DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

METHODOLOGY, STATISTICAL ANALYSIS, AND LISTING OF THE SPECTROGRAPHIC ANALYSES OF GEOCHEMICAL SAMPLES, HELLS HOLE FURTHER PLANNING AREA (RARE II), GREENLEE COUNTY, ARIZONA and GRANT COUNTY, NEW MEXICO

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Open-File Report 81-661

1981

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Studies Related to Wilderness

The Wilderness Act (Public Law 88-577, Sept. 3, 1964) and related Acts require the U.S. Geological Survey and the U.S. Bureau of Mines to survey certain areas on Federal lands to determine their mineral resource potential. Results must be made available to the public and be submitted to the Administration and the Congress. This report presents the results of a geochemical survey of the Hells Hole Further Planning Area (RARE II), Greenlee County, Arizona and Grant County, New Mexico.

INTRODUCTION

A geochemical reconnaissance investigation was undertaken in the proposed Hells Hole Further Planning Area (RARE II), Arizona-New Mexico in 1979-1980. This report presents the raw analytical results from geochemical sampling in the area, some statistical analyses of the data, and a discussion of the methods used.

Samples were taken intermittently from 1977 through 1980, with the bulk of the sampling done in the spring of 1979. Earlier sampling was done in conjunction with geochemical studies of the Silver City 1° x 2° quadrangle as part of the Conterminous United States Mineral Appraisal Program (CUSMAP). That portion of the area lying south of 33° N. latitude is in the Silver City quadrangle.

This sampling program utilizes primarily the magnetically separated heavy-mineral fractions obtained from pan concentrated, stream-sediment samples. This method of geochemical exploration (Hassemer and others, 1979; Watts and others, 1978) is particularly suited to bedrock areas of the Southwest, a region where weathering is dominated by mechanical disintegration and migration of metals is dominated by mechanical dispersion.

METHODS

Sampling and sample-preparation methods

Sampling was accomplished by helicopter, jeep, and foot traverses. The majority of the alluvial samples was collected from small tributaries, many of which drained areas measuring <1 mi^2 (<3 km^2). This sampling procedure should increase the chances of finding small mineral deposits, if they occur, as well as the chances of determining mineral zonation patterns, if present. Furthermore, cumulative dilution effects result from the incremental introductions of barren material and these effects increase with the increase in catchment area. This is a type of interference that can be somewhat circumvented by sampling tributaries of small drainage area rather than the larger drainage systems.

The sample material was gathered with an army-type entrenching tool, occasionally aided by the vigorous use of a prospector's pick where holes were required or boulders were removed. Where possible, the sediment was collected at oblique angles to the active drainage channel, across its full width, and as deep and close to underlying bedrock as practicable. If the active

sediment channel was more than 1 foot (0.3 m) wide, the sample was composited from a series of random sites across the full width.

If a choice of channel locations was possible, the sample was taken from the center of a long, flat run; if the stream had a stepped-bed morphology, the sample was taken between the riffles. In intermittent high-energy streams such locations are most likely to be that portion of the alluvial channel where the flat-bed (plane-bed) condition of the upper flow regime would occur. This bed-form configuration has been shown to have the least amount of sorting in the heavy minerals (Brady and Jobson, 1973). Such poorly sorted accumulations should contain the maximum variety (widest range of specific gravities) of heavy minerals that are conveniently obtainable.

At each sample site, two samples were taken. About 12 lb (5 kg) of bulk alluvial gravel was collected for the purpose of panning a heavy-mineral concentrate. This sample was collected into a 10- x 16-inch canvas bag, a size that experience has shown will yield a sufficient volume of concentrate for geochemical exploration purposes when processed by a person moderately qualified in panning technique. The second sample consisted of about 1 lb (1/2 kg) of alluvial material from which the larger pebbles were removed and was collected into a geochemical sample envelope. The paper envelope prohibits loss of the very fine grained material, especially the clay minerals on which adsorbed metals might occur. This sample was subsequently air-dried, sieved to <80 mesh (<0.177 mm) using a mechanical sieve shaker and analyzed by semiquantitative emission spectrography.

The bulk alluvial sample provided the two principal sample media used in the geochemical interpretation of the study area. Panning is the first of a number of processing steps and is performed for several reasons: first, panning removes the organic and fine- and clay-sized materials which otherwise might act as a cement to bind the heavy-mineral grains together, or which might act as a coating agent and prevent the identification of the mineral grains. Second, the panning greatly reduces the volume of material that needs to be processed during the heavy-liquid separation step. Finally and most importantly, panning reduces the proportions of barren material relative to the minerals of interest. The minerals of interest are those ore-related ones, generally having a high specific gravity, which are indigenous to the sample locality. By physically concentrating those minerals related to the mineralizing process the metal values obtained are greatly enhanced. This enhancement is increased even further in several of the following processing steps which further isolate the minerals of interest:

(1) Air and(or) low-heat dried.
(2) Sieved to <16 mesh (<1.2 mm); coarse discarded.
(3) Preliminary removal of magnetite by hand magnet; magnetite discarded.
(4) Bromoform separation; light fraction (specific gravity <2.85) discarded.
(5) Washed with acetone and dried.
(6) Further removal of magnetite by hand magnet; magnetite discarded.

(7) Electromagnetic separation using a Frantz Isodynamic Separator[1] at 0.1 amp and 1.0 amp (forward setting 25°, side setting 15°). The fraction magnetic at 0.1 amp (mainly residual magnetite) discarded. The final setting at 1.0 amp yielded the two fractions to be analyzed:

(a) Nonmagnetic at 1.0 amp (NM-1) fraction--The fraction where most of the major rock-forming minerals have been removed leaving such minerals as sphene, apatite, and zircon in unmineralized areas, calc-silicate minerals in skarn zones, and in mineralized zones, contains most of the common, primary and secondary ore minerals such as sulfides, sulfates, sulfosalts, carbonates, and halides. Such minerals as galena, chalcopyrite, smithsonite, cerargyrite, gold, barite, fluorite, and cassiterite, if they are present, will be found in this fraction.

(b) Magnetic at 1.0 amp (M-1) fraction--The fraction that contains the heavy mafic rock-forming minerals such as biotite, amphibole, and pyroxene. More importantly, this fraction contains the manganese oxides and iron oxides, including limonite derived from sulfides. Such minerals as pyrolusite, wolframite, specular hematite, columbite, and gossan minerals, if present, are found in this concentrate fraction.

(8) Microscopic examination for mineralogy (in general, a brief scan) and assessment of processing quality.

(9) Pulverization to <150 mesh (<0.10 mm) using an agate mortar and pestle.

(10) Analysis by semiquantitative emission spectrography.

Because the sample collection procedure was designed to obtain a maximum variety of heavy minerals, and hence the widest range of mineralization, the procedure may not apply equally well to all metal occurrences. For example, due to the poor spectrographic detection limits for gold (<20 ppm in the concentrate fractions) and because it is not not always appropriate or feasible to dig deep enough with the entrenching tool to obtain gold, its presence in certain areas could very well have gone undetected.

Gold was observed during the mineralogic scan in only one sample (78 YV 216), but was not detected in the spectrographic analysis of that sample. This occurrence is not unusual. In a study of 518 sample sites in the Silver City, New Mexico area, Hassemer and others (1979) reported that of those samples containing gold, gold was detected visually in approximately 10 percent of the samples, but not by spectrographic analysis; while gold was detected by analyses in about 20 percent of the samples, but not visually. The detection of gold visually, but not by analysis, probably results from the malleable nature of the gold which prevents its being mixed throughout the sample during the pulverization step. Thus gold may or may not be present in

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[1]Use of specific brand names is for descriptive purposes only and does not constitute endorsement by the U.S. Geological Survey.

the analytical sample when it is taken from the pulverized fraction. Gold that is found in the analysis, but not observed visually, may be a constituent of another mineral (for example, pyrite) or may be fine-grained free gold that was hidden from view by larger grains.

Another problem inherent to panned concentrates is the possible loss of the very fine grained minerals. In a massive study of 113,000 panned concentrates collected from a 19,000 mi^2 (50,000 km^2) area in the Massif Armoricain, Guiges and Devismes (1969, p. 76) found that it was impossible to recover conveniently, minerals whose dimensions were less than 0.004 in (0.1 mm), and they warn that there may be poor detection of those minerals that are smaller than these dimensions.

The factors that effect the recovery of the fine grained minerals include the specific gravity of the mineral, the particle shape, the particle size, and the settling time allotted per sample during the heavy-liquid separation process (Tourtelot, 1968). Surprisingly, the experience of the panner beyond the initial learning process has little effect on overall recovery rates of the heavy minerals (Theobald, 1957).

Fortunately, the existence of a problem resulting from very fine grained minerals is frequently flagged by the combination of spotty occurrences and a wide range in the metal values. Samples containing very high values are normally surrounded by samples having lower, yet still anomalous, values. The problem of fine-grained ore minerals is distinguished from contamination by the association of elements occurring both at the particular sample site and at neighboring sample sites representing adjacent drainages.

The possibility that this problem may occur in the Further Planning Area is suggested by a study of polished sections in the adjacent Steeple Rock mining district by Griggs and Wagner (1966). They found that the gold was too finely divided to be resolved by microscope (p. 19), and the principal silver mineral to be fine-grained argentite (p. 20).

One of the advantages of the use of panned concentrates results from the mineralogical scan and lies in mineral identification. The detection of gold was discussed earlier. Another mineral of interest readily identified in the mineralogical scan is fluorite. However, with the exception of one sample (79 BL 619) which contained a significant amount of fluorite, all fluorite occurrences were in samples taken south of 33° N. latitude. The distribution and abundance of fluorite in this area is covered in a previously published report (Watts and Hassemer, 1980).

Another advantage of the use of panned concentrates and the mineralogical scan lies in the identification of contamination. In areas that have intensive hunting activity, lead in the form of shot, slugs, or fragments of slugs, can create a contamination problem. In the Silver City area, a study involving 518 nonmagnetic (NM-1) concentrates (Hassemer and others, 1979) found that over 2 percent of the samples contained readily identifiable lead shot or slug fragments. In the Hells Hole Further Planning Area such lead was removed from three samples (79 BL 330, 343, and 402) when the samples were scanned under the microscope. Unfortunately, such lead can be easily oxidized and pass unnoticed in a rapid scan for mineralogy. This type of lead can be seen in the analytical data for three samples (79 BL 301, 331, and 402). This

lead contamination is recognized by extremely high values (>10,000 ppm), isolated occurrences, and an association with high bismuth and antimony values which are also isolated values. An isolated sample that is very high in lead, such as 79 BL 618, is tentatively assumed to be associated with or at least partially related to mineralization because the sample is found to contain other anomalous metal values and is located in an area where adjacent sample sites area also anomalous in those metals.

The <80-mesh sample, lacking the enhancement characteristics of the concentrate samples, in general shows either greatly reduced anomalies, both in metal values and in areal extent, or shows no anomalous metal values at all. An example may be found in Watts and others (1978, Table IV), which compares silver and zinc values in concentrate samples, NM-1 and M-1, and <80-mesh samples from the Georgetown silver district. The reduced anomaly characteristic of the <80-mesh sample seems to apply to the Hells Hole Further Planning Area. The exception to this generalization is copper whose high values are nearly ubiquitous in this sample medium. These anomalous copper values occur unrelated to rock lithology, structure, or anomalous areas indicated by the concentrate data, and effectively blanket the entire study area showing little variation over a small range of values. A similar case of "blanket" high copper values was observed by Hassemer and Watts (unpublished data) to occur in both sieved stream-sediment samples and in sieved soil samples collected in the Lone Mountain district near Hurley, New Mexico. The similarity of these two occurrences suggests that they may have a similar genesis, as yet undefined.

The <80-mesh sample was taken for several reasons: the possibility of detecting adsorbed metals, its familarity to some readers, its use in the determination of a geochemical census, and the possibility of its future use as a comparative sample for environmental studies.

Rock samples were taken where appearance or structure indicated the possibility of detecting mineralization or suites of elements related to mineralization. Prospects, faults, veins, dikes, and altered-appearing rocks were sampled when opportunity arose, but no attempt to systematically sample rocks was made. Rock samples consisted of grab, chip, and composite mine dump samples. These samples were mechanically crushed and pulverized to <150 mesh and analyzed by semiquantitative emission spectrography.

Analytical methods

All samples were analyzed by semiquantitative emission spectrography for the determination of Fe, Mg, Ca, Ti, Mn, Ag, As, Au, B, Ba, Be, Bi, Cd, Co, Cr, Cu, La, Mo, Nb, Ni, Pb, Sb, Sc, Sn, Sr, V, W, Y, Zn, Zr, and Th (Th was not analyzed in all samples) using the field method of Grimes and Marranzino (1968). Results of these spectrographic analyses for all of the sample media were measured within geometric intervals (for example, boundaries at 1,200, 830, 560, 380, 260, 180, 120, and 83 in ppm) but were reported as the approximate geometric midpoints (1,000, 700, 500, 300, 200, 150, and 100 ppm in the example given above). Thus the values are reported as a series of six steps per order of magnitude.

The lower limits on the spectrographic standard for the semiquantitative emission-spectrographic analyses of stream sediments and rocks were as follows: (Ti, Mg, Fe, and Ca are reported in percent; all other elements are reported in ppm) Ti, 0.002; Mg, 0.02; Fe and Ca, 0.05; Ag,0.5; Be, 1; Co, Cu, Mo, Ni, and Sc, 5; Mn, Au, B, Bi, Cr, Pb, Sn, V, Y, and Zr, 10; Ba, Cd, La, and Nb, 20; Sb and Sr, 100; and As and Zn, 200.

The upper limits on the spectrographic standard for semiquantitative emission-spectrographic analyses of stream sediments and rocks were: (Ti, Mg, Fe, and Ca are reported in percent; all other elements are reported in ppm) Ti, 1; Mg, 10; Fe and Ca, 20; Sc, 100; Au and Cd, 500; Be, Bi, La, Sn, and Zr, 1,000; B, Co, Mo, Nb, and Y, 2,000; Ag, Ba, Cr, Mn, Sr, and Ni, 5,000; As, Sb, W, V, and Zn, 10,000; and Cu and Pb, 20,000.

In 1978, Th was added to the list of elements determined; lower limit 100 ppm, upper limit 1,000 ppm.

The two fractions of heavy-mineral concentrates are measured and reported two spectrographic intervals higher than those of stream sediments for both the upper and lower limits of detection. These changes in limits are made because the standard weight of 10 mg of sample used in conventional analyses is reduced to 5 mg of heavy-mineral concentrate to allow for the addition of a quartz diluent to the graphite buffer to reduce element interferences (high background) inherent to the analysis of heavy-mineral concentrates and to provide a matrix composition more comparable to that of the standards. Frequently other individual variations occur in boundary limits of the concentrates, especially in the nonmagnetic (at 1.0 amp) fraction. Increases in both the upper and lower limits are usually a result of less than 5 mg of sample being analyzed (short weight), whereas decreases in upper limits usually result from interferences. For most elements these differences are not critical to the data interpretations.

For purposes of geochemical exploration, experience has shown that the analytical precision of semiquantitative emission spectrography is well within practical requirements for most of the elements, especially with the enhanced values possible from the analysis of concentrate fractions. The studies of Motooka and Grimes (1976), making use of repeat analyses by a number of analysts and instruments, found that reported values fall within one adjoining reporting interval 83 percent of the time and within two adjoining reporting intervals 96 percent of the time for all of the elements.

There were 61 rock sample sites and 186 stream-sediment sample sites established in this study, but sometimes an inadequate amount of nonmagnetic material prohibited the analysis of that fraction. As a result, there is more data available for the magnetic-concentrate fraction and the <80-mesh sample than for the nonmagnetic-concentrate fraction. The available analytical results for all of the samples are tabulated in their entirety on table 3. Analytical results for the nonmagnetic at 1.0 amp (NM-1) heavy-mineral concentrates begin on page 89, the magnetic at 1.0 amp (M-1) on page 101, the <80-mesh (<.18 mm) stream sediments on page 116, and rocks on page 131.

The column listings on table 3 are arranged so that column 1 contains the sample identifiers. The first two numbers of the sample identifier designate the year the sample was collected. The next two letters indicate the 7.5- or

15-minute U.S. Geological Survey topographic quadrangle in which the sample was collected. The letter abbreviation and corresponding quadrangles are as follows: BL, Big Lue Mountains; MC, Mule Creek; ST, Steeple Rock; YV, York Valley.

The three numbers following letter abbreviations are the unique identification of the sample site. Letter suffixes or a blank space at the end of the sample number have the following meanings: N, nonmagnetic (at 1.0 amp) heavy-mineral concentrate; M, magnetic (at 1.0 amp) heavy-mineral concentrate; R, rock sample; (no suffix), <80 mesh stream sediment.

Rock samples collected by J. C. Ratté have similar designations except the year is indicated by the last two numbers.

The latitude and longitude for each sample locality is shown in degrees, minutes, and seconds in columns 2 and 3. The remaining columns list the 31 elements for which data are available.

The following examples illustrate the element column headings: S-Fe%, Semiquantitative spectrographic analyses of iron in percent; S-Mn, Semiquantitative spectrographic analyses of manganese in ppm.

Data qualified (censoring) codes are used with some reported values. Symbols used are: N, not detected at the lowest level of the spectrographic standard; <, detected, but below the value shown; >, greater than the value shown; --, no data available.

The analyses for this report were performed by Carl L. Forn and Elwin L. Mosier, with assistance by G. W. Day, M. S. Erickson, D. F. Siems, and B. J. Steiner.

Statistical methods

All data listed on table 3 were entered into the U.S. Geological Survey computer data storage system entitled RASS (Rock Analyses Storage System). The data were retrieved from this system and processed using U.S. Geological Survey STATPAC (statistical package) computer programs (VanTrump and Miesch, 1976) for the reduction and statistical analyses of data that can be presented in the form of a two-dimensional matrix. The calculation of univariate frequency distributions as well as the basic statistics (maximum, minimum, mean, and so on) were performed on log transformed data. The statistical summary of the results is presented on table 1 (p. 12).

Spearman rank correlation coefficients were calculated utilizing another STATPAC program. Since Spearman and Kendall rank correlations have the same power-efficiency (Siegal, 1956), the better known Spearman rank correlation was used here. Rank correlation is an appropriate correlation analysis for trace-element data, especially semiquantitative data, because, being a nonparametric analysis, no assumptions are made with regard to the prevailing frequency distribution. For that reason, it usually produces more realistic values than Pearson product-moment calculations using log-transformed data based on an assumption of approximate log normality. As is the case with other types of correlation coefficients +1.00 indicates perfect positive

correlation between variables, -1.00 indicates negative correlation or antipathy and 0.00 indicates random relationship or lack of dependence between variables. Most coefficients fall somewhere between these extremes.

The Spearman rank correlation coefficients for the samples were calculated on the raw analytical values. As can be seen on table 1, however, the principal advantage in the use of concentrate fractions, their greatly enhanced values, can result in a disadvantage, a corresponding increase in qualified values. For example, of the 52 magnetic (M-1) fraction samples containing 100- or more-ppm niobium, 71 percent had the "greater than" qualifying codes for the corresponding titanium values and likewise for 87 percent of the corresponding manganese values. These element pairs would normally be deleted from the calculation of the correlation coefficient. The percentage of deleted pairs would rise to 100 percent for the highest niobium values ($\geq$1,000-ppm). This problem was somewhat alleviated by changing the "G" qualifying codes for both the NM-1 and M-1 fractions to the value that the next higher spectrographic report interval would be for that element as if there was not an upper limit. This change is practicable because this is a correlation by rank order and not by absolute value. Similarly, "L" qualified values were changed to the next lower report interval. The "N" qualified values were not changed. As can be seen on table 1, when an element has the "not detected" qualifying code frequently all or nearly all of the report data for the element is so qualified. A further modification of the NM-1 fraction was the deletion of three contaminated samples (BL 301, 331, and 402) from the statistical data set.

In addition to the entire area data set, three subsets of data for each of the two concentrate fractions were chosen that represented different combinations of anomalous elements. These are: the Twin Peaks-Willis Ranch area lat 32°54'30" to 32°56'45", long 109°01'30" to 109°05'00"; the Sawmill Creek area lat 33°00'30" to 33°03'00", long 108°59'00" to 109°02'00"; and the Coal Creek area lat 33°03'12" to 33°06'05", long 109°02'00" to 109°04'30". Two of the areas, the Twin Peaks-Willis Ranch area and the Sawmill Creek area, contained a sufficient number of rock samples for correlation analysis. Since only a few rock samples were taken outside of these two areas, correlation analysis for the entire rock data set was not performed. Subsets of the <80-mesh stream-sediment samples were not created.

Table 2 (p. 16) contains the Spearman rank correlation coefficients and the test of significance of the correlation coefficient in terms of the normal distribution for the data set and subsets. In computing the correlation coefficient between two columns, only those values from the given columns for which both values were unqualified were used. If either column contained less than three unqualified values or if either column contained the same value, the computation of the correlation coefficient between these two columns was skipped. If a column contained all qualified values, then this column was omitted from the data table. The elements skipped are Au in the nonmagnetic (NM-1) concentrate fraction; Au, Bi, Cd, and Sb in the magnetic (M-1) concentrate fraction; and As, Au, Bi, Cd, Sb, W, and Th in the <80-mesh stream-sediment sample. Additional elements are skipped in the various subsets.

For those wishing to make more extensive use of table 2, Edwards (1976, p. 102) has shown that when n, the number of samples, is greater than 10, the

rank order coefficient may be approximated by the t distribution with n-2 degrees of freedom when the null hypothesis (RHO = 0) is valid. Thus it is not necessary to use the sign test (t) to determine if the coefficient is significant for most element pairs in table 2. Standard tables for values of the correlation coefficient at different levels of significance may be used with n-2 degrees of freedom if the table uses numbers of samples (see Koch and Link, 1970, table A.8), or with the number of degrees of freedom as given in table 2 directly if the table uses degree of freedom (see Beus and Grigorian, 1975, table 69). For small numbers of samples Edwards (1976, table IX) has calculated some selected coefficients for n = 4 to n = 10.

Beus and Grigorian (1975, p. 273) state that experience has shown that a probability of 95 percent is acceptable in the interpretation of geochemical data. Although not stated in the text, their table of values indicates they mean 95 percent probability when the two-sided test of the null hypothesis of independence is true. We feel that tables where the one-sided test of null hypothesis is true (see Koch and Link, 1970, table A.8) may also be used at the 95 percent probability level.

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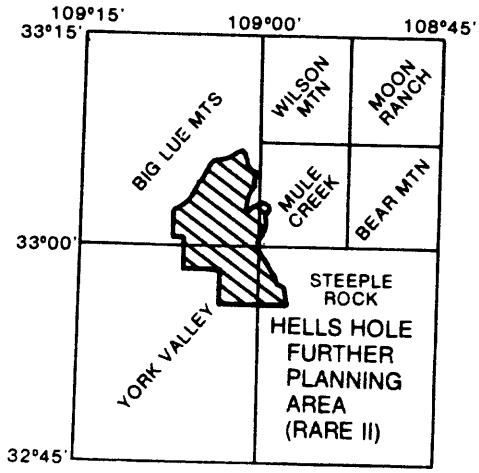
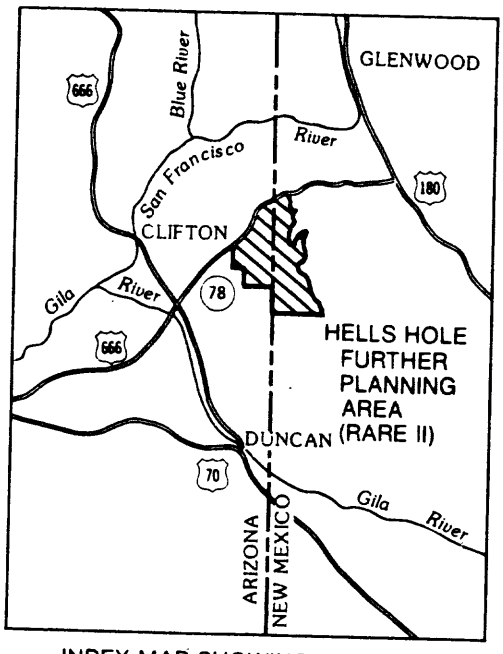


Index showing quadrangles used in this study area



INDEX MAP SHOWING LOCATION OF STUDY AREA

Table 1.--Statistical summary of the analytical results for geochemical samples, Hells Hole Further Planning Area (RARE II), Greenlee County, Arizona-Grant County, New Mexico

[Values for Fe, Mg, Ca, and Ti reported in percent; all other values reported in ppm (parts per million). Upper and lower limits for semiquantitative emission spectrographic analyses of heavy-mineral concentrates, sieved (<80 mesh) stream-sediment samples and rock samples are given in text. NM, nonmagnetic (at 1.0 amp) concentrate; M, magnetic (at 1.0 amp) concentrate; S, sieved (<80 mesh) stream sediment; R, rock. An unqualified value is one in which the element concentration falls within the standards for the analytical method. A qualified value is one in which the element concentrations are designated by symbol: A, analysis not performed; N, not detected at standard's limit of detection; L, detected, but below standard's limit; G, greater than standard's limit. Leaders (--), no data or insufficient data. The percent table for individual variables was constructed by linear interpolation from a frequency table. If selected percentiles fall within data either above or below limits of detection, the data value on table is also given as leaders (--). Principal analysts: C. L. Forn and E. L. Mosier]

Element	Sample type	Data based on qualified values: Number of samples A	N	L	G	Data based on unqualified values: Number of values	Range of values	Geometric mean	Geometric deviation	Percentile distribution based on frequency table of samples analyzed: 25	50	75	90	95	99
Fe	NM	17	0	8	0	161	0.1-5	0.806	2.11	0.43	0.82	1.30	1.78	2.70	--
	M	0	0	0	64	122	2-50	23.6	1.77	20.9	38.8	--	--	--	--
	S	0	0	0	0	186	1.5-15	4.69	1.73	3.18	4.74	6.73	8.60	11.3	--
	R	0	0	0	1	60	0.1-20	1.93	2.98	0.98	2.08	4.59	7.21	9.89	--
Mg	NM	17	0	27	0	142	0.02-10	0.35	3.88	0.08	0.22	0.55	2.63	5.03	7.90
	M	0	0	0	0	186	0.15-7	1.16	2.45	0.56	1.17	2.28	4.03	4.91	--
	S	0	0	0	0	186	0.2-15	0.98	2.07	0.56	0.90	1.84	2.73	3.27	3.77
	R	0	0	2	0	59	0.02-5	0.27	4.16	0.08	0.24	0.79	1.63	2.56	--
Ca	NM	17	0	2	6	163	0.05-50	3.77	5.02	0.91	5.68	15.6	30.2	48.0	--
	M	0	0	5	0	181	0.05-10	1.27	3.39	0.49	1.19	3.29	6.30	7.69	--
	S	0	0	0	1	185	0.15-15	1.85	3.16	0.72	1.16	6.28	10.1	11.6	16.6
	R	0	0	2	0	59	0.05-7	0.37	3.95	0.12	0.24	1.17	2.93	--	--
Ti	NM	17	0	0	18	151	0.02-5	0.38	2.72	0.20	0.50	1.01	--	--	--
	M	0	0	0	73	113	0.2-2	0.95	1.79	0.88	1.92	--	--	--	--
	S	0	0	0	22	164	0.15-1	0.63	1.50	0.48	0.68	0.97	--	--	--
	R	0	1	0	0	60	0.002-1	0.15	3.63	0.08	0.15	0.33	0.67	--	--
MN	NM	17	0	0	2	167	20-10000	860	2.76	442	906	1570	3700	5290	--
	M	0	0	0	78	108	300-10000	2190	2.46	1690	7350	--	--	--	--
	S	0	0	0	1	185	500-5000	1510	1.71	1010	1510	2310	3350	3940	5420
	R	0	0	0	2	59	15-3000	284	3.76	109	348	865	1630	2580	--
Ag	NM	17	164	0	0	5	5-3000	117	12.66	--	--	--	--	--	168
	M	0	183	2	0	1	--	--	--	--	--	--	--	--	--
	S	0	182	2	0	2	1-1	1.00	--	--	--	--	--	--	--
	R	0	39	4	0	18	0.7-300	7.25	7.12	--	--	0.98	13.4	48.2	--
As	NM	17	155	9	0	5	500-1500	765	1.6	--	--	--	--	--	929
	M	0	184	1	0	1	--	--	--	--	--	--	--	--	--
	S	0	186	0	0	0	--	--	--	--	--	--	--	--	--
	R	0	61	0	0	0	--	--	--	--	--	--	--	--	--

Table 1.--Statistical summary of the analytical results for geochemical samples, Hells Hole Further Planning Area (RARE II), Greenlee County, Arizona-Grant County, New Mexico--Continued

Element	Sample type	Data based on qualified values: Number of samples A	N	L	G	Data based on unqualified values: Number of values	Range of values	Geometric mean	Geometric deviation	Percentile distribution based on frequency table of samples analyzed: 25	50	75	90	95	99
Au	NM	17	167	2	0	0	--	--	--	--	--	--	--	--	--
	M	0	185	1	0	0	--	--	--	--	--	--	--	--	--
	S	0	186	0	0	0	--	--	--	--	--	--	--	--	--
	R	0	60	0	0	1	--	--	--	--	--	--	--	--	--
B	NM	17	14	94	0	61	20-300	39.0	1.91	--	--	--	54.8	80.8	136
	M	0	76	45	0	65	20-200	46.8	2.16	--	--	--	84.1	129	172
	S	0	0	6	0	180	10-50	18.8	1.63	12.2	17.9	26.2	--	--	--
	R	0	8	19	0	34	10-70	14.9	1.59	--	--	14.5	22.0	26.0	--
Ba	NM	17	20	1	74	74	50-15000	866	4.03	348	4490	--	--	--	--
	M	0	0	0	5	181	70-10000	980	2.80	486	931	2130	5290	7560	--
	S	0	0	0	0	186	200-5000	1200	1.68	777	1330	1720	2330	2600	3680
	R	0	0	0	1	60	50-3000	599	2.98	226	802	1600	2320	2600	--
Be	NM	17	27	57	0	85	2-700	16.5	4.15	--	--	19.3	62.2	97.2	200
	M	0	55	40	0	91	2-20	4.32	1.74	--	--	4.12	6.88	8.87	12.8
	S	0	1	89	0	96	1-7	1.58	1.57	--	--	1.57	2.50	3.18	4.76
	R	0	4	10	0	47	1-200	2.15	2.43	--	1.56	24.5	35.0	79.3	--
Bi	NM	17	162	0	0	7	20-500	46.2	3.05	--	--	--	--	--	49.3
	M	0	186	0	0	0	--	--	--	--	--	--	--	--	--
	S	0	186	0	0	0	--	--	--	--	--	--	--	--	--
	R	0	60	0	0	1	--	--	--	--	--	--	--	--	--
Cd	NM	17	167	1	0	1	--	--	--	--	--	--	--	--	--
	M	0	186	0	0	0	--	--	--	--	--	--	--	--	--
	S	0	186	0	0	0	--	--	--	--	--	--	--	--	--
	R	0	60	0	0	1	--	--	--	--	--	--	--	--	--
Co	NM	17	101	29	0	39	10-200	16.2	2.00	--	--	--	13.9	27.0	71.2
	M	0	1	1	0	184	10-200	44.3	1.96	29.3	46.3	71.7	97.3	113	163
	S	0	0	0	0	186	5-100	15.8	1.98	9.89	16.2	24.4	40.7	51.6	77.2
	R	0	24	2	0	35	5-50	13.0	1.97	--	--	14.8	27.9	35.3	--
Cr	NM	17	49	82	0	38	10-700	48.3	2.86	--	--	--	44.4	110	430
	M	0	2	3	0	181	20-2000	248	2.51	137	241	468	770	1030	--
	S	0	0	0	0	186	10-1500	121	2.57	63.7	122	213	406	640	--
	R	0	29	13	0	19	10-150	33.4	2.54	--	--	--	55.1	98.9	--
Cu	NM	17	7	9	1	152	10-15000	92.2	4.98	17.1	59.9	253	828	1340	6160
	M	0	0	0	0	186	20-700	92.2	1.93	59.2	81.4	142	238	319	518
	S	0	0	0	0	186	20-700	119	1.66	87.0	126	166	221	250	404
	R	0	0	6	1	54	5-15000	56.6	5.54	12.7	40.1	74.9	541	3010	--

Table 1.--Statistical summary of the analytical results for geochemical samples, Hells Hole Further Planning Area (RARE II), Greenlee County, Arizona-Grant County, New Mexico--Continued

Element	Sample type	Data based on qualified values: Number of samples A	N	L	G	Data based on unqualified values: Number of values	Range of values	Geometric mean	Geometric deviation	Percentile distribution based on frequency table of samples analyzed: 25	50	75	90	95	99
La	NM	17	29	14	10	116	50-2000	222	2.68	--	133	407	1170	--	--
	M	0	36	38	0	112	50-2000	80.7	2.12	--	--	68.6	119	230	--
	S	0	3	17	0	166	20-150	57.3	1.68	32.7	51.0	77.1	110	--	--
	R	0	24	1	0	36	20-150	53.6	1.72	--	27.8	58.3	91.6	108	--
Mo	NM	17	142	9	0	18	10-150	25.9	2.33	--	--	--	--	24.6	92.8
	M	0	142	0	0	44	10-70	24.0	1.79	--	--	--	26.6	41.5	--
	S	0	159	9	0	18	5-50	9.04	1.73	--	--	--	--	9.15	12.8
	R	0	45	1	0	15	5-1000	12.3	4.14	--	--	--	8.20	12.2	--
Nb	NM	17	113	32	0	24	20-500	86.8	2.29	--	--	--	46.6	105	351
	M	0	76	26	0	84	50-5000	159	3.19	--	--	91.5	419	925	--
	S	0	51	95	0	40	20-50	23.8	1.35	--	--	--	--	29.7	--
	R	0	37	7	0	17	20-150	28.5	1.98	--	--	--	--	37.9	--
Ni	NM	18	110	50	0	8	20-100	33.7	1.92	--	--	--	--	--	63.6
	M	0	19	3	0	164	15-3000	78.5	2.01	35.0	73.2	125	171	221	--
	S	0	0	2	0	184	5-150	33.9	2.34	18.0	37.8	60.6	97.9	116	--
	R	0	15	17	0	29	5-100	16.7	2.52	--	--	13.5	37.6	72.1	--
Pb	NM	17	46	40	2	81	15-30000	86.7	5.01	--	--	58.0	319	779	--
	M	0	13	3	0	170	20-3000	67.5	2.06	33.6	62.5	95.9	155	223	--
	S	0	0	0	0	186	10-300	44.5	1.98	27.8	43.2	73.2	109	130	187
	R	0	7	9	0	45	10-7000	27.8	2.92	--	18.5	30.3	52.3	72.0	--
Sb	NM	17	155	3	0	11	200-3000	687	2.82	--	--	--	--	219	2000
	M	0	186	0	0	0	--	--	--	--	--	--	--	--	--
	S	0	186	0	0	0	--	--	--	--	--	--	--	--	--
	R	0	61	0	0	0	--	--	--	--	--	--	--	--	--
Sc	NM	17	68	28	10	63	10-300	41.8	2.54	--	--	33.0	123	--	--
	M	0	5	6	0	175	10-150	37.8	2.06	19.2	34.2	66.3	100	113	--
	S	0	0	3	0	183	5-20	11.9	1.45	8.43	12.4	16.1	--	--	--
	R	0	31	5	0	25	5-20	9.27	1.59	--	--	7.61	13.2	17.7	--
Sn	NM	17	89	2	33	45	20-5000	260	3.82	--	--	770	--	--	--
	M	0	114	5	0	67	20-1000	81.3	2.74	--	--	40.6	197	259	404
	S	0	164	12	0	10	10-20	13.9	1.36	--	--	--	--	--	--
	R	0	59	0	0	2	20-20	20.0	--	--	--	--	--	--	--
Sr	NM	17	49	13	6	101	200-10000	1320	2.51	--	631	1730	4500	--	--
	M	0	141	28	0	17	200-1500	400	1.98	--	--	--	--	341	871
	S	0	3	5	0	178	100-1500	379	1.90	244	353	596	810	1050	--
	R	0	23	5	0	33	100-1000	274	2.23	--	--	322	634	771	--

Table 1.--Statistical summary of the analytical results for geochemical samples, Hells Hole Further Planning Area (RARE II), Greenlee County, Arizona-Grant County, New Mexico--Continued

Element	Sample type	Data based on qualified values: Number of samples A	N	L	G	Data based on unqualified values: Number of values	Range of values	Geometric mean	Geometric deviation	Percentile distribution based on frequency table of samples analyzed: 25	50	75	90	95	99
V	NM	17	20	3	0	146	15-2000	75.5	2.09	32.5	64.0	108	178	239	431
	M	0	0	0	0	186	50-2000	423	2.09	258	439	741	1060	1190	--
	S	0	0	0	0	186	15-700	122	2.10	77.4	146	220	292	337	378
	R	0	0	16	0	45	10-300	43.9	2.80	--	25.2	74.9	174	223	--
W	NM	17	163	5	0	1	--	--	--	--	--	--	--	--	--
	M	0	167	17	0	2	500-500	500	--	--	--	--	--	--	--
	S	0	183	3	0	0	--	--	--	--	--	--	--	--	--
		0	59	1	0	1	--	--	--	--	--	--	--	--	--
Y	NM	17	0	1	2	166	15-2000	263	3.39	122	363	655	1040	1300	--
	M	0	0	8	0	178	20-500	54.3	2.05	31.3	44.3	71.3	180	243	--
	S	0	0	0	0	186	15-100	38.2	1.70	26.2	39.6	52.9	73.0	78.9	--
	R	0	7	6	0	48	10-70	22.2	1.75	--	19.5	30.8	44.0	50.9	--
Zn	NM	17	167	0	1	1	--	--	--	--	--	--	--	--	--
	M	0	66	39	0	81	500-2000	902	1.71	--	--	690	1570	--	--
	S	0	185	0	0	1	--	--	--	--	--	--	--	--	--
	R	0	57	0	0	4	200-10000	532	7.07	--	--	--	--	--	--
Zr	NM	17	0	0	158	11	150-2000	753	2.15	--	--	--	--	--	--
	M	0	0	0	6	180	70-2000	327	2.27	166	346	537	1190	2270	--
	S	0	0	0	0	186	30-700	152	1.65	.05	152	230	315	357	503
	R	0	1	1	0	59	10-500	114	2.67	47.1	147	272	338	364	--
Th	NM	27	145	5	0	9	200-1000	--	--	--	--	--	--	266	736
	M	10	173	0	0	3	200-500	369	1.70	--	--	--	--	--	--
	S	40	146	0	0	0	--	--	--	--	--	--	--	--	--
	R	3	58	0	0	0	--	--	--	--	--	--	--	--	--

Table 2.--Spearman rank correlation coefficients for nonmagnetic (NM-1) and magnetic (M-1) heavy-mineral concentrate samples, <80-mesh stream-sediment samples and rock samples, Hells Hole Further Planning Area (RARE II), Greenlee County, Arizona-Grant County, New Mexico

D0136 SPEARMAN-KENDALL RANK CORRELATION (10/25/77) DATE 5/26/81

SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE NM-1 CONCENTRATES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
1(S-FE%)		2(S-MG%)	0.1320	1.7054E+00	164
1(S-FE%)		3(S-CA%)	-0.0610	-7.8230E-01	164
1(S-FE%)		4(S-TI%)	0.4437	6.3408E+00	164
1(S-FE%)		5(S-MN)	0.0911	1.1719E+00	164
1(S-FE%)		6(S-AG)	0.5270	0.0000E+00	3
1(S-FE%)		7(S-AS)	0.3132	1.1423E+00	12
1(S-FE%)		9(S-B)	0.0299	3.6632E-01	150
1(S-FE%)		10(S-BA)	0.1969	2.4103E+00	144
1(S-FE%)		11(S-BE)	-0.2100	-2.5142E+00	137
1(S-FE%)		12(S-BI)	0.3162	0.0000E+00	2
1(S-FE%)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		14(S-CO)	0.0969	7.9059E-01	66
1(S-FE%)		15(S-CR)	0.2268	2.5079E+00	116
1(S-FE%)		16(S-CU)	0.1861	2.3738E+00	157
1(S-FE%)		17(S-LA)	-0.1783	-2.1055E+00	135
1(S-FE%)		18(S-MO)	-0.2680	-1.3907E+00	25
1(S-FE%)		19(S-NB)	0.0931	6.7418E-01	52
1(S-FE%)		20(S-NI)	0.2315	1.7809E+00	56
1(S-FE%)		21(S-PB)	0.1326	1.4535E+00	118
1(S-FE%)		22(S-SB)	0.3648	1.1080E+00	8
1(S-FE%)		23(S-SC)	-0.1541	-1.5441E+00	98
1(S-FE%)		24(S-SN)	0.0264	2.2913E-01	75
1(S-FE%)		25(S-SR)	-0.1911	-2.1062E+00	117
1(S-FE%)		26(S-V)	0.3690	4.7141E+00	141
1(S-FE%)		27(S-W)	-0.2500	0.0000E+00	3
1(S-FE%)		28(S-Y)	-0.0579	-7.4025E-01	163
1(S-FE%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		30(S-ZR)	0.0457	5.8621E-01	164
1(S-FE%)		31(S-TH)	0.1558	5.4628E-01	12
2(S-MG%)		3(S-CA%)	0.5518	8.4741E+00	164
2(S-MG%)		4(S-TI%)	-0.2141	-2.8063E+00	164
2(S-MG%)		5(S-MN)	0.5406	8.2290E+00	164
2(S-MG%)		6(S-AG)	0.5000	8.2290E+00	3
2(S-MG%)		7(S-AS)	0.0503	1.7446E-01	12
2(S-MG%)		9(S-B)	-0.1039	-1.2797E+00	150
2(S-MG%)		10(S-BA)	0.1166	1.4087E+00	144
2(S-MG%)		11(S-BE)	-0.2506	-3.0301E+00	137
2(S-MG%)		12(S-BI)	-0.7379	0.0000E+00	2
2(S-MG%)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		14(S-CO)	0.6092	6.2403E+00	66
2(S-MG%)		15(S-CR)	-0.0698	-7.5398E-01	116
2(S-MG%)		16(S-CU)	-0.0954	-1.2004E+00	157
2(S-MG%)		17(S-LA)	0.0841	9.8021E-01	135
2(S-MG%)		18(S-MO)	0.1834	9.3279E-01	25
2(S-MG%)		19(S-NB)	-0.0962	-6.9710E-01	52
2(S-MG%)		20(S-NI)	0.3849	3.1212E+00	56
2(S-MG%)		21(S-PB)	-0.3058	-3.4886E+00	118
2(S-MG%)		22(S-SB)	-0.1153	-3.2822E-01	8
2(S-MG%)		23(S-SC)	-0.1758	-1.7682E+00	98
2(S-MG%)		24(S-SN)	-0.1489	-1.3043E+00	75

SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE NM-1 CONCENTRATES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
2(S-MG%)		25(S-SR)	0.2482	2.7714E+00	117
2(S-MG%)		26(S-V)	-0.1198	-1.4332E+00	141
2(S-MG%)		27(S-W)	0.7255	0.0000E+00	3
2(S-MG%)		28(S-Y)	-0.1446	-1.8657E+00	163
2(S-MG%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		30(S-ZR)	-0.1489	-1.9280E+00	164
2(S-MG%)		31(S-TH)	-0.1437	-5.0310E-01	12
3(S-CA%)		4(S-TI%)	-0.2762	-3.6805E+00	164
3(S-CA%)		5(S-MN)	0.4200	5.9262E+00	164
3(S-CA%)		6(S-AG)	-0.1000	5.9262E+00	3
3(S-CA%)		7(S-AS)	-0.0785	-2.7277E-01	12
3(S-CA%)		9(S-B)	-0.0165	-2.0158E-01	150
3(S-CA%)		10(S-BA)	0.0004	5.3950E-03	144
3(S-CA%)		11(S-BE)	-0.2363	-2.8462E+00	137
3(S-CA%)		12(S-BI)	0.7379	0.0000E+00	2
3(S-CA%)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		14(S-CO)	0.4102	3.6538E+00	66
3(S-CA%)		15(S-CR)	0.0550	5.9318E-01	116
3(S-CA%)		16(S-CU)	-0.2232	-2.8689E+00	157
3(S-CA%)		17(S-LA)	0.5645	7.9463E+00	135
3(S-CA%)		18(S-MO)	0.1990	1.0155E+00	25
3(S-CA%)		19(S-NB)	-0.0395	-2.8484E-01	52
3(S-CA%)		20(S-NI)	0.3876	3.1468E+00	56
3(S-CA%)		21(S-PB)	-0.1828	-2.0196E+00	118
3(S-CA%)		22(S-SB)	-0.2919	-8.6337E-01	8
3(S-CA%)		23(S-SC)	-0.1679	-1.6866E+00	98
3(S-CA%)		24(S-SN)	-0.2980	-2.7032E+00	75
3(S-CA%)		25(S-SR)	0.1331	1.4523E+00	117
3(S-CA%)		26(S-V)	-0.0645	-7.6788E-01	141
3(S-CA%)		27(S-W)	0.3536	0.0000E+00	3
3(S-CA%)		28(S-Y)	0.0712	9.1081E-01	163
3(S-CA%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		30(S-ZR)	-0.1048	-1.3497E+00	164
3(S-CA%)		31(S-TH)	-0.4219	-1.6121E+00	12
4(S-TI%)		5(S-MN)	-0.1566	-2.0310E+00	164
4(S-TI%)		6(S-AG)	0.4104	0.0000E+00	3
4(S-TI%)		7(S-AS)	0.2256	8.0234E-01	12
4(S-TI%)		9(S-B)	0.1522	1.8861E+00	150
4(S-TI%)		10(S-BA)	-0.0446	-5.3613E-01	144
4(S-TI%)		11(S-BE)	0.0376	4.3986E-01	137
4(S-TI%)		12(S-BI)	-0.5000	0.0000E+00	2
4(S-TI%)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		14(S-CO)	-0.3124	-2.6717E+00	66
4(S-TI%)		15(S-CR)	0.2610	2.9124E+00	116
4(S-TI%)		16(S-CU)	0.2452	3.1685E+00	157
4(S-TI%)		17(S-LA)	-0.0114	-1.3236E-01	135
4(S-TI%)		18(S-MO)	-0.3338	-1.7703E+00	25
4(S-TI%)		19(S-NB)	-0.1269	-9.2221E-01	52
4(S-TI%)		20(S-NI)	-0.1709	-1.2977E+00	56
4(S-TI%)		21(S-PB)	0.1879	2.0780E+00	118

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SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE NM-1 CONCENTRATES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
4(S-TI%)		22(S-SB)	0.3098	9.2152E-01	8
4(S-TI%)		23(S-SC)	0.1773	1.7830E+00	98
4(S-TI%)		24(S-SN)	0.1028	8.9522E-01	75
4(S-TI%)		25(S-SR)	-0.3082	-3.5038E+00	117
4(S-TI%)		26(S-V)	0.5790	8.4316E+00	141
4(S-TI%)		27(S-W)	-0.1863	0.0000E+00	3
4(S-TI%)		28(S-Y)	0.3195	4.3046E+00	163
4(S-TI%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		30(S-ZR)	0.2077	2.7189E+00	164
4(S-TI%)		31(S-TH)	0.5226	2.1233E+00	12
5(S-MN)		6(S-AG)	-0.1000	2.1233E+00	3
5(S-MN)		7(S-AS)	0.2889	1.0454E+00	12
5(S-MN)		9(S-B)	0.3247	4.2050E+00	150
5(S-MN)		10(S-BA)	0.0761	9.1564E-01	144
5(S-MN)		11(S-BE)	0.2225	2.6711E+00	137
5(S-MN)		12(S-BI)	0.8165	0.0000E+00	2
5(S-MN)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		14(S-CO)	0.5260	5.0248E+00	66
5(S-MN)		15(S-CR)	-0.1909	-2.0950E+00	116
5(S-MN)		16(S-CU)	-0.0108	-1.3482E-01	157
5(S-MN)		17(S-LA)	0.2447	2.9321E+00	135
5(S-MN)		18(S-MO)	0.2903	1.5166E+00	25
5(S-MN)		19(S-NB)	0.4673	3.8114E+00	52
5(S-MN)		20(S-NI)	0.3950	3.2172E+00	56
5(S-MN)		21(S-PB)	-0.1869	-2.0662E+00	118
5(S-MN)		22(S-SB)	0.4264	1.3332E+00	8
5(S-MN)		23(S-SC)	-0.1106	-1.1020E+00	98
5(S-MN)		24(S-SN)	0.3012	2.7354E+00	75
5(S-MN)		25(S-SR)	0.3955	4.6572E+00	117
5(S-MN)		26(S-V)	-0.1299	-1.5560E+00	141
5(S-MN)		27(S-W)	0.7906	0.0000E+00	3
5(S-MN)		28(S-Y)	0.1875	2.4375E+00	163
5(S-MN)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		30(S-ZR)	-0.0466	-5.9729E-01	164
5(S-MN)		31(S-TH)	-0.0931	-3.2403E-01	12
6(S-AG)		7(S-AS)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		9(S-B)	0.7746	0.0000E+00	2
6(S-AG)		10(S-BA)	0.1539	0.0000E+00	3
6(S-AG)		11(S-BE)	0.1054	0.0000E+00	3
6(S-AG)		12(S-BI)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		15(S-CR)	0.0000	0.0000E+00	1
6(S-AG)		16(S-CU)	0.0000	0.0000E+00	3
6(S-AG)		17(S-LA)	0.0000	0.0000E+00	3
6(S-AG)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		21(S-PB)	0.2052	0.0000E+00	3
6(S-AG)		22(S-SB)	LESS THAN 3 PAIRS DETECTED.		

SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE NM-1 CONCENTRATES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
6(S-AG)		23(S-SC)	0.5000	0.0000E+00	1
6(S-AG)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		25(S-SR)	0.5000	0.0000E+00	1
6(S-AG)		26(S-V)	-0.2236	0.0000E+00	3
6(S-AG)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		28(S-Y)	0.0513	0.0000E+00	3
6(S-AG)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
6(S-AG)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		9(S-B)	0.2543	9.1077E-01	12
7(S-AS)		10(S-BA)	0.3748	1.4004E+00	12
7(S-AS)		11(S-BE)	0.0013	4.5545E-03	12
7(S-AS)		12(S-BI)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		14(S-CO)	0.2844	9.8378E-01	11
7(S-AS)		15(S-CR)	-0.2946	-1.0680E+00	12
7(S-AS)		16(S-CU)	0.1362	4.7617E-01	12
7(S-AS)		17(S-LA)	0.6620	2.9292E+00	11
7(S-AS)		18(S-MO)	-0.5000	0.0000E+00	1
7(S-AS)		19(S-NB)	0.7169	0.0000E+00	6
7(S-AS)		20(S-NI)	-0.4500	0.0000E+00	7
7(S-AS)		21(S-PB)	-0.1148	-4.0024E-01	12
7(S-AS)		22(S-SB)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		23(S-SC)	-0.2235	-7.9437E-01	12
7(S-AS)		24(S-SN)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
7(S-AS)		25(S-SR)	0.3496	1.2377E+00	11
7(S-AS)		26(S-V)	0.4731	1.8601E+00	12
7(S-AS)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		28(S-Y)	0.2259	8.0320E-01	12
7(S-AS)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
7(S-AS)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		10(S-BA)	-0.1853	-2.1670E+00	132
9(S-B)		11(S-BE)	0.5224	6.9306E+00	128
9(S-B)		12(S-BI)	-0.7379	0.0000E+00	2
9(S-B)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		14(S-CO)	0.0801	6.4755E-01	65
9(S-B)		15(S-CR)	0.1358	1.4632E+00	114
9(S-B)		16(S-CU)	0.1711	2.1127E+00	148
9(S-B)		17(S-LA)	0.2776	3.2436E+00	126
9(S-B)		18(S-MO)	0.5260	3.0923E+00	25
9(S-B)		19(S-NB)	0.3050	2.2643E+00	50
9(S-B)		20(S-NI)	0.6349	6.0939E+00	55
9(S-B)		21(S-PB)	0.1666	1.8124E+00	115
9(S-B)		22(S-SB)	0.4434	1.3992E+00	8
9(S-B)		23(S-SC)	0.0636	6.1141E-01	92
9(S-B)		24(S-SN)	0.4085	3.7976E+00	72
9(S-B)		25(S-SR)	0.2417	2.6127E+00	110
9(S-B)		26(S-V)	0.1464	1.7130E+00	134
9(S-B)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		

D0136 SPEARMAN-KENDALL RANK CORRELATION (10/25/77) DATE 5/26/81

SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE NM-1 CONCENTRATES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
9(S-B)		28(S-Y)	0.3026	3.8751E+00	149
9(S-B)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		30(S-ZR)	0.1040	1.2808E+00	150
9(S-B)		31(S-TH)	0.1530	4.8947E-01	10
10(S-BA)		11(S-BE)	-0.3116	-3.5617E+00	118
10(S-BA)		12(S-BI)	0.6325	0.0000E+00	2
10(S-BA)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		14(S-CO)	0.2370	1.9817E+00	66
10(S-BA)		15(S-CR)	-0.2273	-2.4925E+00	114
10(S-BA)		16(S-CU)	-0.0224	-2.6401E-01	139
10(S-BA)		17(S-LA)	-0.2135	-2.5016E+00	131
10(S-BA)		18(S-MO)	-0.3041	-1.4972E+00	22
10(S-BA)		19(S-NB)	-0.0539	-3.7784E-01	49
10(S-BA)		20(S-NI)	0.0642	4.8131E-01	56
10(S-BA)		21(S-PB)	0.0081	8.5755E-02	113
10(S-BA)		22(S-SB)	0.1316	0.0000E+00	3
10(S-BA)		23(S-SC)	-0.2606	-2.6586E+00	97
10(S-BA)		24(S-SN)	-0.2907	-2.2739E+00	56
10(S-BA)		25(S-SR)	0.4995	6.2094E+00	116
10(S-BA)		26(S-V)	-0.0675	-7.5953E-01	126
10(S-BA)		27(S-W)	0.3953	0.0000E+00	3
10(S-BA)		28(S-Y)	-0.3612	-4.6322E+00	143
10(S-BA)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		30(S-ZR)	-0.0001	-9.2220E-04	144
10(S-BA)		31(S-TH)	-0.3240	-1.1358E+00	11
11(S-BE)		12(S-BI)	-0.8660	0.0000E+00	1
11(S-BE)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		14(S-CO)	-0.0052	-3.7977E-02	53
11(S-BE)		15(S-CR)	0.0287	2.7653E-01	93
11(S-BE)		16(S-CU)	0.1571	1.8272E+00	132
11(S-BE)		17(S-LA)	0.2494	2.7139E+00	111
11(S-BE)		18(S-MO)	0.4358	2.2187E+00	21
11(S-BE)		19(S-NB)	0.4399	3.4287E+00	49
11(S-BE)		20(S-NI)	-0.1031	-6.9551E-01	45
11(S-BE)		21(S-PB)	0.1024	1.0083E+00	96
11(S-BE)		22(S-SB)	0.2188	6.3409E-01	8
11(S-BE)		23(S-SC)	0.0793	7.0248E-01	78
11(S-BE)		24(S-SN)	0.6001	6.4098E+00	73
11(S-BE)		25(S-SR)	0.0623	5.9884E-01	92
11(S-BE)		26(S-V)	-0.0964	-1.0613E+00	120
11(S-BE)		27(S-W)	-0.2500	0.0000E+00	3
11(S-BE)		28(S-Y)	0.4520	5.9308E+00	137
11(S-BE)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		30(S-ZR)	0.2274	2.7334E+00	137
11(S-BE)		31(S-TH)	0.5243	2.1328E+00	12
12(S-BI)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		15(S-CR)	-1.0000	0.0000E+00	2
12(S-BI)		16(S-CU)	-0.7379	0.0000E+00	2
12(S-BI)		17(S-LA)	0.2108	0.0000E+00	2

SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE NM-1 CONCENTRATES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
12(S-BI)		18(S-MO)	0.8660	0.0000E+00	1
12(S-BI)		19(S-NB)	1.0000	0.0000E+00	1
12(S-BI)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		21(S-PB)	0.5000	0.0000E+00	2
12(S-BI)		22(S-SB)	0.0000	0.0000E+00	1
12(S-BI)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		24(S-SN)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
12(S-BI)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		26(S-V)	0.2722	0.0000E+00	2
12(S-BI)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		28(S-Y)	-0.3333	0.0000E+00	2
12(S-BI)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
12(S-BI)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		15(S-CR)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		16(S-CU)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		17(S-LA)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		22(S-SB)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		15(S-CR)	-0.2242	-1.8693E+00	66
14(S-CO)		16(S-CU)	-0.0068	-5.4850E-02	66
14(S-CO)		17(S-LA)	0.0115	8.9504E-02	61
14(S-CO)		18(S-MO)	0.1693	6.6536E-01	15
14(S-CO)		19(S-NB)	-0.1540	-7.1442E-01	21
14(S-CO)		20(S-NI)	0.3005	2.2281E+00	50
14(S-CO)		21(S-PB)	-0.0388	-2.9536E-01	58
14(S-CO)		22(S-SB)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		23(S-SC)	-0.2304	-1.8640E+00	62
14(S-CO)		24(S-SN)	-0.1860	-8.4662E-01	20
14(S-CO)		25(S-SR)	0.3268	2.7667E+00	64
14(S-CO)		26(S-V)	-0.0467	-3.7126E-01	63
14(S-CO)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		28(S-Y)	-0.1937	-1.5919E+00	65
14(S-CO)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		30(S-ZR)	-0.0647	-5.2662E-01	66
14(S-CO)		31(S-TH)	0.0000	0.0000E+00	1
15(S-CR)		16(S-CU)	-0.0832	-8.9578E-01	115

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SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE NM-1 CONCENTRATES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
15(S-CR)		17(S-LA)	0.1193	1.2547E+00	109
15(S-CR)		18(S-MO)	0.0919	4.2288E-01	21
15(S-CR)		19(S-NB)	0.1079	6.8667E-01	40
15(S-CR)		20(S-NI)	0.1383	1.0446E+00	56
15(S-CR)		21(S-PB)	0.1281	1.3112E+00	103
15(S-CR)		22(S-SB)	0.0000	0.0000E+00	1
15(S-CR)		23(S-SC)	-0.1327	-1.2914E+00	93
15(S-CR)		24(S-SN)	0.0649	4.2145E-01	42
15(S-CR)		25(S-SR)	-0.1681	-1.7223E+00	102
15(S-CR)		26(S-V)	0.3882	4.2962E+00	104
15(S-CR)		27(S-W)	-0.2500	0.0000E+00	3
15(S-CR)		28(S-Y)	0.1131	1.2204E+00	115
15(S-CR)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		30(S-ZR)	-0.0455	-4.9033E-01	116
15(S-CR)		31(S-TH)	-0.0603	0.0000E+00	5
16(S-CU)		17(S-LA)	-0.0851	-9.8828E-01	134
16(S-CU)		18(S-MO)	-0.2582	-1.3363E+00	25
16(S-CU)		19(S-NB)	0.2436	1.7937E+00	51
16(S-CU)		20(S-NI)	-0.0382	-2.8608E-01	56
16(S-CU)		21(S-PB)	0.2939	3.3115E+00	116
16(S-CU)		22(S-SB)	-0.2452	-7.1550E-01	8
16(S-CU)		23(S-SC)	0.2861	2.9560E+00	98
16(S-CU)		24(S-SN)	0.1417	1.2312E+00	74
16(S-CU)		25(S-SR)	-0.1059	-1.1525E+00	117
16(S-CU)		26(S-V)	0.0539	6.4050E-01	141
16(S-CU)		27(S-W)	0.3536	0.0000E+00	3
16(S-CU)		28(S-Y)	0.1032	1.2958E+00	156
16(S-CU)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		30(S-ZR)	0.2942	3.8566E+00	157
16(S-CU)		31(S-TH)	-0.4815	-1.8222E+00	11
17(S-LA)		18(S-MO)	0.4038	1.9737E+00	20
17(S-LA)		19(S-NB)	0.2737	1.9717E+00	48
17(S-LA)		20(S-NI)	0.2310	1.6957E+00	51
17(S-LA)		21(S-PB)	-0.0625	-6.4185E-01	105
17(S-LA)		22(S-SB)	-0.0263	0.0000E+00	3
17(S-LA)		23(S-SC)	0.0064	6.1407E-02	93
17(S-LA)		24(S-SN)	0.0817	6.0765E-01	55
17(S-LA)		25(S-SR)	0.1727	1.8559E+00	112
17(S-LA)		26(S-V)	0.0773	8.5976E-01	123
17(S-LA)		27(S-W)	0.3536	0.0000E+00	3
17(S-LA)		28(S-Y)	0.7050	1.1506E+01	134
17(S-LA)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		30(S-ZR)	-0.0130	-1.5147E-01	135
17(S-LA)		31(S-TH)	0.0280	9.6942E-02	12
18(S-MO)		19(S-NB)	0.3107	9.8053E-01	9
18(S-MO)		20(S-NI)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
18(S-MO)		21(S-PB)	0.4062	2.0369E+00	21
18(S-MO)		22(S-SB)	0.2060	0.0000E+00	4
18(S-MO)		23(S-SC)	-0.5802	-3.0226E+00	18
18(S-MO)		24(S-SN)	0.5768	2.4458E+00	12

SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE NM-1 CONCENTRATES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
18(S-MO)		25(S-SR)	0.2968	1.3184E+00	18
18(S-MO)		26(S-V)	-0.2849	-1.4561E+00	24
18(S-MO)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		28(S-Y)	0.1805	9.1774E-01	25
18(S-MO)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		30(S-ZR)	-0.0441	-2.2050E-01	25
18(S-MO)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		20(S-NI)	0.1982	9.4850E-01	22
19(S-NB)		21(S-PB)	-0.0256	-1.6018E-01	39
19(S-NB)		22(S-SB)	0.2687	0.0000E+00	4
19(S-NB)		23(S-SC)	0.2001	1.1552E+00	32
19(S-NB)		24(S-SN)	0.3885	2.3094E+00	30
19(S-NB)		25(S-SR)	0.2354	1.4532E+00	36
19(S-NB)		26(S-V)	-0.0850	-6.0339E-01	50
19(S-NB)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		28(S-Y)	0.2985	2.2557E+00	52
19(S-NB)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
19(S-NB)		31(S-TH)	-0.2774	0.0000E+00	5
20(S-NI)		21(S-PB)	-0.1077	-7.4233E-01	47
20(S-NI)		22(S-SB)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		23(S-SC)	0.0009	6.7125E-03	52
20(S-NI)		24(S-SN)	0.3615	1.7767E+00	21
20(S-NI)		25(S-SR)	0.3974	3.1822E+00	54
20(S-NI)		26(S-V)	0.0696	5.0787E-01	53
20(S-NI)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		28(S-Y)	0.0638	4.7401E-01	55
20(S-NI)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		30(S-ZR)	0.0126	9.4414E-02	56
20(S-NI)		31(S-TH)	-0.2582	0.0000E+00	2
21(S-PB)		22(S-SB)	-0.7030	0.0000E+00	3
21(S-PB)		23(S-SC)	0.0474	4.2988E-01	82
21(S-PB)		24(S-SN)	0.0050	3.4086E-02	47
21(S-PB)		25(S-SR)	0.0076	7.4959E-02	97
21(S-PB)		26(S-V)	0.1059	1.0857E+00	104
21(S-PB)		27(S-W)	-0.2582	0.0000E+00	2
21(S-PB)		28(S-Y)	0.0054	5.8819E-02	117
21(S-PB)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
21(S-PB)		30(S-ZR)	0.1186	1.2978E+00	118
21(S-PB)		31(S-TH)	-0.6344	0.0000E+00	7
22(S-SB)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
22(S-SB)		24(S-SN)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
22(S-SB)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
22(S-SB)		26(S-V)	0.2267	0.0000E+00	7
22(S-SB)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
22(S-SB)		28(S-Y)	0.3163	9.4316E-01	8
22(S-SB)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
22(S-SB)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
22(S-SB)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		24(S-SN)	0.2057	1.2433E+00	35

SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE NM-1 CONCENTRATES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
23(S-SC)		25(S-SR)	-0.2646	-2.5885E+00	89
23(S-SC)		26(S-V)	-0.0862	-8.3865E-01	94
23(S-SC)		27(S-W)	0.0000	0.0000E+00	3
23(S-SC)		28(S-Y)	0.2883	2.9649E+00	97
23(S-SC)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		30(S-ZR)	0.3331	3.4977E+00	98
23(S-SC)		31(S-TH)	-0.1912	0.0000E+00	4
24(S-SN)		25(S-SR)	0.3558	2.3773E+00	39
24(S-SN)		26(S-V)	-0.0840	-6.8508E-01	66
24(S-SN)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		28(S-Y)	0.4068	3.8562E+00	75
24(S-SN)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
24(S-SN)		31(S-TH)	0.2281	7.4097E-01	10
25(S-SR)		26(S-V)	-0.0864	-8.9264E-01	106
25(S-SR)		27(S-W)	0.7255	0.0000E+00	3
25(S-SR)		28(S-Y)	0.0134	1.4461E-01	116
25(S-SR)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
25(S-SR)		30(S-ZR)	-0.0682	-7.3937E-01	117
25(S-SR)		31(S-TH)	-0.1518	0.0000E+00	4
26(S-V)		27(S-W)	-0.5590	0.0000E+00	3
26(S-V)		28(S-Y)	0.1631	1.9558E+00	140
26(S-V)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
26(S-V)		30(S-ZR)	0.0842	1.0039E+00	141
26(S-V)		31(S-TH)	0.5297	2.0712E+00	11
27(S-W)		28(S-Y)	0.3536	0.0000E+00	3
27(S-W)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
27(S-W)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
27(S-W)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
28(S-Y)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
28(S-Y)		30(S-ZR)	0.2033	2.6509E+00	163
28(S-Y)		31(S-TH)	0.6535	2.9906E+00	12
29(S-ZN)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
29(S-ZN)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
30(S-ZR)		31(S-TH)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		

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SPEARMAN CORRELATION COEFFICIENTS FOR TWIN PEAKS AREA NM-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
1(S-FE%)		2(S-MG%)	0.2172	9.9511E-01	20
1(S-FE%)		3(S-CA%)	0.2582	1.1955E+00	20
1(S-FE%)		4(S-TI%)	0.5935	3.2983E+00	20
1(S-FE%)		5(S-MN)	0.2932	1.3715E+00	20
1(S-FE%)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		7(S-AS)	0.5417	0.0000E+00	6
1(S-FE%)		9(S-B)	0.3769	1.8198E+00	20
1(S-FE%)		10(S-BA)	0.5023	2.5981E+00	20
1(S-FE%)		11(S-BE)	0.1697	7.3037E-01	18
1(S-FE%)		14(S-CO)	0.3713	1.7430E+00	19
1(S-FE%)		15(S-CR)	0.1749	7.9460E-01	20
1(S-FE%)		16(S-CU)	0.3008	1.4105E+00	20
1(S-FE%)		17(S-LA)	0.4509	2.2591E+00	20
1(S-FE%)		18(S-MO)	-0.3208	0.0000E+00	5
1(S-FE%)		19(S-NB)	0.3048	1.0119E+00	10
1(S-FE%)		20(S-NI)	0.3373	1.4771E+00	17
1(S-FE%)		21(S-PB)	0.0763	3.1553E-01	17
1(S-FE%)		23(S-SC)	-0.1100	-4.9502E-01	20
1(S-FE%)		24(S-SN)	0.2115	0.0000E+00	7
1(S-FE%)		25(S-SR)	0.4306	2.0794E+00	19
1(S-FE%)		26(S-V)	0.6126	3.4662E+00	20
1(S-FE%)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		28(S-Y)	0.4087	2.0025E+00	20
1(S-FE%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		30(S-ZR)	-0.1436	-6.4887E-01	20
1(S-FE%)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		3(S-CA%)	0.5039	2.6089E+00	20
2(S-MG%)		4(S-TI%)	0.0941	4.2254E-01	20
2(S-MG%)		5(S-MN)	0.4796	2.4445E+00	20
2(S-MG%)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		7(S-AS)	-0.0972	0.0000E+00	6
2(S-MG%)		9(S-B)	0.3478	1.6590E+00	20
2(S-MG%)		10(S-BA)	-0.1721	-7.8147E-01	20
2(S-MG%)		11(S-BE)	-0.5976	-3.1619E+00	18
2(S-MG%)		14(S-CO)	0.4553	2.2288E+00	19
2(S-MG%)		15(S-CR)	0.4172	2.0530E+00	20
2(S-MG%)		16(S-CU)	0.3750	1.8093E+00	20
2(S-MG%)		17(S-LA)	-0.1144	-5.1486E-01	20
2(S-MG%)		18(S-MO)	0.1049	0.0000E+00	5
2(S-MG%)		19(S-NB)	-0.4117	-1.4287E+00	10
2(S-MG%)		20(S-NI)	0.3702	1.6431E+00	17
2(S-MG%)		21(S-PB)	0.1022	4.2344E-01	17
2(S-MG%)		23(S-SC)	-0.2881	-1.3455E+00	20
2(S-MG%)		24(S-SN)	-0.2130	0.0000E+00	7
2(S-MG%)		25(S-SR)	0.1643	7.2591E-01	19
2(S-MG%)		26(S-V)	0.1192	5.3707E-01	20
2(S-MG%)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		28(S-Y)	-0.1354	-6.1137E-01	20
2(S-MG%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		30(S-ZR)	0.1739	7.8976E-01	20

SPEARMAN CORRELATION COEFFICIENTS FOR TWIN PEAKS AREA NM-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
2(S-MG%)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		4(S-TI%)	0.0551	2.4658E-01	20
3(S-CA%)		5(S-MN)	0.2945	1.3779E+00	20
3(S-CA%)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		7(S-AS)	-0.0274	0.0000E+00	6
3(S-CA%)		9(S-B)	0.2956	1.3836E+00	20
3(S-CA%)		10(S-BA)	0.0169	7.5432E-02	20
3(S-CA%)		11(S-BE)	-0.6263	-3.4081E+00	18
3(S-CA%)		14(S-CO)	0.4280	2.0643E+00	19
3(S-CA%)		15(S-CR)	0.1600	7.2487E-01	20
3(S-CA%)		16(S-CU)	0.0801	3.5955E-01	20
3(S-CA%)		17(S-LA)	0.0975	4.3815E-01	20
3(S-CA%)		18(S-MO)	0.0000	0.0000E+00	5
3(S-CA%)		19(S-NB)	-0.4151	-1.4428E+00	10
3(S-CA%)		20(S-NI)	0.2828	1.2158E+00	17
3(S-CA%)		21(S-PB)	0.0482	1.9887E-01	17
3(S-CA%)		23(S-SC)	-0.2584	-1.1960E+00	20
3(S-CA%)		24(S-SN)	-0.5304	0.0000E+00	7
3(S-CA%)		25(S-SR)	0.2399	1.0770E+00	19
3(S-CA%)		26(S-V)	0.2164	9.9107E-01	20
3(S-CA%)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		28(S-Y)	-0.0490	-2.1930E-01	20
3(S-CA%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		30(S-ZR)	-0.0869	-3.9023E-01	20
3(S-CA%)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		5(S-MN)	0.2802	1.3056E+00	20
4(S-TI%)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		7(S-AS)	0.4286	0.0000E+00	6
4(S-TI%)		9(S-B)	0.2331	1.0721E+00	20
4(S-TI%)		10(S-BA)	0.6359	3.6846E+00	20
4(S-TI%)		11(S-BE)	0.4225	1.9779E+00	18
4(S-TI%)		14(S-CO)	0.1318	5.7974E-01	19
4(S-TI%)		15(S-CR)	-0.0979	-4.3989E-01	20
4(S-TI%)		16(S-CU)	0.1996	9.1079E-01	20
4(S-TI%)		17(S-LA)	0.4083	2.0001E+00	20
4(S-TI%)		18(S-MO)	0.1039	0.0000E+00	5
4(S-TI%)		19(S-NB)	0.3990	1.3760E+00	10
4(S-TI%)		20(S-NI)	0.2285	9.6765E-01	17
4(S-TI%)		21(S-PB)	0.4056	1.8294E+00	17
4(S-TI%)		23(S-SC)	0.1503	6.7997E-01	20
4(S-TI%)		24(S-SN)	0.1354	0.0000E+00	7
4(S-TI%)		25(S-SR)	0.5258	2.6946E+00	19
4(S-TI%)		26(S-V)	0.6722	4.0601E+00	20
4(S-TI%)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		28(S-Y)	0.5572	3.0006E+00	20
4(S-TI%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		30(S-ZR)	0.2152	9.8541E-01	20
4(S-TI%)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		7(S-AS)	0.4302	0.0000E+00	6

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COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
5(S-MN)		9(S-B)	0.3519	1.6813E+00	20
5(S-MN)		10(S-BA)	0.0506	2.2645E-01	20
5(S-MN)		11(S-BE)	-0.0782	-3.3281E-01	18
5(S-MN)		14(S-CO)	-0.0656	-2.8673E-01	19
5(S-MN)		15(S-CR)	0.2255	1.0349E+00	20
5(S-MN)		16(S-CU)	0.5037	2.6076E+00	20
5(S-MN)		17(S-LA)	0.4180	2.0576E+00	20
5(S-MN)		18(S-MO)	-0.3378	0.0000E+00	5
5(S-MN)		19(S-NB)	0.2716	8.9259E-01	10
5(S-MN)		20(S-NI)	0.1687	7.0556E-01	17
5(S-MN)		21(S-PB)	0.1014	4.2018E-01	17
5(S-MN)		23(S-SC)	0.2798	1.3035E+00	20
5(S-MN)		24(S-SN)	-0.4759	0.0000E+00	7
5(S-MN)		25(S-SR)	0.2694	1.2192E+00	19
5(S-MN)		26(S-V)	0.2682	1.2450E+00	20
5(S-MN)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		28(S-Y)	0.5205	2.7264E+00	20
5(S-MN)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		30(S-ZR)	0.1667	7.5604E-01	20
5(S-MN)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		7(S-AS)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		9(S-B)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		10(S-BA)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		11(S-BE)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		15(S-CR)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		16(S-CU)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		17(S-LA)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		9(S-B)	0.6614	0.0000E+00	6
7(S-AS)		10(S-BA)	0.4286	0.0000E+00	6
7(S-AS)		11(S-BE)	0.2047	0.0000E+00	6
7(S-AS)		14(S-CO)	0.1024	0.0000E+00	6
7(S-AS)		15(S-CR)	-0.2835	0.0000E+00	6
7(S-AS)		16(S-CU)	-0.3979	0.0000E+00	6
7(S-AS)		17(S-LA)	0.8333	0.0000E+00	6
7(S-AS)		18(S-MO)	-0.5000	0.0000E+00	1
7(S-AS)		19(S-NB)	0.7536	0.0000E+00	5

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COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
7(S-AS)		20(S-NI)	-0.3378	0.0000E+00	5
7(S-AS)		21(S-PB)	-0.3156	0.0000E+00	6
7(S-AS)		23(S-SC)	-0.1518	0.0000E+00	6
7(S-AS)		24(S-SN)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
7(S-AS)		25(S-SR)	0.6561	0.0000E+00	5
7(S-AS)		26(S-V)	0.6860	0.0000E+00	6
7(S-AS)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		28(S-Y)	0.3821	0.0000E+00	6
7(S-AS)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
7(S-AS)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		10(S-BA)	0.1882	8.5693E-01	20
9(S-B)		11(S-BE)	-0.0961	-4.0958E-01	18
9(S-B)		14(S-CO)	0.3630	1.6980E+00	19
9(S-B)		15(S-CR)	-0.1315	-5.9310E-01	20
9(S-B)		16(S-CU)	0.0345	1.5435E-01	20
9(S-B)		17(S-LA)	0.3322	1.5753E+00	20
9(S-B)		18(S-MO)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
9(S-B)		19(S-NB)	0.4688	1.6785E+00	10
9(S-B)		20(S-NI)	-0.0556	-2.2942E-01	17
9(S-B)		21(S-PB)	-0.0219	-9.0212E-02	17
9(S-B)		23(S-SC)	-0.3645	-1.7503E+00	20
9(S-B)		24(S-SN)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
9(S-B)		25(S-SR)	0.3772	1.7753E+00	19
9(S-B)		26(S-V)	0.3321	1.5743E+00	20
9(S-B)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		28(S-Y)	0.1042	4.6838E-01	20
9(S-B)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		30(S-ZR)	0.0476	2.1320E-01	20
9(S-B)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		11(S-BE)	0.3287	1.4768E+00	18
10(S-BA)		14(S-CO)	0.2096	9.3440E-01	19
10(S-BA)		15(S-CR)	0.0283	1.2679E-01	20
10(S-BA)		16(S-CU)	-0.0895	-4.0204E-01	20
10(S-BA)		17(S-LA)	0.5745	3.1393E+00	20
10(S-BA)		18(S-MO)	0.4237	0.0000E+00	5
10(S-BA)		19(S-NB)	0.3942	1.3563E+00	10
10(S-BA)		20(S-NI)	0.2097	8.8435E-01	17
10(S-BA)		21(S-PB)	0.1037	4.2976E-01	17
10(S-BA)		23(S-SC)	-0.1313	-5.9212E-01	20
10(S-BA)		24(S-SN)	-0.0538	0.0000E+00	7
10(S-BA)		25(S-SR)	0.7294	4.6481E+00	19
10(S-BA)		26(S-V)	0.5739	3.1340E+00	20
10(S-BA)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		28(S-Y)	0.3561	1.7045E+00	20
10(S-BA)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		30(S-ZR)	-0.1882	-8.5693E-01	20
10(S-BA)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		14(S-CO)	-0.4284	-1.9551E+00	17
11(S-BE)		15(S-CR)	-0.2387	-1.0427E+00	18

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SPEARMAN CORRELATION COEFFICIENTS FOR TWIN PEAKS AREA NM-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
11(S-BE)		16(S-CU)	0.0674	2.8647E-01	18
11(S-BE)		17(S-LA)	0.3433	1.5506E+00	18
11(S-BE)		18(S-MO)	-0.2000	0.0000E+00	4
11(S-BE)		19(S-NB)	0.7440	3.5216E+00	10
11(S-BE)		20(S-NI)	-0.1152	-4.4933E-01	15
11(S-BE)		21(S-PB)	0.0413	1.6546E-01	16
11(S-BE)		23(S-SC)	0.3482	1.5761E+00	18
11(S-BE)		24(S-SN)	0.5595	0.0000E+00	7
11(S-BE)		25(S-SR)	0.0210	8.6587E-02	17
11(S-BE)		26(S-V)	0.2128	9.2380E-01	18
11(S-BE)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		28(S-Y)	0.5939	3.1318E+00	18
11(S-BE)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		30(S-ZR)	0.0961	4.0958E-01	18
11(S-BE)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		15(S-CR)	0.0778	3.4025E-01	19
14(S-CO)		16(S-CU)	0.1113	4.8826E-01	19
14(S-CO)		17(S-LA)	-0.0795	-3.4774E-01	19
14(S-CO)		18(S-MO)	0.3416	0.0000E+00	5
14(S-CO)		19(S-NB)	-0.2955	-9.2788E-01	9
14(S-CO)		20(S-NI)	0.1662	6.9502E-01	17
14(S-CO)		21(S-PB)	0.2539	1.0502E+00	16
14(S-CO)		23(S-SC)	-0.6629	-3.8598E+00	19
14(S-CO)		24(S-SN)	-0.0761	0.0000E+00	7
14(S-CO)		25(S-SR)	0.3830	1.7588E+00	18
14(S-CO)		26(S-V)	0.4432	2.1549E+00	19
14(S-CO)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		28(S-Y)	-0.2803	-1.2729E+00	19
14(S-CO)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		30(S-ZR)	-0.1412	-6.2153E-01	19
14(S-CO)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		16(S-CU)	0.2749	1.2785E+00	20
15(S-CR)		17(S-LA)	-0.0731	-3.2801E-01	20
15(S-CR)		18(S-MO)	-0.1667	0.0000E+00	5
15(S-CR)		19(S-NB)	-0.3942	-1.3563E+00	10
15(S-CR)		20(S-NI)	0.5430	2.6660E+00	17
15(S-CR)		21(S-PB)	0.1613	6.7381E-01	17
15(S-CR)		23(S-SC)	-0.1423	-6.4291E-01	20
15(S-CR)		24(S-SN)	0.0000	0.0000E+00	7
15(S-CR)		25(S-SR)	0.1106	4.8500E-01	19
15(S-CR)		26(S-V)	-0.0157	-7.0301E-02	20
15(S-CR)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		28(S-Y)	-0.0890	-3.9943E-01	20
15(S-CR)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		30(S-ZR)	0.1315	5.9310E-01	20
15(S-CR)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		17(S-LA)	0.0302	1.3524E-01	20
16(S-CU)		18(S-MO)	0.1030	0.0000E+00	5
16(S-CU)		19(S-NB)	0.1003	3.1870E-01	10
16(S-CU)		20(S-NI)	0.3455	1.5179E+00	17

SPEARMAN CORRELATION COEFFICIENTS FOR TWIN PEAKS AREA NM-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
16(S-CU)		21(S-PB)	0.3989	1.7934E+00	17
16(S-CU)		23(S-SC)	0.2271	1.0431E+00	20
16(S-CU)		24(S-SN)	-0.2298	0.0000E+00	7
16(S-CU)		25(S-SR)	0.1101	4.8299E-01	19
16(S-CU)		26(S-V)	0.2440	1.1251E+00	20
16(S-CU)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		28(S-Y)	0.3970	1.9343E+00	20
16(S-CU)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		30(S-ZR)	0.2415	1.1127E+00	20
16(S-CU)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		18(S-MO)	0.3118	0.0000E+00	5
17(S-LA)		19(S-NB)	0.4607	1.6412E+00	10
17(S-LA)		20(S-NI)	0.0880	3.6415E-01	17
17(S-LA)		21(S-PB)	-0.1449	-6.0365E-01	17
17(S-LA)		23(S-SC)	0.1753	7.9614E-01	20
17(S-LA)		24(S-SN)	-0.5371	0.0000E+00	7
17(S-LA)		25(S-SR)	0.4659	2.2949E+00	19
17(S-LA)		26(S-V)	0.4816	2.4577E+00	20
17(S-LA)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		28(S-Y)	0.7244	4.7000E+00	20
17(S-LA)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		30(S-ZR)	0.0350	1.5650E-01	20
17(S-LA)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		19(S-NB)	-0.5000	0.0000E+00	1
18(S-MO)		20(S-NI)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
18(S-MO)		21(S-PB)	0.7255	0.0000E+00	3
18(S-MO)		23(S-SC)	-0.4278	0.0000E+00	5
18(S-MO)		24(S-SN)	-0.7746	0.0000E+00	2
18(S-MO)		25(S-SR)	0.1391	0.0000E+00	4
18(S-MO)		26(S-V)	0.2060	0.0000E+00	5
18(S-MO)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		28(S-Y)	-0.2118	0.0000E+00	5
18(S-MO)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
18(S-MO)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		20(S-NI)	-0.2324	-7.1667E-01	9
19(S-NB)		21(S-PB)	-0.1193	-3.7993E-01	10
19(S-NB)		23(S-SC)	0.1203	3.8337E-01	10
19(S-NB)		24(S-SN)	0.8165	0.0000E+00	2
19(S-NB)		25(S-SR)	0.2878	9.0150E-01	9
19(S-NB)		26(S-V)	0.4916	1.7852E+00	10
19(S-NB)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		28(S-Y)	0.6271	2.5458E+00	10
19(S-NB)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
19(S-NB)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		21(S-PB)	0.2562	9.9183E-01	14
20(S-NI)		23(S-SC)	-0.2615	-1.1173E+00	17
20(S-NI)		24(S-SN)	-0.0845	0.0000E+00	6
20(S-NI)		25(S-SR)	0.3379	1.4359E+00	16

SPEARMAN CORRELATION COEFFICIENTS FOR TWIN PEAKS AREA NM-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
20(S-NI)		26(S-V)	0.1748	7.3181E-01	17
20(S-NI)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		28(S-Y)	0.2610	1.1146E+00	17
20(S-NI)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		30(S-ZR)	0.0556	2.2942E-01	17
20(S-NI)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
21(S-PB)		23(S-SC)	-0.1365	-5.6808E-01	17
21(S-PB)		24(S-SN)	-0.5000	0.0000E+00	6
21(S-PB)		25(S-SR)	-0.0860	-3.4543E-01	16
21(S-PB)		26(S-V)	0.3209	1.3971E+00	17
21(S-PB)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
21(S-PB)		28(S-Y)	-0.0189	-7.7950E-02	17
21(S-PB)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
21(S-PB)		30(S-ZR)	0.2844	1.2230E+00	17
21(S-PB)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		24(S-SN)	-0.2371	0.0000E+00	7
23(S-SC)		25(S-SR)	-0.1225	-5.3819E-01	19
23(S-SC)		26(S-V)	-0.0402	-1.8012E-01	20
23(S-SC)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		28(S-Y)	0.5896	3.2645E+00	20
23(S-SC)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		30(S-ZR)	0.2950	1.3809E+00	20
23(S-SC)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		25(S-SR)	-0.1305	0.0000E+00	6
24(S-SN)		26(S-V)	0.0437	0.0000E+00	7
24(S-SN)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		28(S-Y)	-0.0841	0.0000E+00	7
24(S-SN)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
24(S-SN)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
25(S-SR)		26(S-V)	0.7507	4.9528E+00	19
25(S-SR)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
25(S-SR)		28(S-Y)	0.3921	1.8581E+00	19
25(S-SR)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
25(S-SR)		30(S-ZR)	-0.0189	-8.2222E-02	19
25(S-SR)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
26(S-V)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
26(S-V)		28(S-Y)	0.4304	2.1322E+00	20
26(S-V)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
26(S-V)		30(S-ZR)	0.0000	0.0000E+00	20
26(S-V)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
27(S-W)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
27(S-W)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
27(S-W)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
27(S-W)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
28(S-Y)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
28(S-Y)		30(S-ZR)	0.2951	1.3814E+00	20
28(S-Y)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
29(S-ZN)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
29(S-ZN)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		

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SPEARMAN CORRELATION COEFFICIENTS FOR TWIN PEAKS AREA NM-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
30(S-ZR)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		

SPEARMAN CORRELATION COEFFICIENTS FOR SAWMILL CREEK AREA NM-1 FRACT.

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
1(S-FE%)		2(S-MG%)	0.5707	2.7801E+00	16
1(S-FE%)		3(S-CA%)	0.5961	2.9696E+00	16
1(S-FE%)		4(S-TI%)	0.6471	3.3954E+00	16
1(S-FE%)		5(S-MN)	0.5332	2.5213E+00	16
1(S-FE%)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		9(S-B)	-0.0120	-3.9849E-02	11
1(S-FE%)		10(S-BA)	0.3993	1.6296E+00	14
1(S-FE%)		11(S-BE)	0.1628	5.2166E-01	10
1(S-FE%)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		15(S-CR)	-0.4926	0.0000E+00	4
1(S-FE%)		16(S-CU)	0.2514	8.9959E-01	12
1(S-FE%)		17(S-LA)	0.2763	9.5343E-01	11
1(S-FE%)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		21(S-PB)	-0.3781	-1.1553E+00	8
1(S-FE%)		23(S-SC)	-0.2000	-1.1553E+00	2
1(S-FE%)		24(S-SN)	0.1581	0.0000E+00	3
1(S-FE%)		25(S-SR)	-0.4263	-1.3323E+00	8
1(S-FE%)		26(S-V)	-0.1767	-5.6780E-01	10
1(S-FE%)		28(S-Y)	0.2765	1.1507E+00	16
1(S-FE%)		30(S-ZR)	0.0000	0.0000E+00	16
1(S-FE%)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		3(S-CA%)	0.5951	2.9617E+00	16
2(S-MG%)		4(S-TI%)	0.2024	8.2690E-01	16
2(S-MG%)		5(S-MN)	0.5204	2.4375E+00	16
2(S-MG%)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		9(S-B)	0.0289	9.5780E-02	11
2(S-MG%)		10(S-BA)	0.1876	7.1461E-01	14
2(S-MG%)		11(S-BE)	-0.1449	-4.6311E-01	10
2(S-MG%)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		15(S-CR)	0.0000	0.0000E+00	4
2(S-MG%)		16(S-CU)	-0.1987	-7.0217E-01	12
2(S-MG%)		17(S-LA)	0.7571	3.8431E+00	11
2(S-MG%)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		21(S-PB)	-0.0249	-7.0515E-02	8
2(S-MG%)		23(S-SC)	-0.6000	-7.0515E-02	2
2(S-MG%)		24(S-SN)	0.3591	0.0000E+00	3
2(S-MG%)		25(S-SR)	-0.0031	-8.8666E-03	8
2(S-MG%)		26(S-V)	0.3413	1.1481E+00	10
2(S-MG%)		28(S-Y)	0.2645	1.0969E+00	16
2(S-MG%)		30(S-ZR)	-0.1188	-4.7853E-01	16
2(S-MG%)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		4(S-TI%)	0.3474	1.4818E+00	16
3(S-CA%)		5(S-MN)	0.6407	3.3381E+00	16
3(S-CA%)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		9(S-B)	-0.3228	-1.1311E+00	11
3(S-CA%)		10(S-BA)	0.4434	1.8508E+00	14
3(S-CA%)		11(S-BE)	-0.4064	-1.4066E+00	10
3(S-CA%)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		

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SPEARMAN CORRELATION COEFFICIENTS FOR SAWMILL CREEK AREA NM-1 FRACT.

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
3(S-CA%)		15(S-CR)	0.0909	0.0000E+00	4
3(S-CA%)		16(S-CU)	-0.3487	-1.2887E+00	12
3(S-CA%)		17(S-LA)	0.7592	3.8688E+00	11
3(S-CA%)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		21(S-PB)	0.0031	8.8666E-03	8
3(S-CA%)		23(S-SC)	-0.8944	0.0000E+00	2
3(S-CA%)		24(S-SN)	0.6000	0.0000E+00	3
3(S-CA%)		25(S-SR)	-0.1195	-3.4043E-01	8
3(S-CA%)		26(S-V)	-0.1743	-5.5980E-01	10
3(S-CA%)		28(S-Y)	0.1814	7.3765E-01	16
3(S-CA%)		30(S-ZR)	-0.3765	-1.6257E+00	16
3(S-CA%)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		5(S-MN)	0.4936	2.2703E+00	16
4(S-TI%)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		9(S-B)	0.3643	1.2976E+00	11
4(S-TI%)		10(S-BA)	0.2358	9.0783E-01	14
4(S-TI%)		11(S-BE)	0.3333	1.1180E+00	10
4(S-TI%)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		15(S-CR)	-0.0455	0.0000E+00	4
4(S-TI%)		16(S-CU)	0.3757	1.4044E+00	12
4(S-TI%)		17(S-LA)	0.2011	6.8100E-01	11
4(S-TI%)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		21(S-PB)	-0.5556	-1.8899E+00	8
4(S-TI%)		23(S-SC)	-0.6325	0.0000E+00	2
4(S-TI%)		24(S-SN)	-0.6000	0.0000E+00	3
4(S-TI%)		25(S-SR)	-0.3608	-1.0941E+00	8
4(S-TI%)		26(S-V)	0.1413	4.5131E-01	10
4(S-TI%)		28(S-Y)	0.6265	3.2151E+00	16
4(S-TI%)		30(S-ZR)	-0.1895	-7.7179E-01	16
4(S-TI%)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		9(S-B)	0.3349	1.1786E+00	11
5(S-MN)		10(S-BA)	0.0541	2.0278E-01	14
5(S-MN)		11(S-BE)	0.1408	4.4974E-01	10
5(S-MN)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		15(S-CR)	0.0455	0.0000E+00	4
5(S-MN)		16(S-CU)	-0.1174	-4.0949E-01	12
5(S-MN)		17(S-LA)	0.2094	7.1028E-01	11
5(S-MN)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		21(S-PB)	0.2044	5.9061E-01	8
5(S-MN)		23(S-SC)	-0.7379	0.0000E+00	2
5(S-MN)		24(S-SN)	-0.1000	0.0000E+00	3
5(S-MN)		25(S-SR)	-0.4648	-1.4849E+00	8
5(S-MN)		26(S-V)	0.4041	1.3969E+00	10
5(S-MN)		28(S-Y)	0.5274	2.4833E+00	16
5(S-MN)		30(S-ZR)	-0.0955	-3.8391E-01	16
5(S-MN)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		

SPEARMAN CORRELATION COEFFICIENTS FOR SAWMILL CREEK AREA NM-1 FRACT.

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
6(S-AG)		9(S-B)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		10(S-BA)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		11(S-BE)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		15(S-CR)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		16(S-CU)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		17(S-LA)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		10(S-BA)	-0.2337	-7.6012E-01	10
9(S-B)		11(S-BE)	0.7669	3.3796E+00	8
9(S-B)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		15(S-CR)	0.0000	0.0000E+00	3
9(S-B)		16(S-CU)	0.1232	3.9261E-01	10
9(S-B)		17(S-LA)	-0.2818	-8.8099E-01	9
9(S-B)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		21(S-PB)	0.2194	0.0000E+00	6
9(S-B)		23(S-SC)	0.0000	0.0000E+00	2
9(S-B)		24(S-SN)	-0.7182	0.0000E+00	3
9(S-B)		25(S-SR)	-0.0801	0.0000E+00	6
9(S-B)		26(S-V)	0.4832	1.6556E+00	9
9(S-B)		28(S-Y)	0.3348	1.1785E+00	11
9(S-B)		30(S-ZR)	0.0799	2.6600E-01	11
9(S-B)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		11(S-BE)	-0.2361	-7.2898E-01	9
10(S-BA)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		15(S-CR)	-0.7504	0.0000E+00	4
10(S-BA)		16(S-CU)	0.1670	5.6160E-01	11
10(S-BA)		17(S-LA)	0.3822	1.3719E+00	11
10(S-BA)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		21(S-PB)	-0.3185	-9.5034E-01	8
10(S-BA)		23(S-SC)	0.7746	0.0000E+00	2
10(S-BA)		24(S-SN)	0.7379	0.0000E+00	2
10(S-BA)		25(S-SR)	0.6113	2.1848E+00	8
10(S-BA)		26(S-V)	-0.2091	-6.4159E-01	9
10(S-BA)		28(S-Y)	0.0336	1.2584E-01	14
10(S-BA)		30(S-ZR)	0.0000	0.0000E+00	14
10(S-BA)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		15(S-CR)	LESS THAN 3 PAIRS DETECTED.		

SPEARMAN CORRELATION COEFFICIENTS FOR SAWMILL CREEK AREA NM-1 FRACT.

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
11(S-BE)		16(S-CU)	0.5706	1.9650E+00	8
11(S-BE)		17(S-LA)	-0.3060	0.0000E+00	7
11(S-BE)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		21(S-PB)	-0.1029	0.0000E+00	4
11(S-BE)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		24(S-SN)	-0.8000	0.0000E+00	2
11(S-BE)		25(S-SR)	-0.5224	0.0000E+00	4
11(S-BE)		26(S-V)	0.2436	0.0000E+00	7
11(S-BE)		28(S-Y)	0.3417	1.1499E+00	10
11(S-BE)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
11(S-BE)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		15(S-CR)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		16(S-CU)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		17(S-LA)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		16(S-CU)	-0.7071	0.0000E+00	3
15(S-CR)		17(S-LA)	1.0000	0.0000E+00	3
15(S-CR)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		21(S-PB)	0.5556	0.0000E+00	3
15(S-CR)		23(S-SC)	-0.8944	0.0000E+00	2
15(S-CR)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		25(S-SR)	0.2500	0.0000E+00	3
15(S-CR)		26(S-V)	0.4867	0.0000E+00	3
15(S-CR)		28(S-Y)	0.3182	0.0000E+00	4
15(S-CR)		30(S-ZR)	-0.2697	0.0000E+00	4
15(S-CR)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		17(S-LA)	-0.0108	-3.4067E-02	10
16(S-CU)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		21(S-PB)	-0.7457	0.0000E+00	6
16(S-CU)		23(S-SC)	0.6325	0.0000E+00	2
16(S-CU)		24(S-SN)	-0.9487	0.0000E+00	3
16(S-CU)		25(S-SR)	-0.3875	-1.1889E+00	8
16(S-CU)		26(S-V)	0.0163	5.1574E-02	10
16(S-CU)		28(S-Y)	0.2356	8.3995E-01	12
16(S-CU)		30(S-ZR)	0.2424	8.6555E-01	12
16(S-CU)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		

SPEARMAN CORRELATION COEFFICIENTS FOR SAWMILL CREEK AREA NM-1 FRACT.

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
17(S-LA)		21(S-PB)	-0.2751	0.0000E+00	6
17(S-LA)		23(S-SC)	-0.8944	0.0000E+00	2
17(S-LA)		24(S-SN)	1.0000	0.0000E+00	1
17(S-LA)		25(S-SR)	0.2381	6.9341E-01	8
17(S-LA)		26(S-V)	0.1116	3.3705E-01	9
17(S-LA)		28(S-Y)	0.2375	8.1091E-01	11
17(S-LA)		30(S-ZR)	-0.4303	-1.5809E+00	11
17(S-LA)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
21(S-PB)		23(S-SC)	0.4472	0.0000E+00	2
21(S-PB)		24(S-SN)	0.8660	0.0000E+00	1
21(S-PB)		25(S-SR)	0.0000	0.0000E+00	4
21(S-PB)		26(S-V)	0.4274	0.0000E+00	5
21(S-PB)		28(S-Y)	-0.1683	-4.8280E-01	8
21(S-PB)		30(S-ZR)	0.4138	1.2855E+00	8
21(S-PB)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		25(S-SR)	0.2108	0.0000E+00	2
23(S-SC)		26(S-V)	-0.3162	0.0000E+00	2
23(S-SC)		28(S-Y)	-0.7379	0.0000E+00	2
23(S-SC)		30(S-ZR)	0.7746	0.0000E+00	2
23(S-SC)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		26(S-V)	-0.3162	0.0000E+00	2
24(S-SN)		28(S-Y)	-0.5643	0.0000E+00	3
24(S-SN)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
24(S-SN)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
25(S-SR)		26(S-V)	-0.1342	0.0000E+00	7
25(S-SR)		28(S-Y)	0.0486	1.3752E-01	8
25(S-SR)		30(S-ZR)	-0.0591	-1.6748E-01	8
25(S-SR)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
26(S-V)		28(S-Y)	0.3331	1.3114E+00	10
26(S-V)		30(S-ZR)	0.3589	1.2160E+00	10
26(S-V)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		

D0136 SPEARMAN-KENDALL RANK CORRELATION (10/25/77) DATE 3/15/81

SPEARMAN CORRELATION COEFFICIENTS FOR SAWMILL CREEK AREA NM-1 FRACT.

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
28(S-Y)		30(S-ZR)	-0.0716	-2.8705E-01	16
28(S-Y)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
30(S-ZR)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		

D0136 SPEARMAN-KENDALL RANK CORRELATION (10/25/77) DATE 3/15/81

SPEARMAN CORRELATION COEFFICIENTS FOR COAL CREEK AREA NM-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
1(S-FE%)		2(S-MG%)	0.4381	1.6885E+00	12
1(S-FE%)		3(S-CA%)	0.1270	4.4348E-01	12
1(S-FE%)		4(S-TI%)	0.1547	5.4260E-01	12
1(S-FE%)		5(S-MN)	0.8952	6.9589E+00	12
1(S-FE%)		9(S-B)	0.5779	2.3487E+00	11
1(S-FE%)		10(S-BA)	1.0000	0.0000E+00	2
1(S-FE%)		11(S-BE)	-0.0712	-2.4722E-01	12
1(S-FE%)		16(S-CU)	0.4284	1.6424E+00	12
1(S-FE%)		17(S-LA)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		19(S-NB)	0.8333	0.0000E+00	2
1(S-FE%)		21(S-PB)	0.2000	0.0000E+00	3
1(S-FE%)		22(S-SB)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
1(S-FE%)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		24(S-SN)	0.7285	3.6842E+00	12
1(S-FE%)		26(S-V)	0.0685	2.0609E-01	9
1(S-FE%)		28(S-Y)	0.3588	1.3315E+00	12
1(S-FE%)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
1(S-FE%)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		3(S-CA%)	-0.0023	-7.8285E-03	12
2(S-MG%)		4(S-TI%)	0.2325	8.2804E-01	12
2(S-MG%)		5(S-MN)	0.4146	1.5873E+00	12
2(S-MG%)		9(S-B)	0.1913	6.4653E-01	11
2(S-MG%)		10(S-BA)	0.9487	0.0000E+00	2
2(S-MG%)		11(S-BE)	-0.2929	-1.0613E+00	12
2(S-MG%)		16(S-CU)	0.3071	1.1178E+00	12
2(S-MG%)		17(S-LA)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		19(S-NB)	0.9487	0.0000E+00	2
2(S-MG%)		21(S-PB)	0.1539	0.0000E+00	3
2(S-MG%)		22(S-SB)	-0.5000	0.0000E+00	1
2(S-MG%)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		24(S-SN)	0.5337	2.1861E+00	12
2(S-MG%)		26(S-V)	-0.3402	-1.0854E+00	9
2(S-MG%)		28(S-Y)	0.0079	2.7525E-02	12
2(S-MG%)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
2(S-MG%)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		4(S-TI%)	0.6093	2.6618E+00	12
3(S-CA%)		5(S-MN)	0.1961	6.9293E-01	12
3(S-CA%)		9(S-B)	-0.1737	-5.8487E-01	11
3(S-CA%)		10(S-BA)	-0.1054	0.0000E+00	2
3(S-CA%)		11(S-BE)	0.2697	9.7036E-01	12
3(S-CA%)		16(S-CU)	0.5519	2.2927E+00	12
3(S-CA%)		17(S-LA)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		19(S-NB)	0.0000	0.0000E+00	2
3(S-CA%)		21(S-PB)	-0.3000	0.0000E+00	3
3(S-CA%)		22(S-SB)	0.5000	0.0000E+00	1
3(S-CA%)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		24(S-SN)	0.1426	4.9897E-01	12

SPEARMAN CORRELATION COEFFICIENTS FOR COAL CREEK AREA NM-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
3(S-CA%)		26(S-V)	0.8425	4.6912E+00	9
3(S-CA%)		28(S-Y)	0.2472	8.8363E-01	12
3(S-CA%)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
3(S-CA%)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		5(S-MN)	0.3049	1.1089E+00	12
4(S-TI%)		9(S-B)	-0.0832	-2.7696E-01	11
4(S-TI%)		10(S-BA)	0.0000	0.0000E+00	2
4(S-TI%)		11(S-BE)	-0.1024	-3.5676E-01	12
4(S-TI%)		16(S-CU)	0.3833	1.4375E+00	12
4(S-TI%)		17(S-LA)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		19(S-NB)	0.5000	0.0000E+00	2
4(S-TI%)		21(S-PB)	-0.6708	0.0000E+00	3
4(S-TI%)		22(S-SB)	0.5000	0.0000E+00	1
4(S-TI%)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		24(S-SN)	0.1989	7.0299E-01	12
4(S-TI%)		26(S-V)	0.7001	2.9415E+00	9
4(S-TI%)		28(S-Y)	-0.0254	-8.8039E-02	12
4(S-TI%)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
4(S-TI%)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		9(S-B)	0.4717	1.7740E+00	11
5(S-MN)		10(S-BA)	0.8333	0.0000E+00	2
5(S-MN)		11(S-BE)	-0.1929	-6.8097E-01	12
5(S-MN)		16(S-CU)	0.2199	7.8100E-01	12
5(S-MN)		17(S-LA)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		19(S-NB)	0.9487	0.0000E+00	2
5(S-MN)		21(S-PB)	-0.3354	0.0000E+00	3
5(S-MN)		22(S-SB)	1.0000	0.0000E+00	1
5(S-MN)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		24(S-SN)	0.6663	3.0950E+00	12
5(S-MN)		26(S-V)	0.1167	3.5247E-01	9
5(S-MN)		28(S-Y)	0.2107	7.4667E-01	12
5(S-MN)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
5(S-MN)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		10(S-BA)	-0.5000	0.0000E+00	1
9(S-B)		11(S-BE)	0.1733	5.8352E-01	11
9(S-B)		16(S-CU)	-0.1265	-4.2284E-01	11
9(S-B)		17(S-LA)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		19(S-NB)	0.5000	0.0000E+00	1
9(S-B)		21(S-PB)	-0.1054	0.0000E+00	2
9(S-B)		22(S-SB)	0.8660	0.0000E+00	1
9(S-B)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		24(S-SN)	0.4798	1.8135E+00	11
9(S-B)		26(S-V)	-0.3038	-9.0204E-01	8
9(S-B)		28(S-Y)	0.4003	1.4489E+00	11
9(S-B)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
9(S-B)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		11(S-BE)	-0.6325	0.0000E+00	2

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SPEARMAN CORRELATION COEFFICIENTS FOR COAL CREEK AREA NM-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
10(S-BA)		16(S-CU)	0.7778	0.0000E+00	2
10(S-BA)		17(S-LA)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		21(S-PB)	0.5000	0.0000E+00	1
10(S-BA)		22(S-SB)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		24(S-SN)	0.8165	0.0000E+00	2
10(S-BA)		26(S-V)	0.0556	0.0000E+00	2
10(S-BA)		28(S-Y)	0.6325	0.0000E+00	2
10(S-BA)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
10(S-BA)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		16(S-CU)	0.3349	1.2311E+00	12
11(S-BE)		17(S-LA)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		19(S-NB)	-0.8333	0.0000E+00	2
11(S-BE)		21(S-PB)	0.6000	0.0000E+00	3
11(S-BE)		22(S-SB)	-0.5000	0.0000E+00	1
11(S-BE)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		24(S-SN)	0.1193	4.1611E-01	12
11(S-BE)		26(S-V)	0.2990	9.3990E-01	9
11(S-BE)		28(S-Y)	0.6958	3.3557E+00	12
11(S-BE)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
11(S-BE)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		17(S-LA)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		19(S-NB)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
16(S-CU)		21(S-PB)	0.4104	0.0000E+00	3
16(S-CU)		22(S-SB)	-0.5000	0.0000E+00	1
16(S-CU)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		24(S-SN)	0.2380	8.4876E-01	12
16(S-CU)		26(S-V)	0.4565	1.5394E+00	9
16(S-CU)		28(S-Y)	0.2692	9.6825E-01	12
16(S-CU)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
16(S-CU)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		22(S-SB)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		22(S-SB)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		

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SPEARMAN CORRELATION COEFFICIENTS FOR COAL CREEK AREA NM-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
18(S-MO)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		22(S-SB)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		24(S-SN)	0.8165	0.0000E+00	2
19(S-NB)		26(S-V)	-0.5000	0.0000E+00	2
19(S-NB)		28(S-Y)	0.3162	0.0000E+00	2
19(S-NB)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
19(S-NB)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
21(S-PB)		22(S-SB)	LESS THAN 3 PAIRS DETECTED.		
21(S-PB)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
21(S-PB)		24(S-SN)	0.0000	0.0000E+00	3
21(S-PB)		26(S-V)	0.0000	0.0000E+00	2
21(S-PB)		28(S-Y)	0.5643	0.0000E+00	3
21(S-PB)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
21(S-PB)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
22(S-SB)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
22(S-SB)		24(S-SN)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
22(S-SB)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
22(S-SB)		28(S-Y)	0.5000	0.0000E+00	1
22(S-SB)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
22(S-SB)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		26(S-V)	0.0000	0.0000E+00	9
24(S-SN)		28(S-Y)	0.5604	7.3440E+00	12
24(S-SN)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
24(S-SN)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
26(S-V)		28(S-Y)	0.1178	3.5576E-01	9
26(S-V)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
26(S-V)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
28(S-Y)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
28(S-Y)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
30(S-ZR)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		

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SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE M-1 CONCENTRATES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
1(S-FE%)		2(S-MG%)	-0.4658	-7.1396E+00	184
1(S-FE%)		3(S-CA%)	-0.3538	-5.1312E+00	184
1(S-FE%)		4(S-TI%)	0.0047	6.3086E-02	184
1(S-FE%)		5(S-MN)	-0.1310	-1.7925E+00	184
1(S-FE%)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		7(S-AS)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		9(S-B)	0.3062	3.3422E+00	108
1(S-FE%)		10(S-BA)	0.0690	9.3866E-01	184
1(S-FE%)		11(S-BE)	-0.0308	-3.5046E-01	129
1(S-FE%)		14(S-CO)	-0.0269	-3.6364E-01	182
1(S-FE%)		15(S-CR)	0.0794	1.0651E+00	179
1(S-FE%)		16(S-CU)	-0.0334	-4.5332E-01	184
1(S-FE%)		17(S-LA)	0.0267	3.2484E-01	148
1(S-FE%)		18(S-MO)	0.1644	1.0800E+00	42
1(S-FE%)		19(S-NB)	0.2074	2.2030E+00	108
1(S-FE%)		20(S-NI)	-0.1240	-1.5905E+00	162
1(S-FE%)		21(S-PB)	-0.1005	-1.3094E+00	168
1(S-FE%)		23(S-SC)	-0.3093	-4.3516E+00	179
1(S-FE%)		24(S-SN)	0.2460	2.1231E+00	70
1(S-FE%)		25(S-SR)	0.2625	1.7840E+00	43
1(S-FE%)		26(S-V)	0.3622	5.2709E+00	184
1(S-FE%)		27(S-W)	-0.0332	-1.3716E-01	17
1(S-FE%)		28(S-Y)	-0.3544	-5.1403E+00	184
1(S-FE%)		29(S-ZN)	0.2251	2.5098E+00	118
1(S-FE%)		30(S-ZR)	-0.1040	-1.3957E+00	178
1(S-FE%)		31(S-TH)	-0.5000	0.0000E+00	1
2(S-MG%)		3(S-CA%)	0.7513	1.5441E+01	184
2(S-MG%)		4(S-TI%)	0.1373	1.8798E+00	184
2(S-MG%)		5(S-MN)	0.3578	5.1973E+00	184
2(S-MG%)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		7(S-AS)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		9(S-B)	-0.0223	-2.3196E-01	108
2(S-MG%)		10(S-BA)	0.0917	1.2486E+00	184
2(S-MG%)		11(S-BE)	0.3296	3.9649E+00	129
2(S-MG%)		14(S-CO)	0.4558	6.9091E+00	182
2(S-MG%)		15(S-CR)	0.2442	3.3695E+00	179
2(S-MG%)		16(S-CU)	0.0521	7.0783E-01	184
2(S-MG%)		17(S-LA)	0.2313	2.8920E+00	148
2(S-MG%)		18(S-MO)	0.0547	3.5527E-01	42
2(S-MG%)		19(S-NB)	-0.0807	-8.4124E-01	108
2(S-MG%)		20(S-NI)	0.5470	8.3158E+00	162
2(S-MG%)		21(S-PB)	0.0603	7.8298E-01	168
2(S-MG%)		23(S-SC)	0.5710	9.3068E+00	179
2(S-MG%)		24(S-SN)	-0.3091	-2.7193E+00	70
2(S-MG%)		25(S-SR)	-0.0857	-5.6393E-01	43
2(S-MG%)		26(S-V)	-0.1283	-1.7542E+00	184
2(S-MG%)		27(S-W)	0.0000	0.0000E+00	17
2(S-MG%)		28(S-Y)	0.4049	6.0074E+00	184
2(S-MG%)		29(S-ZN)	0.1844	2.0384E+00	118
2(S-MG%)		30(S-ZR)	0.1929	2.6222E+00	178

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SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE M-1 CONCENTRATES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
2(S-MG%)		31(S-TH)	0.8660	0.0000E+00	1
3(S-CA%)		4(S-TI%)	0.0277	3.7640E-01	184
3(S-CA%)		5(S-MN)	0.1752	2.4139E+00	184
3(S-CA%)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		7(S-AS)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		9(S-B)	-0.0860	-8.9705E-01	108
3(S-CA%)		10(S-BA)	-0.0733	-9.9649E-01	184
3(S-CA%)		11(S-BE)	0.1495	1.7169E+00	129
3(S-CA%)		14(S-CO)	0.5408	8.6741E+00	182
3(S-CA%)		15(S-CR)	0.2949	4.1292E+00	179
3(S-CA%)		16(S-CU)	0.1231	1.6827E+00	184
3(S-CA%)		17(S-LA)	0.1536	1.8914E+00	148
3(S-CA%)		18(S-MO)	-0.1264	-8.2574E-01	42
3(S-CA%)		19(S-NB)	-0.2155	-2.2937E+00	108
3(S-CA%)		20(S-NI)	0.5530	8.4472E+00	162
3(S-CA%)		21(S-PB)	0.0587	7.6179E-01	168
3(S-CA%)		23(S-SC)	0.3941	5.7374E+00	179
3(S-CA%)		24(S-SN)	-0.4403	-4.1027E+00	70
3(S-CA%)		25(S-SR)	-0.0878	-5.7767E-01	43
3(S-CA%)		26(S-V)	0.0783	1.0655E+00	184
3(S-CA%)		27(S-W)	-0.4423	-2.0331E+00	17
3(S-CA%)		28(S-Y)	0.3679	5.3673E+00	184
3(S-CA%)		29(S-ZN)	-0.0173	-1.8849E-01	118
3(S-CA%)		30(S-ZR)	0.0624	8.3481E-01	178
3(S-CA%)		31(S-TH)	0.8660	0.0000E+00	1
4(S-TI%)		5(S-MN)	0.4549	6.9298E+00	184
4(S-TI%)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		7(S-AS)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		9(S-B)	0.0699	7.2823E-01	108
4(S-TI%)		10(S-BA)	0.1823	2.5143E+00	184
4(S-TI%)		11(S-BE)	0.3652	4.4558E+00	129
4(S-TI%)		14(S-CO)	0.2927	4.1297E+00	182
4(S-TI%)		15(S-CR)	-0.4024	-5.8806E+00	179
4(S-TI%)		16(S-CU)	0.1214	1.6594E+00	184
4(S-TI%)		17(S-LA)	0.2813	3.5661E+00	148
4(S-TI%)		18(S-MO)	0.1964	1.2982E+00	42
4(S-TI%)		19(S-NB)	0.3703	4.1427E+00	108
4(S-TI%)		20(S-NI)	0.0175	2.2313E-01	162
4(S-TI%)		21(S-PB)	0.1692	2.2246E+00	168
4(S-TI%)		23(S-SC)	0.4347	6.4575E+00	179
4(S-TI%)		24(S-SN)	0.4503	4.2196E+00	70
4(S-TI%)		25(S-SR)	-0.0197	-1.2951E-01	43
4(S-TI%)		26(S-V)	-0.3900	-5.7455E+00	184
4(S-TI%)		27(S-W)	0.3346	1.4642E+00	17
4(S-TI%)		28(S-Y)	0.3475	5.0265E+00	184
4(S-TI%)		29(S-ZN)	0.4784	5.9185E+00	118
4(S-TI%)		30(S-ZR)	0.4730	7.1629E+00	178
4(S-TI%)		31(S-TH)	0.5000	0.0000E+00	1
5(S-MN)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		7(S-AS)	LESS THAN 3 PAIRS DETECTED.		

SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE M-1 CONCENTRATES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
5(S-MN)		9(S-B)	0.1483	1.5588E+00	108
5(S-MN)		10(S-BA)	0.6231	1.0807E+01	184
5(S-MN)		11(S-BE)	0.5825	8.1394E+00	129
5(S-MN)		14(S-CO)	0.1508	2.0573E+00	182
5(S-MN)		15(S-CR)	-0.4150	-6.1022E+00	179
5(S-MN)		16(S-CU)	-0.1725	-2.3754E+00	184
5(S-MN)		17(S-LA)	0.5187	7.3799E+00	148
5(S-MN)		18(S-MO)	0.2417	1.6142E+00	42
5(S-MN)		19(S-NB)	0.5368	6.6116E+00	108
5(S-MN)		20(S-NI)	-0.0266	-3.3821E-01	162
5(S-MN)		21(S-PB)	0.3908	5.5036E+00	168
5(S-MN)		23(S-SC)	0.4319	6.4076E+00	179
5(S-MN)		24(S-SN)	0.2007	1.7141E+00	70
5(S-MN)		25(S-SR)	0.3545	2.4861E+00	43
5(S-MN)		26(S-V)	-0.4026	-5.9656E+00	184
5(S-MN)		27(S-W)	0.2280	9.6549E-01	17
5(S-MN)		28(S-Y)	0.4027	5.9685E+00	184
5(S-MN)		29(S-ZN)	0.6713	9.8398E+00	118
5(S-MN)		30(S-ZR)	0.4354	6.4527E+00	178
5(S-MN)		31(S-TH)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
6(S-AG)		7(S-AS)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		9(S-B)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		10(S-BA)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		11(S-BE)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		15(S-CR)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		16(S-CU)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		17(S-LA)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		9(S-B)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		10(S-BA)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		11(S-BE)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		15(S-CR)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		16(S-CU)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		17(S-LA)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		

SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE M-1 CONCENTRATES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
7(S-AS)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
7(S-AS)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		10(S-BA)	0.0044	4.5300E-02	108
9(S-B)		11(S-BE)	-0.0070	-5.4365E-02	60
9(S-B)		14(S-CO)	0.0599	6.2110E-01	107
9(S-B)		15(S-CR)	0.1152	1.1878E+00	105
9(S-B)		16(S-CU)	0.2130	2.2656E+00	108
9(S-B)		17(S-LA)	0.0858	7.6045E-01	78
9(S-B)		18(S-MO)	0.3160	1.2460E+00	14
9(S-B)		19(S-NB)	0.0625	4.3404E-01	48
9(S-B)		20(S-NI)	0.1326	1.3377E+00	100
9(S-B)		21(S-PB)	-0.0201	-2.0302E-01	102
9(S-B)		23(S-SC)	0.0021	2.1740E-02	104
9(S-B)		24(S-SN)	-0.1437	-6.4959E-01	20
9(S-B)		25(S-SR)	0.1497	8.4328E-01	31
9(S-B)		26(S-V)	0.0069	7.1272E-02	108
9(S-B)		27(S-W)	0.1597	6.2656E-01	15
9(S-B)		28(S-Y)	0.0830	8.6573E-01	108
9(S-B)		29(S-ZN)	0.2250	1.8901E+00	67
9(S-B)		30(S-ZR)	0.1347	1.3995E+00	106
9(S-B)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		11(S-BE)	0.3003	3.5762E+00	129
10(S-BA)		14(S-CO)	0.0440	5.9481E-01	182
10(S-BA)		15(S-CR)	-0.2767	-3.8524E+00	179
10(S-BA)		16(S-CU)	-0.1103	-1.5055E+00	184
10(S-BA)		17(S-LA)	0.2039	2.5336E+00	148
10(S-BA)		18(S-MO)	0.4492	3.2585E+00	42
10(S-BA)		19(S-NB)	0.2938	3.1937E+00	108
10(S-BA)		20(S-NI)	-0.1616	-2.0838E+00	162
10(S-BA)		21(S-PB)	0.3999	5.6545E+00	168
10(S-BA)		23(S-SC)	0.0780	1.0468E+00	179
10(S-BA)		24(S-SN)	-0.0174	-1.4552E-01	70
10(S-BA)		25(S-SR)	0.5733	4.5882E+00	43
10(S-BA)		26(S-V)	-0.1634	-2.2464E+00	184
10(S-BA)		27(S-W)	-0.0316	-1.3037E-01	17
10(S-BA)		28(S-Y)	0.0284	3.8594E-01	184
10(S-BA)		29(S-ZN)	0.5446	7.0542E+00	118
10(S-BA)		30(S-ZR)	0.0794	1.0631E+00	178
10(S-BA)		31(S-TH)	0.0000	0.0000E+00	1
11(S-BE)		14(S-CO)	0.2264	2.6296E+00	128
11(S-BE)		15(S-CR)	-0.2606	-3.0295E+00	126

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SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE M-1 CONCENTRATES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
11(S-BE)		16(S-CU)	-0.0870	-9.9242E-01	129
11(S-BE)		17(S-LA)	0.6260	8.4958E+00	112
11(S-BE)		18(S-MO)	0.5170	3.7227E+00	38
11(S-BE)		19(S-NB)	0.5580	6.4839E+00	93
11(S-BE)		20(S-NI)	0.1562	1.6665E+00	111
11(S-BE)		21(S-PB)	0.3064	3.4969E+00	118
11(S-BE)		23(S-SC)	0.5247	6.9451E+00	127
11(S-BE)		24(S-SN)	0.2236	1.8354E+00	64
11(S-BE)		25(S-SR)	0.2930	1.7335E+00	32
11(S-BE)		26(S-V)	-0.1994	-2.3107E+00	129
11(S-BE)		27(S-W)	0.0785	3.0490E-01	15
11(S-BE)		28(S-Y)	0.4361	5.5034E+00	129
11(S-BE)		29(S-ZN)	0.5264	5.7083E+00	85
11(S-BE)		30(S-ZR)	0.4701	5.9316E+00	124
11(S-BE)		31(S-TH)	-0.8660	0.0000E+00	1
14(S-CO)		15(S-CR)	0.1257	1.6859E+00	177
14(S-CO)		16(S-CU)	0.4486	6.7711E+00	182
14(S-CO)		17(S-LA)	0.1554	1.9076E+00	147
14(S-CO)		18(S-MO)	0.2627	1.7645E+00	42
14(S-CO)		19(S-NB)	-0.1061	-1.0984E+00	106
14(S-CO)		20(S-NI)	0.6032	9.6267E+00	162
14(S-CO)		21(S-PB)	0.0451	5.8190E-01	166
14(S-CO)		23(S-SC)	0.3245	4.5774E+00	178
14(S-CO)		24(S-SN)	-0.2371	-2.0270E+00	69
14(S-CO)		25(S-SR)	0.0376	2.4696E-01	43
14(S-CO)		26(S-V)	0.0625	8.4510E-01	182
14(S-CO)		27(S-W)	-0.5154	-2.4799E+00	17
14(S-CO)		28(S-Y)	0.3551	5.1246E+00	182
14(S-CO)		29(S-ZN)	0.0269	2.8975E-01	116
14(S-CO)		30(S-ZR)	0.2330	3.1790E+00	176
14(S-CO)		31(S-TH)	1.0000	0.0000E+00	1
15(S-CR)		16(S-CU)	0.0438	5.8672E-01	179
15(S-CR)		17(S-LA)	-0.2419	-3.0016E+00	145
15(S-CR)		18(S-MO)	-0.2225	-1.4434E+00	40
15(S-CR)		19(S-NB)	-0.2987	-3.2072E+00	105
15(S-CR)		20(S-NI)	0.4662	6.6858E+00	161
15(S-CR)		21(S-PB)	-0.2225	-2.9230E+00	164
15(S-CR)		23(S-SC)	-0.0588	-7.7896E-01	175
15(S-CR)		24(S-SN)	-0.2434	-2.0848E+00	69
15(S-CR)		25(S-SR)	-0.3984	-2.8487E+00	43
15(S-CR)		26(S-V)	0.4098	6.0106E+00	179
15(S-CR)		27(S-W)	-0.2246	-9.2208E-01	16
15(S-CR)		28(S-Y)	-0.1363	-1.8409E+00	179
15(S-CR)		29(S-ZN)	-0.3274	-3.6828E+00	113
15(S-CR)		30(S-ZR)	-0.4023	-5.7959E+00	174
15(S-CR)		31(S-TH)	1.0000	0.0000E+00	1
16(S-CU)		17(S-LA)	-0.1421	-1.7459E+00	148
16(S-CU)		18(S-MO)	-0.0904	-5.8823E-01	42
16(S-CU)		19(S-NB)	-0.1285	-1.3467E+00	108
16(S-CU)		20(S-NI)	0.2251	2.9404E+00	162

SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE M-1 CONCENTRATES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
16(S-CU)		21(S-PB)	0.0031	3.9776E-02	168
16(S-CU)		23(S-SC)	0.0729	9.7860E-01	179
16(S-CU)		24(S-SN)	-0.0667	-5.5913E-01	70
16(S-CU)		25(S-SR)	-0.3485	-2.4381E+00	43
16(S-CU)		26(S-V)	0.0323	4.3874E-01	184
16(S-CU)		27(S-W)	-0.0323	-1.3308E-01	17
16(S-CU)		28(S-Y)	0.1412	1.9348E+00	184
16(S-CU)		29(S-ZN)	-0.3974	-4.7046E+00	118
16(S-CU)		30(S-ZR)	0.1165	1.5645E+00	178
16(S-CU)		31(S-TH)	0.8660	0.0000E+00	1
17(S-LA)		18(S-MO)	0.2585	1.6057E+00	36
17(S-LA)		19(S-NB)	0.3639	3.8075E+00	95
17(S-LA)		20(S-NI)	0.0096	1.0916E-01	129
17(S-LA)		21(S-PB)	0.4031	5.1364E+00	136
17(S-LA)		23(S-SC)	0.4263	5.7140E+00	147
17(S-LA)		24(S-SN)	0.0244	1.9558E-01	64
17(S-LA)		25(S-SR)	0.2241	1.4175E+00	38
17(S-LA)		26(S-V)	-0.1821	-2.2532E+00	148
17(S-LA)		27(S-W)	-0.1185	-4.6233E-01	15
17(S-LA)		28(S-Y)	0.5824	8.7151E+00	148
17(S-LA)		29(S-ZN)	0.4150	4.5388E+00	99
17(S-LA)		30(S-ZR)	0.4510	6.0426E+00	143
17(S-LA)		31(S-TH)	1.0000	0.0000E+00	1
18(S-MO)		19(S-NB)	0.2666	1.6127E+00	34
18(S-MO)		20(S-NI)	-0.1353	-7.3562E-01	29
18(S-MO)		21(S-PB)	0.3365	2.2881E+00	41
18(S-MO)		23(S-SC)	0.3531	2.4456E+00	42
18(S-MO)		24(S-SN)	0.1977	1.1410E+00	32
18(S-MO)		25(S-SR)	0.1801	5.4942E-01	9
18(S-MO)		26(S-V)	-0.1516	-9.9412E-01	42
18(S-MO)		27(S-W)	-0.4264	0.0000E+00	4
18(S-MO)		28(S-Y)	0.1534	1.0060E+00	42
18(S-MO)		29(S-ZN)	0.3697	2.3198E+00	34
18(S-MO)		30(S-ZR)	0.0078	4.8489E-02	39
18(S-MO)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		20(S-NI)	-0.0770	-7.2884E-01	89
19(S-NB)		21(S-PB)	0.1402	1.3942E+00	97
19(S-NB)		23(S-SC)	0.5675	7.1299E+00	107
19(S-NB)		24(S-SN)	0.6237	6.4823E+00	66
19(S-NB)		25(S-SR)	0.2799	1.3036E+00	20
19(S-NB)		26(S-V)	-0.4391	-5.0797E+00	108
19(S-NB)		27(S-W)	0.6251	2.8877E+00	13
19(S-NB)		28(S-Y)	0.0720	7.5007E-01	108
19(S-NB)		29(S-ZN)	0.5688	6.1856E+00	80
19(S-NB)		30(S-ZR)	0.1964	2.0225E+00	102
19(S-NB)		31(S-TH)	-0.8660	0.0000E+00	1
20(S-NI)		21(S-PB)	-0.2165	-2.6883E+00	147
20(S-NI)		23(S-SC)	0.3538	4.7699E+00	159
20(S-NI)		24(S-SN)	-0.2562	-1.9831E+00	56
20(S-NI)		25(S-SR)	-0.0853	-5.5462E-01	42

SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE M-1 CONCENTRATES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
20(S-NI)		26(S-V)	0.0592	7.5474E-01	162
20(S-NI)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
20(S-NI)		28(S-Y)	0.1560	2.0101E+00	162
20(S-NI)		29(S-ZN)	-0.1898	-1.9041E+00	97
20(S-NI)		30(S-ZR)	0.0879	1.1157E+00	160
20(S-NI)		31(S-TH)	0.8660	0.0000E+00	1
21(S-PB)		23(S-SC)	0.1304	1.6797E+00	163
21(S-PB)		24(S-SN)	-0.1879	-1.5425E+00	65
21(S-PB)		25(S-SR)	0.3113	2.0715E+00	40
21(S-PB)		26(S-V)	-0.1628	-2.1392E+00	168
21(S-PB)		27(S-W)	-0.5692	-2.6814E+00	15
21(S-PB)		28(S-Y)	0.3175	4.3394E+00	168
21(S-PB)		29(S-ZN)	0.2972	3.2646E+00	110
21(S-PB)		30(S-ZR)	0.0472	6.0372E-01	163
21(S-PB)		31(S-TH)	-0.8660	0.0000E+00	1
23(S-SC)		24(S-SN)	0.4113	3.7750E+00	70
23(S-SC)		25(S-SR)	-0.1307	-8.6461E-01	43
23(S-SC)		26(S-V)	-0.4299	-6.3702E+00	179
23(S-SC)		27(S-W)	0.3574	1.5776E+00	17
23(S-SC)		28(S-Y)	0.5312	8.3884E+00	179
23(S-SC)		29(S-ZN)	0.3954	4.6164E+00	115
23(S-SC)		30(S-ZR)	0.3617	5.1033E+00	173
23(S-SC)		31(S-TH)	-0.5000	0.0000E+00	1
24(S-SN)		25(S-SR)	0.2280	8.1132E-01	12
24(S-SN)		26(S-V)	-0.5036	-4.8771E+00	70
24(S-SN)		27(S-W)	0.3514	1.0615E+00	8
24(S-SN)		28(S-Y)	-0.1875	-1.5967E+00	70
24(S-SN)		29(S-ZN)	0.5738	5.0523E+00	52
24(S-SN)		30(S-ZR)	0.0374	3.0860E-01	68
24(S-SN)		31(S-TH)	0.0000	0.0000E+00	1
25(S-SR)		26(S-V)	-0.1090	-7.1880E-01	43
25(S-SR)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
25(S-SR)		28(S-Y)	-0.0699	-4.5926E-01	43
25(S-SR)		29(S-ZN)	0.6489	4.3484E+00	26
25(S-SR)		30(S-ZR)	0.0002	1.3252E-03	42
25(S-SR)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
26(S-V)		27(S-W)	-0.4205	-1.9112E+00	17
26(S-V)		28(S-Y)	-0.3424	-4.9431E+00	184
26(S-V)		29(S-ZN)	-0.4503	-5.4778E+00	118
26(S-V)		30(S-ZR)	-0.3205	-4.5137E+00	178
26(S-V)		31(S-TH)	0.0000	0.0000E+00	1
27(S-W)		28(S-Y)	0.0000	0.0000E+00	17
27(S-W)		29(S-ZN)	-0.4787	-1.8086E+00	11
27(S-W)		30(S-ZR)	0.4545	1.9762E+00	15
27(S-W)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		
28(S-Y)		29(S-ZN)	0.1397	1.5327E+00	118
28(S-Y)		30(S-ZR)	0.5361	8.4727E+00	178
28(S-Y)		31(S-TH)	-1.0000	0.0000E+00	1
29(S-ZN)		30(S-ZR)	0.2642	2.8993E+00	112
29(S-ZN)		31(S-TH)	LESS THAN 3 PAIRS DETECTED.		

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SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE M-1 CONCENTRATES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
30(S-ZR)		31(S-TH)	-1.0000	0.0000E+00	1

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SPEARMAN CORRELATION COEFFICIENTS FOR TWIN PEAKS AREA M-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
1(S-FE%)		2(S-MG%)	-0.5136	-2.7427E+00	21
1(S-FE%)		3(S-CA%)	-0.6314	-3.7310E+00	21
1(S-FE%)		4(S-TI%)	0.5026	2.6639E+00	21
1(S-FE%)		5(S-MN)	-0.2752	-1.3119E+00	21
1(S-FE%)		9(S-B)	0.3535	1.7317E+00	21
1(S-FE%)		10(S-BA)	-0.1712	-7.9616E-01	21
1(S-FE%)		11(S-BE)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
1(S-FE%)		14(S-CO)	0.4551	2.3420E+00	21
1(S-FE%)		15(S-CR)	-0.0635	-2.9153E-01	21
1(S-FE%)		16(S-CU)	0.3994	1.9966E+00	21
1(S-FE%)		17(S-LA)	0.3105	1.3858E+00	18
1(S-FE%)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		19(S-NB)	0.1708	0.0000E+00	5
1(S-FE%)		20(S-NI)	0.4292	2.1253E+00	20
1(S-FE%)		21(S-PB)	-0.1636	-7.5982E-01	21
1(S-FE%)		23(S-SC)	-0.2822	-1.3482E+00	21
1(S-FE%)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		25(S-SR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
1(S-FE%)		26(S-V)	0.5668	3.1527E+00	21
1(S-FE%)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		28(S-Y)	-0.0685	-3.1464E-01	21
1(S-FE%)		29(S-ZN)	-0.0921	-3.9256E-01	18
1(S-FE%)		30(S-ZR)	0.0307	1.3731E-01	20
2(S-MG%)		3(S-CA%)	0.6452	3.8703E+00	21
2(S-MG%)		4(S-TI%)	-0.4934	-2.5993E+00	21
2(S-MG%)		5(S-MN)	0.2168	1.0178E+00	21
2(S-MG%)		9(S-B)	0.0923	4.2491E-01	21
2(S-MG%)		10(S-BA)	0.4753	2.4757E+00	21
2(S-MG%)		11(S-BE)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
2(S-MG%)		14(S-CO)	-0.2696	-1.2831E+00	21
2(S-MG%)		15(S-CR)	0.5386	2.9291E+00	21
2(S-MG%)		16(S-CU)	-0.1471	-6.8128E-01	21
2(S-MG%)		17(S-LA)	-0.0979	-4.1721E-01	18
2(S-MG%)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		19(S-NB)	-0.5688	0.0000E+00	5
2(S-MG%)		20(S-NI)	0.0472	2.1141E-01	20
2(S-MG%)		21(S-PB)	-0.1596	-7.4076E-01	21
2(S-MG%)		23(S-SC)	0.4436	2.2681E+00	21
2(S-MG%)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		25(S-SR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
2(S-MG%)		26(S-V)	-0.0390	-1.7869E-01	21
2(S-MG%)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		28(S-Y)	-0.1963	-9.1747E-01	21
2(S-MG%)		29(S-ZN)	0.0321	1.3642E-01	18
2(S-MG%)		30(S-ZR)	-0.0781	-3.5017E-01	20
3(S-CA%)		4(S-TI%)	-0.5143	-2.7483E+00	21
3(S-CA%)		5(S-MN)	0.0095	4.3605E-02	21
3(S-CA%)		9(S-B)	-0.1128	-5.2026E-01	21
3(S-CA%)		10(S-BA)	-0.0319	-1.4642E-01	21
3(S-CA%)		11(S-BE)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		

SPEARMAN CORRELATION COEFFICIENTS FOR TWIN PEAKS AREA M-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
3(S-CA%)		14(S-CO)	-0.0937	-4.3142E-01	21
3(S-CA%)		15(S-CR)	0.3553	1.7416E+00	21
3(S-CA%)		16(S-CU)	0.0058	2.6772E-02	21
3(S-CA%)		17(S-LA)	-0.2921	-1.2960E+00	18
3(S-CA%)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		19(S-NB)	-0.6382	0.0000E+00	5
3(S-CA%)		20(S-NI)	-0.0216	-9.6768E-02	20
3(S-CA%)		21(S-PB)	-0.1084	-4.9988E-01	21
3(S-CA%)		23(S-SC)	0.3169	1.5310E+00	21
3(S-CA%)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		25(S-SR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
3(S-CA%)		26(S-V)	-0.1437	-6.6524E-01	21
3(S-CA%)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		28(S-Y)	-0.2273	-1.0697E+00	21
3(S-CA%)		29(S-ZN)	-0.1804	-7.7814E-01	18
3(S-CA%)		30(S-ZR)	-0.2455	-1.1327E+00	20
4(S-TI%)		5(S-MN)	-0.0540	-2.4761E-01	21
4(S-TI%)		9(S-B)	0.1660	7.7145E-01	21
4(S-TI%)		10(S-BA)	-0.1177	-5.4328E-01	21
4(S-TI%)		11(S-BE)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
4(S-TI%)		14(S-CO)	0.3535	1.7316E+00	21
4(S-TI%)		15(S-CR)	-0.5286	-2.8537E+00	21
4(S-TI%)		16(S-CU)	0.3403	1.6586E+00	21
4(S-TI%)		17(S-LA)	0.3251	1.4588E+00	18
4(S-TI%)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		19(S-NB)	0.0000	0.0000E+00	5
4(S-TI%)		20(S-NI)	0.2266	1.0406E+00	20
4(S-TI%)		21(S-PB)	0.0035	1.5863E-02	21
4(S-TI%)		23(S-SC)	-0.0231	-1.0605E-01	21
4(S-TI%)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		25(S-SR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
4(S-TI%)		26(S-V)	-0.0487	-2.2333E-01	21
4(S-TI%)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		28(S-Y)	0.2033	9.5162E-01	21
4(S-TI%)		29(S-ZN)	-0.0315	-1.3383E-01	18
4(S-TI%)		30(S-ZR)	0.4810	2.4535E+00	20
5(S-MN)		9(S-B)	0.3214	1.5556E+00	21
5(S-MN)		10(S-BA)	0.2537	1.2019E+00	21
5(S-MN)		11(S-BE)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
5(S-MN)		14(S-CO)	-0.6996	-4.4868E+00	21
5(S-MN)		15(S-CR)	-0.2351	-1.1086E+00	21
5(S-MN)		16(S-CU)	-0.2199	-1.0330E+00	21
5(S-MN)		17(S-LA)	0.2900	1.2855E+00	18
5(S-MN)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		19(S-NB)	0.4786	0.0000E+00	5
5(S-MN)		20(S-NI)	-0.6942	-4.3136E+00	20
5(S-MN)		21(S-PB)	0.6450	3.8680E+00	21
5(S-MN)		23(S-SC)	-0.0006	-2.5870E-03	21
5(S-MN)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		25(S-SR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		

SPEARMAN CORRELATION COEFFICIENTS FOR TWIN PEAKS AREA M-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
5(S-MN)		26(S-V)	-0.4578	-2.3599E+00	21
5(S-MN)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		28(S-Y)	0.4697	2.4381E+00	21
5(S-MN)		29(S-ZN)	0.7096	4.2728E+00	18
5(S-MN)		30(S-ZR)	0.0704	3.1540E-01	20
9(S-B)		10(S-BA)	0.0780	3.5833E-01	21
9(S-B)		11(S-BE)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
9(S-B)		14(S-CO)	-0.1633	-7.5861E-01	21
9(S-B)		15(S-CR)	0.0673	3.0899E-01	21
9(S-B)		16(S-CU)	0.0623	2.8588E-01	21
9(S-B)		17(S-LA)	0.4687	2.2512E+00	18
9(S-B)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		19(S-NB)	-0.2485	0.0000E+00	5
9(S-B)		20(S-NI)	0.0826	3.7064E-01	20
9(S-B)		21(S-PB)	0.2257	1.0615E+00	21
9(S-B)		23(S-SC)	-0.0502	-2.3035E-01	21
9(S-B)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		25(S-SR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
9(S-B)		26(S-V)	0.1684	7.8292E-01	21
9(S-B)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		28(S-Y)	0.1078	4.9712E-01	21
9(S-B)		29(S-ZN)	0.4521	2.1504E+00	18
9(S-B)		30(S-ZR)	-0.0859	-3.8566E-01	20
10(S-BA)		11(S-BE)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
10(S-BA)		14(S-CO)	-0.2755	-1.3132E+00	21
10(S-BA)		15(S-CR)	0.1647	7.6519E-01	21
10(S-BA)		16(S-CU)	-0.3465	-1.6927E+00	21
10(S-BA)		17(S-LA)	0.2512	1.1009E+00	18
10(S-BA)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		19(S-NB)	-0.3528	0.0000E+00	5
10(S-BA)		20(S-NI)	0.1608	7.2860E-01	20
10(S-BA)		21(S-PB)	-0.0283	-1.2976E-01	21
10(S-BA)		23(S-SC)	0.0850	3.9116E-01	21
10(S-BA)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		25(S-SR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
10(S-BA)		26(S-V)	0.0006	2.6382E-03	21
10(S-BA)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		28(S-Y)	-0.1848	-8.6166E-01	21
10(S-BA)		29(S-ZN)	-0.0036	-1.5447E-02	18
10(S-BA)		30(S-ZR)	-0.2048	-9.3559E-01	20
11(S-BE)		14(S-CO)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
11(S-BE)		15(S-CR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
11(S-BE)		16(S-CU)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
11(S-BE)		17(S-LA)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
11(S-BE)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		19(S-NB)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
11(S-BE)		20(S-NI)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
11(S-BE)		21(S-PB)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
11(S-BE)		23(S-SC)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
11(S-BE)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		

SPEARMAN CORRELATION COEFFICIENTS FOR TWIN PEAKS AREA M-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
11(S-BE)		25(S-SR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
11(S-BE)		26(S-V)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
11(S-BE)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		28(S-Y)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
11(S-BE)		29(S-ZN)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
11(S-BE)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
14(S-CO)		15(S-CR)	0.0252	1.1549E-01	21
14(S-CO)		16(S-CU)	0.5575	3.0774E+00	21
14(S-CO)		17(S-LA)	0.1001	4.2698E-01	18
14(S-CO)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		19(S-NB)	-0.6693	0.0000E+00	5
14(S-CO)		20(S-NI)	0.6058	3.4048E+00	20
14(S-CO)		21(S-PB)	-0.6332	-3.7485E+00	21
14(S-CO)		23(S-SC)	-0.0435	-1.9943E-01	21
14(S-CO)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		25(S-SR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
14(S-CO)		26(S-V)	0.5340	2.3947E+00	21
14(S-CO)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		28(S-Y)	-0.1422	-6.5828E-01	21
14(S-CO)		29(S-ZN)	-0.5749	-2.9809E+00	18
14(S-CO)		30(S-ZR)	0.2525	1.1671E+00	20
15(S-CR)		16(S-CU)	-0.0013	-5.9059E-03	21
15(S-CR)		17(S-LA)	-0.1163	-4.9667E-01	18
15(S-CR)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		19(S-NB)	-0.1610	0.0000E+00	5
15(S-CR)		20(S-NI)	0.3258	1.5413E+00	20
15(S-CR)		21(S-PB)	-0.2271	-1.0687E+00	21
15(S-CR)		23(S-SC)	0.0672	3.0887E-01	21
15(S-CR)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		25(S-SR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
15(S-CR)		26(S-V)	0.3898	1.9397E+00	21
15(S-CR)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		28(S-Y)	-0.4030	-2.0180E+00	21
15(S-CR)		29(S-ZN)	-0.1451	-6.2202E-01	18
15(S-CR)		30(S-ZR)	-0.4043	-1.9768E+00	20
16(S-CU)		17(S-LA)	0.0792	3.3705E-01	18
16(S-CU)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		19(S-NB)	-0.4025	0.0000E+00	5
16(S-CU)		20(S-NI)	0.2530	1.1695E+00	20
16(S-CU)		21(S-PB)	-0.0901	-4.1456E-01	21
16(S-CU)		23(S-SC)	0.1199	5.5336E-01	21
16(S-CU)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		25(S-SR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
16(S-CU)		26(S-V)	0.1357	6.2787E-01	21
16(S-CU)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		28(S-Y)	0.3327	1.6165E+00	21
16(S-CU)		29(S-ZN)	-0.4033	-1.8701E+00	18
16(S-CU)		30(S-ZR)	0.4682	2.3697E+00	20
17(S-LA)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		19(S-NB)	0.0882	0.0000E+00	5

SPEARMAN CORRELATION COEFFICIENTS FOR TWIN PEAKS AREA M-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
17(S-LA)		20(S-NI)	-0.0901	-3.7320E-01	17
17(S-LA)		21(S-PB)	0.2297	1.0014E+00	18
17(S-LA)		23(S-SC)	-0.0762	-3.2416E-01	18
17(S-LA)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		25(S-SR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
17(S-LA)		26(S-V)	-0.0050	-2.1160E-02	18
17(S-LA)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		28(S-Y)	0.3783	1.7336E+00	18
17(S-LA)		29(S-ZN)	0.2526	1.0764E+00	17
17(S-LA)		30(S-ZR)	0.2601	1.1106E+00	17
18(S-MO)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		20(S-NI)	-0.8402	0.0000E+00	4
19(S-NB)		21(S-PB)	0.6627	0.0000E+00	5
19(S-NB)		23(S-SC)	0.2582	0.0000E+00	5
19(S-NB)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		25(S-SR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
19(S-NB)		26(S-V)	-0.5292	0.0000E+00	5
19(S-NB)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		28(S-Y)	0.7977	0.0000E+00	5
19(S-NB)		29(S-ZN)	0.7937	0.0000E+00	5
19(S-NB)		30(S-ZR)	0.2000	0.0000E+00	4
20(S-NI)		21(S-PB)	-0.6765	-4.1086E+00	20
20(S-NI)		23(S-SC)	0.2697	1.2525E+00	20
20(S-NI)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		25(S-SR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
20(S-NI)		26(S-V)	0.6041	3.3900E+00	20
20(S-NI)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		28(S-Y)	-0.6196	-3.5303E+00	20
20(S-NI)		29(S-ZN)	-0.7050	-4.0989E+00	17
20(S-NI)		30(S-ZR)	-0.2102	-9.3704E-01	19
21(S-PB)		23(S-SC)	-0.2448	-1.1570E+00	21
21(S-PB)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
21(S-PB)		25(S-SR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
21(S-PB)		26(S-V)	-0.4369	-2.2261E+00	21
21(S-PB)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
21(S-PB)		28(S-Y)	0.5561	3.0665E+00	21
21(S-PB)		29(S-ZN)	0.5197	2.5809E+00	18
21(S-PB)		30(S-ZR)	0.0879	3.9452E-01	20
23(S-SC)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		25(S-SR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		

D0136 SPEARMAN-KENDALL RANK CORRELATION (10/25/77) DATE 3/15/81

SPEARMAN CORRELATION COEFFICIENTS FOR TWIN PEAKS AREA M-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
23(S-SC)		26(S-V)	-0.2498	-1.1824E+00	21
23(S-SC)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		28(S-Y)	-0.0389	-1.7822E-01	21
23(S-SC)		29(S-ZN)	-0.1757	-7.5732E-01	18
23(S-SC)		30(S-ZR)	0.2354	1.0830E+00	20
24(S-SN)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
25(S-SR)		26(S-V)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
25(S-SR)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
25(S-SR)		28(S-Y)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
25(S-SR)		29(S-ZN)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
25(S-SR)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
26(S-V)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
26(S-V)		28(S-Y)	-0.4469	-2.2891E+00	21
26(S-V)		29(S-ZN)	-0.2736	-1.2067E+00	18
26(S-V)		30(S-ZR)	-0.3069	-1.4419E+00	20
27(S-W)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
27(S-W)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
27(S-W)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
29(S-Y)		29(S-ZN)	0.5191	2.5768E+00	18
28(S-Y)		30(S-ZR)	0.7121	4.5356E+00	20
29(S-ZN)		30(S-ZR)	0.0000	0.0000E+00	17

SPEARMAN CORRELATION COEFFICIENTS FOR SAWMILL CREEK AREA M-1 FRACT.

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
1(S-FE%)		2(S-MG%)	-0.4461	-2.1725E+00	19
1(S-FE%)		3(S-CA%)	-0.0921	-4.0318E-01	19
1(S-FE%)		4(S-TI%)	0.0119	5.1925E-02	19
1(S-FE%)		5(S-MN)	-0.5448	-2.8319E+00	19
1(S-FE%)		9(S-B)	-0.7454	0.0000E+00	6
1(S-FE%)		10(S-BA)	-0.5817	-3.1172E+00	19
1(S-FE%)		11(S-BE)	-0.5716	-2.9557E+00	18
1(S-FE%)		14(S-CO)	-0.0604	-2.6389E-01	19
1(S-FE%)		15(S-CR)	0.1801	7.9800E-01	19
1(S-FE%)		16(S-CU)	0.1856	8.2348E-01	19
1(S-FE%)		17(S-LA)	-0.6066	-3.3256E+00	19
1(S-FE%)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		19(S-NB)	-0.1513	-5.0772E-01	11
1(S-FE%)		20(S-NI)	-0.0767	-3.2622E-01	18
1(S-FE%)		21(S-PB)	-0.6771	-4.0106E+00	19
1(S-FE%)		23(S-SC)	-0.1960	-8.7119E-01	19
1(S-FE%)		24(S-SN)	0.1178	3.5599E-01	9
1(S-FE%)		25(S-SR)	-0.1054	0.0000E+00	4
1(S-FE%)		26(S-V)	0.5418	2.8097E+00	19
1(S-FE%)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
1(S-FE%)		28(S-Y)	-0.5673	-3.0025E+00	19
1(S-FE%)		29(S-ZN)	-0.5195	0.0000E+00	6
1(S-FE%)		30(S-ZR)	-0.4351	-2.0500E+00	18
2(S-MG%)		3(S-CA%)	0.7151	4.4591E+00	19
2(S-MG%)		4(S-TI%)	-0.2126	-9.4833E-01	19
2(S-MG%)		5(S-MN)	0.3321	1.5345E+00	19
2(S-MG%)		9(S-B)	0.4547	0.0000E+00	6
2(S-MG%)		10(S-BA)	0.1337	5.8792E-01	19
2(S-MG%)		11(S-BE)	0.5832	3.0460E+00	18
2(S-MG%)		14(S-CO)	0.2872	1.3070E+00	19
2(S-MG%)		15(S-CR)	0.3577	1.6697E+00	19
2(S-MG%)		16(S-CU)	-0.0906	-3.9634E-01	19
2(S-MG%)		17(S-LA)	0.6293	3.5294E+00	19
2(S-MG%)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		19(S-NB)	0.6254	2.6579E+00	11
2(S-MG%)		20(S-NI)	0.6110	3.2743E+00	18
2(S-MG%)		21(S-PB)	0.1310	5.7601E-01	19
2(S-MG%)		23(S-SC)	0.8025	5.8625E+00	19
2(S-MG%)		24(S-SN)	-0.4785	-1.6348E+00	9
2(S-MG%)		25(S-SR)	-0.8924	0.0000E+00	4
2(S-MG%)		26(S-V)	-0.2585	-1.1662E+00	19
2(S-MG%)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
2(S-MG%)		28(S-Y)	0.7991	5.7928E+00	19
2(S-MG%)		29(S-ZN)	0.0520	0.0000E+00	6
2(S-MG%)		30(S-ZR)	0.2557	1.1219E+00	18
3(S-CA%)		4(S-TI%)	-0.3003	-1.3723E+00	19
3(S-CA%)		5(S-MN)	-0.1303	-5.7290E-01	19
3(S-CA%)		9(S-B)	0.0676	0.0000E+00	6
3(S-CA%)		10(S-BA)	-0.2107	-9.3936E-01	19
3(S-CA%)		11(S-BE)	0.2182	9.4878E-01	18

SPEARMAN CORRELATION COEFFICIENTS FOR SAWMILL CREEK AREA M-1 FRACT.

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
3(S-CA%)		14(S-CO)	0.4301	2.0768E+00	19
3(S-CA%)		15(S-CR)	0.5775	3.0833E+00	19
3(S-CA%)		16(S-CU)	0.2530	1.1399E+00	19
3(S-CA%)		17(S-LA)	0.3967	1.8838E+00	19
3(S-CA%)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		19(S-NB)	0.6818	3.0909E+00	11
3(S-CA%)		20(S-NI)	0.7542	4.8728E+00	18
3(S-CA%)		21(S-PB)	-0.2314	-1.0370E+00	19
3(S-CA%)		23(S-SC)	0.6003	3.2715E+00	19
3(S-CA%)		24(S-SN)	-0.5244	-1.8475E+00	9
3(S-CA%)		25(S-SR)	-0.7984	0.0000E+00	4
3(S-CA%)		26(S-V)	-0.1366	-6.0119E-01	19
3(S-CA%)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
3(S-CA%)		28(S-Y)	0.5791	3.0960E+00	19
3(S-CA%)		29(S-ZN)	-0.1013	0.0000E+00	6
3(S-CA%)		30(S-ZR)	0.0754	3.2087E-01	18
4(S-TI%)		5(S-MN)	-0.0396	-1.7264E-01	19
4(S-TI%)		9(S-B)	-0.1961	0.0000E+00	6
4(S-TI%)		10(S-BA)	-0.1908	-8.4728E-01	19
4(S-TI%)		11(S-BE)	-0.0765	-3.2566E-01	18
4(S-TI%)		14(S-CO)	0.0870	3.8068E-01	19
4(S-TI%)		15(S-CR)	-0.1828	-8.1033E-01	19
4(S-TI%)		16(S-CU)	0.0011	4.7471E-03	19
4(S-TI%)		17(S-LA)	-0.1020	-4.4675E-01	19
4(S-TI%)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		19(S-NB)	-0.1524	-5.1133E-01	11
4(S-TI%)		20(S-NI)	-0.3072	-1.3697E+00	18
4(S-TI%)		21(S-PB)	0.0395	1.7238E-01	19
4(S-TI%)		23(S-SC)	-0.0176	-7.6777E-02	19
4(S-TI%)		24(S-SN)	0.5483	1.9668E+00	9
4(S-TI%)		25(S-SR)	0.5880	0.0000E+00	4
4(S-TI%)		26(S-V)	-0.3857	-1.8222E+00	19
4(S-TI%)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
4(S-TI%)		28(S-Y)	-0.0942	-4.1244E-01	19
4(S-TI%)		29(S-ZN)	0.1307	0.0000E+00	6
4(S-TI%)		30(S-ZR)	0.0505	2.1437E-01	18
5(S-MN)		9(S-B)	0.4330	0.0000E+00	6
5(S-MN)		10(S-BA)	0.7035	4.3151E+00	19
5(S-MN)		11(S-BE)	0.5464	2.7677E+00	18
5(S-MN)		14(S-CO)	-0.1169	-5.1304E-01	19
5(S-MN)		15(S-CR)	-0.3776	-1.7775E+00	19
5(S-MN)		16(S-CU)	-0.6576	-3.8046E+00	19
5(S-MN)		17(S-LA)	0.5312	2.7326E+00	19
5(S-MN)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		19(S-NB)	0.1249	4.1739E-01	11
5(S-MN)		20(S-NI)	-0.1143	-4.8801E-01	18
5(S-MN)		21(S-PB)	0.7098	4.3918E+00	19
5(S-MN)		23(S-SC)	0.1277	5.6116E-01	19
5(S-MN)		24(S-SN)	0.3623	1.1661E+00	9
5(S-MN)		25(S-SR)	0.4243	0.0000E+00	4

SPEARMAN CORRELATION COEFFICIENTS FOR SAWMILL CREEK AREA M-1 FRACT.

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
5(S-MN)		26(S-V)	-0.1428	-6.2874E-01	19
5(S-MN)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
5(S-MN)		28(S-Y)	0.3476	1.6160E+00	19
5(S-MN)		29(S-ZN)	0.3424	0.0000E+00	6
5(S-MN)		30(S-ZR)	0.4843	2.3482E+00	18
9(S-B)		10(S-BA)	0.5704	0.0000E+00	6
9(S-B)		11(S-BE)	0.7795	0.0000E+00	6
9(S-B)		14(S-CO)	-0.1325	0.0000E+00	6
9(S-B)		15(S-CR)	0.0650	0.0000E+00	6
9(S-B)		16(S-CU)	-0.4330	0.0000E+00	6
9(S-B)		17(S-LA)	0.1361	0.0000E+00	6
9(S-B)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		19(S-NB)	0.8165	0.0000E+00	2
9(S-B)		20(S-NI)	0.2667	0.0000E+00	6
9(S-B)		21(S-PB)	0.6496	0.0000E+00	6
9(S-B)		23(S-SC)	0.1307	0.0000E+00	6
9(S-B)		24(S-SN)	0.0000	0.0000E+00	1
9(S-B)		25(S-SR)	0.2722	0.0000E+00	2
9(S-B)		26(S-V)	-0.2649	0.0000E+00	6
9(S-B)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
9(S-B)		28(S-Y)	0.2013	0.0000E+00	6
9(S-B)		29(S-ZN)	0.7746	0.0000E+00	2
9(S-B)		30(S-ZR)	0.3208	0.0000E+00	6
10(S-BA)		11(S-BE)	0.3771	1.7274E+00	18
10(S-BA)		14(S-CO)	-0.0183	-7.9763E-02	19
10(S-BA)		15(S-CR)	-0.5230	-2.6747E+00	19
10(S-BA)		16(S-CU)	-0.2811	-1.2769E+00	19
10(S-BA)		17(S-LA)	0.3730	1.7526E+00	19
10(S-BA)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		19(S-NB)	-0.3677	-1.3113E+00	11
10(S-BA)		20(S-NI)	-0.1060	-4.5218E-01	18
10(S-BA)		21(S-PB)	0.7268	4.6125E+00	19
10(S-BA)		23(S-SC)	-0.0924	-4.0437E-01	19
10(S-BA)		24(S-SN)	-0.0965	-2.9078E-01	9
10(S-BA)		25(S-SR)	-0.0636	0.0000E+00	4
10(S-BA)		26(S-V)	-0.1511	-6.6639E-01	19
10(S-BA)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
10(S-BA)		28(S-Y)	0.2395	1.0751E+00	19
10(S-BA)		29(S-ZN)	0.0191	0.0000E+00	6
10(S-BA)		30(S-ZR)	0.5737	2.9715E+00	18
11(S-BE)		14(S-CO)	-0.2170	-9.4322E-01	18
11(S-BE)		15(S-CR)	-0.0117	-4.9606E-02	18
11(S-BE)		16(S-CU)	-0.3476	-1.5726E+00	18
11(S-BE)		17(S-LA)	0.6452	3.5828E+00	18
11(S-BE)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		19(S-NB)	0.5564	2.1174E+00	10
11(S-BE)		20(S-NI)	0.2591	1.1381E+00	18
11(S-BE)		21(S-PB)	0.4370	2.0615E+00	18
11(S-BE)		23(S-SC)	0.6447	3.5781E+00	18
11(S-BE)		24(S-SN)	0.1878	5.7359E-01	9

SPEARMAN CORRELATION COEFFICIENTS FOR SAWMILL CREEK AREA M-1 FRACT.

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
11(S-BE)		25(S-SR)	-0.2295	0.0000E+00	4
11(S-BE)		26(S-V)	-0.2098	-9.1028E-01	18
11(S-BE)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
11(S-BE)		28(S-Y)	0.4992	2.4445E+00	18
11(S-BE)		29(S-ZN)	0.3627	0.0000E+00	5
11(S-BE)		30(S-ZR)	0.6321	3.4612E+00	18
14(S-CO)		15(S-CR)	0.4410	2.1418E+00	19
14(S-CO)		16(S-CU)	0.3555	1.6580E+00	19
14(S-CO)		17(S-LA)	0.1634	7.2202E-01	19
14(S-CO)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		19(S-NB)	-0.1233	-4.1192E-01	11
14(S-CO)		20(S-NI)	0.5563	2.8404E+00	18
14(S-CO)		21(S-PB)	-0.0778	-3.4036E-01	19
14(S-CO)		23(S-SC)	0.0392	1.7099E-01	19
14(S-CO)		24(S-SN)	-0.0692	-2.0818E-01	9
14(S-CO)		25(S-SR)	-0.3178	0.0000E+00	4
14(S-CO)		26(S-V)	-0.2046	-9.1127E-01	19
14(S-CO)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
14(S-CO)		28(S-Y)	0.2573	1.1607E+00	19
14(S-CO)		29(S-ZN)	0.1284	0.0000E+00	6
14(S-CO)		30(S-ZR)	-0.3073	-1.3699E+00	18
15(S-CR)		16(S-CU)	0.1030	4.5135E-01	19
15(S-CR)		17(S-LA)	-0.0543	-2.3689E-01	19
15(S-CR)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		19(S-NB)	0.3057	1.0647E+00	11
15(S-CR)		20(S-NI)	0.7300	4.5321E+00	18
15(S-CR)		21(S-PB)	-0.4837	-2.4091E+00	19
15(S-CR)		23(S-SC)	0.4497	2.1946E+00	19
15(S-CR)		24(S-SN)	-0.3783	-1.7259E+00	9
15(S-CR)		25(S-SR)	-0.7045	0.0000E+00	4
15(S-CR)		26(S-V)	0.1346	5.9193E-01	19
15(S-CR)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
15(S-CR)		28(S-Y)	0.2592	1.1700E+00	19
15(S-CR)		29(S-ZN)	0.2025	0.0000E+00	6
15(S-CR)		30(S-ZR)	-0.3629	-1.6521E+00	18
16(S-CU)		17(S-LA)	-0.1608	-7.1011E-01	19
16(S-CU)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		19(S-NB)	0.1601	5.3781E-01	11
16(S-CU)		20(S-NI)	0.2957	1.3130E+00	18
16(S-CU)		21(S-PB)	-0.2774	-1.2585E+00	19
16(S-CU)		23(S-SC)	-0.1676	-7.4108E-01	19
16(S-CU)		24(S-SN)	-0.2056	-6.3027E-01	9
16(S-CU)		25(S-SR)	-0.6708	0.0000E+00	4
16(S-CU)		26(S-V)	-0.1841	-8.1651E-01	19
16(S-CU)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
16(S-CU)		28(S-Y)	-0.1285	-5.6493E-01	19
16(S-CU)		29(S-ZN)	-0.2615	0.0000E+00	6
16(S-CU)		30(S-ZR)	-0.1685	-7.2517E-01	18
17(S-LA)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		19(S-NB)	0.4914	1.8713E+00	11

SPEARMAN CORRELATION COEFFICIENTS FOR SAWMILL CREEK AREA M-1 FRACT.

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
17(S-LA)		20(S-NI)	0.2918	1.2945E+00	18
17(S-LA)		21(S-PB)	0.3427	1.5902E+00	19
17(S-LA)		23(S-SC)	0.4592	2.2534E+00	19
17(S-LA)		24(S-SN)	-0.5963	-2.2283E+00	9
17(S-LA)		25(S-SR)	-0.0636	0.0000E+00	4
17(S-LA)		26(S-V)	-0.3324	-1.5361E+00	19
17(S-LA)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
17(S-LA)		28(S-Y)	0.6790	4.0312E+00	19
17(S-LA)		29(S-ZN)	-0.1429	0.0000E+00	6
17(S-LA)		30(S-ZR)	0.5203	2.5850E+00	18
18(S-MO)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		20(S-NI)	0.4818	1.7388E+00	10
19(S-NB)		21(S-PB)	-0.1119	-3.7351E-01	11
19(S-NB)		23(S-SC)	0.7560	3.8310E+00	11
19(S-NB)		24(S-SN)	0.1305	0.0000E+00	6
19(S-NB)		25(S-SR)	-0.8660	0.0000E+00	1
19(S-NB)		26(S-V)	-0.2773	-9.5709E-01	11
19(S-NB)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
19(S-NB)		28(S-Y)	0.5220	2.0297E+00	11
19(S-NB)		29(S-ZN)	0.2994	0.0000E+00	6
19(S-NB)		30(S-ZR)	0.4271	1.4936E+00	10
20(S-NI)		21(S-PB)	-0.2980	-1.3247E+00	18
20(S-NI)		23(S-SC)	0.5173	2.5648E+00	18
20(S-NI)		24(S-SN)	-0.3106	-9.8027E-01	9
20(S-NI)		25(S-SR)	-0.7671	0.0000E+00	4
20(S-NI)		26(S-V)	-0.0032	-1.3687E-02	18
20(S-NI)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
20(S-NI)		28(S-Y)	0.4489	2.1311E+00	18
20(S-NI)		29(S-ZN)	-0.1863	0.0000E+00	5
20(S-NI)		30(S-ZR)	-0.0261	-1.1090E-01	18
21(S-PB)		23(S-SC)	-0.1093	-4.7919E-01	19
21(S-PB)		24(S-SN)	0.1138	3.4350E-01	9
21(S-PB)		25(S-SR)	0.0636	0.0000E+00	4
21(S-PB)		26(S-V)	-0.4489	-2.1899E+00	19
21(S-PB)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
21(S-PB)		28(S-Y)	0.2825	1.2837E+00	19
21(S-PB)		29(S-ZN)	0.5159	0.0000E+00	6
21(S-PB)		30(S-ZR)	0.4933	2.4058E+00	18
23(S-SC)		24(S-SN)	-0.2264	-6.9739E-01	9
23(S-SC)		25(S-SR)	-0.6573	0.0000E+00	4

D0136 SPEARMAN-KENDALL RANK CORRELATION (10/25/77) DATE 3/15/31

SPEARMAN CORRELATION COEFFICIENTS FOR SAWMILL CREEK AREA M-1 FRACT.

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
23(S-SC)		26(S-V)	-0.2540	-1.1446E+00	19
23(S-SC)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
23(S-SC)		28(S-Y)	0.7224	4.5541E+00	19
23(S-SC)		29(S-ZN)	0.1975	0.0000E+00	6
23(S-SC)		30(S-ZR)	0.3671	1.6743E+00	18
24(S-SN)		25(S-SR)	0.8660	0.0000E+00	1
24(S-SN)		26(S-V)	0.0238	7.1462E-02	9
24(S-SN)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
24(S-SN)		28(S-Y)	-0.5410	-1.9297E+00	9
24(S-SN)		29(S-ZN)	0.2236	0.0000E+00	3
24(S-SN)		30(S-ZR)	-0.2332	-7.1939E-01	9
25(S-SR)		26(S-V)	-0.3337	0.0000E+00	4
25(S-SR)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
25(S-SR)		28(S-Y)	-0.8263	0.0000E+00	4
25(S-SR)		29(S-ZN)	0.5000	0.0000E+00	1
25(S-SR)		30(S-ZR)	-0.2951	0.0000E+00	4
26(S-V)		27(S-W)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
26(S-V)		28(S-Y)	-0.5318	-2.7372E+00	19
26(S-V)		29(S-ZN)	-0.5096	0.0000E+00	6
26(S-V)		30(S-ZR)	-0.3466	-1.5677E+00	18
27(S-W)		28(S-Y)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
27(S-W)		29(S-ZN)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
27(S-W)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
28(S-Y)		29(S-ZN)	-0.0064	0.0000E+00	6
28(S-Y)		30(S-ZR)	0.4341	2.0445E+00	18
29(S-ZN)		30(S-ZR)	0.3235	0.0000E+00	5

D0136 SPEARMAN-KENDALL RANK CORRELATION (10/25/77) DATE 3/15/81

SPEARMAN CORRELATION COEFFICIENTS FOR COAL CREEK AREA M-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
1(S-FE%)		2(S-MG%)	0.0960	4.2050E-01	19
1(S-FE%)		3(S-CA%)	0.2789	1.2659E+00	19
1(S-FE%)		4(S-TI%)	0.3437	1.5953E+00	19
1(S-FE%)		5(S-MN)	0.1290	5.6724E-01	19
1(S-FE%)		9(S-B)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
1(S-FE%)		10(S-BA)	0.0672	2.9352E-01	19
1(S-FE%)		11(S-BE)	-0.0610	-2.5937E-01	18
1(S-FE%)		14(S-CO)	0.4359	2.0550E+00	18
1(S-FE%)		15(S-CR)	0.3739	1.7572E+00	19
1(S-FE%)		16(S-CU)	-0.0657	-2.8702E-01	19
1(S-FE%)		17(S-LA)	-0.0476	-2.0219E-01	18
1(S-FE%)		18(S-MO)	0.0927	3.8388E-01	17
1(S-FE%)		19(S-NB)	-0.1474	-6.4945E-01	19
1(S-FE%)		20(S-NI)	-0.1742	-5.0046E-01	8
1(S-FE%)		21(S-PB)	0.1682	7.2383E-01	18
1(S-FE%)		23(S-SC)	0.4593	2.2540E+00	19
1(S-FE%)		24(S-SN)	0.5384	2.7850E+00	19
1(S-FE%)		26(S-V)	-0.1230	-5.4039E-01	19
1(S-FE%)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		28(S-Y)	-0.1352	-5.9488E-01	19
1(S-FE%)		29(S-ZN)	0.7197	4.5181E+00	19
1(S-FE%)		30(S-ZR)	-0.2488	-1.0590E+00	17
2(S-MG%)		3(S-CA%)	0.4121	1.9715E+00	19
2(S-MG%)		4(S-TI%)	0.0103	4.4757E-02	19
2(S-MG%)		5(S-MN)	-0.0154	-6.7225E-02	19
2(S-MG%)		9(S-B)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
2(S-MG%)		10(S-BA)	-0.2879	-1.3103E+00	19
2(S-MG%)		11(S-BE)	-0.1909	-8.2515E-01	18
2(S-MG%)		14(S-CO)	0.4840	2.3465E+00	18
2(S-MG%)		15(S-CR)	0.2891	1.3165E+00	19
2(S-MG%)		16(S-CU)	-0.1496	-6.5939E-01	19
2(S-MG%)		17(S-LA)	0.0974	4.1533E-01	18
2(S-MG%)		18(S-MO)	-0.0814	-3.3681E-01	17
2(S-MG%)		19(S-NB)	-0.4017	-1.9121E+00	19
2(S-MG%)		20(S-NI)	0.2776	8.1730E-01	8
2(S-MG%)		21(S-PB)	0.0236	1.0024E-01	18
2(S-MG%)		23(S-SC)	-0.1762	-7.8010E-01	19
2(S-MG%)		24(S-SN)	-0.3443	-1.5983E+00	19
2(S-MG%)		26(S-V)	0.6259	3.4978E+00	19
2(S-MG%)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		28(S-Y)	0.3972	1.8868E+00	19
2(S-MG%)		29(S-ZN)	-0.1060	-4.6458E-01	19
2(S-MG%)		30(S-ZR)	0.3792	1.6895E+00	17
3(S-CA%)		4(S-TI%)	0.3451	1.6027E+00	19
3(S-CA%)		5(S-MN)	0.0135	5.8795E-02	19
3(S-CA%)		9(S-B)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
3(S-CA%)		10(S-BA)	0.2675	1.2101E+00	19
3(S-CA%)		11(S-BE)	0.0969	4.1290E-01	18
3(S-CA%)		14(S-CO)	0.6722	3.8515E+00	18
3(S-CA%)		15(S-CR)	0.7514	4.9640E+00	19

D0136 SPEARMAN-KENDALL RANK CORRELATION (10/25/77) DATE 3/15/81

SPEARMAN CORRELATION COEFFICIENTS FOR COAL CREEK AREA M-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
3(S-CA%)		16(S-CU)	0.1535	6.7703E-01	19
3(S-CA%)		17(S-LA)	0.3431	1.5499E+00	18
3(S-CA%)		18(S-MO)	0.1901	7.9844E-01	17
3(S-CA%)		19(S-NB)	-0.3417	-1.5850E+00	19
3(S-CA%)		20(S-NI)	0.2597	7.6053E-01	8
3(S-CA%)		21(S-PB)	0.3925	1.8106E+00	18
3(S-CA%)		23(S-SC)	0.0541	2.3595E-01	19
3(S-CA%)		24(S-SN)	0.0521	2.2740E-01	19
3(S-CA%)		26(S-V)	0.5999	3.2686E+00	19
3(S-CA%)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		28(S-Y)	0.4720	2.3334E+00	19
3(S-CA%)		29(S-ZN)	0.1524	6.7208E-01	19
3(S-CA%)		30(S-ZR)	-0.2105	-8.8769E-01	17
4(S-TI%)		5(S-MN)	0.4731	2.3407E+00	19
4(S-TI%)		9(S-B)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
4(S-TI%)		10(S-BA)	0.0977	4.2809E-01	19
4(S-TI%)		11(S-BE)	-0.3692	-1.6855E+00	18
4(S-TI%)		14(S-CO)	-0.2995	-1.3318E+00	18
4(S-TI%)		15(S-CR)	0.3062	1.4022E+00	19
4(S-TI%)		16(S-CU)	0.5085	2.5743E+00	19
4(S-TI%)		17(S-LA)	0.0315	1.3384E-01	18
4(S-TI%)		18(S-MO)	-0.3774	-1.6802E+00	17
4(S-TI%)		19(S-NB)	0.4146	1.9856E+00	19
4(S-TI%)		20(S-NI)	-0.3616	-1.0968E+00	8
4(S-TI%)		21(S-PB)	-0.0060	-2.5551E-02	18
4(S-TI%)		23(S-SC)	0.4514	2.2052E+00	19
4(S-TI%)		24(S-SN)	0.2637	1.1917E+00	19
4(S-TI%)		26(S-V)	0.0277	1.2066E-01	19
4(S-TI%)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		28(S-Y)	0.0261	1.1377E-01	19
4(S-TI%)		29(S-ZN)	0.4324	2.0905E+00	19
4(S-TI%)		30(S-ZR)	0.0456	1.8806E-01	17
5(S-MN)		9(S-B)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
5(S-MN)		10(S-BA)	0.4110	1.9653E+00	19
5(S-MN)		11(S-BE)	0.2256	9.8258E-01	18
5(S-MN)		14(S-CO)	-0.2995	-1.3318E+00	18
5(S-MN)		15(S-CR)	0.2952	1.3469E+00	19
5(S-MN)		16(S-CU)	0.1407	6.1941E-01	19
5(S-MN)		17(S-LA)	0.3388	1.5280E+00	18
5(S-MN)		18(S-MO)	0.1776	7.4405E-01	17
5(S-MN)		19(S-NB)	0.3796	1.7884E+00	19
5(S-MN)		20(S-NI)	-0.3616	-1.0968E+00	8
5(S-MN)		21(S-PB)	0.3015	1.3418E+00	18
5(S-MN)		23(S-SC)	0.4458	2.1710E+00	19
5(S-MN)		24(S-SN)	0.0000	0.0000E+00	19
5(S-MN)		26(S-V)	0.0291	1.2686E-01	19
5(S-MN)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		28(S-Y)	0.4663	2.2977E+00	19
5(S-MN)		29(S-ZN)	0.3021	1.3815E+00	19
5(S-MN)		30(S-ZR)	0.2501	1.0651E+00	17

SPEARMAN CORRELATION COEFFICIENTS FOR COAL CREEK AREA M-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
9(S-B)		10(S-BA)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
9(S-B)		11(S-BE)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		15(S-CR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
9(S-B)		16(S-CU)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
9(S-B)		17(S-LA)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
9(S-B)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		19(S-NB)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
9(S-B)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		21(S-PB)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
9(S-B)		23(S-SC)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
9(S-B)		24(S-SN)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
9(S-B)		26(S-V)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
9(S-B)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		28(S-Y)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
9(S-B)		29(S-ZN)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
9(S-B)		30(S-ZR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
10(S-BA)		11(S-BE)	0.6235	3.3830E+00	18
10(S-BA)		14(S-CO)	0.0895	3.8139E-01	18
10(S-BA)		15(S-CR)	0.3447	1.6007E+00	19
10(S-BA)		16(S-CU)	0.1779	7.8796E-01	19
10(S-BA)		17(S-LA)	0.2584	1.1349E+00	18
10(S-BA)		18(S-MO)	0.4933	2.3382E+00	17
10(S-BA)		19(S-NB)	0.0690	3.0154E-01	19
10(S-BA)		20(S-NI)	0.2500	7.3044E-01	8
10(S-BA)		21(S-PB)	0.4560	2.1738E+00	18
10(S-BA)		23(S-SC)	0.5377	2.7796E+00	19
10(S-BA)		24(S-SN)	0.3444	1.5988E+00	19
10(S-BA)		26(S-V)	0.0700	3.0570E-01	19
10(S-BA)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		28(S-Y)	0.2856	1.2991E+00	19
10(S-BA)		29(S-ZN)	0.4102	1.9604E+00	19
10(S-BA)		30(S-ZR)	-0.2477	-1.0541E+00	17
11(S-BE)		14(S-CO)	0.3752	1.7172E+00	18
11(S-BE)		15(S-CR)	-0.0713	-3.0342E-01	18
11(S-BE)		16(S-CU)	-0.0041	-1.7416E-02	18
11(S-BE)		17(S-LA)	0.6003	3.0951E+00	17
11(S-BE)		18(S-MO)	0.7269	4.3647E+00	17
11(S-BE)		19(S-NB)	-0.3374	-1.5204E+00	18
11(S-BE)		20(S-NI)	0.6471	2.4004E+00	8
11(S-BE)		21(S-PB)	0.8257	6.0353E+00	17
11(S-BE)		23(S-SC)	0.0788	3.3528E-01	18
11(S-BE)		24(S-SN)	0.0564	2.3967E-01	18
11(S-BE)		26(S-V)	0.4082	1.8972E+00	18
11(S-BE)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		28(S-Y)	0.5271	2.6315E+00	18
11(S-BE)		29(S-ZN)	0.0607	2.5797E-01	18
11(S-BE)		30(S-ZR)	-0.1431	-5.7852E-01	16
14(S-CO)		15(S-CR)	0.5157	2.5535E+00	18
14(S-CO)		16(S-CU)	-0.1147	-4.9004E-01	18

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SPEARMAN CORRELATION COEFFICIENTS FOR COAL CREEK AREA M-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
14(S-CO)		17(S-LA)	0.2562	1.0928E+00	17
14(S-CO)		18(S-MO)	0.4583	2.1262E+00	17
14(S-CO)		19(S-NB)	-0.6198	-3.3509E+00	18
14(S-CO)		20(S-NI)	0.6042	2.1449E+00	8
14(S-CO)		21(S-PB)	0.4393	2.0160E+00	17
14(S-CO)		23(S-SC)	-0.1243	-5.3169E-01	18
14(S-CO)		24(S-SN)	0.1202	5.1348E-01	18
14(S-CO)		26(S-V)	0.6413	3.5462E+00	18
14(S-CO)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		28(S-Y)	0.4214	1.9712E+00	18
14(S-CO)		29(S-ZN)	0.0299	1.2688E-01	18
14(S-CO)		30(S-ZR)	-0.1512	-6.1165E-01	16
15(S-CR)		16(S-CU)	0.0050	2.1842E-02	19
15(S-CR)		17(S-LA)	0.0542	2.3046E-01	18
15(S-CR)		18(S-MO)	0.2030	8.5468E-01	17
15(S-CR)		19(S-NB)	-0.1094	-4.7993E-01	19
15(S-CR)		20(S-NI)	-0.3840	-1.1764E+00	8
15(S-CR)		21(S-PB)	0.2475	1.0839E+00	18
15(S-CR)		23(S-SC)	0.1229	5.3993E-01	19
15(S-CR)		24(S-SN)	0.1238	5.4372E-01	19
15(S-CR)		26(S-V)	0.3160	1.4519E+00	19
15(S-CR)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		28(S-Y)	0.3820	1.3020E+00	19
15(S-CR)		29(S-ZN)	0.2438	1.0955E+00	19
15(S-CR)		30(S-ZR)	-0.1689	-7.0655E-01	17
16(S-CU)		17(S-LA)	-0.1266	-5.4167E-01	18
16(S-CU)		18(S-MO)	0.0372	1.5365E-01	17
16(S-CU)		19(S-NB)	0.3350	1.5498E+00	19
16(S-CU)		20(S-NI)	0.4158	1.2931E+00	8
16(S-CU)		21(S-PB)	0.0402	1.7082E-01	18
16(S-CU)		23(S-SC)	0.4496	2.1940E+00	19
16(S-CU)		24(S-SN)	0.1757	7.7816E-01	19
16(S-CU)		26(S-V)	0.0326	1.4212E-01	19
16(S-CU)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		28(S-Y)	-0.1463	-6.4462E-01	19
16(S-CU)		29(S-ZN)	0.1864	8.2711E-01	19
16(S-CU)		30(S-ZR)	0.2072	8.7325E-01	17
17(S-LA)		18(S-MO)	0.1705	6.9228E-01	16
17(S-LA)		19(S-NB)	-0.2717	-1.1979E+00	18
17(S-LA)		20(S-NI)	0.1584	4.5382E-01	8
17(S-LA)		21(S-PB)	0.6365	3.4024E+00	17
17(S-LA)		23(S-SC)	-0.0391	-1.6617E-01	18
17(S-LA)		24(S-SN)	0.0008	3.5380E-03	18
17(S-LA)		26(S-V)	0.5739	2.9729E+00	18
17(S-LA)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		28(S-Y)	0.7289	4.5167E+00	18
17(S-LA)		29(S-ZN)	-0.0879	-3.7441E-01	18
17(S-LA)		30(S-ZR)	0.1534	6.2114E-01	16
18(S-MO)		19(S-NB)	-0.3963	-1.7793E+00	17
18(S-MO)		20(S-NI)	0.4954	0.0000E+00	7

SPEARMAN CORRELATION COEFFICIENTS FOR COAL CREEK AREA M-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
18(S-MO)		21(S-PB)	0.7470	4.6331E+00	17
18(S-MO)		23(S-SC)	0.0941	3.8990E-01	17
18(S-MO)		24(S-SN)	-0.1562	-6.5194E-01	17
18(S-MO)		26(S-V)	0.2199	9.2955E-01	17
18(S-MO)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		28(S-Y)	0.3812	1.7003E+00	17
18(S-MO)		29(S-ZN)	0.1290	5.3615E-01	17
18(S-MO)		30(S-ZR)	-0.3441	-1.4193E+00	15
19(S-NB)		20(S-NI)	-0.3677	-1.1182E+00	8
19(S-NB)		21(S-PB)	-0.5426	-2.7405E+00	18
19(S-NB)		23(S-SC)	0.3198	1.4710E+00	19
19(S-NB)		24(S-SN)	0.2493	1.1222E+00	19
19(S-NB)		26(S-V)	-0.4045	-1.9277E+00	19
19(S-NB)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		28(S-Y)	-0.3035	-1.3886E+00	19
19(S-NB)		29(S-ZN)	0.0483	2.1083E-01	19
19(S-NB)		30(S-ZR)	0.0194	7.9857E-02	17
20(S-NI)		21(S-PB)	0.3954	0.0000E+00	7
20(S-NI)		23(S-SC)	-0.1183	-3.3710E-01	8
20(S-NI)		24(S-SN)	0.1021	2.9037E-01	8
20(S-NI)		26(S-V)	0.7074	2.8307E+00	8
20(S-NI)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		28(S-Y)	0.0579	1.6400E-01	8
20(S-NI)		29(S-ZN)	-0.5949	-2.0934E+00	8
20(S-NI)		30(S-ZR)	0.4028	1.2448E+00	8
21(S-PB)		23(S-SC)	0.0347	1.4728E-01	18
21(S-PB)		24(S-SN)	-0.2015	-8.7302E-01	18
21(S-PB)		26(S-V)	0.4893	2.3801E+00	18
21(S-PB)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
21(S-PB)		28(S-Y)	0.6422	3.5544E+00	18
21(S-PB)		29(S-ZN)	0.2183	9.4898E-01	18
21(S-PB)		30(S-ZR)	-0.0910	-3.6538E-01	16
23(S-SC)		24(S-SN)	0.6031	3.2961E+00	19
23(S-SC)		26(S-V)	-0.3638	-1.7022E+00	19
23(S-SC)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		28(S-Y)	-0.2052	-9.1400E-01	19
23(S-SC)		29(S-ZN)	0.7694	5.2499E+00	19
23(S-SC)		30(S-ZR)	-0.2030	-8.5498E-01	17
24(S-SN)		26(S-V)	-0.2846	-1.2940E+00	19
24(S-SN)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		28(S-Y)	-0.3719	-1.7462E+00	19
24(S-SN)		29(S-ZN)	0.5233	2.6765E+00	19
24(S-SN)		30(S-ZR)	-0.1282	-5.3296E-01	17
26(S-V)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
26(S-V)		28(S-Y)	0.7126	4.4272E+00	19
26(S-V)		29(S-ZN)	-0.3499	-1.6280E+00	19
26(S-V)		30(S-ZR)	0.3775	1.6808E+00	17
27(S-W)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
27(S-W)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
27(S-W)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		

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SPEARMAN CORRELATION COEFFICIENTS FOR COAL CREEK AREA M-1 FRACTION

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
28(S-Y)		29(S-ZN)	-0.1339	-5.8892E-01	19
28(S-Y)		30(S-ZR)	0.1616	6.7517E-01	17
29(S-ZN)		30(S-ZR)	-0.3761	-1.6735E+00	17

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SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE -80 MESH SAMPLES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
1(S-FE%)		2(S-MG%)	0.7362	1.4758E+01	184
1(S-FE%)		3(S-CA%)	0.5778	9.5769E+00	183
1(S-FE%)		4(S-TI%)	0.6605	1.1197E+01	162
1(S-FE%)		5(S-MN)	0.2626	3.6822E+00	183
1(S-FE%)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		9(S-B)	-0.4023	-5.8629E+00	178
1(S-FE%)		10(S-BA)	0.4287	6.4362E+00	184
1(S-FE%)		11(S-BE)	-0.4497	-4.8821E+00	94
1(S-FE%)		14(S-CO)	0.5605	9.1800E+00	184
1(S-FE%)		15(S-CR)	0.6120	1.0496E+01	184
1(S-FE%)		16(S-CU)	0.3828	5.6202E+00	184
1(S-FE%)		17(S-LA)	-0.2364	-3.1151E+00	164
1(S-FE%)		18(S-MO)	-0.3244	-1.3716E+00	16
1(S-FE%)		19(S-NB)	-0.1276	-7.9315E-01	38
1(S-FE%)		20(S-NI)	0.4412	6.6335E+00	182
1(S-FE%)		21(S-PB)	-0.0049	-6.6791E-02	184
1(S-FE%)		23(S-SC)	0.5917	9.8744E+00	181
1(S-FE%)		24(S-SN)	-0.0267	-7.5467E-02	8
1(S-FE%)		25(S-SR)	0.5805	9.4567E+00	176
1(S-FE%)		26(S-V)	0.6886	1.2882E+01	184
1(S-FE%)		28(S-Y)	0.3291	4.7268E+00	184
1(S-FE%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		30(S-ZR)	-0.2862	-4.0518E+00	184
2(S-MG%)		3(S-CA%)	0.8181	1.9245E+01	183
2(S-MG%)		4(S-TI%)	0.5442	8.2561E+00	162
2(S-MG%)		5(S-MN)	0.3378	4.8543E+00	183
2(S-MG%)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		9(S-B)	-0.3833	-5.5360E+00	178
2(S-MG%)		10(S-BA)	0.5759	9.5566E+00	184
2(S-MG%)		11(S-BE)	-0.3151	-3.2193E+00	94
2(S-MG%)		14(S-CO)	0.5424	8.7566E+00	184
2(S-MG%)		15(S-CR)	0.5588	9.1410E+00	184
2(S-MG%)		16(S-CU)	0.4272	6.4098E+00	184
2(S-MG%)		17(S-LA)	-0.0207	-2.6468E-01	164
2(S-MG%)		18(S-MO)	-0.4744	-2.1557E+00	16
2(S-MG%)		19(S-NB)	-0.0264	-1.6249E-01	38
2(S-MG%)		20(S-NI)	0.4381	6.5755E+00	182
2(S-MG%)		21(S-PB)	0.0819	1.1144E+00	184
2(S-MG%)		23(S-SC)	0.6539	1.1628E+01	181
2(S-MG%)		24(S-SN)	-0.6668	-2.5307E+00	8
2(S-MG%)		25(S-SR)	0.7806	1.6570E+01	176
2(S-MG%)		26(S-V)	0.5983	1.0130E+01	184
2(S-MG%)		28(S-Y)	0.3874	5.6993E+00	184
2(S-MG%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		30(S-ZR)	-0.3273	-4.6978E+00	184
3(S-CA%)		4(S-TI%)	0.5555	8.4770E+00	161
3(S-CA%)		5(S-MN)	0.5477	8.8308E+00	182
3(S-CA%)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		9(S-B)	-0.1591	-2.1446E+00	177
3(S-CA%)		10(S-BA)	0.6748	1.2368E+01	183

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SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE -80 MESH SAMPLES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
3(S-CA%)		11(S-BE)	0.0241	2.3415E-01	94
3(S-CA%)		14(S-CO)	0.3472	5.0076E+00	183
3(S-CA%)		15(S-CR)	0.4501	6.8177E+00	183
3(S-CA%)		16(S-CU)	0.4205	6.2702E+00	183
3(S-CA%)		17(S-LA)	0.2093	2.7326E+00	163
3(S-CA%)		18(S-MO)	0.1738	7.0592E-01	16
3(S-CA%)		19(S-NB)	0.1935	1.2157E+00	38
3(S-CA%)		20(S-NI)	0.2798	3.9213E+00	181
3(S-CA%)		21(S-PB)	0.3501	5.0566E+00	183
3(S-CA%)		23(S-SC)	0.6148	1.0460E+01	180
3(S-CA%)		24(S-SN)	-0.7010	-2.7798E+00	8
3(S-CA%)		25(S-SR)	0.7718	1.6056E+01	175
3(S-CA%)		26(S-V)	0.4373	6.5788E+00	183
3(S-CA%)		28(S-Y)	0.5604	9.1522E+00	183
3(S-CA%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		30(S-ZR)	-0.2501	-3.4943E+00	183
4(S-TI%)		5(S-MN)	0.2733	3.6048E+00	161
4(S-TI%)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		9(S-B)	-0.1714	-2.1942E+00	159
4(S-TI%)		10(S-BA)	0.4469	6.3578E+00	162
4(S-TI%)		11(S-BE)	-0.2337	-2.2546E+00	88
4(S-TI%)		14(S-CO)	0.4052	5.6418E+00	162
4(S-TI%)		15(S-CR)	0.4701	6.7791E+00	162
4(S-TI%)		16(S-CU)	0.3630	4.9588E+00	162
4(S-TI%)		17(S-LA)	0.0197	2.3450E-01	142
4(S-TI%)		18(S-MO)	0.0123	4.7603E-02	15
4(S-TI%)		19(S-NB)	-0.0143	-8.2125E-02	33
4(S-TI%)		20(S-NI)	0.3345	4.4896E+00	160
4(S-TI%)		21(S-PB)	0.1305	1.6752E+00	162
4(S-TI%)		23(S-SC)	0.4706	6.7258E+00	159
4(S-TI%)		24(S-SN)	-0.8740	0.0000E+00	4
4(S-TI%)		25(S-SR)	0.5677	8.5569E+00	154
4(S-TI%)		26(S-V)	0.5453	8.2800E+00	162
4(S-TI%)		28(S-Y)	0.3441	4.6647E+00	162
4(S-TI%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		30(S-ZR)	-0.0943	-1.2059E+00	162
5(S-MN)		6(S-AG)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		9(S-B)	0.2308	3.1556E+00	177
5(S-MN)		10(S-BA)	0.6425	1.1342E+01	183
5(S-MN)		11(S-BE)	0.2621	2.6188E+00	93
5(S-MN)		14(S-CO)	-0.1694	-2.3253E+00	183
5(S-MN)		15(S-CR)	0.2866	4.0461E+00	183
5(S-MN)		16(S-CU)	0.3415	4.9160E+00	183
5(S-MN)		17(S-LA)	0.5879	9.2798E+00	163
5(S-MN)		18(S-MO)	0.4367	1.9419E+00	16
5(S-MN)		19(S-NB)	0.2956	1.9071E+00	38
5(S-MN)		20(S-NI)	-0.1915	-2.6243E+00	181
5(S-MN)		21(S-PB)	0.6965	1.3131E+01	183
5(S-MN)		23(S-SC)	0.2129	2.9236E+00	180
5(S-MN)		24(S-SN)	0.1044	2.9686E-01	8

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SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE -80 MESH SAMPLES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
5(S-MN)		25(S-SR)	0.2113	2.8605E+00	175
5(S-MN)		26(S-V)	-0.0563	-7.6310E-01	183
5(S-MN)		28(S-Y)	0.6520	1.1634E+01	183
5(S-MN)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		30(S-ZR)	-0.0575	-7.7930E-01	183
6(S-AG)		9(S-B)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		10(S-BA)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		11(S-BE)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		15(S-CR)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		16(S-CU)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		17(S-LA)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		10(S-BA)	-0.0069	-9.2212E-02	178
9(S-B)		11(S-BE)	0.2770	2.7651E+00	92
9(S-B)		14(S-CO)	-0.3656	-5.2398E+00	178
9(S-B)		15(S-CR)	-0.2491	-3.4319E+00	178
9(S-B)		16(S-CU)	0.1905	2.5888E+00	178
9(S-B)		17(S-LA)	0.5235	7.7230E+00	158
9(S-B)		18(S-MO)	0.8117	5.5592E+00	16
9(S-B)		19(S-NB)	0.2956	1.8307E+00	35
9(S-B)		20(S-NI)	-0.2367	-3.2323E+00	176
9(S-B)		21(S-PB)	0.4441	6.6137E+00	178
9(S-B)		23(S-SC)	-0.1543	-2.0663E+00	175
9(S-B)		24(S-SN)	0.1177	0.0000E+00	6
9(S-B)		25(S-SR)	-0.2764	-3.7505E+00	170
9(S-B)		26(S-V)	-0.3553	-5.0709E+00	178
9(S-B)		28(S-Y)	0.1672	2.2621E+00	178
9(S-B)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		30(S-ZR)	0.3324	4.7023E+00	178
10(S-BA)		11(S-BE)	0.0557	5.4043E-01	94
10(S-BA)		14(S-CO)	0.1027	1.4008E+00	184
10(S-BA)		15(S-CR)	0.3998	5.9171E+00	184
10(S-BA)		16(S-CU)	0.3733	5.4579E+00	184
10(S-BA)		17(S-LA)	0.4617	6.6655E+00	164
10(S-BA)		18(S-MO)	0.3497	1.4932E+00	16
10(S-BA)		19(S-NB)	-0.1904	-1.1954E+00	38
10(S-BA)		20(S-NI)	0.0872	1.1808E+00	182
10(S-BA)		21(S-PB)	0.4517	6.8683E+00	184
10(S-BA)		23(S-SC)	0.4176	6.1826E+00	181

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SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE -80 MESH SAMPLES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
10(S-BA)		24(S-SN)	-0.8346	-4.2847E+00	8
10(S-BA)		25(S-SR)	0.4987	7.6326E+00	176
10(S-BA)		26(S-V)	0.1516	2.0800E+00	184
10(S-BA)		28(S-Y)	0.5243	8.3518E+00	184
10(S-BA)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		30(S-ZR)	-0.1009	-1.3751E+00	184
11(S-BE)		14(S-CO)	-0.4394	-4.7431E+00	94
11(S-BE)		15(S-CR)	-0.1143	-1.1154E+00	94
11(S-BE)		16(S-CU)	-0.0109	-1.0602E-01	94
11(S-BE)		17(S-LA)	0.3324	3.2682E+00	86
11(S-BE)		18(S-MO)	0.4307	1.6533E+00	12
11(S-BE)		19(S-NB)	0.2209	1.3588E+00	36
11(S-BE)		20(S-NI)	-0.2596	-2.5789E+00	92
11(S-BE)		21(S-PB)	0.4819	5.3328E+00	94
11(S-BE)		23(S-SC)	-0.1337	-1.2872E+00	91
11(S-BE)		24(S-SN)	0.4426	0.0000E+00	5
11(S-BE)		25(S-SR)	-0.3478	-3.4399E+00	86
11(S-BE)		26(S-V)	-0.5046	-5.6665E+00	94
11(S-BE)		28(S-Y)	0.5000	5.5976E+00	94
11(S-BE)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		30(S-ZR)	0.3339	3.4342E+00	94
14(S-CO)		15(S-CR)	0.4030	5.9738E+00	184
14(S-CO)		16(S-CU)	0.4096	6.0903E+00	184
14(S-CO)		17(S-LA)	-0.3824	-5.2994E+00	164
14(S-CO)		18(S-MO)	-0.5504	-2.6372E+00	16
14(S-CO)		19(S-NB)	-0.1329	-8.2645E-01	38
14(S-CO)		20(S-NI)	0.7709	1.6329E+01	182
14(S-CO)		21(S-PB)	-0.4372	-6.5940E+00	184
14(S-CO)		23(S-SC)	0.6430	1.1296E+01	181
14(S-CO)		24(S-SN)	-0.2754	-8.1030E-01	8
14(S-CO)		25(S-SR)	0.5894	9.6788E+00	176
14(S-CO)		26(S-V)	0.8288	2.0095E+01	184
14(S-CO)		28(S-Y)	0.0103	1.4007E-01	184
14(S-CO)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		30(S-ZR)	-0.0611	-8.2977E-01	184
15(S-CR)		16(S-CU)	0.3388	4.8854E+00	184
15(S-CR)		17(S-LA)	-0.0289	-3.6962E-01	164
15(S-CR)		18(S-MO)	-0.1248	-5.0303E-01	16
15(S-CR)		19(S-NB)	0.1164	7.2227E-01	38
15(S-CR)		20(S-NI)	0.5711	9.3865E+00	182
15(S-CR)		21(S-PB)	0.1167	1.5937E+00	184
15(S-CR)		23(S-SC)	0.4019	5.9042E+00	181
15(S-CR)		24(S-SN)	-0.4350	-1.3663E+00	8
15(S-CR)		25(S-SR)	0.3559	5.0527E+00	176
15(S-CR)		26(S-V)	0.5043	7.9218E+00	184
15(S-CR)		28(S-Y)	0.3184	4.5560E+00	184
15(S-CR)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		30(S-ZR)	-0.2817	-3.9826E+00	184
16(S-CU)		17(S-LA)	0.2950	3.9544E+00	164
16(S-CU)		18(S-MO)	-0.0374	-1.4990E-01	16

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SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE -80 MESH SAMPLES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
16(S-CU)		19(S-NB)	0.1792	1.1226E+00	38
16(S-CU)		20(S-NI)	0.3862	5.6475E+00	182
16(S-CU)		21(S-PB)	0.2482	3.4752E+00	184
16(S-CU)		23(S-SC)	0.5641	9.1918E+00	181
16(S-CU)		24(S-SN)	-0.2245	-6.5168E-01	8
16(S-CU)		25(S-SR)	0.3914	5.6431E+00	176
16(S-CU)		26(S-V)	0.3708	5.4167E+00	184
16(S-CU)		28(S-Y)	0.4071	6.0456E+00	184
16(S-CU)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		30(S-ZR)	0.0714	9.7154E-01	184
17(S-LA)		18(S-MO)	0.4541	1.9071E+00	14
17(S-LA)		19(S-NB)	0.2622	1.6751E+00	38
17(S-LA)		20(S-NI)	-0.2612	-3.4438E+00	162
17(S-LA)		21(S-PB)	0.7141	1.3064E+01	164
17(S-LA)		23(S-SC)	-0.0081	-1.0337E-01	161
17(S-LA)		24(S-SN)	-0.1570	-4.4959E-01	8
17(S-LA)		25(S-SR)	-0.1245	-1.5773E+00	158
17(S-LA)		26(S-V)	-0.3713	-5.1208E+00	164
17(S-LA)		28(S-Y)	0.5422	8.2647E+00	164
17(S-LA)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		30(S-ZR)	0.3761	5.1974E+00	164
18(S-MO)		19(S-NB)	0.6174	0.0000E+00	6
18(S-MO)		20(S-NI)	-0.4579	-2.0602E+00	16
18(S-MO)		21(S-PB)	0.5778	2.8320E+00	16
18(S-MO)		23(S-SC)	-0.0901	-3.6206E-01	16
18(S-MO)		24(S-SN)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
18(S-MO)		25(S-SR)	-0.1817	-6.9151E-01	14
18(S-MO)		26(S-V)	-0.5434	-2.5895E+00	16
18(S-MO)		28(S-Y)	0.4738	2.1522E+00	16
18(S-MO)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		30(S-ZR)	0.1634	6.6233E-01	16
19(S-NB)		20(S-NI)	-0.1068	-6.6229E-01	38
19(S-NB)		21(S-PB)	0.5165	3.7182E+00	38
19(S-NB)		23(S-SC)	0.2711	1.6659E+00	35
19(S-NB)		24(S-SN)	0.8433	0.0000E+00	5
19(S-NB)		25(S-SR)	0.0204	1.1920E-01	34
19(S-NB)		26(S-V)	-0.0614	-3.7930E-01	38
19(S-NB)		28(S-Y)	0.3453	2.2680E+00	38
19(S-NB)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		30(S-ZR)	-0.2735	-1.7526E+00	38
20(S-NI)		21(S-PB)	-0.3064	-4.3418E+00	182
20(S-NI)		23(S-SC)	0.5551	8.9290E+00	179
20(S-NI)		24(S-SN)	-0.3995	-1.2327E+00	8
20(S-NI)		25(S-SR)	0.4412	6.4853E+00	174
20(S-NI)		26(S-V)	0.6767	1.2398E+01	182
20(S-NI)		28(S-Y)	0.0259	3.4999E-01	182
20(S-NI)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		30(S-ZR)	-0.0215	-2.8946E-01	182
21(S-PB)		23(S-SC)	0.0331	4.4593E-01	181
21(S-PB)		24(S-SN)	-0.4589	-1.4609E+00	8

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SPEARMAN CORRELATION COEFFICIENTS FOR HELLS HOLE -80 MESH SAMPLES

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
21(S-PB)		25(S-SR)	0.0066	8.7142E-02	176
21(S-PB)		26(S-V)	-0.3211	-4.5995E+00	184
21(S-PB)		28(S-Y)	0.7159	1.3907E+01	184
21(S-PB)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
21(S-PB)		30(S-ZR)	0.1233	1.6850E+00	184
23(S-SC)		24(S-SN)	-0.2041	-5.8977E-01	8
23(S-SC)		25(S-SR)	0.6951	1.2829E+01	176
23(S-SC)		26(S-V)	0.6566	1.1711E+01	181
23(S-SC)		28(S-Y)	0.3805	5.5349E+00	181
23(S-SC)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		30(S-ZR)	-0.0358	-4.8169E-01	181
24(S-SN)		25(S-SR)	-0.7457	-3.1653E+00	8
24(S-SN)		26(S-V)	-0.4027	-1.2444E+00	8
24(S-SN)		28(S-Y)	-0.1875	-5.4003E-01	8
24(S-SN)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		30(S-ZR)	-0.1927	-5.5558E-01	8
25(S-SR)		26(S-V)	0.6656	1.1831E+01	176
25(S-SR)		28(S-Y)	0.2462	3.3703E+00	176
25(S-SR)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
25(S-SR)		30(S-ZR)	-0.2242	-3.0519E+00	176
26(S-V)		28(S-Y)	0.0547	7.4361E-01	184
26(S-V)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
26(S-V)		30(S-ZR)	-0.2260	-3.1475E+00	184
28(S-Y)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
28(S-Y)		30(S-ZR)	0.1611	2.2144E+00	184
29(S-ZN)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		

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SPEARMAN CORRELATION COEFFICIENTS FOR TWIN PEAKS AREA ROCKS

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
1(S-FE%)		2(S-MG%)	0.2449	8.7500E-01	12
1(S-FE%)		3(S-CA%)	-0.1129	-3.7681E-01	11
1(S-FE%)		4(S-TI%)	0.3405	1.2545E+00	12
1(S-FE%)		5(S-MN)	0.2586	9.2731E-01	12
1(S-FE%)		6(S-AG)	0.5423	0.0000E+00	5
1(S-FE%)		8(S-AU)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		9(S-B)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		10(S-BA)	0.7625	4.0826E+00	12
1(S-FE%)		11(S-BE)	0.2887	0.0000E+00	3
1(S-FE%)		12(S-BI)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		14(S-CO)	0.4640	1.6565E+00	10
1(S-FE%)		15(S-CR)	-0.5000	1.6565E+00	1
1(S-FE%)		16(S-CU)	0.2222	7.5593E-01	11
1(S-FE%)		18(S-MO)	0.1651	0.0000E+00	5
1(S-FE%)		20(S-NI)	-0.1354	0.0000E+00	7
1(S-FE%)		21(S-PB)	0.0882	0.0000E+00	4
1(S-FE%)		23(S-SC)	0.0000	0.0000E+00	7
1(S-FE%)		25(S-SR)	0.2126	0.0000E+00	7
1(S-FE%)		26(S-V)	0.5683	2.0720E+00	9
1(S-FE%)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		28(S-Y)	0.0806	0.0000E+00	6
1(S-FE%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		30(S-ZR)	-0.0924	-3.2143E-01	12
2(S-MG%)		3(S-CA%)	0.7537	3.8033E+00	11
2(S-MG%)		4(S-TI%)	0.8230	5.0198E+00	12
2(S-MG%)		5(S-MN)	0.6324	2.8284E+00	12
2(S-MG%)		6(S-AG)	-0.6545	0.0000E+00	5
2(S-MG%)		8(S-AU)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		9(S-B)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		10(S-BA)	0.2313	8.2355E-01	12
2(S-MG%)		11(S-BE)	-0.1521	0.0000E+00	3
2(S-MG%)		12(S-BI)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		14(S-CO)	0.4410	1.5539E+00	10
2(S-MG%)		15(S-CR)	0.8660	0.0000E+00	1
2(S-MG%)		16(S-CU)	-0.2987	-1.0381E+00	11
2(S-MG%)		18(S-MO)	-0.6307	0.0000E+00	5
2(S-MG%)		20(S-NI)	0.8928	0.0000E+00	7
2(S-MG%)		21(S-PB)	-0.2941	0.0000E+00	4
2(S-MG%)		23(S-SC)	0.3725	0.0000E+00	7
2(S-MG%)		25(S-SR)	0.5246	0.0000E+00	7
2(S-MG%)		26(S-V)	0.0169	5.0734E-02	9
2(S-MG%)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		28(S-Y)	-0.5662	0.0000E+00	6
2(S-MG%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		30(S-ZR)	0.3365	1.2377E+00	12
3(S-CA%)		4(S-TI%)	0.4560	1.6994E+00	11
3(S-CA%)		5(S-MN)	0.7942	4.3342E+00	11
3(S-CA%)		6(S-AG)	-0.5850	0.0000E+00	5

SPEARMAN CORRELATION COEFFICIENTS FOR TWIN PEAKS AREA ROCKS

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
3(S-CA%)		8(S-AU)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		9(S-B)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		10(S-BA)	0.2339	7.9789E-01	11
3(S-CA%)		11(S-BE)	-0.2357	0.0000E+00	2
3(S-CA%)		12(S-BI)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		14(S-CO)	0.3510	1.1852E+00	10
3(S-CA%)		15(S-CR)	1.0000	1.1852E+00	1
3(S-CA%)		16(S-CU)	-0.2060	-6.6559E-01	10
3(S-CA%)		18(S-MO)	-0.5557	0.0000E+00	5
3(S-CA%)		20(S-NI)	0.5174	0.0000E+00	7
3(S-CA%)		21(S-PB)	-0.4867	0.0000E+00	3
3(S-CA%)		23(S-SC)	-0.0707	0.0000E+00	7
3(S-CA%)		25(S-SR)	0.2025	0.0000E+00	7
3(S-CA%)		26(S-V)	0.0099	2.9783E-02	9
3(S-CA%)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		28(S-Y)	-0.2198	0.0000E+00	5
3(S-CA%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		30(S-ZR)	0.2853	9.8726E-01	11
4(S-TI%)		5(S-MN)	0.3334	1.2251E+00	12
4(S-TI%)		6(S-AG)	-0.5095	0.0000E+00	5
4(S-TI%)		8(S-AU)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		9(S-B)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		10(S-BA)	0.3101	1.1298E+00	12
4(S-TI%)		11(S-BE)	-0.6455	0.0000E+00	3
4(S-TI%)		12(S-BI)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		14(S-CO)	0.3554	1.2022E+00	10
4(S-TI%)		15(S-CR)	0.8660	0.0000E+00	1
4(S-TI%)		16(S-CU)	-0.0267	-8.8420E-02	11
4(S-TI%)		18(S-MO)	-0.8074	0.0000E+00	5
4(S-TI%)		20(S-NI)	0.5868	0.0000E+00	7
4(S-TI%)		21(S-PB)	-0.2239	0.0000E+00	4
4(S-TI%)		23(S-SC)	0.3451	0.0000E+00	7
4(S-TI%)		25(S-SR)	0.7439	0.0000E+00	7
4(S-TI%)		26(S-V)	0.1030	3.1058E-01	9
4(S-TI%)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		28(S-Y)	-0.1902	0.0000E+00	6
4(S-TI%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		30(S-ZR)	0.5886	2.5224E+00	12
5(S-MN)		6(S-AG)	-0.4488	0.0000E+00	5
5(S-MN)		8(S-AU)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		9(S-B)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		10(S-BA)	0.3787	1.4175E+00	12
5(S-MN)		11(S-BE)	0.8885	0.0000E+00	3
5(S-MN)		12(S-BI)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		14(S-CO)	0.6499	2.7043E+00	10
5(S-MN)		15(S-CR)	0.8660	0.0000E+00	1
5(S-MN)		16(S-CU)	0.0604	2.0081E-01	11

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SPEARMAN CORRELATION COEFFICIENTS FOR TWIN PEAKS AREA ROCKS

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
5(S-MN)		18(S-MO)	0.0273	0.0000E+00	5
5(S-MN)		20(S-NI)	0.2597	0.0000E+00	7
5(S-MN)		21(S-PB)	0.3769	0.0000E+00	4
5(S-MN)		23(S-SC)	-0.2828	0.0000E+00	7
5(S-MN)		25(S-SR)	0.0921	0.0000E+00	7
5(S-MN)		26(S-V)	0.0520	1.5617E-01	9
5(S-MN)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		28(S-Y)	-0.2177	0.0000E+00	6
5(S-MN)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		30(S-ZR)	0.0581	2.0175E-01	12
6(S-AG)		8(S-AU)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		9(S-B)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		10(S-BA)	0.4447	0.0000E+00	5
6(S-AG)		11(S-BE)	0.0000	0.0000E+00	2
6(S-AG)		12(S-BI)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		14(S-CO)	0.0656	0.0000E+00	4
6(S-AG)		15(S-CR)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		16(S-CU)	0.0000	0.0000E+00	4
6(S-AG)		18(S-MO)	0.2236	0.0000E+00	3
6(S-AG)		20(S-NI)	-0.7632	0.0000E+00	3
6(S-AG)		21(S-PB)	-1.0000	0.0000E+00	1
6(S-AG)		23(S-SC)	0.0000	0.0000E+00	2
6(S-AG)		25(S-SR)	-1.0000	0.0000E+00	1
6(S-AG)		26(S-V)	-0.2501	0.0000E+00	4
6(S-AG)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		30(S-ZR)	-0.7573	0.0000E+00	5
8(S-AU)		9(S-B)	LESS THAN 3 PAIRS DETECTED.		
8(S-AU)		10(S-BA)	LESS THAN 3 PAIRS DETECTED.		
8(S-AU)		11(S-BE)	LESS THAN 3 PAIRS DETECTED.		
8(S-AU)		12(S-BI)	LESS THAN 3 PAIRS DETECTED.		
8(S-AU)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
8(S-AU)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
8(S-AU)		15(S-CR)	LESS THAN 3 PAIRS DETECTED.		
8(S-AU)		16(S-CU)	LESS THAN 3 PAIRS DETECTED.		
8(S-AU)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
8(S-AU)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
8(S-AU)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
8(S-AU)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
8(S-AU)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
8(S-AU)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
8(S-AU)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
8(S-AU)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
8(S-AU)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
8(S-AU)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		10(S-BA)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		11(S-BE)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		12(S-BI)	LESS THAN 3 PAIRS DETECTED.		

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SPEARMAN CORRELATION COEFFICIENTS FOR TWIN PEAKS AREA ROCKS

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
9(S-B)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		15(S-CR)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		16(S-CU)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		11(S-BE)	0.0000	0.0000E+00	3
10(S-BA)		12(S-BI)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		14(S-CO)	0.4068	1.4084E+00	10
10(S-BA)		15(S-CR)	0.5000	1.4084E+00	1
10(S-BA)		16(S-CU)	0.2268	7.7241E-01	11
10(S-BA)		18(S-MO)	0.1273	0.0000E+00	5
10(S-BA)		20(S-NI)	-0.3870	0.0000E+00	7
10(S-BA)		21(S-PB)	0.0000	0.0000E+00	4
10(S-BA)		23(S-SC)	-0.1325	0.0000E+00	7
10(S-BA)		25(S-SR)	0.3957	0.0000E+00	7
10(S-BA)		26(S-V)	0.4416	1.4767E+00	9
10(S-BA)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		28(S-Y)	0.2685	0.0000E+00	6
10(S-BA)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		30(S-ZR)	0.1929	6.8089E-01	12
11(S-BE)		12(S-BI)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		14(S-CO)	-0.5000	0.0000E+00	1
11(S-BE)		15(S-CR)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		16(S-CU)	-0.5443	0.0000E+00	2
11(S-BE)		18(S-MO)	0.0000	0.0000E+00	1
11(S-BE)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		21(S-PB)	0.0000	0.0000E+00	1
11(S-BE)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		26(S-V)	0.8660	0.0000E+00	1
11(S-BE)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		30(S-ZR)	-0.1521	0.0000E+00	3
12(S-BI)		13(S-CD)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		15(S-CR)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		16(S-CU)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		

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SPEARMAN CORRELATION COEFFICIENTS FOR TWIN PEAKS AREA ROCKS

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
12(S-BI)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
12(S-BI)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		14(S-CO)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		15(S-CR)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		16(S-CU)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
13(S-CD)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		15(S-CR)	0.0000	0.0000E+00	1
14(S-CO)		16(S-CU)	0.3963	1.3649E+00	10
14(S-CO)		18(S-MO)	0.1715	0.0000E+00	4
14(S-CO)		20(S-NI)	0.1266	0.0000E+00	6
14(S-CO)		21(S-PB)	0.3162	0.0000E+00	2
14(S-CO)		23(S-SC)	-0.0767	0.0000E+00	7
14(S-CO)		25(S-SR)	-0.4174	0.0000E+00	6
14(S-CO)		26(S-V)	0.2183	6.3256E-01	8
14(S-CO)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		28(S-Y)	0.2236	0.0000E+00	5
14(S-CO)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		30(S-ZR)	-0.1528	-4.8897E-01	10
15(S-CR)		16(S-CU)	-1.0000	-4.8897E-01	1
15(S-CR)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		20(S-NI)	1.0000	-4.8897E-01	1
15(S-CR)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		23(S-SC)	0.8660	0.0000E+00	1
15(S-CR)		25(S-SR)	0.5000	0.0000E+00	1
15(S-CR)		26(S-V)	-0.8660	0.0000E+00	1
15(S-CR)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		30(S-ZR)	1.0000	0.0000E+00	1
16(S-CU)		18(S-MO)	0.5218	0.0000E+00	4
16(S-CU)		20(S-NI)	-0.2722	0.0000E+00	6
16(S-CU)		21(S-PB)	0.5643	0.0000E+00	3
16(S-CU)		23(S-SC)	0.0000	0.0000E+00	7
16(S-CU)		25(S-SR)	-0.1030	0.0000E+00	6

SPEARMAN CORRELATION COEFFICIENTS FOR TWIN PEAKS AREA ROCKS

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
16(S-CU)		26(S-V)	0.6266	2.2740E+00	8
16(S-CU)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		28(S-Y)	0.4330	0.0000E+00	6
16(S-CU)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		30(S-ZR)	0.0291	9.6480E-02	11
18(S-MO)		20(S-NI)	-0.6325	0.0000E+00	3
18(S-MO)		21(S-PB)	0.9487	0.0000E+00	2
18(S-MO)		23(S-SC)	-0.7071	0.0000E+00	3
18(S-MO)		25(S-SR)	-1.0000	0.0000E+00	2
18(S-MO)		26(S-V)	-0.1496	0.0000E+00	5
18(S-MO)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		28(S-Y)	0.8660	0.0000E+00	1
18(S-MO)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		30(S-ZR)	-0.4909	0.0000E+00	5
20(S-NI)		21(S-PB)	-0.5263	0.0000E+00	3
20(S-NI)		23(S-SC)	0.8622	0.0000E+00	5
20(S-NI)		25(S-SR)	0.3553	0.0000E+00	5
20(S-NI)		26(S-V)	0.0994	0.0000E+00	6
20(S-NI)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		28(S-Y)	-0.5479	0.0000E+00	4
20(S-NI)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		30(S-ZR)	0.2744	0.0000E+00	7
21(S-PB)		23(S-SC)	-0.9487	0.0000E+00	2
21(S-PB)		25(S-SR)	-0.5000	0.0000E+00	1
21(S-PB)		26(S-V)	-0.6579	0.0000E+00	3
21(S-PB)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
21(S-PB)		28(S-Y)	0.2108	0.0000E+00	2
21(S-PB)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
21(S-PB)		30(S-ZR)	-0.5822	0.0000E+00	4
23(S-SC)		25(S-SR)	-0.0304	0.0000E+00	5
23(S-SC)		26(S-V)	0.4009	0.0000E+00	7
23(S-SC)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		28(S-Y)	-0.8216	0.0000E+00	4
23(S-SC)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		30(S-ZR)	0.3091	0.0000E+00	7
25(S-SR)		26(S-V)	-0.4439	0.0000E+00	6
25(S-SR)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
25(S-SR)		28(S-Y)	0.8402	0.0000E+00	4
25(S-SR)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
25(S-SR)		30(S-ZR)	0.8277	0.0000E+00	7
26(S-V)		27(S-W)	LESS THAN 3 PAIRS DETECTED.		
26(S-V)		28(S-Y)	-0.4564	0.0000E+00	4
26(S-V)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
26(S-V)		30(S-ZR)	-0.0975	-2.9399E-01	9
27(S-W)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
27(S-W)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
27(S-W)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
28(S-Y)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
28(S-Y)		30(S-ZR)	0.3048	0.0000E+00	6
29(S-ZN)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		

SPEARMAN CORRELATION COEFFICIENTS FOR SAWMILL CREEK AREA ROCKS

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
1(S-FE%)		2(S-MG%)	0.1860	7.0835E-01	14
1(S-FE%)		3(S-CA%)	0.0954	3.8332E-01	16
1(S-FE%)		4(S-TI%)	0.5121	2.3850E+00	16
1(S-FE%)		5(S-MN)	-0.1676	-6.3592E-01	14
1(S-FE%)		6(S-AG)	0.9747	0.0000E+00	3
1(S-FE%)		9(S-B)	0.5621	2.0387E+00	9
1(S-FE%)		10(S-BA)	0.2708	1.0893E+00	15
1(S-FE%)		11(S-BE)	-0.2014	-8.2257E-01	16
1(S-FE%)		14(S-CO)	0.2411	0.0000E+00	7
1(S-FE%)		15(S-CR)	1.0000	0.0000E+00	2
1(S-FE%)		16(S-CU)	0.2755	1.1100E+00	15
1(S-FE%)		17(S-LA)	-0.2463	-7.6252E-01	9
1(S-FE%)		18(S-MO)	0.3441	0.0000E+00	3
1(S-FE%)		19(S-NB)	-0.2629	-7.7062E-01	8
1(S-FE%)		20(S-NI)	0.6228	0.0000E+00	5
1(S-FE%)		21(S-PB)	-0.2023	-7.1563E-01	12
1(S-FE%)		23(S-SC)	0.8660	0.0000E+00	1
1(S-FE%)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		25(S-SR)	0.2757	0.0000E+00	6
1(S-FE%)		26(S-V)	0.5096	1.9645E+00	11
1(S-FE%)		28(S-Y)	-0.4051	-1.5349E+00	12
1(S-FE%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
1(S-FE%)		30(S-ZR)	0.2685	1.0795E+00	15
2(S-MG%)		3(S-CA%)	0.1937	7.3874E-01	14
2(S-MG%)		4(S-TI%)	0.0931	3.5000E-01	14
2(S-MG%)		5(S-MN)	0.3516	1.3011E+00	12
2(S-MG%)		6(S-AG)	-0.4000	1.3011E+00	2
2(S-MG%)		9(S-B)	-0.1467	-4.1937E-01	8
2(S-MG%)		10(S-BA)	-0.2682	-1.0037E+00	13
2(S-MG%)		11(S-BE)	-0.5234	-2.2984E+00	14
2(S-MG%)		14(S-CO)	0.2402	0.0000E+00	7
2(S-MG%)		15(S-CR)	-1.0000	0.0000E+00	2
2(S-MG%)		16(S-CU)	0.3653	1.4151E+00	13
2(S-MG%)		17(S-LA)	0.1166	0.0000E+00	7
2(S-MG%)		18(S-MO)	-0.7746	0.0000E+00	2
2(S-MG%)		19(S-NB)	-0.6027	0.0000E+00	6
2(S-MG%)		20(S-NI)	-0.0566	0.0000E+00	5
2(S-MG%)		21(S-PB)	-0.1292	-4.1186E-01	10
2(S-MG%)		23(S-SC)	0.0000	0.0000E+00	1
2(S-MG%)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		25(S-SR)	0.3386	0.0000E+00	6
2(S-MG%)		26(S-V)	-0.2356	-7.6670E-01	10
2(S-MG%)		28(S-Y)	-0.4177	-1.4540E+00	10
2(S-MG%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
2(S-MG%)		30(S-ZR)	-0.0964	-3.4903E-01	13
3(S-CA%)		4(S-TI%)	0.2310	9.4962E-01	16
3(S-CA%)		5(S-MN)	-0.2665	-1.0345E+00	14
3(S-CA%)		6(S-AG)	0.2236	0.0000E+00	3
3(S-CA%)		9(S-B)	0.0815	2.4543E-01	9
3(S-CA%)		10(S-BA)	0.2311	9.2002E-01	15

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SPEARMAN CORRELATION COEFFICIENTS FOR SAWMILL CREEK AREA ROCKS

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
3(S-CA%)		11(S-BE)	0.0802	3.2201E-01	16
3(S-CA%)		14(S-CO)	0.4485	0.0000E+00	7
3(S-CA%)		15(S-CR)	-0.3162	0.0000E+00	2
3(S-CA%)		16(S-CU)	-0.0557	-2.1607E-01	15
3(S-CA%)		17(S-LA)	0.6931	2.8849E+00	9
3(S-CA%)		18(S-MO)	0.0000	0.0000E+00	3
3(S-CA%)		19(S-NB)	-0.4192	-1.3058E+00	8
3(S-CA%)		20(S-NI)	-0.2831	0.0000E+00	5
3(S-CA%)		21(S-PB)	0.4971	1.9846E+00	12
3(S-CA%)		23(S-SC)	-0.5000	0.0000E+00	1
3(S-CA%)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		25(S-SR)	-0.0874	0.0000E+00	6
3(S-CA%)		26(S-V)	0.0148	4.9141E-02	11
3(S-CA%)		28(S-Y)	0.1515	5.3102E-01	12
3(S-CA%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
3(S-CA%)		30(S-ZR)	0.4181	1.7824E+00	15
4(S-TI%)		5(S-MN)	-0.6346	-3.0724E+00	14
4(S-TI%)		6(S-AG)	0.8208	0.0000E+00	3
4(S-TI%)		9(S-B)	-0.2234	-6.9771E-01	9
4(S-TI%)		10(S-BA)	0.4227	1.8064E+00	15
4(S-TI%)		11(S-BE)	-0.1634	-6.6270E-01	16
4(S-TI%)		14(S-CO)	-0.1217	0.0000E+00	7
4(S-TI%)		15(S-CR)	1.0000	0.0000E+00	2
4(S-TI%)		16(S-CU)	-0.1243	-4.8516E-01	15
4(S-TI%)		17(S-LA)	0.0121	3.6323E-02	9
4(S-TI%)		18(S-MO)	-0.4472	0.0000E+00	3
4(S-TI%)		19(S-NB)	-0.7647	-3.3568E+00	8
4(S-TI%)		20(S-NI)	-0.3056	0.0000E+00	5
4(S-TI%)		21(S-PB)	-0.1759	-6.1888E-01	12
4(S-TI%)		23(S-SC)	0.0000	0.0000E+00	1
4(S-TI%)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		25(S-SR)	-0.1479	0.0000E+00	6
4(S-TI%)		26(S-V)	0.1986	6.7198E-01	11
4(S-TI%)		28(S-Y)	-0.4039	-1.5295E+00	12
4(S-TI%)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
4(S-TI%)		30(S-ZR)	0.5995	2.9010E+00	15
5(S-MN)		6(S-AG)	-0.6325	0.0000E+00	2
5(S-MN)		9(S-B)	0.2243	0.0000E+00	7
5(S-MN)		10(S-BA)	-0.6951	-3.6174E+00	14
5(S-MN)		11(S-BE)	-0.0552	-2.0689E-01	14
5(S-MN)		14(S-CO)	0.4039	0.0000E+00	5
5(S-MN)		15(S-CR)	-0.6325	0.0000E+00	2
5(S-MN)		16(S-CU)	-0.0829	-2.9985E-01	13
5(S-MN)		17(S-LA)	-0.1410	0.0000E+00	7
5(S-MN)		18(S-MO)	0.0000	0.0000E+00	1
5(S-MN)		19(S-NB)	-0.1119	0.0000E+00	6
5(S-MN)		20(S-NI)	0.4167	0.0000E+00	5
5(S-MN)		21(S-PB)	-0.3674	-1.2490E+00	10
5(S-MN)		23(S-SC)	0.0000	0.0000E+00	1
5(S-MN)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		

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SPEARMAN CORRELATION COEFFICIENTS FOR SAWMILL CREEK AREA ROCKS

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
5(S-MN)		25(S-SR)	-0.0742	0.0000E+00	5
5(S-MN)		26(S-V)	-0.4788	-1.6363E+00	9
5(S-MN)		28(S-Y)	0.2295	7.4578E-01	10
5(S-MN)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
5(S-MN)		30(S-ZR)	-0.4456	-1.7947E+00	13
6(S-AG)		9(S-B)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		10(S-BA)	0.3162	0.0000E+00	2
6(S-AG)		11(S-BE)	0.4617	0.0000E+00	3
6(S-AG)		14(S-CO)	0.0000	0.0000E+00	1
6(S-AG)		15(S-CR)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		16(S-CU)	0.2000	0.0000E+00	3
6(S-AG)		17(S-LA)	-0.6325	0.0000E+00	2
6(S-AG)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		19(S-NB)	0.0000	0.0000E+00	1
6(S-AG)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		21(S-PB)	-0.6325	0.0000E+00	2
6(S-AG)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		26(S-V)	0.5000	0.0000E+00	1
6(S-AG)		28(S-Y)	-0.9487	0.0000E+00	2
6(S-AG)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
6(S-AG)		30(S-ZR)	0.2236	0.0000E+00	3
9(S-B)		10(S-BA)	-0.0502	-1.4221E-01	8
9(S-B)		11(S-BE)	0.0639	1.9221E-01	9
9(S-B)		14(S-CO)	0.1054	0.0000E+00	2
9(S-B)		15(S-CR)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		16(S-CU)	0.2247	6.9165E-01	9
9(S-B)		17(S-LA)	0.6187	0.0000E+00	5
9(S-B)		18(S-MO)	0.0000	0.0000E+00	2
9(S-B)		19(S-NB)	0.2949	0.0000E+00	6
9(S-B)		20(S-NI)	0.5000	0.0000E+00	1
9(S-B)		21(S-PB)	-0.1094	-3.1137E-01	8
9(S-B)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		25(S-SR)	0.2868	0.0000E+00	3
9(S-B)		26(S-V)	0.0070	0.0000E+00	6
9(S-B)		28(S-Y)	0.6300	0.0000E+00	7
9(S-B)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
9(S-B)		30(S-ZR)	0.2801	8.2540E-01	8
10(S-BA)		11(S-BE)	0.2159	8.5640E-01	15
10(S-BA)		14(S-CO)	-0.0563	0.0000E+00	6
10(S-BA)		15(S-CR)	0.4000	0.0000E+00	2
10(S-BA)		16(S-CU)	0.0860	3.2300E-01	14
10(S-BA)		17(S-LA)	0.5975	2.1076E+00	8
10(S-BA)		18(S-MO)	-0.8165	0.0000E+00	2
10(S-BA)		19(S-NB)	-0.1567	0.0000E+00	7
10(S-BA)		20(S-NI)	-0.2265	0.0000E+00	5
10(S-BA)		21(S-PB)	0.2178	7.4027E-01	11
10(S-BA)		23(S-SC)	0.5000	0.0000E+00	1

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SPEARMAN CORRELATION COEFFICIENTS FOR SAWMILL CREEK AREA ROCKS

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
10(S-BA)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		25(S-SR)	-0.2996	0.0000E+00	5
10(S-BA)		26(S-V)	0.2356	7.6656E-01	10
10(S-BA)		28(S-Y)	-0.1395	-4.6739E-01	11
10(S-BA)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
10(S-BA)		30(S-ZR)	0.6055	2.8468E+00	14
11(S-BE)		14(S-CO)	0.4430	0.0000E+00	7
11(S-BE)		15(S-CR)	0.9487	0.0000E+00	2
11(S-BE)		16(S-CU)	-0.1205	-4.7012E-01	15
11(S-BE)		17(S-LA)	0.1428	4.3272E-01	9
11(S-BE)		18(S-MO)	0.7500	0.0000E+00	3
11(S-BE)		19(S-NB)	0.6340	2.3190E+00	8
11(S-BE)		20(S-NI)	-0.1143	0.0000E+00	5
11(S-BE)		21(S-PB)	0.7077	3.4699E+00	12
11(S-BE)		23(S-SC)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
11(S-BE)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		25(S-SR)	0.1394	0.0000E+00	6
11(S-BE)		26(S-V)	-0.4344	-1.5997E+00	11
11(S-BE)		28(S-Y)	0.5643	2.3678E+00	12
11(S-BE)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
11(S-BE)		30(S-ZR)	0.3439	1.4183E+00	15
14(S-CO)		15(S-CR)	0.1054	0.0000E+00	2
14(S-CO)		16(S-CU)	0.2845	0.0000E+00	7
14(S-CO)		17(S-LA)	0.8165	0.0000E+00	2
14(S-CO)		18(S-MO)	-0.5443	0.0000E+00	2
14(S-CO)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		20(S-NI)	0.8636	0.0000E+00	4
14(S-CO)		21(S-PB)	0.2052	0.0000E+00	3
14(S-CO)		23(S-SC)	0.8660	0.0000E+00	1
14(S-CO)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		25(S-SR)	0.7833	0.0000E+00	4
14(S-CO)		26(S-V)	-0.0510	0.0000E+00	6
14(S-CO)		28(S-Y)	0.4596	0.0000E+00	3
14(S-CO)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
14(S-CO)		30(S-ZR)	0.5158	0.0000E+00	6
15(S-CR)		16(S-CU)	-0.8000	0.0000E+00	2
15(S-CR)		17(S-LA)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		18(S-MO)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		19(S-NB)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		20(S-NI)	-0.2108	0.0000E+00	2
15(S-CR)		21(S-PB)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		25(S-SR)	HAS ONE OF THE COLUMNS WITH ALL THE SAME VALUE.		
15(S-CR)		26(S-V)	0.7746	0.0000E+00	2
15(S-CR)		28(S-Y)	0.8660	0.0000E+00	1
15(S-CR)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
15(S-CR)		30(S-ZR)	1.0000	0.0000E+00	2
16(S-CU)		17(S-LA)	-0.0688	-1.9498E-01	8
16(S-CU)		18(S-MO)	0.2236	0.0000E+00	3

SPEARMAN CORRELATION COEFFICIENTS FOR SAWMILL CREEK AREA ROCKS

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
16(S-CU)		19(S-NB)	0.4473	0.0000E+00	7
16(S-CU)		20(S-NI)	0.3853	0.0000E+00	5
16(S-CU)		21(S-PB)	0.3119	1.0887E+00	11
16(S-CU)		23(S-SC)	-1.0000	0.0000E+00	1
16(S-CU)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		25(S-SR)	0.3936	0.0000E+00	6
16(S-CU)		26(S-V)	0.4531	1.6072E+00	10
16(S-CU)		28(S-Y)	-0.3935	-1.4198E+00	11
16(S-CU)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
16(S-CU)		30(S-ZR)	-0.1723	-6.5450E-01	14
17(S-LA)		18(S-MO)	-0.8333	0.0000E+00	2
17(S-LA)		19(S-NB)	-0.1284	0.0000E+00	6
17(S-LA)		20(S-NI)	-0.8660	0.0000E+00	1
17(S-LA)		21(S-PB)	0.2439	7.5449E-01	9
17(S-LA)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		25(S-SR)	-0.5000	0.0000E+00	2
17(S-LA)		26(S-V)	-0.3257	0.0000E+00	7
17(S-LA)		28(S-Y)	0.4636	1.5697E+00	9
17(S-LA)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
17(S-LA)		30(S-ZR)	0.8519	4.8797E+00	9
18(S-MO)		19(S-NB)	0.8660	0.0000E+00	1
18(S-MO)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		21(S-PB)	0.3441	0.0000E+00	3
18(S-MO)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		26(S-V)	0.2294	0.0000E+00	3
18(S-MO)		28(S-Y)	0.3162	0.0000E+00	2
18(S-MO)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
18(S-MO)		30(S-ZR)	-0.9487	0.0000E+00	2
19(S-NB)		20(S-NI)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		21(S-PB)	0.4285	1.3414E+00	8
19(S-NB)		23(S-SC)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		25(S-SR)	-0.5000	0.0000E+00	1
19(S-NB)		26(S-V)	0.2200	0.0000E+00	4
19(S-NB)		28(S-Y)	0.2839	8.3760E-01	8
19(S-NB)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
19(S-NB)		30(S-ZR)	-0.7213	-2.9452E+00	8
20(S-NI)		21(S-PB)	-0.9487	0.0000E+00	2
20(S-NI)		23(S-SC)	0.0000	0.0000E+00	1
20(S-NI)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		25(S-SR)	0.5441	0.0000E+00	3
20(S-NI)		26(S-V)	0.3144	0.0000E+00	5
20(S-NI)		28(S-Y)	-0.6325	0.0000E+00	2
20(S-NI)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
20(S-NI)		30(S-ZR)	-0.1791	0.0000E+00	4
21(S-PB)		23(S-SC)	0.0000	0.0000E+00	1
21(S-PB)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		

SPEARMAN CORRELATION COEFFICIENTS FOR SAWMILL CREEK AREA ROCKS

COLUMN	VS	COLUMN	CORR COEFF	SIGN TEST	NO DEG FREEDOM
21(S-PB)		25(S-SR)	0.2163	0.0000E+00	3
21(S-PB)		26(S-V)	0.0739	2.0950E-01	8
21(S-PB)		28(S-Y)	0.2277	7.7572E-01	11
21(S-PB)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
21(S-PB)		30(S-ZR)	0.0075	2.4906E-02	11
23(S-SC)		24(S-SN)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		26(S-V)	0.0000	0.0000E+00	1
23(S-SC)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
23(S-SC)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		25(S-SR)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		26(S-V)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		28(S-Y)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
24(S-SN)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		
25(S-SR)		26(S-V)	0.3966	0.0000E+00	5
25(S-SR)		28(S-Y)	-0.1863	0.0000E+00	3
25(S-SR)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
25(S-SR)		30(S-ZR)	0.1277	0.0000E+00	5
26(S-V)		28(S-Y)	-0.4070	-1.2602E+00	8
26(S-V)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
26(S-V)		30(S-ZR)	-0.2636	-8.6424E-01	10
28(S-Y)		29(S-ZN)	LESS THAN 3 PAIRS DETECTED.		
28(S-Y)		30(S-ZR)	0.0921	3.2045E-01	12
29(S-ZN)		30(S-ZR)	LESS THAN 3 PAIRS DETECTED.		

Table 3.--Analytical results for nonmagnetic (NM-1) and magnetic (M-1) heavy-mineral concentrate samples, <80-mesh stream-sediment samples, and rock samples, Hells Hole Further Planning Area, (RARE II), Greenlee County, Arizona-Grant County, New Mexico

HELLS HOLE (NM-1) CONCENTRATE DATA

Sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
77ST100N	32 59 59	108 58 28	1.0	.50	50.00	1.50	1,000	N	N	N	20	5,000
77ST101N	32 59 59	108 58 40	.7	.50	50.00	.20	1,500	N	N	N	<20	7,000
77ST102N	32 59 29	108 59 3	.5	.20	50.00	1.00	1,000	N	N	N	20	>10,000
77ST103N	32 58 25	108 58 38	1.0	.70	50.00	.20	1,000	N	N	N	<20	2,000
77ST104N	32 57 30	108 58 6	.5	.50	50.00	.10	1,500	N	N	N	<20	300
77ST105N	32 57 7	108 57 35	.5	.50	50.00	.30	1,500	N	N	N	<20	500
77YV200N	32 54 35	109 3 0	1.5	.07	3.00	.70	150	N	N	N	<20	>5,000
77YV201N	32 54 3	109 2 35	1.5	<.05	20.00	.50	100	N	N	N	<20	>5,000
77YV202N	32 53 57	109 2 35	1.5	<.05	7.00	.30	150	70	N	<20	<20	>5,000
77YV204N	32 53 46	109 0 39	1.5	.10	7.00	.70	300	N	N	N	<20	>5,000
78ST233N	32 53 3	108 58 54	1.5	.15	15.00	1.00	300	N	N	N	<20	>5,000
78ST234N	32 53 48	108 59 6	1.5	.15	7.00	>1.00	500	N	N	N	<20	>5,000
78ST235N	32 54 6	109 0 0	1.0	<.05	7.00	.20	200	N	N	N	<20	>5,000
78ST236N	32 55 47	108 59 42	.3	.10	20.00	.15	500	N	N	N	<20	3,000
78ST237N	32 55 41	108 58 45	2.0	.50	1.50	>1.00	700	N	N	N	<20	700
78ST238N	32 56 2	108 58 3	1.5	<.05	.70	>1.00	1,000	N	N	N	<20	1,000
78ST239N	32 57 26	108 59 43	1.5	5.00	15.00	.70	2,000	N	N	N	<20	1,000
78BL104N	33 1 33	109 7 53	.3	.05	2.00	.10	700	N	N	N	<20	>5,000
78BL105N	33 1 37	109 7 53	1.5	.10	5.00	.15	1,500	N	N	N	<20	>5,000
78BL106N	33 0 18	109 7 24	.5	.70	7.00	.20	1,000	N	N	N	<20	>5,000
78YV214N	32 56 26	109 1 6	1.5	.05	5.00	.70	200	N	N	N	<20	5,000
78YV215N	32 56 51	109 1 50	1.0	5.00	10.00	.20	2,000	N	N	N	<20	>5,000
78YV216N	32 56 31	109 3 36	2.0	1.00	3.00	>1.00	500	N	<500	N	<20	>5,000
78YV217N	32 56 59	109 3 48	.7	7.00	10.00	.07	5,000	N	N	N	<20	1,500
78YV218N	32 56 20	109 3 8	3.0	1.00	5.00	>1.00	1,000	N	1,500	N	50	>5,000
78YV219N	32 58 0	109 2 30	.5	.50	20.00	.30	1,500	N	N	N	<20	>5,000
78YV220N	32 57 56	109 2 21	1.5	7.00	15.00	.20	3,000	N	N	N	<20	>5,000
78YV221N	32 58 30	109 3 25	1.5	1.50	15.00	1.00	2,000	N	N	N	<20	300
78YV222N	32 58 59	109 2 49	.5	.30	20.00	.50	500	N	N	N	<20	1,500
78YV223N	32 59 3	109 2 59	1.0	.10	.20	1.00	300	30	N	N	<20	>5,000
78YV224N	32 51 27	109 3 30	.5	3.00	7.00	.10	1,500	N	N	N	<20	>5,000
78YV225N	32 57 6	109 5 27	.7	.70	3.00	.20	1,000	N	N	N	<20	>5,000
78YV226N	32 58 0	109 6 12	.5	5.00	10.00	.10	5,000	N	700	N	<20	>5,000
78YV227N	32 58 50	109 7 20	.7	7.00	10.00	.07	5,000	N	N	N	<20	>5,000
78YV228N	32 59 48	109 8 23	.5	7.00	15.00	5.00	5,000	N	N	N	<20	>5,000
78YV230N	32 52 13	109 1 48	1.5	<.05	.50	1.00	20	N	N	N	<20	>5,000
78YV231N	32 52 54	109 2 56	3.0	<.05	.70	>1.00	70	N	N	N	100	5,000
78YV233N	32 53 11	109 2 44	1.5	<.05	.10	>1.00	50	N	N	N	<20	>5,000
78YV234N	32 54 59	109 3 21	1.5	.50	7.00	>1.00	500	N	N	N	<20	>5,000
78YV235N	33 0 17	109 8 26	.5	1.50	3.00	.10	1,500	N	N	N	N	>5,000
78YV103N	32 55 11	109 4 5	1.0	.30	.70	.30	300	N	N	N	<20	300
78YV106N	32 56 4	109 4 58	.7	.30	.70	.15	300	N	N	N	<20	500
78YV108N	32 56 27	109 4 25	.7	.10	1.50	.50	300	N	N	N	<20	300
78YV109N	32 56 41	109 4 22	1.5	.10	1.00	.70	700	N	N	N	<20	1,500
78YV110N	32 55 56	109 4 55	1.5	.50	2.00	.50	2,000	N	N	N	<20	500

HELLS HOLE (NM-1) CONCENTRATE DATA

Sample	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB
77ST100N	2	N	N	N	20	15	1,000	N	50	N	<20	N
77ST101N	2	N	N	N	30	20	>2,000	N	50	N	<20	N
77ST102N	5	N	N	N	20	10	2,000	N	<50	N	<20	N
77ST103N	5	N	N	N	150	10	1,500	N	50	N	150	N
77ST104N	N	N	N	N	10	10	>2,000	N	50	N	<20	N
77ST105N	<2	N	N	N	10	20	>2,000	N	50	N	<20	N
77YV200N	<2	N	N	200	30	50	70	<10	N	N	200	N
77YV201N	<2	N	N	N	20	20	50	N	N	N	20	N
77YV202N	<2	N	N	N	30	30	50	<10	N	N	30	N
77YV204N	N	N	N	<10	30	30	70	<10	N	N	30	N
78ST233N	<2	N	N	<10	30	50	100	30	N	<10	150	N
78ST234N	2	N	N	N	<20	150	200	N	<50	<10	300	N
78ST235N	<2	N	N	<10	<20	700	50	N	N	<10	200	N
78ST236N	<2	N	N	N	<20	15	1,000	30	<50	<10	N	N
78ST237N	<2	N	N	<10	300	30	300	N	<50	<10	N	N
78ST238N	15	N	N	<10	<20	<10	<50	N	<50	<10	N	N
78ST239N	10	N	N	100	<20	<10	700	N	<50	<10	N	N
78BL104N	<2	N	N	10	<20	200	N	N	N	<10	70	N
78BL105N	2	N	N	10	<20	150	150	N	N	<10	20	N
78BL106N	3	N	N	10	<20	20	150	N	N	<10	N	N
78YV214N	<2	N	N	10	20	100	200	15	N	<10	20	N
78YV215N	<2	N	N	20	20	20	100	N	N	<10	70	N
78YV216N	<2	N	N	10	500	3,000	100	N	<50	20	500	N
78YV217N	<2	N	N	50	<20	20	N	N	N	20	<20	N
78YV218N	<2	N	N	20	<20	200	500	N	200	<10	50	N
78YV219N	<2	N	N	<10	<20	15	>1,000	N	<50	<10	<20	N
78YV220N	<2	N	N	30	<20	10	70	N	N	20	<20	N
78YV221N	5	N	N	10	<20	15	300	N	<50	<10	<20	N
78YV222N	N	N	N	<10	<20	15	>1,000	N	<50	<10	<20	N
78YV223N	10	N	70	N	<20	15	100	N	<50	<10	<20	N
78YV224N	<2	N	N	10	<20	1,000	200	N	N	<10	<20	N
78YV225N	2	N	<50	<10	<20	15	70	N	N	<10	<20	N
78YV226N	150	N	N	30	<20	200	N	N	N	<10	<20	N
78YV227N	<2	N	N	20	<20	10	N	15	N	<10	150	N
78YV228N	5	N	N	20	<20	30	200	N	N	<10	<20	N
78YV230N	N	N	N	<10	70	50	N	10	N	<10	<20	N
78YV231N	<2	N	N	<10	200	150	70	20	<50	<10	150	N
78YV233N	<2	N	N	<10	150	70	50	15	<50	<10	70	N
78YV234N	<2	N	N	10	<20	70	500	N	<50	<10	30	N
78YV235N	<2	N	N	10	<20	15	<50	N	N	<10	N	N
78YV103N	<2	N	N	10	<20	1,000	<50	N	N	<10	<20	N
78YV106N	N	N	N	<10	100	700	<50	N	N	<10	N	N
78YV108N	<2	N	N	<10	<20	20	100	N	N	<10	<20	N
78YV109N	<2	N	N	<10	<20	2,000	150	<10	N	<10	N	N
78YV110N	<2	N	N	<10	150	500	70	<10	N	<10	N	N

HELLS HOLE (NM-1) CONCENTRATE DATA

Sample	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
77ST100N	20	70	700	150	N	700	N	>2,000	--
77ST101N	30	20	1,500	100	N	1,000	N	>2,000	--
77ST102N	20	50	2,000	100	N	700	N	>2,000	--
77ST103N	20	N	1,500	100	N	700	N	>2,000	--
77ST104N	30	N	2,000	100	N	1,000	N	>2,000	--
77ST105N	30	N	2,000	100	N	1,000	N	>2,000	--
77YV200N	15	N	700	150	N	70	N	>1,000	--
77YV201N	10	N	500	100	<100	100	N	>1,000	--
77YV202N	<10	N	500	100	N	20	N	>1,000	--
77YV204N	15	N	700	150	N	100	N	>1,000	--
78ST233N	<10	700	1,000	100	N	150	N	>1,000	N
78ST234N	15	50	300	100	N	500	N	>1,000	N
78ST235N	<10	<20	1,500	70	N	100	N	>1,000	<200
78ST236N	<10	700	700	20	N	500	N	>1,000	N
78ST237N	30	50	<200	200	N	1,000	N	>1,000	N
78ST238N	<10	>1,000	N	150	N	1,000	N	>1,000	1,000
78ST239N	<10	100	2,000	200	N	700	N	>1,000	N
78BL104N	<10	150	5,000	<20	N	70	N	>1,000	N
78BL105N	<10	300	3,000	<20	N	300	N	>1,000	N
78BL106N	<10	N	3,000	20	N	300	N	>1,000	N
78YV214N	20	50	700	200	N	100	N	>1,000	N
78YV215N	20	70	2,000	70	N	100	N	>1,000	N
78YV216N	20	150	2,000	150	N	500	700	>1,000	200
78YV217N	<10	N	700	50	N	20	N	1,000	N
78YV218N	<10	N	3,000	500	N	200	N	>1,000	N
78YV219N	<10	N	700	70	N	700	N	>1,000	N
78YV220N	<10	N	1,500	100	N	70	N	>1,000	N
78YV221N	<10	N	<200	100	N	700	N	>1,000	N
78YV222N	<10	N	<200	100	N	500	N	>1,000	N
78YV223N	100	700	5,000	100	N	>2,000	N	>1,000	700
78YV224N	<10	N	2,000	20	N	200	N	>1,000	N
78YV225N	<10	500	2,000	30	N	150	N	>1,000	N
78YV226N	<10	N	2,000	50	N	50	N	>1,000	N
78YV227N	<10	N	2,000	70	N	50	N	1,000	N
78YV228N	<10	N	2,000	70	N	300	N	>1,000	N
78YV230N	<10	N	500	200	N	20	N	>1,000	N
78YV231N	<10	N	1,000	300	N	20	N	>1,000	N
78YV233N	<10	N	1,000	300	N	20	N	>1,000	N
78YV234N	30	N	700	150	N	200	N	>1,000	N
78YV235N	<10	N	3,000	<20	N	20	N	300	N
78YV103N	30	700	200	70	N	100	N	>1,000	N
78YV106N	50	N	<200	20	N	50	N	>1,000	N
78YV108N	70	150	<200	70	N	150	N	>1,000	N
78YV109N	>100	100	<200	50	N	500	N	>1,000	N
78YV110N	100	N	<200	100	N	150	N	>1,000	N

HELLS HOLE (NM-1) CONCENTRATE DATA--continued

Sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
78YV112N	32 54 34	109 3 12	1.0	.10	1.00	1.00	300	N	N	N	<20	>5,000
78YV113N	32 54 48	109 2 47	1.0	.15	1.00	>1.00	300	N	N	N	<20	2,000
78YV114N	32 55 8	109 2 42	1.0	.20	1.00	1.00	300	N	<500	N	<20	>5,000
78YV115N	32 55 13	109 2 50	1.0	.30	.70	1.00	300	N	N	N	<20	1,500
78YV119N	32 56 3	109 3 6	1.5	.50	3.00	>1.00	500	700	<500	N	<20	700
78YV120N	32 56 3	109 3 16	1.5	.07	<.10	>1.00	300	N	<500	N	<20	>5,000
78YV121N	32 56 7	109 3 21	1.0	<.05	.10	>1.00	700	N	500	N	<20	>5,000
78YV124N	32 56 17	109 2 26	2.0	.07	.30	>1.00	300	N	1,000	N	<20	>5,000
78YV124A	32 55 55	109 1 55	1.5	.50	1.50	>1.00	500	N	N	N	<20	>5,000
78YV125N	32 55 45	109 0 57	1.0	.10	.70	>1.00	300	N	N	N	<20	500
78YV126N	32 55 36	109 0 40	1.5	<.05	.15	1.00	70	N	N	N	<20	2,000
78YV128N	32 54 52	109 1 34	.7	.20	.70	.30	300	N	N	N	<20	1,000
78YV129N	32 54 58	109 2 9	1.5	.10	1.50	.50	300	N	N	N	<20	>5,000
78BL401N	33 4 18	109 4 54	1.0	.20	10.00	.70	300	N	N	N	<20	3,000
78BL402N	33 6 6	109 3 15	.5	.20	7.00	>1.00	500	N	N	N	<20	100
79ST300N	32 56 25	108 58 56	.5	.20	20.00	.15	1,000	N	N	N	<20	200
79ST301N	32 56 56	108 58 3	.5	.20	>20.00	.10	1,000	N	N	N	<20	100
79ST302N	32 58 27	108 59 39	<.1	<.05	.30	.20	150	N	N	N	<20	<50
79ST303N	32 58 30	108 59 33	1.0	.10	.50	1.00	1,500	N	N	N	<20	3,000
79YV301N	32 59 55	109 5 53	.2	1.00	30.00	.20	1,000	N	N	N	<20	>5,000
79YV302N	32 59 33	109 5 49	.5	1.50	7.00	.05	1,500	N	N	N	<20	>5,000
79YV303N	32 58 13	109 6 6	.7	3.00	15.00	.20	5,000	N	<500	N	30	>5,000
79YV304N	32 58 15	109 6 11	.5	3.00	10.00	.07	3,000	N	N	N	20	>5,000
79YV305N	32 58 14	109 5 35	1.0	1.00	15.00	.70	1,000	N	N	N	<20	>5,000
79YV306N	32 57 35	109 5 13	3.0	2.00	7.00	.50	2,000	N	N	N	30	>5,000
79YV307N	32 57 33	109 5 5	2.0	.70	7.00	.50	1,000	N	N	N	<20	>5,000
79YV308N	32 57 37	109 5 6	1.5	3.00	15.00	.70	2,000	N	N	N	<20	>5,000
79YV309N	32 58 42	109 4 13	1.0	.20	2.00	.15	500	N	N	N	20	7,000
79YV310N	32 59 29	109 3 12	1.0	.50	10.00	.50	1,000	N	N	N	<20	3,000
79YV311N	32 57 18	109 3 45	2.0	.20	15.00	.70	1,500	N	N	N	20	>5,000
79YV312N	32 57 11	109 2 52	1.5	5.00	15.00	.15	5,000	N	N	N	<20	>5,000
79YV313N	32 56 54	109 2 22	1.0	7.00	15.00	.10	7,000	N	N	N	<20	>5,000
79YV314N	32 56 26	109 1 48	1.0	.30	.70	1.00	700	N	N	N	<20	>5,000
79YV315N	32 56 57	109 1 25	1.5	.70	5.00	1.50	700	N	N	N	30	1,000
79YV316N	32 56 52	109 1 22	.3	<.05	.70	1.50	500	N	N	N	50	3,000
79YV317N	32 56 49	109 1 13	.2	1.50	20.00	.20	1,000	N	<500	<20	20	1,000
79YV318N	32 56 16	109 0 44	.3	.15	30.00	.70	1,000	N	N	N	<20	300
79YV319N	32 59 51	109 3 40	.3	<.05	1.00	.70	1,000	N	N	N	<20	700
79YV320N	32 59 18	109 3 39	.5	.30	30.00	.50	2,000	N	N	N	70	300
79YV321N	32 59 17	109 3 31	.3	1.00	15.00	.30	1,000	N	N	N	<20	300
79YV322N	32 57 56	109 2 41	.5	5.00	20.00	.15	3,000	N	N	N	<20	>5,000
79YV323N	32 59 29	109 1 15	.2	1.50	10.00	.70	1,500	N	500	N	20	>5,000
79YV324N	32 58 16	109 1 35	.3	.15	.50	.20	700	N	<500	N	<20	>5,000
79YV325N	32 58 13	109 1 34	.3	.15	.70	.20	500	N	<500	N	<20	>5,000
79YV326N	32 55 36	109 4 44	.3	.20	15.00	.50	500	N	<500	N	<20	1,500

HELLS HOLE (NM-1) CONCENTRATE DATA--continued

Sample	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB
78YV112N	<2	N	N	<10	<20	30	50	<10	N	<10	<20	N
78YV113N	<2	N	N	<10	<20	20	<50	N	<50	<10	700	N
78YV114N	<2	N	N	10	<20	500	150	20	<50	<10	10,000	N
78YV115N	<2	N	N	10	<20	100	<50	N	<50	<10	100	N
78YV119N	<2	N	N	15	<20	15,000	<50	<10	<50	<10	300	N
78YV120N	7	N	N	<10	<20	150	100	N	50	<10	50	N
78YV121N	2	N	N	<10	<20	1,500	150	N	300	<10	1,500	N
78YV124N	2	N	N	<10	<20	70	500	<10	50	<10	<20	N
78YV124A	<2	N	N	10	70	1,000	50	N	<50	<10	150	N
78YV125N	2	N	N	<10	<20	200	70	<10	<50	<10	<20	N
78YV126N	N	N	N	<10	50	15	50	10	N	<10	20	N
78YV128N	N	N	N	10	<20	20	<50	70	N	<10	150	N
78YV129N	<2	N	N	10	<20	30	70	N	N	<10	<20	N
78BL401N	5	N	N	N	<20	150	500	N	N	N	N	N
78BL402N	3	30	N	N	<20	100	200	N	<50	N	>20,000	300
79ST300N	N	N	N	N	<20	50	>1,000	N	N	N	20	N
79ST301N	N	N	N	N	<20	>10	1,000	N	N	N	20	N
79ST302N	<2	N	N	N	<20	<10	70	N	N	N	20	N
79ST303N	<2	N	N	N	<20	<10	150	N	N	N	70	N
79YV301N	<2	N	N	N	<20	70	300	N	N	N	<20	N
79YV302N	<2	N	N	N	<20	10	<50	20	N	N	<20	N
79YV303N	150	N	N	15	<20	30	70	N	N	N	<20	N
79YV304N	70	N	N	10	<20	15	<50	N	N	N	30	N
79YV305N	<2	N	N	N	<20	200	200	N	N	N	30	N
79YV306N	3	N	N	15	<20	50	<50	N	N	N	20	N
79YV307N	2	N	N	10	<20	20	100	N	N	N	20	N
79YV308N	<2	N	N	10	50	150	70	N	N	N	50	N
79YV309N	<2	N	N	<10	<20	20	<50	N	N	N	<20	N
79YV310N	N	N	N	10	<20	70	70	N	N	N	<20	N
79YV311N	3	N	N	<10	<20	200	200	N	N	N	100	N
79YV312N	N	N	N	20	<20	2,000	<50	N	N	<10	<20	N
79YV313N	N	N	N	30	<20	20	<50	N	N	<10	<20	N
79YV314N	<2	N	N	N	50	50	300	N	<50	N	<20	N
79YV315N	N	N	N	10	20	100	100	N	<50	N	<20	N
79YV316N	<2	N	N	N	<20	<10	300	N	<50	N	<20	N
79YV317N	700	N	N	<10	700	<10	200	N	50	70	<20	<200
79YV318N	<2	N	N	N	<20	50	100	N	N	N	20	N
79YV319N	50	N	N	N	<20	1,000	200	N	N	N	N	N
79YV320N	20	N	N	N	<20	1,000	200	N	N	N	N	N
79YV321N	<2	N	N	N	<20	200	100	N	N	N	<20	N
79YV322N	<2	N	N	30	<20	50	100	N	N	N	<20	N
79YV323N	100	N	N	10	<20	200	100	N	N	N	200	N
79YV324N	30	N	N	N	<20	15	70	N	N	N	20	N
79YV325N	20	N	N	<10	<20	20	70	N	N	N	20	N
79YV326N	<2	N	N	<10	<20	200	70	N	N	N	20	N

HELLS HOLE (NM-1) CONCENTRATE DATA--continued

Sample	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
78YV112N	100	300	2,000	100	N	150	N	>1,000	N
78YV113N	70	N	<200	70	N	70	N	>1,000	N
78YV114N	70	70	300	150	<100	150	N	>1,000	N
78YV115N	30	N	300	100	<100	50	N	>1,000	N
78YV119N	>100	150	N	300	N	200	N	>1,000	N
78YV120N	100	>1,000	<200	70	N	500	N	>1,000	N
78YV121N	100	N	1,000	2,000	N	700	N	>1,000	N
78YV124N	>100	N	1,000	200	N	700	N	>1,000	N
78YV124A	30	N	700	100	N	70	N	>1,000	N
78YV125N	>100	N	<200	150	N	300	N	>1,000	N
78YV126N	15	N	500	150	N	20	N	1,000	N
78YV128N	15	N	<200	30	N	20	N	>1,000	N
78YV129N	15	N	500	100	N	50	N	1,000	N
78BL401N	100	N	<200	50	<100	700	N	>1,000	N
78BL402N	>100	<20	N	30	<100	500	N	>1,000	N
79ST300N	>100	N	700	30	N	300	N	>1,000	N
79ST301N	>100	N	1,000	20	N	700	N	>1,000	N
79ST302N	>100	20	N	30	N	300	N	>1,000	N
79ST303N	>100	>1,000	N	50	N	700	N	>1,000	<200
79YV301N	100	N	700	50	N	500	N	>1,000	N
79YV302N	10	N	10,000	50	N	30	N	700	N
79YV303N	50	N	1,500	50	N	70	N	>1,000	N
79YV304N	30	N	1,500	50	N	30	N	>1,000	N
79YV305N	50	200	1,500	50	100	200	N	>1,000	N
79YV306N	10	N	1,500	70	N	15	N	>1,000	N
79YV307N	N	N	1,500	30	N	70	N	>1,000	N
79YV308N	200	>1,000	1,000	70	N	700	N	>1,000	N
79YV309N	20	N	300	30	N	50	N	>1,000	N
79YV310N	30	N	300	70	N	70	N	>1,000	N
79YV311N	70	N	1,500	30	N	200	N	>1,000	N
79YV312N	15	N	700	70	N	20	N	>1,000	N
79YV313N	20	N	700	50	N	<20	N	>1,000	N
79YV314N	300	N	1,500	100	N	300	N	>1,000	N
79YV315N	30	N	<200	200	N	70	N	>1,000	N
79YV316N	300	>1,000	N	150	N	500	N	>1,000	N
79YV317N	200	>1,000	1,500	70	N	200	N	>1,000	N
79YV318N	100	>1,000	1,000	70	N	200	N	>1,000	N
79YV319N	300	N	N	100	N	700	N	>1,000	N
79YV320N	100	N	N	200	N	300	N	>1,000	N
79YV321N	150	N	N	50	N	200	N	>1,000	N
79YV322N	20	300	700	50	N	150	N	>1,000	N
79YV323N	100	N	1,500	100	N	200	N	>1,000	N
79YV324N	100	N	1,500	30	N	150	N	>1,000	N
79YV325N	100	N	1,500	30	N	150	N	>1,000	N
79YV326N	150	100	500	50	N	200	N	>1,000	N

HELLS HOLE (NM-1) CONCENTRATE DATA--continued

Sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
79MC100N	33 2 59	108 59 51	.5	.07	.70	.30	500	N	N	N	20	100
79MC101N	33 0 14	108 59 53	1.0	.50	>20.00	1.00	1,000	N	N	N	<20	1,500
79MC102N	33 0 13	108 59 51	.7	.50	>20.00	.20	1,000	N	N	N	<20	5,000
79MC103N	33 0 31	108 59 50	.7	.50	>20.00	.20	1,000	N	N	N	<20	>5,000
79MC104N	33 1 0	108 59 31	<1.0	<.50	3.00	.20	300	N	N	N	N	>100,000
79MC105N	33 1 7	108 59 41	5.0	.07	15.00	.50	300	N	N	N	<20	>5,000
79MC106N	33 1 26	108 59 33	.3	.10	15.00	.15	500	N	N	N	20	>5,000
79MC107N	33 1 29	108 59 16	<1.0	<.50	5.00	.20	300	N	N	N	N	500
79MC108N	33 1 59	108 59 18	<1.0	<.50	7.00	.10	1,000	N	N	N	N	N
79MC109N	33 2 6	108 59 12	<.5	.50	1.50	.02	300	N	N	N	N	500
79MC110N	33 2 35	108 59 27	.3	.15	20.00	.20	1,500	5	N	N	N	300
79MC111N	33 2 36	108 59 26	1.0	.30	15.00	.30	1,000	3,000	N	N	50	1,000
79MC200N	33 1 21	108 59 33	.5	.20	>20.00	.50	1,000	N	N	N	20	1,500
79BL300N	33 1 30	109 8 12	.3	.10	.70	.20	500	N	N	N	<20	>10,000
79BL301N	33 1 47	109 8 15	1.0	.15	5.00	.15	2,000	N	N	N	<20	>10,000
79BL302N	33 2 2	109 9 28	.5	.20	2.00	.07	1,000	N	N	N	30	>10,000
79BL303N	33 1 58	109 9 15	.3	1.00	2.00	.15	1,000	N	N	N	<20	>10,000
79BL304N	33 2 10	109 9 6	5.0	.20	15.00	.10	3,000	N	N	N	50	>10,000
79BL305N	33 2 18	109 8 32	1.0	.20	7.00	.50	3,000	N	N	N	20	>10,000
79BL306N	33 2 24	109 8 41	1.5	.30	10.00	.10	1,000	N	N	N	20	>10,000
79BL307N	33 2 31	109 8 25	.3	.20	2.00	.15	700	N	N	N	<20	>10,000
79BL309N	33 2 54	109 8 5	.3	.30	20.00	.03	1,500	N	N	N	20	>10,000
79BL310N	33 2 57	109 8 8	.1	.10	7.00	.10	500	N	N	N	<20	>10,000
79BL311N	33 0 46	109 7 7	1.5	.30	15.00	.15	1,000	N	N	N	20	>10,000
79BL312N	33 0 46	109 7 3	.5	2.00	20.00	.70	3,000	N	N	N	20	>10,000
79BL313N	33 0 25	109 6 44	1.0	.30	15.00	2.00	1,000	N	N	N	<20	>10,000
79BL314N	33 0 32	109 5 42	2.0	7.00	30.00	1.00	7,000	N	N	N	50	7,000
79BL315N	33 0 29	109 5 42	1.0	2.00	5.00	.50	2,000	N	N	N	<20	>10,000
79BL321N	33 6 25	109 6 17	5.0	10.00	>50.00	2.00	10,000	N	N	N	100	>10,000
79BL322N	33 6 25	109 6 13	1.0	.20	5.00	.70	700	N	N	N	<20	5,000
79BL323N	33 6 13	109 1 26	1.0	.20	10.00	>2.00	1,000	N	N	N	50	1,500
79BL324N	33 6 11	109 1 25	3.0	.50	.50	.50	1,000	N	N	N	150	100
79BL325N	33 5 49	109 0 56	1.0	.70	5.00	.70	1,000	N	N	N	100	300
79BL326N	33 5 21	109 1 4	.7	.10	5.00	1.50	1,000	N	N	N	50	200
79BL327N	33 5 6	109 1 21	3.0	.20	5.00	.50	3,000	N	N	N	70	200
79BL328N	33 5 9	109 1 23	1.5	.10	3.00	.50	1,500	N	N	N	70	3,000
79BL328A	33 0 42	109 4 26	.5	.10	1.50	.70	1,000	N	N	N	70	10,000
79BL329N	33 0 43	109 4 23	1.5	<.20	.70	1.00	5,000	N	N	N	N	5,000
79BL330N	33 0 15	109 3 58	.5	.10	7.00	.50	700	N	N	N	30	500
79BL331N	33 0 16	109 3 53	2.0	.20	1.50	1.50	5,000	N	N	N	30	N
79BL333N	33 2 26	109 6 12	3.0	.07	1.50	>2.00	7,000	N	N	N	70	>10,000
79BL336N	33 4 37	109 3 17	.7	<.05	.20	.15	1,000	N	N	N	50	N
79BL338N	33 4 9	109 0 3	.7	.10	20.00	.70	1,000	N	N	N	20	200
79BL342N	33 2 22	109 1 4	<.1	<.05	.05	.10	100	N	N	N	<20	200
79BL344N	33 4 11	109 4 27	.1	<.05	.50	.50	500	N	N	N	<20	N

HELLS HOLE (NM-1) CONCENTRATE DATA--continued

Sample	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB
79MC100N	20	N	N	N	N	N	100	N	N	N	70	N
79MC101N	N	N	N	<10	50	15	>1,000	N	N	<10	20	N
79MC102N	N	N	N	N	30	15	>1,000	N	N	<10	<20	N
79MC103N	N	N	N	N	20	20	>1,000	N	N	--	300	N
79MC104N	N	N	N	N	N	<100	200	N	N	N	N	N
79MC105N	N	N	N	30	<20	500	200	N	N	<10	30	N
79MC106N	<2	N	N	N	<20	20	200	N	N	N	300	N
79MC107N	N	N	N	N	200	N	N	N	N	N	700	N
79MC108N	N	N	N	N	N	N	N	N	N	N	N	N
79MC109N	10	N	N	N	N	N	N	N	N	N	N	N
79MC110N	10	N	N	N	N	10	150	N	N	N	500	N
79MC111N	15	N	N	N	N	<20	300	N	N	N	500	N
79MC200N	N	N	N	N	20	15	>1,000	N	N	N	30	N
79BL300N	<2	N	N	N	<20	10	100	N	N	N	30	N
79BL301N	<2	50	N	N	<20	100	200	N	N	N	30,000	<200
79BL302N	<2	N	N	N	<20	15	150	N	N	N	30	N
79BL303N	N	N	N	N	<20	700	100	N	N	N	20	N
79BL304N	N	50	N	20	<20	70	200	N	N	30	500	N
79BL305N	2	N	N	N	<20	30	150	N	50	N	20	N
79BL306N	<2	N	N	N	<20	150	500	N	N	20	20	N
79BL307N	2	N	N	N	<20	10	150	N	N	N	20	N
79BL309N	<2	N	N	N	<20	100	1,500	N	N	N	<20	N
79BL310N	N	N	N	N	<20	1,500	200	N	N	N	100	N
79BL311N	10	N	N	N	<20	20	200	N	<50	N	70	N
79BL312N	<2	N	N	<10	<20	70	500	N	<50	N	20	N
79BL313N	<2	N	N	N	<20	500	700	N	<50	N	1,500	N
79BL314N	<2	N	N	30	50	20	300	N	N	50	<20	N
79BL315N	N	N	N	N	<20	70	500	N	N	N	<20	N
79BL321N	<2	N	N	N	<20	1,000	1,000	N	N	100	<20	N
79BL322N	<2	N	N	N	<20	700	300	N	N	N	5,000	N
79BL323N	20	N	N	N	50	300	500	N	50	N	50	N
79BL324N	70	20	N	N	50	200	150	70	<50	N	70	2,000
79BL325N	50	20	N	N	50	150	500	30	<50	N	100	300
79BL326N	50	N	N	N	N	300	700	N	100	N	N	N
79BL327N	50	N	N	N	N	200	700	N	100	N	N	300
79BL328N	150	N	N	N	N	50	700	100	150	N	N	3,000
79BL328A	15	N	N	N	N	200	300	N	20	N	20	N
79BL329N	30	N	N	N	N	N	N	N	200	N	N	N
79BL330N	10	N	N	N	N	700	700	N	N	N	N	N
79BL331N	50	500	N	N	N	1,000	500	N	300	N	>50,000	N
79BL333N	7	N	N	N	N	700	300	N	500	N	100	N
79BL336N	50	N	N	N	N	20	300	N	N	N	N	N
79BL338N	20	30	N	N	20	15	1,000	150	30	N	70	1,000
79BL342N	5	N	N	N	N	70	N	N	N	N	50	N
79BL344N	50	N	N	N	N	300	N	N	N	N	N	N

HELLS HOLE (NM-1) CONCENTRATE DATA--continued

Sample	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
79MC100N	N	N	N	N	N	1,000	N	>2,000	<200
79MC101N	<10	N	1,000	70	N	500	N	150	N
79MC102N	<10	N	1,500	70	N	700	N	500	N
79MC103N	20	700	1,500	70	N	500	N	>1,000	N
79MC104N	N	N	7,000	N	N	200	N	>20,000	N
79MC105N	100	N	300	30	N	200	N	>1,000	N
79MC106N	>100	500	1,500	50	N	300	N	>1,000	N
79MC107N	N	N	N	N	N	300	N	>20,000	N
79MC108N	N	N	N	N	N	500	N	>20,000	N
79MC109N	N	N	N	N	N	300	N	>10,000	N
79MC110N	N	N	200	100	N	200	N	>200	N
79MC111N	N	N	N	70	N	300	N	>5,000	N
79MC200N	<10	N	1,000	50	N	500	N	700	N
79BL300N	<10	N	>10,000	N	N	20	N	>2,000	N
79BL301N	N	2,000	>10,000	30	N	100	N	>2,000	N
79BL302N	N	N	>10,000	N	N	20	N	2,000	N
79BL303N	N	N	10,000	N	N	30	N	>2,000	N
79BL304N	N	N	10,000	100	N	150	N	>2,000	N
79BL305N	N	N	10,000	20	N	70	N	>2,000	N
79BL306N	N	N	7,000	50	N	150	N	>2,000	N
79BL307N	N	N	>10,000	N	N	30	N	>2,000	N
79BL309N	N	N	5,000	70	N	500	N	>2,000	N
79BL310N	N	N	>10,000	N	N	150	N	>2,000	N
79BL311N	N	2,000	3,000	30	N	70	N	>2,000	N
79BL312N	N	N	5,000	70	N	500	N	>2,000	N
79BL313N	N	1,500	10,000	N	N	1,000	>20,000	>2,000	N
79BL314N	N	N	3,000	200	N	500	N	>2,000	N
79BL315N	N	>2,000	5,000	N	N	500	N	>2,000	N
79BL321N	N	>2,000	>10,000	300	N	2,000	N	>2,000	N
79BL322N	N	N	N	N	N	500	N	>1,000	N
79BL323N	N	>2,000	N	200	N	1,000	N	>2,000	300
79BL324N	N	>2,000	N	100	N	500	N	>2,000	N
79BL325N	N	>2,000	N	100	N	500	N	>2,000	500
79BL326N	N	>2,000	N	150	N	2,000	N	>2,000	N
79BL327N	N	>2,000	N	200	N	2,000	N	>2,000	N
79BL328N	N	>2,000	N	100	N	1,500	N	>2,000	N
79BL328A	N	300	N	100	N	500	N	>2,000	N
79BL329N	N	N	N	N	N	1,000	N	>10,000	N
79BL330N	N	500	N	150	N	1,000	N	>2,000	N
79BL331N	N	500	N	150	N	1,000	N	>2,000	N
79BL333N	N	150	500	30	N	300	N	>2,000	N
79BL336N	N	>2,000	N	50	N	700	N	>2,000	N
79BL338N	N	>2,000	2,000	150	N	700	N	>2,000	N
79BL342N	N	200	N	N	N	50	N	>2,000	N
79BL344N	N	1,000	N	N	N	500	N	>2,000	N

HELLS HOLE (NM-1) CONCENTRATE DATA--continued

Sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
79BL346N	33 4 30	109 4 13	1.0	.10	.70	.70	1,000	N	N	N	70	N
79BL347N	33 5 6	109 3 55	1.0	.07	.30	1.00	5,000	N	N	N	100	N
79BL348N	33 3 34	109 2 40	.5	.15	.70	1.00	700	N	N	N	30	150
79BL349N	33 3 23	109 2 34	.2	.07	7.00	1.50	700	N	N	N	30	50
79BL350N	33 3 17	109 2 30	.2	.02	.15	.50	500	N	N	N	50	50
79BL351N	33 3 17	109 2 25	.3	.03	.10	.70	700	N	N	N	50	N
79BL352N	33 3 58	109 2 48	.1	.02	.15	1.00	300	N	N	N	20	N
79BL353N	33 4 8	109 2 56	1.0	<.05	1.00	2.00	1,500	N	N	N	50	N
79BL355N	33 6 1	109 3 38	1.0	.20	<.10	.50	1,000	N	N	N	50	N
79BL356N	33 6 17	109 3 16	.5	.10	3.00	1.50	700	N	N	N	30	N
79BL359N	33 4 39	109 4 56	.5	<.20	1.00	1.50	300	N	N	N	N	15,000
79BL600N	33 0 50	109 0 49	.7	.20	30.00	1.00	1,500	N	N	N	20	1,500
79BL601N	33 0 47	109 0 38	.7	.30	30.00	2.00	1,500	N	N	N	20	10,000
79BL602N	33 0 24	109 0 25	.3	.20	20.00	.50	700	N	N	N	50	700
79BL604N	33 1 17	109 0 2	.7	.20	10.00	.50	700	N	N	N	30	>10,000
79BL605N	33 1 36	109 0 53	.7	.30	15.00	.30	1,500	N	N	N	30	7,000
79BL606N	33 1 25	109 1 53	<.1	<.05	.50	.50	300	N	N	N	300	N
79BL607N	33 2 17	109 0 58	.7	.15	5.00	1.50	>10,000	N	N	N	70	1,000
79BL609N	33 2 45	109 3 25	<.1	<.05	.50	.50	700	N	N	N	<20	N
79BL610N	33 3 47	109 2 41	.7	<.05	.50	.70	700	N	N	N	<20	N
79BL611N	33 3 53	109 2 51	.7	.15	.50	1.00	1,500	N	N	N	<20	N
79BL612N	33 4 19	109 1 49	.7	.05	2.00	.20	500	N	N	N	<20	N
79BL613N	33 4 16	109 1 10	1.0	<.05	1.00	.70	3,000	N	N	N	100	N
79BL614N	33 3 17	109 0 54	.2	.20	30.00	.05	1,000	N	N	N	<20	N
79BL615N	33 3 22	109 1 7	1.0	<.05	1.00	.50	>10,000	N	N	N	100	N
79BL617N	33 2 18	109 4 12	1.0	<.05	.30	.70	500	N	N	N	N	N
79BL618N	33 2 1	109 7 1	1.0	.50	30.00	1.00	7,000	N	N	N	70	>10,000
79BL619N	33 1 33	109 7 31	.7	.20	15.00	.10	3,000	N	N	N	20	>10,000
79BL620N	33 1 27	109 7 29	1.5	.50	10.00	.30	2,000	N	N	N	20	>10,000
80MC120N	33 0 26	108 58 26	1.0	.70	20.00	.20	1,000	N	N	N	N	1,000
80MC121N	33 0 41	108 58 11	--	--	--	--	--	--	--	--	--	--
80MC122N	33 0 51	108 58 9	.5	.70	20.00	.05	500	N	N	N	N	50
80MC123N	33 0 56	108 58 24	1.5	.70	7.00	1.00	500	N	N	N	N	>10,000
80MC124N	33 1 24	108 57 27	.5	.70	20.00	.10	700	N	N	N	N	300
80BL550N	33 5 35	109 4 6	--	--	--	--	--	--	--	--	--	--
80BL551N	33 5 57	109 3 38	2.0	3.00	.50	1.00	3,000	N	N	N	N	300
80BL552N	33 5 54	109 3 12	--	--	--	--	--	--	--	--	--	--

HELLS HOLE (NM-1) CONCENTRATE DATA--continued

Sample	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB
79BL346N	100	N	N	N	N	1,000	N	N	N	N	N	N
79BL347N	20	N	N	N	N	200	N	10	N	N	30	2,000
79BL348N	70	N	N	N	N	700	N	N	N	N	150	N
79BL349N	50	N	N	N	N	300	N	N	N	N	20	N
79BL350N	100	N	N	N	N	300	N	N	N	N	N	N
79BL351N	100	N	N	N	N	200	N	10	N	N	70	<200
79BL352N	20	N	N	N	N	300	N	N	N	N	N	N
79BL353N	100	N	N	N	N	3,000	N	N	N	N	N	1,000
79BL355N	30	N	N	N	N	500	N	N	100	N	N	500
79BL356N	30	N	N	N	100	10	N	N	N	N	15	N
79BL359N	30	N	N	N	N	N	N	N	N	N	N	N
79BL600N	10	N	N	N	N	50	1,000	N	N	N	N	N
79BL601N	3	N	N	N	10	20	1,000	N	<50	N	N	N
79BL602N	5	N	N	N	N	50	1,500	N	N	N	50	N
79BL604N	15	N	N	N	N	200	500	N	N	N	30	N
79BL605N	20	N	N	N	N	100	1,000	N	N	N	N	N
79BL606N	70	N	N	N	N	150	N	N	N	N	N	N
79BL607N	30	N	N	N	N	150	150	N	<50	N	N	N
79BL609N	70	N	N	N	N	<10	N	N	N	N	N	N
79BL610N	70	N	N	N	N	500	N	N	<50	N	N	N
79BL611N	50	N	N	N	N	500	N	N	100	N	N	N
79BL612N	70	N	N	N	N	200	N	N	N	N	N	200
79BL613N	100	N	N	N	N	100	N	50	N	N	700	1,000
79BL614N	5	N	N	N	N	20	1,500	N	N	N	N	N
79BL615N	200	N	N	N	N	N	N	N	N	N	N	N
79BL617N	70	N	N	N	N	300	300	N	N	N	N	N
79BL618N	30	N	N	N	N	2,000	300	N	70	N	7,000	N
79BL619N	7	N	N	N	N	300	150	N	N	N	N	N
79BL620N	10	N	N	N	N	700	150	N	N	N	N	N
80MC120N	2	N	N	N	N	15	1,000	N	N	N	N	N
80MC121N	--	--	--	--	--	--	--	--	--	--	--	--
80MC122N	N	N	N	N	N	15	1,000	N	N	N	N	N
80MC123N	5	N	N	N	N	150	700	N	N	N	N	N
80MC124N	N	N	N	N	N	100	1,500	N	N	N	N	N
80BL550N	--	--	--	--	--	--	--	--	--	--	--	--
80BL551N	30	N	N	N	N	500	100	N	300	N	50	N
80BL552N	--	--	--	--	--	--	--	--	--	--	--	--

HELLS HOLE (NM-1) CONCENTRATE DATA--continued

Sample	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
79BL346N	N	>2,000	N	N	N	>2,000	N	>2,000	N
79BL347N	N	>2,000	N	N	N	500	N	>2,000	N
79BL348N	N	>2,000	N	70	N	700	N	>2,000	N
79BL349N	N	>2,000	N	70	N	500	N	>2,000	N
79BL350N	N	>2,000	N	30	N	1,000	N	>2,000	N
79BL351N	N	>2,000	N	50	N	1,500	N	>2,000	N
79BL352N	N	1,500	N	50	N	300	N	>2,000	N
79BL353N	N	>2,000	N	100	N	1,000	N	>2,000	N
79BL355N	N	>2,000	N	30	N	300	N	>2,000	N
79BL356N	N	1,000	N	50	N	700	N	>2,000	N
79BL359N	N	N	N	N	N	1,500	N	>10,000	N
79BL600N	N	N	500	70	N	1,000	N	>2,000	N
79BL601N	N	N	1,000	150	N	1,000	N	>2,000	N
79BL602N	N	N	300	100	N	1,000	N	>2,000	500
79BL604N	N	N	1,000	100	N	500	N	>2,000	N
79BL605N	N	N	500	200	N	500	N	>2,000	N
79BL606N	N	150	N	100	N	700	N	>2,000	N
79BL607N	N	30	N	70	N	700	N	>2,000	500
79BL609N	N	>2,000	N	100	N	700	N	>2,000	N
79BL610N	N	>2,000	N	70	N	700	N	>2,000	N
79BL611N	N	>2,000	N	50	N	500	N	>2,000	N
79BL612N	N	>2,000	N	15	N	300	N	>2,000	N
79BL613N	N	>2,000	N	70	N	500	N	>2,000	N
79BL614N	N	700	700	20	N	500	N	>2,000	N
79BL615N	N	>2,000	N	N	N	1,000	N	>2,000	N
79BL617N	N	>2,000	N	100	N	1,000	N	>2,000	700
79BL618N	N	700	2,000	100	N	300	N	>2,000	N
79BL619N	N	2,000	10,000	30	N	200	N	>2,000	<200
79BL620N	N	>2,000	3,000	50	N	300	N	>2,000	<200
80MC120N	20	100	1,000	50	N	500	N	>2,000	N
80MC121N	--	--	--	--	--	--	--	--	--
80MC122N	15	N	1,000	20	N	500	N	2,000	N
80MC123N	20	N	2,000	70	N	1,000	N	>2,000	N
80MC124N	20	N	1,000	30	N	1,000	N	>2,000	N
80BL550N	--	--	--	--	--	--	--	--	--
80BL551N	50	5,000	N	50	N	2,000	N	>5,000	500
80BL552N	--	--	--	--	--	--	--	--	--

HELLS HOLE (M-1) CONCENTRATE DATA

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B
77ST100M	32 59 59	108 58 28	20	3.00	2.00	>2.0	7,000	N	N	N	<20
77ST101M	32 59 59	108 58 40	30	3.00	3.00	>2.0	7,000	N	N	N	<20
77ST102M	32 59 29	108 59 3	20	3.00	2.00	>2.0	7,000	N	N	N	<20
77ST103M	32 58 25	108 58 38	30	2.00	2.00	>2.0	5,000	N	N	N	<20
77ST104M	32 57 30	108 59 6	15	5.00	5.00	>2.0	3,000	N	N	N	<20
77ST105M	32 57 7	108 57 35	15	5.00	5.00	2.0	3,000	N	N	N	<20
77YV200M	32 54 35	109 3 0	20	.50	1.50	.7	1,000	N	N	N	<20
77YV201M	32 54 3	109 2 35	>20	.15	.15	.5	700	N	N	N	<20
77YV202M	32 53 57	109 2 35	15	.50	.30	.5	500	<1.0	N	N	<20
77YV204M	32 53 46	109 0 39	15	.70	.70	.7	700	N	N	N	<20
78ST233M	32 53 3	108 56 54	20	.20	.05	.7	1,000	N	N	N	30
78ST234M	32 53 48	108 59 6	10	.70	.30	1.0	1,500	N	N	N	<20
78ST235M	32 54 6	109 0 0	>20	.20	<.10	1.0	1,000	N	N	N	70
78ST236M	32 55 47	108 59 42	15	1.50	.70	.7	1,500	N	N	N	30
78ST237M	32 55 41	108 58 45	7	2.00	2.00	1.0	2,000	N	N	N	<20
78ST238M	32 56 2	108 58 3	15	1.50	.70	>1.0	5,000	N	N	N	20
78ST239M	32 57 26	108 59 43	15	.70	.50	>1.0	>5,000	N	N	N	20
78BL104M	33 1 33	109 7 53	>20	.70	1.00	>1.0	>5,000	N	N	N	100
78BL105M	33 1 37	109 7 53	>20	2.00	1.50	>1.0	>5,000	N	N	N	70
78BL106M	33 0 18	109 7 54	>20	.70	.70	>1.0	>5,000	N	N	N	150
78YV214M	32 56 26	109 1 6	>20	1.50	1.00	1.0	2,000	.5	N	N	100
78YV215M	32 56 21	109 1 50	>20	5.00	.50	.5	2,000	N	N	N	200
78YV216M	32 56 31	109 3 36	20	3.00	5.00	.7	1,500	N	N	N	70
78YV217M	32 56 59	109 3 48	>20	1.00	1.00	.2	2,000	N	N	N	100
78YV218M	32 56 20	109 3 8	15	1.50	1.50	>1.0	>5,000	N	N	N	70
78YV219M	32 58 0	109 2 30	10	2.00	3.00	>1.0	3,000	N	N	N	50
78YV220M	32 57 56	109 2 21	20	1.50	2.00	.7	>5,000	N	N	N	100
78YV221M	32 58 30	109 3 25	>20	1.50	1.50	1.0	>5,000	N	N	N	150
78YV222M	32 58 59	109 2 49	10	3.00	7.00	>1.0	3,000	N	N	N	50
78YV223M	32 59 3	109 2 59	>20	.50	.70	>1.0	>5,000	N	N	N	150
78YV224M	32 57 27	109 3 30	>20	1.50	2.00	.7	3,000	N	N	N	150
78YV225M	32 57 6	109 5 27	>20	1.50	1.50	1.0	5,000	N	N	N	150
78YV226M	32 58 0	109 6 12	>20	1.50	1.50	1.0	5,000	N	N	N	150
78YV227M	32 58 50	109 7 20	20	3.00	5.00	1.0	>5,000	N	N	N	150
78YV228M	32 59 48	109 8 23	20	2.00	2.00	1.0	>5,000	N	N	N	150
78YV230M	32 52 13	109 1 48	20	.30	.50	1.0	1,000	N	N	N	100
78YV231M	32 52 54	109 2 56	>20	.15	.20	.2	1,000	N	N	N	150
78YV233M	32 53 11	109 2 44	>20	.15	.50	.7	1,000	N	N	N	150
78YV234M	32 54 59	109 3 31	>20	.50	1.50	1.0	2,000	N	N	N	100
78YV235M	33 0 17	109 8 26	>20	.70	1.50	1.0	>5,000	N	N	N	100
78YV103M	32 55 11	109 4 5	>20	.50	.70	1.0	1,000	N	N	N	50
78YV106M	32 56 4	109 4 58	>20	1.00	1.00	>1.0	1,000	N	N	N	30
78YV108M	32 56 27	109 4 25	20	1.00	.70	1.0	1,500	N	N	N	20
78YV109M	32 56 41	109 4 22	>20	1.00	.70	>1.0	1,000	N	N	N	30
78YV110M	32 55 56	109 4 55	20	1.50	1.50	1.0	1,000	N	N	N	20

HELLS HOLE (M-1) CONCENTRATE DATA

sample	S-BA	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
77ST100M	1,000	3	N	N	100	500	150	100	N	50	50	70
77ST101M	700	5	N	N	150	700	200	50	N	70	150	30
77ST102M	700	5	N	N	70	300	150	150	N	70	70	50
77ST103M	700	3	N	N	100	1,000	200	50	N	50	100	30
77ST104M	150	2	N	N	70	500	150	50	N	50	150	<20
77ST105M	300	3	N	N	70	200	100	50	N	50	150	<20
77YV200M	300	N	N	N	70	200	200	<50	N	N	100	50
77YV201M	700	<2	N	N	70	100	300	<50	20	N	70	70
77YV202M	700	<2	N	N	30	200	300	<50	15	N	70	150
77YV204M	300	<2	N	N	30	150	300	<50	N	N	50	70
78ST233M	700	<2	N	N	50	500	200	N	15	N	100	100
78ST234M	1,500	<2	N	N	15	50	70	<50	N	<50	30	30
78ST235M	500	<2	N	N	70	500	150	<50	N	<50	150	30
78ST236M	1,000	<2	N	N	30	300	100	<50	N	<50	100	30
78ST237M	1,000	<2	N	N	50	700	70	<50	N	<50	200	30
78ST238M	2,000	<2	N	N	15	150	30	70	N	50	30	70
78ST239M	3,000	2	N	N	50	150	200	50	N	<50	30	150
78BL104M	700	7	N	N	30	100	50	N	N	50	20	N
78BL105M	1,500	7	N	N	70	300	150	N	N	70	100	50
78BL106M	1,000	N	N	N	30	150	70	N	N	70	30	20
78YV214M	1,000	N	N	N	70	500	200	N	N	N	100	70
78YV215M	1,500	N	N	N	30	1,500	70	N	N	N	100	50
78YV216M	500	N	N	N	30	2,000	100	N	10	N	150	70
78YV217M	1,000	N	N	N	30	1,500	70	N	N	N	70	20
78YV218M	500	<2	N	N	30	150	70	50	N	<50	30	70
78YV219M	500	N	N	N	30	300	70	<50	N	<50	70	<20
78YV220M	1,500	<2	N	N	30	300	70	50	N	N	100	100
78YV221M	1,500	N	N	N	50	500	100	N	N	<50	150	50
78YV222M	500	N	N	N	70	200	150	<50	N	50	70	70
78YV223M	2,000	<2	N	N	50	700	100	<50	10	150	100	200
78YV224M	500	N	N	N	50	1,000	70	<50	N	N	100	20
78YV225M	700	N	N	N	50	1,000	70	<50	N	N	100	50
78YV226M	700	N	N	N	70	700	100	N	N	N	100	50
78YV227M	1,000	<2	N	N	70	700	100	N	N	N	100	70
78YV228M	3,000	<2	N	N	30	300	70	50	30	<50	150	70
78YV230M	700	N	N	N	30	200	200	50	20	N	70	70
78YV231M	1,000	N	N	N	10	150	150	N	30	N	20	70
78YV233M	700	<2	N	N	30	200	150	N	30	N	70	70
78YV234M	200	N	N	N	70	500	500	50	N	N	70	70
78YV235M	7,000	2	N	N	50	<20	150	N	N	50	20	70
78YV103M	700	N	N	N	70	300	200	70	N	N	150	30
78YV106M	500	N	N	N	70	300	300	<50	N	N	150	20
78YV108M	500	N	N	N	70	700	300	50	N	<50	100	50
78YV109M	500	N	N	N	70	300	300	50	N	<50	150	70
78YV110M	700	N	N	N	70	300	150	50	N	N	100	20

HELLS HOLE (M-1) CONCENTRATE DATA

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
77ST100M	N	70	N	<200	1,000	N	70	700	2,000	--
77ST101M	N	70	N	N	1,000	N	50	500	2,000	--
77ST102M	N	70	N	<200	700	N	100	500	>2,000	--
77ST103M	N	70	N	<200	1,000	N	50	<500	2,000	--
77ST104M	N	100	N	<200	500	<100	70	N	1,500	--
77ST105M	N	100	N	<200	500	<100	70	N	500	--
77YV200M	N	30	N	<200	700	N	50	<500	300	--
77YV201M	N	30	N	300	500	<100	30	<500	150	--
77YV202M	N	30	N	200	300	N	30	<500	100	--
77YV204M	N	30	N	<200	500	N	30	<500	150	--
78ST233M	N	15	N	N	500	N	30	<500	150	N
78ST234M	N	30	N	N	150	N	70	<500	500	N
78ST235M	N	30	N	N	1,000	N	30	500	300	N
78ST236M	N	30	N	N	500	N	20	<500	100	N
78ST237M	N	30	N	N	150	N	100	N	300	N
78ST238M	N	50	<20	N	100	N	100	500	300	N
78ST239M	N	30	N	N	200	N	50	500	500	N
78BL104M	N	20	100	N	500	N	30	1,000	500	N
78BL105M	N	30	70	N	300	N	30	1,000	300	N
78BL106M	N	20	20	N	500	N	30	700	500	N
78YV214M	N	20	N	N	1,000	N	70	500	200	N
78YV215M	N	20	N	N	1,000	N	30	500	200	N
78YV216M	N	70	N	N	700	N	20	N	70	N
78YV217M	N	20	N	N	1,000	N	20	N	100	N
78YV218M	N	30	20	<200	300	N	200	500	700	N
78YV219M	N	50	N	N	500	N	50	N	150	N
78YV220M	N	15	N	700	1,000	N	30	N	500	N
78YV221M	N	30	N	<200	1,000	N	50	N	200	N
78YV222M	N	70	N	N	300	N	100	N	300	N
78YV223M	N	20	<20	N	1,000	N	50	N	150	N
78YV224M	N	30	N	N	1,000	N	30	N	200	N
78YV225M	N	30	N	N	1,000	N	70	N	150	N
78YV226M	N	15	N	N	500	N	50	500	150	N
78YV227M	N	30	N	N	700	N	50	N	150	N
78YV228M	N	30	<20	<200	500	<100	30	N	300	N
78YV230M	N	10	N	<200	500	N	30	N	150	N
78YV231M	N	<10	N	500	300	N	30	N	150	N
78YV233M	N	10	N	700	500	<100	20	N	150	N
78YV234M	N	15	N	N	700	N	100	500	300	N
78YV235M	N	15	30	N	200	<100	30	700	1,000	N
78YV103M	N	30	N	<200	700	N	70	<500	500	N
78YV106M	N	30	N	N	700	N	30	<500	500	N
78YV108M	N	30	N	N	500	N	150	<500	700	N
78YV109M	N	30	N	N	700	N	70	<500	700	N
78YV110M	N	30	N	<200	500	N	30	<500	500	N

HELLS HOLE (M-1) CONCENTRATE DATA--continued

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B
78YV112M	32 54 34	109 3 12	>20	.50	.70	>1.0	1,500	N	N	N	30
78YV113M	32 54 48	109 2 47	>20	.20	.30	>1.0	700	N	N	N	50
78YV114M	32 55 8	109 2 42	>20	.50	.70	>1.0	1,000	N	N	N	50
78YV115M	32 55 13	109 2 50	>20	.50	.70	>1.0	700	N	N	N	30
78YV119M	32 56 3	109 3 6	20	1.50	3.00	.7	2,000	N	N	N	50
78YV120M	32 56 3	109 3 16	>20	.30	.10	>1.0	5,000	N	N	N	50
78YV121M	32 56 7	109 3 21	20	.50	.50	1.0	5,000	N	N	N	20
78YV124M	32 56 17	109 2 26	>20	.30	.30	>1.0	3,000	N	N	N	50
78YV124A	32 55 55	109 1 55	20	5.00	5.00	.5	1,000	N	N	N	30
78YV125M	32 55 45	109 0 57	>20	.30	.07	.5	500	N	N	N	70
78YV126M	32 55 36	109 0 40	20	.20	<.10	.7	300	N	N	N	20
78YV128M	32 54 52	109 1 34	>20	.70	1.00	1.0	1,500	N	N	N	30
78YV129M	32 54 58	109 2 9	>20	.15	.10	1.0	500	N	N	N	30
78BL400M	33 4 18	109 4 55	15	5.00	7.00	.7	5,000	N	N	N	20
78BL401M	33 4 18	109 4 54	15	7.00	7.00	1.0	5,000	N	N	N	<10
78BL402M	33 6 6	109 3 15	15	1.50	2.00	>1.0	>5,000	N	<200	N	20
79ST300M	32 56 25	108 56 56	10	2.00	1.00	2.0	3,000	N	N	N	<20
79ST301M	32 56 56	108 58 3	10	5.00	7.00	>2.0	2,000	N	N	N	<20
79ST302M	32 58 27	108 59 39	15	3.00	<.10	>2.0	>5,000	N	500	<20	<20
79ST303M	32 58 30	108 59 33	10	1.50	1.00	1.0	>5,000	N	N	N	<20
79YV301M	32 59 55	109 5 53	15	2.00	2.00	1.0	2,000	N	N	N	<20
79YV302M	32 59 53	109 5 49	20	1.00	1.50	1.0	>5,000	N	N	N	<20
79YV303M	32 58 13	109 6 6	>20	.50	.70	1.0	1,000	N	N	N	<20
79YV304M	32 58 15	109 6 11	>20	.50	.70	>1.0	1,500	N	N	N	<20
79YV305M	32 58 14	109 5 35	>20	1.00	1.00	1.0	1,000	N	N	N	<20
79YV306M	32 57 35	109 5 13	>20	.50	.70	>1.0	1,000	N	N	N	<20
79YV307M	32 57 33	109 5 5	>20	.50	1.00	1.0	1,500	N	N	N	20
79YV308M	32 57 37	109 5 6	10	7.00	10.00	.7	1,500	N	N	N	<20
79YV309M	32 58 42	109 4 13	>20	.20	.20	.2	1,000	N	N	N	<20
79YV310M	32 59 29	109 3 12	>20	.20	.20	.2	700	N	N	N	<20
79YV311M	32 57 18	109 3 45	20	.50	.50	1.0	>5,000	N	N	N	<20
79YV312M	32 57 11	109 2 52	>20	.50	.50	.5	1,000	N	N	N	20
79YV313M	32 56 54	109 2 22	>20	1.00	1.00	.5	1,000	N	N	N	30
79YV314M	32 56 26	109 1 48	20	1.00	1.00	.7	2,000	N	N	N	20
79YV315M	32 56 57	109 1 25	>20	.50	.50	.5	2,000	N	N	N	20
79YV316M	32 56 52	109 1 22	>20	.50	.20	.5	1,000	N	N	N	20
79YV317M	32 56 49	109 1 13	10	.50	.50	.7	1,000	N	N	N	<20
79YV318M	32 56 16	109 0 44	>20	.70	.50	.7	1,500	N	N	N	<20
79YV319M	32 59 51	109 3 40	20	.50	1.00	1.0	>5,000	N	N	N	<20
79YV320M	32 59 18	109 3 39	>20	.70	1.50	.3	2,000	N	N	N	<20
79YV321M	32 59 17	109 3 31	>20	.50	.30	.3	700	N	N	N	<20
79YV322M	32 57 56	109 2 41	>20	.50	.20	.2	1,000	N	N	N	<20
79YV323M	32 59 29	109 1 15	20	2.00	3.00	2.0	2,000	N	N	N	N
79YV324M	32 58 16	109 1 35	>20	.50	.20	.5	1,000	N	N	N	<20
79YV325M	32 58 13	109 1 34	>20	.30	1.50	.3	700	N	N	N	<20

HELLS HOLE (M-1) CONCENTRATE DATA--continued

sample	S-BA	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
78YV112M	300	N	N	N	70	200	200	<50	N	N	150	20
78YV113M	300	N	N	N	70	200	150	50	N	N	150	30
78YV114M	500	N	N	N	70	500	300	50	N	N	150	70
78YV115M	300	N	N	N	70	700	200	<50	N	N	150	30
78YV119M	300	<2	N	N	20	300	700	<50	N	<50	30	100
78YV120M	300	<2	N	N	20	200	150	150	N	50	15	150
78YV121M	500	<2	N	N	20	200	100	<50	N	50	20	100
78YV124M	1,000	<2	N	N	30	50	150	50	N	<50	<10	100
78YV124A	500	<2	N	N	30	2,000	100	<50	N	N	150	20
78YV125M	300	<2	N	N	15	500	70	100	N	N	50	30
78YV126M	300	<2	N	N	20	200	100	<50	20	N	50	20
78YV128M	300	N	N	N	70	300	200	100	N	N	100	50
78YV129M	200	N	N	N	70	300	150	<50	N	N	100	50
78BL400M	700	<1	N	N	50	700	300	<20	15	<20	100	50
78BL401M	500	N	N	N	70	700	70	<20	N	50	150	N
78BL402M	700	N	N	N	20	300	200	300	10	100	70	70
79ST300M	2,000	N	N	N	50	200	200	70	N	50	70	50
79ST301M	500	N	N	N	100	300	150	70	N	<50	150	70
79ST302M	700	7	N	N	10	200	50	50	N	200	N	100
79ST303M	3,000	3	N	N	30	50	100	<50	N	50	20	100
79YV301M	1,500	N	N	N	50	700	70	<50	N	N	150	50
79YV302M	>5,000	<2	N	N	30	100	50	<50	N	N	30	70
79YV303M	700	N	N	N	70	700	70	<50	N	N	100	20
79YV304M	300	N	N	N	50	150	50	N	N	<50	70	1,000
79YV305M	700	N	N	N	30	1,000	70	N	N	N	150	70
79YV306M	700	N	N	N	30	<20	20	<50	N	N	N	50
79YV307M	1,500	N	N	N	20	500	30	N	N	N	50	50
79YV308M	200	N	N	N	30	2,000	30	<50	N	N	200	50
79YV309M	500	<2	N	N	15	200	30	N	N	N	30	30
79YV310M	300	N	N	N	10	200	20	N	N	N	30	30
79YV311M	2,000	N	N	N	10	<20	70	<50	N	N	N	30
79YV312M	1,000	N	N	N	15	1,000	50	N	N	N	70	100
79YV313M	1,000	<2	N	N	20	1,000	50	N	N	N	70	70
79YV314M	700	N	N	N	20	700	50	N	N	N	70	70
79YV315M	1,500	N	N	N	30	1,000	50	N	N	N	70	70
79YV316M	1,000	N	N	N	15	1,000	30	N	N	N	70	70
79YV317M	1,500	<2	N	N	10	300	30	<50	N	N	50	50
79YV318M	700	<2	N	N	20	700	70	50	N	N	50	100
79YV319M	2,000	<2	N	N	20	500	50	<50	N	<50	50	100
79YV320M	700	N	N	N	15	500	150	N	N	N	70	50
79YV321M	500	N	N	N	10	500	20	N	N	N	50	50
79YV322M	500	<2	N	N	10	500	30	N	N	N	30	70
79YV323M	200	N	N	N	70	700	100	<50	N	<50	100	30
79YV324M	700	<2	N	N	15	700	50	N	N	N	50	70
79YV325M	1,000	<2	N	N	10	500	30	N	N	<50	50	70

HELLS HOLE (M-1) CONCENTRATE DATA--continued

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
78YV112M	N	30	N	<200	700	N	30	<500	500	N
78YV113M	N	20	N	N	700	N	30	<500	500	N
78YV114M	N	20	N	N	700	N	70	<500	500	N
78YV115M	N	30	N	N	700	N	20	<500	500	N
78YV119M	N	30	N	<200	300	N	200	<500	700	N
78YV120M	N	30	N	N	300	<100	500	700	>1,000	N
78YV121M	N	30	N	N	300	<100	300	500	700	N
78YV124M	N	20	N	<200	500	N	30	<500	200	N
78YV124A	N	50	N	<200	500	N	20	<500	70	N
78YV125M	N	10	N	N	1,000	N	<20	<500	100	N
78YV126M	N	15	N	<200	500	N	30	<500	300	N
78YV128M	N	30	N	<200	700	N	50	<500	700	N
78YV129M	N	20	N	N	700	N	50	<500	500	N
78BL400M	N	70	100	<100	200	N	50	N	150	N
78BL401M	N	100	<10	N	200	N	100	N	150	N
78BL402M	N	100	150	N	150	<50	200	500	500	N
79ST300M	N	20	N	N	200	N	70	<500	300	N
79ST301M	N	50	N	N	300	N	50	<500	300	N
79ST302M	N	30	200	N	100	<100	30	700	500	N
79ST303M	N	20	20	N	150	<100	30	<500	200	N
79YV301M	N	20	N	N	700	N	50	N	150	N
79YV302M	N	<10	N	N	700	N	20	N	150	N
79YV303M	N	10	N	N	1,000	N	30	<500	150	N
79YV304M	N	15	N	N	700	N	30	500	200	N
79YV305M	N	10	N	N	1,000	N	30	1,500	100	N
79YV306M	N	N	N	N	200	N	30	500	100	N
79YV307M	N	N	N	N	1,000	N	30	N	100	N
79YV308M	N	70	N	N	2,000	N	20	N	150	N
79YV309M	N	N	N	N	1,000	N	20	<500	70	N
79YV310M	N	N	N	N	1,500	N	<20	N	100	N
79YV311M	N	<10	N	N	300	N	20	<500	70	N
79YV312M	N	15	N	N	1,000	N	<20	N	100	N
79YV313M	N	15	N	N	1,000	N	20	N	150	N
79YV314M	N	15	N	<200	700	N	30	N	150	N
79YV315M	N	15	N	N	700	N	20	N	150	N
79YV316M	N	15	N	N	1,000	N	30	N	200	N
79YV317M	N	15	N	N	300	N	30	N	150	N
79YV318M	N	15	N	N	1,500	N	30	<500	150	N
79YV319M	N	15	N	<200	700	N	30	500	200	N
79YV320M	N	<10	N	<200	1,000	N	<20	N	100	N
79YV321M	N	<10	N	N	1,000	N	<20	N	100	N
79YV322M	N	<10	N	N	1,500	N	<20	N	100	N
79YV323M	N	50	N	N	500	N	50	N	150	N
79YV324M	N	10	N	N	1,500	N	20	<500	150	N
79YV325M	N	10	N	N	1,000	N	<20	N	150	N

HELLS HOLE (M-1) CONCENTRATE DATA--continued

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B
79YV326M	32 55 36	109 4 44	20	.50	2.00	.7	1,000	N	N	N	<20
79MC100M	33 2 59	108 59 51	20	1.50	.50	>1.0	>5,000	N	N	N	N
79MC101M	33 0 14	108 59 53	20	2.00	7.00	>1.0	1,000	N	N	N	N
79MC102M	33 0 13	108 59 51	>20	2.00	7.00	>1.0	2,000	N	N	N	N
79MC103M	33 0 31	108 59 50	>20	.30	1.50	>1.0	700	N	N	N	N
79MC104M	33 1 0	108 59 31	>20	3.00	7.00	1.0	3,000	N	N	N	N
79MC105M	33 1 7	108 59 41	>20	.50	1.00	.7	2,000	<1.0	N	N	<20
79MC106M	33 1 26	108 59 33	>20	.50	1.00	>1.0	3,000	N	N	N	<20
79MC107M	33 1 29	108 59 16	>20	.50	1.00	>1.0	>5,000	N	N	N	<20
79MC108M	33 1 59	108 59 18	20	.70	1.00	.7	>5,000	N	N	N	20
79MC109M	33 2 6	108 59 12	20	.50	.20	>1.0	>5,000	N	N	N	N
79MC110M	33 2 35	108 59 27	20	1.50	5.00	.5	>5,000	N	N	N	<20
79MC111M	33 2 36	108 59 26	>20	1.00	2.00	1.0	>5,000	N	N	N	<20
79MC200M	33 1 21	108 59 33	>20	.70	2.00	1.0	1,000	N	N	N	<20
79BL300M	33 1 30	109 8 12	50	.30	.20	2.0	10,000	N	N	N	N
79BL301M	33 1 47	109 8 15	>50	1.00	1.00	>2.0	>10,000	N	N	N	N
79BL302M	33 2 2	109 9 28	>50	.70	.50	>2.0	7,000	N	N	N	N
79BL303M	33 1 58	109 9 15	50	1.50	2.00	>2.0	>10,000	N	N	N	N
79BL304M	33 2 10	109 9 6	50	1.50	.50	1.0	>10,000	N	N	N	N
79BL305M	33 2 18	109 8 32	50	1.00	.30	>2.0	10,000	N	N	N	N
79BL306M	33 2 24	109 8 41	50	2.00	2.00	1.5	>10,000	N	N	N	20
79BL307M	33 2 31	109 8 25	>50	.70	3.00	>2.0	>10,000	N	N	N	N
79BL309M	33 2 54	109 8 5	30	5.00	7.00	2.0	10,000	N	N	N	N
79BL310M	33 2 57	109 8 8	30	5.00	5.00	1.0	>10,000	N	N	N	N
79BL311M	33 0 46	109 7 7	>50	1.00	.50	2.0	>10,000	N	N	N	N
79BL312M	33 0 46	109 7 3	50	3.00	5.00	2.0	>10,000	N	N	N	N
79BL313M	33 0 25	109 6 44	50	1.50	2.00	1.5	>10,000	N	N	N	N
79BL314M	33 0 32	109 5 42	50	2.00	5.00	2.0	>10,000	N	N	N	N
79BL315M	33 0 29	109 5 42	>50	2.00	5.00	>2.0	7,000	N	N	N	N
79BL321M	33 6 25	109 6 17	50	5.00	2.00	1.0	>10,000	N	N	N	N
79BL322M	33 6 25	109 6 13	30	7.00	3.00	1.0	10,000	N	N	N	N
79BL323M	33 6 13	109 1 26	2	2.00	3.00	>2.0	>10,000	N	N	N	N
79BL324M	33 6 11	109 1 25	50	2.00	5.00	2.0	>10,000	N	N	N	N
79BL325M	33 5 49	109 0 56	30	3.00	7.00	2.0	>10,000	N	N	N	N
79BL326M	33 5 21	109 1 4	20	5.00	10.00	1.5	7,000	N	N	N	N
79BL327M	33 5 6	109 1 21	20	5.00	10.00	1.0	10,000	N	N	N	N
79BL328M	33 5 9	109 1 23	20	3.00	7.00	1.0	>10,000	N	N	N	N
79BL328A	33 0 42	109 4 26	30	2.00	5.00	>2.0	7,000	N	N	N	N
79BL329M	33 0 43	109 4 23	50	1.50	2.00	>2.0	>10,000	N	N	N	N
79BL330M	33 0 15	109 3 58	50	2.00	3.00	>2.0	>10,000	N	N	N	N
79BL331M	33 0 16	109 3 53	30	2.00	3.00	2.0	>10,000	N	N	N	N
79BL332M	33 2 31	109 6 9	20	5.00	10.00	1.5	>10,000	N	N	N	N
79BL333M	33 2 26	109 6 12	50	3.00	7.00	2.0	>10,000	N	N	N	N
79BL335M	33 5 54	109 3 12	>50	1.00	.20	>2.0	>10,000	N	N	N	N
79BL336M	33 4 37	109 3 17	50	1.00	.15	>2.0	>10,000	N	N	N	N

HELLS HOLE (M-1) CONCENTRATE DATA--continued

sample	S-BA	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
79YV326M	300	N	N	N	50	300	70	<50	N	N	70	70
79MC100M	>5,000	N	N	N	70	30	100	100	N	50	<10	300
79MC101M	300	<2	N	N	100	200	500	<50	N	N	100	100
79MC102M	1,000	<2	N	N	100	700	300	<50	N	N	150	150
79MC103M	500	<2	N	N	150	500	500	<50	N	N	100	100
79MC104M	1,000	<2	N	N	100	300	200	<50	N	N	100	70
79MC105M	1,000	2	N	N	30	150	100	50	N	N	50	70
79MC106M	1,500	<2	N	N	70	150	70	50	N	<50	30	70
79MC107M	3,000	<2	N	N	70	20	70	70	N	<50	30	150
79MC108M	>5,000	5	N	N	30	70	70	50	N	N	50	200
79MC109M	5,000	<2	N	N	70	150	70	50	N	<50	15	200
79MC110M	>5,000	3	N	N	150	100	200	150	N	N	70	500
79MC111M	5,000	2	N	N	30	150	70	70	N	70	50	150
79MC200M	300	<2	N	N	50	200	500	50	N	N	70	70
79BL300M	500	3	N	N	N	20	30	N	N	50	N	20
79BL301M	1,500	2	N	N	100	150	70	N	N	100	150	50
79BL302M	500	2	N	N	50	50	50	70	N	N	N	30
79BL303M	5,000	2	N	N	100	100	150	50	N	N	70	20
79BL304M	1,000	5	N	N	100	100	150	50	N	N	150	70
79BL305M	1,500	2	N	N	30	100	50	N	N	70	50	N
79BL306M	>10,000	3	N	N	100	200	100	70	N	N	200	70
79BL307M	1,000	3	N	N	20	N	30	N	15	100	N	N
79BL309M	2,000	N	N	N	100	200	70	50	N	<50	200	100
79BL310M	7,000	N	N	N	100	300	100	50	N	N	200	100
79BL311M	2,000	3	N	N	20	N	50	50	10	<50	N	70
79BL312M	5,000	3	N	N	50	300	50	50	N	100	150	70
79BL313M	10,000	5	N	N	50	50	70	50	N	100	20	70
79BL314M	3,000	2	N	N	70	500	70	50	15	<50	150	100
79BL315M	1,000	N	N	N	100	700	70	50	N	N	200	30
79BL321M	5,000	N	N	N	100	700	100	50	N	N	300	N
79BL322M	1,000	N	N	N	100	300	70	100	N	N	300	N
79BL323M	150	5	N	N	70	200	70	2,000	N	100	150	70
79BL324M	100	3	N	N	70	100	70	700	N	70	70	30
79BL325M	200	5	N	N	70	300	70	500	N	100	200	100
79BL326M	100	3	N	N	50	500	50	200	N	50	100	N
79BL327M	100	3	N	N	50	300	50	50	N	50	150	30
79BL328M	70	3	N	N	70	300	100	200	N	70	150	50
79BL328A	1,000	2	N	N	100	200	100	70	N	70	100	50
79BL329M	2,000	3	N	N	100	150	70	50	N	300	70	N
79BL330M	2,000	5	N	N	70	150	150	70	20	<50	150	50
79BL331M	7,000	7	N	N	50	150	100	70	20	200	100	150
79BL332M	5,000	5	N	N	100	500	100	100	30	100	150	100
79BL333M	10,000	3	N	N	200	300	150	100	N	150	200	200
79BL335M	1,500	2	N	N	30	200	70	50	N	500	20	N
79BL336M	3,000	5	N	N	30	100	100	50	30	700	N	70

HELLS HOLE (M-1) CONCENTRATE DATA--continued

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
79YV326M	N	15	N	N	500	N	30	N	200	N
79MC100M	N	30	N	N	200	<100	200	500	>1,000	N
79MC101M	N	50	N	<200	300	N	50	N	150	N
79MC102M	N	50	N	<200	500	N	30	<500	150	N
79MC103M	N	15	N	N	500	N	30	N	150	N
79MC104M	N	50	N	<200	700	N	50	N	150	N
79MC105M	N	30	N	N	1,000	N	50	N	300	N
79MC106M	N	20	N	N	1,500	N	30	500	150	N
79MC107M	N	15	N	500	500	<100	30	700	200	N
79MC108M	N	15	N	200	1,000	<100	30	N	200	N
79MC109M	N	15	70	200	300	<100	50	1,000	200	N
79MC110M	N	15	30	<200	500	<100	150	N	300	N
79MC111M	N	30	<20	<200	1,000	<100	70	<500	500	N
79MC200M	N	20	N	N	500	N	30	N	150	N
79BL300M	N	N	N	N	100	N	30	2,000	2,000	N
79BL301M	N	20	N	N	300	N	70	1,500	1,500	N
79BL302M	N	20	N	N	300	N	70	2,000	2,000	N
79BL303M	N	30	N	N	700	N	30	N	200	N
79BL304M	N	10	N	N	150	N	30	700	700	N
79BL305M	N	15	N	N	200	N	50	2,000	2,000	N
79BL306M	N	50	N	700	500	N	70	N	500	N
79BL307M	N	20	N	N	100	N	50	2,000	>2,000	N
79BL309M	N	70	50	N	300	N	50	700	500	N
79BL310M	N	50	N	N	300	N	50	700	500	N
79BL311M	N	15	N	N	200	N	50	1,500	500	N
79BL312M	N	50	N	N	300	N	50	1,000	1,000	N
79BL313M	N	20	50	1,000	300	N	50	1,000	1,000	N
79BL314M	N	50	30	500	500	N	50	1,000	300	N
79BL315M	N	50	N	N	1,000	N	30	1,000	200	N
79BL321M	N	50	20	700	200	N	50	700	200	N
79BL322M	N	50	N	N	200	N	50	500	500	N
79BL323M	N	50	200	N	200	N	200	N	500	500
79BL324M	N	50	200	N	300	N	200	500	500	N
79BL325M	N	100	200	N	300	N	200	500	1,000	N
79BL326M	N	100	N	N	300	N	100	N	500	N
79BL327M	N	100	200	N	300	N	100	N	500	N
79BL328M	N	100	30	N	500	N	150	N	1,000	N
79BL328A	N	50	20	200	700	N	50	N	500	N
79BL329M	N	70	100	N	700	N	50	700	200	N
79BL330M	N	50	50	200	1,000	N	70	500	500	N
79BL331M	N	70	30	1,500	700	N	70	500	300	N
79BL332M	N	100	70	N	500	N	70	N	150	N
79BL333M	N	50	20	N	500	N	50	1,500	700	N
79BL335M	N	100	200	N	100	N	30	2,000	500	N
79BL336M	N	150	200	N	100	N	30	2,000	500	N

HELLS HOLE (M-1) CONCENTRATE DATA--continued

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B
79BL337M	33 4 34	109 3 13	50	1.00	.50	>2.0	>10,000	N	N	N	N
79BL338M	33 4 9	109 0 3	30	1.50	2.00	1.5	>10,000	N	N	N	50
79BL339M	33 2 4	109 1 20	50	1.00	1.00	>2.0	>10,000	N	N	N	N
79BL340M	33 2 5	109 1 33	30	3.00	7.00	>2.0	>10,000	N	N	N	N
79BL341M	33 2 8	109 1 34	20	2.00	3.00	1.0	>10,000	N	N	N	20
79BL342M	33 2 22	109 1 4	30	5.00	10.00	.7	>10,000	N	N	N	N
79BL343M	33 3 40	109 4 22	>50	1.00	1.00	>2.0	>10,000	N	N	N	N
79BL344M	33 4 11	109 4 27	50	.70	.30	>2.0	>10,000	N	N	N	N
79BL345M	33 4 7	109 4 17	30	1.00	.50	>2.0	>10,000	N	N	N	N
79BL346M	33 4 30	109 4 13	30	.70	.30	>2.0	>10,000	N	N	N	N
79BL347M	33 5 6	109 3 55	50	.70	.30	>2.0	>10,000	N	N	N	N
79BL348M	33 3 34	109 2 40	50	2.00	1.50	>2.0	10,000	N	N	N	N
79BL349M	33 3 23	109 2 34	50	1.00	1.00	>2.0	>10,000	N	N	N	N
79BL350M	33 3 17	109 2 30	50	2.00	2.00	>2.0	>10,000	N	N	N	N
79BL351M	33 3 17	109 2 25	50	1.00	.20	>2.0	>10,000	N	N	N	N
79BL352M	33 3 58	109 2 48	50	1.50	1.00	>2.0	>10,000	N	N	N	N
79BL353M	33 4 8	109 2 56	>50	1.00	.70	>2.0	>10,000	N	N	N	N
79BL354M	33 5 28	109 2 48	50	1.00	.10	>2.0	>10,000	N	N	N	N
79BL355M	33 6 1	109 3 38	>50	1.00	<.10	>2.0	>10,000	N	N	N	N
79BL356M	33 6 17	109 3 16	20	5.00	7.00	2.0	10,000	N	N	N	N
79BL357M	33 5 18	109 5 15	15	5.00	7.00	1.0	10,000	N	N	N	N
79BL358M	33 5 4	109 5 14	15	5.00	10.00	1.0	7,000	N	N	N	N
79BL359M	33 4 39	109 4 56	20	5.00	7.00	.7	5,000	N	N	N	N
79BL600M	33 0 50	109 0 49	20	1.50	5.00	>2.0	10,000	N	N	N	N
79BL601M	33 0 47	109 0 38	30	1.50	3.00	>2.0	7,000	N	N	N	N
79BL602M	33 0 24	109 0 25	10	3.00	7.00	>2.0	3,000	N	N	N	N
79BL604M	33 1 17	109 0 2	50	1.00	.70	2.0	>10,000	N	N	N	N
79BL605M	33 1 36	109 0 53	50	1.00	1.00	2.0	>10,000	N	N	N	N
79BL606M	33 1 25	109 1 53	30	1.00	1.50	>2.0	>10,000	N	N	N	N
79BL607M	33 2 17	109 0 58	20	2.00	3.00	2.0	>10,000	N	N	N	N
79BL608M	33 2 42	109 3 22	20	3.00	5.00	>2.0	>10,000	N	N	N	N
79BL609M	33 2 45	109 3 25	50	1.00	.30	>2.0	>10,000	N	N	N	N
79BL610M	33 3 47	109 2 41	30	2.00	.20	2.0	>10,000	N	N	N	N
79BL611M	33 3 53	109 2 51	30	1.00	.50	>2.0	>10,000	N	N	N	N
79BL612M	33 4 19	109 1 49	30	3.00	7.00	2.0	>10,000	N	N	N	N
79BL613M	33 4 16	109 1 10	30	.70	1.00	1.5	>10,000	N	N	N	30
79BL614M	33 3 17	109 0 54	30	3.00	7.00	2.0	7,000	N	N	N	N
79BL615M	33 3 22	109 1 7	20	.50	.30	1.0	>10,000	N	N	N	100
79BL616M	33 2 19	109 4 6	50	1.50	2.00	>2.0	>10,000	N	N	N	N
79BL617M	33 2 18	109 4 12	30	.30	5.00	>2.0	10,000	N	N	N	N
79BL618M	33 2 1	109 7 1	50	2.00	3.00	2.0	>10,000	N	N	N	N
79BL619M	33 1 33	109 7 31	>50	1.50	3.00	2.0	10,000	N	N	N	N
79BL620M	33 1 27	109 7 29	50	1.50	2.00	2.0	>10,000	N	N	N	N
80MC120M	33 0 26	108 58 26	10	1.50	2.00	2.0	2,000	N	N	N	<20
80MC121M	33 0 41	108 58 11	20	1.50	1.00	2.0	2,000	N	N	N	50

HELLS HOLE (M-1) CONCENTRATE DATA--continued

sample	S-BA	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
79BL337M	3,000	5	N	N	30	150	70	100	15	500	20	100
79BL338M	3,000	7	N	N	70	200	150	2,000	20	70	100	100
79BL339M	3,000	10	N	N	30	70	70	50	15	200	30	200
79BL340M	1,000	5	N	N	100	500	70	100	N	200	150	100
79BL341M	7,000	20	N	N	70	200	70	150	20	100	70	1,000
79BL342M	1,500	10	N	N	100	700	70	150	N	150	200	100
79BL343M	2,000	5	N	N	70	500	100	50	50	1,000	50	100
79BL344M	7,000	7	N	N	30	150	70	70	50	1,000	70	100
79BL345M	7,000	7	N	N	30	150	200	70	70	1,000	N	100
79BL346M	7,000	7	N	N	30	150	100	100	50	1,000	N	100
79BL347M	7,000	7	N	N	30	150	100	100	30	1,000	N	100
79BL348M	1,000	3	N	N	70	150	100	50	20	300	70	70
79BL349M	3,000	7	N	N	100	200	150	100	50	500	70	100
79BL350M	1,500	5	N	N	50	200	50	100	50	300	N	100
79BL351M	1,000	10	N	N	50	70	70	200	50	500	N	300
79BL352M	3,000	5	N	N	50	200	70	150	10	1,000	50	50
79BL353M	7,000	5	N	N	70	500	70	50	50	1,000	30	70
79BL354M	5,000	7	N	N	30	150	70	50	30	1,000	N	70
79BL355M	1,000	3	N	N	30	30	70	N	20	1,500	N	30
79BL356M	700	5	N	N	50	1,000	70	500	N	70	150	100
79BL357M	1,000	2	N	N	100	500	70	70	N	N	200	N
79BL358M	500	3	N	N	150	1,000	100	50	N	N	300	N
79BL359M	500	5	N	N	100	700	150	50	N	N	300	20
79BL600M	1,000	7	N	N	50	100	200	200	N	200	50	100
79BL601M	1,000	7	N	N	70	300	200	70	N	70	70	150
79BL602M	150	3	N	N	70	70	100	70	N	100	100	N
79BL604M	700	7	N	N	30	150	50	70	N	N	30	150
79BL605M	7,000	10	N	N	70	150	100	100	N	N	100	100
79BL606M	5,000	10	N	N	50	50	100	70	N	100	50	200
79BL607M	5,000	15	N	N	50	200	50	100	N	70	100	150
79BL608M	2,000	7	N	N	70	200	70	70	70	150	150	150
79BL609M	3,000	5	N	N	30	100	70	50	30	500	N	70
79BL610M	5,000	10	N	N	70	150	50	100	70	150	70	200
79BL611M	2,000	3	N	N	30	200	50	70	20	1,000	15	70
79BL612M	2,000	5	N	N	100	300	70	300	N	70	300	150
79BL613M	200	10	N	N	30	150	50	1,500	N	200	20	300
79BL614M	700	10	N	N	70	200	200	70	N	70	150	70
79BL615M	300	10	N	N	10	20	50	100	N	300	N	200
79BL616M	1,500	3	N	N	30	70	100	70	50	700	50	150
79BL617M	500	3	N	N	70	150	70	70	15	300	150	50
79BL618M	2,000	5	N	N	50	100	70	50	N	200	70	70
79BL619M	1,500	5	N	N	50	200	100	N	N	100	100	20
79BL620M	1,500	5	N	N	50	100	70	50	N	50	50	30
80MC120M	500	2	N	N	30	150	70	50	N	70	70	20
80MC121M	500	7	N	N	30	150	100	50	N	100	100	50

HELLS HOLE (M-1) CONCENTRATE DATA--continued

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
79BL337M	N	100	200	N	150	N	100	2,000	500	N
79BL338M	N	70	20	N	500	N	200	500	500	500
79BL339M	N	50	150	N	300	N	50	1,000	500	N
79BL340M	N	100	50	N	500	N	300	N	300	N
79BL341M	N	100	20	N	300	N	200	1,000	2,000	N
79BL342M	N	150	N	N	500	N	500	N	150	N
79BL343M	N	100	200	N	150	N	50	2,000	300	N
79BL344M	N	100	200	N	150	N	50	1,500	300	N
79BL345M	N	150	150	N	150	N	70	2,000	200	N
79BL346M	N	100	300	N	150	N	50	1,500	500	N
79BL347M	N	100	300	N	150	N	50	2,000	500	N
79BL348M	N	70	200	N	500	N	30	1,500	500	N
79BL349M	N	100	300	N	200	N	100	1,500	700	N
79BL350M	N	70	100	N	200	N	150	1,500	>2,000	N
79BL351M	N	50	100	N	200	N	200	1,500	>2,000	N
79BL352M	N	100	300	N	200	N	70	1,500	500	N
79BL353M	N	100	300	N	150	N	70	2,000	300	N
79BL354M	N	100	300	N	150	N	50	2,000	500	N
79BL355M	N	150	500	N	100	N	20	2,000	500	N
79BL356M	N	100	20	N	200	N	200	N	1,000	N
79BL357M	N	70	N	N	300	N	50	N	150	N
79BL358M	N	100	N	N	300	N	50	N	150	N
79BL359M	N	100	N	N	500	N	50	N	200	N
79BL600M	N	50	20	N	200	N	150	N	500	N
79BL601M	N	50	30	N	500	N	70	N	200	N
79BL602M	N	70	N	N	300	N	100	N	300	N
79BL604M	N	20	50	N	2,000	N	30	N	150	N
79BL605M	N	30	50	N	1,500	N	30	N	500	N
79BL606M	N	30	1,000	N	500	N	50	700	500	N
79BL607M	N	70	N	N	500	N	200	N	500	N
79BL608M	N	100	20	N	500	N	70	500	300	N
79BL609M	N	100	200	N	100	N	30	2,000	300	N
79BL610M	N	70	50	N	700	N	500	1,000	1,000	N
79BL611M	N	70	150	N	150	N	70	1,500	300	N
79BL612M	N	100	20	N	500	N	150	N	700	N
79BL613M	N	70	100	N	300	N	300	500	1,000	200
79BL614M	N	50	N	N	700	N	100	N	1,000	N
79BL615M	N	100	50	N	150	N	300	N	2,000	N
79BL616M	N	100	300	N	150	N	30	1,500	300	N
79BL617M	N	100	50	N	200	N	70	700	500	N
79BL618M	N	30	30	200	1,000	N	50	1,000	2,000	N
79BL619M	N	30	70	N	1,000	N	30	1,500	1,500	N
79BL620M	N	30	50	200	1,000	N	50	1,000	300	N
80MC120M	N	30	N	N	300	N	50	<500	700	N
80MC121M	N	20	N	N	500	N	50	500	1,000	N

HELLS HOLE (M-1) CONCENTRATE DATA--continued

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B
80MC122M	33 0 51	108 58 9	10	.50	5.00	1.0	3,000	N	N	N	<20
80MC123M	33 0 56	108 58 24	20	1.00	1.00	2.0	3,000	N	N	N	20
80MC124M	33 1 24	108 57 27	7	5.00	5.00	1.0	1,500	N	N	N	<20
80BL550M	33 5 35	109 4 6	20	1.00	.10	>2.0	>10,000	N	N	N	20
80BL551M	33 5 57	109 3 38	20	1.00	.10	>2.0	>10,000	N	N	N	20
80BL552M	33 5 54	109 3 12	30	.70	<.10	1.5	10,000	N	N	N	20

HELLS HOLE (M-1) CONCENTRATE DATA--continued

sample	S-BA	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
80MC122M	700	2	N	N	50	200	50	50	N	N	100	20
80MC123M	1,000	5	N	N	50	70	70	70	N	N	20	100
80MC124M	200	N	N	N	30	500	30	N	N	N	100	N
80BL550M	1,000	2	N	N	10	150	100	50	15	5,000	N	20
80BL551M	1,000	2	N	N	10	50	100	50	15	5,000	N	30
80BL552M	1,000	N	N	N	<10	30	30	50	N	500	<10	30

HELLS HOLE (M-1) CONCENTRATE DATA--continued

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
80MC122M	N	30	N	N	300	N	70	<500	300	N
80MC123M	N	20	N	N	500	N	50	500	500	N
80MC124M	N	30	N	N	200	N	50	<500	150	N
80BL550M	N	70	100	N	150	500	50	<500	1,000	N
80BL551M	N	70	100	N	150	500	50	<500	1,000	N
80BL552M	N	30	200	N	50	N	<20	700	200	N

HELLS HOLE <80 MESH STREAM SEDIMENT DATA

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B
77ST100	32 59 59	108 58 28	10.0	1.0	.50	1.00	1,000	N	N	N	10
77ST101	32 59 59	108 58 40	15.0	1.5	.70	>1.00	1,500	N	N	N	10
77ST102	32 59 29	108 59 3	5.0	1.0	.70	.70	1,000	N	N	N	10
77ST103	32 58 25	108 58 38	10.0	1.0	1.00	1.00	1,500	N	N	N	<10
77ST104	32 57 30	108 58 6	10.0	1.5	1.50	1.00	1,500	N	N	N	10
77ST105	32 57 7	108 57 35	15.0	2.0	.70	>1.00	1,500	N	N	N	10
77YV200	32 54 35	109 3 0	5.0	1.0	1.00	.50	700	N	N	N	10
77YV201	32 54 3	109 2 35	5.0	.7	.50	.30	700	N	N	N	30
77YV202	32 53 57	109 2 35	5.0	.7	.50	.50	700	N	N	N	10
77YV204	32 53 46	109 0 39	5.0	1.0	.70	.50	700	N	N	N	10
78YV214	32 56 26	109 1 6	7.0	1.0	.70	.70	1,000	N	N	N	20
78YV215	32 56 51	109 1 50	5.0	1.0	.70	.70	1,000	N	N	N	20
78YV216	32 56 31	109 3 36	5.0	1.5	.70	.70	1,000	N	N	N	20
78YV217	32 56 59	109 3 48	5.0	1.0	1.00	.70	1,500	1.0	N	N	20
78YV218	32 56 20	109 3 8	5.0	.7	.50	.70	1,000	N	N	N	20
78YV219	32 58 0	109 2 30	10.0	.7	.70	>1.00	2,000	N	N	N	15
78YV220	32 57 56	109 2 21	7.0	.7	.50	.50	1,000	N	N	N	15
78YV221	32 58 30	109 3 25	5.0	.7	.70	.70	1,500	N	N	N	20
78YV222	32 58 59	109 2 49	7.0	.7	.70	>1.00	1,500	N	N	N	15
78YV223	32 59 3	109 2 59	2.0	.7	.50	.50	1,000	N	N	N	15
78YV224	32 57 27	109 3 30	7.0	1.0	1.00	1.00	1,500	N	N	N	15
78YV225	32 57 6	109 5 27	7.0	.7	1.00	.70	2,000	N	N	N	15
78YV226	32 58 0	109 6 12	5.0	.7	1.00	.70	1,000	N	N	N	15
78YV227	32 58 50	109 7 20	3.0	.5	1.00	.30	1,500	N	N	N	15
78YV228	32 59 48	109 8 23	3.0	.3	.70	.70	1,500	N	N	N	15
78YV230	32 52 13	109 1 48	5.0	.5	.30	.50	1,000	N	N	N	20
78YV231	32 52 54	109 2 56	5.0	.5	.30	.50	500	N	N	N	20
78YV233	32 53 11	109 2 44	2.0	.5	.30	.30	1,000	N	N	N	30
78YV234	32 54 59	109 3 21	10.0	1.0	.70	.50	1,000	N	N	N	20
78YV235	33 0 17	109 8 26	7.0	.7	.70	.50	1,500	N	N	N	20
78ST233	32 53 3	108 58 54	5.0	.5	1.00	.70	1,000	N	N	N	15
78ST234	32 53 48	108 59 6	5.0	1.0	1.00	.70	1,500	N	N	N	10
78ST235	32 54 6	109 0 0	5.0	1.0	1.50	1.00	1,000	N	N	N	15
78ST236	32 55 47	108 59 42	7.0	.7	1.50	>1.00	1,500	N	N	N	15
78ST237	32 55 41	108 58 45	5.0	.5	.70	1.00	1,500	N	N	N	15
78ST238	32 56 2	108 58 3	5.0	.3	.50	>1.00	2,000	N	N	N	10
78ST239	32 57 26	108 59 43	3.0	.7	1.00	.50	1,500	N	N	N	20
78BL104	33 1 33	109 7 53	3.0	1.0	1.50	>1.00	1,500	N	N	N	15
78BL105	33 1 37	109 7 53	3.0	.7	1.50	1.00	1,000	N	N	N	15
78BL106	33 0 18	109 7 24	5.0	.7	1.00	1.00	1,500	N	N	N	15
78BL400	33 4 18	109 4 55	3.0	.2	.50	.70	700	N	N	N	50
78BL401	33 4 18	109 4 54	2.0	.3	.50	.50	500	N	N	N	30
78BL402	33 6 6	109 3 15	3.0	.3	.70	1.00	700	N	N	N	50
78YV103	32 55 11	109 4 5	3.0	.7	1.00	.70	1,000	N	N	N	15
78YV106	32 56 4	109 4 58	3.0	.7	1.00	.70	700	N	N	N	20

HELLS HOLE <80 MESH STREAM SEDIMENT DATA

sample	S-BA	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
77ST100	1,500	1.5	N	N	20	200	100	70	5	20	50	20
77ST101	1,000	2.0	N	N	50	500	150	70	5	20	100	30
77ST102	2,000	2.0	N	N	20	70	100	50	N	<20	30	20
77ST103	1,500	1.5	N	N	50	500	200	50	N	20	100	20
77ST104	1,500	1.5	N	N	50	1,000	200	50	N	<20	100	20
77ST105	1,500	1.0	N	N	100	1,000	200	30	N	<20	150	15
77YV200	700	1.0	N	N	20	70	100	30	N	N	30	20
77YV201	700	<1.0	N	N	20	50	150	20	7	N	30	30
77YV202	700	<1.0	N	N	20	70	100	20	<5	<20	30	30
77YV204	700	<1.0	N	N	20	100	70	20	N	<20	30	20
78YV214	700	1.0	N	N	15	150	70	50	N	N	50	30
78YV215	700	1.0	N	N	15	70	100	50	N	<20	50	30
78YV216	500	1.0	N	N	20	300	150	30	N	N	50	30
78YV217	1,000	1.0	N	N	15	300	150	50	N	<20	50	30
78YV218	700	1.0	N	N	15	10	100	30	N	N	15	20
78YV219	1,000	<1.0	N	N	15	300	100	20	N	<20	50	50
78YV220	700	1.0	N	N	15	200	70	50	N	<20	50	30
78YV221	700	1.0	N	N	15	200	150	50	N	<20	30	30
78YV222	700	1.0	N	N	15	200	70	70	N	20	30	30
78YV223	700	1.5	N	N	7	200	50	<20	N	N	20	30
78YV224	1,000	1.0	N	N	20	300	150	50	N	N	100	30
78YV225	1,000	1.0	N	N	10	200	70	30	N	N	30	30
78YV226	700	1.0	N	N	10	70	100	30	N	N	30	20
78YV227	500	1.0	N	N	7	30	70	30	N	N	10	15
78YV228	700	1.0	N	N	10	50	70	50	N	N	10	15
78YV230	700	1.0	N	N	15	50	100	30	<5	N	20	20
78YV231	700	1.0	N	N	10	50	100	50	N	N	30	20
78YV233	500	1.5	N	N	10	50	100	30	N	N	20	30
78YV234	700	<1.0	N	N	30	100	150	20	N	N	50	30
78YV235	1,000	1.0	N	N	20	15	150	20	N	N	10	20
78ST233	1,000	<1.0	N	N	15	150	70	50	5	N	50	50
78ST234	1,000	<1.0	N	N	15	100	70	30	N	N	50	30
78ST235	1,000	<1.0	N	N	15	150	100	50	N	N	50	50
78ST236	1,500	<1.0	N	N	20	500	150	30	N	<20	100	50
78ST237	1,000	<1.0	N	N	10	150	70	30	N	<20	30	70
78ST238	1,000	1.0	N	N	5	70	50	30	N	<20	7	70
78ST239	1,000	1.5	N	N	7	50	150	70	N	<20	10	70
78BL104	700	<1.0	N	N	15	50	100	30	N	N	30	30
78BL105	700	<1.0	N	N	15	200	100	50	N	N	30	20
78BL106	700	<1.0	N	N	20	300	150	30	N	N	30	30
78BL400	1,000	2.0	N	N	15	30	100	70	50	<20	70	70
78BL401	700	2.0	N	N	10	30	150	50	N	<20	50	200
78BL402	700	2.0	N	N	15	50	100	20	N	20	30	70
78YV103	700	<1.0	N	N	30	50	150	<20	N	N	50	20
78YV106	700	<1.0	N	N	30	30	150	<20	5	N	100	15

HELLS HOLE <80 MESH STREAM SEDIMENT DATA

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
77ST100	N	10	N	200	150	N	50	N	500	--
77ST101	N	10	N	200	300	N	50	N	300	--
77ST102	N	10	N	300	150	N	30	N	300	--
77ST103	N	15	N	500	200	N	50	N	200	--
77ST104	N	15	N	500	150	N	30	N	200	--
77ST105	N	20	N	300	200	N	20	500	150	--
77YV200	N	15	N	300	150	N	30	N	150	--
77YV201	N	15	N	300	150	N	30	N	200	--
77YV202	N	15	N	300	150	N	30	N	300	--
77YV204	N	15	N	300	150	N	30	N	150	--
78YV214	N	7	N	300	150	N	20	N	200	--
78YV215	N	10	N	300	100	N	20	N	150	--
78YV216	N	10	N	300	200	N	20	N	100	--
78YV217	N	10	N	300	150	N	20	N	150	--
78YV218	N	7	N	200	150	N	15	N	100	--
78YV219	N	10	15	200	300	N	30	N	100	--
78YV220	N	7	N	200	150	N	30	N	150	--
78YV221	N	7	N	300	150	N	20	N	100	--
78YV222	N	10	N	200	200	N	30	N	100	--
78YV223	N	5	N	150	70	N	20	N	100	--
78YV224	N	15	N	300	150	N	20	N	150	--
78YV225	N	10	N	300	150	N	20	N	100	--
78YV226	N	7	N	300	100	N	20	N	150	--
78YV227	N	7	N	300	100	N	15	N	70	--
78YV228	N	7	N	300	100	N	20	N	100	--
78YV230	N	10	N	300	100	N	15	N	100	--
78YV231	N	7	N	200	100	N	20	N	100	--
78YV233	N	7	N	200	70	N	15	N	70	--
78YV234	N	15	N	300	200	N	20	N	150	--
78YV235	N	10	N	300	150	N	15	N	100	--
78ST233	N	7	N	300	150	N	30	N	200	--
78ST234	N	10	N	300	70	N	30	N	100	--
78ST235	N	10	N	300	100	N	30	N	100	--
78ST236	N	15	N	500	150	N	30	N	150	--
78ST237	N	7	N	300	100	N	30	N	100	--
78ST238	N	7	N	200	30	N	30	N	150	--
78ST239	N	7	N	200	50	N	30	N	100	--
78BL104	N	7	N	500	150	N	15	N	70	--
78BL105	N	7	N	300	200	N	15	N	70	--
78BL106	N	10	N	300	200	N	20	N	100	--
78BL400	N	10	N	<100	150	<50	30	N	300	N
78BL401	N	10	N	<100	70	N	30	N	300	N
78BL402	N	10	N	500	150	N	50	N	500	N
78YV103	N	15	N	500	200	N	30	N	300	N
78YV106	N	15	N	300	200	N	15	N	200	N

HELLS HOLE <80 MESH STREAM SEDIMENT DATA--continued

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B
78YV108	32 56 27	109 4 25	3.0	.3	.50	.50	700	N	N	N	15
78YV109	32 56 41	109 4 22	3.0	1.0	1.00	.70	1,000	N	N	N	20
78YV110	32 55 56	109 4 55	2.0	.7	.70	.30	500	N	N	N	10
78YV112	32 54 34	109 3 12	3.0	.3	.70	.70	700	N	N	N	30
78YV113	32 54 48	109 2 47	3.0	.3	.70	.70	700	N	N	N	30
78YV114	32 55 8	109 2 42	3.0	.7	.70	.70	1,000	N	N	N	50
78YV115	32 55 13	109 2 50	3.0	.5	.70	.50	700	N	N	N	30
78YV119	32 56 3	109 3 6	3.0	.7	.70	.50	700	N	N	N	30
78YV120	32 56 3	109 3 16	2.0	.3	.15	.30	500	N	N	N	15
78YV121	32 56 7	109 3 21	2.0	.3	.30	.50	700	N	N	N	30
78YV124	32 56 17	109 2 26	2.0	.3	.30	.50	700	N	N	N	15
78YV124A	32 55 55	109 1 55	3.0	.7	.70	.70	1,000	N	N	N	30
78YV125	32 55 45	109 0 57	3.0	.5	.70	.70	700	N	N	N	20
78YV126	32 55 36	109 0 40	3.0	.5	.50	.70	700	N	N	N	15
78YV128	32 54 52	109 1 34	3.0	.5	1.00	.50	1,000	N	N	N	30
78YV129	32 54 58	109 2 9	3.0	.3	.30	.50	500	N	N	N	30
79YV301	32 59 55	109 5 53	7.0	2.0	10.00	>1.00	1,500	N	N	N	15
79YV302	32 59 53	109 5 49	7.0	2.0	10.00	1.00	1,500	N	N	N	15
79YV303	32 58 13	109 6 6	7.0	2.0	10.00	1.00	2,000	N	N	N	15
79YV304	32 58 15	109 6 11	5.0	2.0	>20.00	.50	1,500	N	N	N	30
79YV305	32 58 14	109 5 35	7.0	3.0	15.00	1.00	2,000	N	N	N	20
79YV306	32 57 35	109 5 13	7.0	2.0	7.00	.70	3,000	N	N	N	20
79YV307	32 57 33	109 5 5	7.0	2.0	15.00	1.00	3,000	N	N	N	10
79YV308	32 57 37	109 5 6	7.0	3.0	10.00	.70	2,000	N	N	N	20
79YV309	32 58 42	109 4 13	10.0	3.0	10.00	>1.00	3,000	N	N	N	15
79YV310	32 59 29	109 3 12	10.0	3.0	10.00	>1.00	2,000	N	N	N	15
79YV311	32 57 18	109 3 45	5.0	2.0	5.00	1.00	3,000	N	N	N	20
79YV312	32 57 11	109 2 52	15.0	3.0	10.00	.50	3,000	N	N	N	10
79YV313	32 56 54	109 2 22	10.0	3.0	10.00	.70	2,000	1.0	N	N	15
79YV314	32 56 26	109 1 48	10.0	3.0	10.00	>1.00	2,000	<.5	N	N	15
79YV315	32 56 57	109 1 25	10.0	3.0	10.00	1.00	3,000	N	N	N	15
79YV316	32 56 52	109 1 22	10.0	3.0	10.00	1.00	5,000	N	N	N	15
79YV317	32 56 49	109 1 13	7.0	2.0	7.00	1.00	1,500	N	N	N	15
79YV318	32 56 16	109 0 44	7.0	2.0	7.00	1.00	2,000	N	N	N	10
79YV319	32 59 51	109 3 40	10.0	2.0	7.00	1.00	1,500	N	N	N	10
79YV320	32 59 18	109 3 39	7.0	3.0	7.00	>1.00	1,500	N	N	N	15
79YV321	32 59 17	109 3 31	5.0	15.0	3.00	1.00	2,000	N	N	N	10
79YV322	32 57 56	109 2 41	7.0	3.0	15.00	>1.00	2,000	N	N	N	10
79YV323	32 59 29	109 1 15	7.0	2.0	7.00	>1.00	1,500	N	N	N	10
79YV324	32 58 16	109 1 35	7.0	3.0	7.00	1.00	1,500	N	N	N	15
79YV325	32 58 13	109 1 34	7.0	2.0	5.00	1.00	1,500	N	N	N	10
79YV326	32 55 36	109 4 44	7.0	2.0	10.00	.70	1,500	N	N	N	10
79ST300	32 56 25	108 58 56	5.0	.7	1.50	1.00	1,500	N	N	N	30
79ST301	32 56 56	108 58 3	7.0	1.5	3.00	>1.00	1,000	N	N	N	50
79ST302	32 58 27	108 59 39	1.5	.3	.50	.30	2,000	N	N	N	20

HELLS HOLE <80 MESH STREAM SEDIMENT DATA--continued

sample	S-BA	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
78YV108	500	<1.0	N	N	20	30	100	<20	N	N	50	15
78YV109	700	<1.0	N	N	30	30	200	<20	N	<20	50	20
78YV110	700	<1.0	N	N	30	30	200	<20	N	N	70	15
78YV112	700	<1.0	N	N	50	50	100	20	10	N	100	10
78YV113	700	<1.0	N	N	20	30	100	<20	N	<20	30	15
78YV114	1,000	<1.0	N	N	30	70	150	<20	N	<20	70	20
78YV115	700	1.0	N	N	30	70	150	<20	N	N	70	15
78YV119	700	1.0	N	N	30	50	700	N	5	<20	70	15
78YV120	200	<1.0	N	N	15	30	100	N	N	<20	50	15
78YV121	500	1.0	N	N	15	70	100	<20	N	<20	100	15
78YV124	700	1.0	N	N	20	15	70	N	N	N	10	10
78YV124A	1,000	<1.0	N	N	30	500	150	<20	N	<20	150	15
78YV125	1,000	<1.0	N	N	50	300	150	<20	N	<20	150	15
78YV126	700	<1.0	N	N	30	150	100	<20	N	N	100	15
78YV128	700	<1.0	N	N	30	70	100	<20	N	<20	100	15
78YV129	700	1.0	N	N	30	50	100	<20	N	N	70	15
79YV301	1,500	<1.0	N	N	20	300	150	50	N	N	70	50
79YV302	2,000	<1.0	N	N	20	70	150	50	N	N	15	50
79YV303	2,000	<1.0	N	N	15	200	150	50	N	N	70	50
79YV304	1,000	<1.0	N	N	10	100	100	70	N	N	20	50
79YV305	2,000	<1.0	N	N	30	700	150	50	N	<20	150	50
79YV306	2,000	<1.0	N	N	15	30	200	70	N	<20	5	50
79YV307	3,000	<1.0	N	N	30	700	100	70	N	<20	70	50
79YV308	1,500	<1.0	N	N	20	500	150	50	N	<20	50	50
79YV309	2,000	<1.0	N	N	50	700	200	70	N	N	100	50
79YV310	2,000	<1.0	N	N	50	500	150	70	N	N	100	50
79YV311	2,000	1.0	N	N	10	50	150	70	N	<20	5	70
79YV312	2,000	<1.0	N	N	50	1,000	150	50	N	N	70	70
79YV313	1,500	<1.0	N	N	50	500	150	50	N	N	100	50
79YV314	2,000	<1.0	N	N	70	700	150	50	N	<20	150	50
79YV315	2,000	<1.0	N	N	50	700	200	50	N	<20	100	70
79YV316	2,000	<1.0	N	N	20	1,500	150	70	N	N	70	50
79YV317	2,000	<1.0	N	N	15	200	50	70	N	<20	30	50
79YV318	1,500	<1.0	N	N	20	150	150	70	N	<20	50	50
79YV319	1,500	<1.0	N	N	20	300	200	50	N	<20	150	50
79YV320	1,500	<1.0	N	N	20	200	200	70	N	<20	100	50
79YV321	1,500	1.0	N	N	15	100	100	70	N	<20	30	70
79YV322	1,500	<1.0	N	N	30	200	150	70	N	<20	70	50
79YV323	1,500	<1.0	N	N	20	150	200	70	N	20	50	50
79YV324	1,500	<1.0	N	N	20	200	150	70	N	<20	70	50
79YV325	1,500	<1.0	N	N	20	300	200	50	N	<20	70	70
79YV326	1,000	<1.0	N	N	20	150	200	50	N	N	50	50
79ST300	1,500	1.5	N	N	15	150	100	70	N	<20	30	70
79ST301	1,500	1.0	N	N	50	200	300	70	N	<20	150	50
79ST302	1,000	3.0	N	N	5	50	70	<20	N	<20	7	70

HELLS HOLE <80 MESH STREAM SEDIMENT DATA--continued

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
78YV108	N	15	N	200	150	N	15	N	200	N
78YV109	N	20	N	500	200	N	30	N	200	N
78YV110	N	15	N	300	100	N	15	N	200	N
78YV112	N	15	N	500	300	N	20	N	300	N
78YV113	N	15	N	500	300	N	20	N	300	N
78YV114	N	15	N	700	200	N	30	N	300	N
78YV115	N	15	N	500	200	N	15	N	200	N
78YV119	N	15	N	500	200	N	15	N	150	N
78YV120	N	5	N	100	100	N	20	N	150	N
78YV121	N	7	N	200	100	N	30	N	300	N
78YV124	N	7	N	300	150	N	15	N	150	N
78YV124A	N	20	N	500	300	N	20	N	200	N
78YV125	N	15	N	300	150	N	20	N	300	N
78YV126	N	15	N	300	150	N	20	N	300	N
78YV128	N	15	N	300	300	N	20	N	300	N
78YV129	N	15	N	200	200	N	20	N	200	N
79YV301	N	15	N	700	200	N	50	N	100	N
79YV302	N	15	N	700	200	N	50	N	100	N
79YV303	N	15	N	700	300	N	50	N	100	N
79YV304	N	10	N	500	100	N	50	N	100	N
79YV305	N	20	N	700	200	N	70	N	150	N
79YV306	N	10	N	700	150	N	50	N	200	N
79YV307	N	15	N	700	200	N	70	N	150	N
79YV308	N	15	N	700	200	N	50	N	100	N
79YV309	N	20	N	700	300	N	70	N	150	N
79YV310	N	20	N	700	300	N	70	N	100	N
79YV311	N	15	N	500	100	N	50	N	150	N
79YV312	N	20	N	700	300	N	50	N	50	N
79YV313	N	20	N	700	300	N	70	N	100	N
79YV314	N	20	N	700	300	N	70	N	100	N
79YV315	N	20	N	700	300	N	70	N	150	N
79YV316	N	20	N	700	300	N	70	N	150	N
79YV317	N	20	N	700	200	N	70	N	200	N
79YV318	N	15	N	500	200	N	70	N	200	N
79YV319	N	20	N	700	200	N	70	N	300	N
79YV320	N	20	N	700	200	N	70	N	150	N
79YV321	N	15	N	500	150	N	50	N	150	N
79YV322	N	20	N	700	200	N	70	N	200	N
79YV323	N	20	N	700	200	N	70	N	200	N
79YV324	N	20	N	700	200	N	50	N	150	N
79YV325	N	15	N	700	300	N	70	N	150	N
79YV326	N	20	N	700	300	N	50	N	100	N
79ST300	N	15	N	300	150	N	50	N	300	N
79ST301	N	20	N	500	200	N	70	N	300	N
79ST302	N	7	N	<100	50	N	30	N	200	N

HELLS HOLE <80 MESH STREAM SEDIMENT DATA--continued

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B
79ST303	32 58 30	108 59 33	1.5	.5	.50	.30	1,500	N	N	N	20
79BL300	33 1 30	109 8 12	5.0	1.5	7.00	.50	2,000	N	N	N	20
79BL301	33 1 47	109 8 15	7.0	2.0	10.00	>1.00	1,500	N	N	N	10
79BL302	33 2 2	109 9 28	7.0	1.5	10.00	1.00	3,000	N	N	N	20
79BL303	33 1 58	109 9 15	7.0	2.0	10.00	1.00	2,000	N	N	N	15
79BL304	33 2 10	109 9 6	5.0	2.0	10.00	1.00	2,000	N	N	N	30
79BL305	33 2 18	109 8 32	7.0	3.0	10.00	1.00	2,000	N	N	N	20
79BL306	33 2 24	109 8 41	7.0	3.0	7.00	1.00	2,000	N	N	N	20
79BL307	33 2 31	109 8 25	5.0	1.5	7.00	.70	2,000	N	N	N	20
79BL309	33 2 54	109 8 5	5.0	3.0	10.00	.70	3,000	N	N	N	20
79BL310	33 2 57	109 8 8	5.0	3.0	10.00	1.00	1,500	N	N	N	15
79BL311	33 0 46	109 7 7	5.0	1.5	7.00	.50	3,000	N	N	N	20
79BL312	33 0 46	109 7 3	7.0	1.5	10.00	1.00	3,000	N	N	N	10
79BL313	33 0 25	109 6 44	7.0	2.0	10.00	.70	2,000	N	N	N	10
79BL314	33 0 32	109 5 42	15.0	3.0	15.00	>1.00	2,000	N	N	N	15
79BL315	33 0 29	109 5 42	7.0	2.0	10.00	1.00	2,000	N	N	N	15
79BL321	33 6 25	109 6 17	7.0	3.0	15.00	.70	2,000	N	N	N	10
79BL322	33 6 25	109 6 13	5.0	2.0	7.00	.70	2,000	N	N	N	20
79BL323	33 6 13	109 1 26	5.0	1.5	7.00	.70	1,500	N	N	N	50
79BL324	33 6 11	109 1 25	5.0	1.5	7.00	.70	3,000	N	N	N	50
79BL325	33 5 49	109 0 56	7.0	1.0	5.00	>1.00	5,000	N	N	N	30
79BL326	33 5 21	109 1 4	5.0	2.0	10.00	1.00	3,000	N	N	N	20
79BL327	33 5 6	109 1 21	5.0	1.5	10.00	1.00	3,000	N	N	N	20
79BL328	33 5 9	109 1 23	7.0	1.5	10.00	1.00	1,500	N	N	N	20
79BL328A	33 0 42	109 4 26	15.0	3.0	7.00	>1.00	3,000	N	N	N	<10
79BL329	33 0 43	109 4 23	5.0	1.5	5.00	.70	5,000	N	N	N	30
79BL330	33 0 15	109 3 58	10.0	2.0	7.00	1.00	2,000	N	N	N	15
79BL331	33 0 16	109 3 53	7.0	2.0	7.00	1.00	5,000	N	N	N	20
79BL332	33 2 31	109 6 9	7.0	2.0	7.00	1.00	5,000	N	N	N	20
79BL333	33 2 26	109 6 12	7.0	3.0	10.00	.70	1,500	N	N	N	20
79BL335	33 5 54	109 3 12	5.0	.7	3.00	.70	>5,000	N	N	N	30
79BL336	33 4 37	109 3 17	3.0	.3	3.00	.50	5,000	N	N	N	50
79BL337	33 4 34	109 3 13	5.0	.5	3.00	.70	5,000	N	N	N	30
79BL338	33 4 9	109 0 3	15.0	2.0	10.00	>1.00	3,000	<.5	N	N	<10
79BL339	33 2 4	109 1 20	2.0	1.0	2.00	.50	5,000	N	N	N	20
79BL340	33 2 5	109 1 33	5.0	.7	1.00	.70	2,000	N	N	N	50
79BL341	33 2 8	109 1 34	3.0	.5	1.00	1.00	2,000	N	N	N	50
79BL342	33 2 22	109 1 4	7.0	2.0	3.00	.70	1,500	N	N	N	20
79BL343	33 3 40	109 4 22	3.0	.3	.70	.50	2,000	N	N	N	30
79BL344	33 4 11	109 4 27	1.5	.5	.70	.30	1,500	N	N	N	50
79BL345	33 4 7	109 4 17	2.0	.3	.70	.50	1,500	N	N	N	50
79BL346	33 4 30	109 4 13	2.0	.5	1.00	.70	3,000	N	N	N	50
79BL347	33 5 6	109 3 55	2.0	.5	1.00	.50	3,000	N	N	N	50
79BL348	33 3 34	109 2 40	3.0	.7	1.00	.50	2,000	N	N	N	30
79BL349	33 3 23	109 2 34	3.0	.7	1.00	.70	5,000	N	N	N	30

HELLS HOLE <80 MESH STREAM SEDIMENT DATA--continued

sample	S-BA	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
79ST303	1,500	2.0	N	N	7	100	30	<20	N	<20	20	50
79BL300	2,000	1.0	N	N	7	50	70	100	N	<20	15	50
79BL301	1,500	<1.0	N	N	30	200	100	50	N	<20	70	30
79BL302	2,000	<1.0	N	N	15	100	100	50	N	<20	10	50
79BL303	3,000	<1.0	N	N	20	70	150	70	N	<20	15	30
79BL304	2,000	<1.0	N	N	15	100	100	70	N	<20	50	50
79BL305	2,000	<1.0	N	N	15	150	150	70	N	<20	50	50
79BL306	2,000	<1.0	N	N	20	200	200	70	N	<20	100	50
79BL307	5,000	1.0	N	N	10	100	100	100	N	20	15	70
79BL309	2,000	<1.0	N	N	20	150	200	70	N	<20	70	50
79BL310	2,000	<1.0	N	N	20	150	150	70	N	<20	50	50
79BL311	3,000	1.5	N	N	10	70	150	100	N	<20	7	50
79BL312	3,000	<1.0	N	N	20	150	70	50	N	<20	20	50
79BL313	1,500	<1.0	N	N	20	70	150	70	N	<20	15	50
79BL314	2,000	<1.0	N	N	70	300	200	50	N	<20	100	50
79BL315	2,000	<1.0	N	N	50	500	200	70	N	<20	100	50
79BL321	3,000	<1.0	N	N	50	300	150	70	N	<20	100	50
79BL322	2,000	<1.0	N	N	30	150	150	100	N	<20	100	50
79BL323	500	2.0	N	N	10	100	30	50	10	30	20	150
79BL324	1,500	3.0	N	N	15	150	150	150	10	30	20	150
79BL325	300	1.5	N	N	20	150	100	100	<5	50	20	100
79BL326	1,500	1.0	N	N	50	150	200	70	N	20	70	100
79BL327	2,000	3.0	N	N	30	150	300	100	N	30	50	150
79BL328	1,500	1.0	N	N	20	300	200	70	N	30	50	150
79BL328A	2,000	<1.0	N	N	70	100	200	20	N	<20	50	30
79BL329	2,000	1.5	N	N	15	150	200	150	N	<20	15	100
79BL330	2,000	<1.0	N	N	50	200	150	30	N	<20	70	50
79BL331	3,000	1.0	N	N	20	100	200	100	N	<20	30	100
79BL332	3,000	<1.0	N	N	15	500	300	70	N	<20	50	100
79BL333	2,000	<1.0	N	N	20	150	300	70	N	<20	70	70
79BL335	2,000	2.0	N	N	5	150	150	150	N	<20	30	150
79BL336	2,000	2.0	N	N	5	20	70	100	<5	<20	<5	150
79BL337	3,000	1.5	N	N	5	70	150	150	10	<20	5	150
79BL338	1,500	<1.0	N	N	70	1,500	150	30	N	20	70	100
79BL339	2,000	1.5	N	N	5	70	100	150	N	<20	<5	100
79BL340	1,500	2.0	N	N	10	70	150	100	N	<20	7	100
79BL341	1,500	3.0	N	N	5	70	100	100	N	<20	7	100
79BL342	1,500	2.0	N	N	15	200	200	70	N	20	70	70
79BL343	1,500	1.5	N	N	5	70	100	150	N	<20	5	70
79BL344	1,500	2.0	N	N	5	100	150	150	N	<20	15	100
79BL345	1,500	2.0	N	N	7	50	100	100	10	20	7	70
79BL346	1,500	2.0	N	N	7	100	150	150	10	30	20	100
79BL347	1,500	2.0	N	N	5	70	150	150	<5	20	7	100
79BL348	1,500	1.5	N	N	7	150	150	100	N	<20	10	100
79BL349	1,500	3.0	N	N	7	100	200	150	N	20	15	100

HELLS HOLE <80 MESH STREAM SEDIMENT DATA--continued

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
79ST303	N	7	N	<100	50	N	30	N	150	N
79BL300	N	10	N	700	70	N	30	N	300	N
79BL301	N	15	N	700	300	N	30	N	30	N
79BL302	N	15	N	500	100	N	50	N	100	N
79BL303	N	15	N	1,000	200	N	50	N	70	N
79BL304	N	15	N	1,000	150	N	30	N	150	N
79BL305	N	15	N	1,000	150	N	30	N	100	N
79BL306	N	15	N	700	300	N	50	N	100	N
79BL307	N	10	N	700	50	N	50	N	300	N
79BL309	N	15	N	700	150	N	50	N	150	N
79BL310	N	15	N	700	150	N	50	N	70	N
79BL311	N	15	N	700	50	N	30	N	200	N
79BL312	N	15	N	1,000	200	N	50	N	100	N
79BL313	N	15	N	1,000	300	N	30	N	100	N
79BL314	N	20	N	1,000	300	N	70	N	70	N
79BL315	N	15	N	1,000	200	N	50	N	150	N
79BL321	N	15	N	1,000	200	N	70	N	100	N
79BL322	N	15	N	700	150	N	50	N	100	N
79BL323	N	15	15	500	100	N	70	N	100	N
79BL324	N	15	10	700	100	N	100	N	200	N
79BL325	N	15	20	500	200	N	70	N	150	N
79BL326	N	15	10	1,500	300	N	70	N	150	N
79BL327	N	15	<10	1,500	200	N	70	N	200	N
79BL328	N	15	10	1,000	300	N	70	N	150	N
79BL328A	N	20	N	1,500	300	N	70	N	150	N
79BL329	N	15	N	300	100	N	70	N	200	N
79BL330	N	20	N	1,000	200	N	70	N	200	N
79BL331	N	15	N	1,000	200	N	70	N	500	N
79BL332	N	20	N	1,500	200	N	50	N	100	N
79BL333	N	20	N	1,500	200	N	50	N	200	N
79BL335	N	15	N	300	50	N	70	N	150	N
79BL336	N	15	N	200	20	N	30	N	150	N
79BL337	N	15	N	300	30	N	70	N	200	N
79BL338	N	20	10	1,000	700	N	100	N	70	N
79BL339	N	15	N	300	50	N	50	N	300	N
79BL340	N	7	N	200	50	N	50	N	150	N
79BL341	N	10	N	200	50	N	50	N	150	N
79BL342	N	20	N	700	150	N	100	N	100	N
79BL343	N	7	N	100	20	N	50	N	200	N
79BL344	N	7	N	100	15	N	30	N	150	N
79BL345	N	7	N	<100	15	N	50	N	300	N
79BL346	N	10	N	100	30	N	70	N	200	N
79BL347	N	7	N	200	20	N	50	N	300	N
79BL348	N	10	N	200	50	N	50	N	200	N
79BL349	N	10	N	200	50	N	70	N	200	N

HELLS HOLE <80 MESH STREAM SEDIMENT DATA--continued

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B
79BL350	33 3 17	109 2 30	5.0	.5	1.00	.70	3,000	N	N	N	30
79BL351	33 3 17	109 2 25	3.0	.5	1.00	.50	2,000	N	N	N	50
79BL352	33 3 58	109 2 48	5.0	.5	1.00	.70	3,000	N	N	N	50
79BL353	33 4 8	109 2 56	5.0	.5	1.00	.70	3,000	N	N	N	50
79BL354	33 5 28	109 2 48	3.0	.3	1.00	.50	2,000	N	N	N	50
79BL355	33 6 1	109 3 38	2.0	.3	.70	.30	3,000	N	N	N	30
79BL356	33 6 17	109 3 16	5.0	.7	1.50	.70	1,500	N	N	N	50
79BL357	33 5 18	109 5 15	7.0	1.5	5.00	1.00	1,000	N	N	N	20
79BL358	33 5 4	109 5 14	7.0	1.0	3.00	.70	1,500	N	N	N	20
79BL359	33 4 39	109 4 56	7.0	.7	3.00	.70	1,500	N	N	N	20
79BL600	33 0 50	109 0 49	7.0	1.5	5.00	1.00	1,500	N	N	N	15
79BL601	33 0 47	109 0 38	7.0	1.5	3.00	1.00	1,500	N	N	N	15
79BL602	33 0 24	109 0 25	15.0	1.5	3.00	>1.00	3,000	N	N	N	<10
79BL604	33 1 17	109 0 2	7.0	2.0	2.00	.70	1,000	N	N	N	10
79BL605	33 1 36	109 0 53	5.0	1.5	2.00	.50	1,000	N	N	N	20
79BL606	33 1 25	109 1 53	3.0	.5	.70	.50	2,000	N	N	N	20
79BL607	33 2 17	109 0 58	3.0	.7	1.00	.50	2,000	N	N	N	20
79BL608	33 2 42	109 3 22	3.0	.7	1.00	.70	2,000	N	N	N	20
79BL609	33 2 45	109 3 25	2.0	.7	.70	.50	3,000	N	N	N	30
79BL610	33 3 47	109 2 41	2.0	.5	.70	.50	2,000	N	N	N	30
79BL611	33 3 53	109 2 51	2.0	.5	.70	.50	3,000	N	N	N	30
79BL612	33 4 19	109 1 49	2.0	.7	1.00	.30	1,500	N	N	N	20
79BL613	33 4 16	109 0 11	1.5	.5	1.50	.30	2,000	N	N	N	30
79BL614	33 3 17	109 0 54	3.0	.7	2.00	.70	1,500	N	N	N	20
79BL615	33 3 22	109 1 7	2.0	.5	.70	.30	2,000	N	N	N	20
79BL616	33 2 19	109 4 6	5.0	.7	1.00	.50	1,500	N	N	N	50
79BL617	33 2 18	109 4 12	3.0	.7	.70	.50	3,000	N	N	N	50
79BL618	33 2 1	109 7 1	5.0	1.5	5.00	.50	1,500	N	N	N	15
79BL619	33 1 33	109 7 31	7.0	2.0	7.00	.50	1,500	N	N	N	<10
79BL620	33 1 27	109 7 29	5.0	1.5	3.00	.70	1,500	N	N	N	15
79MC100	33 2 59	108 59 51	7.0	.7	.70	1.00	1,500	N	N	N	10
79MC101	33 0 14	108 59 53	7.0	1.0	2.00	>1.00	1,000	N	N	N	10
79MC102	33 0 13	108 59 51	7.0	1.0	2.00	1.00	1,000	N	N	N	10
79MC103	33 0 31	108 59 50	5.0	1.0	1.00	.70	1,000	N	N	N	10
79MC104	33 1 0	108 59 31	5.0	1.5	1.50	.70	1,000	N	N	N	15
79MC105	33 1 7	108 59 41	7.0	1.0	.70	.70	1,000	N	N	N	10
79MC106	33 1 26	108 59 33	7.0	1.5	1.00	.50	700	N	N	N	10
79MC107	33 1 29	108 59 16	3.0	.7	1.00	.50	1,500	N	N	N	20
79MC108	33 1 59	108 59 18	2.0	1.0	1.00	.30	1,000	N	N	N	15
79MC109	33 2 6	108 59 12	1.5	.7	1.00	.30	1,000	N	N	N	15
79MC110	33 2 35	108 59 27	2.0	1.0	1.50	.50	1,000	N	N	N	15
79MC111	33 2 36	108 59 26	2.0	.7	1.00	.30	1,000	N	N	N	15
79MC200	33 1 21	108 59 33	5.0	.7	.70	.70	700	N	N	N	10
80MC120	33 0 26	108 58 26	5.0	1.0	2.00	.70	1,000	N	N	N	10
80MC121	33 0 41	108 58 11	3.0	1.0	1.00	.50	700	N	N	N	10

HELLS HOLE <80 MESH STREAM SEDIMENT DATA--continued

sample	S-BA	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
79BL350	1,000	2.0	N	N	5	150	150	100	N	20	50	100
79BL351	1,000	3.0	N	N	7	300	200	100	10	50	70	150
79BL352	1,500	2.0	N	N	7	150	150	150	<5	20	20	100
79BL353	1,500	2.0	N	N	10	150	150	150	15	30	15	100
79BL354	2,000	2.0	N	N	5	70	100	100	<5	20	15	100
79BL355	1,500	2.0	N	N	5	50	70	100	N	<20	10	100
79BL356	700	1.0	N	N	7	100	30	50	N	<20	15	100
79BL357	1,500	<1.0	N	N	20	100	150	50	N	<20	50	50
79BL358	1,500	<1.0	N	N	15	100	200	50	N	<20	50	30
79BL359	1,500	<1.0	N	N	15	150	200	50	N	<20	30	50
79BL600	1,500	1.0	N	N	15	20	150	100	N	<20	15	70
79BL601	1,500	<1.0	N	N	15	150	150	70	N	<20	50	50
79BL602	1,000	N	N	N	70	200	200	20	N	<20	70	30
79BL604	1,500	<1.0	N	N	20	150	100	50	N	<20	50	30
79BL605	1,500	<1.0	N	N	15	150	100	70	N	N	50	30
79BL606	1,500	1.5	N	N	7	150	70	100	N	20	15	70
79BL607	1,500	2.0	N	N	7	70	70	100	N	20	15	100
79BL608	1,500	1.5	N	N	7	150	150	100	N	30	20	100
79BL609	1,500	2.0	N	N	7	150	200	100	10	<20	30	100
79BL610	1,000	3.0	N	N	7	100	100	100	<5	20	15	100
79BL611	1,500	1.5	N	N	5	100	150	100	N	20	7	100
79BL612	1,000	2.0	N	N	10	100	100	70	N	20	30	70
79BL613	500	7.0	N	N	5	70	150	70	<5	50	10	100
79BL614	1,000	5.0	N	N	15	50	150	70	N	20	20	300
79BL615	500	5.0	N	N	5	70	100	100	N	50	10	100
79BL616	1,500	2.0	N	N	7	100	500	100	10	<20	15	150
79BL617	1,500	2.0	N	N	7	100	150	100	10	<20	10	100
79BL618	1,500	1.0	N	N	10	100	150	100	N	<20	30	100
79BL619	1,500	<1.0	N	N	15	1,500	100	30	N	N	50	30
79BL620	1,500	<1.0	N	N	10	150	100	50	N	N	20	30
79MC100	1,500	<1.0	N	N	10	100	70	50	N	<20	15	50
79MC101	1,500	<1.0	N	N	20	200	150	70	N	<20	50	30
79MC102	1,500	<1.0	N	N	15	300	150	50	N	<20	50	30
79MC103	1,500	<1.0	N	N	15	200	100	50	N	N	50	30
79MC104	1,500	<1.0	N	N	20	200	100	30	N	N	100	30
79MC105	1,500	<1.0	N	N	15	150	70	30	N	N	20	30
79MC106	1,500	<1.0	N	N	15	150	50	50	N	N	30	30
79MC107	1,500	1.0	N	N	15	300	150	70	N	<20	20	70
79MC108	1,500	<1.0	N	N	15	150	50	50	N	N	30	20
79MC109	1,500	<1.0	N	N	15	150	50	50	N	N	20	20
79MC110	1,500	<1.0	N	N	15	100	70	50	N	<20	50	50
79MC111	1,500	<1.0	N	N	15	100	50	50	N	N	50	30
79MC200	1,500	<1.0	N	N	15	200	70	30	N	<20	30	30
80MC120	700	3.0	N	N	20	70	70	50	N	20	30	30
80MC121	500	1.0	N	N	15	50	70	30	N	<20	30	20

HELLS HOLE <80 MESH STREAM SEDIMENT DATA--continued

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
79BL350	N	7	<10	200	50	N	50	N	200	N
79BL351	N	7	<10	200	50	N	70	N	200	N
79BL352	N	7	<10	200	50	N	70	N	300	N
79BL353	N	10	<10	200	70	N	70	N	300	N
79BL354	N	7	<10	100	30	N	70	N	300	N
79BL355	N	7	<10	100	20	N	50	N	200	N
79BL356	N	10	<10	200	100	N	50	N	200	N
79BL357	N	15	<10	500	200	N	70	N	150	N
79BL358	N	15	N	500	200	N	30	N	100	N
79BL359	N	15	N	300	150	N	50	N	100	N
79BL600	N	15	N	500	70	N	70	N	100	N
79BL601	N	20	N	500	200	N	70	N	150	N
79BL602	N	20	20	300	300	N	70	N	50	N
79BL604	N	15	N	300	150	N	50	N	100	N
79BL605	N	10	N	200	100	N	50	N	100	N
79BL606	N	10	N	200	100	N	70	N	150	N
79BL607	N	10	N	100	50	N	70	N	300	N
79BL608	N	15	N	100	70	N	50	N	200	N
79BL609	N	10	N	100	50	N	50	N	200	N
79BL610	N	7	N	100	50	N	70	N	150	N
79BL611	N	7	N	100	50	N	70	N	200	N
79BL612	N	10	N	300	70	N	70	N	200	N
79BL613	N	10	20	200	50	N	100	N	150	N
79BL614	N	10	<10	300	70	N	70	N	200	N
79BL615	N	10	N	200	30	N	70	N	200	N
79BL616	N	15	15	200	100	N	50	N	300	N
79BL617	N	10	N	200	70	N	50	N	200	N
79BL618	N	15	N	500	100	N	30	N	150	N
79BL619	N	15	<10	700	300	N	20	N	30	N
79BL620	N	15	N	700	200	N	20	N	50	N
79MC100	N	7	<10	300	150	N	50	N	100	N
79MC101	N	15	N	500	200	N	50	N	150	N
79MC102	N	10	N	500	200	N	30	N	100	N
79MC103	N	10	N	500	150	N	30	N	100	N
79MC104	N	15	N	500	200	N	30	N	100	N
79MC105	N	10	N	300	200	N	20	N	100	N
79MC106	N	10	N	300	200	<50	20	N	100	N
79MC107	N	10	N	300	70	N	30	N	100	N
79MC108	N	7	N	300	70	N	15	N	100	N
79MC109	N	5	N	300	70	N	15	N	100	N
79MC110	N	7	N	300	70	<50	30	N	100	N
79MC111	N	7	N	300	50	N	20	N	70	N
79MC200	N	10	N	300	150	N	20	N	70	N
80MC120	N	10	N	300	150	N	30	N	700	N
80MC121	N	7	N	200	100	N	20	N	200	N

HELLS HOLE <80 MESH STREAM SEDIMENT DATA--continued

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B
80MC122	33 0 51	108 58 9	5.0	1.0	2.00	.50	700	N	N	N	<10
80MC123	33 0 56	108 58 24	3.0	.7	1.00	.50	700	N	N	N	10
80MC124	33 1 24	108 57 27	5.0	1.0	2.00	.50	1,000	N	N	N	10
80BL550	33 5 35	109 4 6	2.0	.3	.70	.15	1,000	N	N	N	10
80BL551	33 5 57	109 3 38	2.0	.3	.50	.15	1,000	N	N	N	10
80BL552	33 5 54	109 3 12	2.0	.3	.50	.15	1,000	N	N	N	10

HELLS HOLE <80 MESH STREAM SEDIMENT DATA--continued

sample	S-BA	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
80MC122	500	1.0	N	N	20	100	70	30	N	20	50	20
80MC123	500	3.0	N	N	15	30	70	30	N	20	20	20
80MC124	500	3.0	N	N	20	70	70	30	N	20	50	20
80BL550	500	3.0	N	N	5	10	20	30	N	20	5	20
80BL551	500	3.0	N	N	5	20	20	30	N	20	15	30
80BL552	300	3.0	N	N	5	20	50	30	N	30	10	30

HELLS HOLE <80 MESH STREAM SEDIMENT DATA--continued

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
80MC122	N	10	N	500	150	N	20	N	300	N
80MC123	N	7	N	200	100	N	50	N	300	N
80MC124	N	7	N	300	150	N	30	N	300	N
80BL550	N	<5	N	N	15	N	20	N	150	N
80BL551	N	<5	N	N	15	N	30	N	150	N
80BL552	N	<5	N	N	20	N	30	N	150	N

HELLS HOLE ROCK DATA

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B
77ST100R	32 59 59	108 58 28	5.0	1.50	3.00	.700	1,500	1.0	N	N	10
77ST103R	32 58 25	108 58 38	7.0	1.50	1.00	.500	2,000	N	N	N	10
77ST104R	32 57 30	108 58 6	5.0	1.50	1.50	.500	1,500	N	N	N	10
78BL104R	33 1 33	109 7 53	5.0	2.00	3.00	.700	1,000	N	N	N	15
78YV232R	32 52 49	109 2 27	>20.0	.05	.20	.050	30	N	N	N	70
78YV104R	32 55 9	109 3 30	3.0	1.00	1.50	.300	700	7.0	N	N	<10
78YV105R	32 55 52	109 5 0	.3	.10	.07	.050	30	N	N	N	<10
78YV106R	32 56 4	109 4 58	3.0	1.50	1.50	.300	700	N	N	N	<10
78YV107R	32 56 14	109 4 40	5.0	1.50	1.50	.300	700	N	N	N	<10
78YV108R	32 56 27	109 4 25	5.0	1.50	1.50	.300	700	N	N	N	<10
78YV111R	32 54 33	109 3 21	5.0	.20	1.00	.100	2,000	15.0	N	N	<10
78YV116R	32 55 12	109 2 47	3.0	1.00	1.50	.300	1,000	N	N	N	<10
78YV117R	32 55 42	109 2 57	3.0	1.50	.50	.300	700	N	N	N	<10
78YV118R	32 55 54	109 2 58	7.0	.30	.10	.150	200	15.0	N	N	<10
78YV122R	32 55 33	109 2 55	.2	.05	<.05	.070	15	N	N	N	<10
78YV123R	32 55 2	109 2 11	.7	.15	.10	.150	20	15.0	N	15	<10
78YV123A	32 56 17	109 2 26	.5	.15	.07	.070	100	1.0	N	N	<10
78YV127R	32 54 52	109 1 34	1.5	.05	.05	.070	20	70.0	N	N	<10
78YV102R	32 54 53	109 3 39	.3	.70	7.00	.015	1,500	<.5	N	N	<10
BL20279	33 2 18	109 1 52	1.0	<.02	.20	.150	200	N	N	N	20
YV2C79	32 55 22	109 4 32	7.0	.02	.05	.020	50	300.0	N	N	15
BL20379	33 2 18	109 1 52	2.0	.30	.30	.150	200	3.0	N	N	20
BL21379	33 2 55	109 0 32	.5	.20	.15	.002	300	1.0	N	N	N
BL15479	33 0 25	109 1 42	1.0	.30	.20	.150	300	N	N	N	N
BL7279	33 0 48	109 1 37	1.5	.50	.30	.100	>5,000	2.0	N	N	15
BL4679	33 2 26	109 1 28	1.0	.07	.15	.050	700	N	N	N	20
BL4979	33 2 15	109 1 22	1.5	.07	.20	.050	>5,000	N	N	N	20
MC379	33 0 12	108 59 50	2.0	.10	.20	.300	300	100.0	N	N	N
BL7379	33 0 53	109 1 30	3.0	.15	.20	.300	70	70.0	N	N	N
BL7179	33 0 35	109 1 48	1.5	<.02	.30	.150	70	1.5	N	N	N
MC979	33 1 9	108 59 44	7.0	.10	.20	.700	50	N	N	N	N
MC779	33 0 55	108 59 42	1.5	.30	.20	.100	300	N	N	N	15
BL6379	33 0 35	109 0 28	20.0	.20	.15	.010	1,500	N	N	N	50
BL7079	33 0 35	109 1 48	1.0	.07	.30	.150	200	N	N	N	10
MC879	33 0 55	108 59 42	1.5	.50	.50	.100	300	N	N	N	N
BL6279	33 0 28	108 59 58	.7	.15	.07	.070	150	70.0	N	N	15
MC579	33 0 28	108 59 0	1.5	.20	.07	.300	100	2.0	N	N	30
BL6479	33 0 32	109 0 49	2.0	.20	.10	.200	50	N	N	N	<10
BL3279	33 0 56	109 2 43	1.5	.03	.20	.150	70	<.5	N	N	20
BL3179	33 0 56	109 2 43	1.0	.10	.30	.150	70	<.5	N	N	15
BL1779	33 0 14	109 4 25	5.0	.20	.30	.200	3,000	<.5	N	N	15
BL3379	33 1 7	109 2 48	1.0	.10	.20	.150	70	N	N	N	15
BL6A79	33 2 30	109 6 25	7.0	3.00	7.00	1.000	300	1.0	N	N	N
BL3679	33 2 35	109 1 37	.7	.07	.10	.050	150	N	N	N	15
BL16979	33 0 28	108 59 18	.2	.02	.30	N	500	N	N	N	20

HELLS HOLE ROCK DATA

sample	S-BA	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
77ST100R	1,000	2.0	N	N	30	150	100	100	N	20	100	20
77ST103R	1,000	1.0	N	N	30	50	70	50	N	<20	20	20
77ST104R	1,500	1.0	N	N	20	10	50	50	N	<20	15	20
78BL104R	1,000	N	N	N	30	100	100	20	N	N	70	15
78YV232R	200	N	N	N	N	50	30	N	N	N	20	N
78YV104R	1,500	N	N	N	15	<10	7,000	<20	N	N	10	<10
78YV105R	50	<1.0	N	N	<5	<10	50	N	N	N	<5	<10
78YV106R	200	<1.0	N	N	15	<10	10	N	N	N	<5	<10
78YV107R	700	<1.0	N	N	15	<10	20	N	5	N	<5	<10
78YV108R	700	<1.0	N	N	15	150	30	N	N	N	50	10
78YV111R	700	<1.0	20	30	30	<10	7,000	N	1,000	N	7	7,000
78YV116R	500	<1.0	N	N	15	<10	700	N	7	N	15	50
78YV117R	150	<1.0	N	N	20	30	50	N	N	N	30	<10
78YV118R	200	<1.0	N	N	15	10	15,000	N	10	N	15	<10
78YV122R	150	1.0	N	N	<5	<10	100	N	N	N	<5	15
78YV123R	100	1.0	N	N	15	<10	50	N	7	N	<5	<10
78YV123A	50	1.5	N	N	5	<10	30	N	N	N	<5	N
78YV127R	150	1.0	N	N	5	<10	30	N	100	N	7	70
78YV102R	150	<1.0	N	N	15	<10	30	N	N	N	15	<10
BL20279	1,000	2.0	N	N	N	N	10	150	5	20	N	20
YV2C79	3,000	1.5	N	N	N	N	>20,000	N	15	N	5	50
BL20379	2,000	3.0	N	N	N	N	1,000	100	N	30	N	50
BL21379	200	1.5	N	N	7	N	300	N	N	N	N	N
BL15479	1,500	2.0	N	N	N	N	50	100	N	20	N	20
BL7279	>5,000	7.0	N	N	20	N	700	70	7	20	N	300
BL4679	100	10.0	N	N	N	N	50	N	<5	150	N	50
BL4979	700	200.0	N	N	7	N	30	50	10	100	N	70
MC379	1,000	3.0	N	N	7	20	50	50	10	N	10	15
BL7379	1,000	2.0	N	N	7	20	70	50	7	N	15	20
BL7179	2,000	2.0	N	N	N	N	30	100	N	30	N	50
MC979	1,500	2.0	N	N	10	30	50	50	N	N	10	30
MC779	700	1.0	N	N	5	<10	30	N	N	N	7	N
BL6379	1,000	2.0	N	N	15	N	50	N	7	N	20	15
BL7079	2,000	3.0	N	N	N	N	15	70	N	20	N	30
MC679	300	1.0	N	N	10	10	100	N	N	N	15	N
BL6279	200	3.0	N	N	5	10	30	N	N	N	7	30
MC579	700	1.5	N	N	5	<10	20	50	N	N	5	15
BL6479	2,000	1.5	N	N	5	15	200	N	N	N	7	<10
BL3279	2,000	2.0	N	N	N	N	50	70	N	20	N	50
BL3179	2,000	2.0	N	N	N	N	70	70	5	20	N	30
BL1779	2,000	3.0	N	N	10	N	70	70	7	N	N	70
BL3379	3,000	2.0	N	N	N	N	5	70	N	20	N	30
BL6A79	2,000	1.0	N	N	30	70	300	30	N	N	70	20
BL3679	2,000	15.0	N	N	N	N	50	N	N	100	N	30
BL16979	500	1.5	N	N	N	N	10	50	N	N	N	N

HELLS HOLE ROCK DATA

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
77ST100R	N	10	N	700	150	N	50	N	300	--
77ST103R	N	20	N	500	100	N	30	N	150	--
77ST104R	N	10	N	500	100	N	20	N	200	--
78BL104R	N	15	N	700	200	N	20	N	100	N
78YV232R	N	N	N	300	70	N	10	200	70	N
78YV104R	N	7	N	500	100	N	15	200	70	N
78YV105R	N	N	N	N	<10	N	10	N	50	N
78YV106R	N	5	N	300	50	N	<10	N	30	N
78YV107R	N	7	N	1,000	50	N	15	N	50	N
78YV108R	N	10	N	700	70	N	15	N	70	N
78YV111R	N	5	N	N	50	N	20	10,000	30	N
78YV116R	N	7	N	700	70	N	15	N	70	N
78YV117R	N	10	N	200	70	N	10	N	30	N
78YV118R	N	7	N	300	300	<50	<10	N	20	N
78YV122R	N	N	N	N	<10	N	30	N	50	N
78YV123R	N	N	N	N	50	N	<10	N	30	N
78YV123A	N	<5	N	N	<10	N	<10	N	50	N
78YV127R	N	7	N	N	20	N	<10	N	30	N
78YV102R	N	<5	N	100	<10	N	10	N	10	N
BL20279	N	N	N	N	10	N	50	N	500	N
YV2C79	N	N	N	150	100	50	N	N	20	N
BL20379	N	N	N	100	10	N	20	N	300	N
BL21379	N	N	N	N	<10	N	N	N	20	N
BL15479	N	N	N	N	<10	N	20	N	300	N
BL7279	N	N	20	200	20	N	20	200	300	N
BL4679	N	N	N	N	<10	N	30	N	150	N
BL4979	N	N	20	N	15	N	70	N	100	N
MC379	N	5	N	<100	30	N	10	N	300	N
BL7379	N	5	N	<100	30	N	10	N	200	N
BL7179	N	<5	N	<100	<10	N	30	N	300	N
MC979	N	10	N	150	100	N	20	N	300	N
MC779	N	N	N	100	20	N	N	N	50	N
BL6379	N	10	N	150	20	N	N	N	<10	N
BL7079	N	N	N	100	<10	N	20	N	300	N
MC879	N	N	N	150	30	N	<10	N	70	N
BL6279	N	N	N	N	20	N	N	N	50	N
MC579	N	5	N	<100	30	N	20	N	300	N
BL6479	N	N	N	150	30	N	10	N	150	N
BL3279	N	N	N	100	<10	N	30	N	300	N
BL3179	N	N	N	100	<10	N	20	N	300	N
BL1779	N	N	N	<100	50	N	30	N	200	N
BL3379	N	<5	N	100	<10	N	20	N	300	N
BL6A79	N	15	N	700	150	N	20	N	200	N
BL3679	N	N	N	N	<10	N	50	N	150	N
BL16979	N	N	N	N	<10	N	N	N	N	N

HELLS HOLE ROCK DATA--continued

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B
MC679	33 0 47	108 59 34	1.0	.30	.10	.100	500	N	N	N	10
MC3579	33 0 9	108 57 52	3.0	.50	.20	.100	500	N	N	N	10
MC3779	33 0 8	108 57 15	.7	.07	.15	.100	200	N	N	N	10
MC6179	33 0 48	108 59 0	2.0	.30	.10	.200	1,000	N	N	N	<10
MC6679	33 0 28	108 59 22	.1	.02	<.05	.002	1,000	N	N	N	10
MC7079	33 0 9	108 58 24	2.0	.50	.15	.150	500	N	N	N	<10
MC7179	33 0 4	108 58 23	5.0	.10	.10	.100	700	N	N	N	10
MC7279	33 0 4	108 58 23	.5	.02	.10	.100	200	N	N	N	10
MC7679	33 0 5	108 58 51	3.0	.30	.20	.500	100	N	N	N	<10
79BL300R	33 1 30	109 8 12	10.0	5.00	7.00	1.000	1,500	N	N	N	10
79BL306R	33 2 22	109 8 36	7.0	1.50	3.00	1.000	1,000	N	N	N	10
79BL308R	33 2 58	109 8 12	5.0	.70	2.00	.700	500	N	N	N	15
79BL309R	33 2 54	109 8 5	2.0	.50	1.50	.200	700	N	N	N	10
79BL334R	33 2 31	109 6 15	10.0	5.00	7.00	1.000	1,000	N	N	N	<10
79BL339R	33 2 4	109 1 20	1.5	.20	.70	.200	150	N	N	N	20
79MC101R	33 0 14	108 59 51	5.0	1.50	1.00	.500	200	.7	N	N	10

HELLS HOLE ROCK DATA--continued

sample	S-BA	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
MC679	200	2.0	N	N	N	N	7	20	N	N	<5	20
MC3579	200	2.0	N	N	N	N	5	30	N	N	<5	10
MC3779	200	2.0	N	N	N	N	<5	20	N	N	<5	10
MC6179	500	2.0	N	N	N	N	<5	50	N	20	<5	20
MC6679	150	1.0	N	N	N	N	<5	N	N	20	<5	N
MC7079	200	3.0	N	N	N	N	<5	50	N	N	<5	20
MC7179	300	3.0	N	N	N	N	7	20	N	20	<5	20
MC7279	200	3.0	N	N	N	N	<5	20	N	N	<5	10
MC7679	700	1.0	N	N	N	N	10	50	N	N	<5	10
79BL300R	1,000	1.5	N	N	50	70	70	30	N	N	70	15
79BL306R	2,000	1.5	N	N	20	20	50	100	N	<20	30	20
79BL308R	1,500	1.5	N	N	7	N	<5	100	N	<20	<5	20
79BL309R	1,500	1.5	N	N	N	N	15	70	N	<20	<5	20
79BL334R	1,500	N	N	N	50	100	50	50	N	<20	100	15
79BL339R	1,000	3.0	N	N	N	N	5	100	N	20	5	30
79MC101R	1,500	<1.0	N	N	10	30	30	70	N	<20	10	15

HELLS HOLE ROCK DATA--continued

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
MC679	N	N	N	N	10	N	10	N	100	N
MC3579	N	N	N	N	20	N	30	N	150	N
MC3779	N	N	N	N	10	N	10	N	150	N
MC6179	N	<5	N	N	10	N	30	N	200	N
MC6679	N	N	N	N	<10	N	N	N	10	N
MC7079	N	N	N	N	10	N	30	N	200	N
MC7179	N	N	N	N	30	N	20	N	150	N
MC7279	N	N	N	N	<10	N	10	N	150	N
MC7679	N	7	N	300	70	N	20	N	200	N
79BL300R	N	20	N	1,000	200	N	50	N	150	N
79BL306R	N	15	N	500	200	N	50	N	300	N
79BL308R	N	10	N	700	100	N	50	N	300	N
79BL309R	N	N	N	300	10	N	30	N	300	N
79BL334R	N	20	N	100	200	N	50	N	200	N
79BL339R	N	N	N	N	10	N	50	N	300	N
79MC101R	N	15	N	500	200	N	30	N	200	N