the collection and preparation of the stream sediment samples. The samples were generally collected from the active stream channel; where this was not possible, the samples were collected from stream deposits adjacent to the active channel. The

samples were dried, sieved, and the minus 80 mesh fractions were analyzed for 30 elements by the six-step semiquantitative spectrographic method and for gold by the atomic absorption method. The spectrographic analyses were reported in percentage (pct) or parts per million (ppm) to the nearest number in the series 1.0, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. The precision of a reported value is approximately plus 100 percent or minus 50 percent. Minimum limits of detection for each element are given on page 5. Semiquantitative spectrographic analyses were done by Arnold Farley, Jr., J. M. Motooka, G. W. Sears, Jr., and Chris Heropoulos, and atomic-absorption analyses were done by W. L. Campbell, R. L. Miller, T. A. Roemer, A. L. Meier, and M. S. Rickard.

Locations of the stream sediment samples are shown on figure 1. The samples are grouped in table 1 according to the 1:63,360-scale quadrangle in which they occur. The order of listing of the quadrangles is Melozitna D-2, D-3, D-4, D-5, Hughes A-2, A-3, A-6, B-6, C-4, D-4, and Shungnak A-1, A-2, A-3, A-4, B-1, B-2, B-3, B-4, B-5, B-6, C-2, C-3.

The results of the stream sediment sampling program have been processed by means of a computer program known as GEOSUM and are presented in table 1. The GEOSUM program is designed primarily for summarizing and tabulating geochemical data--especially data from semiquantitative spectrographic analyses (commonly referred to as six-step spectrographic analyses) by the laboratories of the U.S. Geological Survey. The program output consists of: (a) a listing of the data, (b) histograms and cumulative frequency distributions for all elements except gold, antimony,

arsenic, tungsten, and cadmium,[1] and (c) a statistical summary which includes geometric means and geometric deviations.

## RESULTS

Examination of the histograms of the various elements indicates that most of the elements for which sufficient data is available have a roughly log-normal distribution. Lead, copper, and strontium are good examples of this type of distribution. A few elements such as titanium and chromium have a bi-modal type of distribution. On the basis of these histograms, anomalous values are suggested for several elements of possible economic interest. These are as follows: copper (Cu), 100 ppm; lead (Pb), 70 ppm; beryllium (Be), 3 ppm; manganese (Mn), 2,000 ppm; boron (B), 70 ppm; nickel (Ni), 100 ppm; chromium (Cr), 200 ppm; cobalt (Co), 50 ppm; molybdenum (Mo), 5 ppm. Any reported value for silver, zinc, tin, and bismuth is regarded as significant. It should be emphasized that the stream sediment sampling was of a reconnaissance nature and particular attention was paid to the contact zones of granitic plutons. This bias undoubtedly influenced the frequency distribution pattern. The selection of these concentrations as anomalous values is, therefore, subjective and interpretive on the part of the author.

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[1] The frequency table and histogram for gold have been omitted since the classes used in calculating these tables are those used in the semiquantitative spectrographic method and the gold was analyzed for by the quantitative atomic absorption method. Gold was found in only 13 of 267 samples (5%). The statistical summaries for antimony, arsenic, tungsten, and cadmium were omitted because no values for these elements were reported.

## ANOMALOUS AREAS

The stream sediment sampling showed several areas of anomalous concentrations of metals. The more significant of these have already been discussed in Miller and Ferrians (1968); these include the anomalies at Hawk River (Pb-Ag), the Dakli area in the northern Zane Hills (Cu), the Clear Creek area in the eastern Zane Hills (Cu-Pb-Au), and Indian Mountain-Utopia Creek (Pb-Zn-Ag-Cu). Other anomalies are as follows: (a) the Norutak Hills (northern Hughes quadrangle)--low but anomalous amounts of zinc, molybdenum, copper, and silver occur in streams (samples 67AMm308, 318, 319) draining two intensely oxidized pyritiferous soda rhyolite bodies. Analyses of grab samples of rhyolite show up to 500 ppm zinc, 300 ppm copper, and 50 ppm molybdenum; (b) the upper Selawik River (central Shungnak quadrangle)--two streams draining an area of Lower Cretaceous volcanic rocks (samples 67AMm244, 245, Shungnak C-2 quadrangle) on the north side of the Selawik River contain low but anomalous amounts of copper and silver, and (c) a sediment sample (67AMm102, Shungnak A-2 quadrangle) from the southeastern Shungnak quadrangle contained anomalous amounts of lead (150 ppm) and silver (1.5 ppm). This stream drains the contact between the quartz monzonite of the Wheeler Creek pluton and the wallrock andesite.

There are other areas where one or more elements occur in amounts above what the histograms suggest is background, but the values reported are not particularly high nor is there any significant grouping of anomalous elements or sample localities.

EXPLANATION OF TABLE 1.

The results of the analyses of the stream sediment samples are given in Table 1 as analytical values such as 7.0000 ppm, 10.0000 percent, etc., or as qualified values expressed as a letter. These letter codes are N = not detected, L = less than specified limit of detection, G = greater than value shown, B = no data, H = interference, or T = trace. Note that the right-most zero digits for each analytical value are not significant. The specified limits of detection are as follows:

Specified limits of detection

| FE PCT | MG PCT | CA PCT | TI PCT | MN PPM | AG PPM |
|---|---|---|---|---|---|
| 0.05000 | 0.02000 | 0.05000 | 0.00100 | 10.00000 | 0.50000 |
| AS PPM | AU PPM | B PPM | BA PPM | BE PPM | BI PPM |
| 200.00000 | 0.02000 | 5.00000 | 5.00000 | 1.00000 | 10.00000 |
| CO PPM | CR PPM | CU PPM | LA PPM | MO PPM | NB PPM |
| 3.00000 | 5.00000 | 5.00000 | 20.00000 | 3.00000 | 10.00000 |
| NI PPM | PB PPM | SB PPM | SC PPM | SN PPM | SR PPM |
| 2.00000 | 10.00000 | 100.00000 | 5.00000 | 10.00000 | 100.00000 |
| V PPM | W PPM | Y PPM | ZN PPM | ZR PPM | |
| 10.00000 | 50.00000 | 5.00000 | 200.00000 | 10.00000 | |

As has been mentioned, semiquantitative spectrographic analyses by the U.S. Geological Survey are reported as geometric midpoints (1.0, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc.) of geometric brackets having the boundaries 1.2, 0.83, 0.56, 0.38, 0.26, 0.18, 0.12, 0.083, etc. The frequency distributions

and histograms are on logarithmic scales and are computed using these brackets as class intervals, for example:

| Reported value (ppm) | Limits | |
|---|---|---|
| 1.0 | .83 | 1.2 |
| 1.5 | 1.2 | 1.8 |
| 2.0 | 1.8 | 2.6 |
| 3.0 | 2.6 | 3.8 |
| 5.0 | 3.8 | 5.6 |
| 7.0 | 5.6 | 8.3 |
| 10.0 | 8.3 | 12.0 |

The statistics given below the histograms are derived only from data values within the ranges of analytical determination (analytical values), and are, therefore, biased if data values qualified with N, L, G, T, or H codes are present. Statistical estimates that are unbiased in this regard are given at the end of Table 1. The geometric mean is the antilogarithim of the arithmetic mean of the logs of the analyses and an estimate of "central tendency," or of a characteristic value, of a frequency distribution that is approximately symmetrical on a log scale, and is therefore useful for characterizing many geochemical distributions. The geometric mean is not an estimate of geochemical abundance and is of no value in estimating reserves or total amounts of elements present. The geometric deviation is the antilogarithim of the standard deviation of the logs of the analyses. See USGS Professional Paper 574-B for further discussion and USGS Bulletin 1147E, p. 20-23, for further discussion and explanation of geometric deviation.

In the computations performed to produce the statistical summary at the end of Table 1, 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.

## References cited

Patton, W. W., Jr., and Miller, T. P., 1966, Regional geologic map of the Hughes quadrangle, Alaska: U.S. Geol. Survey Misc. Geol. Inv. Map I-459, scale 1:250,000.

Patton, W. W., Jr., Miller, T. P., and Tailleur, I. L., 1968, Regional geologic map of the Shungnak and southern part of the Ambler River quadrangles, Alaska: U.S. Geol. Survey Misc. Geol. Inv. Map I-554, scale 1:250,000.

Miller, T. P., and Ferrians, O. J., Jr., 1968, Suggested areas for prospecting in the central Koyukuk River region, Alaska: U.S. Geol. Survey Circ. 570, 12 p.

TABLE 1. SED. SAMPLE ANALYSES

| QUAD | SAMPLE | FE PCT | MG PCT | CA PCT | TI PCT | MN PPM | AG PPM | AS PPM | AU PPM | B PPM | BA PPM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MD-2 | 67AMM343 | 7.0000 | 1.0000 | 0.7000 | 0.5000 | 500.0000 | 3.0000 | 0.0 N | 0.0700 | 20.0000 | 7000.0000 |
| | 67AMM356 | 3.0000 | 0.5000 | 1.0000 | 0.5000 | 300.0000 | 0.0 N | 0.0 N | 0.0 R | 20.0000 | 700.0000 |
| | 67AMM357 | 2.0000 | 0.3000 | 1.0000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 R | 30.0000 | 500.0000 |
| | 67AMM346 | 5.0000 | 1.0000 | 0.1500 | 0.5000 | 150.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 3000.0000 |
| MD-3 | 67AMM290 | 0.7000 | 2.0000 | 7.0000 | 0.7000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 2000.0000 |
| | 67AMM291 | 7.0000 | 2.0000 | 7.0000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 2000.0000 |
| | 67AMM292 | 7.0000 | 2.0000 | 7.0000 | 1.5000 | 3000.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 2000.0000 |
| | 67AMM293 | 5.0000 | 0.7000 | 0.7000 | 0.5000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 1000.0000 |
| MD-4 | 67AMM5 | 3.0000 | 0.7000 | 0.7000 | 0.7000 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 100.0000 | 300.0000 |
| | 67AMM6 | 5.0000 | 0.7000 | 0.7000 | 0.5000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 300.0000 |
| MD-5 | 67AMM8 | 3.0000 | 0.7000 | 0.7000 | 0.3000 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 300.0000 |
| | 67AMM9 | 3.0000 | 0.7000 | 0.7000 | 0.5000 | 200.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 500.0000 |
| | 67AMM10 | 5.0000 | 0.7000 | 0.7000 | 0.5000 | 100.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 300.0000 |
| HA-2 | 67AMM355 | 5.0000 | 1.0000 | 1.5000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 R | 50.0000 | 700.0000 |
| | 67AMM193 | 7.0000 | 1.0000 | 1.5000 | 0.3000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 1500.0000 |
| | 67AMM304 | 7.0000 | 3.0000 | 7.0000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 2000.0000 |
| | 67AMM303 | 7.0000 | 2.0000 | 5.0000 | 0.5000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1500.0000 |
| | 67AMM305 | 7.0000 | 2.0000 | 5.0000 | 0.7000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 3000.0000 |
| | 67AMM302 | 7.0000 | 1.5000 | 7.0000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 2000.0000 |
| | 67AMM298 | 7.0000 | 1.5000 | 5.0000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 3000.0000 |
| | 67AMM296 | 7.0000 | 1.5000 | 1.5000 | 0.5000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 1500.0000 |
| | 67AMM295 | 7.0000 | 1.0000 | 1.5000 | 1.0000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 150.0000 | 1500.0000 |
| | 67ADV157 | 7.0000 | 1.5000 | 1.5000 | 1.0000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1500.0000 |
| | 67ADV159 | 7.0000 | 1.5000 | 2.0000 | 0.7000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000L | 1500.0000 |
| | 67ADV160 | 5.0000 | 1.5000 | 5.0000 | 1.0000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000L | 1500.0000 |
| | 67ADV162 | 7.0000 | 1.5000 | 5.0000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1500.0000 |
| | 67ADV161 | 5.0000 | 1.5000 | 5.0000 | 0.5000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1500.0000 |
| | 67ADV163 | 7.0000 | 1.5000 | 7.0000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000L | 2000.0000 |
| | 67ADV164 | 7.0000 | 2.0000 | 7.0000 | 1.0000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 1500.0000 |
| | 67ADV165 | 7.0000 | 1.5000 | 7.0000 | 0.5000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 3000.0000 |
| | 67ADV166 | 7.0000 | 1.5000 | 7.0000 | 0.7000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000L | 3000.0000 |
| HA-3 | 67AMM300 | 5.0000 | 1.5000 | 7.0000 | 0.3000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 3000.0000 |
| | 67AMM301 | 7.0000 | 1.5000 | 7.0000 | 0.3000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 2000.0000 |
| | 67AMM299 | 7.0000 | 1.5000 | 5.0000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 3000.0000 |
| | 67AMM294 | 5.0000 | 1.5000 | 1.5000 | 0.7000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 1500.0000 |
| HA-6 | 64AMM120 | 10.0000 | 2.0000 | 2.0000 | 0.3000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 R | 30.0000 | 1500.0000 |
| | 67AMM172 | 5.0000 | 1.5000 | 3.0000 | 0.3000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1500.0000 |
| | 67ADV82 | 5.0000 | 1.0000 | 1.5000 | 0.1500 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67ADV81 | 3.0000 | 0.7000 | 1.5000 | 0.1500 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67ADV79 | 2.0000 | 0.7000 | 1.0000 | 0.1500 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67ADV77 | 3.0000 | 0.3000 | 1.5000 | 0.1500 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67ADV74 | 2.0000 | 0.3000 | 1.0000 | 0.1500 | 200.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 700.0000 |
| | 67ADV70 | 2.0000 | 0.3000 | 1.5000 | 0.1000 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67ADV69 | 1.5000 | 0.2000 | 1.5000 | 0.1000 | 20.0000 | 0.0 N | 0.0 N | 0.0200 | 0.0 N | 1000.0000 |
| | 67ADV142 | 7.0000 | 3.0000 | 5.0000 | 0.7000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1500.0000 |
| | 67ADV140 | 7.0000 | 5.0000 | 7.0000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1500.0000 |
| | 67ADV139 | 7.0000 | 5.0000 | 7.0000 | 0.7000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1500.0000 |
| | 67ADV123 | 5.0000 | 1.0000 | 2.0000 | 0.3000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 200.0000 | 1000.0000 |
| | 67ADV27 | 7.0000 | 1.0000 | 0.7000 | 0.3000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 700.0000 |
| | 67ADV28 | 7.0000 | 1.0000 | 1.5000 | 0.2000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 100.0000 | 700.0000 |

TABLE 1. SED. SAMPLE ANALYSES

| QUAD | SAMPLE | BE PPM | BI PPM | CO PPM | CR PPM | CU PPM | LA PPM | MO PPM | NB PPM | NI PPM | PB PPM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MD-2 | 67AMM343 | 1.0000 | 0.0 N | 15.0000 | 50.0000 | 150.0000 | 150.0000 | 3.0000 | 0.0 N | 20.0000 | 2000.0000 |
| | 67AMM356 | 1.0000 | 0.0 N | 15.0000 | 50.0000 | 50.0000 | 30.0000 | 0.0 N | 0.0 N | 20.0000 | 20.0000 |
| | 67AMM357 | 1.0000 | 0.0 N | 10.0000 | 30.0000 | 20.0000 | 30.0000 | 0.0 N | 0.0 N | 10.0000 | 0.0 N |
| | 67AMM346 | 1.0000 | 0.0 N | 0.0 N | 15.0000 | 70.0000 | 300.0000 | 7.0000 | 20.0000 | 5.0000 | 15.0000 |
| MD-3 | 67AMM290 | 1.5000 | 0.0 N | 15.0000 | 30.0000 | 50.0000 | 150.0000 | 3.0000 | 20.0000 | 30.0000 | 30.0000 |
| | 67AMM291 | 1.5000 | 0.0 N | 20.0000 | 30.0000 | 70.0000 | 70.0000 | 3.0000 | 10.0000 | 30.0000 | 30.0000 |
| | 67AMM292 | 1.0000 | 0.0 N | 20.0000 | 50.0000 | 30.0000 | 200.0000 | 0.0 N | 50.0000 | 50.0000 | 30.0000 |
| | 67AMM293 | 0.0 N | 0.0 N | 15.0000 | 70.0000 | 30.0000 | 30.0000 | 0.0 N | 0.0 N | 20.0000 | 15.0000 |
| MD-4 | 67AMM5 | 0.0 N | 0.0 N | 10.0000 | 70.0000 | 20.0000 | 50.0000 | 0.0 N | 0.0 N | 20.0000 | 0.0 N |
| | 67AMM6 | 0.0 N | 0.0 N | 10.0000 | 70.0000 | 20.0000 | 50.0000 | 0.0 N | 0.0 N | 20.0000 | 0.0 N |
| MD-5 | 67AMM8 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 20.0000 | 70.0000 | 0.0 N | 0.0 N | 15.0000 | 0.0 N |
| | 67AMM9 | 0.0 N | 0.0 N | 0.0 N | 150.0000 | 15.0000 | 70.0000 | 0.0 N | 0.0 N | 20.0000 | 0.0 N |
| | 67AMM10 | 0.0 N | 0.0 N | 15.0000 | 10.0000 | 30.0000 | 30.0000 | 0.0 N | 0.0 N | 30.0000 | 0.0 N |
| MA-2 | 67AMM355 | 0.0 N | 0.0 N | 30.0000 | 70.0000 | 50.0000 | 30.0000 | 0.0 N | 0.0 N | 30.0000 | 15.0000 |
| | 67AMM193 | 0.0 N | 0.0 N | 50.0000 | 50.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 70.0000 |
| | 67AMM304 | 1.0000 | 0.0 N | 30.0000 | 70.0000 | 30.0000 | 300.0000 | 0.0 N | 15.0000 | 70.0000 | 30.0000 |
| | 67AMM303 | 1.0000 | 0.0 N | 20.0000 | 70.0000 | 50.0000 | 70.0000 | 0.0 N | 10.0000 | 70.0000 | 20.0000 |
| | 67AMM305 | 1.0000 | 0.0 N | 20.0000 | 150.0000 | 50.0000 | 100.0000 | 0.0 N | 10.0000 | 50.0000 | 20.0000 |
| | 67AMM302 | 1.0000 | 0.0 N | 15.0000 | 50.0000 | 20.0000 | 150.0000 | 0.0 N | 10.0000 | 30.0000 | 20.0000 |
| | 67AMM298 | 1.5000 | 0.0 N | 20.0000 | 70.0000 | 50.0000 | 200.0000 | 3.0000 | 10.0000 | 50.0000 | 30.0000 |
| | 67AMM296 | 0.0 N | 0.0 N | 20.0000 | 100.0000 | 70.0000 | 70.0000 | 0.0 N | 0.0 N | 70.0000 | 30.0000 |
| | 67AMM295 | 0.0 N | 0.0 N | 15.0000 | 70.0000 | 70.0000 | 100.0000 | 0.0 N | 15.0000 | 50.0000 | 30.0000 |
| | 67ADV157 | 1.5000 | 0.0 N | 30.0000 | 70.0000 | 100.0000 | 70.0000 | 0.0 N | 0.0 N | 50.0000 | 30.0000 |
| | 67ADV159 | 1.5000 | 0.0 N | 20.0000 | 70.0000 | 200.0000 | 70.0000 | 0.0 N | 0.0 N | 30.0000 | 15.0000 |
| | 67ADV160 | 1.5000 | 0.0 N | 20.0000 | 70.0000 | 150.0000 | 200.0000 | 0.0 N | 15.0000 | 30.0000 | 15.0000 |
| | 67ADV162 | 1.0000 | 15.0000 | 30.0000 | 70.0000 | 50.0000 | 70.0000 | 0.0 N | 10.0000 | 50.0000 | 20.0000 |
| | 67ADV161 | 1.0000 | 0.0 N | 15.0000 | 30.0000 | 100.0000 | 150.0000 | 0.0 N | 10.0000 | 20.0000 | 20.0000 |
| | 67ADV163 | 1.5000 | 0.0 N | 20.0000 | 70.0000 | 70.0000 | 150.0000 | 0.0 N | 30.0000 | 50.0000 | 20.0000 |
| | 67ADV164 | 1.5000 | 0.0 N | 20.0000 | 30.0000 | 20.0000 | 200.0000 | 0.0 N | 50.0000 | 50.0000 | 15.0000 |
| | 67ADV165 | 1.5000 | 0.0 N | 15.0000 | 30.0000 | 50.0000 | 70.0000 | 0.0 N | 20.0000 | 30.0000 | 30.0000 |
| | 67ADV166 | 1.0000 | 0.0 N | 15.0000 | 30.0000 | 50.0000 | 150.0000 | 0.0 N | 30.0000 | 30.0000 | 15.0000 |
| MA-3 | 67AMM300 | 1.5000 | 0.0 N | 15.0000 | 70.0000 | 30.0000 | 70.0000 | 3.0000 | 10.0000 | 30.0000 | 30.0000 |
| | 67AMM301 | 1.0000 | 0.0 N | 20.0000 | 150.0000 | 30.0000 | 150.0000 | 0.0 N | 10.0000 | 30.0000 | 30.0000 |
| | 67AMM299 | 1.0000 | 0.0 N | 20.0000 | 300.0000 | 50.0000 | 200.0000 | 0.0 N | 10.0000 | 70.0000 | 30.0000 |
| | 67AMM294 | 0.0 N | 0.0 N | 15.0000 | 70.0000 | 70.0000 | 50.0000 | 0.0 N | 10.0000 | 50.0000 | 20.0000 |
| MA-6 | 64AMM120 | 2.0000 | 0.0 N | 30.0000 | 200.0000 | 100.0000 | 100.0000 | 0.0 N | 15.0000 | 70.0000 | 20.0000 |
| | 67AMM172 | 1.5000 | 0.0 N | 50.0000 | 500.0000 | 30.0000 | 30.0000 | 0.0 N | 0.0 N | 150.0000 | 50.0000 |
| | 67ADV82 | 1.0000 | 0.0 N | 30.0000 | 150.0000 | 20.0000 | 50.0000 | 0.0 N | 0.0 N | 30.0000 | 20.0000 |
| | 67ADV81 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 20.0000 |
| | 67ADV79 | 1.5000 | 30.0000 | 0.0 N | 30.0000 | 15.0000 | 30.0000 | 0.0 N | 0.0 N | 10.0000 | 20.0000 |
| | 67ADV77 | 1.5000 | 0.0 N | 0.0 N | 20.0000 | 30.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 |
| | 67ADV74 | 1.5000 | 0.0 N | 0.0 N | 20.0000 | 10.0000 | 70.0000 | 0.0 N | 0.0 N | 2.0000 | 30.0000 |
| | 67ADV70 | 2.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 50.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 |
| | 67ADV69 | 1.5000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 30.0000 | 0.0 N | 0.0 N | 3.0000 | 20.0000 |
| | 67ADV142 | 1.5000 | 0.0 N | 30.0000 | 200.0000 | 100.0000 | 100.0000 | 10.0000 | 10.0000 | 100.0000 | 30.0000 |
| | 67ADV140 | 1.5000 | 0.0 N | 30.0000 | 150.0000 | 70.0000 | 100.0000 | 0.0 N | 0.0 N | 70.0000 | 30.0000 |
| | 67ADV139 | 3.0000 | 0.0 N | 30.0000 | 150.0000 | 100.0000 | 150.0000 | 0.0 N | 10.0000 | 100.0000 | 30.0000 |
| | 67ADV123 | 1.5000 | 0.0 N | 10.0000 | 200.0000 | 20.0000 | 30.0000 | 0.0 N | 0.0 N | 30.0000 | 50.0000 |
| | 67ADV27 | 0.0 N | 0.0 N | 20.0000 | 100.0000 | 50.0000 | 20.0000 | 0.0 N | 0.0 B | 15.0000 | 50.0000 |
| | 67ADV28 | 2.0000 | 0.0 N | 20.0000 | 200.0000 | 20.0000 | 150.0000 | 5.0000 | 0.0 B | 20.0000 | 50.0000 |

TABLE 1. SED. SAMPLE ANALYSES

| QUAD | SAMPLE | SB PPM | SC PPM | SN PPM | SR PPM | V PPM | W PPM | Y PPM | ZN PPM | ZR PPM |
|---|---|---|---|---|---|---|---|---|---|---|
| MD-2 | 67AMM343 | 0.0 N | 0.0 B | 0.0 N | 300.0000 | 150.0000 | 0.0 N | 30.0000 | 700.0000 | 300.0000 |
| | 67AMM356 | 0.0 N | 7.0000 | 0.0 N | 100.0000 | 150.0000 | 0.0 N | 15.0000 | 0.0 N | 300.0000 |
| | 67AMM357 | 0.0 N | 7.0000 | 0.0 N | 100.0000 | 70.0000 | 0.0 N | 15.0000 | 0.0 N | 200.0000 |
| | 67AMM346 | 0.0 N | 0.0 B | 0.0 N | 200.0000 | 70.0000 | 0.0 N | 50.0000 | 0.0 N | 300.0000 |
| MD-3 | 67AMM290 | 0.0 N | 0.0 B | 0.0 N | 1500.0000 | 100.0000 | 0.0 N | 30.0000 | 0.0 N | 500.0000 |
| | 67AMM291 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 100.0000 | 0.0 N | 20.0000 | 0.0 N | 200.0000 |
| | 67AMM292 | 0.0 N | 0.0 B | 20.0000 | 1000.0000 | 150.0000 | 0.0 N | 50.0000 | 0.0 N | 700.0000 |
| | 67AMM293 | 0.0 N | 0.0 B | 0.0 N | 150.0000 | 70.0000 | 0.0 N | 15.0000 | 0.0 N | 200.0000 |
| MD-4 | 67AMM5 | 0.0 N | 15.0000 | 0.0 N | 0.0 N | 100.0000 | 0.0 N | 30.0000 | 0.0 N | 300.0000 |
| | 67AMM6 | 0.0 N | 15.0000 | 0.0 N | 100.0000 | 150.0000 | 0.0 N | 20.0000 | 0.0 N | 200.0000 |
| MD-5 | 67AMM8 | 0.0 N | 15.0000 | 0.0 N | 100.0000 | 150.0000 | 0.0 N | 15.0000 | 0.0 N | 300.0000 |
| | 67AMM9 | 0.0 N | 15.0000 | 0.0 N | 150.0000 | 150.0000 | 0.0 N | 20.0000 | 0.0 N | 300.0000 |
| | 67AMM10 | 0.0 N | 15.0000 | 0.0 N | 150.0000 | 150.0000 | 0.0 N | 15.0000 | 0.0 N | 200.0000 |
| MA-2 | 67AMM355 | 0.0 N | 10.0000 | 0.0 N | 500.0000 | 300.0000 | 0.0 N | 15.0000 | 0.0 N | 300.0000 |
| | 67AMM193 | 0.0 N | 15.0000 | 0.0 N | 300.0000 | 70.0000 | 0.0 N | 10.0000 | 0.0 N | 100.0000 |
| | 67AMM304 | 0.0 N | 0.0 B | 0.0 N | 1500.0000 | 150.0000 | 0.0 N | 70.0000 | 0.0 N | 150.0000 |
| | 67AMM303 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 300.0000 |
| | 67AMM305 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 300.0000 |
| | 67AMM302 | 0.0 N | 0.0 B | 0.0 N | 2000.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 500.0000 |
| | 67AMM298 | 0.0 N | 0.0 B | 0.0 N | 1500.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 300.0000 |
| | 67AMM296 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 20.0000 | 0.0 N | 200.0000 |
| | 67AMM295 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 300.0000 |
| | 67ADV157 | 0.0 N | 0.0 B | 0.0 N | 300.0000 | 150.0000 | 0.0 N | 50.0000 | 0.0 N | 300.0000 |
| | 67ADV159 | 0.0 N | 0.0 B | 0.0 N | 300.0000 | 100.0000 | 0.0 N | 30.0000 | 0.0 N | 300.0000 |
| | 67ADV160 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 50.0000 | 0.0 N | 300.0000 |
| | 67ADV162 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 200.0000 |
| | 67ADV161 | 0.0 N | 0.0 B | 20.0000 | 1000.0000 | 70.0000 | 0.0 N | 20.0000 | 0.0 N | 200.0000 |
| | 67ADV163 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 700.0000 |
| | 67ADV164 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 100.0000 | 0.0 N | 30.0000 | 0.0 N | 1000.0000 |
| | 67ADV165 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 70.0000 | 0.0 N | 20.0000 | 0.0 N | 200.0000 |
| | 67ADV166 | 0.0 N | 0.0 B | 0.0 N | 1500.0000 | 70.0000 | 0.0 N | 30.0000 | 0.0 N | 200.0000 |
| MA-3 | 67AMM300 | 0.0 N | 0.0 B | 0.0 N | 2000.0000 | 70.0000 | 0.0 N | 15.0000 | 0.0 N | 150.0000 |
| | 67AMM301 | 0.0 N | 0.0 B | 0.0 N | 1500.0000 | 100.0000 | 0.0 N | 30.0000 | 0.0 N | 150.0000 |
| | 67AMM299 | 0.0 N | 0.0 B | 0.0 N | 1500.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 200.0000 |
| | 67AMM294 | 0.0 N | 0.0 B | 0.0 N | 500.0000 | 150.0000 | 0.0 N | 20.0000 | 0.0 N | 200.0000 |
| MA-6 | 64AMM120 | 0.0 N | 30.0000 | 0.0 N | 1000.0000 | 300.0000 | 0.0 N | 30.0000 | 0.0 N | 150.0000 |
| | 67AMM172 | 0.0 N | 30.0000 | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 15.0000 | 0.0 N | 150.0000 |
| | 67ADV82 | 0.0 N | 15.0000 | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 10.0000 | 0.0 N | 150.0000 |
| | 67ADV81 | 0.0 N | 7.0000 | 0.0 N | 700.0000 | 100.0000 | 0.0 N | 0.0 N | 0.0 N | 100.0000 |
| | 67ADV79 | 0.0 N | 10.0000 | 0.0 N | 300.0000 | 70.0000 | 0.0 N | 10.0000 | 0.0 N | 150.0000 |
| | 67ADV77 | 0.0 N | 0.0 N | 0.0 N | 300.0000 | 100.0000 | 0.0 N | 20.0000 | 0.0 N | 200.0000 |
| | 67ADV74 | 0.0 N | 0.0 N | 0.0 N | 500.0000 | 30.0000 | 0.0 N | 7.0000 | 0.0 N | 150.0000 |
| | 67ADV70 | 0.0 N | 0.0 N | 0.0 N | 500.0000 | 50.0000 | 0.0 N | 7.0000 | 0.0 N | 150.0000 |
| | 67ADV69 | 0.0 N | 0.0 N | 0.0 N | 500.0000 | 50.0000 | 0.0 N | 10.0000 | 0.0 N | 100.0000 |
| | 67ADV142 | 0.0 N | 0.0 B | 0.0 N | 500.0000 | 200.0000 | 0.0 N | 50.0000 | 0.0 N | 200.0000 |
| | 67ADV140 | 0.0 N | 0.0 B | 0.0 N | 500.0000 | 200.0000 | 0.0 N | 30.0000 | 0.0 N | 300.0000 |
| | 67ADV139 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 300.0000 |
| | 67ADV123 | 0.0 N | 7.0000 | 0.0 N | 300.0000 | 70.0000 | 0.0 N | 10.0000 | 0.0 N | 200.0000 |
| | 67ADV27 | 0.0 N | 20.0000 | 0.0 N | 150.0000 | 150.0000 | 0.0 N | 10.0000 | 0.0 N | 150.0000 |
| | 67ADV28 | 0.0 N | 20.0000 | 0.0 N | 300.0000 | 70.0000 | 0.0 N | 10.0000 | 0.0 N | 100.0000 |

TABLE 1. SED. SAMPLE ANALYSES

| QUAD | SAMPLE | FE PCT | MG PCT | CA PCT | TI PCT | MN PPM | AG PPM | AS PPM | AU PPM | B PPM | BA PPM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HA-6 | 67ADV125 | 5.0000 | 1.0000 | 2.0000 | 0.1500 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 300.0000 | 1000.0000 |
| | 67ADV29 | 7.0000 | 1.0000 | 2.0000 | 0.2000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 700.0000 |
| | 67ADV30 | 7.0000 | 2.0000 | 3.0000 | 0.3000 | 15.0000 | 0.0 N | 0.0 N | 0.0 N | 100.0000 | 1000.0000 |
| | 67ADV127 | 5.0000 | 1.0000 | 3.0000 | 0.1500 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 1000.0000 |
| | 67ADV167 | 7.0000 | 1.5000 | 5.0000 | 1.0000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 1500.0000 |
| | 67ADV167 | 7.0000 | 1.5000 | 3.0000 | 0.7000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 1500.0000 |
| | 67ADV167 | 7.0000 | 1.5000 | 5.0000 | 1.0000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1500.0000 |
| | 67ADV167 | 7.0000 | 1.5000 | 3.0000 | 0.7000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1000.0000 |
| | 67ADV167 | 7.0000 | 1.5000 | 1.5000 | 1.0000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1500.0000 |
| | 67ADV167 | 7.0000 | 1.5000 | 3.0000 | 0.7000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1000.0000 |
| | 67ADV167 | 7.0000 | 1.5000 | 3.0000 | 0.5000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1500.0000 |
| | 67ADV167 | 7.0000 | 2.0000 | 5.0000 | 0.5000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000L | 1500.0000 |
| | 67ADV167 | 7.0000 | 1.5000 | 5.0000 | 0.7000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1500.0000 |
| | 67ADV167 | 7.0000 | 3.0000 | 5.0000 | 0.7000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000L | 1500.0000 |
| | 67ADV167 | 7.0000 | 1.5000 | 3.0000 | 0.7000 | 700.0000 | 0.0 N | 0.0 N | 0.0400 | 30.0000 | 1500.0000 |
| | 67ADV132 | 7.0000 | 1.0000 | 1.5000 | 0.2000 | 1500.0000 | 0.0 N | 0.0 N | 1.7400 | 100.0000 | 700.0000 |
| | 67ADV132 | 7.0000 | 1.5000 | 5.0000 | 0.7000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1500.0000 |
| | 67ADV132 | 7.0000 | 1.5000 | 5.0000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1500.0000 |
| | 67ADV132 | 7.0000 | 1.5000 | 5.0000 | 0.7000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1500.0000 |
| | 67ADV132 | 7.0000 | 2.0000 | 5.0000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1500.0000 |
| | 67ADV132 | 7.0000 | 2.0000 | 5.0000 | 0.7000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1500.0000 |
| | 67ADV68 | 1.5000 | 0.5000 | 1.5000 | 0.1500 | 200.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67ADV67 | 3.0000 | 0.7000 | 1.5000 | 0.3000 | 700.0000 | 0.0 N | 0.0 N | 0.0200 | 0.0 N | 1000.0000 |
| | 67ADV66 | 1.5000 | 0.3000 | 1.0000 | 0.1500 | 200.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 700.0000 |
| | 67ADV65 | 1.5000 | 0.3000 | 1.5000 | 0.2000 | 150.0000 | 0.0 N | 0.0 N | 0.0200 | 0.0 N | 500.0000 |
| | 67ADV60 | 1.0000 | 0.2000 | 1.0000 | 0.7000 | 300.0000 | 0.0 N | 0.0 N | 0.0300 | 0.0 N | 1000.0000 |
| | 67ADV59 | 3.0000 | 0.5000 | 1.5000 | 0.1000 | 150.0000 | 0.0 N | 0.0 N | 0.0300 | 0.0 N | 1500.0000 |
| | 67ADV57 | 1.0000 | 0.2000 | 1.0000 | 0.1000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67ADV55 | 3.0000 | 0.5000 | 1.0000 | 0.1500 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 500.0000 |
| | 67ADV53 | 3.0000 | 1.0000 | 1.0000 | 0.1500 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 2000.0000 |
| | 67ADV174 | 7.0000 | 1.5000 | 1.0000 | 0.7000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 1500.0000 |
| | 67ADV174 | 7.0000 | 1.5000 | 1.5000 | 0.7000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 1500.0000 |
| | 67ADV174 | 7.0000 | 1.5000 | 1.5000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 1500.0000 |
| | 67ADV174 | 7.0000 | 1.5000 | 2.0000 | 0.5000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 2000.0000 |
| | 67ADV174 | 7.0000 | 2.0000 | 2.0000 | 0.7000 | 3000.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1500.0000 |
| | 67ADV175 | 7.0000 | 1.5000 | 3.0000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 2000.0000 |
| | 67ADV175 | 7.0000 | 1.0000 | 3.0000 | 0.7000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 2000.0000 |
| | 67ADV175 | 7.0000 | 1.5000 | 3.0000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 2000.0000 |
| | 67ADV175 | 7.0000 | 1.5000 | 3.0000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 2000.0000 |
| | 67ADV176 | 7.0000 | 1.5000 | 2.0000 | 0.5000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 2000.0000 |
| | 67ADV176 | 7.0000 | 1.5000 | 2.0000 | 0.5000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 2000.0000 |
| | 67ADV177 | 7.0000 | 2.0000 | 3.0000 | 0.5000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1500.0000 |
| | 67ADV177 | 7.0000 | 3.0000 | 3.0000 | 0.5000 | 2000.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1500.0000 |
| | 67ADV178 | 10.0000G | 1.5000 | 2.0000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1500.0000 |
| | 67ADV178 | 10.0000G | 1.5000 | 2.0000 | 1.0000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1500.0000 |
| | 67ADV179 | 5.0000 | 0.7000 | 3.0000 | 0.3000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 3000.0000 |
| HG-6 | 67ADV7 | 3.0000 | 0.7000 | 1.0000 | 0.3000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 1000.0000 |
| | 67ADV10 | 3.0000 | 0.7000 | 0.7000 | 0.5000 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 1000.0000 |
| | 67ADV11 | 3.0000 | 0.7000 | 0.7000 | 0.3000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 700.0000 |
| | 67AMM173 | 3.0000 | 0.7000 | 1.0000 | 0.1500 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 1000.0000 |

TABLE 1. SED. SAMPLE ANALYSES

| QUAD | SAMPLE | BE PPM | BI PPM | CD PPM | CR PPM | CU PPM | LA PPM | MO PPM | NB PPM | NI PPM | PB PPM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HA-6 | 67ADV125 | 1.0000 | 0.0 N | 15.0000 | 200.0000 | 15.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 30.0000 |
| | 67ADV29 | 1.5000 | 0.0 N | 20.0000 | 200.0000 | 30.0000 | 150.0000 | 5.0000 | 0.0 N | 100.0000 | 50.0000 |
| | 67ADV30 | 2.0000 | 0.0 N | 50.0000 | 500.0000 | 30.0000 | 200.0000 | 7.0000 | 0.0 N | 150.0000 | 50.0000 |
| | 67ADV127 | 1.0000 | 0.0 N | 30.0000 | 200.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 50.0000 |
| | 67ADV167 | 3.0000 | 0.0 N | 20.0000 | 150.0000 | 50.0000 | 150.0000 | 5.0000 | 20.0000 | 50.0000 | 70.0000 |
| | 67ADV167 | 2.0000 | 0.0 N | 15.0000 | 150.0000 | 50.0000 | 150.0000 | 3.0000 | 30.0000 | 50.0000 | 70.0000 |
| | 67ADV167 | 3.0000 | 0.0 N | 15.0000 | 150.0000 | 50.0000 | 150.0000 | 3.0000 | 30.0000 | 50.0000 | 70.0000 |
| | 67ADV167 | 2.0000 | 0.0 N | 15.0000 | 150.0000 | 70.0000 | 200.0000 | 3.0000 | 20.0000 | 50.0000 | 70.0000 |
| | 67ADV167 | 3.0000 | 0.0 N | 15.0000 | 100.0000 | 50.0000 | 100.0000 | 7.0000 | 30.0000 | 50.0000 | 70.0000 |
| | 67ADV167 | 3.0000 | 0.0 N | 15.0000 | 150.0000 | 70.0000 | 100.0000 | 0.0 N | 10.0000 | 50.0000 | 70.0000 |
| | 67ADV167 | 3.0000 | 0.0 N | 20.0000 | 150.0000 | 70.0000 | 100.0000 | 5.0000 | 10.0000 | 70.0000 | 100.0000 |
| | 67ADV167 | 3.0000 | 0.0 N | 15.0000 | 150.0000 | 50.0000 | 200.0000 | 0.0 N | 15.0000 | 50.0000 | 70.0000 |
| | 67ADV167 | 2.0000 | 0.0 N | 15.0000 | 100.0000 | 70.0000 | 150.0000 | 0.0 N | 10.0000 | 50.0000 | 50.0000 |
| | 67ADV167 | 2.0000 | 0.0 N | 20.0000 | 150.0000 | 70.0000 | 150.0000 | 0.0 N | 15.0000 | 50.0000 | 50.0000 |
| | 67ADV167 | 1.5000 | 0.0 N | 15.0000 | 100.0000 | 50.0000 | 100.0000 | 0.0 N | 15.0000 | 50.0000 | 30.0000 |
| | 67ADV132 | 1.5000 | 15.0000 | 50.0000 | 300.0000 | 50.0000 | 70.0000 | 5.0000 | 0.0 N | 70.0000 | 100.0000 |
| | 67ADV132 | 2.0000 | 0.0 N | 15.0000 | 100.0000 | 30.0000 | 150.0000 | 0.0 N | 15.0000 | 50.0000 | 50.0000 |
| | 67ADV132 | 3.0000 | 0.0 N | 15.0000 | 150.0000 | 30.0000 | 150.0000 | 0.0 N | 15.0000 | 30.0000 | 50.0000 |
| | 67ADV132 | 3.0000 | 0.0 N | 15.0000 | 150.0000 | 30.0000 | 150.0000 | 0.0 N | 30.0000 | 50.0000 | 50.0000 |
| | 67ADV132 | 3.0000 | 0.0 N | 15.0000 | 150.0000 | 30.0000 | 150.0000 | 0.0 N | 30.0000 | 50.0000 | 50.0000 |
| | 67ADV132 | 3.0000 | 0.0 N | 15.0000 | 150.0000 | 30.0000 | 150.0000 | 0.0 N | 30.0000 | 50.0000 | 50.0000 |
| | 67ADV68 | 1.5000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 70.0000 | 0.0 N | 0.0 N | 7.0000 | 20.0000 |
| | 67ADV67 | 2.0000 | 0.0 N | 0.0 N | 30.0000 | 30.0000 | 70.0000 | 0.0 N | 20.0000 | 10.0000 | 20.0000 |
| | 67ADV66 | 1.5000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 |
| | 67ADV65 | 1.5000 | 0.0 N | 0.0 N | 10.0000 | 5.0000 | 0.0 N | 0.0 N | 0.0 N | 2.0000 | 20.0000 |
| | 67ADV60 | 1.5000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 20.0000 |
| | 67ADV59 | 1.5000 | 0.0 N | 0.0 N | 10.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 30.0000 |
| | 67ADV57 | 1.5000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 20.0000 | 0.0 N | 0.0 N | 2.0000 | 15.0000 |
| | 67ADV55 | 2.0000 | 0.0 N | 0.0 N | 30.0000 | 30.0000 | 20.0000 | 0.0 N | 0.0 N | 7.0000 | 15.0000 |
| | 67ADV53 | 1.5000 | 0.0 N | 0.0 N | 10.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 5.0000 | 20.0000 |
| | 67ADV174 | 3.0000 | 0.0 N | 15.0000 | 150.0000 | 50.0000 | 150.0000 | 0.0 N | 20.0000 | 70.0000 | 50.0000 |
| | 67ADV174 | 3.0000 | 0.0 N | 15.0000 | 150.0000 | 50.0000 | 150.0000 | 0.0 N | 30.0000 | 70.0000 | 70.0000 |
| | 67ADV174 | 2.0000 | 0.0 N | 20.0000 | 150.0000 | 70.0000 | 100.0000 | 0.0 N | 20.0000 | 50.0000 | 50.0000 |
| | 67ADV174 | 3.0000 | 0.0 N | 15.0000 | 70.0000 | 50.0000 | 300.0000 | 0.0 N | 30.0000 | 50.0000 | 70.0000 |
| | 67ADV174 | 3.0000 | 0.0 N | 30.0000 | 200.0000 | 50.0000 | 300.0000 | 0.0 N | 30.0000 | 100.0000 | 100.0000 |
| | 67ADV175 | 3.0000 | 0.0 N | 15.0000 | 70.0000 | 30.0000 | 150.0000 | 0.0 N | 30.0000 | 30.0000 | 70.0000 |
| | 67ADV175 | 1.5000 | 0.0 N | 15.0000 | 70.0000 | 50.0000 | 300.0000 | 0.0 N | 30.0000 | 30.0000 | 50.0000 |
| | 67ADV175 | 2.0000 | 0.0 N | 15.0000 | 70.0000 | 50.0000 | 150.0000 | 0.0 N | 15.0000 | 30.0000 | 50.0000 |
| | 67ADV175 | 1.5000 | 0.0 N | 30.0000 | 200.0000 | 70.0000 | 100.0000 | 0.0 N | 15.0000 | 70.0000 | 50.0000 |
| | 67ADV176 | 1.0000 | 0.0 N | 30.0000N | 150.0000 | 100.0000 | 150.0000 | 0.0 N | 20.0000 | 70.0000 | 70.0000 |
| | 67ADV176 | 1.0000 | 0.0 N | 30.0000 | 150.0000 | 100.0000 | 200.0000 | 0.0 N | 10.0000 | 70.0000 | 150.0000 |
| | 67ADV177 | 2.0000 | 0.0 N | 20.0000 | 150.0000 | 100.0000 | 150.0000 | 0.0 N | 10.0000 | 70.0000 | 70.0000 |
| | 67ADV177 | 2.0000 | 0.0 N | 30.0000 | 200.0000 | 100.0000 | 100.0000 | 0.0 N | 15.0000 | 70.0000 | 150.0000 |
| | 67ADV178 | 2.0000 | 0.0 N | 30.0000 | 100.0000 | 70.0000 | 150.0000 | 0.0 N | 30.0000 | 70.0000 | 50.0000 |
| | 67ADV178 | 3.0000 | 0.0 N | 30.0000 | 150.0000 | 70.0000 | 300.0000 | 0.0 N | 30.0000 | 70.0000 | 70.0000 |
| | 67ADV179 | 1.5000 | 0.0 N | 10.0000 | 30.0000 | 70.0000 | 100.0000 | 0.0 N | 10.0000 | 20.0000 | 70.0000 |
| HG-6 | 67ADV7 | 0.0 N | 0.0 N | 10.0000 | 150.0000 | 30.0000 | 30.0000 | 0.0 N | 0.0 B | 30.0000 | 30.0000 |
| | 67ADV10 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 20.0000 | 30.0000 | 0.0 N | 0.0 B | 15.0000 | 50.0000 |
| | 67ADV11 | 0.0 N | 0.0 N | 10.0000 | 100.0000 | 30.0000 | 30.0000 | 0.0 N | 0.0 B | 20.0000 | 50.0000 |
| | 67AMM173 | 1.5000 | 0.0 N | 10.0000 | 100.0000 | 50.0000 | 50.0000 | 7.0000 | 0.0 N | 30.0000 | 30.0000 |

TABLE 1. SED. SAMPLE ANALYSES

| QUAD | SAMPLE | SB PPM | SC PPM | SN PPM | SR PPM | V PPM | W PPM | Y PPM | ZN PPM | ZR PPM |
|---|---|---|---|---|---|---|---|---|---|---|
| HA-6 | 67ADV125 | 0.0 N | 10.0000 | 0.0 N | 300.0000 | 50.0000 | 0.0 N | 5.0000 | 0.0 N | 70.0000 |
| | 67ADV29 | 0.0 N | 20.0000 | 0.0 N | 500.0000 | 70.0000 | 0.0 N | 15.0000 | 0.0 N | 150.0000 |
| | 67ADV30 | 0.0 N | 30.0000 | 0.0 N | 700.0000 | 200.0000 | 0.0 N | 15.0000 | 0.0 N | 200.0000 |
| | 67ADV127 | 0.0 N | 15.0000 | 0.0 N | 300.0000 | 70.0000 | 0.0 N | 5.0000 | 0.0 N | 50.0000 |
| | 67ADV167 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 50.0000 | 0.0 N | 1500.0000 |
| | 67ADV167 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 50.0000 | 0.0 N | 1500.0000 |
| | 67ADV167 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 70.0000 | 0.0 N | 150.0000 |
| | 67ADV167 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 1500.0000 |
| | 67ADV167 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 700.0000 |
| | 67ADV167 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 700.0000 |
| | 67ADV167 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 500.0000 |
| | 67ADV167 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 500.0000 |
| | 67ADV167 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 50.0000 | 0.0 N | 700.0000 |
| | 67ADV167 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 50.0000 | 0.0 N | 700.0000 |
| | 67ADV167 | 0.0 N | 0.0 B | 0.0 N | 500.0000 | 150.0000 | 0.0 N | 50.0000 | 0.0 N | 700.0000 |
| | 67ADV132 | 0.0 N | 20.0000 | 0.0 N | 100.0000 | 100.0000 | 0.0 N | 7.0000 | 0.0 N | 150.0000 |
| | 67ADV132 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 50.0000 | 0.0 N | 1500.0000 |
| | 67ADV132 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 1000.0000 |
| | 67ADV132 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 50.0000 | 0.0 N | 1500.0000 |
| | 67ADV132 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 50.0000 | 0.0 N | 1500.0000 |
| | 67ADV132 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 50.0000 | 0.0 N | 2000.0000 |
| | 67ADV68 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 50.0000 | 0.0 N | 7.0000 | 0.0 N | 70.0000 |
| | 67ADV67 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 70.0000 | 0.0 N | 15.0000 | 0.0 N | 100.0000 |
| | 67ADV66 | 0.0 N | 0.0 N | 0.0 N | 500.0000 | 70.0000 | 0.0 N | 7.0000 | 0.0 N | 150.0000 |
| | 67ADV65 | 0.0 N | 0.0 N | 0.0 N | 500.0000 | 50.0000 | 0.0 N | 15.0000 | 0.0 N | 70.0000 |
| | 67ADV60 | 0.0 N | 0.0 N | 0.0 N | 500.0000 | 30.0000 | 0.0 N | 5.0000 | 0.0 N | 100.0000 |
| | 67ADV59 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 70.0000 | 0.0 N | 5.0000 | 0.0 N | 100.0000 |
| | 67ADV57 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 30.0000 | 0.0 N | 5.0000 | 0.0 N | 70.0000 |
| | 67ADV55 | 0.0 N | 7.0000 | 0.0 N | 500.0000 | 70.0000 | 0.0 N | 7.0000 | 0.0 N | 200.0000 |
| | 67ADV53 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 50.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 |
| | 67ADV174 | 0.0 N | 0.0 B | 0.0 N | 300.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 1500.0000 |
| | 67ADV174 | 0.0 N | 0.0 B | 0.0 N | 500.0000 | 150.0000 | 0.0 N | 50.0000 | 0.0 N | 1500.0000 |
| | 67ADV174 | 0.0 N | 0.0 B | 0.0 N | 300.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 1000.0000 |
| | 67ADV174 | 0.0 N | 0.0 B | 30.0000 | 1000.0000 | 150.0000 | 0.0 N | 70.0000 | 0.0 N | 5000.0000 |
| | 67ADV174 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 70.0000 | 0.0 N | 1000.0000 |
| | 67ADV175 | 0.0 N | 0.0 B | 0.0 N | 1500.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 700.0000 |
| | 67ADV175 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 50.0000 | 0.0 N | 300.0000 |
| | 67ADV175 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 300.0000 |
| | 67ADV175 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 700.0000 |
| | 67ADV176 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 500.0000 |
| | 67ADV176 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 700.0000 |
| | 67ADV177 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 20.0000 | 0.0 N | 700.0000 |
| | 67ADV177 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 300.0000 | 0.0 N | 20.0000 | 0.0 N | 300.0000 |
| | 67ADV178 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 70.0000 | 0.0 N | 1000.0000 |
| | 67ADV178 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 70.0000 | 0.0 N | 1500.0000 |
| | 67ADV179 | 0.0 N | 0.0 B | 0.0 N | 1500.0000 | 70.0000 | 0.0 N | 15.0000 | 0.0 N | 300.0000 |
| HB-6 | 67ADV7 | 0.0 N | 15.0000 | 0.0 N | 100.0000 | 100.0000 | 0.0 N | 7.0000 | 0.0 N | 200.0000 |
| | 67ADV10 | 0.0 N | 10.0000 | 0.0 N | 150.0000 | 100.0000 | 0.0 N | 10.0000 | 0.0 N | 200.0000 |
| | 67ADV11 | 0.0 N | 10.0000 | 0.0 N | 100.0000 | 200.0000 | 0.0 N | 10.0000 | 0.0 N | 150.0000 |
| | 67AMM173 | 0.0 N | 7.0000 | 0.0 N | 500.0000 | 70.0000 | 0.0 N | 5.0000 | 0.0 N | 100.0000 |

TABLE 1. SED. SAMPLE ANALYSES

| QUAD | SAMPLE | FE PCT | MG PCT | CA PCT | TI PCT | MN PPM | AG PPM | AS PPM | AU PPM | B PPM | BA PPM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-4 | 67AMM337 | 7.0000 | 2.0000 | 3.0000 | 0.7000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1500.0000 |
| | 67AMM338 | 7.0000 | 3.0000 | 3.0000 | 0.7000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1500.0000 |
| | 67AMM336 | 7.0000 | 2.0000 | 7.0000 | 0.7000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000L | 2000.0000 |
| | 67AMM339 | 7.0000 | 1.5000 | 7.0000 | 0.7000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 3000.0000 |
| | 67AMM334 | 7.0000 | 0.7000 | 3.0000 | 0.3000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000L | 3000.0000 |
| HC-4 | 67AMM314 | 7.0000 | 15.0000 | 1.0000 | 0.7000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1000.0000 |
| | 67AMM315 | 7.0000 | 5.0000 | 7.0000 | 0.5000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1500.0000 |
| | 67AMM316 | 7.0000 | 3.0000 | 5.0000 | 0.5000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1000.0000 |
| | 67AMM317 | 7.0000 | 1.5000 | 1.5000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1000.0000 |
| | 67AMM308 | 10.0000 | 2.0000 | 3.0000 | 0.3000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1000.0000 |
| | 67AMM318 | 7.0000 | 1.5000 | 0.3000 | 0.5000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000L | 2000.0000 |
| | 67AMM319 | 7.0000 | 0.7000 | 0.3000 | 0.5000 | 150.0000 | 2.0000 | 0.0 N | 0.0 N | 20.0000L | 7000.0000 |
| HD-4 | 67AMM312 | 7.0000 | 1.5000 | 1.0000 | 0.5000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1000.0000 |
| | 67AMM313 | 7.0000 | 1.0000 | 1.0000 | 0.5000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1000.0000 |
| SA-1 | 67ADV34 | 1.5000 | 0.3000 | 1.0000 | 0.1500 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1500.0000 |
| | 67ADV35 | 1.5000 | 0.5000 | 1.0000 | 0.1500 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1500.0000 |
| | 67ADV32 | 5.0000 | 0.7000 | 1.0000 | 0.2000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1000.0000 |
| | 67AMM171 | 1.5000 | 0.7000 | 1.0000 | 0.0700 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 700.0000 |
| | 67AMM169 | 1.0000 | 0.5000 | 1.5000 | 0.1000 | 200.0000 | 0.0 N | 0.0 N | 0.0300 | 0.0 N | 700.0000 |
| | 67AMM170 | 5.0000 | 0.7000 | 1.5000 | 0.2000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 700.0000 |
| | 67AMM167 | 1.5000 | 0.3000 | 1.0000 | 0.1500 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 65AMM169 | 1.0000 | 0.5000 | 1.5000 | 0.2000 | 200.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 2000.0000 |
| SA-2 | 67AMM101 | 5.0000 | 0.7000 | 2.0000 | 0.5000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 100.0000 | 1000.0000 |
| | 67AMM102 | 2.0000 | 0.7000 | 1.5000 | 0.1500 | 150.0000 | 1.5000 | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67AMM100 | 3.0000 | 0.7000 | 1.5000 | 0.2000 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1000.0000 |
| | 67AMM99 | 3.0000 | 0.7000 | 1.5000 | 0.3000 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1000.0000 |
| | 67AMM96 | 5.0000 | 0.7000 | 2.0000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1500.0000 |
| | 67AMM97 | 5.0000 | 0.7000 | 1.5000 | 0.5000 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 700.0000 |
| | 67AMM95 | 3.0000 | 0.7000 | 1.5000 | 0.1500 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 1500.0000 |
| | 67AMM94 | 5.0000 | 0.7000 | 1.5000 | 0.3000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 700.0000 |
| | 67AMM93 | 3.0000 | 0.7000 | 1.5000 | 0.1500 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 1000.0000 |
| | 67AMM92 | 3.0000 | 0.7000 | 1.0000 | 0.1500 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67AMM91 | 3.0000 | 0.7000 | 1.0000 | 0.1500 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 700.0000 |
| | 67AMM98 | 7.0000 | 1.0000 | 2.0000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 1000.0000 |
| | 67AMM103 | 3.0000 | 0.7000 | 1.5000 | 0.1500 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| SA-3 | 67AMM122 | 3.0000 | 0.7000 | 1.5000 | 0.1500 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 1000.0000 |
| | 67AMM121 | 1.5000 | 0.7000 | 1.0000 | 0.1500 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1500.0000 |
| | 67AMM120 | 5.0000 | 1.5000 | 1.5000 | 0.2000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 2000.0000 |
| | 67AMM106 | 2.0000 | 0.7000 | 1.5000 | 0.1500 | 300.0000 | 0.0 N | 0.0 N | 0.0200 | 10.0000 | 1000.0000 |
| | 67AMM105 | 3.0000 | 0.7000 | 1.5000 | 0.1500 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 66AMM75 | 3.0000 | 1.0000 | 2.0000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67AMM213 | 1.0000 | 0.5000 | 1.0000 | 0.1500 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 700.0000 |
| | 67AMM215 | 0.7000 | 0.1000 | 0.2000 | 0.0700 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 100.0000 |
| | 67AMM214 | 0.7000 | 0.2000 | 0.1000 | 0.1000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 150.0000 |
| | 66AMM74 | 2.0000 | 0.5000 | 1.0000 | 0.3000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 700.0000 |
| SA-4 | 67ADV121 | 7.0000 | 0.7000 | 0.7000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1500.0000 |
| | 67ADV122 | 7.0000 | 1.5000 | 1.0000 | 0.5000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1500.0000 |
| | 66AMM70 | 5.0000 | 1.0000 | 2.0000 | 0.5000 | 700.0000 | 0.7000L | 0.0 N | 0.0 N | 20.0000 | 1000.0000 |
| | 66AMM71 | 5.0000 | 1.0000 | 1.5000 | 0.5000 | 700.0000 | 0.7000L | 0.0 N | 0.0 N | 30.0000 | 1500.0000 |
| SB-1 | 64AMM126 | 2.0000 | 0.5000 | 1.5000 | 0.1500 | 300.0000 | 0.0 N | 0.0 N | 0.0 B | 10.0000 | 2000.0000 |

TABLE 1. SED. SAMPLE ANALYSES

| QUAD | SAMPLE | BE PPM | BI PPM | CO PPM | CR PPM | CU PPM | LA PPM | MO PPM | NB PPM | NI PPM | PB PPM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NB-6 | 67AMM337 | 1.5000 | 0.0 N | 20.0000 | 100.0000 | 150.0000 | 100.0000 | 5.0000 | 10.0000 | 70.0000 | 70.0000 |
| | 67AMM338 | 3.0000 | 0.0 N | 30.0000 | 150.0000 | 150.0000 | 70.0000 | 10.0000 | 15.0000 | 70.0000 | 50.0000 |
| | 67AMM336 | 2.0000 | 0.0 N | 15.0000 | 70.0000 | 50.0000 | 100.0000 | 3.0000 | 10.0000 | 50.0000 | 50.0000 |
| | 67AMM339 | 2.0000 | 0.0 N | 15.0000 | 70.0000 | 70.0000 | 200.0000 | 0.0 N | 20.0000 | 50.0000 | 70.0000 |
| | 67AMM334 | 1.5000 | 0.0 N | 15.0000 | 30.0000 | 50.0000 | 150.0000 | 0.0 N | 15.0000 | 15.0000 | 50.0000 |
| NC-4 | 67AMM314 | 1.0000 | 0.0 N | 30.0000 | 70.0000 | 70.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 15.0000 |
| | 67AMM315 | 1.0000 | 0.0 N | 30.0000 | 200.0000 | 70.0000 | 100.0000 | 0.0 N | 10.0000 | 70.0000 | 20.0000 |
| | 67AMM316 | 1.0000 | 0.0 N | 20.0000 | 70.0000 | 50.0000 | 100.0000 | 0.0 N | 10.0000 | 50.0000 | 20.0000 |
| | 67AMM317 | 0.0 N | 0.0 N | 15.0000 | 70.0000 | 30.0000 | 0.0 N | 0.0 N | 10.0000 | 30.0000 | 20.0000 |
| | 67AMM308 | 1.0000 | 0.0 N | 70.0000 | 100.0000 | 200.0000 | 50.0000 | 0.0 N | 10.0000 | 70.0000 | 30.0000 |
| | 67AMM318 | 1.0000 | 0.0 N | 15.0000 | 70.0000 | 150.0000 | 0.0 N | 3.0000 | 0.0 N | 20.0000 | 20.0000 |
| | 67AMM319 | 0.0 N | 0.0 N | 5.0000 | 50.0000 | 100.0000 | 0.0 N | 7.0000 | 0.0 N | 7.0000 | 20.0000 |
| NB-4 | 67AMM312 | 1.0000 | 0.0 N | 15.0000 | 70.0000 | 50.0000 | 50.0000 | 0.0 N | 10.0000 | 50.0000 | 20.0000 |
| | 67AMM313 | 1.0000 | 0.0 N | 15.0000 | 100.0000 | 30.0000 | 50.0000 | 0.0 N | 15.0000 | 50.0000 | 15.0000 |
| SA-1 | 67ADV34 | 1.5000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 30.0000 | 0.0 N | 0.0 N | 5.0000 | 70.0000 |
| | 67ADV35 | 1.0000 | 0.0 N | 0.0 N | 0.0 N | 7.0000 | 50.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 |
| | 67ADV32 | 1.5000 | 0.0 N | 10.0000 | 50.0000 | 30.0000 | 200.0000 | 5.0000 | 0.0 N | 15.0000 | 30.0000 |
| | 67AMM171 | 1.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 30.0000 |
| | 67AMM169 | 1.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 20.0000 | 0.0 N | 0.0 N | 3.0000 | 30.0000 |
| | 67AMM170 | 1.5000 | 0.0 N | 15.0000 | 30.0000 | 30.0000 | 30.0000 | 7.0000 | 0.0 N | 7.0000 | 50.0000 |
| | 67AMM167 | 1.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 20.0000 | 0.0 N | 0.0 N | 2.0000 | 20.0000 |
| | 65AMM169 | 1.5000 | 0.0 N | 5.0000 | 20.0000 | 15.0000 | 50.0000 | 0.0 N | 10.0000 | 7.0000 | 50.0000 |
| SA-2 | 67AMM101 | 2.0000 | 0.0 N | 10.0000 | 50.0000 | 20.0000 | 50.0000 | 0.0 N | 20.0000 | 15.0000 | 20.0000 |
| | 67AMM102 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 10.0000 | 0.0 N | 0.0 N | 0.0 B | 15.0000 | 150.0000 |
| | 67AMM100 | 1.5000 | 0.0 N | 0.0 N | 30.0000 | 30.0000 | 30.0000 | 0.0 N | 0.0 N | 15.0000 | 30.0000 |
| | 67AMM99 | 1.5000 | 0.0 N | 0.0 N | 30.0000 | 30.0000 | 70.0000 | 0.0 N | 0.0 N | 15.0000 | 50.0000 |
| | 67AMM96 | 1.5000 | 0.0 N | 0.0 N | 50.0000 | 20.0000 | 30.0000 | 0.0 N | 0.0 N | 15.0000 | 30.0000 |
| | 67AMM97 | 1.5000 | 0.0 N | 0.0 N | 70.0000 | 30.0000 | 30.0000 | 7.0000 | 0.0 N | 15.0000 | 100.0000 |
| | 67AMM95 | 1.0000 | 0.0 N | 0.0 N | 30.0000 | 20.0000 | 20.0000 | 0.0 N | 0.0 N | 15.0000 | 50.0000 |
| | 67AMM94 | 1.5000 | 0.0 N | 0.0 N | 50.0000 | 20.0000 | 20.0000 | 0.0 N | 0.0 N | 15.0000 | 50.0000 |
| | 67AMM93 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 20.0000 | 30.0000 | 0.0 N | 0.0 N | 10.0000 | 70.0000 |
| | 67AMM92 | 1.0000 | 0.0 N | 0.0 N | 15.0000 | 20.0000 | 70.0000 | 0.0 N | 0.0 N | 10.0000 | 50.0000 |
| | 67AMM91 | 1.0000 | 0.0 N | 0.0 N | 20.0000 | 20.0000 | 50.0000 | 0.0 N | 0.0 N | 15.0000 | 30.0000 |
| | 67AMM98 | 1.5000 | 0.0 N | 10.0000 | 70.0000 | 20.0000 | 20.0000 | 0.0 N | 0.0 N | 20.0000 | 50.0000 |
| | 67AMM103 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 B | 20.0000 | 50.0000 |
| SA-3 | 67AMM122 | 1.0000 | 0.0 N | 0.0 N | 200.0000 | 20.0000 | 50.0000 | 0.0 N | 0.0 N | 20.0000 | 30.0000 |
| | 67AMM121 | 1.0000 | 0.0 N | 0.0 N | 15.0000 | 15.0000 | 30.0000 | 0.0 N | 0.0 N | 10.0000 | 70.0000 |
| | 67AMM120 | 1.0000 | 0.0 N | 10.0000 | 50.0000 | 50.0000 | 70.0000 | 0.0 N | 0.0 N | 20.0000 | 70.0000 |
| | 67AMM106 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 15.0000 | 0.0 N | 0.0 N | 0.0 B | 15.0000 | 50.0000 |
| | 67AMM105 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 15.0000 | 0.0 N | 0.0 N | 0.0 B | 15.0000 | 50.0000 |
| | 66AMM75 | 2.0000 | 0.0 N | 15.0000 | 50.0000 | 50.0000 | 150.0000 | 7.0000 | 30.0000 | 30.0000 | 50.0000 |
| | 67AMM213 | 3.0000 | 0.0 N | 0.0 N | 10.0000 | 20.0000 | 30.0000 | 0.0 N | 0.0 N | 5.0000 | 20.0000 |
| | 67AMM215 | 3.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 20.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 |
| | 67AMM214 | 5.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 |
| | 66AMM74 | 7.0000 | 0.0 N | 7.0000 | 30.0000 | 50.0000 | 100.0000 | 5.0000 | 50.0000 | 15.0000 | 70.0000 |
| SA-4 | 67ADV121 | 1.0000 | 0.0 N | 10.0000 | 50.0000 | 30.0000 | 30.0000 | 0.0 N | 0.0 N | 20.0000 | 150.0000 |
| | 67ADV122 | 1.0000 | 0.0 N | 15.0000 | 100.0000 | 30.0000 | 30.0000 | 0.0 N | 0.0 N | 30.0000 | 70.0000 |
| | 66AMM70 | 1.5000 | 0.0 N | 20.0000 | 150.0000 | 70.0000 | 50.0000 | 3.0000 | 15.0000 | 50.0000 | 30.0000 |
| | 66AMM71 | 2.0000 | 0.0 N | 20.0000 | 100.0000 | 100.0000 | 100.0000 | 7.0000 | 15.0000 | 50.0000 | 100.0000 |
| SG-1 | 64AMM126 | 2.0000 | 0.0 N | 3.0000 | 10.0000 | 10.0000 | 50.0000 | 0.0 N | 20.0000 | 5.0000 | 50.0000 |

TABLE 1. SED. SAMPLE ANALYSES

| QUAD | SAMPLE | SB PPM | SC PPM | SN PPM | SR PPM | V PPM | W PPM | Y PPM | ZN PPM | ZR PPM |
|---|---|---|---|---|---|---|---|---|---|---|
| HD-6 | 67AMM337 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 100.0000 | 0.0 N | 30.0000 | 0.0 N | 500.0000 |
| | 67AMM338 | 0.0 N | 0.0 B | 0.0 N | 500.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 300.0000 |
| | 67AMM336 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 100.0000 | 0.0 N | 30.0000 | 0.0 N | 300.0000 |
| | 67AMM339 | 0.0 N | 0.0 B | 0.0 N | 1500.0000 | 100.0000 | 0.0 N | 50.0000 | 0.0 N | 300.0000 |
| | 67AMM334 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 100.0000 | 0.0 N | 30.0000 | 0.0 N | 150.0000 |
| HC-4 | 67AMM314 | 0.0 N | 0.0 B | 0.0 N | 500.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 200.0000 |
| | 67AMM315 | 0.0 N | 0.0 B | 0.0 N | 500.0000 | 150.0000 | 0.0 N | 50.0000 | 0.0 N | 700.0000 |
| | 67AMM316 | 0.0 N | 0.0 B | 0.0 N | 300.0000 | 150.0000 | 0.0 N | 50.0000 | 0.0 N | 150.0000 |
| | 67AMM317 | 0.0 N | 0.0 B | 0.0 N | 300.0000 | 100.0000 | 0.0 N | 20.0000 | 0.0 N | 300.0000 |
| | 67AMM308 | 0.0 N | 0.0 B | 0.0 N | 300.0000 | 150.0000 | 0.0 N | 30.0000 | 300.0000 | 150.0000 |
| | 67AMM318 | 0.0 N | 0.0 B | 0.0 N | 150.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 200.0000 |
| | 67AMM319 | 0.0 N | 0.0 B | 0.0 N | 100.0000 | 100.0000 | 0.0 N | 30.0000 | 0.0 N | 150.0000 |
| HO-4 | 67AMM312 | 0.0 N | 0.0 B | 0.0 N | 300.0000 | 100.0000 | 0.0 N | 30.0000 | 0.0 N | 300.0000 |
| | 67AMM313 | 0.0 N | 0.0 B | 0.0 N | 200.0000 | 70.0000 | 0.0 N | 30.0000 | 0.0 N | 200.0000 |
| SA-1 | 67ADV34 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 50.0000 | 0.0 N | 7.0000 | 0.0 N | 150.0000 |
| | 67ADV35 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 50.0000 | 0.0 N | 5.0000 | 0.0 N | 100.0000 |
| | 67ADV32 | 0.0 N | 5.0000 | 0.0 N | 500.0000 | 100.0000 | 0.0 N | 15.0000 | 0.0 N | 150.0000 |
| | 67AMM171 | 0.0 N | 0.0 N | 0.0 N | 500.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 |
| | 67AMM169 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 |
| | 67AMM170 | 0.0 N | 7.0000 | 0.0 N | 300.0000 | 100.0000 | 0.0 N | 20.0000 | 0.0 N | 150.0000 |
| | 67AMM167 | 0.0 N | 0.0 N | 0.0 N | 500.0000 | 50.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 |
| | 65AMM169 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 50.0000 | 0.0 N | 15.0000 | 0.0 N | 200.0000 |
| SA-2 | 67AMM101 | 0.0 N | 7.0000 | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 20.0000 | 0.0 N | 150.0000 |
| | 67AMM102 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 |
| | 67AMM100 | 0.0 N | 7.0000 | 0.0 N | 1000.0000 | 100.0000 | 0.0 N | 15.0000 | 0.0 N | 150.0000 |
| | 67AMM99 | 0.0 N | 7.0000 | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 15.0000 | 0.0 N | 150.0000 |
| | 67AMM96 | 0.0 N | 10.0000 | 0.0 N | 1000.0000 | 100.0000 | 0.0 N | 20.0000 | 0.0 N | 100.0000 |
| | 67AMM97 | 0.0 N | 10.0000 | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 15.0000 | 0.0 N | 70.0000 |
| | 67AMM95 | 0.0 N | 5.0000 | 0.0 N | 700.0000 | 70.0000 | 0.0 N | 10.0000 | 0.0 N | 70.0000 |
| | 67AMM94 | 0.0 N | 7.0000 | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 20.0000 | 0.0 N | 300.0000 |
| | 67AMM93 | 0.0 N | 7.0000 | 0.0 N | 500.0000 | 70.0000 | 0.0 N | 7.0000 | 0.0 N | 100.0000 |
| | 67AMM92 | 0.0 N | 7.0000 | 0.0 N | 500.0000 | 70.0000 | 0.0 N | 7.0000 | 0.0 N | 70.0000 |
| | 67AMM91 | 0.0 N | 5.0000 | 0.0 N | 500.0000 | 100.0000 | 0.0 N | 10.0000 | 0.0 N | 100.0000 |
| | 67AMM98 | 0.0 N | 7.0000 | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 15.0000 | 0.0 N | 70.0000 |
| | 67AMM103 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 |
| SA-3 | 67AMM122 | 0.0 N | 7.0000 | 0.0 N | 700.0000 | 70.0000 | 0.0 N | 5.0000 | 0.0 N | 70.0000 |
| | 67AMM121 | 0.0 N | 5.0000 | 0.0 N | 500.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 |
| | 67AMM120 | 0.0 N | 7.0000 | 0.0 N | 700.0000 | 70.0000 | 0.0 N | 7.0000 | 0.0 N | 30.0000 |
| | 67AMM106 | 0.0 N | 0.0 N | 0.0 N | 500.0000 | 50.0000 | 0.0 N | 5.0000 | 0.0 N | 30.0000 |
| | 67AMM105 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 |
| | 66AMM75 | 0.0 N | 20.0000 | 0.0 N | 1000.0000 | 100.0000 | 0.0 N | 30.0000 | 0.0 N | 500.0000 |
| | 67AMM213 | 0.0 N | 0.0 N | 0.0 N | 300.0000 | 50.0000 | 0.0 N | 10.0000 | 0.0 N | 100.0000 |
| | 67AMM215 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 |
| | 67AMM214 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 0.0 N | 0.0 N | 0.0 N | 100.0000 |
| | 66AMM74 | 0.0 N | 7.0000 | 0.0 N | 500.0000 | 70.0000 | 0.0 N | 20.0000 | 0.0 N | 1000.0000 |
| SA-4 | 67ADV121 | 0.0 N | 10.0000 | 0.0 N | 150.0000 | 70.0000 | 0.0 N | 10.0000 | 0.0 N | 200.0000 |
| | 67ADV122 | 0.0 N | 10.0000 | 0.0 N | 300.0000 | 100.0000 | 0.0 N | 10.0000 | 0.0 N | 200.0000 |
| | 66AMM70 | 0.0 N | 20.0000 | 0.0 N | 500.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 200.0000 |
| | 66AMM71 | 0.0 N | 20.0000 | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 20.0000 | 0.0 N | 300.0000 |
| SB-1 | 64AMM126 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 70.0000 | 0.0 N | 15.0000 | 0.0 N | 150.0000 |

TABLE 1. SED. SAMPLE ANALYSES

| QUAD | SAMPLE | FE PCT | MG PCT | CA PCT | TI PCT | MN PPM | AG PPM | AS PPM | AU PPM | B PPM | BA PPM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SB-1 | 64AMM127 | 3.0000 | 0.7000 | 2.0000 | 0.2000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 2000.0000 |
| | 64AMM128 | 5.0000 | 1.5000 | 3.0000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 2000.0000 |
| | 64AMM129 | 7.0000 | 1.5000 | 2.0000 | 0.3000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 2000.0000 |
| | 67AMM332 | 7.0000 | 2.0000 | 5.0000 | 0.7000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000L | 2000.0000 |
| | 67AMM330 | 7.0000 | 1.5000 | 0.7000 | 1.0000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 1500.0000 |
| | 67AMM331 | 7.0000 | 2.0000 | 5.0000 | 0.5000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1500.0000 |
| | 67AMM329 | 7.0000 | 5.0000 | 5.0000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000L | 1500.0000 |
| | 67AMM328 | 5.0000 | 3.0000 | 7.0000 | 1.0000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000L | 2000.0000 |
| | 67AMM333 | 5.0000 | 1.5000 | 5.0000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000L | 3000.0000 |
| | 64AMM131 | 7.0000 | 1.5000 | 3.0000 | 0.3000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 2000.0000 |
| | 67AMM165 | 3.0000 | 1.0000 | 2.0000 | 0.2000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 2000.0000 |
| | 67AMM166 | 10.0000 | 1.5000 | 3.0000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1000.0000 |
| | 67ADV145 | 10.00000G | 3.0000 | 7.0000 | 1.0000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 3000.0000 |
| | 67ADV146 | 10.00000G | 2.0000 | 7.0000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 3000.0000 |
| | 67ADV170 | 7.0000 | 2.0000 | 3.0000 | 0.7000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000L | 3000.0000 |
| | 67ADV169 | 7.0000 | 3.0000 | 5.0000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000L | 2000.0000 |
| | 67ADV147 | 10.00000G | 3.0000 | 7.0000 | 1.0000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 2000.0000 |
| | 67ADV149 | 7.0000 | 3.0000 | 7.0000 | 0.7000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 2000.0000 |
| | 67ADV150 | 7.0000 | 2.0000 | 5.0000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1500.0000 |
| | 67ADV151 | 10.0000 | 3.0000 | 7.0000 | 1.5000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 3000.0000 |
| | 67ADV98 | 7.0000 | 1.5000 | 1.5000 | 0.3000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 1500.0000 |
| | 67ADV105 | 10.0000 | 1.5000 | 1.5000 | 0.3000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67ADV104 | 7.0000 | 1.5000 | 1.5000 | 0.2000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67ADV106 | 10.0000 | 1.5000 | 1.5000 | 0.5000 | 2000.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67ADV107 | 10.0000 | 1.5000 | 1.5000 | 0.5000 | 2000.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67ADV108 | 10.0000 | 1.5000 | 5.0000 | 0.5000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67ADV109 | 10.0000 | 1.5000 | 2.0000 | 0.5000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 65AMM77 | 5.0000 | 1.0000 | 2.0000 | 0.3000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 2000.0000 |
| | 67AMM164 | 5.0000 | 1.5000 | 2.0000 | 0.3000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 2000.0000 |
| | 67AMM176 | 7.0000 | 1.0000 | 2.0000 | 1.0000 | 1500.0000 | 0.0 N | 0.0 N | 0.0200 | 30.0000 | 1000.0000 |
| | 67AMM163 | 7.0000 | 1.5000 | 2.0000 | 0.3000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 2000.0000 |
| | 67AMM162 | 7.0000 | 1.0000 | 2.0000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 2000.0000 |
| | 67AMM161 | 10.0000 | 1.5000 | 2.0000 | 0.3000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 2000.0000 |
| SB-2 | 67ADV95 | 5.0000 | 1.0000 | 1.5000 | 0.5000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 1500.0000 |
| | 67AMM175 | 7.0000 | 1.5000 | 1.5000 | 0.5000 | 300.0000 | 0.0 N | 0.0 N | 0.0200 | 70.0000 | 700.0000 |
| | 65AMM95 | 7.0000 | 5.0000 | 3.0000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 65AMM94 | 5.0000 | 1.5000 | 3.0000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1500.0000 |
| | 67AMM88 | 3.0000 | 0.3000 | 1.5000 | 0.1500 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 1500.0000 |
| | 67ADV46 | 2.0000 | 0.7000 | 1.0000 | 0.1500 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 2000.0000 |
| | 67ADV43 | 2.0000 | 0.7000 | 1.0000 | 0.1500 | 200.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 1500.0000 |
| | 67ADV42 | 3.0000 | 0.7000 | 1.0000 | 0.1500 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 2000.0000 |
| | 67ADV39 | 3.0000 | 0.7000 | 1.5000 | 0.2000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 2000.0000 |
| | 65AMM170 | 2.0000 | 0.7000 | 2.0000 | 0.5000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 2000.0000 |
| | 67ADV37 | 5.0000 | 0.7000 | 1.5000 | 0.2000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 2000.0000 |
| | 67AMM87 | 2.0000 | 0.7000 | 1.5000 | 0.3000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 65AMM171 | 1.5000 | 0.5000 | 1.5000 | 0.3000 | 200.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 2000.0000 |
| | 67AMM75 | 5.0000 | 0.5000 | 1.5000 | 0.1500 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1000.0000 |
| | 67AMM86 | 2.0000 | 0.3000 | 1.0000 | 0.1000 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 65AMM172 | 1.5000 | 0.3000 | 1.5000 | 0.3000 | 200.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 2000.0000 |
| | 67AMM78 | 3.0000 | 0.7000 | 2.0000 | 0.2000 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 1000.0000 |

TABLE 1. SED. SAMPLE ANALYSES

| QUAD | SAMPLE | BE PPM | BI PPM | CD PPM | CR PPM | CU PPM | LA PPM | MO PPM | NB PPM | NI PPM | PB PPM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SB-1 | 64AMM127 | 2.0000 | 0.0 N | 10.0000 | 15.0000 | 20.0000 | 50.0000 | 0.0 N | 15.0000 | 15.0000 | 50.0000 |
| | 64AMM128 | 2.0000 | 0.0 N | 20.0000 | 150.0000 | 50.0000 | 100.0000 | 0.0 N | 20.0000 | 50.0000 | 50.0000 |
| | 64AMM129 | 2.0000 | 0.0 N | 20.0000 | 70.0000 | 70.0000 | 70.0000 | 0.0 N | 15.0000 | 50.0000 | 50.0000 |
| | 67AMM332 | 2.0000 | 0.0 N | 20.0000 | 70.0000 | 100.0000 | 200.0000 | 0.0 N | 15.0000 | 70.0000 | 30.0000 |
| | 67AMM330 | 15.0000 | 0.0 N | 20.0000 | 150.0000 | 100.0000 | 70.0000 | 0.0 N | 10.0000 | 70.0000 | 30.0000 |
| | 67AMM331 | 1.0000 | 0.0 N | 20.0000 | 70.0000 | 150.0000 | 150.0000 | 0.0 N | 10.0000 | 50.0000 | 50.0000 |
| | 67AMM329 | 1.5000 | 0.0 N | 30.0000 | 300.0000 | 150.0000 | 150.0000 | 0.0 N | 10.0000 | 150.0000 | 30.0000 |
| | 67AMM328 | 1.0000 | 0.0 N | 30.0000 | 150.0000 | 100.0000 | 150.0000 | 0.0 N | 10.0000 | 70.0000 | 30.0000 |
| | 67AMM333 | 2.0000 | 0.0 N | 15.0000 | 20.0000 | 30.0000 | 200.0000 | 0.0 N | 15.0000 | 20.0000 | 30.0000 |
| | 64AMM131 | 2.0000 | 0.0 N | 20.0000 | 200.0000 | 50.0000 | 100.0000 | 0.0 N | 15.0000 | 70.0000 | 50.0000 |
| | 67AMM165 | 1.5000 | 0.0 N | 10.0000 | 100.0000 | 20.0000 | 50.0000 | 0.0 N | 0.0 N | 20.0000 | 30.0000 |
| | 67AMM166 | 1.5000 | 0.0 N | 20.0000 | 150.0000 | 30.0000 | 50.0000 | 0.0 N | 0.0 N | 100.0000 | 20.0000 |
| | 67ADV145 | 1.5000 | 0.0 N | 30.0000 | 50.0000 | 100.0000 | 100.0000 | 0.0 N | 10.0000 | 30.0000 | 30.0000 |
| | 67ADV146 | 1.0000 | 0.0 N | 30.0000 | 50.0000 | 150.0000 | 150.0000 | 0.0 N | 0.0 N | 30.0000 | 30.0000 |
| | 67ADV170 | 1.0000 | 0.0 N | 20.0000 | 150.0000 | 150.0000 | 100.0000 | 0.0 N | 10.0000 | 50.0000 | 30.0000 |
| | 67ADV169 | 0.0 N | 0.0 N | 30.0000 | 200.0000 | 300.0000 | 70.0000 | 0.0 N | 10.0000 | 70.0000 | 30.0000 |
| | 67ADV147 | 1.5000 | 0.0 N | 30.0000 | 200.0000 | 150.0000 | 200.0000 | 0.0 N | 10.0000 | 100.0000 | 30.0000 |
| | 67ADV149 | 1.0000 | 15.0000 | 30.0000 | 150.0000 | 150.0000 | 150.0000 | 0.0 N | 0.0 N | 100.0000 | 30.0000 |
| | 67ADV150 | 1.0000 | 0.0 N | 20.0000 | 70.0000 | 200.0000 | 70.0000 | 0.0 N | 0.0 N | 50.0000 | 30.0000 |
| | 67ADV151 | 1.5000 | 0.0 N | 30.0000 | 100.0000 | 150.0000 | 150.0000 | 0.0 N | 10.0000 | 70.0000 | 30.0000 |
| | 67ADV98 | 0.0 N | 0.0 N | 50.0000 | 200.0000 | 20.0000 | 100.0000 | 0.0 N | 0.0 N | 70.0000 | 0.0 N |
| | 67ADV105 | 1.0000 | 0.0 N | 50.0000 | 200.0000 | 50.0000 | 70.0000 | 0.0 N | 0.0 N | 50.0000 | 0.0 N |
| | 67ADV104 | 1.0000 | 0.0 N | 30.0000 | 70.0000 | 20.0000 | 20.0000 | 0.0 N | 0.0 N | 30.0000 | 20.0000 |
| | 67ADV106 | 0.0 N | 0.0 N | 30.0000 | 300.0000 | 30.0000 | 100.0000 | 0.0 N | 0.0 N | 20.0000 | 0.0 N |
| | 67ADV107 | 0.0 N | 0.0 N | 50.0000 | 70.0000 | 30.0000 | 70.0000 | 0.0 N | 0.0 N | 100.0000 | 0.0 N |
| | 67ADV108 | 0.0 N | 0.0 N | 70.0000 | 150.0000 | 50.0000 | 70.0000 | 0.0 N | 0.0 N | 200.0000 | 0.0 N |
| | 67ADV109 | 0.0 N | 0.0 N | 30.0000 | 700.0000 | 30.0000 | 50.0000 | 0.0 N | 0.0 N | 50.0000 | 0.0 N |
| | 65AMM77 | 0.0 N | 0.0 N | 15.0000 | 70.0000 | 50.0000 | 50.0000 | 0.0 N | 0.0 N | 30.0000 | 30.0000 |
| | 67AMM164 | 0.0 N | 0.0 N | 20.0000 | 150.0000 | 30.0000 | 70.0000 | 10.0000 | 0.0 N | 30.0000 | 30.0000 |
| | 67AMM176 | 1.5000 | 0.0 N | 20.0000 | 300.0000 | 30.0000 | 100.0000 | 5.0000 | 20.0000 | 70.0000 | 20.0000 |
| | 67AMM163 | 0.0 N | 0.0 N | 15.0000 | 70.0000 | 30.0000 | 150.0000 | 7.0000 | 0.0 N | 30.0000 | 70.0000 |
| | 67AMM162 | 0.0 N | 0.0 N | 15.0000 | 70.0000 | 30.0000 | 100.0000 | 5.0000 | 0.0 N | 30.0000 | 20.0000 |
| | 67AMM161 | 0.0 N | 0.0 N | 30.0000 | 150.0000 | 30.0000 | 70.0000 | 0.0 N | 0.0 N | 30.0000 | 20.0000 |
| SB-2 | 67ADV95 | 0.0 N | 0.0 N | 20.0000 | 200.0000 | 30.0000 | 700.0000 | 0.0 N | 0.0 N | 50.0000 | 0.0 N |
| | 67AMM175 | 1.5000 | 0.0 N | 30.0000 | 500.0000 | 50.0000 | 70.0000 | 0.0 N | 0.0 N | 150.0000 | 10.0000 |
| | 65AMM95 | 0.0 N | 0.0 N | 50.0000 | 500.0000 | 50.0000 | 50.0000 | 0.0 N | 0.0 N | 150.0000 | 15.0000 |
| | 65AMM94 | 0.0 N | 0.0 N | 30.0000 | 200.0000 | 70.0000 | 70.0000 | 0.0 N | 0.0 N | 70.0000 | 20.0000 |
| | 67AMM88 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 20.0000 | 20.0000 | 0.0 N | 0.0 B | 15.0000 | 30.0000 |
| | 67ADV46 | 1.0000 | 0.0 N | 0.0 N | 30.0000 | 20.0000 | 50.0000 | 0.0 N | 0.0 N | 10.0000 | 30.0000 |
| | 67ADV43 | 1.5000 | 0.0 N | 0.0 N | 10.0000 | 20.0000 | 70.0000 | 0.0 N | 0.0 N | 7.0000 | 50.0000 |
| | 67ADV42 | 1.0000 | 0.0 N | 0.0 N | 15.0000 | 20.0000 | 70.0000 | 0.0 N | 0.0 N | 7.0000 | 70.0000 |
| | 67ADV39 | 1.0000 | 0.0 N | 0.0 N | 50.0000 | 30.0000 | 70.0000 | 0.0 N | 0.0 N | 10.0000 | 50.0000 |
| | 65AMM170 | 1.5000 | 0.0 N | 10.0000 | 50.0000 | 30.0000 | 100.0000 | 3.0000 | 15.0000 | 15.0000 | 70.0000 |
| | 67ADV37 | 1.5000 | 0.0 N | 0.0 N | 70.0000 | 30.0000 | 70.0000 | 0.0 N | 0.0 N | 15.0000 | 100.0000 |
| | 67AMM87 | 0.0 N | 0.0 N | 0.0 N | 150.0000 | 30.0000 | 20.0000 | 7.0000 | 0.0 B | 15.0000 | 30.0000 |
| | 65AMM171 | 1.5000 | 0.0 N | 7.0000 | 30.0000 | 20.0000 | 70.0000 | 3.0000 | 10.0000 | 15.0000 | 50.0000 |
| | 67AMM75 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 20.0000 | 0.0 N | 0.0 N | 0.0 B | 15.0000 | 30.0000 |
| | 67AMM86 | 1.0000 | 0.0 N | 0.0 N | 10.0000 | 20.0000 | 70.0000 | 0.0 N | 0.0 N | 10.0000 | 30.0000 |
| | 65AMM172 | 1.5000 | 0.0 N | 5.0000 | 20.0000 | 20.0000 | 30.0000 | 0.0 N | 10.0000 | 10.0000 | 50.0000 |
| | 67AMM78 | 1.5000 | 0.0 N | 0.0 N | 70.0000 | 50.0000 | 70.0000 | 0.0 N | 0.0 N | 15.0000 | 20.0000 |

TABLE 1. SED. SAMPLE ANALYSES

| QUAD | SAMPLE | SB PPM | SC PPM | SN PPM | SR PPM | V PPM | W PPM | Y PPM | ZN PPM | ZR PPM |
|---|---|---|---|---|---|---|---|---|---|---|
| SQ-1 | 64AMM127 | 0.0 N | 7.0000 | 0.0 N | 1500.0000 | 100.0000 | 0.0 N | 15.0000 | 0.0 N | 100.0000 |
| | 64AMM128 | 0.0 N | 20.0000 | 0.0 N | 2000.0000 | 200.0000 | 0.0 N | 20.0000 | 0.0 N | 150.0000 |
| | 64AMM129 | 0.0 N | 20.0000 | 0.0 N | 2000.0000 | 200.0000 | 0.0 N | 20.0000 | 0.0 N | 150.0000 |
| | 67AMM332 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 70.0000 | 0.0 N | 300.0000 |
| | 67AMM330 | 0.0 N | 0.0 B | 0.0 N | 200.0000 | 150.0000 | 0.0 N | 50.0000 | 0.0 N | 300.0000 |
| | 67AMM331 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 300.0000 |
| | 67AMM329 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 200.0000 |
| | 67AMM328 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 200.0000 | 0.0 N | 50.0000 | 0.0 N | 300.0000 |
| | 67AMM333 | 0.0 N | 0.0 B | 0.0 N | 1500.0000 | 70.0000 | 0.0 N | 30.0000 | 0.0 N | 200.0000 |
| | 64AMM131 | 0.0 N | 20.0000 | 0.0 N | 2000.0000 | 200.0000 | 0.0 N | 30.0000 | 0.0 N | 200.0000 |
| | 67AMM165 | 0.0 N | 10.0000 | 0.0 N | 1000.0000 | 70.0000 | 0.0 N | 5.0000 | 0.0 N | 50.0000 |
| | 67AMM166 | 0.0 N | 20.0000 | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 15.0000 | 0.0 N | 150.0000 |
| | 67ADV145 | 0.0 N | 0.0 B | 30.0000 | 1500.0000 | 200.0000 | 0.0 N | 50.0000 | 0.0 N | 300.0000 |
| | 67ADV146 | 0.0 N | 0.0 B | 10.0000 | 1500.0000 | 200.0000 | 0.0 N | 50.0000 | 0.0 N | 200.0000 |
| | 67ADV170 | 0.0 N | 0.0 B | 0.0 N | 1500.0000 | 100.0000 | 0.0 N | 20.0000 | 0.0 N | 200.0000 |
| | 67ADV169 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 300.0000 |
| | 67ADV147 | 0.0 N | 0.0 B | 0.0 N | 1500.0000 | 200.0000 | 0.0 N | 50.0000 | 0.0 N | 700.0000 |
| | 67ADV149 | 0.0 N | 0.0 B | 0.0 N | 1500.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 200.0000 |
| | 67ADV150 | 0.0 N | 0.0 B | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 200.0000 |
| | 67ADV151 | 0.0 N | 0.0 B | 0.0 N | 2000.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 300.0000 |
| | 67ADV98 | 0.0 N | 30.0000 | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 20.0000 | 0.0 N | 150.0000 |
| | 67ADV105 | 0.0 N | 30.0000 | 0.0 N | 700.0000 | 200.0000 | 0.0 N | 15.0000 | 0.0 N | 150.0000 |
| | 67ADV104 | 0.0 N | 7.0000 | 0.0 N | 1000.0000 | 100.0000 | 0.0 N | 5.0000 | 0.0 N | 150.0000 |
| | 67ADV106 | 0.0 N | 30.0000 | 0.0 N | 700.0000 | 200.0000 | 0.0 N | 15.0000 | 0.0 N | 150.0000 |
| | 67ADV107 | 0.0 N | 30.0000 | 0.0 N | 700.0000 | 200.0000 | 0.0 N | 15.0000 | 0.0 N | 150.0000 |
| | 67ADV108 | 0.0 N | 50.0000 | 0.0 N | 700.0000 | 200.0000 | 0.0 N | 15.0000 | 0.0 N | 150.0000 |
| | 67ADV109 | 0.0 N | 20.0000 | 0.0 N | 1000.0000 | 200.0000 | 0.0 N | 10.0000 | 0.0 N | 150.0000 |
| | 65AMM77 | 0.0 N | 20.0000 | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 150.0000 |
| | 67AMM164 | 0.0 N | 20.0000 | 0.0 N | 700.0000 | 70.0000 | 0.0 N | 15.0000 | 0.0 N | 200.0000 |
| | 67AMM176 | 0.0 N | 20.0000 | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 100.0000 |
| | 67AMM163 | 0.0 N | 10.0000 | 0.0 N | 1500.0000 | 100.0000 | 0.0 N | 15.0000 | 0.0 N | 100.0000 |
| | 67AMM162 | 0.0 N | 20.0000 | 0.0 N | 1000.0000 | 150.0000 | 0.0 N | 15.0000 | 0.0 N | 100.0000 |
| | 67AMM161 | 0.0 N | 15.0000 | 0.0 N | 500.0000 | 200.0000 | 0.0 N | 15.0000 | 0.0 N | 150.0000 |
| SQ-2 | 67ADV95 | 0.0 N | 30.0000 | 0.0 N | 700.0000 | 200.0000 | 0.0 N | 20.0000 | 0.0 N | 150.0000 |
| | 67AMM175 | 0.0 N | 30.0000 | 0.0 N | 300.0000 | 150.0000 | 0.0 N | 15.0000 | 0.0 N | 150.0000 |
| | 65AMM95 | 0.0 N | 50.0000 | 0.0 N | 500.0000 | 200.0000 | 0.0 N | 30.0000 | 0.0 N | 100.0000 |
| | 65AMM94 | 0.0 N | 30.0000 | 0.0 N | 500.0000 | 200.0000 | 0.0 N | 30.0000 | 0.0 N | 150.0000 |
| | 67AMM88 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 70.0000 | 0.0 N | 0.0 N | 0.0 N | 100.0000 |
| | 67ADV46 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 50.0000 | 0.0 N | 5.0000 | 0.0 N | 20.0000 |
| | 67ADV43 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 70.0000 | 0.0 N | 5.0000 | 0.0 N | 200.0000 |
| | 67ADV42 | 0.0 N | 5.0000 | 0.0 N | 700.0000 | 70.0000 | 0.0 N | 7.0000 | 0.0 N | 50.0000 |
| | 67ADV39 | 0.0 N | 5.0000 | 10.0000 | 700.0000 | 100.0000 | 0.0 N | 7.0000 | 0.0 N | 30.0000 |
| | 65AMM170 | 0.0 N | 10.0000 | 0.0 N | 1000.0000 | 100.0000 | 0.0 N | 20.0000 | 0.0 N | 300.0000 |
| | 67ADV37 | 0.0 N | 7.0000 | 0.0 N | 1000.0000 | 70.0000 | 0.0 N | 10.0000 | 0.0 N | 200.0000 |
| | 67AMM87 | 0.0 N | 15.0000 | 0.0 N | 700.0000 | 50.0000 | 0.0 N | 0.0 N | 0.0 N | 200.0000 |
| | 65AMM171 | 0.0 N | 5.0000 | 0.0 N | 700.0000 | 50.0000 | 0.0 N | 10.0000 | 0.0 N | 200.0000 |
| | 67AMM75 | 0.0 N | 0.0 N | 0.0 N | 500.0000 | 100.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 |
| | 67AMM86 | 0.0 N | 7.0000 | 0.0 N | 700.0000 | 30.0000 | 0.0 N | 7.0000 | 0.0 N | 70.0000 |
| | 65AMM172 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 50.0000 | 0.0 N | 10.0000 | 0.0 N | 70.0000 |
| | 67AMM78 | 0.0 N | 7.0000 | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 15.0000 | 0.0 N | 300.0000 |

TABLE 1. SED. SAMPLE ANALYSES

| QUAD | SAMPLE | FE PCT | MG PCT | CA PCT | TI PCT | MN PPM | AG PPM | AS PPM | AU PPM | B PPM | BA PPM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 67AMM77 | 3.0000 | 0.7000 | 1.5000 | 0.2000 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 700.0000 |
| | 67AMM81 | 3.0000 | 0.7000 | 1.5000 | 0.1500 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67AMM80 | 3.0000 | 0.7000 | 1.5000 | 0.1500 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67AMM82 | 7.0000 | 1.0000 | 1.5000 | 0.3000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1000.0000 |
| | 67AMM83 | 3.0000 | 0.5000 | 1.0000 | 0.1500 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 1000.0000 |
| | 67AMM85 | 5.0000 | 0.7000 | 1.5000 | 0.2000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67AMM37 | 7.0000 | 1.0000 | 2.0000 | 0.1500 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 700.0000 |
| | 67AMM38 | 3.0000 | 0.7000 | 1.5000 | 0.5000 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1000.0000 |
| | 65AMM242 | 2.0000 | 0.7000 | 2.0000 | 0.2000 | 500.0000 | 0.7000 | 0.0 N | 0.0 N | 0.0 N | 2000.0000 |
| | 67AMM36 | 3.0000 | 0.7000 | 1.5000 | 0.1500 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 1500.0000 |
| | 67AMM34 | 2.0000 | 0.7000 | 1.0000 | 0.1500 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67AMM35 | 2.0000 | 0.5000 | 1.0000 | 0.0700 | 200.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67AMM243 | 3.0000 | 0.7000 | 1.5000 | 0.3000 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 1000.0000 |
| | 65AMM241 | 5.0000 | 0.7000 | 2.0000 | 0.5000 | 500.0000 | 0.7000 | 0.0 N | 0.0 N | 100.0000 | 1500.0000 |
| | 65AMM240 | 3.0000 | 0.7000 | 1.5000 | 0.5000 | 500.0000 | 0.7000L | 0.0 N | 0.0 N | 50.0000 | 1500.0000 |
| | 65AMM239 | 3.0000 | 0.7000 | 1.5000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1500.0000 |
| | 67AMM241 | 3.0000 | 0.7000 | 1.5000 | 0.3000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 100.0000 | 1000.0000 |
| | 67AMM33 | 5.0000 | 0.7000 | 1.5000 | 0.3000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 1500.0000 |
| | 67AMM123 | 2.0000 | 0.7000 | 1.5000 | 0.1500 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1500.0000 |
| | 67AMM216 | 1.5000 | 0.7000 | 0.7000 | 0.1500 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67AMM217 | 1.5000 | 0.5000 | 0.5000 | 0.1500 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 700.0000 |
| | 67AMM22 | 2.0000 | 0.3000 | 0.5000 | 0.1500 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 300.0000 |
| | 67AMM234 | 3.0000 | 0.7000 | 1.5000 | 0.2000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 1500.0000 |
| | 67AMM23 | 2.0000 | 0.7000 | 0.7000 | 0.1500 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 1500.0000 |
| | 67AMM233 | 2.0000 | 0.7000 | 1.0000 | 0.1500 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1500.0000 |
| | 65AMM238 | 2.0000 | 0.5000 | 1.0000 | 0.3000 | 500.0000 | 0.7000L | 0.0 N | 0.0 N | 10.0000 | 1500.0000 |
| | 67AMM24 | 3.0000 | 0.7000 | 1.0000 | 0.2000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1000.0000 |
| | 67AMM230 | 3.0000 | 0.7000 | 1.5000 | 0.1500 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 1000.0000 |
| | 67AMM231 | 5.0000 | 0.7000 | 0.7000 | 0.3000 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 1000.0000 |
| | 67AMM232 | 7.0000 | 1.0000 | 2.0000 | 0.3000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 1000.0000 |
| | 67AMM228 | 3.0000 | 0.7000 | 1.5000 | 0.3000 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1000.0000 |
| | 67AMM229 | 2.0000 | 0.3000 | 1.0000 | 0.1000 | 100.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1000.0000 |
| | 65AMM237 | 2.0000 | 0.3000 | 1.5000 | 0.3000 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1000.0000 |
| | 67AMM227 | 2.0000 | 0.5000 | 0.7000 | 0.2000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1000.0000 |
| | 67AMM226 | 1.5000 | 0.3000 | 1.5000 | 0.1500 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 200.0000 | 700.0000 |
| | 67AMM225 | 1.5000 | 0.3000 | 1.5000 | 0.1500 | 300.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 1500.0000 |
| | 67AMM58 | 5.0000 | 0.7000 | 1.5000 | 0.1500 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 700.0000 |
| | 67AMM279 | 7.0000 | 1.5000 | 7.0000 | 0.7000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1500.0000 |
| | 67AMM280 | 3.0000 | 1.5000 | 3.0000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1500.0000 |
| | 67AMM281 | 5.0000 | 1.0000 | 5.0000 | 1.0000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 1500.0000 |
| | 67AMM284 | 7.0000 | 3.0000 | 7.0000 | 1.0000 | 1000.0000 | 0.0 N | 0.0 N | 0.0300 | 50.0000 | 3000.0000 |
| | 67AMM222 | 7.0000 | 1.0000 | 1.5000 | 0.7000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 1000.0000 |
| | 67AMM223 | 1.5000 | 0.3000 | 1.5000 | 0.1500 | 200.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1500.0000 |
| | 67AMM221 | 0.7000 | 0.3000 | 1.0000 | 0.1000 | 100.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 1500.0000 |
| | 67AMM220 | 1.0000 | 0.3000 | 1.5000 | 1.5000 | 150.0000 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 1000.0000 |
| | 67AMM198 | 7.0000 | 1.0000 | 2.0000 | 0.5000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 1000.0000 |
| | 67AMM199 | 7.0000 | 1.0000 | 1.5000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 1000.0000 |
| | 67AMM204 | 7.0000 | 0.7000 | 0.7000 | 0.7000 | 1500.0000 | 0.5000 | 0.0 N | 0.0 N | 100.0000 | 1500.0000 |
| | 67AMM203 | 7.0000 | 1.0000 | 1.0000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 100.0000 | 1000.0000 |
| | 67AMM202 | 7.0000 | 1.5000 | 1.5000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 1000.0000 |

TABLE 1. SED. SAMPLE ANALYSES

| QUAD | SAMPLE | BE PPM | BI PPM | CD PPM | CR PPM | CU PPM | LA PPM | MO PPM | NB PPM | NI PPM | PB PPM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 58-2 | 67AMM77 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 20.0000 | 70.0000 | 0.0 N | 0.0 N | 20.0000 | 20.0000 |
| | 67AMM81 | 1.0000 | 0.0 N | 0.0 N | 30.0000 | 20.0000 | 20.0000 | 0.0 N | 0.0 N | 20.0000 | 15.0000 |
| | 67AMM80 | 0.0 N | 0.0 N | 0.0 N | 100.0000 | 10.0000 | 300.0000 | 0.0 N | 0.0 N | 10.0000 | 15.0000 |
| | 67AMM82 | 2.0000 | 0.0 N | 15.0000 | 70.0000 | 30.0000 | 100.0000 | 10.0000 | 0.0 N | 30.0000 | 70.0000 |
| | 67AMM83 | 1.5000 | 0.0 N | 0.0 N | 30.0000 | 20.0000 | 30.0000 | 5.0000 | 0.0 N | 15.0000 | 50.0000 |
| | 67AMM85 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 20.0000 | 50.0000 | 0.0 N | 0.0 N | 10.0000 | 50.0000 |
| | 67AMM37 | 0.0 N | 0.0 N | 20.0000 | 50.0000 | 50.0000 | 50.0000 | 0.0 N | 0.0 N | 20.0000 | 30.0000 |
| | 67AMM38 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 30.0000 | 30.0000 | 0.0 N | 0.0 N | 15.0000 | 30.0000 |
| | 65AMM242 | 1.5000 | 0.0 N | 10.0000 | 70.0000 | 50.0000 | 30.0000 | 5.0000 | 0.0 N | 20.0000 | 70.0000 |
| | 67AMM36 | 1.0000 | 0.0 N | 10.0000 | 150.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 50.0000 |
| | 67AMM34 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 15.0000 | 100.0000 | 0.0 N | 0.0 N | 7.0000 | 50.0000 |
| | 67AMM35 | 0.0 N | 0.0 N | 0.0 N | 70.0000 | 10.0000 | 0.0 N | 0.0 N | 0.0 N | 5.0000 | 70.0000 |
| | 67AMM243 | 2.0000 | 0.0 N | 0.0 N | 20.0000 | 30.0000 | 70.0000 | 0.0 N | 0.0 N | 10.0000 | 70.0000 |
| 58-3 | 65AMM241 | 3.0000 | 0.0 N | 10.0000 | 70.0000 | 70.0000 | 100.0000 | 3.0000 | 20.0000 | 30.0000 | 70.0000 |
| | 65AMM240 | 5.0000 | 0.0 N | 10.0000 | 50.0000 | 20.0000 | 70.0000 | 0.0 N | 15.0000 | 30.0000 | 50.0000 |
| | 65AMM239 | 1.5000 | 0.0 N | 10.0000 | 70.0000 | 20.0000 | 70.0000 | 0.0 N | 20.0000 | 30.0000 | 30.0000 |
| | 67AMM241 | 1.5000 | 0.0 N | 0.0 N | 30.0000 | 20.0000 | 50.0000 | 0.0 N | 0.0 N | 15.0000 | 50.0000 |
| | 67AMM33 | 1.5000 | 0.0 N | 15.0000 | 20.0000 | 30.0000 | 50.0000 | 0.0 N | 0.0 N | 30.0000 | 100.0000 |
| | 67AMM123 | 1.0000 | 0.0 N | 0.0 N | 70.0000 | 10.0000 | 50.0000 | 0.0 N | 0.0 N | 15.0000 | 70.0000 |
| | 67AMM216 | 3.0000 | 0.0 N | 0.0 N | 10.0000 | 70.0000 | 30.0000 | 0.0 N | 0.0 N | 10.0000 | 30.0000 |
| | 67AMM217 | 5.0000 | 0.0 N | 0.0 N | 15.0000 | 20.0000 | 50.0000 | 5.0000 | 0.0 N | 5.0000 | 30.0000 |
| | 67AMM22 | 2.0000 | 0.0 N | 0.0 N | 30.0000 | 15.0000 | 30.0000 | 0.0 N | 0.0 N | 7.0000 | 50.0000 |
| | 67AMM234 | 1.5000 | 0.0 N | 0.0 N | 30.0000 | 30.0000 | 70.0000 | 0.0 N | 0.0 N | 15.0000 | 70.0000 |
| | 67AMM23 | 1.5000 | 0.0 N | 0.0 N | 50.0000 | 20.0000 | 30.0000 | 0.0 N | 0.0 N | 15.0000 | 50.0000 |
| | 67AMM233 | 1.5000 | 0.0 N | 0.0 N | 10.0000 | 15.0000 | 50.0000 | 5.0000 | 0.0 N | 7.0000 | 10.0000 |
| | 65AMM238 | 3.0000 | 0.0 N | 7.0000 | 30.0000 | 30.0000 | 70.0000 | 3.0000 | 20.0000 | 20.0000 | 70.0000 |
| 58-4 | 67AMM24 | 1.5000 | 0.0 N | 0.0 N | 100.0000 | 15.0000 | 70.0000 | 0.0 N | 0.0 N | 15.0000 | 70.0000 |
| | 67AMM230 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 20.0000 | 30.0000 | 5.0000 | 0.0 N | 10.0000 | 20.0000 |
| | 67AMM231 | 1.0000 | 0.0 N | 10.0000 | 70.0000 | 30.0000 | 30.0000 | 0.0 N | 0.0 N | 20.0000 | 20.0000 |
| | 67AMM232 | 1.0000 | 0.0 N | 30.0000 | 150.0000 | 50.0000 | 50.0000 | 5.0000 | 0.0 N | 30.0000 | 30.0000 |
| | 67AMM228 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 10.0000 | 50.0000 | 0.0 N | 0.0 N | 15.0000 | 0.0 N |
| | 67AMM229 | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 7.0000 | 20.0000 | 0.0 N | 0.0 N | 5.0000 | 0.0 N |
| | 65AMM237 | 2.0000 | 0.0 N | 7.0000 | 50.0000 | 15.0000 | 30.0000 | 0.0 N | 10.0000 | 15.0000 | 30.0000 |
| | 67AMM227 | 1.5000 | 0.0 N | 0.0 N | 30.0000 | 10.0000 | 30.0000 | 0.0 N | 0.0 N | 5.0000 | 0.0 N |
| | 67AMM226 | 0.0 N | 0.0 N | 0.0 N | 150.0000 | 10.0000 | 30.0000 | 0.0 N | 0.0 N | 3.0000 | 15.0000 |
| | 67AMM225 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 10.0000 | 30.0000 | 0.0 N | 0.0 N | 2.0000 | 20.0000 |
| | 67AMM58 | 2.0000 | 0.0 N | 15.0000 | 50.0000 | 20.0000 | 70.0000 | 0.0 N | 0.0 N | 30.0000 | 30.0000 |
| | 67AMM279 | 0.0 N | 0.0 N | 20.0000 | 70.0000 | 70.0000 | 150.0000 | 0.0 N | 15.0000 | 50.0000 | 70.0000 |
| | 67AMM280 | 2.0000 | 0.0 N | 15.0000 | 70.0000 | 30.0000 | 70.0000 | 0.0 N | 10.0000 | 30.0000 | 30.0000 |
| | 67AMM281 | 1.5000 | 0.0 N | 15.0000N | 70.0000 | 30.0000 | 100.0000 | 0.0 N | 30.0000 | 30.0000 | 30.0000 |
| | 67AMM284 | 2.0000 | 0.0 N | 30.0000 | 100.0000 | 70.0000 | 150.0000 | 0.0 N | 20.0000 | 50.0000 | 30.0000 |
| | 67AMM222 | 1.0000 | 0.0 N | 15.0000 | 50.0000 | 10.0000 | 50.0000 | 0.0 N | 0.0 N | 20.0000 | 30.0000 |
| | 67AMM223 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 10.0000 | 30.0000 | 0.0 N | 0.0 N | 2.0000 | 20.0000 |
| | 67AMM221 | 0.0 N | 0.0 N | 0.0 N | 0.0 N | 7.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 |
| | 67AMM220 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 10.0000 | 30.0000 | 0.0 N | 0.0 N | 5.0000 | 0.0 N |
| | 67AMM198 | 1.0000 | 0.0 N | 10.0000 | 100.0000 | 30.0000 | 50.0000 | 0.0 N | 0.0 N | 30.0000 | 20.0000 |
| | 67AMM199 | 1.5000 | 0.0 N | 10.0000 | 70.0000 | 50.0000 | 50.0000 | 0.0 N | 0.0 N | 20.0000 | 20.0000 |
| | 67AMM204 | 1.5000 | 0.0 N | 20.0000 | 70.0000 | 50.0000 | 50.0000 | 0.0 N | 0.0 N | 30.0000 | 70.0000 |
| | 67AMM203 | 1.5000 | 0.0 N | 15.0000 | 70.0000 | 30.0000 | 50.0000 | 0.0 N | 0.0 N | 30.0000 | 50.0000 |
| | 67AMM202 | 1.5000 | 0.0 N | 15.0000 | 150.0000 | 30.0000 | 50.0000 | 0.0 N | 0.0 N | 50.0000 | 50.0000 |

TABLE 1. SED. SAMPLE ANALYSES

| QUAD | SAMPLE | SB PPM | SC PPM | SN PPM | SR PPM | V PPM | W PPM | Y PPM | ZN PPM | ZR PPM |
|---|---|---|---|---|---|---|---|---|---|---|
| 58-2 | 67AMM77 | 0.0 N | 7.0000 | 0.0 N | 700.0000 | 100.0000 | 0.0 N | 10.0000 | 0.0 N | 70.0000 |
| | 67AMM81 | 0.0 N | 5.0000 | 0.0 N | 1000.0000 | 70.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 |
| | 67AMM80 | 0.0 N | 5.0000 | 0.0 N | 700.0000 | 50.0000 | 0.0 N | 10.0000 | 0.0 N | 150.0000 |
| | 67AMM82 | 0.0 N | 15.0000 | 0.0 N | 700.0000 | 100.0000 | 0.0 N | 5.0000 | 0.0 N | 70.0000 |
| | 67AMM83 | 0.0 N | 7.0000 | 0.0 N | 500.0000 | 50.0000 | 0.0 N | 0.0 N | 0.0 N | 150.0000 |
| | 67AMM85 | 0.0 N | 0.0 N | 0.0 N | 1000.0000 | 70.0000 | 0.0 N | 5.0000 | 0.0 N | 150.0000 |
| | 67AMM37 | 0.0 N | 30.0000 | 0.0 N | 300.0000 | 300.0000 | 0.0 N | 15.0000 | 0.0 N | 150.0000 |
| | 67AMM38 | 0.0 N | 7.0000 | 0.0 N | 700.0000 | 70.0000 | 0.0 N | 5.0000 | 0.0 N | 50.0000 |
| | 65AMM242 | 0.0 N | 10.0000 | 0.0 N | 500.0000 | 100.0000 | 0.0 N | 7.0000 | 0.0 N | 100.0000 |
| | 67AMM36 | 0.0 N | 7.0000 | 0.0 N | 700.0000 | 70.0000 | 0.0 N | 7.0000 | 0.0 N | 70.0000 |
| | 67AMM34 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 30.0000 | 0.0 N | 5.0000 | 0.0 N | 30.0000 |
| | 67AMM35 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 0.0 N |
| | 67AMM243 | 0.0 N | 7.0000 | 0.0 N | 700.0000 | 50.0000 | 0.0 N | 7.0000 | 0.0 N | 100.0000 |
| 58-3 | 65AMM241 | 0.0 N | 15.0000 | 0.0 N | 500.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 300.0000 |
| | 65AMM240 | 0.0 N | 7.0000 | 0.0 N | 700.0000 | 70.0000 | 0.0 N | 20.0000 | 0.0 N | 150.0000 |
| | 65AMM239 | 0.0 N | 10.0000 | 0.0 N | 700.0000 | 150.0000 | 0.0 N | 20.0000 | 0.0 N | 300.0000 |
| | 67AMM241 | 0.0 N | 7.0000 | 0.0 N | 1000.0000 | 50.0000 | 0.0 N | 10.0000 | 0.0 N | 70.0000 |
| | 67AMM33 | 0.0 N | 10.0000 | 0.0 N | 700.0000 | 100.0000N | 0.0 N | 7.0000 | 0.0 N | 150.0000 |
| | 67AMM123 | 0.0 N | 5.0000 | 0.0 N | 700.0000 | 30.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 |
| | 67AMM216 | 0.0 N | 0.0 N | 0.0 N | 500.0000 | 30.0000 | 0.0 N | 10.0000 | 0.0 N | 150.0000 |
| | 67AMM217 | 0.0 N | 0.0 N | 0.0 N | 200.0000 | 20.0000 | 0.0 N | 10.0000 | 0.0 N | 70.0000 |
| | 67AMM22 | 0.0 N | 0.0 N | 0.0 N | 150.0000 | 20.0000 | 0.0 N | 0.0 N | 0.0 N | 100.0000 |
| | 67AMM234 | 0.0 N | 5.0000 | 0.0 N | 700.0000 | 50.0000 | 0.0 N | 15.0000 | 0.0 N | 70.0000 |
| | 67AMM23 | 0.0 N | 5.0000 | 0.0 N | 500.0000 | 50.0000 | 0.0 N | 0.0 N | 0.0 N | 100.0000 |
| | 67AMM233 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 50.0000 | 0.0 N | 10.0000 | 0.0 N | 100.0000 |
| | 65AMM238 | 0.0 N | 5.0000 | 0.0 N | 500.0000 | 70.0000 | 0.0 N | 15.0000 | 0.0 N | 150.0000 |
| 58-4 | 67AMM24 | 0.0 N | 5.0000 | 0.0 N | 500.0000 | 50.0000 | 0.0 N | 10.0000 | 0.0 N | 100.0000 |
| | 67AMM230 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 50.0000 | 0.0 N | 5.0000 | 0.0 N | 70.0000 |
| | 67AMM231 | 0.0 N | 10.0000 | 0.0 N | 200.0000 | 70.0000 | 0.0 N | 10.0000 | 0.0 N | 200.0000 |
| | 67AMM232 | 0.0 N | 15.0000 | 0.0 N | 700.0000 | 70.0000 | 0.0 N | 15.0000 | 0.0 N | 200.0000 |
| | 67AMM228 | 0.0 N | 0.0 N | 0.0 N | 300.0000 | 30.0000 | 0.0 N | 7.0000 | 0.0 N | 50.0000 |
| | 67AMM229 | 0.0 N | 0.0 N | 0.0 N | 500.0000 | 20.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 |
| | 65AMM237 | 0.0 N | 5.0000 | 0.0 N | 300.0000 | 50.0000 | 0.0 N | 10.0000 | 0.0 N | 150.0000 |
| | 67AMM227 | 0.0 N | 0.0 N | 0.0 N | 300.0000 | 30.0000 | 0.0 N | 7.0000 | 0.0 N | 150.0000 |
| | 67AMM226 | 0.0 N | 0.0 N | 0.0 N | 500.0000 | 30.0000 | 0.0 N | 10.0000 | 0.0 N | 30.0000 |
| | 67AMM225 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 50.0000 | 0.0 N | 0.0 N | 0.0 N | 70.0000 |
| | 67AMM58 | 0.0 N | 7.0000 | 0.0 N | 500.0000 | 100.0000 | 0.0 N | 10.0000 | 0.0 N | 150.0000 |
| | 67AMM279 | 0.0 N | 0.0 B | 0.0 N | 1500.0000 | 150.0000 | 0.0 N | 30.0000 | 0.0 N | 500.0000 |
| | 67AMM280 | 0.0 N | 0.0 B | 0.0 N | 500.0000 | 70.0000 | 0.0 N | 20.0000 | 0.0 N | 500.0000 |
| | 67AMM281 | 0.0 N | 0.0 B | 0.0 N | 700.0000 | 100.0000 | 0.0 N | 30.0000 | 0.0 N | 700.0000 |
| | 67AMM284 | 0.0 N | 0.0 B | 0.0 N | 1500.0000 | 150.0000 | 0.0 N | 50.0000 | 0.0 N | 500.0000 |
| | 67AMM222 | 0.0 N | 10.0000 | 0.0 N | 700.0000 | 70.0000 | 0.0 N | 15.0000 | 0.0 N | 300.0000 |
| | 67AMM223 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 70.0000 | 0.0 N | 7.0000 | 0.0 N | 100.0000 |
| | 67AMM221 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 15.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 |
| | 67AMM220 | 0.0 N | 0.0 N | 0.0 N | 700.0000 | 15.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 |
| | 67AMM198 | 0.0 N | 15.0000 | 0.0 N | 300.0000 | 100.0000 | 0.0 N | 10.0000 | 0.0 N | 150.0000 |
| | 67AMM199 | 0.0 N | 15.0000 | 0.0 N | 300.0000 | 150.0000 | 0.0 N | 10.0000 | 0.0 N | 150.0000 |
| | 67AMM204 | 0.0 N | 15.0000 | 0.0 N | 150.0000 | 100.0000 | 0.0 N | 15.0000 | 0.0 N | 200.0000 |
| | 67AMM203 | 0.0 N | 15.0000 | 0.0 N | 200.0000 | 100.0000 | 0.0 N | 10.0000 | 0.0 N | 300.0000 |
| | 67AMM202 | 0.0 N | 20.0000 | 0.0 N | 500.0000 | 150.0000 | 0.0 N | 15.0000 | 0.0 N | 150.0000 |

TABLE 1. SED. SAMPLE ANALYSES

| QUAD | SAMPLE | FE PCT | MG PCT | CA PCT | TI PCT | MN PPM | AG PPM | AS PPM | AU PPM | B PPM | BA PPM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SG-4 | 67AMM201 | 7.0000 | 1.5000 | 2.0000 | 0.7000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 1000.0000 |
| | 67AMM200 | 10.0000 | 2.0000 | 2.0000 | 1.0000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 100.0000 | 2000.0000 |
| | 67ADV118 | 10.0000 | 1.0000 | 1.5000 | 0.5000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 2000.0000 |
| | 66AMM73 | 5.0000 | 1.0000 | 2.0000 | 0.5000 | 1500.0000 | 0.7000L | 0.0 N | 0.0 N | 15.0000 | 1500.0000 |
| | 66AMM72 | 5.0000 | 1.5000 | 2.0000 | 0.7000 | 700.0000 | 0.7000L | 0.0 N | 0.0 N | 50.0000 | 1500.0000 |
| | 67AMM131 | 5.0000 | 0.7000 | 1.0000 | 0.3000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 100.0000 | 1000.0000 |
| | 67AMM132 | 7.0000 | 1.0000 | 1.0000 | 0.7000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 100.0000 | 1500.0000 |
| | 66APA88 | 3.0000 | 1.5000 | 2.0000 | 0.5000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 1000.0000 |
| | 66APA89 | 2.0000 | 0.7000 | 2.0000 | 0.5000 | 500.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 700.0000 |
| | 66APA90 | 3.0000 | 1.0000 | 1.5000 | 0.7000 | 1000.0000 | 0.0 N | 0.0 N | 0.0 N | 20.0000 | 50.0000 |
| SG-5 | 66APA91 | 3.0000 | 0.7000 | 1.0000 | 0.5000 | 1500.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 700.0000 |
| | 66APA92 | 3.0000 | 0.7000 | 1.5000 | 0.7000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 300.0000 |
| SG-6 | 66APA93 | 2.0000 | 0.7000 | 1.5000 | 0.3000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 50.0000 | 700.0000 |
| | 66APA94 | 3.0000 | 0.7000 | 1.5000 | 0.7000 | 700.0000 | 0.0 N | 0.0 N | 0.0 N | 15.0000 | 500.0000 |
| SG-2 | 65AMM245 | 5.0000 | 1.0000 | 3.0000 | 0.3000 | 1000.0000 | 1.5000 | 0.0 N | 0.0 N | 10.0000 | 700.0000 |
| | 65AMM244 | 3.0000 | 1.5000 | 2.0000 | 0.3000 | 1000.0000 | 0.7000L | 0.0 N | 0.0 N | 0.0 N | 500.0000 |
| SG-9 | 65AMM243 | 5.0000 | 1.0000 | 2.0000 | 0.5000 | 700.0000 | 0.7000L | 0.0 N | 0.0 N | 10.0000 | 70.0000 |

TABLE 1. SED. SAMPLE ANALYSES

| QUAD | SAMPLE | BE PPM | BI PPM | CD PPM | CR PPM | CU PPM | LA PPM | MO PPM | NB PPM | NI PPM | PB PPM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SB-4 | 67AMM201 | 1.5000 | 0.0 N | 15.0000 | 70.0000 | 50.0000 | 50.0000 | 7.0000 | 0.0 N | 30.0000 | 20.0000 |
| | 67AMM200 | 1.5000 | 0.0 N | 15.0000 | 150.0000 | 30.0000 | 70.0000 | 0.0 N | 0.0 N | 50.0000 | 30.0000 |
| | 67ADV118 | 1.0000 | 0.0 N | 15.0000 | 70.0000 | 50.0000 | 30.0000 | 0.0 N | 0.0 N | 20.0000 | 100.0000 |
| | 66AMM73 | 3.0000 | 0.0 N | 30.0000 | 100.0000 | 100.0000 | 100.0000 | 5.0000 | 15.0000 | 50.0000 | 150.0000 |
| | 66AMM72 | 1.5000 | 0.0 N | 30.0000 | 150.0000 | 100.0000 | 70.0000 | 5.0000 | 15.0000 | 50.0000 | 50.0000 |
| | 67AMM131 | 1.0000 | 0.0 N | 15.0000 | 100.0000 | 30.0000 | 50.0000 | 0.0 N | 0.0 N | 30.0000 | 50.0000 |
| | 67AMM132 | 1.0000 | 0.0 N | 20.0000 | 30.0000 | 30.0000 | 50.0000 | 0.0 N | 20.0000 | 50.0000 | 50.0000 |
| | 66APA88 | 3.0000 | 0.0 N | 20.0000 | 100.0000 | 50.0000 | 70.0000 | 5.0000 | 15.0000 | 50.0000 | 30.0000 |
| | 66APA89 | 1.5000 | 0.0 N | 10.0000 | 100.0000 | 30.0000 | 30.0000 | 0.0 N | 10.0000 | 30.0000 | 20.0000 |
| | 66APA90 | 0.0 N | 0.0 N | 10.0000 | 150.0000 | 20.0000 | 50.0000 | 3.0000 | 15.0000 | 30.0000 | 10.0000 |
| SB-5 | 66APA91 | 1.0000 | 0.0 N | 20.0000 | 150.0000 | 15.0000 | 70.0000 | 0.0 N | 15.0000 | 30.0000 | 15.0000 |
| | 66APA92 | 0.0 N | 0.0 N | 10.0000 | 150.0000 | 15.0000 | 70.0000 | 3.0000 | 20.0000 | 20.0000 | 0.0 N |
| SB-6 | 66APA93 | 0.0 N | 0.0 N | 15.0000 | 100.0000 | 20.0000 | 30.0000 | 0.0 N | 15.0000 | 30.0000 | 10.0000 |
| | 66APA94 | 0.0 N | 0.0 N | 10.0000 | 300.0000 | 15.0000 | 50.0000 | 0.0 N | 15.0000 | 30.0000 | 10.0000 |
| SC-2 | 65AMM245 | 0.0 N | 0.0 N | 20.0000 | 100.0000 | 150.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 0.0 N |
| | 65AMM244 | 0.0 N | 0.0 N | 20.0000 | 150.0000 | 70.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 0.0 N |
| SC-3 | 65AMM243 | 0.0 N | 0.0 N | 20.0000 | 150.0000 | 50.0000 | 0.0 N | 0.0 N | 0.0 N | 30.0000 | 0.0 N |

TABLE 1. SED. SAMPLE ANALYSES

| QUAD | SAMPLE | SB PPM | | SC PPM | SN PPM | | SR PPM | V PPM | W PPM | | Y PPM | ZN PPM | | ZR PPM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB-4 | 67AMM201 | 0.0 | N | 15.0000 | 0.0 | N | 300.0000 | 150.0000 | 0.0 | N | 10.0000 | 0.0 | N | 150.0000 |
| | 67AMM200 | 0.0 | N | 20.0000 | 0.0 | N | 700.0000 | 200.0000 | 0.0 | N | 15.0000 | 0.0 | N | 150.0000 |
| | 67ADV118 | 0.0 | N | 10.0000 | 0.0 | N | 300.0000 | 70.0000 | 0.0 | N | 5.0000 | 0.0 | N | 200.0000 |
| | 66AMM73 | 0.0 | N | 20.0000 | 0.0 | N | 1000.0000 | 150.0000 | 0.0 | N | 20.0000 | 0.0 | N | 300.0000 |
| | 66AMM72 | 0.0 | N | 20.0000 | 0.0 | N | 700.0000 | 150.0000 | 0.0 | N | 20.0000 | 0.0 | N | 300.0000 |
| | 67AMM131 | 0.0 | N | 15.0000 | 0.0 | N | 150.0000 | 100.0000 | 0.0 | N | 20.0000 | 0.0 | N | 200.0000 |
| | 67AMM132 | 0.0 | N | 15.0000 | 0.0 | N | 300.0000 | 150.0000 | 0.0 | N | 10.0000 | 0.0 | N | 200.0000 |
| | 66APA88 | 0.0 | N | 20.0000 | 0.0 | N | 700.0000 | 100.0000 | 0.0 | N | 20.0000 | 0.0 | N | 200.0000 |
| | 66APA89 | 0.0 | N | 15.0000 | 0.0 | N | 500.0000 | 100.0000 | 0.0 | N | 20.0000 | 0.0 | N | 150.0000 |
| | 66APA90 | 0.0 | N | 20.0000 | 0.0 | N | 150.0000 | 100.0000 | 0.0 | N | 30.0000 | 0.0 | N | 300.0000 |
| SB-5 | 66APA91 | 0.0 | N | 15.0000 | 0.0 | N | 200.0000 | 70.0000 | 0.0 | N | 30.0000 | 0.0 | N | 200.0000 |
| | 66APA92 | 0.0 | N | 20.0000 | 0.0 | N | 150.0000 | 100.0000 | 0.0 | N | 30.0000 | 0.0 | N | 300.0000 |
| SB-6 | 66APA93 | 0.0 | N | 15.0000 | 0.0 | N | 200.0000 | 70.0000 | 0.0 | N | 30.0000 | 0.0 | N | 150.0000 |
| | 66APA94 | 0.0 | N | 15.0000 | 0.0 | N | 200.0000 | 100.0000 | 0.0 | N | 30.0000 | 0.0 | N | 200.0000 |
| SC-2 | 65AMM245 | 0.0 | N | 20.0000 | 0.0 | N | 150.0000 | 150.0000 | 0.0 | N | 20.0000 | 0.0 | N | 70.0000 |
| | 65AMM244 | 0.0 | N | 20.0000 | 0.0 | N | 100.0000 | 150.0000 | 0.0 | N | 20.0000 | 0.0 | N | 70.0000 |
| SC-3 | 65AMM243 | 0.0 | N | 30.0000 | 0.0 | N | 100.0000 | 200.0000 | 0.0 | N | 30.0000 | 0.0 | N | 100.0000 |

FREQUENCY TABLE FOR COLUMN 1 ( FE PCT)

| LIMITS LOWER | - UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 3.8E-02 - | 5.6E-02 | 0 | 0 | 0.0 | 0.0 |
| 5.6E-02 - | 8.3E-02 | 0 | 0 | 0.0 | 0.0 |
| 8.3E-02 - | 1.2E-01 | 0 | 0 | 0.0 | 0.0 |
| 1.2E-01 - | 1.8E-01 | 0 | 0 | 0.0 | 0.0 |
| 1.8E-01 - | 2.6E-01 | 0 | 0 | 0.0 | 0.0 |
| 2.6E-01 - | 3.8E-01 | 0 | 0 | 0.0 | 0.0 |
| 3.8E-01 - | 5.6E-01 | 0 | 0 | 0.0 | 0.0 |
| 5.6E-01 - | 8.3E-01 | 4 | 4 | 1.50 | 1.50 |
| 8.3E-01 - | 1.2E 00 | 6 | 10 | 2.25 | 3.75 |
| 1.2E 00 - | 1.8E 00 | 16 | 26 | 5.99 | 9.74 |
| 1.8E 00 - | 2.6E 00 | 26 | 52 | 9.74 | 19.48 |
| 2.6E 00 - | 3.8E 00 | 51 | 103 | 19.10 | 38.58 |
| 3.8E 00 - | 5.6E 00 | 44 | 147 | 16.48 | 55.06 |
| 5.6E 00 - | 8.3E 00 | 103 | 250 | 38.58 | 93.63 |
| 8.3E 00 - | 1.2E 01 | 12 | 262 | 4.49 | 98.13 |

HISTOGRAM FOR COLUMN 1 ( FE PCT) **X = 1%**

```
7.0E-01 X

1.0E 00 XX

1.5E 00 XXXXXX

2.0E 00 XXXXXXXXXX

3.0E 00 XXXXXXXXXXXXXXXXXX

5.0E 00 XXXXXXXXXXXXXXX

7.0E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 01 XXXX
```

| M | L | H | B | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 5 | 262 |
| 0.0 | 0.0 | | | 0.0 | 1.87 | |

MAXIMUM = 1.00000E 01

MINIMUM = 7.00000E-01

GEOMETRIC MEAN = 4.23203E 00

GEOMETRIC DEVIATION = 1.85405E 00

**EXPLANATION**

7.0E-01 means $7.0 \times 10^{-1}$ or 0.7
7.0E 00 means $7.0 \times 10^{0}$ or 7.0
7.0E 01 means $7.0 \times 10^{1}$ or 70.0
7.0E 02 means $7.0 \times 10^{2}$ or 700.0
7.0E 03 means $7.0 \times 10^{3}$ or 7,000.0

FREQUENCY TABLE FOR COLUMN 2 ( MG PCT)

| LIMITS LOWER | - UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 1.8E-02 - | 2.6E-02 | 0 | 0 | 0.0 | 0.0 |
| 2.6E-02 - | 3.8E-02 | 0 | 0 | 0.0 | 0.0 |
| 3.8E-02 - | 5.6E-02 | 0 | 0 | 0.0 | 0.0 |
| 5.6E-02 - | 8.3E-02 | 0 | 0 | 0.0 | 0.0 |
| 8.3E-02 - | 1.2E-01 | 1 | 1 | 0.37 | 0.37 |
| 1.2E-01 - | 1.8E-01 | 0 | 1 | 0.0 | 0.37 |
| 1.8E-01 - | 2.6E-01 | 4 | 5 | 1.50 | 1.87 |
| 2.6E-01 - | 3.8E-01 | 19 | 24 | 7.12 | 8.99 |
| 3.8E-01 - | 5.6E-01 | 17 | 41 | 6.37 | 15.36 |
| 5.6E-01 - | 8.3E-01 | 76 | 117 | 28.46 | 43.82 |
| 8.3E-01 - | 1.2E 00 | 39 | 156 | 14.61 | 58.43 |
| 1.2E 00 - | 1.8E 00 | 70 | 226 | 26.22 | 84.64 |
| 1.8E 00 - | 2.6E 00 | 22 | 248 | 8.24 | 92.88 |
| 2.6E 00 - | 3.8E 00 | 13 | 261 | 4.87 | 97.75 |
| 3.8E 00 - | 5.6E 00 | 5 | 266 | 1.87 | 99.63 |
| 5.6E 00 - | 8.3E 00 | 0 | 266 | 0.0 | 99.63 |
| 8.3E 00 - | 1.2E 01 | 0 | 266 | 0.0 | 99.63 |
| 1.2E 01 - | 1.8E 01 | 1 | 267 | 0.37 | 100.00 |

HISTOGRAM FOR COLUMN 2 ( MG PCT) X = 1%

```
2.0E-01 X

3.0E-01 XXXXXXX

5.0E-01 XXXXXX

7.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 00 XXXXXXXXXXXXXX

1.5E 00 XXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 00 XXXXXXXX

3.0E 00 XXXXX

5.0E 00 XX

7.0E 00

1.0E 01

1.5E 01
```

| N | L | H | K | T | G | ANALYTICAL VALUES. |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 267 |
| 0.0 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 1.50000E 01

MINIMUM = 1.00000E-01

GEOMETRIC MEAN = 9.93141E-01 GEOMETRIC DEVIATION 1.95243E 00

**EXPLANATION**

7.0E-01 means $7.0 \times 10^{-1}$ or 0.7
7.0E 00 means $7.0 \times 10^{0}$ or 7.0
7.0E 01 means $7.0 \times 10^{1}$ or 70.0
7.0E 02 means $7.0 \times 10^{2}$ or 700.0
7.0E 03 means $7.0 \times 10^{3}$ or 7,000.0

FREQUENCY TABLE FOR COLUMN 3 ( CA PCT)

| LIMITS LOWER | - UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 3.8E-02 - | 5.6E-02 | 0 | 0 | 0.0 | 0.0 |
| 5.6E-02 - | 8.3E-02 | 0 | 0 | 0.0 | 0.0 |
| 8.3E-02 - | 1.2E-01 | 1 | 1 | 0.37 | 0.37 |
| 1.2E-01 - | 1.8E-01 | 1 | 2 | 0.37 | 0.75 |
| 1.8E-01 - | 2.6E-01 | 1 | 3 | 0.37 | 1.12 |
| 2.6E-01 - | 3.8E-01 | 2 | 5 | 0.75 | 1.87 |
| 3.8E-01 - | 5.6E-01 | 2 | 7 | 0.75 | 2.62 |
| 5.6E-01 - | 8.3E-01 | 17 | 24 | 6.37 | 8.99 |
| 8.3E-01 - | 1.2E 00 | 42 | 66 | 15.73 | 24.72 |
| 1.2E 00 - | 1.8E 00 | 82 | 148 | 30.71 | 55.43 |
| 1.8E 00 - | 2.6E 00 | 41 | 189 | 15.36 | 70.79 |
| 2.6E 00 - | 3.8E 00 | 27 | 216 | 10.11 | 80.90 |
| 3.8E 00 - | 5.6E 00 | 27 | 243 | 10.11 | 91.01 |
| 5.6E 00 - | 8.3E 00 | 24 | 267 | 8.99 | 100.00 |

**EXPLANATION**

7.0E-01 means $7.0 \times 10^{-1}$ or 0.7
7.0E 00 means $7.0 \times 10^{0}$ or 7.0
7.0E 01 means $7.0 \times 10^{1}$ or 70.0
7.0E 02 means $7.0 \times 10^{2}$ or 700.0
7.0E 03 means $7.0 \times 10^{3}$ or 7,000.0

HISTOGRAM FOR COLUMN 3 ( CA PCT) **X = 1%**

```
3.0E-01 X

5.0E-01 X

7.0E-01 XXXXXX

1.0E 00 XXXXXXXXXXXXXXX

1.5E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 00 XXXXXXXXXXXXXXX

3.0E 00 XXXXXXXXXX

5.0E 00 XXXXXXXXXX

7.0E 00 XXXXXXXXX
```

| N | L | H | R | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 267 |
| 0.0 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 7.00000E 00

MINIMUM = 1.00000E-01

GEOMETRIC MEAN = 1.86086E 00

GEOMETRIC DEVIATION = 2.07166E 00

FREQUENCY TABLE FOR COLUMN 4 ( TI PCT)

| LIMITS LOWER | - UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 8.3E-04 - | 1.2E-03 | 0 | 0 | 0.0 | 0.0 |
| 1.2E-03 - | 1.8E-03 | 0 | 0 | 0.0 | 0.0 |
| 1.8E-03 - | 2.6E-03 | 0 | 0 | 0.0 | 0.0 |
| 2.6E-03 - | 3.8E-03 | 0 | 0 | 0.0 | 0.0 |
| 3.8E-03 - | 5.6E-03 | 0 | 0 | 0.0 | 0.0 |
| 5.6E-03 - | 8.3E-03 | 0 | 0 | 0.0 | 0.0 |
| 8.3E-03 - | 1.2E-02 | 0 | 0 | 0.0 | 0.0 |
| 1.2E-02 - | 1.8E-02 | 0 | 0 | 0.0 | 0.0 |
| 1.8E-02 - | 2.6E-02 | 0 | 0 | 0.0 | 0.0 |
| 2.6E-02 - | 3.8E-02 | 0 | 0 | 0.0 | 0.0 |
| 3.8E-02 - | 5.6E-02 | 0 | 0 | 0.0 | 0.0 |
| 5.6E-02 - | 8.3E-02 | 3 | 3 | 1.12 | 1.12 |
| 8.3E-02 - | 1.2E-01 | 9 | 12 | 3.37 | 4.49 |
| 1.2E-01 - | 1.8E-01 | 49 | 61 | 18.35 | 22.85 |
| 1.8E-01 - | 2.6E-01 | 21 | 82 | 7.87 | 30.71 |
| 2.6E-01 - | 3.8E-01 | 42 | 124 | 15.73 | 46.44 |
| 3.8E-01 - | 5.6E-01 | 67 | 191 | 25.09 | 71.54 |
| 5.6E-01 - | 8.3E-01 | 57 | 248 | 21.35 | 92.88 |
| 8.3E-01 - | 1.2E 00 | 16 | 264 | 5.99 | 98.88 |
| 1.2E 00 - | 1.8E 00 | 3 | 267 | 1.12 | 100.00 |

**EXPLANATION**

7.0E-01 means $7.0 \times 10^{-1}$ or 0.7
7.0E 00 means $7.0 \times 10^{0}$ or 7.0
7.0E 01 means $7.0 \times 10^{1}$ or 70.0
7.0E 02 means $7.0 \times 10^{2}$ or 700.0
7.0E 03 means $7.0 \times 10^{3}$ or 7,000.0

HISTOGRAM FOR COLUMN 4 ( TI PCT) **X = 1%**

```
7.0E-02 X

1.0E-01 XXX

1.5E-01 XXXXXXXXXXXXXXXXXX

2.0E-01 XXXXXXXX

3.0E-01 XXXXXXXXXXXXXXXX

5.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXX

7.0E-01 XXXXXXXXXXXXXXXXXXXXX

1.0E 00 XXXXXX

1.5E 00 X
```

| N | L | H | R | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 267 |
| 0.0 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 1.50000E 00

MINIMUM = 7.00000E-02

GEOMETRIC MEAN = 3.61628E-01

GEOMETRIC DEVIATION = 1.98075E 00

FREQUENCY TABLE FOR COLUMN 5 ( MN PPM)

| LIMITS LOWER | - UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 8.3E 00 - | 1.2E 01 | 0 | 0 | 0.0 | 0.0 |
| 1.2E 01 - | 1.8E 01 | 1 | 1 | 0.37 | 0.37 |
| 1.8E 01 - | 2.6E 01 | 1 | 2 | 0.37 | 0.75 |
| 2.6E 01 - | 3.8E 01 | 0 | 2 | 0.0 | 0.75 |
| 3.8E 01 - | 5.6E 01 | 0 | 2 | 0.0 | 0.75 |
| 5.6E 01 - | 8.3E 01 | 0 | 2 | 0.0 | 0.75 |
| 8.3E 01 - | 1.2E 02 | 3 | 5 | 1.12 | 1.87 |
| 1.2E 02 - | 1.8E 02 | 6 | 11 | 2.25 | 4.12 |
| 1.8E 02 - | 2.6E 02 | 11 | 22 | 4.12 | 8.24 |
| 2.6E 02 - | 3.8E 02 | 35 | 57 | 13.11 | 21.35 |
| 3.8E 02 - | 5.6E 02 | 37 | 94 | 13.86 | 35.21 |
| 5.6E 02 - | 8.3E 02 | 70 | 164 | 26.22 | 61.42 |
| 8.3E 02 - | 1.2E 03 | 49 | 213 | 18.35 | 79.78 |
| 1.2E 03 - | 1.8E 03 | 48 | 261 | 17.98 | 97.75 |
| 1.8E 03 - | 2.6E 03 | 3 | 264 | 1.12 | 98.88 |
| 2.6E 03 - | 3.8E 03 | 2 | 266 | 0.75 | 99.63 |

**EXPLANATION**

7.0E-01 means $7.0 \times 10^{-1}$ or 0.7
7.0E 00 means $7.0 \times 10^{0}$ or 7.0
7.0E 01 means $7.0 \times 10^{1}$ or 70.0
7.0E 02 means $7.0 \times 10^{2}$ or 700.0
7.0E 03 means $7.0 \times 10^{3}$ or 7,000.0

HISTOGRAM FOR COLUMN 5 ( MN PPM) **X = 1%**

```
1.0E 02 X

1.5E 02 XX

2.0E 02 XXXX

3.0E 02 XXXXXXXXXXXXX

5.0E 02 XXXXXXXXXXXXXX

7.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 03 XXXXXXXXXXXXXXXXXX

1.5E 03 XXXXXXXXXXXXXXXXXX

2.0E 03 X

3.0E 03 X
```

| N | L | H | R | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 266 |
| 0.37 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 3.00000E 03

MINIMUM = 1.50000E 01

GEOMETRIC MEAN = 6.53493E 02

GEOMETRIC DEVIATION = 2.07088E 00

FREQUENCY TABLE FOR COLUMN 6 ( AG PPM)

| LIMITS LOWER | - UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 3.8E-01 - | 5.6E-01 | 1 | 1 | 0.37 | 0.37 |
| 5.6E-01 - | 8.3E-01 | 2 | 3 | 0.75 | 1.12 |
| 8.3E-01 - | 1.2E 00 | 0 | 3 | 0.0 | 1.12 |
| 1.2E 00 - | 1.8E 00 | 2 | 5 | 0.75 | 1.87 |
| 1.8E 00 - | 2.6E 00 | 1 | 6 | 0.37 | 2.25 |
| 2.6E 00 - | 3.8E 00 | 1 | 7 | 0.37 | 2.62 |

**EXPLANATION**

**7.0E-01 means $7.0 \times 10^{-1}$ or 0.7**
**7.0E 00 means $7.0 \times 10^{0}$ or 7.0**
**7.0E 01 means $7.0 \times 10^{1}$ or 70.0**
**7.0E 02 means $7.0 \times 10^{2}$ or 700.0**
**7.0E 03 means $7.0 \times 10^{3}$ or 7,000.0**

HISTOGRAM FOR COLUMN 6 ( AG PPM) X = 1%

7.0E-01 X

1.0E 00

1.5E 00 X

2.0E 00

3.0E 00

**Several different laboratories were involved in the analyses of these samples and the lower limit of detection of some elements varied between laboratories. The lower limit of detection of silver varied from 0.5 ppm to 1.0 ppm. Therefore, the number of N, L,0.5, and 0.7 values is not accurate. However, it is thought that the percentages given for these values are an approximation. It can also be seen that only 1.6% of the samples contain 1.0 ppm or more silver.**

| N | L | H | B | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 252 | 8 | 0 | 0 | 0 | 0 | 7 |
| 94.38 | 3.00 | | | 0.0 | 0.0 | |

MAXIMUM = 3.00000E 00

MINIMUM = 5.00000E-01

GEOMETRIC MEAN = 1.18635E 00

GEOMETRIC DEVIATION = 1.91841E 00

FREQUENCY TABLE FOR COLUMN 9 ( B PPM)

| LIMITS LOWER | - UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 8.3E 00 - | 1.2E 01 | 22 | 22 | 8.24 | 8.24 |
| 1.2E 01 - | 1.8E 01 | 19 | 41 | 7.12 | 15.36 |
| 1.8E 01 - | 2.6E 01 | 33 | 74 | 12.36 | 27.72 |
| 2.6E 01 - | 3.8E 01 | 40 | 114 | 14.98 | 42.70 |
| 3.8E 01 - | 5.6E 01 | 21 | 135 | 7.87 | 50.56 |
| 5.6E 01 - | 8.3E 01 | 20 | 155 | 7.49 | 58.05 |
| 8.3E 01 - | 1.2E 02 | 12 | 167 | 4.49 | 62.55 |
| 1.2E 02 - | 1.8E 02 | 1 | 168 | 0.37 | 62.92 |
| 1.8E 02 - | 2.6E 02 | 2 | 170 | 0.75 | 63.67 |
| 2.6E 02 - | 3.8E 02 | 1 | 171 | 0.37 | 64.04 |

HISTOGRAM FOR COLUMN 9 ( B PPM) X = 1%

```
1.0E 01 XXXXXXXX

1.5E 01 XXXXXXX

2.0E 01 XXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXX

5.0E 01 XXXXXXXX

7.0E 01 XXXXXXX

1.0E 02 XXXX

1.5E 02

2.0E 02 X

3.0E 02
```

| N | L | H | R | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 80 | 16 | 0 | 0 | 0 | 0 | 171 |
| 29.96 | 5.99 | | | 0.0 | 0.0 | |

MAXIMUM = 3.00000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 2.98433E 01

GEOMETRIC DEVIATION = 2.09863E 00

**EXPLANATION**

7.0E-01 means $7.0 \times 10^{-1}$ or 0.7
7.0E 00 means $7.0 \times 10^{0}$ or 7.0
7.0E 01 means $7.0 \times 10^{1}$ or 70.0
7.0E 02 means $7.0 \times 10^{2}$ or 700.0
7.0E 03 means $7.0 \times 10^{3}$ or 7,000.0

Several different laberateries were involved in the analyses of these samples and the lower limit of detection of some elements varied between laberateries. The lower limit of detection of boron was 10 ppm for about half the samples and 20 ppm for the other half. Therefore, that part of the histogram from 10 to 15 ppm and the number of N and L values are not accurate. The total number of samples with 15 ppm or less is 52%.

FREQUENCY TABLE FOR COLUMN 10 ( BA PPM)

| LIMITS LOWER | UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 3.8E 00 - | 5.6E 00 | 0 | 0 | 0.0 | 0.0 |
| 5.6E 00 - | 8.3E 00 | 0 | 0 | 0.0 | 0.0 |
| 8.3E 00 - | 1.2E 01 | 0 | 0 | 0.0 | 0.0 |
| 1.2E 01 - | 1.8E 01 | 0 | 0 | 0.0 | 0.0 |
| 1.8E 01 - | 2.6E 01 | 0 | 0 | 0.0 | 0.0 |
| 2.6E 01 - | 3.8E 01 | 0 | 0 | 0.0 | 0.0 |
| 3.8E 01 - | 5.6E 01 | 1 | 1 | 0.37 | 0.37 |
| 5.6E 01 - | 8.3E 01 | 1 | 2 | 0.37 | 0.75 |
| 8.3E 01 - | 1.2E 02 | 1 | 3 | 0.37 | 1.12 |
| 1.2E 02 - | 1.8E 02 | 1 | 4 | 0.37 | 1.50 |
| 1.8E 02 - | 2.6E 02 | 0 | 4 | 0.0 | 1.50 |
| 2.6E 02 - | 3.8E 02 | 6 | 10 | 2.25 | 3.75 |
| 3.8E 02 - | 5.6E 02 | 6 | 16 | 2.25 | 5.99 |
| 5.6E 02 - | 8.3E 02 | 27 | 43 | 10.11 | 16.10 |
| 8.3E 02 - | 1.2E 03 | 82 | 125 | 30.71 | 46.82 |
| 1.2E 03 - | 1.8E 03 | 79 | 204 | 29.59 | 76.40 |
| 1.8E 03 - | 2.6E 03 | 45 | 249 | 16.85 | 93.26 |
| 2.6E 03 - | 3.8E 03 | 16 | 265 | 5.99 | 99.25 |
| 3.8E 03 - | 5.6E 03 | 0 | 265 | 0.0 | 99.25 |
| 5.6E 03 - | 8.3E 03 | 2 | 267 | 0.75 | 100.00 |

**EXPLANATION**

7.0E-01 means $7.0 \times 10^{-1}$ or 0.7
7.0E 00 means $7.0 \times 10^{0}$ or 7.0
7.0E 01 means $7.0 \times 10^{1}$ or 70.0
7.0E 02 means $7.0 \times 10^{2}$ or 700.0
7.0E 03 means $7.0 \times 10^{3}$ or 7,000.0

HISTOGRAM FOR COLUMN 10 ( BA PPM) **X = 1%**

```
3.0E 02 XX

5.0E 02 XX

7.0E 02 XXXXXXXXXX

1.0E 03 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.5E 03 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 03 XXXXXXXXXXXXXXXXX

3.0E 03 XXXXXX

5.0E 03

7.0E 03 X
```

| N | L | B | B | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 267 |
| 0.0 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 7.00000E 03

MINIMUM = 5.00000E 01

GEOMETRIC MEAN = 1.22326E 03

GEOMETRIC DEVIATION = 1.79347E 00

FREQUENCY TABLE FOR COLUMN 11 ( BE PPM)

| LIMITS LOWER - UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|
| 8.3E-01 - 1.2E 00 | 61 | 61 | 22.85 | 22.85 |
| 1.2E 00 - 1.8E 00 | 78 | 139 | 29.21 | 52.06 |
| 1.8E 00 - 2.6E 00 | 35 | 174 | 13.11 | 65.17 |
| 2.6E 00 - 3.8E 00 | 25 | 199 | 9.36 | 74.53 |
| 3.8E 00 - 5.6E 00 | 3 | 202 | 1.12 | 75.66 |
| 5.6E 00 - 8.3E 00 | 1 | 203 | 0.37 | 76.03 |
| 8.3E 00 - 1.2E 01 | 0 | 203 | 0.0 | 76.03 |
| 1.2E 01 - 1.8E 01 | 1 | 204 | 0.37 | 76.40 |

**EXPLANATION**

7.0E-01 means $7.0 \times 10^{-1}$ or 0.7
7.0E 00 means $7.0 \times 10^{0}$ or 7.0
7.0E 01 means $7.0 \times 10^{1}$ or 70.0
7.0E 02 means $7.0 \times 10^{2}$ or 700.0
7.0E 03 means $7.0 \times 10^{3}$ or 7,000.0

HISTOGRAM FOR COLUMN 11 ( BE PPM) **X = 1%**

```
1.0E 00 XXXXXXXXXXXXXXXXXXXXXX

1.5E 00 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 00 XXXXXXXXXXXXX

3.0E 00 XXXXXXXXX

5.0E 00 X

7.0E 00

1.0E 01

1.5E 01
```

| N | L | H | R | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 63 | 0 | 0 | 0 | 0 | 0 | 204 |
| 23.60 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 1.50000E 01

MINIMUM = 1.00000E 00

GEOMETRIC MEAN = 1.57627E 00

GEOMETRIC DEVIATION = 1.52735E 00

FREQUENCY TABLE FOR COLUMN 12 ( BI PPM)

| LIMITS LOWER | - UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 8.3E 00 - | 1.2E 01 | 0 | 0 | 0.0 | 0.0 |
| 1.2E 01 - | 1.8E 01 | 3 | 3 | 1.12 | 1.12 |
| 1.8E 01 - | 2.6E 01 | 0 | 3 | 0.0 | 1.12 |
| 2.6E 01 - | 3.8E 01 | 1 | 4 | 0.37 | 1.50 |

**EXPLANATION**

**7.0E-01 means $7.0 \times 10^{-1}$ or 0.7**
**7.0E 00 means $7.0 \times 10^{0}$ or 7.0**
**7.0E 01 means $7.0 \times 10^{1}$ or 70.0**
**7.0E 02 means $7.0 \times 10^{2}$ or 700.0**
**7.0E 03 means $7.0 \times 10^{3}$ or 7,000.0**

HISTOGRAM FOR COLUMN 12 ( BI PPM) **X = 1%**

1.5E 01 X

2.0E 01

3.0E 01

| N | L | H | R | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 263 | 0 | 0 | 0 | 0 | 0 | 4 |
| 98.50 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 3.00000E 01

MINIMUM = 1.50000E 01

GEOMETRIC MEAN = 1.78380E 01

GEOMETRIC DEVIATION = 1.41422E 00

FREQUENCY TABLE FOR COLUMN 13 ( CO PPM)

| LIMITS LOWER - UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|
| 2.6E 00 - 3.8E 00 | 1 | 1 | 0.37 | 0.37 |
| 3.8E 00 - 5.6E 00 | 3 | 4 | 1.12 | 1.50 |
| 5.6E 00 - 8.3E 00 | 4 | 8 | 1.50 | 3.00 |
| 8.3E 00 - 1.2E 01 | 28 | 36 | 10.49 | 13.48 |
| 1.2E 01 - 1.8E 01 | 58 | 94 | 21.72 | 35.21 |
| 1.8E 01 - 2.6E 01 | 45 | 139 | 16.85 | 52.06 |
| 2.6E 01 - 3.8E 01 | 37 | 176 | 13.86 | 65.92 |
| 3.8E 01 - 5.6E 01 | 8 | 184 | 3.00 | 68.91 |
| 5.6E 01 - 8.3E 01 | 2 | 186 | 0.75 | 69.66 |

**EXPLANATION**

7.0E-01 means $7.0 \times 10^{-1}$ or 0.7
7.0E 00 means $7.0 \times 10^{0}$ or 7.0
7.0E 01 means $7.0 \times 10^{1}$ or 70.0
7.0E 02 means $7.0 \times 10^{2}$ or 700.0
7.0E 03 means $7.0 \times 10^{3}$ or 7,000.0

HISTOGRAM FOR COLUMN 13 ( CO PPM) **X = 1%**

```
5.0E 00 X

7.0E 00 X

1.0E 01 XXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXX

5.0E 01 XXX

7.0E 01 X
```

| N | L | H | R | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 81 | 0 | 0 | 0 | 0 | 0 | 186 |
| 30.34 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 7.00000E 01

MINIMUM = 3.00000E 00

GEOMETRIC MEAN = 1.78154E 01

GEOMETRIC DEVIATION = 1.64175E 00

FREQUENCY TABLE FOR COLUMN 14 ( CR PPM)

| LIMITS LOWER | - UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 3.8E 00 - | 5.6E 00 | 0 | 0 | 0.0 | 0.0 |
| 5.6E 00 - | 8.3E 00 | 0 | 0 | 0.0 | 0.0 |
| 8.3E 00 - | 1.2E 01 | 12 | 12 | 4.49 | 4.49 |
| 1.2E 01 - | 1.8E 01 | 8 | 20 | 3.00 | 7.49 |
| 1.8E 01 - | 2.6E 01 | 14 | 34 | 5.24 | 12.73 |
| 2.6E 01 - | 3.8E 01 | 30 | 64 | 11.24 | 23.97 |
| 3.8E 01 - | 5.6E 01 | 26 | 90 | 9.74 | 33.71 |
| 5.6E 01 - | 8.3E 01 | 57 | 147 | 21.35 | 55.06 |
| 8.3E 01 - | 1.2E 02 | 26 | 173 | 9.74 | 64.79 |
| 1.2E 02 - | 1.8E 02 | 49 | 222 | 18.35 | 83.15 |
| 1.8E 02 - | 2.6E 02 | 19 | 241 | 7.12 | 90.26 |
| 2.6E 02 - | 3.8E 02 | 6 | 247 | 2.25 | 92.51 |
| 3.8E 02 - | 5.6E 02 | 4 | 251 | 1.50 | 94.01 |
| 5.6E 02 - | 8.3E 02 | 1 | 252 | 0.37 | 94.38 |

**EXPLANATION**

7.0E-01 means $7.0 \times 10^{-1}$ or 0.7
7.0E 00 means $7.0 \times 10^{0}$ or 7.0
7.0E 01 means $7.0 \times 10^{1}$ or 70.0
7.0E 02 means $7.0 \times 10^{2}$ or 700.0
7.0E 03 means $7.0 \times 10^{3}$ or 7,000.0

HISTOGRAM FOR COLUMN 14 ( CR PPM) X = 1%

```
1.0E 01 XXXX

1.5E 01 XXX

2.0E 01 XXXXX

3.0E 01 XXXXXXXXXXX

5.0E 01 XXXXXXXXXX

7.0E 01 XXXXXXXXXXXXXXXXXXXX

1.0E 02 XXXXXXXXXX

1.5E 02 XXXXXXXXXXXXXXXXXX

2.0E 02 XXXXXXX

3.0E 02 XX

5.0E 02 X

7.0E 02
```

| N | L | H | R | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 15 | 0 | 0 | 0 | 0 | 0 | 252 |
| 5.62 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 7.00000E 02

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 6.94619E 01

GEOMETRIC DEVIATION = 2.42640E 00

FREQUENCY TABLE FOR COLUMN 15 ( CU PPM)

| LIMITS LOWER - UPPER | | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 3.8E 00 - | 5.6E 00 | 1 | 1 | 0.37 | 0.37 |
| 5.6E 00 - | 8.3E 00 | 3 | 4 | 1.12 | 1.50 |
| 8.3E 00 - | 1.2E 01 | 15 | 19 | 5.62 | 7.12 |
| 1.2E 01 - | 1.8E 01 | 19 | 38 | 7.12 | 14.23 |
| 1.8E 01 - | 2.6E 01 | 48 | 86 | 17.98 | 32.21 |
| 2.6E 01 - | 3.8E 01 | 70 | 156 | 26.22 | 58.43 |
| 3.8E 01 - | 5.6E 01 | 49 | 205 | 18.35 | 76.78 |
| 5.6E 01 - | 8.3E 01 | 28 | 233 | 10.49 | 87.27 |
| 8.3E 01 - | 1.2E 02 | 17 | 250 | 6.37 | 93.63 |
| 1.2E 02 - | 1.8E 02 | 13 | 263 | 4.87 | 98.50 |
| 1.8E 02 - | 2.6E 02 | 3 | 266 | 1.12 | 99.63 |
| 2.6E 02 - | 3.8E 02 | 1 | 267 | 0.37 | 100.00 |

**EXPLANATION**

**7.0E-01 means 7.0 x $10^{-1}$ or 0.7**
**7.0E 00 means 7.0 x $10^{0}$ or 7.0**
**7.0E 01 means 7.0 x $10^{1}$ or 70.0**
**7.0E 02 means 7.0 x $10^{2}$ or 700.0**
**7.0E 03 means 7.0 x $10^{3}$ or 7,000.0**

HISTOGRAM FOR COLUMN 15 ( CU PPM) **X = 1%**

```
7.0E 00 X

1.0E 01 XXXXXX

1.5E 01 XXXXXXX

2.0E 01 XXXXXXXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXX

5.0E 01 XXXXXXXXXXXXXXXXX

7.0E 01 XXXXXXXXXX

1.0E 02 XXXXXX

1.5E 02 XXXXX

2.0E 02 X

3.0E 02
```

| N | L | H | B | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 267 |
| 0.0 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 3.00000E 02

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 3.52215E 01

GEOMETRIC DEVIATION = 2.09370E 00

FREQUENCY TABLE FOR COLUMN 16 ( LA PPM)

| LIMITS LOWER - UPPER | | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 1.8E 01 - | 2.6E 01 | 14 | 14 | 5.74 | 5.74 |
| 2.6E 01 - | 3.8E 01 | 44 | 58 | 16.48 | 21.72 |
| 3.8E 01 - | 5.6E 01 | 43 | 101 | 16.10 | 37.83 |
| 5.6E 01 - | 8.3E 01 | 50 | 151 | 18.73 | 56.55 |
| 8.3E 01 - | 1.2E 02 | 33 | 184 | 12.36 | 68.91 |
| 1.2E 02 - | 1.8E 02 | 38 | 222 | 14.23 | 83.15 |
| 1.8E 02 - | 2.6E 02 | 14 | 236 | 5.24 | 88.39 |
| 2.6E 02 - | 3.8E 02 | 7 | 243 | 2.62 | 91.01 |
| 3.8E 02 - | 5.6E 02 | 0 | 243 | 0.0 | 91.01 |
| 5.6E 02 - | 8.3E 02 | 1 | 244 | 0.37 | 91.39 |

**EXPLANATION**

**7.0E-01 means $7.0 \times 10^{-1}$ or 0.7**
**7.0E 00 means $7.0 \times 10^{0}$ or 7.0**
**7.0E 01 means $7.0 \times 10^{1}$ or 70.0**
**7.0E 02 means $7.0 \times 10^{2}$ or 700.0**
**7.0E 03 means $7.0 \times 10^{3}$ or 7,000,0**

HISTOGRAM FOR COLUMN 16 ( LA PPM) **X = 1%**

```
2.0E 01 XXXXX

3.0E 01 XXXXXXXXXXXXXXXX

5.0E 01 XXXXXXXXXXXXXXXX

7.0E 01 XXXXXXXXXXXXXXXXXXX

1.0E 02 XXXXXXXXXXXX

1.5E 02 XXXXXXXXXXXXXX

2.0E 02 XXXXX

3.0E 02 XXX

5.0E 02

7.0E 02
```

| N | L | H | B | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 23 | 0 | 0 | 0 | 0 | 0 | 244 |
| 8.61 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 7.00000E 02

MINIMUM = 2.00000E 01

GEOMETRIC MEAN = 6.95993E 01

GEOMETRIC DEVIATION = 2.02203E 00

FREQUENCY TABLE FOR COLUMN 17 ( MO PPM)

| LIMITS LOWER - | UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 2.6E 00 - | 3.8E 00 | 17 | 17 | 6.37 | 6.37 |
| 3.8E 00 - | 5.6E 00 | 19 | 36 | 7.12 | 13.48 |
| 5.6E 00 - | 8.3E 00 | 12 | 48 | 4.49 | 17.98 |
| 8.3E 00 - | 1.2E 01 | 4 | 52 | 1.50 | 19.48 |

HISTOGRAM FOR COLUMN 17 ( MO PPM) X = 1%

3.0E 00 XXXXXX

5.0E 00 XXXXXXX

7.0E 00 XXXX

1.0E 01 X

| N | L | H | R | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 215 | 0 | 0 | 0 | 0 | 0 | 52 |
| 80.52 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 1.00000E 01

MINIMUM = 3.00000E 00

GEOMETRIC MEAN = 4.82298E 00

GEOMETRIC DEVIATION = 1.47299E 00

**EXPLANATION**

7.0E-01 means $7.0 \times 10^{-1}$ or 0.7
7.0E 00 means $7.0 \times 10^{0}$ or 7.0
7.0E 01 means $7.0 \times 10^{1}$ or 70.0
7.0E 02 means $7.0 \times 10^{2}$ or 700.0
7.0E 03 means $7.0 \times 10^{3}$ or 7,000.0

Several different laboratories were involved in the analyses of these samples and the lower limit of detection of some elements varied between laboratories. The lower limit of detection of molybdenum was 5.0 ppm for about half the samples and 3.0 ppm for the other half. Therefore, the percentage of 3.0 ppm values is not accurate. The total number of samples with less than 5.0 ppm is about 87%.

FREQUENCY TABLE FOR COLUMN 18 ( NB PPM)

| LIMITS LOWER - UPPER | | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 8.3E 00 - | 1.2E 01 | 41 | 41 | 16.14 | 16.14 |
| 1.2E 01 - | 1.8E 01 | 32 | 73 | 12.60 | 28.74 |
| 1.8E 01 - | 2.6E 01 | 20 | 93 | 7.87 | 36.61 |
| 2.6E 01 - | 3.8E 01 | 17 | 110 | 6.69 | 43.31 |
| 3.8E 01 - | 5.6E 01 | 3 | 113 | 1.18 | 44.49 |

**EXPLANATION**

**7.0E-01 means $7.0 \times 10^{-1}$ or 0.7**
**7.0E 00 means $7.0 \times 10^{0}$ or 7.0**
**7.0E 01 means $7.0 \times 10^{1}$ or 70.0**
**7.0E 02 means $7.0 \times 10^{2}$ or 700.0**
**7.0E 03 means $7.0 \times 10^{3}$ or 7,000.0**

HISTOGRAM FOR COLUMN 18 ( NB PPM) **X = 1%**

```
1.0E 01 XXXXXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXX

2.0E 01 XXXXXXXX

3.0E 01 XXXXXXX

5.0E 01 X
```

| N | L | H | R | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 141 | 0 | 0 | 13 | 0 | 0 | 113 |
| 55.51 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 5.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.56125E 01

GEOMETRIC DEVIATION = 1.53770E 00

FREQUENCY TABLE FOR COLUMN 19 ( NI PPM)

| LIMITS LOWER - UPPER | | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 1.8E 00 - | 2.6E 00 | 6 | 6 | 2.25 | 2.25 |
| 2.6E 00 - | 3.8E 00 | 3 | 9 | 1.12 | 3.37 |
| 3.8E 00 - | 5.6E 00 | 10 | 19 | 3.75 | 7.12 |
| 5.6E 00 - | 8.3E 00 | 10 | 29 | 3.75 | 10.86 |
| 8.3E 00 - | 1.2E 01 | 16 | 45 | 5.99 | 16.85 |
| 1.2E 01 - | 1.8E 01 | 35 | 80 | 13.11 | 29.96 |
| 1.8E 01 - | 2.6E 01 | 30 | 110 | 11.24 | 41.20 |
| 2.6E 01 - | 3.8E 01 | 54 | 164 | 20.22 | 61.42 |
| 3.8E 01 - | 5.6E 01 | 48 | 212 | 17.98 | 79.40 |
| 5.6E 01 - | 8.3E 01 | 31 | 243 | 11.61 | 91.01 |
| 8.3E 01 - | 1.2E 02 | 8 | 251 | 3.00 | 94.01 |
| 1.2E 02 - | 1.8E 02 | 5 | 256 | 1.87 | 95.88 |
| 1.8E 02 - | 2.6E 02 | 1 | 257 | 0.37 | 96.25 |

**EXPLANATION**

**7.0E-01 means 7.0 x $10^{-1}$ or 0.7**
**7.0E 00 means 7.0 x $10^{0}$ or 7.0**
**7.0E 01 means 7.0 x $10^{1}$ or 70.0**
**7.0E 02 means 7.0 x $10^{2}$ or 700.0**
**7.0E 03 means 7.0 x $10^{3}$ or 7,000.0**

HISTOGRAM FOR COLUMN 19 ( NI PPM) **X = 1%**

```
2.0E 00 XX

3.0E 00 X

5.0E 00 XXXX

7.0E 00 XXXX

1.0E 01 XXXXXX

1.5E 01 XXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXX

5.0E 01 XXXXXXXXXXXXXXXXX

7.0E 01 XXXXXXXXXXXX

1.0E 02 XXX

1.5E 02 XX

2.0E 02
```

| N | L | H | B | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 19 | 0 | 0 | 0 | 0 | 0 | 257 |
| 3.75 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 2.00000E 02

MINIMUM = 2.00000E 00

GEOMETRIC MEAN = 2.57468E 01

GEOMETRIC DEVIATION = 2.48048E 00

FREQUENCY TABLE FOR COLUMN 20 ( PB PPM)

| LIMITS LOWER | - UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 8.3E 00 - | 1.2E 01 | 5 | 5 | 1.87 | 1.87 |
| 1.2E 01 - | 1.8E 01 | 16 | 21 | 5.99 | 7.87 |
| 1.8E 01 - | 2.6E 01 | 46 | 67 | 17.23 | 25.09 |
| 2.6E 01 - | 3.8E 01 | 68 | 135 | 25.47 | 50.56 |
| 3.8E 01 - | 5.6E 01 | 60 | 195 | 22.47 | 73.03 |
| 5.6E 01 - | 8.3E 01 | 37 | 232 | 13.86 | 86.89 |
| 8.3E 01 - | 1.2E 02 | 8 | 240 | 3.00 | 89.89 |
| 1.2E 02 - | 1.8E 02 | 5 | 245 | 1.87 | 91.76 |
| 1.8E 02 - | 2.6E 02 | 0 | 245 | 0.0 | 91.76 |
| 2.6E 02 - | 3.8E 02 | 0 | 245 | 0.0 | 91.76 |
| 3.8E 02 - | 5.6E 02 | 0 | 245 | 0.0 | 91.76 |
| 5.6E 02 - | 8.3E 02 | 0 | 245 | 0.0 | 91.76 |
| 8.3E 02 - | 1.2E 03 | 0 | 245 | 0.0 | 91.76 |
| 1.2E 03 - | 1.8E 03 | 0 | 245 | 0.0 | 91.76 |
| 1.8E 03 - | 2.6E 03 | 1 | 246 | 0.37 | 92.13 |

**EXPLANATION**

**7.0E-01 means** $7.0 \times 10^{-1}$ or 0.7
**7.0E 00 means** $7.0 \times 10^{0}$ or 7.0
**7.0E 01 means** $7.0 \times 10^{1}$ or 70.0
**7.0E 02 means** $7.0 \times 10^{2}$ or 700.0
**7.0E 03 means** $7.0 \times 10^{3}$ or 7,000.0

HISTOGRAM FOR COLUMN 20 ( PB PPM) **X = 1%**

```
1.0E 01 XX
1.5E 01 XXXXXX
2.0E 01 XXXXXXXXXXXXXXXXX
3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXXX
5.0E 01 XXXXXXXXXXXXXXXXXXXXXX
7.0E 01 XXXXXXXXXXXXXX
1.0E 02 XXX
1.5E 02 XX
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 |
|---|---|---|---|---|---|---|
| 21 | 0 | 0 | 0 | 0 | 0 | 246 |
| 7.87 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 2.00000E 03 **GEOMETRIC MEAN = 3.65557E 01**

MINIMUM = 1.00000E 01 **GEOMETRIC DEVIATION = 1.87129E 00**

FREQUENCY TABLE FOR COLUMN 22 ( SC PPM)

| LIMITS LOWER - UPPER | | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 3.8E 00 - | 5.6E 00 | 15 | 15 | 8.62 | 8.62 |
| 5.6E 00 - | 8.3E 00 | 30 | 45 | 17.24 | 25.86 |
| 8.3E 00 - | 1.2E 01 | 18 | 63 | 10.34 | 36.21 |
| 1.2E 01 - | 1.8E 01 | 25 | 88 | 14.37 | 50.57 |
| 1.8E 01 - | 2.6E 01 | 25 | 113 | 14.37 | 64.94 |
| 2.6E 01 - | 3.8E 01 | 12 | 125 | 6.90 | 71.84 |
| 3.8E 01 - | 5.6E 01 | 2 | 127 | 1.15 | 72.99 |

**EXPLANATION**

**7.0E-01 means $7.0 \times 10^{-1}$ or 0.7**
**7.0E 00 means $7.0 \times 10^{0}$ or 7.0**
**7.0E 01 means $7.0 \times 10^{1}$ or 70.0**
**7.0E 02 means $7.0 \times 10^{2}$ or 700.0**
**7.0E 03 means $7.0 \times 10^{3}$ or 7,000.0**

HISTOGRAM FOR COLUMN 22 ( SC PPM) **X = 1%**

```
5.0E 00 XXXXXXXXX

7.0E 00 XXXXXXXXXXXXXXXX

1.0E 01 XXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXXXX

3.0E 01 XXXXXXX

5.0E 01 X
```

| N | L | M | H | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 47 | 0 | 0 | 93 | 0 | 0 | 127 |
| 27.01 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 5.00000E 01

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 1.19635E 01

GEOMETRIC DEVIATION = 1.79025E 00

FREQUENCY TABLE FOR COLUMN 23 ( SN PPM)

| LIMITS LOWER | - UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 8.3E 00 - | 1.2E 01 | 2 | 2 | 0.75 | 0.75 |
| 1.2E 01 - | 1.8E 01 | 0 | 2 | 0.0 | 0.75 |
| 1.8E 01 - | 2.6E 01 | 2 | 4 | 0.75 | 1.50 |
| 2.6E 01 - | 3.8E 01 | 2 | 6 | 0.75 | 2.25 |

**EXPLANATION**

7.0E-01 means $7.0 \times 10^{-1}$ or 0.7
7.0E 00 means $7.0 \times 10^{0}$ or 7.0
7.0E 01 means $7.0 \times 10^{1}$ or 70.0
7.0E 02 means $7.0 \times 10^{2}$ or 700.0
7.0E 03 means $7.0 \times 10^{3}$ or 7,000.0

HISTOGRAM FOR COLUMN 23 ( SN PPM) X = 1%

1.0E 01 X

1.5E 01

2.0E 01 X

3.0E 01 X

| N | L | H | R | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 261 | 0 | 0 | 0 | 0 | 0 | 6 |
| 97.75 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 3.00000E 01

MINIMUM = 1.00000E 01

GEOMETRIC MEAN = 1.81712E 01

GEOMETRIC DEVIATION = 1.64361E 00

FREQUENCY TABLE FOR COLUMN 24 ( SR PPM)

| LIMITS LOWER | - UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 8.3E 01 - | 1.2E 02 | 10 | 10 | 3.75 | 3.75 |
| 1.2E 02 - | 1.8E 02 | 13 | 23 | 4.87 | 8.61 |
| 1.8E 02 - | 2.6E 02 | 9 | 32 | 3.37 | 11.99 |
| 2.6E 02 - | 3.8E 02 | 29 | 61 | 10.86 | 22.85 |
| 3.8E 02 - | 5.6E 02 | 45 | 106 | 16.85 | 39.70 |
| 5.6E 02 - | 8.3E 02 | 82 | 188 | 30.71 | 70.41 |
| 8.3E 02 - | 1.2E 03 | 51 | 239 | 19.10 | 89.51 |
| 1.2E 03 - | 1.8E 03 | 19 | 258 | 7.12 | 96.63 |
| 1.8E 03 - | 2.6E 03 | 6 | 264 | 2.25 | 98.88 |

**EXPLANATION**

**7.0E-01 means** $7.0 \times 10^{-1}$ or 0.7
**7.0E 00 means** $7.0 \times 10^{0}$ or 7.0
**7.0E 01 means** $7.0 \times 10^{1}$ or 70.0
**7.0E 02 means** $7.0 \times 10^{2}$ or 700.0
**7.0E 03 means** $7.0 \times 10^{3}$ or 7,000.0

HISTOGRAM FOR COLUMN 24 ( SR PPM) **X = 1%**

```
1.0E 02 XXXX

1.5E 02 XXXXX

2.0E 02 XXX

3.0E 02 XXXXXXXXXXX

5.0E 02 XXXXXXXXXXXXXXXX

7.0E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1.0E 03 XXXXXXXXXXXXXXXXXX

1.5E 03 XXXXXXX

2.0E 03 XX
```

| N | L | H | B | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 3 | 0 | 0 | 0 | 0 | 0 | 264 |
| 1.12 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 2.00000E 03

MINIMUM = 1.00000E 02

GEOMETRIC MEAN = 5.75842E 02

GEOMETRIC DEVIATION = 1.98314E 00

FREQUENCY TABLE FOR COLUMN 25 ( V PPM)

| LIMITS LOWER | - UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 8.3E 00 - | 1.2E 01 | 0 | 0 | 0.0 | 0.0 |
| 1.2E 01 - | 1.8E 01 | 4 | 4 | 1.50 | 1.50 |
| 1.8E 01 - | 2.6E 01 | 3 | 7 | 1.12 | 2.62 |
| 2.6E 01 - | 3.8E 01 | 17 | 24 | 6.37 | 8.99 |
| 3.8E 01 - | 5.6E 01 | 27 | 51 | 10.11 | 19.10 |
| 5.6E 01 - | 8.3E 01 | 49 | 100 | 18.35 | 37.45 |
| 8.3E 01 - | 1.2E 02 | 46 | 146 | 17.23 | 54.68 |
| 1.2E 02 - | 1.8E 02 | 94 | 240 | 35.21 | 89.89 |
| 1.8E 02 - | 2.6E 02 | 22 | 262 | 8.24 | 98.13 |
| 2.6E 02 - | 3.8E 02 | 4 | 266 | 1.50 | 99.63 |

**EXPLANATION**

7.0E-01 means $7.0 \times 10^{-1}$ or 0.7
7.0E 00 means $7.0 \times 10^{0}$ or 7.0
7.0E 01 means $7.0 \times 10^{1}$ or 70.0
7.0E 02 means $7.0 \times 10^{2}$ or 700.0
7.0E 03 means $7.0 \times 10^{3}$ or 7,000.0

HISTOGRAM FOR COLUMN 25 ( V PPM) **X = 1%**

```
1.5E 01 X

2.0E 01 X

3.0E 01 XXXXXX

5.0E 01 XXXXXXXXXX

7.0E 01 XXXXXXXXXXXXXXXXX

1.0E 02 XXXXXXXXXXXXXXXX

1.5E 02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2.0E 02 XXXXXXXX

3.0E 02 X
```

| N | L | H | B | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 266 |
| 0.37 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 3.00000E 02

MINIMUM = 1.50000E 01

GEOMETRIC MEAN = 9.58240E 01

GEOMETRIC DEVIATION = 1.82893E 00

FREQUENCY TABLE FOR COLUMN 27 ( Y PPM)

| LIMITS LOWER | - UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 3.8E 00 - | 5.6E 00 | 19 | 19 | 7.12 | 7.12 |
| 5.6E 00 - | 8.3E 00 | 21 | 40 | 7.87 | 14.98 |
| 8.3E 00 - | 1.2E 01 | 34 | 74 | 12.73 | 27.72 |
| 1.2E 01 - | 1.8E 01 | 40 | 114 | 14.98 | 42.70 |
| 1.8E 01 - | 2.6E 01 | 33 | 147 | 12.36 | 55.06 |
| 2.6E 01 - | 3.8E 01 | 64 | 211 | 23.97 | 79.03 |
| 3.8E 01 - | 5.6E 01 | 25 | 236 | 9.36 | 88.39 |
| 5.6E 01 - | 8.3E 01 | 7 | 243 | 2.62 | 91.01 |

**EXPLANATION**

**7.0E-01 means 7.0 x $10^{-1}$ or 0.7**
**7.0E 00 means 7.0 x $10^{0}$ or 7.0**
**7.0E 01 means 7.0 x $10^{1}$ or 70.0**
**7.0E 02 means 7.0 x $10^{2}$ or 700.0**
**7.0E 03 means 7.0 x $10^{3}$ or 7,000.0**

HISTOGRAM FOR COLUMN 27 ( Y PPM) **X = 1%**

```
5.0E 00 XXXXXXX

7.0E 00 XXXXXXXX

1.0E 01 XXXXXXXXXXXXX

1.5E 01 XXXXXXXXXXXXXXX

2.0E 01 XXXXXXXXXXXX

3.0E 01 XXXXXXXXXXXXXXXXXXXXXXXX

5.0E 01 XXXXXXXXX

7.0E 01 XXX
```

| N | L | H | B | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 24 | 0 | 0 | 0 | 0 | 0 | 243 |
| 8.99 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 7.00000E 01

MINIMUM = 5.00000E 00

GEOMETRIC MEAN = 1.79817E 01

GEOMETRIC DEVIATION = 2.01678E 00

FREQUENCY TABLE FOR COLUMN 28 ( ZN PPM)

| LIMITS LOWER | - UPPER | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 1.8E 02 - | 2.6E 02 | 0 | 0 | 0.0 | 0.0 |
| 2.6E 02 - | 3.8E 02 | 1 | 1 | 0.37 | 0.37 |
| 3.8E 02 - | 5.6E 02 | 0 | 1 | 0.0 | 0.37 |
| 5.6E 02 - | 8.3E 02 | 1 | 2 | 0.37 | 0.75 |

HISTOGRAM FOR COLUMN 28 ( ZN PPM) X = 1%

| N | L | B | B | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 265 | 0 | 0 | 0 | 0 | 0 | 2 |
| 99.25 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 7.00000E 02

MINIMUM = 3.00000E 02

GEOMETRIC MEAN = 4.58256E 02

GEOMETRIC DEVIATION = 1.82053E 00

**EXPLANATION**

**7.0E-01 means** $7.0 \times 10^{-1}$ **or** 0.7
**7.0E 00 means** $7.0 \times 10^{0}$ **or** 7.0
**7.0E 01 means** $7.0 \times 10^{1}$ **or** 70.0
**7.0E 02 means** $7.0 \times 10^{2}$ **or** 700.0
**7.0E 03 means** $7.0 \times 10^{3}$ **or** 7,000.0

FREQUENCY TABLE FOR COLUMN 29 ( ZR PPM)

| LIMITS LOWER - UPPER | | FREQ | FREQ CUM | PERCENT FREQ | PERCENT FREQ CUM |
|---|---|---|---|---|---|
| 8.3E 00 - | 1.2E 01 | 0 | 0 | 0.0 | 0.0 |
| 1.2E 01 - | 1.8E 01 | 0 | 0 | 0.0 | 0.0 |
| 1.8E 01 - | 2.6E 01 | 3 | 3 | 1.12 | 1.12 |
| 2.6E 01 - | 3.8E 01 | 7 | 10 | 2.62 | 3.75 |
| 3.8E 01 - | 5.6E 01 | 12 | 22 | 4.49 | 8.24 |
| 5.6E 01 - | 8.3E 01 | 25 | 47 | 9.36 | 17.60 |
| 8.3E 01 - | 1.2E 02 | 28 | 75 | 10.49 | 28.09 |
| 1.2E 02 - | 1.8E 02 | 59 | 134 | 22.10 | 50.19 |
| 1.8E 02 - | 2.6E 02 | 47 | 181 | 17.60 | 67.79 |
| 2.6E 02 - | 3.8E 02 | 44 | 225 | 16.48 | 84.27 |
| 3.8E 02 - | 5.6E 02 | 10 | 235 | 3.75 | 88.01 |
| 5.6E 02 - | 8.3E 02 | 14 | 249 | 5.24 | 93.26 |
| 8.3E 02 - | 1.2E 03 | 6 | 255 | 2.25 | 95.51 |
| 1.2E 03 - | 1.8E 03 | 9 | 264 | 3.37 | 98.88 |
| 1.8E 03 - | 2.6E 03 | 1 | 265 | 0.37 | 99.25 |
| 2.6E 03 - | 3.8E 03 | 0 | 265 | 0.0 | 99.25 |
| 3.8E 03 - | 5.6E 03 | 1 | 266 | 0.37 | 99.63 |

**EXPLANATION**

7.0E-01 means $7.0 \times 10^{-1}$ or 0.7
7.0E 00 means $7.0 \times 10^{0}$ or 7.0
7.0E 01 means $7.0 \times 10^{1}$ or 70.0
7.0E 02 means $7.0 \times 10^{2}$ or 700.0
7.0E 03 means $7.0 \times 10^{3}$ or 7,000.0

HISTOGRAM FOR COLUMN 29 ( ZR PPM) X = 1%

```
2.0E 01 X
3.0E 01 XXX
5.0E 01 XXXX
7.0E 01 XXXXXXXXX
1.0E 02 XXXXXXXXXX
1.5E 02 XXXXXXXXXXXXXXXXXXXXX
2.0E 02 XXXXXXXXXXXXXXXXXX
3.0E 02 XXXXXXXXXXXXXXXX
5.0E 02 XXXX
7.0E 02 XXXXX
1.0E 03 XX
1.5E 03 XXX
2.0E 03
3.0E 03
5.0E 03
```

| N | L | H | M | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 266 |
| 0.37 | 0.0 | | | 0.0 | 0.0 | |

MAXIMUM = 5.00000E 03 MINIMUM = 2.00000E 01 GEOMETRIC MEAN = 1.84384E 02 GEOMETRIC DEVIATION = 2.45555E 00

A470 STATISTICAL SUMMARY DATE 3/27/69

| ELEMENT | N | L | H | R | T | G | ANALYTICAL VALUES |
|---|---|---|---|---|---|---|---|
| FE PCT | 0 | 0 | 0 | 0 | 0 | 5 | 262 |
| MG PCT | 0 | 0 | 0 | 0 | 0 | 0 | 267 |
| CA PCT | 0 | 0 | 0 | 0 | 0 | 0 | 267 |
| TI PCT | 0 | 0 | 0 | 0 | 0 | 0 | 267 |
| MN PPM | 1 | 0 | 0 | 0 | 0 | 0 | 266 |
| AG PPM | 252 | 8 | 0 | 0 | 0 | 0 | 7 |
| AS PPM | 267 | 0 | 0 | 0 | 0 | 0 | 0 |
| AU PPM | 245 | 0 | 0 | 9 | 0 | 0 | 13 |
| B PPM | 80 | 16 | 0 | 0 | 0 | 0 | 171 |
| BA PPM | 0 | 0 | 0 | 0 | 0 | 0 | 267 |
| BE PPM | 63 | 0 | 0 | 0 | 0 | 0 | 204 |
| BI PPM | 263 | 0 | 0 | 0 | 0 | 0 | 4 |
| CO PPM | 81 | 0 | 0 | 0 | 0 | 0 | 186 |
| CR PPM | 15 | 0 | 0 | 0 | 0 | 0 | 252 |
| CU PPM | 0 | 0 | 0 | 0 | 0 | 0 | 267 |
| LA PPM | 23 | 0 | 0 | 0 | 0 | 0 | 244 |
| MO PPM | 215 | 0 | 0 | 0 | 0 | 0 | 52 |
| NB PPM | 141 | 0 | 0 | 13 | 0 | 0 | 113 |
| NI PPM | 10 | 0 | 0 | 0 | 0 | 0 | 257 |
| PB PPM | 21 | 0 | 0 | 0 | 0 | 0 | 246 |
| SB PPM | 267 | 0 | 0 | 0 | 0 | 0 | 0 |
| SC PPM | 47 | 0 | 0 | 93 | 0 | 0 | 127 |
| SN PPM | 261 | 0 | 0 | 0 | 0 | 0 | 6 |
| SR PPM | 3 | 0 | 0 | 0 | 0 | 0 | 264 |
| V PPM | 1 | 0 | 0 | 0 | 0 | 0 | 266 |
| W PPM | 267 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y PPM | 24 | 0 | 0 | 0 | 0 | 0 | 243 |
| ZN PPM | 265 | 0 | 0 | 0 | 0 | 0 | 2 |
| ZR PPM | 1 | 0 | 0 | 0 | 0 | 0 | 266 |

| ELEMENT | GEOMETRIC MEAN | GEOMETRIC DEVIATION | REMARKS |
|---|---|---|---|
| FE PCT | ******** | ****** | 5 GREATER THAN VALUES. NO COMPUTATIONS. |
| MG PCT | 0.993141 | 1.95 | 267 SAMPLES AND 267 ANALYTICAL VALUES. |
| CA PCT | 1.860855 | 2.07 | 267 SAMPLES AND 267 ANALYTICAL VALUES. |
| TI PCT | 0.361629 | 1.98 | 267 SAMPLES AND 267 ANALYTICAL VALUES. |
| MN PPM | 642.509521 | 2.18 | 1 NOT DETECTED, LESS THAN, OR TRACE VALUES. 266 REPORTED VALUES. |
| AG PPM | ******** | ****** | 260 NOT DETECTED, LESS THAN, OR TRACE VALUES. 7 REPORTED VALUES. NO COMPUTATIONS. |
| AS PPM | ******** | ****** | 267 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS. |
| AU PPM | ******** | ****** | 245 NOT DETECTED, LESS THAN, OR TRACE VALUES. 13 REPORTED VALUES. NO COMPUTATIONS. |
| B PPM | 14.017799 | 3.43 | 96 NOT DETECTED, LESS THAN, OR TRACE VALUES. 171 REPORTED VALUES. |
| BA PPM | 1223.260254 | 1.79 | 267 SAMPLES AND 267 ANALYTICAL VALUES. |
| BE PPM | 1.249454 | 1.76 | 63 NOT DETECTED, LESS THAN, OR TRACE VALUES. 204 REPORTED VALUES. |
| BI PPM | ******** | ****** | 263 NOT DETECTED, LESS THAN, OR TRACE VALUES. 4 REPORTED VALUES. NO COMPUTATIONS. |
| CO PPM | 7.909538 | 3.83 | 81 NOT DETECTED, LESS THAN, OR TRACE VALUES. 186 REPORTED VALUES. |
| CR PPM | 57.760040 | 3.16 | 15 NOT DETECTED, LESS THAN, OR TRACE VALUES. 252 REPORTED VALUES. |
| CU PPM | 35.221405 | 2.09 | 267 SAMPLES AND 267 ANALYTICAL VALUES. |
| LA PPM | 59.922775 | 2.31 | 23 NOT DETECTED, LESS THAN, OR TRACE VALUES. 244 REPORTED VALUES. |
| MO PPM | 1.081491 | 2.81 | 215 NOT DETECTED, LESS THAN, OR TRACE VALUES. 52 REPORTED VALUES. |
| NB PPM | 7.516061 | 2.24 | 141 NOT DETECTED, LESS THAN, OR TRACE VALUES. 113 REPORTED VALUES. |
| NI PPM | 22.989319 | 2.89 | 10 NOT DETECTED, LESS THAN, OR TRACE VALUES. 257 REPORTED VALUES. |
| PB PPM | 31.721298 | 2.17 | 21 NOT DETECTED, LESS THAN, OR TRACE VALUES. 246 REPORTED VALUES. |
| SB PPM | ******** | ****** | 267 NOT DETECTED, LESS THAN, OR TRACE VALUES. 0 REPORTED VALUES. NO COMPUTATIONS. |
| SC PPM | 7.600996 | 2.52 | 47 NOT DETECTED, LESS THAN, OR TRACE VALUES. 127 REPORTED VALUES. |
| SN PPM | ******** | ****** | 261 NOT DETECTED, LESS THAN, OR TRACE VALUES. 6 REPORTED VALUES. NO COMPUTATIONS. |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SR | PPM | 562.003174 | 2.05 | 3 | NOT DETECTED, LESS THAN, OR TRACE VALUES. | 264 | REPORTED VALUES. |
| V | PPM | 94.892426 | 1.86 | 1 | NOT DETECTED, LESS THAN, OR TRACE VALUES. | 266 | REPORTED VALUES. |
| W | PPM | ******** | ****** | 267 | NOT DETECTED, LESS THAN, OR TRACE VALUES. | 0 | REPORTED VALUES. NO COMPUTATIONS. |
| Y | PPM | 15.133652 | 2.39 | 24 | NOT DETECTED, LESS THAN, OR TRACE VALUES. | 243 | REPORTED VALUES. |
| ZN | PPM | ******** | ****** | 265 | NOT DETECTED, LESS THAN, OR TRACE VALUES. | 2 | REPORTED VALUES. NO COMPUTATIONS. |
| ZR | PPM | 182.076996 | 2.51 | 1 | NOT DETECTED, LESS THAN, OR TRACE VALUES. | 266 | REPORTED VALUES. |