

UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Analyses of Rocks and Stream Sediments from the  
Blue Joint Wilderness Study Area, Ravalli County, Montana,  
and the Blue Joint Roadless Area, Lemhi County, Idaho

By

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## Studies Related to Wilderness

The Wilderness Act (Public Law 88-577, September 3, 1964) and related acts require the U.S. Geological Survey and 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 President and the Congress. This report presents the results of a geochemical survey of the Blue Joint wilderness study area in the Bitterroot National Forest, Ravalli County, Montana, and the Blue Joint roadless area in the Salmon National Forest, Lemhi County, Idaho. The Blue Joint roadless area, Lemhi County, Idaho was included in the River of No Return Wilderness by Public Law 96-312, July 23, 1980. The Blue Joint wilderness study area, Ravalli County, Montana was classified as a further planning area during the Second Roadless Area Review and Evaluation (RARE II) by the U.S. Forest Service, January 1979.

## Introduction

The geochemical evaluation of the Blue Joint wilderness study area and the contiguous Blue Joint roadless area consisted of the collection and analyses of 904 samples. These samples included 738 rocks and 166 stream sediments. The stream-sediment samples were separated by various preparation techniques into three fractions to be analyzed: a less than 170-mesh (0.090 mm) fraction, a magnetic heavy-mineral-concentrate fraction, and a nonmagnetic heavy-mineral-concentrate fraction. The sample localities and analytical results are listed in this report.

Analyses were performed by Elwin L. Mosier. The analytical data were entered into the RASS II computer storage system by C. M. McDougal and S. K. McDanal. Geochemical sampling was carried out by field parties of the U.S. Geological Survey, which included W. M. Rehn, K. I. Lund, C. D. Holloway, J. S. Azadian, P. R. Billings, H. J. Brandenberger, R. M. Bruce, B. A. Bye, G. D. Cotton, B. W. Coxe, G. L. Sims, M. E. Koesterer, and James Scott.

## Location

The study area is located approximately 90 mi south of Missoula, Montana, on the Idaho-Montana border in the southern portion of the Bitterroot Mountains. Figure 1 shows the general location.

## Sample preparation

Rock samples were crushed and pulverized to less than 100-mesh (0.15 mm) in a vertical pulverizer with ceramic plates.

Approximately one liter of sediment, screened to -10 mesh (1.0 mm), was taken at each stream-sediment site. In the laboratory, this material was dried and sieved. The less than 170-mesh (0.090 mm) fraction (fine fraction) was analyzed without further preparation. The greater than 170-mesh (0.090 mm) but less than 35-mesh (0.5 mm) material was further processed with a

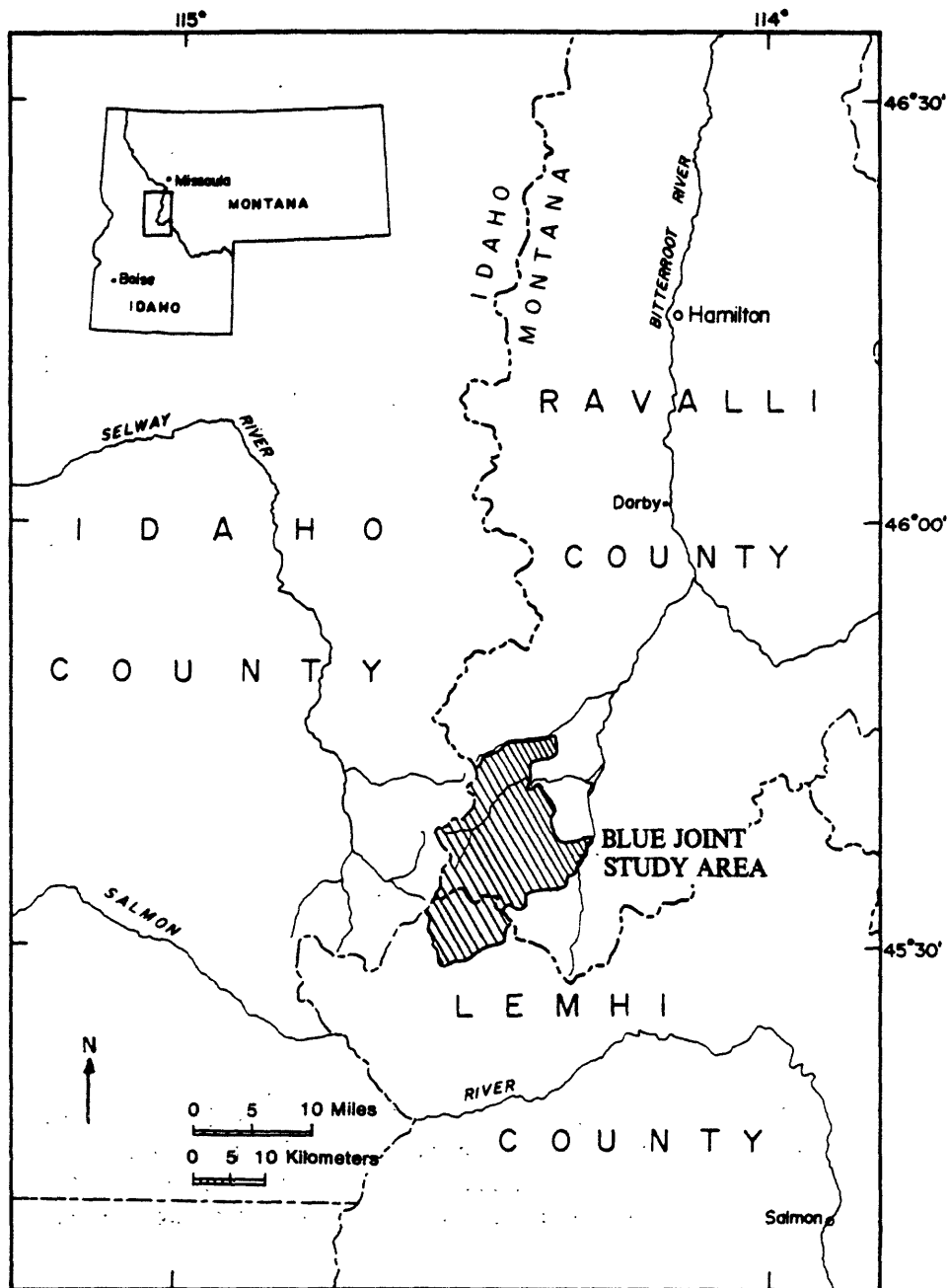


Figure 1.--Index map showing location of study area.

Wilfley concentrating table to obtain a concentrate made up largely of minerals with a specific gravity greater than 3.0. The less dense material was discarded. From the heavy-mineral concentrate, the ferromagnetic minerals were separated out with a hand magnet (magnetic fraction). This fraction and the remaining heavy-mineral fraction (nonmagnetic fraction) were pulverized by mortar and pestle and analyzed separately.

Preparation of the samples for analysis was performed both in the field in a mobile laboratory and at the U.S. Geological Survey laboratories in Golden, Colorado, by B. W. Coxe, M. E. Koesterer, G. L. Sims, R. T. Wheaton, James Scott, and G. D. Cotton.

#### Analytical procedures

Each sample was analyzed semiquantitatively for 31 elements by a size-step d.c.-arc optical emission spectrographic method (Grimes and Marranzino, 1968). All analyses were performed at the U.S. Geological Survey laboratories in Golden, Colorado, by Elwin L. Mosier.

The semiquantitative spectrographic values are reported as six steps per order of magnitude (1, 0.7, 0.5, 0.3, 0.2, 0.15, or multiples of ten of these numbers) and are approximate geometric midpoints of the concentration ranges. Due to the high concentration of iron, titanium, and zirconium in the heavy-mineral concentrates, a modification of the analytical procedure, described by Grimes and Marranzino, is necessary. To reduce spectral interferences, each of these samples is diluted to half its original concentration by an equal amount of pure  $\text{SiO}_2$ . Consequently, the lower limits of detection for each element are doubled.

One hundred and three analyses on eleven different standard reference samples analyzed with the samples enabled us to monitor the precision of the analytical method. One standard was randomly placed within each block of 23

samples. The precision generally exceeds the 83 percent and 96 percent frequency values for plus or minus one and two adjoining reporting intervals of the mean value (Motooka and Grimes, 1976). This higher level of precision is expected when one analyst uses one spectrographic instrument and completes the analyses in a relatively short time.

#### Explanation of data tables

All values are in units of parts per million except those for iron, magnesium, calcium, and titanium, which are in units of percent. Qualifying codes N, L, and G are used for values near or outside of the upper and lower detection limits. In these cases, the detection limit is reported with the qualifying code following. Code N indicates the element was not detected for that sample. Code L indicates the element was detected, but the value was at or below the lower quantifiable limit. Code G indicates the value was greater than the upper quantifiable limit.

#### Stream-sediment samples

Reported along with the raw analytical data for the three fractions of stream-sediment samples are statistical summaries of the data. Frequency distributions and histograms, reported on logarithmic scales and employing the same class intervals used in reporting six-step semiquantitative spectrographic data, have been computed for each element of each fraction. The minimum and maximum reported values for each element and the geometric deviation also have been computed and are reported here.

#### Rock samples

Age designations for the rock samples are tentative, and names given under rock type are field designations. The explanation of formation symbols is given on page 126a.



# Sample number system

Example--79WR001A

The first and second numbers indicate the year the sample was taken. The third and fourth characters are the sampler's initials. Fifth, sixth, and seventh numbers indicate the station at which the sample was taken. Eighth and ninth characters designate the sample.

Suffixes (eighth and ninth characters):

A, B, C--R are rock samples.

A1 and A2 are replicate rock samples.

SF--stream sediment fine fraction (-170-mesh).

SM--stream sediment magnetic fraction of heavy-mineral concentrate.

SN--stream sediment nonmagnetic fraction of heavy-mineral concentrate.

TF, TM, TN--replicate stream sediment fine, magnetic, and nonmagnetic fractions.

The first digit of each sample number was omitted from the sample location map.

#### References cited

- Grimes, D. J., and Marranzino, A. P., 1968, Direct-current arc and alternating-current spark emission spectrographic field methods for the semiquantitative analyses of geologic materials: U.S. Geological Survey Circular 591, 6 p.
- Motooka, J. M., and Grimes, D. J., 1976, Analytical precision of one-sixth order semiquantitative spectrographic analyses: U.S. Geological Survey Circular 738, 25 p.

Table 1.--Analytical data for stream sediment fine fraction

## BLUE JOINT &lt;170 MESH FRACTION

SAMPLE	Lat.	Long.	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn(ppm)	Ag(ppm)	B(ppm)	Ba(ppm)
98B001SF	45 43 16N	114 29 35W	3.0	0.50	0.5	0.2	500	0.7	10.000L	500.000
98B002SF	45 43 16N	114 29 35W	3.0	0.70	0.2	0.3	300	5.0	10.000	500.000
98B003SF	45 43 52N	114 29 02W	2.0	0.70	0.5	0.3	500	0.5N	10.000	700.000
98B004SF	45 43 52N	114 28 44W	5.0	0.70	0.7	0.5	500	0.5N	10.000L	1000.000
98B007SF	45 36 07N	114 19 52W	2.0	0.70	0.5	0.2	200	0.5N	30.000	300.000
98B008SF	45 31 08N	114 26 42W	3.0	0.70	0.7	0.5	500	0.5N	10.000L	500.000
98B009SF	45 31 08N	114 26 35W	5.0	0.70	1.0	0.5	500	0.5N	10.000L	700.000
98B010SF	45 31 08N	114 26 28W	5.0	0.70	0.7	0.7	500	0.5N	10.000L	1000.000
98B010TF	45 31 08N	114 26 28W	3.0	0.70	0.7	0.5	300	0.5N	10.000L	700.000
98B010TF	45 31 08N	114 26 28W	5.0	0.70	0.7	0.7	300	0.5N	10.000L	1000.000
98B011SF	45 30 14N	114 27 50W	5.0	0.70	0.7	0.5	1000	0.5N	10.000L	500.000
98B012SF	45 30 14N	114 28 05W	3.0	0.50	0.7	0.3	700	0.5N	10.000L	500.000
98B013SF	45 29 42N	114 29 53W	3.0	0.50	1.0	0.7	500	0.5N	10.000L	500.000
98B014SF	45 29 28N	114 30 18W	5.0	0.70	1.0	0.5	500	0.5N	10.000L	300.000
98B015SF	45 29 17N	114 30 40W	5.0	0.70	1.0	0.5	1000	0.5N	10.000	500.000
98B016SF	45 29 17N	114 32 06W	5.0	0.70	1.0	1.0	500	0.5N	10.000L	500.000
98B019SF	45 41 17N	114 27 11W	2.0	0.30	0.3	0.2	300	0.5N	10.000L	700.000
98B020SF	45 41 24N	114 27 04W	1.5	0.30	0.5	0.2	500	0.5N	10.000	500.000
98B025SF	45 36 25N	114 22 52W	2.0	0.70	0.5	0.2	500	0.5L	15.000	500.000
98B026SF	45 36 25N	114 22 44W	5.0	1.00	0.5	0.5	300	0.5N	15.000	700.000
98B027SF	45 36 25N	114 22 16W	5.0	1.00	0.5	0.5	500	0.5N	10.000	700.000
98B028SF	45 36 29N	114 22 05W	5.0	1.00	0.5	0.5	700	0.5N	10.000	1000.000
98B029SF	45 41 20N	114 29 28W	2.0	0.70	0.3	0.2	300	0.5N	10.000	500.000
98B030SF	45 41 24N	114 29 24W	2.0	0.50	0.5	0.2	1000	0.5N	10.000	500.000
98B032SF	45 41 06N	114 29 10W	2.0	0.50	0.5	0.2	700	0.7	10.000L	500.000
98B033SF	45 41 02N	114 28 59W	3.0	0.30	0.3	0.2	1000	0.5L	10.000	500.000
98B034SF	45 40 52N	114 28 52W	1.5	0.30	0.3	0.2	500	0.5N	10.000L	700.000
98B035SF	45 31 08N	114 27 32W	5.0	0.70	1.0	0.7	700	0.5N	10.000L	500.000
98B036SF	45 31 01N	114 27 18W	5.0	1.00	1.0	1.0	1500	0.5N	10.000L	300.000
98B037SF	45 29 17N	114 32 31W	5.0	0.70	1.0	0.7	700	0.5N	10.000L	700.000
98B038SF	45 29 13N	114 32 31W	5.0	0.70	1.0	0.7	700	0.5N	10.000L	700.000
98B038TF	45 29 13N	114 32 31W	5.0	0.70	1.0	0.7	700	0.5N	10.000L	1000.000
98B038TF	45 29 13N	114 32 31W	5.0	0.70	1.0	0.5	700	0.5N	10.000L	700.000
98B039SF	45 31 12N	114 28 08W	3.0	0.50	0.7	0.3	1000	0.5N	10.000L	300.000
98B040SF	45 30 47N	114 28 37W	3.0	0.70	0.7	0.5	700	0.5N	10.000L	300.000
98B074SF	45 33 47N	114 19 12W	5.0	2.00	2.0	0.5	700	0.5N	15.000	500.000
98C002SF	45 44 28N	114 25 48W	3.0	0.50	0.5	0.5	1000	0.5	10.000	300.000
98C003SF	45 44 20N	114 25 52W	2.0	0.70	0.5	0.5	700	0.5L	10.000L	300.000
98C004SF	45 44 49N	114 24 47W	3.0	0.50	0.5	0.3	700	0.5L	10.000	200.000
98C005SF	45 44 49N	114 25 01W	3.0	0.50	0.7	0.3	700	0.5	10.000	200.000
98C006SF	45 44 56N	114 23 56W	3.0	0.50	0.5	0.5	1000	0.5L	10.000	300.000
98C007SF	45 44 49N	114 24 18W	3.0	0.70	0.7	0.3	700	0.7	10.000L	300.000
98C009SF	45 45 36N	114 25 19W	2.0	0.50	0.3	0.2	300	1.5	10.000L	500.000
98C010SF	45 46 48N	114 27 18W	3.0	0.50	0.7	0.3	700	0.5N	10.000	700.000
98C011SF	45 45 54N	114 26 24W	3.0	0.50	0.7	0.3	500	0.5	10.000L	300.000

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## BLUE JOINT &lt;170 MESH FRACTION-continued

SAMPLE	Be (ppm)	Bi (ppm)	Co (ppm)	Cr (ppm)	Cu (ppm)	La (ppm)	Mo (ppm)	Nb (ppm)	Ni (ppm)	Pb (ppm)
9BB001SF	7.0	10 N	7	50	10	200	5 N	20	15	20
9BB002SF	2.0	10 N	10	50	10	50	5 N	20 L	15	15
9BB003SF	3.0	10 N	10	70	7	70	5 N	20 L	15	20
9BB004SF	7.0	10 N	10	70	15	150	5 N	20	20	30
9BB007SF	3.0	10 N	7	50	50	100	5 N	20 N	20	30
9BB008SF	5.0	10 N	7	50	15	100	5 N	30	15	30
9BB009SF	5.0	10 N	15	50	10	150	5 L	30	20	50
9BB010SF	3.0	10 N	10	70	10	150	5 L	50	15	30
9BB010TF	3.0	10 N	10	70	15	150	5 N	20	15	50
9BB010TF	7.0	10 N	10	70	15	200	5 N	30	20	20
9BB011SF	5.0	10 N	10	30	10	150	5 N	30	10	30
9BB012SF	5.0	10 N	7	30	10	150	5 N	30	15	30
9BB013SF	3.0	10 N	7	30	7	200	5 N	30	10	20
9BB014SF	5.0	10 N	10	50	10	200	5 N	30	15	20
9BB015SF	5.0	10 N	10	50	20	200	5 N	30	10	20
9BB016SF	5.0	10 N	15	50	15	500	5 N	30	10	30
9BB019SF	5.0	10 N	5	20	7	20	5 N	20 N	5	20
9BB020SF	5.0	10 N	5 L	10	5	100	5 N	20	5	30
9BB025SF	7.0	10 N	10	30	100	70	5 N	20 N	20	50
9BB026SF	5.0	10 N	20	100	20	70	5 N	20 L	30	10
9BB027SF	3.0	10 N	30	70	30	50	5	20 L	30	10
9BB028SF	2.0	10 N	20	70	20	100	5	20 L	20	10
9BB029SF	2.0	10 N	7	30	7	30	5 N	20 N	10	20
9BB030SF	7.0	10 N	5	20	10	70	5 N	20 N	7	30
9BB032SF	7.0	10 N	5	20	10	150	5 N	20 L	7	30
9BB033SF	5.0	10 N	7	30	10	70	5 N	20	10	50
9BB034SF	5.0	10 N	5 N	10	5	50	5 N	20 L	5 N	20
9BB035SF	5.0	10 N	10	30	7	200	5 N	50	10	20
9BB036SF	7.0	10 N	10	30	10	200	5	50	10	20
9BB037SF	2.0	10 N	10	50	10	200	5	30	10	20
9BB038SF	3.0	10 N	15	50	10	150	7	30	10	20
9BB038TF	3.0	10 N	10	30	7	200	5	50	10	20
9BB038TF	3.0	10 N	10	50	7	200	5 L	30	10	20
9BB039SF	7.0	10 N	10	50	7	150	5 N	50	15	30
9BB040SF	7.0	10 N	10	30	7	150	5 N	30	10	30
9BB074SF	3.0	10 N	30	150	30	150	5 N	20 L	50	15
9BC002SF	30.0	10 N	7	20	30	700	5 N	50	10	50
9BC003SF	10.0	10 N	5	15	7	100	5	50	10	30
9BC004SF	20.0	10 N	5	20	7	200	5 N	50	10	30
9BC005SF	30.0	10 N	7	30	10	200	5 N	50	15	30
9BC006SF	20.0	10 N	7	20	10	200	5 N	20	10	30
9BC007SF	15.0	10 N	7	20	10	150	5 L	30	10	50
9BC009SF	5.0	10 N	7	70	50	300	7	20 L	15	30
9BC010SF	2.0	10 N	15	50	30	100	7	20 L	15	20
9BC011SF	5.0	10 N	7	30	15	200	5 N	20 L	10	30

## BLUE JOINT &lt;170 MESH FRACTION-continued

SAMPLE	Sc (ppm)	Sn (ppm)	Sr (ppm)	V (ppm)	Y (ppm)	Zn (ppm)	Zr (ppm)	Th (ppm)
9BB001SF	7	10 N	150	50	150	200 N	500	100 N
9BB002SF	5	10 L	100	50	30	200 N	200	100 N
9BB003SF	5	10 N	200	50	50	200 N	700	100 N
9BB004SF	10	10 N	200	70	100	200 N	300	100 N
9BB007SF	7	10 N	100 L	50	100	200 N	200	100 N
9BB008SF	10	20	150	50	100	200 N	1000 G	100 N
9BB009SF	15	30	150	70	100	200 N	1000 G	100
9BB010SF	15	15	200	70	150	200 N	1000 G	100 N
9BB010TF	15	30	150	70	100	200 N	100	100 N
9BB010TF	15	15	200	100	300	200 N	1000 G	100 N
9BB011SF	10	15	200	70	70	200 N	1000 G	100 L
9BB012SF	7	30	200	50	70	200 N	1000	100
9BB013SF	15	30	200	70	100	200 N	1000 G	100
9BB014SF	15	20	200	50	100	200 N	1000	100 N
9BB015SF	15	10	200	70	100	200 N	1000	100 L
9BB016SF	15	30	150	70	200	200 N	1000 G	100 L
9BB019SF	5 L	20	200	20	20	200 N	200	100 N
9BB020SF	5 N	10 L	150	20	30	200 N	500	100 N
9BB025SF	5	10 N	100	50	30	200 N	300	100 N
9BB026SF	15	10 N	100	100	70	200 N	300	100 N
9BB027SF	15	10 N	100	150	150	200 N	500	100 N
9BB028SF	15	10 N	150	100	150	200 N	500	100 N
9BB029SF	5 L	10 N	100	30	70	200 N	500	100 N
9BB030SF	5	10 L	200	30	50	200 N	300	100 N
9BB032SF	5	10 N	150	30	50	200 N	300	100 N
9BB033SF	7	10	200	30	50	200 N	200	100 N
9BB034SF	5 N	10 N	150	20	30	200 N	1000	100 N
9BB035SF	15	20	200	70	200	200 N	1000 G	150
9BB036SF	10	15	200	100	200	200 N	1000 G	100 N
9BB037SF	15	15	300	100	100	200 N	1000 G	100 N
9BB038SF	15	20	200	70	100	200 N	1000 G	100 N
9BB038TF	10	20	200	70	100	200 N	1000 G	100 N
9BB038TF	15	20	200	70	70	200 N	1000	100 N
9BB039SF	10	20	150	70	100	200 N	700	100 N
9BB040SF	10	20	150	70	100	200 N	1000 G	100
9BB074SF	20	10 N	300	150	50	200 N	300	100 N
9BC002SF	10	15	100	70	200	200 N	1000 G	100 N
9BC003SF	5	30	100	50	300	200	1000 G	100 N
9BC004SF	7	15	100	30	300	300	1000 G	100 N
9BC005SF	5	15	100	30	300	300	1000 G	100 N
9BC006SF	7	15	150	50	200	200 L	1000	100 N
9BC007SF	7	15	150	50	200	200	700	100 N
9BC009SF	7	10 L	100	50	100	200 N	500	100 N
9BC010SF	10	10 N	200	100	50	200 N	200	100 N
9BC011SF	7	10 N	100	50	100	200 N	300	100 N

DATE 6/10/81

## BLUE JOINT &lt;170 MESH FRACTION-continued

SAMPLE	Lat.	Long.	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn(ppm)	Ag(ppm)	B(ppm)	Ba(ppm)
9BC012SF	45 45 43N	114 26 13W	3.0	0.50	0.5	0.5	500	0.5L	10.000L	700.000
9BC012SF	45 45 43N	114 26 13W	2.0	0.70	0.3	0.2	300	0.5N	10.000L	500.000
9CH001SF	45 42 00N	114 23 42W	3.0	0.70	0.7	0.2	500	1.0	10.000L	300.000
9CH004SF	45 44 10N	114 26 38W	3.0	0.50	0.5	0.3	500	0.5	10.000L	500.000
9CH005SF	45 44 10N	114 26 38W	3.0	0.30	0.5	0.3	500	0.5N	10.000L	1000.000
9CH007SF	45 44 53N	114 22 52W	3.0	0.70	0.7	0.3	300	1.0	10.000	500.000
9CH008SF	45 42 14N	114 28 52W	2.0	0.50	0.5	0.2	300	0.7	10.000	500.000
9CH009SF	45 42 07N	114 28 37W	3.0	0.70	0.5	0.2	500	0.7	10.000	500.000
9CH026SF	45 43 34N	114 25 26W	2.0	0.50	0.5	0.3	300	0.7	10.000	300.000
9CH028SF	45 44 56N	114 31 34W	3.0	0.70	0.3	0.3	700	0.5N	10.000L	300.000
9CH030SF	45 45 07N	114 30 22W	3.0	0.50	0.3	0.2	500	0.5	10.000L	500.000
9CH031SF	45 45 14N	114 29 56W	3.0	0.50	0.3	0.3	300	0.5N	10.000L	300.000
9CH045SF	45 41 42N	114 24 00W	2.0	0.30	0.5	0.2	500	0.5N	10.000L	200.000
9CH046SF	46 08 02N	114 01 37W	3.0	0.50	0.3	0.3	500	0.5N	10.000L	300.000
9KL001SF	45 35 10N	114 21 00W	5.0	0.70	0.5	0.5	300	0.5N	10.000	1000.000
9KL002SF	45 35 02N	114 21 22W	5.0	0.70	0.7	0.5	500	0.5N	10.000L	700.000
9KL005SF	45 29 17N	114 32 56W	5.0	0.70	0.7	0.7	500	0.5N	10.000L	500.000
9KL006SF	45 29 10N	114 32 56W	5.0	0.70	0.7	0.5	700	0.5N	10.000L	700.000
9KL007SF	45 29 49N	114 32 56W	5.0	0.50	0.7	0.3	700	0.5N	10.000L	500.000
9KL008SF	45 30 40N	114 33 14W	7.0	0.70	1.0	0.5	3000	0.5N	10.000	700.000
9KL009SF	45 30 40N	114 33 07W	3.0	0.50	0.5	0.3	500	0.5N	10.000L	300.000
9KL011SF	45 36 22N	114 31 12W	3.0	0.70	0.5	0.70	700	0.5N	10.000L	300.000
9KL012SF	45 36 40N	114 31 05W	3.0	0.70	0.5	0.3	700	0.5N	10.000L	300.000
9KL013SF	45 37 01N	114 30 58W	2.0	0.50	0.5	0.3	500	0.5N	10.000L	300.000
9KL014SF	45 38 29N	114 30 04W	2.0	0.70	0.2	0.2	500	0.5N	10.000	500.000
9KL015SF	45 40 01N	114 28 23W	2.0	0.50	0.3	0.2	300	0.5N	10.000L	500.000
9KL015TF	45 40 01N	114 28 23W	2.0	0.30	0.2	0.2	300	0.5L	10.000	700.000
9KL015TF	45 40 01N	114 28 23W	2.0	0.30	0.2	0.2	500	0.5N	10.000L	500.000
9KL016SF	45 40 01N	114 28 26W	2.0	0.50	0.3	0.2	500	0.5N	10.000L	700.000
9KL017SF	45 40 16N	114 27 54W	3.0	0.70	0.5	0.3	1000	0.5N	10.000	500.000
9KL018SF	45 40 23N	114 27 43W	3.0	0.70	0.5	0.3	700	0.5N	10.000	500.000
9KL019SF	45 40 30N	114 27 32W	2.0	0.50	0.5	0.3	500	0.5N	10.000L	300.000
9KL021SF	45 37 55N	114 32 06W	7.0	2.00	1.5	0.7	1000	0.5N	10.000	700.000
9KL022SF	45 38 13N	114 31 34W	3.0	0.70	0.5	0.3	500	0.5	10.000	500.000
9KL023SF	45 38 10N	114 30 18W	2.0	0.50	0.5	0.3	700	0.5N	10.000L	3000.000
9KL024SF	45 34 12N	114 29 06W	7.0	0.70	0.7	0.3	1000	0.5N	10.000L	300.000
9KL024TF	45 34 12N	114 29 06W	7.0	0.70	0.7	0.5	1000	0.5N	10.000L	300.000
9KL024TF	45 34 12N	114 29 06W	10.0	0.70	0.7	0.5	1000	0.5N	10.000L	300.000
9KL025SF	45 34 12N	114 29 02W	5.0	0.50	0.7	0.2	1000	0.5N	10.000L	200.000
9KL026SF	45 34 08N	114 29 02W	3.0	1.00	0.7	0.5	1000	0.5N	10.000L	300.000
9KL027SF	45 34 26N	114 28 44W	3.0	1.00	1.0	0.7	700	0.5N	10.000L	500.000
9KL028SF	45 34 37N	114 28 34W	3.0	0.70	0.7	0.7	700	0.5N	10.000L	300.000
9KL029SF	45 34 55N	114 28 05W	3.0	0.70	1.0	0.5	1000	0.5N	10.000L	300.000
9KL030SF	45 35 24N	114 28 16W	3.0	0.70	0.7	0.5	1000	0.5N	10.000	500.000
9KL031SF	45 35 20N	114 27 07W	2.0	0.50	1.0	0.3	500	0.5N	10.000L	300.000

## BLUE JOINT &lt;170 MESH FRACTION-continued

SAMPLE	Be(ppm)	Bi(ppm)	Co(ppm)	Cr(ppm)	Cu(ppm)	La(ppm)	Mo(ppm)	Nb(ppm)	Ni(ppm)	Pb(ppm)
9BC0125F	2.0	10 N	10	50	20	200	5 L	30	10	30
9BC0125F	5.0	10 N	5	20	10	100	5	30	10	20
9CH0015F	7.0	10 N	10	100	20	200	5 N	20	30	50
9CH0045F	7.0	10 N	7	30	7	300	5	30	10	30
9CH0055F	5.0	10 N	5	20	7	150	5 N	30	5	30
9CH0075F	10.0	10 N	7	50	20	150	5 N	20	15	50
9CH0085F	5.0	10 N	10	50	10	70	5 N	20 N	10	30
9CH0095F	7.0	10 N	10	70	7	50	5 N	20 L	15	30
9CH0265F	10.0	10 N	7	30	7	100	5 N	30	15	50
9CH0285F	7.0	10 N	10	50	7	150	5 L	30	15	30
9CH0305F	5.0	10 N	7	50	10	200	5 L	20	10	30
9CH0315F	7.0	10 N	7	30	7	200	5	50	10	30
9CH0455F	20.0	10 N	5	15	7	150	5 N	30	5	30
9CH0465F	15.0	10 N	5	20	7	150	5 N	50	10	30
9KL0015F	2.0	10 N	15	70	20	150	5 N	20 L	20	15
9KL0025F	3.0	10 N	15	50	20	150	5 N	20 N	20	15
9KL0055F	7.0	10 N	10	50	10	200	5 N	50	15	15
9KL0065F	3.0	10 N	10	50	15	200	5 N	20	15	20
9KL0075F	5.0	10 N	10	30	15	200	5 N	30	15	30
9KL0085F	5.0	10 N	20	100	30	300	7	30	20	15
9KL0095F	15.0	10 N	7	20	20	150	7	70	10	20
9KL0115F	50.0	10 N	5	20	10	150	5 N	50	10	30
9KL0125F	30.0	10 N	5	20	10	200	5	30	10	30
9KL0135F	15.0	10 N	5	20	5	150	5 N	50	5	15
9KL0145F	2.0	10 N	7	50	10	20	5 N	20 N	20	15
9KL0155F	3.0	10 N	5	15	5	50	5 L	20	5 N	20
9KL0155F	5.0	10 N	5	15	5	50	5 N	20 L	5	20
9KL0155F	5.0	10 N	5 L	15	5	50	5 N	20	5 N	20
9KL0155F	5.0	10 N	5	10	5	70	5	20	5	20
9KL0175F	7.0	10 N	10	30	10	50	5 N	20 L	15	20
9KL0185F	3.0	10 N	10	30	10	70	5 N	30	15	15
9KL0195F	15.0	10 N	5	15	7	100	5 N	50	7	30
9KL0215F	1.0	10 N	50	200	50	100	5 N	50	50	15
9KL0225F	2.0	10 N	10	100	20	100	5 L	20 L	20	20
9KL0235F	2.0	10 N	5	30	10	30	5 N	20 L	10	15
9KL0245F	7.0	10 N	10	70	10	100	5	20	15	30
9KL0245F	7.0	10 N	10	50	10	100	7	20	10	30
9KL0245F	7.0	10 N	15	50	15	150	7	30	10	30
9KL0255F	5.0	10 N	7	15	10	50	5 N	20	5	15
9KL0265F	5.0	10 N	7	20	7	150	5 N	30	5 N	30
9KL0275F	5.0	10 N	10	30	10	150	5 N	30	7	30
9KL0285F	3.0	10 N	7	20	7	100	5 N	30	5 N	20
9KL0295F	5.0	10 N	10	30	7	150	5 N	30	5 N	20
9KL0305F	3.0	10 N	10	30	15	50	5 N	20	15	30
9KL0315F	5.0	10 N	5	15	7	150	5 N	30	5 N	20

## BLUE JOINT &lt;170 MESH FRACTION-continued

SAMPLE	Sc(ppm)	Sn(ppm)	Sr(ppm)	V(ppm)	Y(ppm)	Zn(ppm)	Zr(ppm)	Th(ppm)
98C012SF	10	15	200	100	100	200 N	700	100 N
98C012SF	5	10	300	50	50	200 N	700	100 N
9CH001SF	15	10	100	70	150	200 N	300	100 N
9CH004SF	7	10	100	50	100	200 N	1000 G	100 N
9CH005SF	5	10 L	200	30	70	200 N	700	100 N
9CH007SF	10	10	150	50	150	200 N	1000	100 N
9CH008SF	10	10	200	50	30	200 N	200	100 N
9CH009SF	7	10	200	50	30	200 N	300	100 N
9CH026SF	7	10	150	50	70	200 N	300	100 N
9CH028SF	7	10	150	50	70	200 N	1000	100 N
9CH030SF	7	10	100	50	100	200 N	500	100 N
9CH031SF	7	15	100	50	100	200 N	1000 G	100
9CH045SF	5	10 L	100	30	100	200 N	700	100 L
9CH046SF	7	10	100	30	100	200 N	1000	100 N
9KL001SF	15	150	200	100	300	200 N	1000	100 N
9KL002SF	15	10 N	150	100	200	200 N	1000	100 N
9KL005SF	15	10	200	70	150	200 N	1000 G	100
9KL006SF	15	70	150	70	70	200 N	1000	100 N
9KL007SF	10	15	150	70	100	200 N	1000	100 N
9KL008SF	15	30	300	100	100	200 N	1000	100 L
9KL009SF	5	20	100	50	100	200 N	700	100 N
9KL011SF	5 L	10	100	50	150	200 L	1000	100 N
9KL012SF	5	10	150	30	100	200 L	1000	100 N
9KL013SF	5 L	10 L	150	30	100	200 N	1000	100 N
9KL014SF	5 L	10 N	100 N	50	30	200 N	150	100 N
9KL015SF	5 L	10 L	100	30	30	200 N	1000	100 N
9KL015TF	5 L	10 L	100	30	30	200 N	700	100 N
9KL015TF	5 L	10 N	100	30	30	200 N	700	100 N
9KL016SF	5 L	10 L	150	30	30	200 N	700	100 N
9KL017SF	5	10	150	50	50	200 N	500	100 N
9KL018SF	5	10 N	100	70	50	200 N	300	100 N
9KL019SF	5 L	10	100	30	100	200 N	700	100 N
9KL021SF	20	10 N	200	300	70	200 N	500	100 N
9KL022SF	7	10 N	100	70	100	200 N	300	100 N
9KL023SF	5	10 N	150	50	30	200 N	300	100 N
9KL024SF	7	10 N	150	100	50	200 N	1000	100 N
9KL024TF	7	10	150	150	70	200 N	1000	100 N
9KL024TF	7	10	150	100	100	200 N	1000	100
9KL025SF	5 L	10 N	100	30	70	200 N	200	100 N
9KL026SF	5	10	100	30	100	200 N	1000 G	100 N
9KL027SF	10	15	200	70	70	200 N	1000 G	100 N
9KL028SF	10	10	300	70	70	200 N	1000 G	100 N
9KL029SF	7	10	200	70	100	200 N	1000 G	100 L
9KL030SF	5	10 L	200	100	30	200 N	1000	100 N
9KL031SF	5 L	10	150	50	70	200 N	1000 G	100 N



## BLUE JOINT &lt;170 MESH FRACTION-continued

SAMPLE	Lat.	Long.	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn(ppm)	Ag(ppm)	B(ppm)	Ba(ppm)
9KLO32SF	45 35 28N	114 27 07W	5.0	0.70	1.0	0.7	700	0.5N	10.000L	700.000
9KLO33SF	45 36 04N	114 25 12W	3.0	0.50	0.5	0.3	700	0.5N	20.000	1000.000
9KLO34SF	45 35 56N	114 24 22W	2.0	0.70	0.5	0.3	500	0.5N	10.000	1000.000
9KLO35SF	45 33 07N	114 28 48W	3.0	0.70	1.0	0.5	700	0.5N	10.000L	500.000
9KLO36SF	45 33 07N	114 28 48W	5.0	0.70	0.7	0.5	300	0.5N	10.000L	700.000
9KLO37SF	45 33 07N	114 28 59W	5.0	0.70	1.0	0.5	1000	0.5N	10.000L	500.000
9KLO38SF	45 32 46N	114 29 20W	5.0	0.70	1.0	0.7	500	0.5N	10.000L	500.000
9KLO39SF	45 32 31N	114 29 35W	3.0	0.50	1.0	0.3	1000	0.5N	10.000L	300.000
9KLO40SF	45 31 52N	114 30 18W	5.0	0.70	1.0	0.7	500	0.5N	10.000L	500.000
9KLO41SF	45 31 23N	114 31 34W	5.0	0.70	0.7	0.5	1000	0.5N	10.000L	500.000
9ME001SF	45 32 28N	114 24 22W	7.0	1.50	2.0	0.5	1000	0.5N	10.000	700.000
9ME002SF	45 31 59N	114 24 32W	7.0	2.00	2.0	0.7	1000	0.5	10.000L	500.000
9ME003SF	45 33 04N	114 23 35W	5.0	1.00	1.0	0.3	500	0.5N	10.000	700.000
9ME004SF	45 39 07N	114 22 26W	2.0	0.70	0.5	0.2	300	0.5N	10.000L	500.000
9ME005SF	45 39 00N	114 22 08W	2.0	0.70	0.3	0.2	500	0.5N	10.000	300.000
9ME006SF	45 39 00N	114 22 16W	2.0	0.70	0.5	0.2	500	0.5N	10.000	300.000
9ME006TF	45 39 00N	114 22 16W	2.0	0.70	0.5	0.2	300	0.5N	10.000	300.000
9ME007TF	45 39 00N	114 22 16W	2.0	0.70	0.5	0.2	300	0.5	10.000L	300.000
9ME007SF	45 38 56N	114 22 26W	2.0	0.70	0.5	0.2	500	0.5N	10.000L	300.000
9ME010SF	45 39 40N	114 20 42W	2.0	0.70	0.5	0.2	300	0.5N	10.000L	300.000
9ME012SF	45 45 11N	114 27 58W	3.0	0.50	0.3	0.3	300	0.5N	10.000L	300.000
9ME013SF	45 45 50N	114 28 41W	5.0	0.50	0.3	0.3	500	0.5N	10.000L	500.000
9ME018SF	45 40 01N	114 23 53W	2.0	0.50	0.5	0.3	700	0.5N	10.000L	200.000
9ME019SF	45 40 01N	114 23 56W	2.0	0.50	0.5	0.3	500	0.5N	10.000L	200.000
9ME019TF	45 40 01N	114 23 56W	2.0	0.50	0.5	0.3	500	0.5N	10.000L	200.000
9ME019TF	45 40 01N	114 23 56W	2.0	0.50	0.5	0.3	500	0.5N	10.000L	200.000
9ME020SF	45 39 58N	114 23 56W	3.0	0.70	0.7	0.3	700	0.5N	10.000	200.000
9ME021SF	45 39 58N	114 23 31W	2.0	0.50	0.5	0.2	1000	0.5N	10.000	150.000
9ME024SF	45 40 52N	114 22 26W	1.5	0.50	0.5	0.2	300	0.5N	10.000L	200.000
9ME025SF	45 40 59N	114 22 08W	2.0	0.50	0.7	0.2	500	0.5N	10.000	300.000
9ME026SF	45 43 23N	114 22 23W	7.0	2.00	2.0	0.7	1000	0.5N	10.000	300.000
9ME027SF	45 34 59N	114 22 55W	5.0	1.00	0.7	0.5	700	0.5L	10.000	700.000
9ME028SF	45 35 24N	114 23 10W	5.0	1.50	1.0	0.7	500	0.5N	15.000	500.000
9ME029SF	45 35 13N	114 23 17W	2.0	0.70	0.5	0.3	500	0.5N	15.000	700.000
9ME030SF	45 35 49N	114 23 35W	3.0	1.00	0.7	0.5	300	0.5N	15.000	300.000
9RB001SF	45 40 55N	114 27 14W	2.0	0.70	0.5	0.5	500	0.5N	10.000L	300.000
9RB002SF	45 41 24N	114 26 38W	3.0	0.70	0.5	0.3	1000	0.5L	10.000	300.000
9RB003SF	45 41 31N	114 25 44W	3.0	0.50	1.0	0.3	1000	0.5N	10.000	500.000
9RB004SF	45 41 35N	114 25 30W	5.0	0.70	1.0	0.5	1000	0.5N	10.000L	500.000
9RB005SF	45 41 38N	114 24 47W	3.0	0.70	0.7	0.3	500	0.5	10.000L	300.000
9RB009SF	45 43 55N	114 23 49W	2.0	0.50	0.5	0.2	500	2.0	10.000	200.000
9RB013SF	45 42 07N	114 27 32W	2.0	0.50	0.3	0.2	1000	0.5N	10.000	500.000
9RB016SF	45 42 14N	114 25 26W	3.0	0.70	0.5	0.5	500	0.5N	10.000	700.000
9RB017SF	45 42 14N	114 25 23W	3.0	0.70	0.5	0.5	500	0.5N	10.000L	700.000
9SA001SF	45 44 20N	114 27 43W	5.0	0.70	0.5	0.5	500	1.5	10.000L	700.000

DATE 6/10/81

## BLUE JOINT &lt;170 MESH FRACTION-continued

SAMPLE	Be (ppm)	Bi (ppm)	Co (ppm)	Cr (ppm)	Cu (ppm)	La (ppm)	Mo (ppm)	Nb (ppm)	Ni (ppm)	Pb (ppm)
9KL032SF	5.0	10 N	10	30	10	150	5 N	30	7	20
9KL033SF	3.0	10 N	10	50	20	30	5 N	20 N	15	20
9KL034SF	3.0	10 N	10	50	10	30	5 N	20 N	15	15
9KL035SF	5.0	10 N	10	30	10	150	5 N	30	10	20
9KL036SF	5.0	10 N	10	30	10	100	5 N	30	10	20
9KL037SF	5.0	10 N	10	30	7	150	5 N	30	10	30
9KL038SF	5.0	10 N	10	30	20	200	5 N	50	10	20
9KL039SF	7.0	10 N	7	30	10	150	5 N	70	7	30
9KL040SF	5.0	10 N	10	30	5	200	5 N	50	7	20
9KL041SF	5.0	10 N	10	50	7	100	5 N	50	10	20
9ME001SF	1.5	10 N	30	100	50	100	5 N	20	50	15
9ME002SF	1.0	10 N	50	200	30	100	5 N	20	70	20
9ME003SF	3.0	10 N	15	70	30	150	5 N	20 L	15	15
9ME004SF	2.0	10 N	7	70	10	30	5 N	20 N	20	15
9ME005SF	1.5	10 N	10	30	10	70	5 N	20 L	15	10
9ME006SF	20.0	10 N	7	70	15	100	5 N	20	10	20
9ME006TF	15.0	10 N	5	50	15	70	5 N	20	10	20
9ME006TF	20.0	10 N	5	50	70	50	5 N	30	10	20
9ME007SF	15.0	10 N	5	50	10	100	5 N	50	10	20
9ME010SF	5.0	10 N	7	30	10	20	5 N	20 L	10	20
9ME012SF	7.0	10 N	5	20	20	150	5 L	50	10	30
9ME013SF	5.0	10 N	10	20	10	300	5 N	30	10	30
9ME018SF	20.0	10 N	5 N	10	5	150	5 N	70	5	20
9ME019SF	20.0	10 N	5	10	5	200	5 N	100	5 N	20
9ME019TF	20.0	10 N	5 N	10	7	200	5 N	100	5 N	15
9ME019TF	15.0	10 N	5 L	15	5	200	5 N	30	7	20
9ME020SF	30.0	10 N	5	15	7	200	5 N	50	7	30
9ME021SF	20.0	10 N	5 L	10	7	100	5 N	30	5 N	20
9ME024SF	10.0	10 N	5 N	15	7	50	5 N	20	5	20
9ME025SF	15.0	10 N	7	30	15	70	5 N	20 L	15	50
9ME026SF	1.0	10 N	30	200	30	100	5 N	20	50	10 L
9ME027SF	2.0	10 N	20	70	30	200	5 L	20 L	15	15
9ME028SF	5.0	10 N	30	100	50	70	5 N	20 N	50	20
9ME029SF	2.0	10 N	7	50	7	50	5 N	20 N	15	10
9ME030SF	3.0	10 N	20	150	30	70	5 N	20 N	30	50
9RB001SF	20.0	10 N	5	15	7	150	5 N	50	7	30
9RB002SF	15.0	10 N	7	30	20	70	5 N	50	15	30
9RB003SF	15.0	10 N	5	20	10	200	5 N	30	7	20
9RB004SF	15.0	10 N	5	30	10	200	5 N	50	10	20
9RB005SF	20.0	10 N	7	30	15	500	5	50	15	30
9RB009SF	50.0	10 N	5	20	30	500	5 N	30	10	50
9RB013SF	5.0	10 N	5	20	7	50	5 N	20 L	5	20
9RB016SF	7.0	10 N	7	30	10	70	5 N	20	10	20
9RB017SF	5.0	10 N	7	50	7	70	5 N	20	15	15
9SA001SF	5.0	10 N	10	100	15	200	5 N	20	15	30

## BLUE JOINT &lt;170 MESH FRACTION-continued

SAMPLE	Sc(ppm)	Sn(ppm)	Sr(ppm)	V(ppm)	Y(ppm)	Zn(ppm)	Zr(ppm)	Th(ppm)
9KL032SF	10	15	200	70	100	200 N	1000 G	200
9KL033SF	5	10 N	100	50	50	200 N	500	100 N
9KL034SF	5	10 N	150	50	50	200 N	500	100 N
9KL035SF	10	15	200	70	100	200 N	1000 G	100 N
9KL036SF	10	10	200	70	70	200 N	700	100 N
9KL037SF	10	15	200	70	70	200 N	1000	100 N
9KL038SF	15	20	200	100	150	200 N	1000 G	100 L
9KL039SF	10	10	150	50	200	200 N	1000	100 L
9KL040SF	10	20	200	70	150	200 N	1000 G	100
9KL041SF	15	30	200	70	150	200 N	1000 G	100 L
9ME001SF	20	10 N	150	200	70	200 N	200	100 N
9ME002SF	30	10 N	200	300	50	200 N	200	100 N
9ME003SF	15	10 N	200	100	70	200 N	700	100 N
9ME004SF	5	10 L	100	50	30	200 N	300	100 N
9ME005SF	5	10 N	100 L	50	30	200 N	200	100 N
9ME006SF	5	10	100	50	70	200 N	500	100 N
9ME006TF	5 L	10	100	50	70	200 N	300	100 N
9ME006TF	5 L	10	100	30	50	200 N	300	100 N
9ME007SF	5 L	30	100	50	100	200 N	700	100 N
9ME010SF	5 L	10 L	100	30	50	200 N	500	100 N
9ME012SF	5	15	100	30	100	200 N	1000 G	100 N
9ME013SF	10	10 L	100	50	100	200 N	1000 G	100 N
9ME018SF	5 N	10	100 N	20	70	200 N	1000	100 N
9ME019SF	5	10	100 L	30	200	200 N	1000 G	100 N
9ME019TF	5 N	10	100 N	20	200	200 N	1000 G	100 N
9ME019TF	5 N	10	100 L	20	70	200 N	1000	100 N
9ME020SF	5 N	15	100	30	150	200 N	1000 G	100 N
9ME021SF	5 L	20	100 N	20	70	200 N	500	100 N
9ME024SF	5 N	10 N	100 L	20	50	200 N	500	100 N
9ME025SF	7	10 L	100	30	100	200 N	200	100 N
9ME026SF	30	10 N	200	300	50	200 N	1000	100 N
9ME027SF	15	10 N	150	100	300	200 N	1000	100 N
9ME028SF	20	10 N	150	200	70	200 N	200	100 N
9ME029SF	5	10 N	150	50	30	200 N	500	100 N
9ME030SF	7	10 N	150	70	50	200 N	500	100 N
9RB001SF	5 L	10	100 L	30	70	200 N	1000	100 N
9RB002SF	5	15	150	50	70	200 L	500	100 N
9RB003SF	10	10	150	30	150	200 N	700	100 N
9RB004SF	10	10	150	30	150	200 N	1000 G	100 N
9RB005SF	7	10	150	50	300	200 N	1000	100 N
9RB009SF	5	10	100 L	30	700	200 L	500	100 N
9RB013SF	5	10 L	100	30	30	200 N	500	100 N
9RB016SF	5	10 L	150	50	70	200 N	1000	100 N
9RB017SF	7	10 N	100	50	70	200 N	1000	100 N
9SA001SF	10	10	200	100	100	200 N	500	100 N

## BLUE JOINT &lt;170 MESH FRACTION-continued

SAMPLE	Lat.	Long.	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn(ppm)	Ag(ppm)	B(ppm)	Ba(ppm)
9SA002SF	45 44 13N	114 28 01W	2.0	0.30	0.5	0.2	300	0.5N	10.000L	700.000
9WR002SF	45 32 31N	114 25 34W	5.0	1.00	1.0	0.7	700	0.5N	10.000L	300.000
9WR005SF	45 32 42N	114 25 55W	3.0	1.00	0.7	0.5	1000	0.5N	10.000L	300.000
9WR006SF	45 32 42N	114 25 52W	5.0	0.70	1.0	0.3	700	0.5N	10.000L	300.000
9WR008SF	45 32 46N	114 24 54W	5.0	2.00	2.0	0.5	1000	0.7	10.000	700.000
9WR009SF	45 33 14N	114 23 10W	7.0	2.00	2.0	0.5	1000	0.5N	10.000	1500.000
9WR016SF	45 32 10N	114 31 23W	3.0	0.70	1.0	0.5	500	0.5N	10.000L	300.000
9WR017SF	45 32 13N	114 31 30W	5.0	0.70	0.5	0.5	1000	0.5N	10.000L	500.000
9WR018SF	45 31 41N	114 31 52W	3.0	0.70	0.5	0.3	1000	0.5L	10.000L	500.000
9WR019SF	45 31 19N	114 32 13W	3.0	0.70	0.7	0.3	500	0.5N	10.000L	300.000
9WR020SF	45 36 11N	114 31 12W	5.0	1.00	0.7	0.5	700	0.5N	10.000L	300.000
9WR021SF	45 36 54N	114 30 43W	5.0	0.70	0.7	0.5	700	0.5N	10.000L	700.000
9WR022SF	45 37 19N	114 30 36W	5.0	1.00	1.0	1.0	1500	0.5L	10.000L	1000.000
9WR023SF	45 37 52N	114 29 28W	5.0	0.70	0.7	0.5	700	0.5N	10.000L	500.000
9WR024SF	45 38 10N	114 29 20W	5.0	0.50	0.7	0.5	500	0.5N	10.000L	500.000
9WR025SF	45 38 06N	114 29 17W	5.0	0.70	0.7	0.3	700	0.5L	10.000L	500.000
9WR025TF	45 38 06N	114 29 17W	5.0	0.70	0.7	0.5	1000	0.5N	10.000L	500.000
9WR025TF	45 38 06N	114 29 17W	5.0	0.70	0.7	0.5	700	0.5N	10.000L	500.000
9WR026SF	45 38 20N	114 29 06W	5.0	0.70	1.0	0.7	700	0.5N	10.000L	300.000
9WR027SF	45 39 00N	114 29 06W	3.0	0.70	0.7	0.3	700	0.5N	10.000L	300.000
9WR028SF	45 39 25N	114 28 34W	2.0	0.50	0.7	0.2	500	0.5N	10.000L	300.000
9WR029SF	45 39 32N	114 28 26W	2.0	0.50	0.7	0.3	500	0.5N	10.000L	300.000
9WR032SF	45 37 05N	114 25 48W	5.0	1.00	1.0	0.7	1000	0.5N	10.000L	700.000
9WR033SF	45 37 08N	114 25 48W	5.0	1.00	1.0	0.5	500	0.5N	10.000L	700.000
9WR034SF	45 37 19N	114 24 18W	5.0	1.00	0.5	0.3	500	0.5N	10.000L	200.000
9WR035SF	45 37 16N	114 24 18W	3.0	0.70	1.0	0.3	500	0.7	10.000L	700.000
9WR037SF	45 34 16N	114 27 04W	5.0	0.70	0.7	0.7	700	0.5N	10.000L	300.000
9WR038SF	45 34 16N	114 27 07W	5.0	0.70	0.7	0.5	700	0.5N	10.000L	500.000
9WR039SF	45 34 41N	114 26 38W	5.0	0.70	0.7	0.7	700	0.5N	10.000L	500.000
9WR040SF	45 34 55N	114 26 28W	5.0	0.70	0.7	0.5	1000	0.5N	10.000	700.000
9WR041SF	45 35 06N	114 26 17W	3.0	0.70	0.7	0.5	500	0.5L	10.000	1500.000
9WR042SF	45 35 53N	114 26 17W	3.0	0.50	0.7	0.5	700	0.5N	15.000	1000.000
9WR043SF	45 36 11N	114 26 42W	5.0	1.00	1.0	1.0	700	0.5N	10.000L	700.000
9WR044SF	45 36 11N	114 26 46W	5.0	1.00	1.0	0.7	700	0.5N	10.000L	700.000
9WR045SF	45 35 46N	114 25 34W	3.0	1.00	0.7	0.5	500	0.5N	10.000	1000.000
9WR046SF	45 32 20N	114 27 29W	5.0	0.70	0.7	0.7	700	0.5N	10.000L	500.000
9WR047SF	45 32 20N	114 27 32W	5.0	0.70	0.7	0.7	700	0.5L	10.000L	500.000
9WR048SF	45 32 10N	114 27 47W	2.0	0.50	1.0	0.3	1000	0.5N	10.000	300.000
9WR049SF	45 31 55N	114 28 12W	3.0	0.50	1.0	0.5	700	0.5N	10.000L	300.000
9WR050SF	45 31 44N	114 28 48W	3.0	0.70	1.0	0.5	1000	0.5N	10.000	300.000
9WR052SF	45 31 01N	114 29 17W	5.0	0.70	1.0	0.7	700	0.5N	10.000L	500.000
9WR053SF	45 30 14N	114 29 02W	5.0	0.70	0.7	1.0	500	0.5N	10.000L	700.000
9WR054SF	45 30 07N	114 29 10W	5.0	0.70	1.0	0.7	500	0.5N	10.000L	500.000
9WR101A	45 36 58N	114 25 03W	0.7	0.10	0.1	0.1	70	0.5N	10.000L	500.000
9WR229SF	45 38 02N	114 29 06W	3.0	0.70	0.5	0.2	700	1.5	10.000L	300.000

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## BLUE JOINT &lt;170 MESH FRACTION-continued

SAMPLE	Be(ppm)	Bi(ppm)	Co(ppm)	Cr(ppm)	Cu(ppm)	La(ppm)	Mo(ppm)	Nb(ppm)	Ni(ppm)	Pb(ppm)
9SA002SF	5.0	10 N	5	30	15	150	5 N	20 N	7	20
9WR002SF	3.0	10 N	15	70	10	100	5 N	30	15	30
9WR005SF	10.0	10 N	7	30	7	150	5 N	50	15	30
9WR006SF	7.0	10 N	10	30	7	100	5 N	30	10	30
9WR008SF	2.0	10 N	30	100	50	200	5 N	30	50	20
9WR009SF	1.0L	10 N	50	200	50	300	5 N	50	50	10
9WR016SF	5.0	10 N	10	50	7	150	5 N	30	15	20
9WR017SF	10.0	10 N	10	30	15	100	5	30	15	30
9WR018SF	15.0	10 N	7	50	10	70	10	50	30	30
9WR019SF	20.0	10 N	5	20	10	200	5	70	10	30
9WR020SF	7.0	10 N	10	20	10	150	5 L	50	7	20
9WR021SF	5.0	10 N	10	30	15	100	5	20	10	20
9WR022SF	5.0	10 N	10	30	15	200	7	30	7	30
9WR023SF	20.0	10 N	7	30	10	200	5	70	7	20
9WR024SF	10.0	10 N	7	20	20	200	10	100	7	30
9WR025SF	15.0	10 N	7	20	15	200	10	70	7	20
9WR025TF	15.0	10 N	7	30	20	200	10	70	10	30
9WR025TF	10.0	10 N	7	30	20	300	10	50	10	20
9WR026SF	15.0	10 N	7	50	7	200	5 L	50	7	30
9WR027SF	20.0	10 N	7	20	10	100	5 N	70	7	30
9WR028SF	15.0	10 N	5	15	10	100	5 N	20	5	20
9WR029SF	10.0	10 N	5	15	5	70	5 N	30	5	20
9WR032SF	5.0	10 N	10	50	30	200	5 N	30	10	30
9WR033SF	5.0	10 N	10	70	10	100	5 N	30	15	20
9WR034SF	15.0	10 N	5	20	15	200	5 N	70	7	30
9WR035SF	15.0	10 N	10	70	15	100	5 N	50	10	15
9WR037SF	10.0	10 N	7	20	7	200	5 N	30	5	30
9WR038SF	7.0	10 N	10	20	10	200	5 N	50	7	30
9WR039SF	7.0	20	7	30	30	200	5 N	70	10	30
9WR040SF	10.0	10 N	10	30	20	100	5 N	30	10	20
9WR041SF	5.0	10 N	7	50	15	100	5 N	20 L	10	15
9WR042SF	3.0	10 N	10	70	15	30	5 N	20 N	10	15
9WR043SF	5.0	10 N	10	50	15	200	5 N	30	15	20
9WR044SF	3.0	10 N	10	30	10	100	5	30	10	30
9WR045SF	2.0	10 N	15	100	15	50	5 N	20 N	20	20
9WR046SF	7.0	10 N	10	30	10	100	5 N	50	7	20
9WR047SF	7.0	10 N	10	30	7	150	5 N	50	7	30
9WR048SF	7.0	10 N	7	30	7	150	5 N	20	10	30
9WR049SF	5.0	10 N	5	20	5	200	5 N	30	5 N	20
9WR050SF	7.0	10 N	7	30	7	100	5 N	20	10	20
9WR052SF	5.0	10 N	10	30	7	100	5 N	30	10	30
9WR053SF	3.0	10 N	10	50	5	200	5 L	50	7	30
9WR054SF	5.0	10 N	10	30	7	200	5 N	50	10	20
9WR101A	1.0L	10 N	5 N	15	5 N	20 N	5 N	20 N	5 N	10 N
9WR229SF	20.0	10 N	5	20	20	150	5 N	50	10	30

## BLUE JOINT &lt;170 MESH FRACTION-continued

SAMPLE	Sc (ppm)	Sn (ppm)	Sr (ppm)	V (ppm)	Y (ppm)	Zn (ppm)	Zr (ppm)	Th (ppm)
9SA002SF	5 L	10 N	150	20	50	200 N	200	100 N
9WR002SF	10	10	150	100	70	200 N	1000 G	100 N
9WR005SF	5	15	150	50	150	200 N	1000 G	100 N
9WR006SF	5	15	150	70	100	200 N	1000	200
9WR008SF	30	10 N	300	200	100	200 N	200	100 N
9WR009SF	30	10 N	300	200	50	200 N	200	100 N
9WR016SF	5	15	200	70	70	200 N	1000 G	150
9WR017SF	5	20	150	50	70	200	1000 G	100
9WR018SF	5	15	200	50	100	200	500	100 N
9WR019SF	5	15	150	50	100	200 N	500	100 L
9WR020SF	5	15	150	50	70	200 N	1000 G	100 N
9WR021SF	10	10	200	70	70	200 N	1000 G	100 N
9WR022SF	10	10	200	100	100	200 N	1000 G	100 N
9WR023SF	10	20	150	70	200	200 N	1000 G	100 L
9WR024SF	5	70	150	50	150	200 L	1000 G	100 N
9WR025SF	5	15	150	50	100	200 L	1000	100 N
9WR025TF	7	30	100	30	100	200	1000	100 N
9WR025TF	7	20	150	50	100	200 L	1000 G	100 N
9WR026SF	5	15	100	70	150	200 N	1000 G	100 N
9WR027SF	5	20	100	50	150	200 N	1000	100 L
9WR028SF	5 L	10	150	30	50	200 N	200	100 N
9WR029SF	5 L	20	200	50	70	200 N	1000	100 N
9WR032SF	15	15	200	100	100	200 L	1000 G	100 N
9WR033SF	10	15	150	70	70	200 N	1000	100 N
9WR034SF	5	20	100 L	30	200	200 L	1000	100
9WR035SF	10	20	150	70	200	200 N	500	100 L
9WR037SF	7	15	150	50	100	200 N	1000 G	100 L
9WR038SF	7	15	150	70	100	200 N	1000	100
9WR039SF	7	20	150	70	200	200 N	1000 G	100
9WR040SF	10	10	150	70	100	200 N	1000	100
9WR041SF	7	10 N	150	70	70	200 N	700	100 N
9WR042SF	7	10 N	150	100	50	200 N	1000	100 N
9WR043SF	15	15	200	100	100	200 N	1000 G	100 N
9WR044SF	10	15	200	70	70	200 N	1000 G	100 N
9WR045SF	10	10 N	200	100	30	200 N	700	100 N
9WR046SF	10	15	200	70	100	200 N	1000 G	100 N
9WR047SF	10	15	150	70	150	200 N	1000 G	100
9WR048SF	5	10	150	50	70	200 N	1000 G	100
9WR049SF	5	10	200	50	150	200 N	1000 G	100 N
9WR050SF	5	10	200	50	70	200 N	1000 G	100 N
9WR052SF	10	30	300	50	100	200 N	1000 G	100 L
9WR053SF	15	30	200	70	150	200 N	1000 G	100 L
9WR054SF	15	30	200	70	100	200 N	1000 G	100
9WK101A	5 N	10 N	100 N	10	10 L	200 N	50	100 N
9WR229SF	5	30	200	30	100	200	500	100 N

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## BLUE JOINT &lt;170 MESH FRACTION-continued

SAMPLE	Lat.	Long.	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn(ppm)	Ag(ppm)	B(ppm)	Ba(ppm)
9WR243SF	45 39 18N	114 29 24W	2.0	1.00	0.2	0.2	300	0.5N	10.000	300.000
9WR249SF	45 31 23N	114 32 06W	2.0	0.50	0.5	0.2	500	0.5N	10.000L	300.000
9WR254SF	45 30 54N	114 32 31W	3.0	0.70	0.5	0.3	500	0.5N	10.000L	200.000
9WR256SF	45 38 49N	114 31 52W	2.0	0.70	0.3	0.2	300	0.5N	10.000	500.000
9WR257SF	45 38 49N	114 31 48W	2.0	0.70	0.3	0.2	500	0.5N	10.000	500.000
9WR260SF	45 33 04N	114 26 28W	3.0	0.70	0.5	0.2	1500	0.5L	10.000	300.000
9WR261SF	45 33 00N	114 26 28W	2.0	0.50	0.5	0.2	700	0.5N	10.000L	300.000
9WR262SF	45 32 49N	114 25 55W	2.0	0.70	0.3	0.2	1000	0.5N	10.000L	300.000
9WR269SF	45 37 41N	114 24 25W	2.0	0.50	0.3	0.2	500	0.5N	10.000L	150.000

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BLUE JOINT <170 MESH FRACTION-continued

SAMPLE	Be(ppm)	Bi(ppm)	Co(ppm)	Cr(ppm)	Cu(ppm)	La(ppm)	Mo(ppm)	Nb(ppm)	Ni(ppm)	Pb(ppm)
9WR243SF	2.0	10 N	7	70	10	50	7	20 N	20	10
9WR249SF	10.0	10 N	5	20	7	150	5 L	100	10	20
9WR254SF	15.0	10 N	5	30	15	200	5 N	50	15	20
9WR256SF	3.0	10 N	10	100	10	50	5	20 N	30	15
9WR257SF	5.0	10 N	20	70	10	50	5 N	20	20	30
9WR260SF	15.0	10 N	10	20	7	200	5 N	30	10	70
9WR261SF	7.0	10 N	7	30	7	150	5 N	20	10	20
9WR262SF	10.0	10 N	5	30	7	150	5 N	30	10	15
9WR269SF	20.0	10 N	5 L	20	10	150	5 N	70	7	50



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BLUE JOINT <170 MESH FRACTION-continued

SAMPLE	Sc(ppm)	Sn(ppm)	Sr(ppm)	V(ppm)	Y(ppm)	Zn(ppm)	Zr(ppm)	Th(ppm)
9WR243SF	5	10 L	100 L	30	30	200 N	200	100 N
9WR249SF	5	15	200	30	150	200 N	1000	100 N
9WR254SF	5	15	200	30	150	200 N	1000 G	100 N
9WR256SF	7	10 N	200	50	30	200 N	200	100 N
9WR257SF	7	10	200	50	50	200 N	300	100 N
9WR260SF	5	15	200	50	100	200 N	500	100
9WR261SF	5	15	200	50	70	200 N	1000	100
9WR262SF	5	20	200	30	150	200 N	500	100 N
9WR269SF	5 L	20	100 L	20	100	200 L	700	100 L

Table 2.--Statistical summary for stream sediment fine fraction

## TITLE

Blue Joint &lt;170 Mesh Fraction

THE FREQUENCY DISTRIBUTIONS AND HISTOGRAMS ON THE FOLLOWING PAGES ARE ON LOGARITHMIC SCALES, AND EMPLOY THE SAME CLASS INTERVALS AS USED IN REPORTING 6-STEP SEMIQUANTITATIVE SPECTROGRAPHIC ANALYSES. IMPORTANT NOTE- THE STATISTICS GIVEN BELOW THE HISTOGRAMS ARE DERIVED ONLY FROM DATA VALUES WITHIN THE RANGES OF ANALYTICAL DETERMINATION, AND ARE, THEREFORE, BIASED IF DATA VALUES QUALIFIED WITH N, L, G, T, OR H CODES ARE PRESENT. SEE LATER SECTION OF OUTPUT FOR STATISTICAL ESTIMATES THAT ARE UNBIASED IN THIS REGARD. THE GEOMETRIC MEAN IS AN ESTIMATE OF "CENTRAL TENDENCY," OR OF A CHARACTERISTIC VALUE, OF A FREQUENCY DISTRIBUTION THAT IS APPROXIMATELY SYMMETRICAL ON A LOG SCALE, AND IS THEREFORE USEFUL FOR CHARACTERIZING MANY GEOCHEMICAL DISTRIBUTIONS. THE GEOMETRIC MEAN IS NOT AN ESTIMATE OF GEOCHEMICAL ABUNDANCE AND IS OF NO VALUE IN ESTIMATING RESERVES OR TOTAL AMOUNTS OF ELEMENTS PRESENT. SEE USGS PROFESSIONAL PAPER 574-B FOR FURTHER DISCUSSION. SEE USGS BULLETIN 1147E, PAGE 23, FOR EXPLANATION OF GEOMETRIC DEVIATION.

THE CUMULATIVE FREQUENCY PERCENTS GIVEN BELOW SHOULD BE PLOTTED AGAINST THE "LOWER" LIMITS TO GIVE THE LEPELTIER-  
CUMULATIVE CURVE.

TYPE

## TITLE

Blue Joint &lt;170 Mesh Fraction

## FREQUENCY TABLE FOR COLUMN 3 ( size)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT CUM
LOWER	UPPER				
3.8E-02	5.6E-02	0	0	0.00	100.00
5.6E-02	8.3E-02	0	0	0.00	100.00
8.3E-02	1.2E-01	0	0	0.00	100.00
1.2E-01	1.8E-01	0	0	0.00	100.00
1.8E-01	2.6E-01	0	0	0.00	100.00
2.6E-01	3.8E-01	0	0	0.00	100.00
3.8E-01	5.6E-01	0	0	0.00	100.00
5.6E-01	8.3E-01	1	1	0.53	100.00
8.3E-01	1.2E+00	1	2	0.00	99.47
1.2E+00	1.8E+00	3	5	1.59	97.88
1.8E+00	2.6E+00	51	56	26.98	70.90
2.6E+00	3.8E+00	62	117	32.80	38.10
3.8E+00	5.6E+00	63	180	33.33	4.76
5.6E+00	8.3E+00	8	188	4.23	0.53
8.3E+00	1.2E+01	1	189	0.53	

## HISTOGRAM FOR COLUMN 3 ( size)

```

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

```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	189
0.00	0.00			0.00	0.00	

MAXIMUM = 1.00000E+01  
 MINIMUM = 7.00000E-01  
 GEOMETRIC MEAN = 3.26418E+00  
 GEOMETRIC DEVIATION = 1.53219E+00

## TITLE

Blue Joint &lt;170 Mesh Fraction

## FREQUENCY TABLE FOR COLUMN 4 ( smgX)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E-02	2.6E-02	0	0	0.00	100.00
2.6E-02	3.8E-02	0	0	0.00	100.00
3.8E-02	5.6E-02	0	0	0.00	100.00
5.6E-02	8.3E-02	0	0	0.00	100.00
8.3E-02	1.2E-01	1	1	0.53	100.00
1.2E-01	1.8E-01	0	1	0.00	99.47
1.8E-01	2.6E-01	0	1	0.00	99.47
2.6E-01	3.8E-01	9	10	4.76	99.47
3.8E-01	5.6E-01	52	62	27.51	94.71
5.6E-01	8.3E-01	100	162	52.91	67.20
8.3E-01	1.2E+00	20	182	10.58	14.29
1.2E+00	1.8E+00	2	184	1.06	3.70
1.8E+00	2.6E+00	5	189	2.65	2.65

## HISTOGRAM FOR COLUMN 4 ( smgX)

```

1.0E-01 X
1.5E-01
2.0E-01
3.0E-01 XXXXX
5.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
7.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.0E+00 XXXXXXXXXXXXXXXX
1.5E+00 X
2.0E+00 XXX

```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	189
0.00	0.00	0	0	0.00	0.00	

MAXIMUM = 2.00000E+00  
 MINIMUM = 1.00000E-01  
 GEOMETRIC MEAN = 6.52913E-01  
 GEOMETRIC DEVIATION = 1.43407E+00

## TITLE

Blue Joint &lt;170 Mesh Fraction

## FREQUENCY TABLE FOR COLUMN 5 ( scaZ)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
3.8E-02	5.6E-02	0	0	0.00	100.00
5.6E-02	8.3E-02	0	0	0.00	100.00
8.3E-02	1.2E-01	1	1	0.53	100.00
1.2E-01	1.8E-01	0	1	0.00	99.47
1.8E-01	2.6E-01	5	6	2.65	96.83
2.6E-01	3.8E-01	20	26	10.58	86.24
3.8E-01	5.6E-01	61	87	32.28	53.97
5.6E-01	8.3E-01	56	143	29.63	24.34
8.3E-01	1.2E+00	40	183	21.16	3.17
1.2E+00	1.8E+00	1	184	0.53	2.65
1.8E+00	2.6E+00	5	189	2.65	

## HISTOGRAM FOR COLUMN 5 ( scaZ)

1.0E-01 X  
1.5E-01  
2.0E-01 XXX  
3.0E-01 XXXXXXXXXXXXX  
5.0E-01 XXXXXXXXXXXXXXXXXXXXXXXX  
7.0E-01 XXXXXXXXXXXXXXXXXXXXXXXX  
1.0E+00 XXXXXXXXXXXXXXXXXXXXXXXX  
1.5E+00 X  
2.0E+00 XXX

ANALYTICAL				
N	L	H	B	T
0	0	0	0	0
0.00	0.00			0.00

MAXIMUM = 2.00000E+00  
MINIMUM = 1.00000E-01  
GEOMETRIC MEAN = 6.11966E-01  
GEOMETRIC DEVIATION = 1.59214E+00

## TITLE

Blue Joint &lt;170 Mesh Fraction

## FREQUENCY TABLE FOR COLUMN 6 ( stix)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E-03	2.6E-03	0	0	0.00	100.00
2.6E-03	3.8E-03	0	0	0.00	100.00
3.8E-03	5.6E-03	0	0	0.00	100.00
5.6E-03	8.3E-03	0	0	0.00	100.00
8.3E-03	1.2E-02	0	0	0.00	100.00
1.2E-02	1.8E-02	0	0	0.00	100.00
1.8E-02	2.6E-02	0	0	0.00	100.00
2.6E-02	3.8E-02	0	0	0.00	100.00
3.8E-02	5.6E-02	0	0	0.00	100.00
5.6E-02	8.3E-02	1	1	0.53	100.00
8.3E-02	1.2E-01	0	1	0.00	99.47
1.2E-01	1.8E-01	5	6	2.65	99.47
1.8E-01	2.6E-01	41	47	21.69	96.83
2.6E-01	3.8E-01	53	100	28.04	75.13
3.8E-01	5.6E-01	56	156	29.63	47.09
5.6E-01	8.3E-01	28	184	14.81	17.46
8.3E-01	1.2E+00	5	189	2.65	2.65

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## HISTOGRAM FOR COLUMN 6 ( stix)

```

7.0E-02 X
1.0E-01
1.5E-01 XXX
2.0E-01 XXXXXXXXXXXXXXXXXXXX
3.0E-01 XXXXXXXXXXXXXXXXXXXX
5.0E-01 XXXXXXXXXXXXXXXXXXXX
7.0E-01 XXXXXXXXXXXXXXXXXX
1.0E+00 XXX

```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	189
0.00	0.00			0.00	0.00	

MAXIMUM = 1.00000E+00  
 MINIMUM = 7.00000E-02  
 GEOMETRIC MEAN = 3.64498E-01  
 GEOMETRIC DEVIATION = 1.64042E+00

## TITLE

Blue Joint &lt;170 Mesh Fraction

## FREQUENCY TABLE FOR COLUMN 7 ( smn)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E+00	1.2E+01	0	0	0.00	100.00
1.2E+01	1.8E+01	0	0	0.00	100.00
1.8E+01	2.6E+01	0	0	0.00	100.00
2.6E+01	3.6E+01	0	0	0.00	100.00
3.6E+01	5.6E+01	0	0	0.00	100.00
5.6E+01	8.3E+01	1	1	0.53	100.00
8.3E+01	1.2E+02	0	1	0.00	99.47
1.2E+02	1.8E+02	0	1	0.00	99.47
1.8E+02	2.6E+02	1	2	0.53	98.94
2.6E+02	3.6E+02	27	29	14.29	84.66
3.6E+02	5.6E+02	67	96	35.45	49.21
5.6E+02	8.3E+02	50	146	26.46	27.75
8.3E+02	1.2E+03	39	185	20.63	2.12
1.2E+03	1.8E+03	3	188	1.59	0.53
1.8E+03	2.6E+03	0	188	0.00	0.53
2.6E+03	3.8E+03	1	189	0.53	

## HISTOGRAM FOR COLUMN 7 ( smn)

7.0E+01 X  
1.0E+02  
1.5E+02  
2.0E+02 X  
3.0E+02 XXXXXXXXXXXXXXXX  
5.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
7.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
1.0E+03 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
1.5E+03 XX  
2.0E+03  
3.0E+03 X

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	189
0.00	0.00	0	0	0.00	0.00	

MAXIMUM = 3.00000E+03  
MINIMUM = 7.00000E+01  
GEOMETRIC MEAN = 5.93089E+02  
GEOMETRIC DEVIATION = 1.56275E+00

## TITLE

Blue Joint &lt;170 Mesh Fraction

## FREQUENCY TABLE FOR COLUMN 8 ( sag)

LIMITS		FREQ	FREQ	PERCENT	PERCENT
LOWER	UPPER	CUM	CUM	FREQ	FREQ
3.8E-01	5.6E-01	9	9	4.76	12.70
5.6E-01	8.3E-01	8	17	4.23	7.94
8.3E-01	1.2E+00	2	19	1.06	3.70
1.2E+00	1.8E+00	3	22	1.59	2.65
1.8E+00	2.6E+00	1	23	0.53	1.06
2.6E+00	3.8E+00	0	23	0.00	0.53
3.8E+00	5.6E+00	1	24	0.53	0.53

## HISTOGRAM FOR COLUMN 8 ( sag)

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

ANALYTICAL		VALUES	
N	L	T	G
150	15	0	0
79.37	7.94	0.00	0.00

MAXIMUM = 5.00000E+00  
 MINIMUM = 5.00000E-01  
 GEOMETRIC MEAN = 7.92789E-01  
 GEOMETRIC DEVIATION = 1.77763E+00



TITLE

Blue Joint <170 Mesh Fraction

FREQUENCY TABLE FOR COLUMN 11 ( sb)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E+00	1.2E+01	55	55	29.10	33.33
1.2E+01	1.8E+01	6	61	3.17	4.23
1.8E+01	2.6E+01	1	62	0.53	1.06
2.6E+01	3.8E+01	1	63	0.53	0.53

HISTOGRAM FOR COLUMN 11 ( sb)

1.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 1.5E+01 XXX  
 2.0E+01 X  
 3.0E+01 X

ANALYTICAL VALUES		63	
N	L	H	T
0	126	0	0
0.00	66.67	0	0.00

MAXIMUM = 3.00000E+01  
 MINIMUM = 1.00000E+01  
 GEOMETRIC MEAN = 1.06936E+01  
 GEOMETRIC DEVIATION = 1.21696E+00

TITLE

Blue Joint <170 Mesh Fraction

FREQUENCY TABLE FOR COLUMN 12 ( sba)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E+01	2.6E+01	0	0	0.00	100.00
2.6E+01	3.8E+01	0	0	0.00	100.00
3.8E+01	5.6E+01	0	0	0.00	100.00
5.6E+01	8.3E+01	0	0	0.00	100.00
8.3E+01	1.2E+02	0	0	0.00	100.00
1.2E+02	1.8E+02	2	2	1.06	100.00
1.8E+02	2.6E+02	13	15	6.88	98.94
2.6E+02	3.8E+02	61	76	32.28	92.06
3.8E+02	5.6E+02	61	137	32.28	59.79
5.6E+02	8.3E+02	37	174	19.58	27.51
8.3E+02	1.2E+03	12	186	6.35	7.94
1.2E+03	1.8E+03	2	188	1.06	1.59
1.8E+03	2.6E+03	0	188	0.00	0.53
2.6E+03	3.8E+03	1	189	0.53	0.53

HISTOGRAM FOR COLUMN 12 ( sba)

```

1.5E+02 X
2.0E+02 XXXXXXXX
3.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
5.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
7.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXX
1.0E+03 XXXXXX
1.5E+03 X
2.0E+03
3.0E+03 X
    
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	189
0.00	0.00	0	0	0.00	0.00	

MAXIMUM = 3.00000E+03  
 MINIMUM = 1.50000E+02  
 GEOMETRIC MEAN = 4.48074E+02  
 GEOMETRIC DEVIATION = 1.61360E+00

## TITLE

Blue Joint &lt;170 Mesh Fraction

## FREQUENCY TABLE FOR COLUMN 13 ( sbe)

LIMITS		FREQ	FREQ	PERCENT	PERCENT
LOWER	UPPER	CUM	CUM	FREQ	FREQ CUM
8.3E-01	1.2E+00	3	3	1.59	98.94
1.2E+00	1.8E+00	2	5	1.06	97.35
1.8E+00	2.6E+00	16	21	8.47	96.30
2.6E+00	3.8E+00	25	46	13.23	87.83
3.8E+00	5.6E+00	54	100	28.57	74.60
5.6E+00	8.1E+00	31	131	16.40	46.03
8.3E+00	1.2E+01	13	144	6.88	29.63
1.2E+01	1.8E+01	21	165	11.11	22.75
1.8E+01	2.6E+01	16	181	8.47	11.64
2.6E+01	3.8E+01	4	185	2.12	3.17
3.8E+01	5.6E+01	2	187	1.06	1.06

## HISTOGRAM FOR COLUMN 13 ( sbe)

```

1.0E+00 XX
1.5E+00 X
2.0E+00 XXXXXXXX
3.0E+00 XXXXXXXXXX
5.0E+00 XXXXXXXXXX
7.0E+00 XXXXXXXXXX
1.0E+01 XXXXXX
1.5E+01 XXXXXXXXXX
2.0E+01 XXXXXXXX
3.0E+01 XX
5.0E+01 X

```

N	L	H	B	T	G	ANALYTICAL VALUES
0	2	0	0	0	0	187
0.00'	1.06			0.00		0.00

MAXIMUM = 5.00000E+01  
 MINIMUM = 1.00000E+00  
 GEOMETRIC MEAN = 6.25234E+00  
 GEOMETRIC DEVIATION = 2.16203E+00

## TITLE

Blue Joint &lt;170 Mesh Fraction

FREQUENCY TABLE FOR COLUMN 14 ( sbt)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E+00	1.2E+01	1	1	0.53	1.06
1.2E+01	1.8E+01	0	1	0.00	0.53
1.8E+01	2.6E+01	1	2	0.53	0.53

HISTOGRAM FOR COLUMN 14 ( sbt)

1.0E+01 X  
1.5E+01  
2.0E+01 X

N	L	H	B	T	G	ANALYTICAL VALUES
187	0	0	0	0	0	2
98.94	0.00			0.00		0.00

MAXIMUM = 2.00000E+01  
MINIMUM = 1.00000E+01  
GEOMETRIC MEAN = 1.41421E+01  
GEOMETRIC DEVIATION = 1.63253E+00

## TITLE

Blue Joint &lt;170 Mesh Fraction

## FREQUENCY TABLE FOR COLUMN 16 ( sco)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
3.8E+00	5.6E+00	39	39	20.63	94.71
5.6E+00	8.3E+00	49	88	25.93	74.07
8.3E+00	1.2E+01	66	154	34.92	48.15
1.2E+01	1.8E+01	11	165	5.82	13.23
1.8E+01	2.6E+01	6	171	3.17	7.41
2.6E+01	3.8E+01	5	176	2.65	4.23
3.8E+01	5.6E+01	3	179	1.59	1.59

## HISTOGRAM FOR COLUMN 16 ( sco)

5.0E+00 XXXXXXXXXXXXXXXXXXXX  
 7.0E+00 XXXXXXXXXXXXXXXXXXXX  
 1.0E+01 XXXXXXXXXXXXXXXXXXXX  
 1.5E+01 XXXXX  
 2.0E+01 XXX  
 3.0E+01 XXX  
 5.0E+01 XX

ANALYTICAL VALUES		T	G
N	S		
2.65	2.65	0	0
		0.00	0.00

MAXIMUM = 5.00000E+01  
 MINIMUM = 5.00000E+00  
 GEOMETRIC MEAN = 8.66888E+00  
 GEOMETRIC DEVIATION = 1.60472E+00

## TITLE

Blue Joint &lt;170 Mesh Fraction

## FREQUENCY TABLE FOR COLUMN 17 ( scr)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E+00	1.2E+01	7	7	3.70	100.00
1.2E+01	1.8E+01	15	22	7.94	96.30
1.8E+01	2.6E+01	34	56	17.99	88.36
2.6E+01	3.8E+01	57	113	30.16	70.37
3.8E+01	5.6E+01	40	153	21.16	40.21
5.6E+01	8.3E+01	21	174	11.11	19.05
8.3E+01	1.2E+02	10	184	5.29	7.94
1.2E+02	1.8E+02	1	185	0.53	2.65
1.8E+02	2.6E+02	4	189	2.12	2.12

## HISTOGRAM FOR COLUMN 17 ( scr)

```

1.0E+01 XXXX
1.5E+01 XXXXXXXX
2.0E+01 XXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXXXXXXXXXXXXXXXX
5.0E+01 XXXXXXXXXXXXXXXXXXXXXXXX
7.0E+01 XXXXXXXXXXXXXXXX
1.0E+02 XXXXX
1.5E+02 X
2.0E+02 XX

```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	189
0.00	0.00			0.00	0.00	

MAXIMUM = 2.00000E+02  
 MINIMUM = 1.00000E+01  
 GEOMETRIC MEAN = 3.47153E+01  
 GEOMETRIC DEVIATION = 1.87441E+00

## TITLE

Blue Joint &lt;170 Mesh Fraction

## FREQUENCY TABLE FOR COLUMN 18 ( scu)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
3.8E+00	5.6E+00	14	14	7.41	99.47
5.6E+00	8.3E+00	48	62	25.40	92.06
8.3E+00	1.2E+01	59	121	31.22	66.67
1.2E+01	1.8E+01	27	148	14.29	35.45
1.8E+01	2.6E+01	19	167	10.05	21.16
2.6E+01	3.8E+01	12	179	6.35	11.11
3.8E+01	5.6E+01	7	186	3.70	4.76
5.6E+01	8.3E+01	1	187	0.53	1.06
8.3E+01	1.2E+02	1	188	0.53	0.53

## HISTOGRAM FOR COLUMN 18 ( scu)

```

5.0E+00 XXXXXX
7.0E+00 XXXXXXXXXXXXXXXXXXXXXXXX
1.0E+01 XXXXXXXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXXXXXXXXX
2.0E+01 XXXXXXXXXXXXXXXX
3.0E+01 XXXXX
5.0E+01 XXXX
7.0E+01 X
1.0E+02 X

```

N	L	H	B	T	G	ANALYTICAL VALUES
1	0	0	0	0	0	188
0.53	0.00			0.00		0.00

MAXIMUM = 1.00000E+02  
 MINIMUM = 5.00000E+00  
 GEOMETRIC MEAN = 1.14826E+01  
 GEOMETRIC DEVIATION = 1.79921E+00

## TITLE

Blue Joint &lt;170 Mesh Fraction

## FREQUENCY TABLE FOR COLUMN 19 ( s(a)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E+01	2.6E+01	3	3	1.59	99.47
2.6E+01	3.8E+01	6	9	3.17	97.88
3.8E+01	5.6E+01	18	27	9.52	94.71
5.6E+01	8.3E+01	18	45	9.52	85.19
8.3E+01	1.2E+02	36	81	19.05	75.66
1.2E+02	1.8E+02	45	126	23.81	56.61
1.8E+02	2.6E+02	52	178	27.51	32.80
2.6E+02	3.8E+02	6	184	3.17	5.29
3.8E+02	5.6E+02	3	187	1.59	2.12
5.6E+02	8.3E+02	1	188	0.53	0.53

## HISTOGRAM FOR COLUMN 19 ( s(a)

```

2.0E+01 XX
3.0E+01 XXX
5.0E+01 XXXXXXXXXXXX
7.0E+01 XXXXXXXXXXXX
1.0E+02 XXXXXXXXXXXXXXXXXXXX
1.5E+02 XXXXXXXXXXXXXXXXXXXX
2.0E+02 XXXXXXXXXXXXXXXXXXXX
3.0E+02 XXX
5.0E+02 XX
7.0E+02 X

```

N	L	H	B	T	G	ANALYTICAL VALUES
1	0	0	0	0	0	188
0.53	0.00			0.00	0.00	

MAXIMUM = 7.00000E+02  
 MINIMUM = 2.00000E+01  
 GEOMETRIC MEAN = 1.21561E+02  
 GEOMETRIC DEVIATION = 1.85522E+00



## TITLE

Blue Joint &lt;170 Mesh Fraction

FREQUENCY TABLE FOR COLUMN 20 ( smo)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
3.8E+00	5.6E+00	19	19	10.05	17.99
5.6E+00	8.3E+00	10	29	5.29	7.94
8.3E+00	1.2E+01	5	34	2.65	2.65

HISTOGRAM FOR COLUMN 20 ( smo)

5.0E+00 XXXXXXXXXX  
 7.0E+00 XXXXX  
 1.0E+01 XXX

ANALYTICAL VALUES		T	G
N	L		
140	15	0	0
74.07	7.94	0.00	0.00

MAXIMUM = 1.00000E+01  
 MINIMUM = 5.00000E+00  
 GEOMETRIC MEAN = 6.11249E+00  
 GEOMETRIC DEVIATION = 1.29171E+00

TITLE

Blue Joint <170 Mesh Fraction

FREQUENCY TABLE FOR COLUMN 21 ( snb)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E+01	2.6E+01	32	32	16.93	77.25
2.6E+01	3.8E+01	58	90	30.69	60.32
3.8E+01	5.6E+01	41	131	21.69	29.63
5.6E+01	8.3E+01	11	142	5.82	7.94
8.3E+01	1.2E+02	4	146	2.12	2.12

HISTOGRAM FOR COLUMN 21 ( snb)

2.0E+01 XXXXXXXXXXXXXXXXXXXX  
 3.0E+01 XXXXXXXXXXXXXXXXXXXX  
 5.0E+01 XXXXXXXXXXXXXXXXXXXX  
 7.0E+01 XXXXX  
 1.0E+02 XX

ANALYTICAL		VALUES	
N	L	H	B
20	23	0	0
10.58	12.17	0.00	0.00

MAXIMUM = 1.00000E+02  
 MINIMUM = 2.00000E+01  
 GEOMETRIC MEAN = 3.49040E+01  
 GEOMETRIC DEVIATION = 1.53104E+00

## TITLE

Blue Joint &lt;170 Mesh Fraction

FREQUENCY TABLE FOR COLUMN 22 ( sni)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
3.8E+00	5.6E+00	14	14	7.41	93.65
5.6E+00	8.3E+00	25	39	13.23	86.24
8.3E+00	1.2E+01	68	107	35.98	73.02
1.2E+01	1.8E+01	42	149	22.22	37.04
1.8E+01	2.6E+01	15	164	7.94	14.81
2.6E+01	3.8E+01	6	170	3.17	6.88
3.8E+01	5.6E+01	6	176	3.17	3.70
5.6E+01	8.3E+01	1	177	0.53	0.53

HISTOGRAM FOR COLUMN 22 ( sni)

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

N	L	H	B	T	G	ANALYTICAL VALUES
12	0	0	0	0	0	177
6.35	0.00			0.00	0.00	

MAXIMUM = 7.00000E+01  
MINIMUM = 5.00000E+00  
GEOMETRIC MEAN = 1.16479E+01  
GEOMETRIC DEVIATION = 1.67170E+00

TITLE

Blue Joint <170 Mesh Fraction

FREQUENCY TABLE FOR COLUMN 23 ( spb)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E+00	1.2E+01	7	7	3.70	98.94
1.2E+01	1.8E+01	23	30	12.17	95.24
1.8E+01	2.6E+01	73	103	38.62	83.07
2.6E+01	3.8E+01	70	173	37.04	44.44
3.8E+01	5.6E+01	13	186	6.88	7.41
5.6E+01	8.3E+01	1	187	0.53	0.53

HISTOGRAM FOR COLUMN 23 ( spb)

```

1.0E+01 XXXX
1.5E+01 XXXXXXXXXXXX
2.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
5.0E+01 XXXXXXXX
7.0E+01 X

```

N	L	H	B	T	G	ANALYTICAL VALUES
1	1	0	0	0	0	187
0.53	0.53			0.00	0.00	

MAXIMUM = 7.00000E+01  
 MINIMUM = 1.00000E+01  
 GEOMETRIC MEAN = 2.34901E+01  
 GEOMETRIC DEVIATION = 1.43670E+00

## TITLE

Blue Joint &lt;170 Mesh Fraction

## FREQUENCY TABLE FOR COLUMN 25 ( ssc)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
3.8E+00	5.6E+00	51	51	26.98	84.13
5.6E+00	8.3E+00	34	85	17.99	57.14
8.3E+00	1.2E+01	37	122	19.58	39.15
1.2E+01	1.8E+01	30	152	15.87	19.58
1.8E+01	2.6E+01	3	155	1.59	3.70
2.6E+01	3.8E+01	4	159	2.12	2.12

## HISTOGRAM FOR COLUMN 25 ( ssc)

```

5.0E+00 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
7.0E+00 XXXXXXXXXXXXXXXXXXXXXXXX
1.0E+01 XXXXXXXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXXXXXXXXXXXXXXXXX
2.0E+01 XX
3.0E+01 XX

```

N	L	H	B	T	G	ANALYTICAL VALUES
8	22	0	0	0	0	159
4.23	11.64			0.00	0.00	

MAXIMUM = 3.00000E+01  
 MINIMUM = 5.00000E+00  
 GEOMETRIC MEAN = 8.34117E+00  
 GEOMETRIC DEVIATION = 1.59888E+00

## TITLE

Blue Joint &lt;170 Mesh Fraction

FREQUENCY TABLE FOR COLUMN 26 ( ssn)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E+00	1.2E+01	47	47	24.87	67.72
1.2E+01	1.8E+01	40	87	21.16	42.86
1.8E+01	2.6E+01	24	111	12.70	21.69
2.6E+01	3.8E+01	14	125	7.41	8.99
3.8E+01	5.6E+01	0	125	0.00	1.59
5.6E+01	8.3E+01	2	127	1.06	1.59
8.3E+01	1.2E+02	0	127	0.00	0.53
1.2E+02	1.8E+02	1	128	0.53	0.53

HISTOGRAM FOR COLUMN 26 ( ssn)

```

1.0E+01 XXXXXXXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXXXXXXXXXXXXXXXXX
2.0E+01 XXXXXXXXXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXXXXXXXX
5.0E+01
7.0E+01 X
1.0E+02
1.5E+02 X

```

ANALYTICAL VALUES		VALUES	
N	L	H	B
43	18	0	0
22.75	9.52	0.00	0.00

MAXIMUM = 1.50000E+02  
 MINIMUM = 1.00000E+01  
 GEOMETRIC MEAN = 1.53479E+01  
 GEOMETRIC DEVIATION = 1.57791E+00

## TITLE

Blue Joint &lt;170 Mesh Fraction

## FREQUENCY TABLE FOR COLUMN 27 ( ssr)

LIMITS		FREQ	FREQ CUM	PERCENT	PERCENT FREQ CUM
LOWER	UPPER				
8.3E+01	1.2E+02	43	43	22.75	92.06
1.2E+02	1.8E+02	62	105	32.80	69.31
1.8E+02	2.6E+02	62	167	32.80	36.51
2.6E+02	3.8E+02	7	174	3.70	3.70

## HISTOGRAM FOR COLUMN 27 ( ssr)

```

1.0E+02 XXXXXXXXXXXXXXXXXXXXXXXX
1.5E+02 XXXXXXXXXXXXXXXXXXXXXXXX
2.0E+02 XXXXXXXXXXXXXXXXXXXXXXXX
3.0E+02 XXXX

```

ANALYTICAL  
VALUES  
174

N	L	H	B	T	G
5	10	0	0	0	0
2.65	5.29			0.00	0.00

MAXIMUM = 3.00000E+02  
 MINIMUM = 1.00000E+02  
 GEOMETRIC MEAN = 1.54598E+02  
 GEOMETRIC DEVIATION = 1.34773E+00

## TITLE

Blue Joint &lt;170 Mesh Fraction

FREQUENCY TABLE FOR COLUMN 28 ( sv)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E+00	1.2E+01	1	1	0.53	100.00
1.2E+01	1.8E+01	0	1	0.00	99.47
1.8E+01	2.6E+01	10	11	5.29	99.47
2.6E+01	3.8E+01	37	48	19.58	94.18
3.8E+01	5.6E+01	61	109	32.28	74.60
5.6E+01	8.3E+01	48	157	25.40	42.33
8.3E+01	1.2E+02	23	180	12.17	16.93
1.2E+02	1.8E+02	2	182	1.06	4.76
1.8E+02	2.6E+02	4	186	2.12	3.70
2.6E+02	3.8E+02	3	189	1.59	1.59

HISTOGRAM FOR COLUMN 28 ( sv)

```

1.0E+01 X
1.5E+01
2.0E+01 XXXXX
3.0E+01 XXXXXXXXXXXXXXXXXXXX
5.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
7.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.0E+02 XXXXXXXXXXXXXXXX
1.5E+02 X
2.0E+02 XX
3.0E+02 XX

```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	189
0.00	0.00	0	0	0.00	0.00	

MAXIMUM = 3.00000E+02  
 MINIMUM = 1.00000E+01  
 GEOMETRIC MEAN = 5.42842E+01  
 GEOMETRIC DEVIATION = 1.72242E+00



TITLE  
Blue Joint <170 Mesh Fraction

## FREQUENCY TABLE FOR COLUMN 30 ( sy)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E+00	1.2E+01	0	0	0.00	99.47
1.2E+01	1.8E+01	0	0	0.00	99.47
1.8E+01	2.6E+01	1	1	0.53	99.47
2.6E+01	3.8E+01	20	21	10.58	98.94
3.8E+01	5.6E+01	22	43	11.64	88.36
5.6E+01	8.3E+01	41	84	21.69	76.72
8.3E+01	1.2E+02	58	142	30.69	55.03
1.2E+02	1.8E+02	24	166	12.70	24.34
1.8E+02	2.6E+02	14	180	7.41	11.64
2.6E+02	3.8E+02	7	187	3.70	4.23
3.8E+02	5.6E+02	0	187	0.00	0.53
5.6E+02	8.3E+02	1	188	0.53	0.53

## HISTOGRAM FOR COLUMN 30 ( sy)

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

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	0	188
0.00	0.53			0.00	0.00	

MAXIMUM = 7.00000E+02  
 MINIMUM = 2.00000E+01  
 GEOMETRIC MEAN = 8.68571E+01  
 GEOMETRIC DEVIATION = 1.81580E+00

TITLE  
Blue Joint <170 Mesh Fraction

FREQUENCY TABLE FOR COLUMN 31 ( szn)

LIMITS	FREQ	PERCENT	PERCENT
LOWER - UPPER	CUM	FREQ	FREQ CUM
1.8E+02 - 2.8E+02	6	3.17	4.76
2.6E+02 - 3.8E+02	3	1.59	1.59

HISTOGRAM FOR COLUMN 31 ( szn)

2.0E+02 XXX  
3.0E+02 XX

N	L	H	B	T	G	ANALYTICAL VALUES
169	11	0	0	0	0	9
89.42	5.82			0.00	0.00	

MAXIMUM = 3.00000E+02  
MINIMUM = 2.00000E+02  
GEOMETRIC MEAN = 2.28943E+02  
GEOMETRIC DEVIATION = 1.22475E+00

## TITLE

Blue Joint &lt;170 Mesh Fraction

## FREQUENCY TABLE FOR COLUMN 32 ( szr)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E+01	1.2E+01	0	0	0.00	100.00
1.2E+01	1.8E+01	0	0	0.00	100.00
1.8E+01	2.6E+01	0	0	0.00	100.00
2.6E+01	3.8E+01	0	0	0.00	100.00
3.8E+01	5.6E+01	1	1	0.53	100.00
5.6E+01	8.3E+01	0	1	0.00	99.47
8.3E+01	1.2E+02	1	2	0.53	99.47
1.2E+02	1.8E+02	1	3	0.53	98.94
1.8E+02	2.6E+02	18	21	9.52	98.41
2.6E+02	3.8E+02	16	37	8.47	88.89
3.8E+02	5.6E+02	27	64	14.29	80.42
5.6E+02	8.3E+02	19	83	10.05	66.14
8.3E+02	1.2E+03	44	127	23.28	56.08

## HISTOGRAM FOR COLUMN 32 ( szr)

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

## ANALYTICAL

## VALUES

N	L	H	B	T	G
0.00	0	0	0	0	62
	0.00			0.00	32.80

MAXIMUM = 1.00000E+03  
 MINIMUM = 5.00000E+01  
 GEOMETRIC MEAN = 5.28786E+02  
 GEOMETRIC DEVIATION = 1.89545E+00

TITLE  
Blue Joint <170 Mesh Fraction

FREQUENCY TABLE FOR COLUMN 33 ( sth)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E+01	1.2E+02	18	18	9.52	11.64
1.2E+02	1.8E+02	2	20	1.06	2.12
1.8E+02	2.6E+02	2	22	1.06	1.06

HISTOGRAM FOR COLUMN 33 ( sth)

1.0E+02 XXXXXXXXXXXX  
1.5E+02 X  
2.0E+02 X

N	L	H	B	T	G	ANALYTICAL VALUES
150	17	0	0	0	0	22
79.37	8.99			0.00	0.00	

48  
MAXIMUM = 2.00000E+02  
MINIMUM = 1.00000E+02  
GEOMETRIC MEAN = 1.10503E+02  
GEOMETRIC DEVIATION = 1.25327E+00

## TITLE

Blue Joint &lt;170 Mesh Fraction

IN THE COMPUTATIONS PERFORMED TO PRODUCE THE FOLLOWING TABLE OF GEOMETRIC MEANS AND DEVIATIONS, ALL ELEMENTS ARE IGNORED WHERE ONE OR MORE OF THE UNQUALIFIED DATA VALUES IS LESS THAN THE ANALYTICAL LIMIT OF DETECTION SPECIFIED ON INPUT OR WHERE ANY DATA VALUES ARE QUALIFIED WITH THE G (GREATER THAN) CODE. DATA VALUES QUALIFIED WITH B OR H ARE NOT USED IN THE COMPUTATIONS. WHERE NONE OF THE DATA VALUES FOR AN ELEMENT ARE QUALIFIED THE MEAN AND DEVIATION SHOULD BE THE SAME AS THOSE GIVEN IN THE PRECEDING SECTION. WHERE DATA ARE QUALIFIED WITH THE CODES N, L, OR T, THE ESTIMATES OF GEOMETRIC MEAN AND DEVIATION ARE BASED ON A METHOD BY A. J. COHEN FOR TREATING CENSORED DISTRIBUTIONS. THE APPLICATION OF THIS METHOD TO GEOCHEMICAL PROBLEMS IS DESCRIBED IN USGS PROFESSIONAL PAPER 574-B. THE ESTIMATES ARE UNBIASED IN A STRICT SENSE ONLY WHERE THE DATA ARE DERIVED FROM A LOGNORMAL PARENT POPULATION, BUT EXPERIMENTS HAVE SHOWN THAT LARGE DEPARTURES FROM THIS REQUIREMENT MAY NOT GREATLY INVALIDATE THE RESULTS ACCEPTANCE AND USE OF THE ESTIMATES, HOWEVER, IS THE RESPONSIBILITY OF THE INDIVIDUAL.

ELEMENT	N	L	H	B	T	G	ANALYTICAL VALUES
sfex	0	0	0	0	0	0	189
smgx	0	0	0	0	0	0	189
scax	0	0	0	0	0	0	189
stix	0	0	0	0	0	0	189
smn	0	0	0	0	0	0	189
sag	150	15	0	0	0	0	24
sb	0	126	0	0	0	0	63
sba	0	0	0	0	0	0	189
sbe	0	2	0	0	0	0	187
sbi	187	0	0	0	0	0	2
sco	5	5	0	0	0	0	179
scr	0	0	0	0	0	0	189
scu	1	0	0	0	0	0	188
sla	1	0	0	0	0	0	188
sno	140	15	0	0	0	0	34
snb	20	23	0	0	0	0	146
sni	12	0	0	0	0	0	177
spo	1	1	0	0	0	0	187
ssc	8	22	0	0	0	0	159
ssn	43	18	0	0	0	0	128
ssr	5	10	0	0	0	0	174
sv	0	0	0	0	0	0	189
sy	0	1	0	0	0	0	188
szn	169	11	0	0	0	0	9
szr	0	0	0	0	0	0	127
sth	150	17	0	0	0	62	22

## TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
sfe%	3.264181	1.53	189 SAMPLES AND 189 ANALYTICAL VALUES.
smg%	0.652913	1.43	189 SAMPLES AND 189 ANALYTICAL VALUES.
sca%	0.611966	1.59	189 SAMPLES AND 189 ANALYTICAL VALUES.
stix	0.364498	1.64	189 SAMPLES AND 189 ANALYTICAL VALUES.
smn	593.089241	1.56	189 SAMPLES AND 189 ANALYTICAL VALUES.
sag	0.792922	1.78	165 NOT DETECTED, LESS THAN, OR TRACE VALUES.
sb	7.011598	1.47	126 NOT DETECTED, LESS THAN, OR TRACE VALUES.
sba	448.073547	1.61	189 SAMPLES AND 189 ANALYTICAL VALUES.
sbe	6.103260	2.23	2 NOT DETECTED, LESS THAN, OR TRACE VALUES.
sbi	14.166053	1.63	187 NOT DETECTED, LESS THAN, OR TRACE VALUES.
sco	8.201861	1.68	10 NOT DETECTED, LESS THAN, OR TRACE VALUES.
scr	34.715261	1.87	189 SAMPLES AND 189 ANALYTICAL VALUES.
scu	11.402056	1.81	1 NOT DETECTED, LESS THAN, OR TRACE VALUES.
sla	120.221951	1.89	1 NOT DETECTED, LESS THAN, OR TRACE VALUES.
sno	1.901664	2.19	155 NOT DETECTED, LESS THAN, OR TRACE VALUES.
snb	27.754332	1.79	43 NOT DETECTED, LESS THAN, OR TRACE VALUES.
snl	10.686177	1.82	12 NOT DETECTED, LESS THAN, OR TRACE VALUES.
spb	23.203897	1.46	2 NOT DETECTED, LESS THAN, OR TRACE VALUES.
ssc	7.017148	1.81	30 NOT DETECTED, LESS THAN, OR TRACE VALUES.
ssn	10.952723	1.91	61 NOT DETECTED, LESS THAN, OR TRACE VALUES.
ssr	145.315201	1.43	15 NOT DETECTED, LESS THAN, OR TRACE VALUES.
sv	54.284232	1.72	189 SAMPLES AND 189 ANALYTICAL VALUES.
sy	85.724650	1.86	1 NOT DETECTED, LESS THAN, OR TRACE VALUES.
szn	65.765568	1.82	180 NOT DETECTED, LESS THAN, OR TRACE VALUES.
szr	*****	*****	62 GREATER THAN VALUES. NO COMPUTATIONS.
sth	41.354345	1.79	167 NOT DETECTED, LESS THAN, OR TRACE VALUES.
			24 REPORTED VALUES.
			63 REPORTED VALUES.
			187 REPORTED VALUES.
			2 REPORTED VALUES.
			179 REPORTED VALUES.
			188 REPORTED VALUES.
			188 REPORTED VALUES.
			34 REPORTED VALUES.
			146 REPORTED VALUES.
			177 REPORTED VALUES.
			187 REPORTED VALUES.
			159 REPORTED VALUES.
			128 REPORTED VALUES.
			174 REPORTED VALUES.
			188 REPORTED VALUES.
			9 REPORTED VALUES.
			22 REPORTED VALUES.

Blue Nonmagnetic Fraction

SAMPLE	Lat.	Long.	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn(ppm)	Ag(ppm)	B(ppm)	Ba(ppm)
989001SN	45 43 16N	114 29 35E	20.0	0.20	0.1	2.0	1000	1.0N	20 L	300
989002SN	45 43 16N	114 29 35E	10.0	0.70	0.2	1.0	500	1.0N	20 L	700
989003SN	45 43 52N	114 29 02E	10.0	0.70	0.2	1.0	500	1.0N	20 L	1000
989004SN	45 43 52N	114 28 44E	20.0	0.50	0.2	2.0G	2000	1.0N	20	700
989008SN	45 31 08N	114 26 42E	10.0	0.15	0.7	2.0G	5000	1.0N	20 L	150
989009SN	45 31 08N	114 26 35E	20.0	0.20	0.5	2.0G	2000	1.0N	20 L	100
989010SN	45 31 08N	114 26 28E	30.0	0.15	0.5	2.0G	3000	1.0N	20 L	50
989011SN	45 30 14N	114 27 50E	15.0	0.50	1.0	2.0G	7000	1.0N	20 L	200
989012SN	45 30 14N	114 28 05E	10.0	0.70	0.7	2.0G	5000	1.0N	20 L	300
989013SN	45 29 42N	114 29 53E	20.0	0.20	1.0	2.0G	10000	1.0N	20 L	50 N
989015SN	45 29 17N	114 30 40E	10.0	0.50	2.0	2.0G	3000	1.0N	20	200
989016SN	45 29 17N	114 32 06E	10.0	0.20	1.0	2.0G	3000	1.0N	20 L	50 N
989017SN	0 00 00N	0 00 00W	5.0	0.20	1.0	1.5	1000	1.0N	20 L	300
989019SN	45 41 17N	114 27 11E	7.0	0.20	0.5	1.0	500	1.0N	20 L	500
989020SN	45 41 24N	114 27 04E	15.0	0.50	0.7	2.0G	2000	1.0N	20 L	150
989026SN	45 36 25N	114 22 44E	20.0	1.50	0.2	0.7	2000	1.0N	30	50 N
989027SN	45 36 25N	114 22 16E	30.0	2.00	0.2	1.0	5000	1.0N	20 L	50 N
989028SN	45 36 29N	114 22 05E	20.0	0.70	0.2	2.0	7000	1.0N	20 L	100
989035SN	45 31 08N	114 27 32E	20.0	0.20	1.0	2.0G	7000	1.0N	20	70
989036SN	45 31 01N	114 27 18E	20.0	0.30	0.7	2.0G	7000	1.0N	20 L	70
989037SN	45 29 17N	114 32 31E	10.0	0.50	2.0	2.0G	2000	1.0N	20 L	150
989038SN	45 29 13N	114 32 31E	15.0	0.30	1.5	2.0G	5000	1.0N	20 L	70
989040SN	45 30 47N	114 28 37E	20.0	0.15	0.7	2.0G	10000	1.0N	20 L	50
989074SN	45 33 47N	114 19 12E	20.0	2.00	1.0	2.0G	5000	1.0N	20	200
98C004SN	45 44 49N	114 24 47E	5.0	0.50	0.5	1.0	500	1.0N	20	500
98C005SN	45 44 49N	114 25 01E	5.0	0.10	1.0	1.0	500	1.0N	20 L	200
98C007SN	45 44 49N	114 24 18E	7.0	0.70	1.0	1.0	1000	1.0N	20 L	300
98C007SN	45 44 49N	114 24 18E	50.0	0.10	0.2	2.0	2000	1.0N	20 N	50 N
98C010SN	45 46 48N	114 27 18E	10.0	1.00	1.0	2.0	2000	1.0N	20 N	500
98C011SN	45 45 54N	114 26 24E	30.0	0.50	0.5	2.0G	2000	1.0N	20	100
98C012SN	0 00 00N	0 00 00W	15.0	0.70	0.7	2.0G	3000	1.0N	20 N	300
98C001SN	45 42 00N	114 23 42E	20.0	0.50	0.5	2.0G	7000	1.0N	20 L	100
98C005SN	45 44 10N	114 26 38E	20.0	0.20	0.5	2.0G	2000	1.0N	20	300
98C007SN	45 44 53N	114 22 52E	10.0	0.10	0.3	2.0G	2000	1.0N	20 L	200
98C009SN	45 42 07N	114 28 37E	5.0	0.20	0.5	2.0	1000	1.0N	100	700
98C028SN	45 44 56N	114 31 34E	20.0	0.50	0.5	2.0G	1500	2.0	20 L	200
98C030SN	45 45 07N	114 30 22E	20.0	0.30	0.2	1.5	1500	7.0	20	500
98C031SN	45 45 14N	114 29 56E	20.0	0.15	0.2	2.0	1000	10.0	20	200
98C045SN	45 41 42N	114 24 00E	15.0	0.20	0.7	2.0G	5000	1.0N	20 L	70
98C046SN	46 08 02N	114 01 37E	20.0	0.10	0.2	2.0G	5000	1.0N	20 L	50
98C001SN	45 35 10N	114 21 00E	20.0	1.00	0.1	1.5	5000	1.0N	20	50
98C002SN	45 35 02N	114 21 22E	20.0	1.50	0.3	1.0	5000	1.0N	20 L	150
98C005SN	45 29 17N	114 32 56E	7.0	0.20	2.0	2.0G	2000	1.0N	20 L	200
98C006SN	45 29 10N	114 32 56E	10.0	0.30	2.0	2.0G	2000	1.0N	20 L	150
98C007SN	45 29 49N	114 32 56E	10.0	0.20	0.5	2.0G	2000	1.0N	50	300

Table 3.--Analytical data for magnetic heavy-mineral-concentrate fraction

DATE 6/10/81

## Blue Joint Magnetic Fraction

SAMPLE	Lat.	Long.	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn(ppm)	B(ppm)	Ba(ppm)	Be(ppm)
96B004SM	45 43 52N	114 28 44W	50.0	0.20	0.2	2.06	3000	20 N	200	7
96B008SM	45 31 08N	114 26 42W	50.0	0.10	0.2	2.06	10000	20 N	50 N	5
96B009SM	45 31 08N	114 26 35W	50.06	0.05	0.2	0.26	2000	20 N	50 N	2
96B010SM	45 31 08N	114 26 28W	50.0	0.05	0.1	2.06	1500	20 N	50 N	2 N
96B011SM	45 30 14N	114 27 50W	50.0	0.10	0.2	2.06	2000	20 N	50 N	3
96B012SM	45 30 14N	114 28 05W	50.06	0.15	0.2	2.06	2000	20 N	50 N	3
96B013SM	45 29 42N	114 29 53W	50.06	0.05	0.2	2.06	3000	20 N	50 N	2
96B016SM	45 29 17N	114 32 06W	50.0	0.05	0.3	2.06	10000 6	20 N	50 N	5
96B035SM	45 31 08N	114 27 32W	50.06	0.15	0.2	2.06	10000	20 N	50 N	7
96B036SM	45 31 01N	114 27 18W	50.0	0.10	0.2	2.06	5000	20 N	50 N	5
96B037SM	45 29 17N	114 32 31W	30.0	0.10	0.3	2.06	7000	20 N	50 N	2 N
96B038SM	45 29 13N	114 32 31W	30.0	0.10	0.3	2.06	10000	20 L	50 N	2 N
96B039SM	45 31 12N	114 28 08W	50.0	0.05	0.1	2.0	3000	20 L	50 N	2 L
96B040SM	45 30 47N	114 28 37W	30.0	0.07	0.2	2.06	2000	20 L	50 N	3
96B074SM	45 33 47N	114 19 12W	50.0	0.50	0.2	2.06	5000	20 N	100	10 N
96C004SM	45 44 49N	114 24 47W	50.0	0.15	0.2	2.06	1000	20 N	50 N	15
96C005SM	45 44 49N	114 25 01W	50.0	0.10	0.2	2.06	1000	20 N	50	15
96C010SM	45 46 48N	114 27 18W	50.0	0.15	0.2	1.0	700	20 N	150	2 N
96C011SM	45 45 54N	114 26 24W	50.0	0.15	0.2	2.06	1500	20 N	50	2 N
96C012SM	45 45 43N	114 26 13W	50.0	0.10	0.2	2.06	1000	20 N	50	2 N
96C001SM	45 42 00N	114 23 42W	30.0	0.20	0.2	2.06	5000	20 L	70	10
96C005SM	45 44 10N	114 26 38W	50.0	0.15	0.3	2.06	2000	20 L	300	20
96C028SM	45 44 56N	114 31 34W	50.0	0.10	0.2	2.06	1000	20 L	70	7
96C030SM	45 45 07N	114 30 22W	30.0	0.10	0.2	2.06	700	20 N	150	10
96C031SM	45 45 14N	114 29 56W	50.0	0.07	0.2	2.06	1000	20 L	50	7
96C045SM	45 41 42N	114 24 00W	30.0	0.10	0.2	2.06	3000	20 L	50	5
96C046SM	46 08 02N	114 01 37W	50.0	0.10	0.2	2.06	3000	20 L	50	10
96L001SM	45 35 10N	114 21 00W	50.0	0.15	0.1	2.06	1000	20 N	70	2 N
96L002SM	45 35 02N	114 21 22W	50.06	0.20	0.2	0.26	1500	20 N	50	2
96L005SM	45 29 17N	114 32 56W	50.0	0.07	0.2	2.06	10000	20 N	50 N	2 N
96L006SM	45 29 10N	114 32 56W	30.0	0.10	0.2	2.06	7000	20 N	50 N	2 N
96L007SM	45 29 49N	114 32 56W	50.06	0.05	0.2	2.06	2000	20 N	50 N	3
96L008SM	45 30 40N	114 33 14W	50.0	0.50	0.3	2.06	5000	20 N	50	3
96L011SM	45 36 22N	114 31 12W	50.0	0.10	0.2	2.06	2000	20 N	50 N	10
96L012SM	45 36 40N	114 31 05W	50.0	0.10	0.2	2.06	2000	20 N	50 N	10
96L013SM	45 37 01N	114 30 58W	50.0	0.10	0.3	2.06	2000	20 N	50 N	5
96L014SM	45 38 28N	114 30 04W	50.0	0.50	0.1	1.0	500	20 N	50 N	5
96L019SM	45 40 30N	114 27 32W	50.0	0.10	0.2	2.06	2000	20 N	50 N	7
96L021SM	45 37 55N	114 32 06W	50.0	0.15	0.2	2.06	1500	20 N	50 N	2 N
96L022SM	45 38 13N	114 31 34W	30.0	0.30	0.2	2.06	2000	20 N	50 N	2 N
96L023SM	45 38 10N	114 30 18W	50.0	0.15	0.2	2.06	3000	20 N	200	5
96L027SM	45 34 26N	114 28 44W	50.0	0.10	0.2	2.06	5000	20 N	1500	2
96L028SM	45 34 37N	114 28 34W	30.0	0.20	0.2	2.06	7000	20 N	70	2
96L029SM	45 34 55N	114 28 05W	50.0	0.10	0.2	1.5	2000	20 N	50 N	2 N
96L030SM	45 35 24N	114 28 16W	50.0	0.20	0.2	2.0	2000	20 N	50	3



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## Blue Joint Magnetic Fraction-continued

SAMPLE	Bi (ppm)	Cd (ppm)	Co (ppm)	Cr (ppm)	Cu (ppm)	La (ppm)	Mo (ppm)	Nb (ppm)	Ni (ppm)	Pb (ppm)
98B004SM	20 N	50 N	20	150	20	1500	30	150	20	50
98B008SM	20 N	50 N	20	300	10	500	10	500	10	50
98B009SM	20 N	50 N	30	300	10	200	10 N	150	30	20
98B010SM	20 N	50 N	50	300	10	100	10 N	70	30	20
98B011SM	20 N	50 N	20	500	10 L	300	10 N	100	15	30
98B012SM	20 N	50 N	20	500	10	700	10 N	70	20	20
98B013SM	20 N	50 N	20	300	10 L	700	10	150	20	20 L
98B016SM	20 N	50 N	20	200	15	200	10 N	500	10 N	20 N
98B035SM	20 N	50 N	30	300	10	1000	20	300	20	30
98B036SM	20 N	50 N	20	300	10 L	500	20	150	15	20 L
98B037SM	20 N	50 N	20	200	10 L	300	10	300	15	20 N
98B038SM	20 N	50 N	20	100	10 L	150	15	700	10 N	20 N
98B039SM	20 N	50 N	30	200	10 L	200	15	100	15	20 L
98B040SM	20 N	50 N	20	200	15	1000	10	150	15	20 L
98B074SM	20 N	50 N	50	300	50	100	10 N	100	50	50
98C004SM	20 N	50 N	30	200	10	70	50	300	10	100
98C005SM	20 N	50 N	20	1000	10	1000	50	300	300	70
98C010SM	20 N	50 N	70	200	10	200	10 N	50 N	30	20 N
98C011SM	20 N	50 N	50	200	10	300	10 N	50	20	20 N
98C012SM	20 N	50 N	50	200	10 L	700	10 N	150	20	20 N
98C001SM	20 N	50 N	20	200	70	100	10	200	15	30
98C005SM	20 N	50 N	20	70	15	500	20	100	10 N	100
98C028SM	20 N	50 N	20	200	10	300	20	300	10 N	50
98C030SM	20 N	50 N	50	300	50	1500	30	200	10	70
98C031SM	20 N	50 N	20	300	15	2000	50	200	10 N	50
98C045SM	20 N	50 N	15	100	10	2000	50	150	10 N	20 L
98C046SM	20 N	50 N	15	150	70	500	30	200	10 N	100
98C001SM	20 N	50 N	100	7000	30	500	10 N	70	70	20
98C002SM	20 N	50 N	200	700	100	100	10 N	50	100	30
98C005SM	20 N	50 N	20	150	15	200	10 N	500	10 N	30
98C006SM	20 N	50 N	30	300	20	1000	10 N	200	10	20
98C007SM	20 N	50 N	20	700	10	300	10	100	15	20
98C008SM	20 N	50 N	50	500	50	1500	10 N	100	50	20 N
98C011SM	20 N	50 N	15	100	20	2000	100	150	10 N	70
98C012SM	20 N	50 N	10 N	150	10	2000	100	150	10 N	70
98C013SM	20 N	50 N	20	150	15	2000	70	150	10 N	100
98C014SM	20 N	50 N	50	5000	15	50 N	10 N	70	300	20 L
98C019SM	20 N	150	20	150	20	1000	100	150	500	70
98C021SM	20 N	50 N	50	500	15	1000	10 N	100	50	20 N
98C022SM	20 N	50 N	50	3000	20	300	10 N	100	150	20 L
98C023SM	20 N	50 N	50	700	20	500	15	100	30	20
98C027SM	20 N	50 N	20	200	10	500	15	300	15	20 L
98C028SM	20 N	50 N	20	200	10	300	15	500	10	20
98C029SM	20 N	50 N	20	200	10 L	1000	10	70	20	20 L
98C030SM	20 N	50 N	20	500	10	700	10	100	20	20

## Blue Joint Magnetic Fraction-continued

SAMPLE	Sc (ppm)	Sn (ppm)	V (ppm)	Y (ppm)	Zn (ppm)	Zr (ppm)	Th (ppm)
98B004SM	15	70	300	150	500	1500	200
98B008SM	30	200	300	500	500	1500	200 N
98B009SM	15	70	700	300	500 N	700	200 N
98B010SM	10	50	700	100	500 N	700	200 N
98B011SM	10	150	700	300	500	700	200 N
98B012SM	10 L	200	1000	300	500	2000	200 N
98B013SM	15	100	1000	200	500	700	200 N
98B016SM	50	150	500	200	500 N	1500	200 N
98B035SM	30	150	500	500	500	1000	200
98B036SM	20	100	700	300	700	1000	300
98B037SM	20	70	500	300	500 L	700	200 N
98B038SM	50	100	500	150	500 N	1000	200 N
98B039SM	15	150	500	200	1000	1000	200
98B040SM	15	150	200	500	700	700	200
98B074SM	15	30	1000	70	700	500	200 N
98C004SM	10 N	200	500	300	1000	2000 G	200 N
98C005SM	10	200	500	500	1000	2000 G	500
98C010SM	10	20 N	700	30	500	300	200 N
98C011SM	10	20 N	500	50	500	500	200 N
98C012SM	10	20 N	700	30	500	500	200 N
98C001SM	15	50	300	200	700	2000	200 N
98C005SM	50	20 N	200	100	1000	700	200 N
98C028SM	10	150	300	300	700	2000 G	200 L
98C030SM	20	70	200	200	700	1500	200
98C031SM	10	150	500	200	700	2000 G	200
98C045SM	10	100	150	200	700	2000 G	200 N
98C046SM	10 L	100	500	200	1000	2000 G	200 L
98L001SM	10	150	700	50	500 N	500	200 N
98L002SM	10	20 N	1000	100	500 N	1000	200 N
98L005SM	50	50	150	100	500 N	1500	200 N
98L006SM	30	50	200	150	500 N	1500	200 N
98L007SM	10	200	1000	200	500	1500	200 N
98L008SM	20	50	500	300	500 N	1000	200 N
98L011SM	20	150	200	300	1500	2000 G	200
98L012SM	15	150	200	300	700	2000 G	200 N
98L013SM	20	100	300	500	500	2000 G	300
98L014SM	10 N	50	500	20	500 N	1000	200 N
98L019SM	15	200	300	200	1000	2000 G	200 N
98L021SM	10	20 N	1500	200	500 N	700	200 N
98L022SM	10	20 N	1000	100	500	200	700
98L023SM	20	50	500	150	700	700	200 N
98L027SM	30	100	500	200	500 L	700	200 N
98L028SM	50	100	500	150	500	1500	500
98L029SM	10	70	500	150	1000	700	200
98L030SM	15	100	700	500	500	700	500

## Blue Joint Magnetic Fraction-continued

SAMPLE	Lat.	Long.	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn(ppm)	B(ppm)	Ba(ppm)	Be(ppm)
9KL031SM	45 35 20N	114 27 07W	50.0	0.15	0.2	2.0	2000	20 N	50 N	2
9KL032SM	45 35 28N	114 27 07W	50.0	0.15	0.3	2.06	5000	20 N	50 N	2
9KL035SM	45 33 07N	114 28 48W	50.0	0.15	0.1	2.0	1000	20	70	5
9KL035SM	45 33 07N	114 28 48W	50.0	0.10	0.2	2.06	5000	20 N	50 N	5
9KL036SM	45 33 07N	114 28 48W	7.0	2.00	0.5	0.3	500	20 L	2000	2 N
9KL037SM	45 33 07N	114 28 59W	50.0	0.10	0.2	2.06	7000	20 N	50 N	2
9KL038SM	45 32 46N	114 29 20W	50.0	0.10	0.1	2.06	5000	20 N	50 N	2 N
9KL039SM	45 32 31N	114 29 35W	50.0	0.10	0.2	2.0	5000	20 N	50 N	3
9KL040SM	45 31 52N	114 30 18W	50.0	0.15	0.3	2.06	2000	20 N	50 N	7
9KL041SM	45 31 23N	114 31 34W	50.0	0.15	0.2	2.0	3000	20 N	50 N	7
9KL042SM	45 31 01N	114 32 13W	50.0	0.07	0.2	2.0	3000	20 N	50 N	2 N
9ME001SM	45 32 28N	114 24 22W	50.0	0.50	0.3	2.06	1500	20 N	100	2 N
9ME002SM	45 31 59N	114 24 32W	50.06	0.30	0.3	2.06	2000	20 N	50 N	2 N
9ME003SM	45 33 04N	114 23 35W	50.06	0.20	0.2	2.0	1000	20 N	500	2 N
9ME005SM	45 39 00N	114 22 08W	50.0	0.30	0.1	2.06	1500	20 N	50 N	2
9ME006SM	45 39 00N	114 22 16W	50.0	0.15	0.1	2.06	2000	20 N	50 N	10
9ME007SM	45 38 56N	114 22 26W	50.0	0.15	0.1	2.06	1500	20 N	50 N	15
9ME012SM	45 45 11N	114 27 58W	30.0	0.10	0.2	2.06	1500	20 L	50	7
9ME013SM	45 45 50N	114 28 41W	30.0	0.70	1.5	2.06	2000	20 L	50	5
9ME018SM	45 40 01N	114 23 53W	50.0	0.10	0.2	2.06	3000	20 N	50 N	10
9ME019SM	45 40 01N	114 23 56W	50.0	0.15	0.3	2.06	5000	20 N	50 N	30
9ME020SM	45 39 58N	114 23 56W	30.0	0.15	0.3	2.0	2000	20 N	50 N	10
9ME021SM	45 39 58N	114 23 31W	50.0	0.10	0.2	2.06	3000	20 N	50 N	10
9ME024SM	45 40 52N	114 22 26W	50.0	0.10	0.1	2.06	3000	20 N	50 N	10
9ME025SM	45 40 59N	114 22 08W	50.06	0.07	0.1	2.06	5000	20 N	50 N	10
9ME026SM	45 43 23N	114 22 23W	50.0	0.70	0.2	2.06	2000	20 N	50 N	2 N
9ME028SM	45 35 24N	114 23 10W	50.0	0.30	0.2	2.06	3000	20 N	50 N	2 N
9ME029SM	45 35 13N	114 23 17W	50.0	0.10	0.1	2.06	500	20	200	2 N
9ME030SM	45 35 49N	114 23 35W	50.0	0.20	0.1	2.0	700	20 N	50 N	2 N
9RB001SM	45 40 55N	114 27 14W	50.0	0.05	0.1	2.06	2000	20 N	50 N	5
9RB003SM	45 41 31N	114 25 44W	50.0	0.10	0.2	2.06	2000	20 N	50 N	3
9RB004SM	45 41 35N	114 25 30W	50.0	0.10	0.3	2.06	2000	20 N	50 N	7
9RB005SM	45 41 38N	114 24 47W	50.0	0.10	0.3	2.06	2000	20 N	50 N	15
9RB016SM	45 42 14N	114 25 26W	30.0	0.20	0.2	2.06	2000	20 N	100	5
9RB017SM	45 42 14N	114 25 23W	30.0	0.20	0.2	2.06	1500	20 N	150	7
9SA001SM	45 44 20N	114 27 43W	30.0	0.10	0.2	2.06	3000	20 N	150	7
9SA002SM	45 44 13N	114 28 01W	30.0	0.20	0.5	2.06	3000	20 N	200	3
9RB002SM	45 32 31N	114 25 34W	50.0	0.15	0.2	2.06	3000	20 N	50 N	5
9WR005SM	45 32 42N	114 25 55W	30.0	0.05	0.1	2.06	10000	20 N	50 N	7
9WR006SM	45 32 42N	114 25 52W	50.0	0.05	0.1	2.06	10000	20 N	50 N	10
9WR008SM	45 32 46N	114 24 54W	50.0	0.70	0.7	2.0	1500	20 N	100	2 N
9WR009SM	45 33 14N	114 23 10W	50.06	0.30	0.2	2.06	1000	20 N	200	2 N
9WR016SM	45 32 10N	114 31 23W	50.0	0.10	0.2	2.06	2000	20 N	50 N	5
9WR017SM	45 32 13N	114 31 30W	50.0	0.15	0.2	2.06	2000	20 N	50 N	7
9WR019SM	45 31 19N	114 32 13W	50.0	0.07	0.2	2.06	2000	20 N	50 N	5

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## Blue Joint Magnetic fraction-continued

SAMPLE	Bi(ppm)	Cd(ppm)	Co(ppm)	Cr(ppm)	Cu(ppm)	La(ppm)	Mo(ppm)	Nb(ppm)	Ni(ppm)	Pb(ppm)
9KL031SM	20 N	50 N	50	500	10	700	20	100	30	30
9KL032SM	20 N	50 N	30	500	20	1500	20	200	15	20 L
9KL033SM	20 N	50 N	20	300	20	100	10	100	50	50
9KL035SM	20 N	50 N	20	200	10	700	30	200	15	20 N
9KL036SM	20 N	50 N	50	200	300	50 N	70	50 N	100	20
9KL037SM	20 N	50 N	20	300	15	500	15	300	15	20 L
9KL038SM	20 N	50 N	30	300	10	150	20	100	30	20 N
9KL039SM	20 N	50 N	20	500	10 L	1000	20	150	15	20
9KL040SM	20 N	50 N	30	300	10 L	1500	20	200	20	20
9KL041SM	20 N	50 N	20	300	10	1000	10	70	20	20 N
9KL042SM	20 N	50 N	20	200	10 L	500	20	150	20	20 N
9ME001SM	20 N	50 N	200	500	70	100	10 N	50	100	20
9ME002SM	20 N	50 N	70	500	20	50 N	10 N	70	50	20 N
9ME003SM	20 N	50 N	70	300	20	1500	10 N	200	50	20 N
9ME005SM	20 N	50 N	70	500	10	200	10 N	150	30	20 N
9ME006SM	20 N	50 N	50	500	50	100	30	100	30	300
9ME007SM	20 N	50 N	30	700	50	300	70	100	30	100
9ME012SM	20 N	50 N	20	150	20	2000 G	30	150	10 N	30
9ME013SM	20 N	50 N	30	200	30	2000 G	10	100	20	50
9ME018SM	20 N	50 N	15	150	10	2000 G	70	150	50	50
9ME019SM	20 N	50 N	20	150	20	2000 G	100	150	10 N	50
9ME020SM	20 N	50 N	10	100	15	2000	70	100	10 N	50
9ME021SM	20 N	50 N	15	150	30	1000	100	200	10 N	70
9ME024SM	20 N	50 N	10	70	20	700	70	200	10 N	70
9ME025SM	20 N	50 N	20	70	10	500	70	300	10 N	70
9ME026SM	20 N	50 N	100	700	15	200	10 N	70	50	20 N
9ME028SM	20 N	50 N	50	500	10	50 N	10 N	50	50	20 N
9ME029SM	20 N	50 N	20	500	10 L	50	10 N	50 L	20	20
9ME030SM	20 N	50 N	50	3000	15	200	10 N	70	70	20
9RB001SM	20 N	50 N	15	150	10	150	100	200	10 N	30
9RB003SM	20 N	50 N	10 N	200	10 L	100	100	500	30	20
9RB004SM	20 N	50 N	10	150	15	700	100	200	10 N	20
9RB005SM	20 N	50 N	15	150	50	2000	70	200	10 N	50
9RB016SM	20 N	50 N	20	150	15	500	30	300	15	20
9RB017SM	20 N	50 N	20	150	20	300	30	150	15	30
9SA001SM	20 N	50 N	15	50	20	200	15	200	10	30
9SA002SM	20 N	50 N	20	50	10	100	10	100	10 N	30
9WR002SM	20 N	50 N	50	500	20	500	20	150	30	20
9WR005SM	20 N	50 N	30	100	20	200	100	1000	10 N	30
9WR006SM	20 N	50 N	10 N	200	10 L	1000	15	700	10	30
9WR008SM	20 N	50 N	100	500	30	1500	10 N	100	70	20 N
9WR009SM	20 N	50 N	70	1000	15	2000	10 N	100	70	20 N
9WR016SM	20 N	50 N	30	500	15	1000	10 N	200	15	20
9WR017SM	20 N	50 N	20	500	15	700	10 N	200	15	30
9WR019SM	20 N	50 N	20	300	10 L	1500	50	300	10	20

## Blue Joint Magnetic Fraction-continued

SAMPLE	Sc (ppm)	Sn (ppm)	V (ppm)	Y (ppm)	Zn (ppm)	Zr (ppm)	Th (ppm)
9KL031SM	15	70	700	200	500	2000	200
9KL032SM	20	100	700	500	500	1000	500
9KL035SM	10	20	300	70	500 L	700	200 N
9KL035SM	20	150	500	200	1000	700	300
9KL036SM	10	20 N	150	30	500 N	200	200 N
9KL037SM	30	150	700	200	500	700	500
9KL038SM	15	150	1000	150	1500	500	200 N
9KL039SM	15	150	700	300	700	1500	700
9KL040SM	30	200	500	300	700	1000	200
9KL041SM	15	150	700	300	1000	700	200
9KL042SM	10	500	700	300	1000	1000	200 L
9ME001SM	10	20 N	1000	70	500 N	200	200 N
9ME002SM	10	20 N	1000	50	500 N	200	200 N
9ME003SM	10	20 N	1000	70	500 N	500	200 N
9ME005SM	10	50	500	50	500 N	700	200 N
9ME006SM	10	200	1000	150	1000	2000 G	200 N
9ME007SM	10	200	500	200	1000	2000	200 N
9ME012SM	10	70	200	200	500	2000 G	200 L
9ME013SM	20	50	500	300	500 L	2000	1000
9ME018SM	10 N	200	200	300	1500	2000 G	300
9ME019SM	10 N	200	200	500	1500	2000 G	500
9ME020SM	10 N	150	150	200	1000	2000 G	200
9ME021SM	10 N	200	200	300	1500	2000 G	200 N
9ME024SM	10 N	150	200	500	1500	2000 G	200 N
9ME025SM	20	200	300	300	1500	2000 G	200 N
9ME026SM	10	20 N	2000	50	500 N	200	200 N
9ME028SM	15	20 N	1500	70	500 N	150	200 N
9ME029SM	10 L	20 N	500	70	500 N	150	200 N
9ME030SM	10 N	20 N	500	30	500 N	300	500
9RB001SM	20	200	200	150	1500	2000 G	200 N
9RB003SM	20	100	300	150	700	2000 G	200 N
9RB004SM	20	100	200	200	700	2000 G	200 N
9RB005SM	10	150	200	500	1000	2000 G	300
9RB016SM	15	50	500	100	500	1500	200 N
9RB017SM	20	50	700	100	1000	1000	200 L
9SA001SM	20	20	200	100	500 L	1000	200 N
9SA002SM	20	20 N	200	70	500	2000	200 N
9WR002SM	15	150	1000	200	700	1000	200 N
9WR005SM	70	200	150	500	700	700	200 N
9WR006SM	30	200	200	500	700	700	200 N
9WR008SM	15	20 N	1000	70	500 N	1000	200 N
9WR009SM	15	20 N	1500	30	500 N	200	200 N
9WR016SM	15	150	700	300	500	700	200 N
9WR017SM	20	150	500	500	500 L	700	200 N
9WR019SM	20	200	500	1000	1000	2000 G	200 L

## Blue Joint Magnetic Fraction-continued

SAMPLE	Lat.	Long.	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn(ppm)	B(ppm)	Ba(ppm)	Be(ppm)
9WR020SM	45 36 11N	114 31 12W	50.0	0.10	0.2	2.06	3000	20 N	50 N	2
9WR021SM	45 36 54N	114 30 43W	10.0	0.20	2.0	2.06	2000	20 N	150	5
9WR022SM	45 37 19N	114 30 36W	50.0	0.10	0.3	2.06	2000	20 N	50 N	5
9WR023SM	45 37 52N	114 29 28W	30.0	0.15	0.7	2.06	2000	20 N	50 N	10
9WR024SM	45 38 10N	114 29 20W	50.0	0.10	0.2	2.06	2000	20 N	50 N	10
9WR025SM	45 38 06N	114 29 17W	50.0	0.10	0.2	2.06	2000	20 N	50 N	20
9WR026SM	45 38 20N	114 29 06W	50.0	0.10	0.2	2.06	2000	20 N	50 N	7
9WR027SM	45 39 00N	114 29 06W	50.0	0.50	0.2	2.06	2000	20 N	50 N	5
9WR028SM	45 39 25N	114 28 34W	50.0	0.30	0.2	2.06	2000	20 N	150	10
9WR029SM	45 39 32N	114 28 26W	50.0	0.07	0.1L	2.06	2000	20	50 N	7
9WR032SM	45 37 05N	114 25 48W	30.0	0.15	0.3	2.06	2000	20 N	50 N	3
9WR033SM	45 37 08N	114 25 48W	50.0	0.15	0.2	2.06	1500	20 N	50	7
9WR034SM	45 37 19N	114 24 18W	30.0	0.07	0.1	2.0	1500	20 N	50 N	15
9WR035SM	45 37 16N	114 24 18W	50.0	0.10	0.2	2.06	2000	20 N	50 N	7
9WR037SM	45 34 16N	114 27 04W	50.0	0.10	0.2	2.06	10000 G	20 N	50 N	20
9WR038SM	45 34 16N	114 27 07W	50.0	0.10	0.1	2.06	7000	20 N	50 N	10
9WR039SM	45 34 41N	114 26 38W	50.0	0.10	0.2	2.06	7000	20 N	50 N	7
9WR040SM	45 34 55N	114 26 28W	50.0	0.10	0.2	2.06	7000	20 N	50 N	15
9WR041SM	45 35 06N	114 26 17W	50.0	0.10	0.2	2.06	2000	20 N	50 N	7
9WR042SM	45 35 53N	114 26 17W	50.0	0.07	0.2	2.06	3000	20 N	50 N	2
9WR043SM	45 36 11N	114 26 42W	50.0	0.15	0.2	2.06	3000	20 N	50 N	2 N
9WR044SM	45 36 11N	114 26 46W	50.0	0.20	0.3	2.06	2000	20 N	50 N	2
9WR045SM	45 35 46N	114 25 34W	50.0	0.15	0.1	2.06	700	20 N	50	5
9WR046SM	45 32 20N	114 27 29W	30.0	0.05	0.1	2.06	7000	20 N	50 N	7
9WR047SM	45 32 20N	114 27 32W	50.0	0.10	0.2	2.06	3000	20 N	50 N	10
9WR048SM	45 32 10N	114 27 47W	50.0	0.10	0.2	2.0	3000	20 N	50 N	2
9WR049SM	45 31 55N	114 28 12W	50.0	0.07	0.2	2.0	2000	20 N	50 N	10
9WR050SM	45 31 44N	114 28 48W	50.0	0.15	0.2	1.5	2000	20 N	50 N	5
9WR052SM	45 31 01N	114 29 17W	30.0	0.10	0.2	1.5	2000	20 N	50 N	2
9WR053SM	45 30 14N	114 29 02W	50.0	0.10	0.2	2.06	3000	20 N	50 N	2
9WR054SM	45 30 07N	114 29 10W	50.0	0.10	0.3	2.06	5000	20 N	50 N	2 N
9WR229SM	45 38 02N	114 29 06W	50.06	0.20	0.2	2.06	5000	20 N	50 N	10
9WR249SM	45 31 23N	114 32 06W	50.0	0.10	0.2	2.0	3000	20 N	50 N	3
9WR254SM	45 30 54N	114 32 31W	50.0	0.10	0.2	2.0	5000	20 N	50 N	2
9WR256SM	45 38 49N	114 31 52W	50.0	0.70	0.2	2.06	5000	20 N	50 N	2
9WR260SM	45 33 04N	114 26 28W	50.0	0.20	0.1L	2.06	10000 G	20 N	50 N	5
9WR261SM	45 33 00N	114 26 28W	30.0	0.10	0.1	2.06	10000 G	20 N	50 N	10
9WR262SM	45 32 49N	114 25 55W	50.06	0.15	0.1	2.06	10000	20 N	50 N	7
9WR269SM	45 37 41N	114 24 25W	50.0	0.10	0.2	2.0	2000	20 N	50 N	15

DATE 6/10/84

Blue Joint Magnetic Fraction-continued

SAMPLE	Bi(ppm)	Cd(ppm)	Co(ppm)	Cr(ppm)	Cu(ppm)	La(ppm)	Mo(ppm)	Nb(ppm)	Ni(ppm)	Pb(ppm)
9WR020SM	20 N	50 N	30	500	10	2000	10	150	20	20 N
9WR021SM	20 N	50 N	15	70	10 L	2000 G	10 N	500	10 N	50
9WR022SM	20 N	50 N	20	300	10	1500	50	150	10 N	20 N
9WR023SM	20 N	50 N	20	200	10	2000 G	30	200	10 N	50
9WR024SM	20 N	50 N	15	200	100	2000	100	200	10 N	70
9WR025SM	20 N	50 N	15	100	100	2000	70	200	10 N	50
9WR026SM	20 N	50 N	30	500	20	500	70	150	15	20
9WR027SM	20 N	50 N	150	700	30	500	30	100	100	70
9WR028SM	20 N	50 N	50	200	50	1500	70	150	50	70
9WR029SM	20 N	50 N	15	150	15	300	100	150	10 N	50
9WR032SM	20 N	50 N	20	300	15	700	10 N	100	20	20
9WR033SM	20 N	50 N	30	500	50	2000	15	150	20	20
9WR034SM	20 N	50 N	15	70	15	500	100	200	10 N	70
9WR035SM	20 N	50 N	15	100	20	1500	100	150	10 N	20 N
9WR037SM	20 N	50 N	20	200	10 L	500	20	1000	10	30
9WR038SM	20 N	50 N	30	200	15	500	20	700	15	20
9WR039SM	20 N	50 N	30	500	30	1500	15	300	30	50
9WR040SM	20 N	50 N	50	200	15	700	10	500	30	30
9WR041SM	20 N	50 N	30	300	15	500	10 N	200	50	20
9WR042SM	20 N	50 N	20	500	10	500	20	150	20	20 N
9WR043SM	20 N	50 N	30	500	20	700	10 N	200	20	20 N
9WR044SM	20 N	50 N	50	700	50	1000	15	200	20	20
9WR045SM	20 N	50 N	20	500	20	150	10 N	50	30	50
9WR046SM	20 N	50 N	20	200	10	300	15	500	10	20 N
9WR047SM	20 N	50 N	20	300	10 L	700	20	200	10 N	30
9WR048SM	20 N	50 N	30	500	10	200	20	100	20	20 N
9WR049SM	20 N	50 N	30	300	10 L	300	20	100	20	20 N
9WR050SM	20 N	50 N	30	300	10 L	700	15	100	20	20 N
9WR052SM	20 N	50 N	20	300	10	1000	10	70	15	20 L
9WR053SM	20 N	50 N	20	300	10 L	500	15	200	20	50
9WR054SM	20 N	50 N	30	200	10	2000	15	150	20	20 N
9WR229SM	20 N	50 N	20	100	50	2000	70	200	10 N	70
9WR249SM	20 N	50 N	15	150	20	1000	30	150	10 N	50
9WR254SM	20 N	50 N	30	300	30	1000	20	150	10 N	20 L
9WR256SM	20 N	50 N	70	10000	30	200	10 N	200	1000	20
9WR260SM	20 N	50 N	30	100	30	100	20	500	10 N	50
9WR261SM	20 N	50 N	30	100	30	100	15	1000	10 N	20
9WR262SM	20	50 N	30	100	30	300	50	200	10 N	100
9WR269SM	20 N	50 N	10	70	70	500	70	200	10 N	100

## Blue Joint Magnetic Fraction-continued

SAMPLE	Sc(ppm)	Sn(ppm)	V(ppm)	Y(ppm)	Zn(ppm)	Zr(ppm)	Th(ppm)
9WR020SM	15	100	700	200	500 L	1500	200 N
9WR021SM	10 B	200	150	1000	500 N	2000	1500
9WR022SM	10 B	100	700	500	700	2000	200
9WR023SM	10 B	100	200	500	500	2000	700
9WR024SM	10 B	200	200	300	1500	2000 G	200 L
9WR025SM	10 B	500	200	300	1000	2000 G	500
9WR026SM	10	150	700	200	1000	2000 G	200 N
9WR027SM	15	150	1000	100	1000	500	200 N
9WR028SM	10	200	300	200	1500	2000	200 N
9WR029SM	20	300	200	300	2000	2000 G	200 N
9WR032SM	10 B	100	700	200	700	1000	1000
9WR033SM	10 B	150	500	500	500	1500	500
9WR034SM	10 B	500	200	500	1500	2000 G	200 L
9WR035SM	10 B	150	200	300	1500	2000 G	200
9WR037SM	10 B	200	200	700	700	700	200 N
9WR038SM	10 B	200	300	500	700	1500	200 N
9WR039SM	10 B	200	300	500	500	1500	1000
9WR040SM	10 B	150	300	300	700	1500	200 L
9WR041SM	10 B	70	500	300	500	1500	200 N
9WR042SM	10 B	100	500	200	500 L	2000	200 N
9WR043SM	10 B	100	500	300	500 L	1500	200 N
9WR044SM	10 B	100	500	200	500	2000	200 L
9WR045SM	10 B	20 N	500	70	500 N	700	200 N
9WR046SM	10 B	150	300	200	1000	1000	200 N
9WR047SM	10 B	200	700	500	700	2000	200 L
9WR048SM	15	200	1000	200	1500	2000	200 L
9WR049SM	15	150	700	300	1000	2000	200 N
9WR050SM	15	150	700	500	700	1000	200
9WR052SM	15	100	500	200	700	500	500
9WR053SM	20	100	700	300	500	700	200 N
9WR054SM	20	100	500	500	700	700	500
9WR229SM	10 H	200	200	200	1000	2000 G	200 N
9WR249SM	10	200	300	300	1500	2000	200 N
9WR254SM	10	100	500	150	1000	2000	200 N
9WR256SM	10	200	700	200	1500	500	200 N
9WR260SM	10 H	200	300	150	1000	700	200 N
9WR261SM	10 H	200	500	200	700	500	200 N
9WR262SM	10 H	200	500	200	1500	2000	200 N
9WR269SM	10 H	150	150	300	1500	2000 G	200 N



Table 4.--Statistical summary for magnetic heavy-mineral-concentrate fraction

TITLE  
Blue Magnetic Fraction

THE FREQUENCY DISTRIBUTIONS AND HISTOGRAMS ON THE FOLLOWING PAGES ARE ON LOGARITHMIC SCALES, AND EMPLOY THE SAME CLASS INTERVALS AS USED IN REPORTING 6-STEP SEMIQUANTITATIVE SPECTROGRAPHIC ANALYSES. IMPORTANT NOTE-- THE STATISTICS GIVEN BELOW THE HISTOGRAMS ARE DERIVED ONLY FROM DATA VALUES WITHIN THE RANGES OF ANALYTICAL DETERMINATION, AND ARE, THEREFORE, BIASED IF DATA VALUES QUALIFIED WITH N, L, G, T, OR H CODES ARE PRESENT. SEE LATER SECTION OF OUTPUT FOR STATISTICAL ESTIMATES THAT ARE UNBIASED IN THIS REGARD. THE GEOMETRIC MEAN IS AN ESTIMATE OF "CENTRAL TENDENCY," OR OF A CHARACTERISTIC VALUE, OF A FREQUENCY DISTRIBUTION THAT IS APPROXIMATELY SYMMETRICAL ON A LOG SCALE, AND IS THEREFORE USEFUL FOR CHARACTERIZING MANY GEOCHEMICAL DISTRIBUTIONS. THE GEOMETRIC MEAN IS NOT AN ESTIMATE OF GEOCHEMICAL ABUNDANCE AND IS OF NO VALUE IN ESTIMATING RESERVES OR TOTAL AMOUNTS OF ELEMENTS PRESENT. SEE USGS PROFESSIONAL PAPER 574-B FOR FURTHER DISCUSSION. SEE USGS BULLETIN 1147E, PAGE 23, FOR EXPLANATION OF GEOMETRIC DEVIATION.

THE CUMULATIVE FREQUENCY PERCENTS GIVEN BELOW SHOULD BE PLOTTED AGAINST THE "LOWER" LIMITS TO GIVE THE LEPELTIER-  
CUMULATIVE CURVE.

TYPE

TITLE  
Blue Magnetic fraction

## FREQUENCY TABLE FOR COLUMN 3 ( sfc%)

LIMITS	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER - UPPER				
8.3E-02 - 1.2E-01	0	0	0.00	100.00
1.2E-01 - 1.8E-01	0	0	0.00	100.00
1.8E-01 - 2.6E-01	0	0	0.00	100.00
2.6E-01 - 3.8E-01	0	0	0.00	100.00
3.8E-01 - 5.6E-01	0	0	0.00	100.00
5.6E-01 - 8.3E-01	0	0	0.00	100.00
8.3E-01 - 1.2E+00	0	0	0.00	100.00
1.2E+00 - 1.8E+00	0	0	0.00	100.00
1.8E+00 - 2.6E+00	0	0	0.00	100.00
2.6E+00 - 3.8E+00	0	0	0.00	100.00
3.8E+00 - 5.6E+00	0	0	0.00	100.00
5.6E+00 - 8.3E+00	1	1	0.78	100.00
8.3E+00 - 1.2E+01	1	2	0.78	99.22
1.2E+01 - 1.8E+01	0	2	0.00	98.45
1.8E+01 - 2.6E+01	0	2	0.00	98.45
2.6E+01 - 3.8E+01	24	26	18.60	98.45
3.8E+01 - 5.6E+01	91	117	70.54	79.84

## HISTOGRAM FOR COLUMN 3 ( sfc%)

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

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	12	117
0.00	0.00	0	0	0.00	9.30	

MAXIMUM = 5.00000E+01  
MINIMUM = 7.00000E+00  
GEOMETRIC MEAN = 4.36707E+01  
GEOMETRIC DEVIATION = 1.35247E+00

TITLE  
Blue Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 4 ( smg%)			
LIMITS		FREQ	PERCENT
LOWER	UPPER	CUM	FREQ CUM
3.8E-02	5.6E-02	10	7.75
5.6E-02	8.3E-02	10	100.00
8.3E-02	1.2E-01	20	7.75
1.2E-01	1.8E-01	53	41.09
1.8E-01	2.6E-01	73	84.50
2.6E-01	3.8E-01	100	43.41
3.8E-01	5.6E-01	114	22.48
5.6E-01	8.3E-01	120	10.85
8.3E-01	1.2E+00	124	4.65
1.2E+00	1.8E+00	128	3.10
1.8E+00	2.6E+00	128	0.00
		129	0.78
			0.78

## HISTOGRAM FOR COLUMN 4 ( smg%)

```

5.0E-02 XXXXXXXX
7.0E-02 XXXXXXXX
1.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.5E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2.0E-01 XXXXXXXXXXXXXXX
3.0E-01 XXXXX
5.0E-01 XXX
7.0E-01 XXX
1.0E+00
1.5E+00
2.0E+00 X

```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	129
0.00	0.00			0.00	0.00	

MAXIMUM = 2.00000E+00  
 MINIMUM = 5.00000E-02  
 GEOMETRIC MEAN = 1.30118E-01  
 GEOMETRIC DEVIATION = 1.86853E+00

TITLE  
Blue Magnetic Fraction

## FREQUENCY TABLE FOR COLUMN 5 ( scaz)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E-02 - 1.2E-01	22	22	17.05	98.45
1.2E-01 - 1.8E-01	30	52	23.26	81.40
1.8E-01 - 2.6E-01	50	102	38.76	58.14
2.6E-01 - 3.8E-01	18	120	13.95	19.38
3.8E-01 - 5.6E-01	3	123	2.33	5.43
5.6E-01 - 8.3E-01	2	125	1.55	3.10
8.3E-01 - 1.2E+00	0	125	0.00	1.55
1.2E+00 - 1.8E+00	1	126	0.78	1.55
1.8E+00 - 2.6E+00	1	127	0.78	0.78

## HISTOGRAM FOR COLUMN 5 ( scaz)

```

1.0E-01 XXXXXXXXXXXXXXXXXXXX
1.5E-01 XXXXXXXXXXXXXXXXXXXX
2.0E-01 XXXXXXXXXXXXXXXXXXXX
3.0E-01 XXXXXXXXXXXXXXXXXXXX
5.0E-01 XXXXXXXXXXXXXXXXX
7.0E-01 XX
1.0E+00
1.5E+00 X
2.0E+00 X

```

ANALYTICAL  
VALUES  
127

N	L	H	B	T	G
0	2	0	0	0	0
0.00	1.55			0.00	0.00

MAXIMUM = 2.00000E+00  
MINIMUM = 1.00000E-01  
GEOMETRIC MEAN = 1.89261E-01  
GEOMETRIC DEVIATION = 1.63749E+00

TITLE  
Blue Magnetic Fraction

## FREQUENCY TABLE FOR COLUMN 6 ( stix)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT CUM
LOWER	UPPER				
3.8E-03	5.6E-03	0	0	0.00	100.00
5.6E-03	8.3E-03	0	0	0.00	100.00
8.3E-03	1.2E-02	0	0	0.00	100.00
1.2E-02	1.8E-02	0	0	0.00	100.00
1.8E-02	2.6E-02	0	0	0.00	100.00
2.6E-02	3.8E-02	0	0	0.00	100.00
3.8E-02	5.6E-02	0	0	0.00	100.00
5.6E-02	8.3E-02	0	0	0.00	100.00
8.3E-02	1.2E-01	0	0	0.00	100.00
1.2E-01	1.8E-01	0	0	0.00	100.00
1.8E-01	2.6E-01	0	0	0.00	100.00
2.6E-01	3.8E-01	1	1	0.78	100.00
3.8E-01	5.6E-01	0	1	0.00	99.22
5.6E-01	8.3E-01	0	1	0.00	99.22
8.3E-01	1.2E+00	2	3	1.55	99.22
1.2E+00	1.8E+00	3	6	2.33	97.67
1.8E+00	2.6E+00	17	23	13.18	95.35

## HISTOGRAM FOR COLUMN 6 ( stix)

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

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	106	23
0.00	0.00	0	0	0.00	82.17	

MAXIMUM = 2.00000E+00  
MINIMUM = 3.00000E-01  
GEOMETRIC MEAN = 1.67007E+00  
GEOMETRIC DEVIATION = 1.53668E+00

## TITLE

Blue Magnetic Fraction

## FREQUENCY TABLE FOR COLUMN 7 ( smn)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E+01	2.6E+01	0	0	0.00	100.00
2.6E+01	3.8E+01	0	0	0.00	100.00
3.8E+01	5.6E+01	0	0	0.00	100.00
5.6E+01	8.3E+01	0	0	0.00	100.00
8.3E+01	1.2E+02	0	0	0.00	100.00
1.2E+02	1.8E+02	0	0	0.00	100.00
1.8E+02	2.6E+02	0	0	0.00	100.00
2.6E+02	3.8E+02	0	0	0.00	100.00
3.8E+02	5.6E+02	3	3	2.33	100.00
5.6E+02	8.3E+02	4	7	3.10	97.67
8.3E+02	1.2E+03	9	16	6.98	94.57
1.2E+03	1.8E+03	12	28	9.30	87.60
1.8E+03	2.6E+03	46	74	35.66	78.29
2.6E+03	3.8E+03	21	95	16.28	42.64
3.8E+03	5.6E+03	14	109	10.85	26.36
5.6E+03	8.3E+03	8	117	6.20	15.50
8.3E+03	1.2E+04	7	124	5.43	9.30

## HISTOGRAM FOR COLUMN 7 ( smn)

```

5.0E+02 XX
7.0E+02 XXX
1.0E+03 XXXXXXXX
1.5E+03 XXXXXXXX
2.0E+03 XXXXXXXX
3.0E+03 XXXXXXXX
5.0E+03 XXXXXXXX
7.0E+03 XXXXXXXX
1.0E+04 XXXXX

```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	5	124
0.00	0.00			0.00		3.88

MAXIMUM = 1.00000E+04  
 MINIMUM = 5.00000E+02  
 GEOMETRIC MEAN = 2.43852E+03  
 GEOMETRIC DEVIATION = 1.96961E+00

**TITLE**

**sb a)**

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
3.8E+01	5.6E+01	13	13	10.08	27.91
5.6E+01	8.3E+01	5	18	3.88	17.83
8.3E+01	1.2E+02	3	21	2.33	13.95
1.2E+02	1.8E+02	6	27	4.65	11.63
1.8E+02	2.6E+02	4	31	3.10	6.98
2.6E+02	3.8E+02	1	32	0.78	3.88
3.8E+02	5.6E+02	1	33	0.78	3.10
5.6E+02	8.3E+02	0	33	0.00	2.33
8.3E+02	1.2E+03	0	33	0.00	2.33
1.2E+03	1.8E+03	1	34	0.78	2.33
1.8E+03	2.6E+03	2	36	1.55	1.55

**Suba)**

```

5.OE+01 XXXXXXXXX
7.OE+01 XXXX
1.OE+02 XX
1.5E+02 XXXXX
2.OE+02 XXX
3.OE+02 X
5.OE+02 X
7.OE+02
1.OE+03
1.5E+03 X
2.OE+03 XX

```

ANALYTICAL		VALUES	
N	L	H	B
93	0	0	0
72.09	0.00	0.00	0.00

```

MAXIMUM = 2.0000E+03
MINIMUM = 5.0000E+01
GEOMETRIC MEAN = 1.17542E+02
GEOMETRIC DEVIATION = 2.83207E+00

```

TITLE  
Blue Magnetic Fraction

## FREQUENCY TABLE FOR COLUMN 13 ( sbc)

LIMITS		FREQ	CUM	PERCENT FREQ	PERCENT CUM
LOWER	UPPER				
1.8E+00	2.6E+00	18	18	13.95	79.07
2.6E+00	3.8E+00	11	29	8.53	65.12
3.8E+00	5.6E+00	21	50	16.28	56.59
5.6E+00	8.3E+00	21	71	16.28	40.31
8.3E+00	1.2E+01	20	91	15.50	24.03
1.2E+01	1.8E+01	7	98	5.43	8.53
1.8E+01	2.6E+01	3	101	2.33	3.10
2.6E+01	3.8E+01	1	102	0.78	0.78

## HISTOGRAM FOR COLUMN 13 ( sbc)

```

2.0E+00 XXXXXXXXXXXXXXXX
3.0E+00 XXXXXXXXXXXXXXXX
5.0E+00 XXXXXXXXXXXXXXXX
7.0E+00 XXXXXXXXXXXXXXXX
1.0E+01 XXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXX
2.0E+01 XX
3.0E+01 X

```

N	L	H	B	T	G	ANALYTICAL VALUES
26	1	0	0	0	0	102
20.16	0.78			0.00	0.00	

MAXIMUM = 3.00000E+01  
 MINIMUM = 2.00000E+00  
 GEOMETRIC MEAN = 5.64952E+00  
 GEOMETRIC DEVIATION = 1.96194E+00



TITLE  
Blue Magnetic Fraction

FREQUENCY TABLE FOR COLUMN 16 ( sco)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER - UPPER					
8.3E+00 - 1.2E+01	4	4	4	3.10	97.67
1.2E+01 - 1.8E+01	15	19	19	11.63	94.57
1.8E+01 - 2.6E+01	50	69	69	38.76	82.95
2.6E+01 - 3.8E+01	27	96	96	20.93	44.19
3.8E+01 - 5.6E+01	18	114	114	13.95	23.26
5.6E+01 - 8.3E+01	6	120	120	4.65	9.30
8.3E+01 - 1.2E+02	3	123	123	2.33	4.65
1.2E+02 - 1.8E+02	1	124	124	0.78	2.33
1.8E+02 - 2.6E+02	2	126	126	1.55	1.55

HISTOGRAM FOR COLUMN 16 ( sco)

```

1.0E+01 xxx
1.5E+01 xxxxxxxxxxxxxx
2.0E+01 xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
3.0E+01 xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
5.0E+01 xxxxxxxxxxxxxxxxxxxxxx
7.0E+01 xxxxx
1.0E+02 xx
1.5E+02 x
2.0E+02 xx

```

N	L	H	B	T	G	ANALYTICAL VALUES
3	0	0	0	0	0	126
2.33	0.00			0.00	0.00	

MAXIMUM = 2.00000E+02  
 MINIMUM = 1.00000E+01  
 GEOMETRIC MEAN = 2.73244E+01  
 GEOMETRIC DEVIATION = 1.78907E+00

TITLE  
Blue Magnetic Fraction

## FREQUENCY TABLE FOR COLUMN 17 ( scr)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT CUM
LOWER	UPPER				
1.8E+01	2.6E+01	0	0	0.00	100.00
2.6E+01	3.8E+01	0	0	0.00	100.00
3.8E+01	5.6E+01	2	2	1.55	100.00
5.6E+01	8.3E+01	6	8	4.65	98.45
8.3E+01	1.2E+02	11	19	8.53	93.80
1.2E+02	1.8E+02	17	36	13.18	85.27
1.8E+02	2.6E+02	27	63	20.93	72.09
2.6E+02	3.8E+02	25	88	19.38	51.16
3.8E+02	5.6E+02	27	115	20.93	31.78
5.6E+02	8.3E+02	7	122	5.43	10.85
8.3E+02	1.2E+03	2	124	1.55	5.43
1.2E+03	1.8E+03	0	124	0.00	3.88
1.8E+03	2.6E+03	0	124	0.00	3.88
2.6E+03	3.8E+03	2	126	1.55	3.88
3.8E+03	5.6E+03	1	127	0.78	2.33
5.6E+03	8.3E+03	1	128	0.78	1.55
8.3E+03	1.2E+04	1	129	0.78	0.78

## HISTOGRAM FOR COLUMN 17 ( scr)

```

5.0E+01 XX
7.0E+01 XXXXX
1.0E+02 XXXXXXXXXX
1.5E+02 XXXXXXXXXX
2.0E+02 XXXXXXXXXX
3.0E+02 XXXXXXXXXX
5.0E+02 XXXXXXXXXX
7.0E+02 XXXXX
1.0E+03 XX
1.5E+03
2.0E+03
3.0E+03 XX
5.0E+03 X
7.0E+03 X
1.0E+04 X

```

N	L	H	B	T	G	ANALYTICAL VALUES
0.00	0.00	0	0	0.00	0	129
						0.00

MAXIMUM = 1.00000E+04  
 MINIMUM = 5.00000E+01  
 GEOMETRIC MEAN = 2.75640E+02  
 GEOMETRIC DEVIATION = 2.41806E+00

## TITLE

Blue Magnetic Fraction

## FREQUENCY TABLE FOR COLUMN 18 ( SCU)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT CUM
LOWER	UPPER				
8.3E+00	1.2E+01	35	35	27.13	83.72
1.2E+01	1.8E+01	23	58	17.83	56.59
1.8E+01	2.6E+01	22	80	17.05	38.76
2.6E+01	3.8E+01	11	91	8.53	21.71
3.8E+01	5.6E+01	9	100	6.98	13.18
5.6E+01	8.3E+01	4	104	3.10	6.20
8.3E+01	1.7E+02	3	107	2.33	3.10
1.2E+02	1.8E+02	0	107	0.00	0.78
1.8E+02	2.6E+02	0	107	0.00	0.78
2.6E+02	3.8E+02	1	108	0.78	0.78

## HISTOGRAM FOR COLUMN 18 ( SCU)

```

1.0E+01 XXXXXXXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXXXXXXXXXXXXXXXXX
2.0E+01 XXXXXXXXXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXXXXXXXX
5.0E+01 XXXXXXXX
7.0E+01 XXX
1.0E+02 XX
1.5E+02
2.0E+02
3.0E+02 X

```

N	L	H	B	T	G	ANALYTICAL VALUES
0	21	0	0	0	0	108
0.00	16.28			0.00	0.00	

MAXIMUM = 3.00000E+02  
 MINIMUM = 1.00000E+01  
 GEOMETRIC MEAN = 1.89854E+01  
 GEOMETRIC DEVIATION = 1.96976E+00

TITLE  
Blue Magnetic Fraction

## FREQUENCY TABLE FOR COLUMN 19 ( sla)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
3.8E+01	5.6E+01	1	1	0.78	96.90
5.6E+01	8.3E+01	1	2	0.78	96.12
8.3E+01	1.2E+02	11	13	8.53	95.35
1.2E+02	1.8E+02	4	17	3.10	86.82
1.8E+02	2.6E+02	12	29	9.30	83.72
2.6E+02	3.8E+02	13	42	10.08	74.42
3.8E+02	5.6E+02	21	63	16.28	64.34
5.6E+02	8.3E+02	14	77	10.85	48.06
8.3E+02	1.2E+03	16	93	12.40	37.21
1.2E+03	1.8E+03	12	105	9.30	24.81
1.8E+03	2.6E+03	14	119	10.85	15.50

## HISTOGRAM FOR COLUMN 19 ( sla)

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

N	L	H	B	T	G	ANALYTICAL VALUES
4	0	0	0	0	6	119
3.10	0.00			0.00	4.65	

MAXIMUM = 2.00000E+03  
 MINIMUM = 5.00000E+01  
 GEOMETRIC MEAN = 5.16952E+02  
 GEOMETRIC DEVIATION = 2.59678E+00

TITLE  
Blue Magnetic Fraction

## FREQUENCY TABLE FOR COLUMN 20 ( smq)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E+00	1.2E+01	15	15	11.63	72.87
1.2E+01	1.8E+01	16	31	12.40	61.24
1.8E+01	2.6E+01	20	51	15.50	48.84
2.6E+01	3.8E+01	11	62	8.53	33.33
3.8E+01	5.6E+01	7	69	5.43	24.81
5.6E+01	8.3E+01	13	82	10.08	19.38
8.3E+01	1.2E+02	12	94	9.30	9.30

## HISTOGRAM FOR COLUMN 20 ( smq)

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

ANALYTICAL VALUES		T	G
N	L		
35	0	0	0
27.13	0.00	0.00	0.00

MAXIMUM = 1.00000E+02  
 MINIMUM = 1.00000E+01  
 GEOMETRIC MEAN = 2.79538E+01  
 GEOMETRIC DEVIATION = 2.19024E+00

## TITLE

Blue Magnetic Fraction

## FREQUENCY TABLE FOR COLUMN 21 ( snb)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
3.8E+01	5.6E+01	5	5	3.88	97.67
5.6E+01	8.3E+01	11	16	8.53	93.80
8.3E+01	1.2E+02	23	39	17.83	85.27
1.2E+02	1.8E+02	30	69	23.26	67.44
1.8E+02	2.6E+02	30	99	23.26	44.19
2.6E+02	3.8E+02	11	110	8.53	20.93
3.8E+02	5.6E+02	10	120	7.75	12.40
5.6E+02	8.3E+02	3	123	2.33	4.65
8.3E+02	1.2E+03	3	126	2.33	2.33

## HISTOGRAM FOR COLUMN 21 ( snb)

```

5.0E+01 XXXX
7.0E+01 XXXXXXXX
1.0E+02 XXXXXXXXXXXXXXXX
1.5E+02 XXXXXXXXXXXXXXXX
2.0E+02 XXXXXXXXXXXXXXXX
3.0E+02 XXXXXXXX
5.0E+02 XXXXXXXX
7.0E+02 XX
1.0E+03 XX

```

ANALYTICAL  
VALUES

N	L	H	B	T	G
2	1	0	0	0	0
1.55	0.78			0.00	0.00

MAXIMUM = 1.00000E+03  
 MINIMUM = 5.00000E+01  
 GEOMETRIC MEAN = 1.69508E+02  
 GEOMETRIC DEVIATION = 1.93540E+00

TITLE  
Blue Magnetic Fraction

## FREQUENCY TABLE FOR COLUMN 22 ( sni)

LIMITS		FREQ	FREQ	PERCENT	PERCENT
LOWER	UPPER	CUM	FREQ	FREQ	CUM
8.3E+00	1.2E+01	10	7.75	7.75	70.54
1.2E+01	1.8E+01	18	13.95	13.95	62.79
1.8E+01	2.6E+01	25	19.38	19.38	48.84
2.6E+01	3.8E+01	14	10.85	10.85	29.46
3.8E+01	5.6E+01	10	7.75	7.75	18.60
5.6E+01	8.3E+01	5	3.88	3.88	10.85
8.3E+01	1.2E+02	4	3.10	3.10	6.98
1.2E+02	1.8E+02	1	0.78	0.78	3.88
1.8E+02	2.6E+02	0	0.00	0.00	3.10
2.6E+02	3.8E+02	2	1.55	1.55	1.55
3.8E+02	5.6E+02	1	0.78	0.78	0.78
5.6E+02	8.3E+02	0	0.00	0.00	0.78
8.3E+02	1.2E+03	1	0.78	0.78	0.78

## HISTOGRAM FOR COLUMN 22 ( sni)

```

1.0E+01 XXXXXXXX
1.5E+01 XXXXXXXX
2.0E+01 XXXXXXXX
3.0E+01 XXXXXXXX
5.0E+01 XXXXXXXX
7.0E+01 XXXX
1.0E+02 XXX
1.5E+02 X
2.0E+02
3.0E+02 XX
5.0E+02 X
7.0E+02
1.0E+03 X

```

N	L	H	B	T	G	ANALYTICAL VALUES
38	0	0	0	0	0	91
29.46	0.00			0.00	0.00	0.00

MAXIMUM = 1.00000E+03  
 MINIMUM = 1.00000E+01  
 GEOMETRIC MEAN = 2.78081E+01  
 GEOMETRIC DEVIATION = 2.41106E+00

TITLE  
Blue Magnetic Fraction

## FREQUENCY TABLE FOR COLUMN 23 ( spb)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E+01	2.6E+01	30	30	23.26	67.44
2.6E+01	3.8E+01	17	47	13.18	44.19
3.8E+01	5.6E+01	19	66	14.73	31.01
5.6E+01	8.3E+01	13	79	10.08	16.28
8.3E+01	1.2E+02	7	86	5.43	6.20
1.2E+02	1.8E+02	0	86	0.00	0.78
1.8E+02	2.6E+02	0	86	0.00	0.78
2.6E+02	3.8E+02	1	87	0.78	0.78

## HISTOGRAM FOR COLUMN 23 ( spb)

2.0E+01 XXXXXXXXXXXXXXXXXXXX  
3.0E+01 XXXXXXXXXXXXXXXX  
5.0E+01 XXXXXXXXXXXXXXXXXXXX  
7.0E+01 XXXXXXXXXXXXXXXX  
1.0E+02 XXXXX  
1.5E+02  
2.0E+02  
3.0E+02 X

N	L	H	B	T	G	ANALYTICAL VALUES
29	13	0	0	0	0	87
22.48	10.08			0.00	0.00	

MAXIMUM = 3.00000E+02  
MINIMUM = 2.00000E+01  
GEOMETRIC MEAN = 3.74455E+01  
GEOMETRIC DEVIATION = 1.81214E+00



TITLE  
Blue Magnetic Fraction

## FREQUENCY TABLE FOR COLUMN 25 ( ssc)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E+00	-	32	32	30.77	89.42
1.2E+01	-	25	57	24.04	58.65
1.8E+01	-	22	79	21.15	34.62
2.6E+01	-	7	86	6.73	13.46
3.8E+01	-	5	91	4.81	6.73
5.6E+01	-	2	93	1.92	1.92

## HISTOGRAM FOR COLUMN 25 ( ssc)

```

1.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
2.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXX
5.0E+01 XXXXX
7.0E+01 XX

```

N	L	H	B	T	G	ANALYTICAL VALUES
8	3	5	20	0	0	93
7.69	2.88			0.00	0.00	

MAXIMUM = 7.00000E+01  
 MINIMUM = 1.00000E+01  
 GEOMETRIC MEAN = 1.62261E+01  
 GEOMETRIC DEVIATION = 1.62824E+00

TITLE  
Blue Magnetic Fraction

## FREQUENCY TABLE FOR COLUMN 26 ( ssn)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E+01	2.6E+01	2	2	1.55	85.27
2.6E+01	3.8E+01	0	2	0.00	83.72
3.8E+01	5.6E+01	11	13	8.53	83.72
5.6E+01	8.3E+01	8	21	6.20	75.19
8.3E+01	1.2E+02	23	44	17.83	68.99
1.2E+02	1.8E+02	31	75	24.03	51.16
1.8E+02	2.6E+02	31	106	24.03	27.13
2.6E+02	3.8E+02	1	107	0.78	3.10
3.8E+02	5.6E+02	3	110	2.33	2.33

## HISTOGRAM FOR COLUMN 26 ( ssn)

2.0E+01 XX  
 3.0E+01  
 5.0E+01 XXXXXXXX  
 7.0E+01 XXXXX  
 1.0E+02 XXXXXXXXXXXXXXXX  
 1.5E+02 XXXXXXXXXXXXXXXXXXXX  
 2.0E+02 XXXXXXXXXXXXXXXXXXXX  
 3.0E+02 X  
 5.0E+02 XX

N	L	H	B	T	G	ANALYTICAL VALUES
19	0	0	0	0	0	110
14.73	0.00			0.00	0.00	

MAXIMUM = 5.00000E+02  
 MINIMUM = 2.00000E+01  
 GEOMETRIC MEAN = 1.26994E+02  
 GEOMETRIC DEVIATION = 1.75049E+00

TITLE  
Blue Magnetic Fraction

## FREQUENCY TABLE FOR COLUMN 28 ( sv)

LIMITS		FREQ	FREQ	PERCENT	PERCENT
LOWER	UPPER	CUM	CUM	FREQ	FREQ
1.8E+01	2.6E+01	0	0	0.00	100.00
2.6E+01	3.8E+01	0	0	0.00	100.00
3.8E+01	5.6E+01	0	0	0.00	100.00
5.6E+01	8.3E+01	0	0	0.00	100.00
8.3E+01	1.2E+02	0	0	0.00	100.00
1.2E+02	1.8E+02	8	8	6.20	100.00
1.8E+02	2.6E+02	25	33	19.38	93.80
2.6E+02	3.8E+02	16	49	12.40	74.42
3.8E+02	5.6E+02	37	86	28.68	62.02
5.6E+02	8.3E+02	25	111	19.38	33.33
8.3E+02	1.2E+03	14	125	10.85	13.95
1.2E+03	1.8E+03	3	128	2.33	3.10
1.8E+03	2.6E+03	1	129	0.78	0.78

## HISTOGRAM FOR COLUMN 28 ( sv)

```

1.5E+02 XXXXX
2.0E+02 XXXXXXXXXXXXXXXX
3.0E+02 XXXXXXXXXXXXXXXX
5.0E+02 XXXXXXXXXXXXXXXX
7.0E+02 XXXXXXXXXXXXXXXX
1.0E+03 XXXXXXXXXXXXXXXX
1.5E+03 XX
2.0E+03 X

```

ANALYTICAL  
VALUES  
129

N	L	H	B	T	G
0	0	0	0	0	0
0.00	0.00			0.00	0.00

MAXIMUM = 2.00000E+03  
 MINIMUM = 1.50000E+02  
 GEOMETRIC MEAN = 4.35170E+02  
 GEOMETRIC DEVIATION = 1.86092E+00

TITLE  
Blue Magnetic Fraction

## FREQUENCY TABLE FOR COLUMN 30 ( SY)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E+01	2.6E+01	1	1	0.78	100.00
2.6E+01	3.8E+01	5	6	3.88	99.22
3.8E+01	5.6E+01	5	11	3.88	95.35
5.6E+01	8.3E+01	8	19	6.20	91.47
8.3E+01	1.2E+02	10	29	7.75	85.27
1.2E+02	1.8E+02	12	41	9.30	77.52
1.8E+02	2.6E+02	33	74	25.58	68.22
2.6E+02	3.8E+02	30	104	23.26	42.64
3.8E+02	5.6E+02	22	126	17.05	19.38
5.6E+02	8.3E+02	1	127	0.78	2.33
8.3E+02	1.2E+03	2	129	1.55	1.55

## HISTOGRAM FOR COLUMN 30 ( SY)

2.0E+01 X  
 3.0E+01 XXXX  
 5.0E+01 XXXX  
 7.0E+01 XXXXX  
 1.0E+02 XXXXXXXX  
 1.5E+02 XXXXXXXX  
 2.0E+02 XXXXXXXXXXXXXXXXXXXXXXXX  
 3.0E+02 XXXXXXXXXXXXXXXXXXXXXXXX  
 5.0E+02 XXXXXXXXXXXXXXXXXXXXXXXX  
 7.0E+02 X  
 1.0E+03 XX

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	129
0.00	0.00			0.00	0.00	

MAXIMUM = 1.00000E+03  
 MINIMUM = 2.00000E+01  
 GEOMETRIC MEAN = 1.98905E+02  
 GEOMETRIC DEVIATION = 2.17923E+00

TITLE  
Blue Magnetic Fraction

## FREQUENCY TABLE FOR COLUMN 31 ( szn)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
3.8E+02	5.6E+02	26	26	20.16	72.87
5.6E+02	8.3E+02	26	52	20.16	52.71
8.3E+02	1.2E+03	24	76	18.60	32.56
1.2E+03	1.8E+03	17	93	13.18	13.95
1.8E+03	2.6E+03	1	94	0.78	0.78

## HISTOGRAM FOR COLUMN 31 ( szn)

5.0E+02 XXXXXXXXXXXXXXXXXXXXXXXX  
 7.0E+02 XXXXXXXXXXXXXXXXXXXXXXXX  
 1.0E+03 XXXXXXXXXXXXXXXXXXXXXXXX  
 1.5E+03 XXXXXXXXXXXXXXXXXXXXXXXX  
 2.0E+03 X

ANALYTICAL  
VALUES

		T	G
81	25	0	0
1	19.38	0.00	0.00

MAXIMUM = 2.00000E+03  
 MINIMUM = 5.00000E+02  
 GEOMETRIC MEAN = 8.10849E+02  
 GEOMETRIC DEVIATION = 1.49306E+00

TITLE  
Blue Magnetic Fraction

## FREQUENCY TABLE FOR COLUMN 32 ( szr )

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E+01	2.6E+01	0	0	0.00	100.00
2.6E+01	3.8E+01	0	0	0.00	100.00
3.8E+01	5.6E+01	0	0	0.00	100.00
5.6E+01	8.3E+01	0	0	0.00	100.00
8.3E+01	1.2E+02	0	0	0.00	100.00
1.2E+02	1.8E+02	2	2	1.55	100.00
1.8E+02	2.6E+02	6	8	4.65	98.45
2.6E+02	3.8E+02	2	10	1.55	93.80
3.8E+02	5.6E+02	9	19	6.98	92.25
5.6E+02	8.3E+02	26	45	20.16	85.27
8.3E+02	1.2E+03	17	62	13.18	65.12
1.2E+03	1.8E+03	18	80	13.95	51.94
1.8E+03	2.6E+03	18	98	13.95	37.98

## HISTOGRAM FOR COLUMN 32 ( szr )

1.5E+02 XX  
 2.0E+02 XXXXX  
 3.0E+02 XX  
 5.0E+02 XXXXXXXX  
 7.0E+02 XXXXXXXXXXXXXXXXXXXX  
 1.0E+03 XXXXXXXXXXXXXXXXXXXX  
 1.5E+03 XXXXXXXXXXXXXXXXXXXX  
 2.0E+03 XXXXXXXXXXXXXXXXXXXX

ANALYTICAL  
VALUES  
98

N	L	H	B	T	G
0	0	0	0	0	31
0.0Q	0.00			0.00	24.03

MAXIMUM = 2.00000E+03  
 MINIMUM = 1.50000E+02  
 GEOMETRIC MEAN = 8.88409E+02  
 GEOMETRIC DEVIATION = 1.95367E+00

## TITLE

Blue Magnetic Fraction

## FREQUENCY TABLE FOR COLUMN 33 (sth)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E+02	2.6E+02	15	15	11.63	29.46
2.6E+02	3.8E+02	5	20	3.88	17.83
3.8E+02	5.0E+02	11	31	8.53	13.95
5.0E+02	8.3E+02	3	34	2.33	5.43
8.3E+02	1.2E+03	3	37	2.33	3.10
1.2E+03	1.8E+03	1	38	0.78	0.78

## HISTOGRAM FOR COLUMN 33 (sth)

```

2.0E+02 XXXXXXXXXXXXX
3.0E+02 XXXX
5.0E+02 XXXXXXXXXXXXX
7.0E+02 XX
1.0E+03 XX
1.5E+03 X

```

83

N	L	H	B	T	G	ANALYTICAL VALUES
79	12	0	0	0	0	38
61.24	9.30			0.00		0.00

MAXIMUM = 1.50000E+03  
 MINIMUM = 2.00000E+02  
 GEOMETRIC MEAN = 3.63543E+02  
 GEOMETRIC DEVIATION = 1.81005E+00

## TITLE

Blue Magnetic Fraction

IN THE COMPUTATIONS PERFORMED TO PRODUCE THE FOLLOWING TABLE OF GEOMETRIC MEANS AND DEVIATIONS, ALL ELEMENTS ARE IGNORED WHERE ONE OR MORE OF THE UNQUALIFIED DATA VALUES IS LESS THAN THE ANALYTICAL LIMIT OF DETECTION SPECIFIED ON INPUT OR WHERE ANY DATA VALUES ARE QUALIFIED WITH THE G (GREATER THAN) CODE. DATA VALUES QUALIFIED WITH B OR H ARE NOT USED IN THE COMPUTATIONS. WHERE NONE OF THE DATA VALUES FOR AN ELEMENT ARE QUALIFIED THE MEAN AND DEVIATION SHOULD BE THE SAME AS THOSE GIVEN IN THE PRECEDING SECTION. WHERE DATA ARE QUALIFIED WITH THE CODES N, L, OR T, THE ESTIMATES OF GEOMETRIC MEAN AND DEVIATION ARE BASED ON A METHOD BY A. J. COHEN FOR TREATING CENSORED DISTRIBUTIONS. THE APPLICATION OF THIS METHOD TO GEOCHEMICAL PROBLEMS IS DESCRIBED IN USGS PROFESSIONAL PAPER 574-B. THE ESTIMATES ARE UNBIASED IN A STRICT SENSE ONLY WHERE THE DATA ARE DERIVED FROM A LOGNORMAL PARENT POPULATION, BUT EXPERIMENTS HAVE SHOWN THAT LARGE DEPARTURES FROM THIS REQUIREMENT MAY NOT GREATLY INVALIDATE THE RESULTS ACCEPTANCE AND USE OF THE ESTIMATES, HOWEVER, IS THE RESPONSIBILITY OF THE INDIVIDUAL.

ELEMENT	N	L	H	B	T	G	ANALYTICAL VALUES
sfex	0	0	0	0	0	12	117
smg%	0	0	0	0	0	0	129
scax	0	2	0	0	0	0	127
stix	0	0	0	0	0	106	23
smn	0	0	0	0	0	5	124
sba	93	0	0	0	0	0	36
sbe	26	1	0	0	0	0	102
sco	3	0	0	0	0	0	126
scr	0	0	0	0	0	0	129
scu	0	21	0	0	0	0	108
sla	4	0	0	0	0	6	119
sno	35	0	0	0	0	0	94
sno	2	1	0	0	0	0	126
sni	38	0	0	0	0	0	91
spb	29	13	0	0	0	0	87
ssc	8	3	5	20	0	0	93
ssn	19	0	0	0	0	0	110
sv	0	0	0	0	0	0	129
sy	0	0	0	0	0	0	129
szn	25	10	0	0	0	0	94
szr	0	0	0	0	0	31	98
sth	79	12	0	0	0	0	38



## TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
sfe%	*****	*****	12 GREATER THAN VALUES. NO COMPUTATIONS.
smg%	0.130118	1.87	129 SAMPLES AND 129 ANALYTICAL VALUES.
scg%	0.186221	1.66	2 NOT DETECTED, LESS THAN, OR TRACE VALUES.
stix	*****	*****	106 GREATER THAN VALUES. NO COMPUTATIONS.
smn	*****	*****	5 GREATER THAN VALUES. NO COMPUTATIONS.
sba	12.275215	6.70	93 NOT DETECTED, LESS THAN, OR TRACE VALUES.
sbe	3.985669	2.52	27 NOT DETECTED, LESS THAN, OR TRACE VALUES.
sco	26.428098	1.85	3 NOT DETECTED, LESS THAN, OR TRACE VALUES.
scr	275.639854	2.42	129 SAMPLES AND 129 ANALYTICAL VALUES.
scu	15.394472	2.22	21 NOT DETECTED, LESS THAN, OR TRACE VALUES.
sla	*****	*****	6 GREATER THAN VALUES. NO COMPUTATIONS.
smo	16.711676	3.05	35 NOT DETECTED, LESS THAN, OR TRACE VALUES.
snb	162.766418	2.02	3 NOT DETECTED, LESS THAN, OR TRACE VALUES.
snl	15.466850	3.39	38 NOT DETECTED, LESS THAN, OR TRACE VALUES.
spb	24.593327	2.26	42 NOT DETECTED, LESS THAN, OR TRACE VALUES.
ssc	14.655286	1.74	11 NOT DETECTED, LESS THAN, OR TRACE VALUES.
ssn	89.312026	2.73	19 NOT DETECTED, LESS THAN, OR TRACE VALUES.
sv	435.170380	1.86	129 SAMPLES AND 129 ANALYTICAL VALUES.
sy	198.905508	2.18	129 SAMPLES AND 129 ANALYTICAL VALUES.
szn	599.266891	1.86	35 NOT DETECTED, LESS THAN, OR TRACE VALUES.
szr	*****	*****	31 GREATER THAN VALUES. NO COMPUTATIONS.
sth	95.670558	3.14	91 NOT DETECTED, LESS THAN, OR TRACE VALUES.

127 REPORTED VALUES.

36 REPORTED VALUES.

102 REPORTED VALUES.

126 REPORTED VALUES.

108 REPORTED VALUES.

94 REPORTED VALUES.

126 REPORTED VALUES.

91 REPORTED VALUES.

87 REPORTED VALUES.

93 REPORTED VALUES.

110 REPORTED VALUES.

94 REPORTED VALUES.

38 REPORTED VALUES.

Table 5.--Analytical data for nonmagnetic heavy-mineral-concentrate fraction

## BLUE JOINT NONMAG FRACTION

SAMPLE	Lat.	Long.	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn(ppm)	Ag(ppm)	B(ppm)	Ba(ppm)
98B0013N	45 43 16N	114 29 35W	20.0	0.20	0.1	2.0	1000	1.0N	20 L	300
98B0023N	45 43 16N	114 29 35W	10.0	0.70	0.2	1.0	500	1.0N	20 L	700
98B0033N	45 43 52N	114 29 02W	10.0	0.70	0.2	1.0	500	1.0N	20 L	1000
98B0043N	45 43 52N	114 28 44W	20.0	0.50	0.2	2.06	2000	1.0N	20	700
98B0083N	45 31 08N	114 26 42W	10.0	0.15	0.7	2.06	5000	1.0N	20 L	150
98B0093N	45 31 08N	114 26 35W	20.0	0.20	0.5	2.06	2000	1.0N	20 L	100
98B0103N	45 31 08N	114 26 28W	30.0	0.15	0.5	2.06	3000	1.0N	20 L	50
98B0113N	45 30 14N	114 27 50W	15.0	0.50	1.0	2.06	7000	1.0N	20 L	200
98B0123N	45 30 14N	114 28 05W	10.0	0.70	0.7	2.06	5000	1.0N	20 L	300
98B0133N	45 29 42N	114 29 53W	20.0	0.20	1.0	2.06	10000	1.0N	20 L	50 N
98B0153N	45 29 17N	114 30 40W	10.0	0.50	2.0	2.06	3000	1.0N	20 L	200
98B0163N	45 29 17N	114 32 06W	10.0	0.20	1.0	2.06	3000	1.0N	20 L	50 N
98B0193N	45 41 17N	114 27 11W	7.0	0.20	0.5	1.0	500	1.0N	20 L	500
98B0203N	45 41 24N	114 27 04W	15.0	0.50	0.7	2.06	2000	1.0N	20 L	150
98B0263N	45 36 25N	114 22 44W	20.0	1.50	0.2	0.7	2000	1.0N	30	50 N
98B0273N	45 36 25N	114 22 16W	30.0	2.00	0.2	1.0	5000	1.0N	20 L	50 N
98B0283N	45 36 29N	114 22 05W	20.0	0.70	0.2	2.0	7000	1.0N	20 L	100
98B0353N	45 31 08N	114 27 32W	20.0	0.20	1.0	2.06	7000	1.0N	20	70
98B0363N	45 31 01N	114 27 18W	20.0	0.30	0.7	2.06	7000	1.0N	20 L	70
98B0373N	45 29 17N	114 32 31W	10.0	0.50	2.0	2.06	2000	1.0N	20 L	150
98B0383N	45 29 13N	114 32 31W	15.0	0.30	1.5	2.06	5000	1.0N	20 L	70
98B0403N	45 30 47N	114 28 37W	20.0	0.15	0.7	2.06	10000	1.0N	20 L	50
98B0743N	45 33 47N	114 19 12W	20.0	2.00	1.0	2.06	5000	1.0N	20	200
98C0043N	45 44 49N	114 24 47W	5.0	0.50	0.5	1.0	500	1.0N	20	500
98C0053N	45 44 49N	114 25 01W	5.0	0.10	1.0	1.0	500	1.0N	20 L	200
98C0073N	45 44 49N	114 24 18W	7.0	0.70	1.0	1.0	1000	1.0N	20 L	300
98C0073N	45 44 49N	114 24 18W	50.0	0.10	0.2	2.0	2000	1.0N	20 N	50 N
98C0103N	45 46 48N	114 27 18W	10.0	1.00	1.0	2.0	2000	1.0N	20 N	500
98C0113N	45 45 54N	114 26 24W	30.0	0.50	0.5	2.06	2000	1.0N	20	100
98C0123N	45 45 43N	114 26 13W	15.0	0.70	0.7	2.06	3000	1.0N	20 N	300
98C0013N	45 42 00N	114 23 42W	20.0	0.50	0.5	2.06	7000	1.0N	20 L	100
98C0053N	45 44 10N	114 26 38W	20.0	0.20	0.5	2.06	2000	1.0N	20	300
98C0073N	45 44 53N	114 22 52W	10.0	0.10	0.3	2.06	2000	1.0N	20 L	200
98C0093N	45 42 07N	114 28 37W	5.0	0.20	0.5	2.0	1000	1.0N	100	700
98C0283N	45 44 56N	114 31 34W	20.0	0.50	0.5	2.06	1500	2.0	20 L	200
98C0303N	45 45 07N	114 30 22W	20.0	0.30	0.2	1.5	1500	7.0	20	500
98C0313N	45 45 14N	114 29 56W	20.0	0.15	0.2	2.0	1000	10.0	20	200
98C0453N	45 41 42N	114 24 00W	15.0	0.20	0.7	2.06	5000	1.0N	20 L	70
98C0463N	46 08 02N	114 01 37W	20.0	0.10	0.2	2.06	5000	1.0N	20 L	50
98C0013N	45 35 10N	114 21 00W	20.0	1.00	0.1	1.5	5000	1.0N	20	50
98C0023N	45 35 02N	114 21 22W	20.0	1.50	0.3	1.0	5000	1.0N	20 L	150
98C0053N	45 29 17N	114 32 56W	7.0	0.20	2.0	2.06	2000	1.0N	20 L	200
98C0063N	45 29 10N	114 32 56W	10.0	0.30	2.0	2.06	2000	1.0N	20 L	150
98C0073N	45 29 49N	114 32 56W	10.0	0.20	0.5	2.06	2000	1.0N	50	300
98C0083N	45 30 40N	114 33 14W	7.0	0.30	2.0	2.06	2000	1.0N	20 N	200

SAMPLE	Be(ppm)	Bi(ppm)	Co(ppm)	Cr(ppm)	Cu(ppm)	La(ppm)	Mo(ppm)	Nb(ppm)	Ni(ppm)	Pb(ppm)
98B001SN	7	20 N	20	200	20	700	10	150	10 N	50
98B002SN	3	500	50	3000	20	700	20	70	700	20 N
98B003SN	5	20 N	30	150	10 L	2000 G	10 N	50	30	20 N
98B004SN	5	20 N	20	150	15	2000 G	10	150	20	50
98B008SN	20	20 N	20	50	10 L	2000 G	10 N	300	10 N	70
98B009SN	7	20 N	30	300	10	2000 G	15	200	10 N	50
98B010SN	7	20 N	30	300	10 L	2000 G	100	200	10 N	200
98B011SN	7	20 N	20	70	10 L	2000 G	10 N	300	10 N	50
98B012SN	7	20 N	20	50	10 L	2000 G	10 N	200	10 N	30
98B013SN	5	20 N	20	70	10 L	2000 G	10 N	300	10 N	70
98B015SN	5	20 N	20	70	10 L	2000 G	10 N	200	10 N	50
98B016SN	30	20 N	20	70	10 L	2000 G	10 N	300	10 N	70
98B019SN	7	20 N	15	20	20	2000	10 N	70	10 N	50
98B020SN	5	20 N	10 N	100	10 L	2000 G	10 N	70	10 N	50
98B026SN	2 N	20 N	20	100	15	1500	10 N	100	15	50
98B027SN	2 N	20 N	50	150	10 L	1500	10	200	10	50
98B028SN	2 N	20 N	50	150	10 L	1000	10 N	200	10	70
98B035SN	50	20 N	30	100	10 L	2000 G	10	300	10 N	100
98B036SN	30	20 N	30	100	10 L	2000 G	20	300	10 N	70
98B037SN	5	20 N	15	150	10 L	2000 G	20	300	10 N	100
98B038SN	30	20 N	20	100	10 L	2000 G	15	300	10 N	70
98B040SN	30	20 N	20	50	10 L	2000 G	10 N	700	10 N	50
98B074SN	2	20 N	50	200	10	2000	10 N	100	10 N	20
98C004SN	20	20 N	10	30	10 L	700	10 N	500	10 N	100
98C005SN	30	20 N	10	20	10 L	2000	10 N	500	10 N	70
98C007SN	20	20 N	20	50	10	2000 G	10 N	200	10 N	70
98C007SN	7	20 N	15	200	10 L	2000	50	150	15	20
98C010SN	2 N	20 N	20	150	10 L	2000	10 N	50 L	10	20 N
98C011SN	3	20 N	50	200	50	2000	10 N	100	10 N	70
98C012SN	2 N	20 N	20	150	10 L	2000 G	10 N	100	10 N	20 L
98C001SN	7	20 N	10 N	50	10 L	1500	15	500	10 N	30
98C005SN	7	20 N	15	50	10 L	2000 G	10 N	100	10 N	70
98C007SN	7	20 N	10 N	150	10 L	2000	10 N	700	10 N	70
98C009SN	2	20 N	10	2000	10	2000 G	10 N	70	10 N	20
98C028SN	10	20 N	20	70	30	2000 G	10 N	150	10 N	100
98C030SN	7	20 N	20	70	50	700	10 N	100	10 N	100
98C031SN	15	20 N	20	50	70	2000 G	10	200	10 N	150
98C045SN	30	20 N	15	20	10	2000 G	10	500	10 N	50
98C046SN	5	20 N	15	50	10 L	2000 G	10	500	10 N	20 L
98C001SN	2 N	20 N	50	150	10	2000	10 N	100	15	50
98C002SN	2 N	20 N	50	70	15	1000	10 N	50	10 N	50
98C003SN	2 N	20 N	20	100	10 L	2000 G	10 N	200	10 N	30
98C006SN	7	20 N	20	100	10 L	2000 G	10 N	200	10 N	20
98C00										

BLUE JOINT NONMAG FRACTION-continued

SAMPLE	Sn(ppm)	Sr(ppm)	V(ppm)	W(ppm)	Y(ppm)	Zn(ppm)	Zr(ppm)	Th(ppm)
98B001SN	100	200 N	200	100 N	300	500 N	2000 G	500
98B002SN	30	200 N	100	100 N	150	500 N	2000 G	200 N
98B003SN	20 N	200 N	100	100 N	500	500 N	2000	200
98B004SN	50	200 N	150	100 N	200	500 N	2000 G	1000
98B008SN	200	200 N	100	100 N	1500	500 N	2000 G	5000 G
98B009SN	150	200 N	200	100 N	1000	500 N	2000 G	3000
98B010SN	150	200 N	300	100 N	1000	500 N	2000	2000
98B011SN	200	200 N	150	100 N	1000	500 N	2000 G	2000
98B012SN	200	200 N	100	100 N	700	500 N	2000	2000
98B013SN	200	200 N	100	100 N	1000	500 N	2000 G	5000
98B015SN	150	200 N	200	100 N	1000	500 N	2000 G	5000
98B016SN	150	200 N	150	100 N	1500	500 N	2000 G	5000
98B019SN	5000 G	200 N	70	100 N	150	500	1500	700
98B020SN	1500	200 N	200	100 N	1000	500 N	2000 G	700
98B026SN	20 N	200 N	100	100 N	700	500 N	2000	200 L
98B027SN	20 N	200 N	150	100 N	1500	500 N	1500	300
98B028SN	30	200 N	200	100 N	2000	500 N	1000	200
98B035SN	500	200 N	200	100 N	1500	500 N	2000 G	5000 G
98B036SN	300	200 N	200	100 L	1000	500 N	2000	5000
98B037SN	200	200 N	200	100 N	1000	500 N	2000 G	2000
98B038SN	200	200 N	200	100 N	1000	500 N	2000 G	3000
98B040SN	300	200 N	100	100	1500	500 N	2000	3000
98B074SN	50	200 N	200	100 N	200	500 N	2000 G	200
98C004SN	100	200 N	70	100 N	2000	500 N	2000 G	1000
98C005SN	700	200 N	70	100 N	2000	500 N	2000 G	1500
98C007SN	50	200 N	100	100 N	1000	500 N	2000 G	2000
98C007SN	150	200 N	500	100 N	200	1500	1500	200 L
98C010SN	20 N	200 L	150	100 N	500	500 N	2000 G	300
98C011SN	20	200 N	200	100 N	500	500 N	2000 G	500
98C012SN	20 N	200 N	200	100 N	500	500 N	2000 G	500
98C001SN	30	200 N	100	100 N	500	500 N	2000 G	500
98C005SN	1000	200 N	100	100 N	500	500 N	2000 G	700
98C007SN	30	200 N	70	100 N	700	500 N	2000 G	1000
98C009SN	150	200 N	70	100 N	700	500 N	2000 G	700
98C028SN	50	200 N	100	100 N	500	500 N	2000 G	700
98C030SN	20	200 N	70	100 N	1500	500 N	2000 G	500
98C031SN	50	200 N	100	100 N	3000	500 N	2000 G	1500
98C045SN	200	200 N	50	100 N	1000	500 N	2000 G	1000
98C046SN	500	200 N	70	100 N	500	500 N	2000 G	700
98L001SN	20 N	200 N	100	100 N	3000	500 N	2000 G	300
98L002SN	100	200 N	100	100 N	5000	500 N	2000 G	200
98L005SN	100	200 N	200	100 N	700	500 N	2000 G	2000
98L006SN	100	200 N	200	100 N	700	500 N	2000 G	1500
98L007SN	700	200 N	70	100 N	1000	500 N	2000 G	3000
98L008SN	70	200 N	100	100 N	700	500 N	2000 G	700

BLUE JOINT NONMAG FRACTION-continued

SAMPLE	Lat.	Long.	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn(ppm)	Ag(ppm)	B(ppm)	Ba(ppm)
9KL011SN	45 36 22N	114 31 12W	15.0	0.20	0.3	2.0	2000	1.0N	20 L	50 N
9KL012SN	45 36 40N	114 31 05W	10.0	0.20	0.7	1.5	1500	1.0N	20 N	70
9KL013SN	45 37 01N	114 30 58W	10.0	0.30	1.0	2.0	2000	1.0N	20 L	100
9KL014SN	45 38 28N	114 30 04W	20.0	0.20	0.2	2.0	500	1.0N	20	70
9KL019SN	45 40 30N	114 27 32W	10.0	0.20	0.3	2.06	2000	1.0N	20 L	100
9KL021SN	45 37 55N	114 32 06W	30.0	0.50	0.5	2.06	3000	1.0N	30	50 N
9KL022SN	45 38 13N	114 31 34W	20.0	1.50	0.7	2.06	5000	1.0N	20	200
9KL023SN	45 38 10N	114 30 18W	30.0	0.15	0.5	2.06	7000	1.0N	20 N	300
9KL024SN	45 34 12N	114 29 06W	20.0	0.30	1.5	2.06	10000	1.0N	20	150
9KL025SN	45 34 12N	114 29 02W	15.0	0.20	1.0	2.06	7000	1.0N	20 L	150
9KL026SN	45 34 08N	114 29 02W	10.0	0.20	1.0	2.06	5000	1.0N	20 L	300
9KL027SN	45 34 26N	114 28 44W	15.0	0.30	1.5	2.06	7000	1.0N	20 L	200
9KL028SN	45 34 37N	114 28 34W	15.0	0.20	1.0	2.06	7000	1.0N	20 L	150
9KL029SN	45 34 55N	114 28 05W	20.0	0.50	1.5	2.06	7000	1.0N	20	150
9KL030SN	45 35 24N	114 28 16W	15.0	0.50	1.0	2.06	7000	1.0N	20 L	100
9KL031SN	45 35 20N	114 27 07W	15.0	0.50	1.0	2.06	5000	1.0N	20 L	150
9KL032SN	45 35 28N	114 27 07W	15.0	0.30	1.5	2.06	5000	1.0N	20 L	100
9KL033SN	45 36 04N	114 25 12W	30.0	0.15	0.2	2.06	1000	1.0N	50	150
9KL035SN	45 33 07N	114 28 48W	20.0	0.20	0.5	2.06	5000	1.0N	20	50
9KL036SN	45 33 07N	114 28 48W	5.0	1.50	0.5	0.3	500	1.0	20	2000
9KL037SN	45 33 07N	114 28 59W	20.0	0.20	0.7	2.06	7000	1.0N	20 L	50 N
9KL038SN	45 32 46N	114 29 20W	20.0	0.15	0.2	2.06	7000	1.0N	20	50 N
9KL039SN	45 32 31N	114 29 35W	20.0	0.30	0.3	2.06	5000	1.0N	20	100
9KL040SN	45 31 52N	114 30 18W	15.0	0.50	2.0	2.06	10000	1.0N	20 L	70
9KL041SN	45 31 23N	114 31 34W	15.0	0.20	1.0	2.06	5000	1.0N	20 L	50
9KL042SN	45 31 01N	114 32 13W	20.0	0.20	0.5	2.06	5000	1.0N	20 L	100
9ME001SN	45 32 28N	114 24 22W	10.0	2.00	3.0	2.06	2000	1.0N	20 L	700
9ME002SN	45 31 59N	114 24 32W	15.0	2.00	2.0	2.06	2000	3.0	20 L	200
9ME003SN	45 33 04N	114 23 35W	20.0	1.50	1.0	2.06	5000	1.0N	20	5000
9ME005SN	45 39 00N	114 22 08W	30.0	0.20	0.2	2.0	500	1.0N	50	150
9ME006SN	45 39 00N	114 22 16W	20.0	0.30	0.2	2.0	5000	1.0N	30	150
9ME007SN	45 38 56N	114 22 26W	30.0	0.30	0.2	1.5	7000	1.0N	20	200
9ME010SN	45 39 40N	114 20 42W	30.0	0.50	0.2	2.06	1000	1.0N	30	200
9ME012SN	45 45 11N	114 27 58W	20.0	0.15	0.5	2.06	2000	1.0N	20	150
9ME013SN	45 45 50N	114 28 41W	20.0	0.70	2.0	1.5	1500	1.0N	20 L	100
9ME018SN	45 40 01N	114 23 53W	15.0	0.20	0.7	2.06	5000	1.0N	20 L	70
9ME019SN	45 40 01N	114 23 56W	20.0	0.30	0.7	2.06	5000	1.0N	20 L	100
9ME020SN	45 39 58N	114 23 56W	10.0	0.20	0.7	1.5	2000	1.0N	20 L	100
9ME021SN	45 39 58N	114 23 31W	10.0	0.15	0.3	1.5	2000	1.0N	20 L	150
9ME024SN	45 40 52N	114 22 26W	15.0	0.15	0.5	1.5	2000	1.0N	20 L	300
9ME025SN	45 40 59N	114 22 08W	15.0	0.15	0.2	1.0	1500	1.0N	20	300
9ME026SN	45 43 23N	114 22 23W	20.0	2.00	1.0	2.06	5000	1.0N	20 L	150
9ME027SN	45 34 59N	114 22 55W	30.0	1.50	0.3	0.2	10000 G	1.0N	20 N	50 N
9ME028SN	45 35 24N	114 23 10W	20.0	1.50	0.5	2.0	10000	1.0N	20	50
9ME029SN	45 35 13N	114 23 17W	30.0	0.50	0.2	2.06	700	1.0N	20 N	200

BLUE JOINT NONMAG FRACTION-continued

SAMPLE	Be(ppm)	Bi(ppm)	Co(ppm)	Cr(ppm)	Cu(ppm)	La(ppm)	Mo(ppm)	Nb(ppm)	Ni(ppm)	Pb(ppm)
9KL011SN	70	20 N	10 N	20	15	2000 G	10	200	10 N	100
9KL012SN	15	20 N	10 N	30	10	2000 G	10 N	150	10 N	50
9KL013SN	50	20 N	10 N	70	10 L	2000 G	10 N	200	10 N	50
9KL014SN	2 N	20 N	10 N	700	10 L	1000	10 N	70	20	20 L
9KL019SN	30	20 N	10 N	70	50	2000 G	15	700	10 N	70
9KL021SN	2 N	20 N	200	700	70	2000 G	10 N	1000	50	30
9KL022SN	2 N	200	100	500	50	1500	10 N	500	30	50
9KL023SN	20	20 N	20	700	10 L	1500	10 N	100	10 N	20 N
9KL024SN	10	20 N	20	100	10 L	2000 G	15	700	10 N	70
9KL025SN	7	20 N	20	70	10 L	2000 G	15	500	10 N	70
9KL026SN	10	20 N	10	50	10 L	2000 G	10	500	10 N	50
9KL027SN	20	20 N	20	70	10	2000 G	10 N	500	10 N	70
9KL028SN	30	20 N	15	70	10 L	2000 G	10	500	10 N	20
9KL029SN	2	20 N	20	100	10 L	2000 G	10 N	300	10 N	50
9KL030SN	5	20 N	20	70	10	2000 G	10 N	200	10 N	50
9KL031SN	5	20 N	20	70	10	2000 G	10	500	10 N	70
9KL032SN	2	20 N	20	100	10 L	2000 G	15	200	10 N	30
9KL033SN	2 N	20 N	15	500	10	2000 G	10 N	100	15	70
9KL035SN	20	20 N	30	100	10 L	2000 G	15	300	10 N	70
9KL036SN	2 N	20 N	50	150	300	20 N	70	50 N	70	20 L
9KL037SN	10	20 N	20	100	5 L	2000 G	10	300	10 N	30
9KL038SN	20	20 N	30	100	10	2000	15	500	10 N	50
9KL039SN	30	20 N	50	100	10 L	2000 G	15	500	10 N	100
9KL040SN	30	20 N	30	100	10 L	2000 G	15	300	10	50
9KL041SN	50	20 N	20	100	5 L	2000 G	10	500	10 N	70
9KL042SN	20	20 N	30	150	5 L	2000 G	10 N	300	10 N	100
9ME001SN	2 N	20 N	50	150	20	700	10 N	100	50	20 L
9ME002SN	2 N	20 N	50	300	10	2000	10 N	100	50	20 N
9ME003SN	2 N	20 N	50	200	30	2000 G	10 N	200	30	30
9ME005SN	2 N	20 N	20	300	10 L	700	10 N	150	10 N	50
9ME006SN	15	20 N	50	150	70	2000	10	200	30	1500
9ME007SN	20	50	50	200	100	2000 G	20	300	30	2000
9ME010SN	2 N	20 N	10 N	300	10 L	700	10 N	100	10 N	50
9ME012SN	10	20 N	20	50	20	2000 G	15	200	10 N	100
9ME013SN	5	20 N	50	50	20	2000 G	10 N	50	20	100
9ME018SN	100	20 N	15	50	10 L	2000 G	20	500	10 N	100
9ME019SN	200	20 N	15	50	10	2000 G	20	500	15	70
9ME020SN	100	20 N	10	20	15	2000 G	10	200	10 N	70
9ME021SN	70	20 L	10 N	30	30	2000 G	30	150	10 N	50
9ME024SN	10	20 N	10 N	50	20	2000 G	30	150	10 N	100
9ME025SN	7	20	10 N	50	20	2000	20	100	10 N	150
9ME026SN	2 N	20 N	70	300	10	2000	10 N	200	30	20 N
9ME027SN	2 N	20 N	30	150	10	500	10 N	50 N	10 N	20
9ME028SN	2 N	20 N	50	150	10	700	10 N	50	10 N	30
9ME029SN	2 N	20 N	20	700	10 L	500	10 N	50	20	20

BLUE JOINT NONMAG FRACTION-continued

SAMPLE	Sn (ppm)	Sr (ppm)	V (ppm)	W (ppm)	Y (ppm)	Zn (ppm)	Zr (ppm)	Th (ppm)
9KL011SN	2000	200 N	70	100 N	1000	500 N	2000 G	2000
9KL012SN	1000	200 N	70	100 N	500	500 N	2000 G	1000
9KL013SN	700	200 N	100	100 N	500	500 N	2000 G	1500
9KL014SN	70	200 N	150	100 N	200	500 N	2000 G	200
9KL019SN	5000	200 N	70	100 N	2000	500 N	2000 G	2000
9KL021SN	20 N	200 N	700	1000	200	500 N	2000 G	500
9KL022SN	30	200 N	300	100 L	1500	500 N	2000 G	200
9KL023SN	30	200 N	700	100 N	500	500 N	2000 G	200 L
9KL024SN	500	200 N	200	100 N	2000	500 N	2000	2000
9KL025SN	200	200 N	200	100 N	2000	500 N	2000 G	2000
9KL026SN	200	200 N	150	100 N	2000	500 N	2000 G	1000
9KL027SN	300	200 N	200	100 N	2000	500 N	2000 G	1000
9KL028SN	150	200 N	200	100 L	1500	500 N	2000 G	1000
9KL029SN	100	200 N	300	100 N	700	500 N	2000 G	3000
9KL030SN	200	200 N	200	100 N	2000	500 N	2000 G	2000
9KL031SN	200	200 N	300	100 N	2000	500 N	2000 G	5000
9KL032SN	150	200 N	200	100 N	1000	500 N	2000 G	1500
9KL033SN	20 N	200 N	500	100 N	500	500 N	2000 G	200 N
9KL035SN	300	200 N	200	100	1000	500 N	2000 G	5000
9KL036SN	20 N	200 N	100	100 N	30	500 N	200	200 N
9KL037SN	100	200 N	200	100 N	1000	500 N	2000 G	2000
9KL038SN	200	200 N	200	100 L	1000	500 N	2000 G	2000
9KL039SN	200	200 N	150	100 N	1500	500 N	2000 G	5000 G
9KL040SN	300	200 N	200	100 N	1500	500 N	2000	2000
9KL041SN	200	200 N	200	100 N	2000	500 N	2000	5000
9KL042SN	200	200 N	200	100 N	1000	500 N	2000 G	5000
9ME001SN	20 N	200 N	300	100 N	150	500 N	1500	200 N
9ME002SN	20 N	200 N	300	100 N	200	500 N	1000	200 N
9ME003SN	150	200 N	500	100 N	500	500 N	2000 G	500
9ME005SN	500	200 N	150	100 N	500	500 N	2000 G	200 N
9ME006SN	500	200 N	200	100 N	1500	500 N	2000 G	2000
9ME007SN	1500	200 N	200	100 N	1000	500	2000 G	1000
9ME010SN	500	200 N	150	100 N	200	500 N	2000 G	200 N
9ME012SN	50	200 N	100	100 N	1000	500 N	2000 G	2000
9ME013SN	20 N	200 N	200	100 N	700	500 N	2000 G	2000
9ME018SN	2000	200 N	100	100 N	1500	500 N	2000 G	3000
9ME019SN	1500	200 N	100	100 N	3000	500 N	2000 G	2000
9ME020SN	200	200 N	70	100 N	1500	500 N	2000 G	1000
9ME021SN	3000	200 N	100	100 N	1000	700	2000	500
9ME024SN	100	200 N	100	100 N	1000	700	2000 G	700
9ME025SN	2000	200 N	100	100 N	500	500 L	2000	500
9ME026SN	20 N	200 N	500	100 N	100	500 N	2000	200 N
9ME027SN	20 N	200 N	100	100 N	1000	500 N	300	200 L
9ME028SN	20 N	200 N	200	100 N	2000	500 N	2000 G	200 N
9ME029SN	20 N	200 N	500	100 N	200	500 N	2000 G	200 N

BLUE JOINT NONMAG FRACTION-continued

SAMPLE	Lat.	Long.	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn(ppm)	Ag(ppm)	B(ppm)	Ba(ppm)
9ME030SN	45 35 49N	114 23 35W	15.0	1.00	1.0	2.0	500	1.0N	50	150
9RB001SN	45 40 55N	114 27 14W	15.0	0.20	0.5	2.06	3000	1.0N	20 L	100
9RB002SN	45 41 24N	114 26 38W	20.0	0.50	0.3	2.06	3000	1.0N	20 L	200
9RB003SN	45 41 31N	114 25 44W	20.0	0.20	0.3	2.06	5000	1.0N	20 L	200
9RB004SN	45 41 35N	114 25 30W	20.0	0.15	0.5	2.06	5000	1.0N	20 L	50 N
9RB005SN	45 41 38N	114 24 47W	10.0	0.20	1.0	2.06	3000	1.0N	20 L	150
9RB009SN	45 43 55N	114 23 49W	5.0	0.10	0.3	1.5	700	1.0N	20	150
9RB016SN	45 42 14N	114 25 26W	20.0	0.50	0.7	2.06	5000	1.0N	20	500
9RB017SN	45 42 14N	114 25 23W	10.0	1.00	0.5	2.06	1500	1.0N	20	1500
9SA001SN	45 44 20N	114 27 43W	20.0	1.00	1.5	2.06	10000	1.0N	20 N	500
9SA002SN	45 44 13N	114 28 01W	20.0	0.50	1.0	2.06	5000	1.0N	20 N	1000
9WR002SN	45 32 31N	114 25 34W	20.0	1.50	1.0	2.06	5000	1.0N	20	50 N
9WR005SN	45 32 42N	114 25 55W	15.0	0.20	0.5	2.06	7000	1.0N	20 L	50 N
9WR006SN	45 32 42N	114 25 52W	15.0	0.20	0.5	2.06	7000	1.0N	20 L	50
9WR008SN	45 32 46N	114 24 54W	15.0	3.00	3.0	2.06	3000	1.0N	20 L	5000
9WR009SN	45 33 14N	114 23 10W	20.0	1.00	0.5	2.06	3000	1.0N	20 L	10000 G
9WR016SN	45 32 10N	114 31 23W	20.0	0.50	1.0	2.06	7000	1.0N	20 L	70
9WR017SN	45 32 13N	114 31 30W	10.0	0.30	1.0	2.06	5000	1.0N	20 L	150
9WR019SN	45 31 19N	114 32 13W	10.0	0.15	0.7	2.06	2000	1.0N	20 L	50 N
9WR020SN	45 36 11N	114 31 12W	15.0	0.20	1.0	2.06	5000	1.0N	20 N	100
9WR021SN	45 36 54N	114 30 43W	50.0	0.20	0.5	2.06	2000	1.0N	20 L	50 N
9WR022SN	45 37 19N	114 30 36W	20.0	0.50	2.0	2.06	10000	1.0N	20 L	50 N
9WR023SN	45 37 52N	114 29 28W	20.0	0.50	1.5	2.06	7000	1.0N	20 L	50 N
9WR024SN	45 38 10N	114 29 20W	15.0	0.20	1.0	2.06	5000	1.0N	20 L	50
9WR025SN	45 38 06N	114 29 17W	20.0	0.20	1.0	2.06	5000	1.0N	20 L	50 N
9WR026SN	45 38 20N	114 29 06W	20.0	0.30	0.7	2.06	5000	1.0N	20 L	50
9WR027SN	45 39 00N	114 29 06W	20.0	1.00	0.5	2.06	2000	1.0N	20 L	50 N
9WR028SN	45 39 25N	114 28 34W	15.0	1.00	0.5	2.0	2000	1.0N	20 L	700
9WR029SN	45 39 32N	114 28 26W	20.0	0.30	0.2	2.06	5000	1.0N	20 L	150
9WR032SN	45 37 05N	114 25 48W	20.0	0.50	1.0	2.06	5000	1.0N	20 L	150
9WR033SN	45 37 08N	114 25 48W	30.0	0.30	1.5	2.06	5000	1.0N	20 L	50 N
9WR034SN	45 37 19N	114 24 18W	30.0	0.15	0.2	2.06	3000	1.0N	20 L	50 N
9WR035SN	45 37 16N	114 24 18W	20.0	0.30	1.0	2.06	5000	1.0N	20 L	150
9WR037SN	45 34 16N	114 27 04W	20.0	0.30	1.0	2.06	3000	1.0N	20 L	70
9WR038SN	45 34 16N	114 27 07W	20.0	0.50	1.0	2.06	5000	1.0N	20 L	150
9WR039SN	45 34 41N	114 26 38W	15.0	0.20	0.7	2.06	7000	1.0N	20 N	50 N
9WR040SN	45 34 55N	114 26 28W	20.0	0.30	0.7	2.06	7000	1.0N	20 L	70
9WR041SN	45 35 06N	114 26 17W	30.0	0.50	1.0	2.06	2000	1.0N	20 L	300
9WR042SN	45 35 53N	114 26 17W	30.0	0.20	1.0	2.06	3000	1.0N	30	200
9WR043SN	45 36 11N	114 26 42W	30.0	1.00	3.0	2.06	7000	1.0N	20 L	200
9WR044SN	45 36 11N	114 26 46W	20.0	0.70	2.0	2.06	7000	1.0N	20 L	50 N
9WR045SN	45 35 46N	114 25 34W	50.0	0.20	1.0	2.06	1000	1.0	20 N	100
9WR046SN	45 32 20N	114 27 29W	15.0	0.30	1.0	2.06	5000	1.0N	20 L	50
9WR047SN	45 32 20N	114 27 32W	15.0	0.30	1.0	2.06	5000	1.0N	20 L	50 N
9WR048SN	45 32 10N	114 27 47W	20.0	0.20	0.5	2.06	7000	1.0N	20 L	100



BLUE JOINT NONMAG FRACTION-continued

SAMPLE	Be(ppm)	Bi(ppm)	Co(ppm)	Cr(ppm)	Cu(ppm)	La(ppm)	Mo(ppm)	Nb(ppm)	Ni(ppm)	Pb(ppm)
9MEC30SN	2 N	20 L	30	300	150	100	10 N	200	30	300
9RB001SN	10	20 N	10 N	70	10 L	2000 G	15	300	10 N	70
9RB002SN	10	20 N	10 N	50	10 L	2000 G	10 N	500	10 N	30
9RB003SN	7	20 N	10 N	30	10 L	2000 G	15	200	10 N	50
9RB004SN	5	20 N	10 N	20	10 L	2000 G	20	500	10 N	20
9RB005SN	20	20 N	15	50	10	2000 G	10 N	700	10 N	50
9RB009SN	15	20 N	10 N	30	15	2000	10 N	500	10 N	70
9RB016SN	5	20 N	15	70	10 L	2000 G	15	500	10 N	50
9RB017SN	5	20 N	10	100	10 L	2000	10 N	200	10	20 L
9SA001SN	5	20 N	15	1500	10 L	2000 G	10 N	100	10 N	50
9SA002SN	5	20 N	10	30	10	1000	10 N	100	10 N	50
9WR002SN	30	20 N	30	200	10	2000 G	10 N	200	30	70
9WR005SN	30	20 N	10 N	70	10 L	2000 G	10 N	700	10 N	100
9WR006SN	30	20 N	10 N	70	10 L	2000 G	10 N	700	10 N	100
9WR008SN	3	20 N	30	150	15	2000 G	10 N	150	30	20 L
9WR009SN	2 N	20 N	100	500	20	2000 G	15	500	30	20
9WR016SN	15	20 N	10 N	100	10	2000 G	10 N	200	10 N	70
9WR017SN	20	20 N	10 N	70	10	2000 G	10 N	300	15	150
9WR019SN	150	20 N	10 N	300	10	2000 G	10 N	500	10 N	100
9WR020SN	50	20 N	10 N	70	10 L	2000 G	10	200	10 N	70
9WR021SN	2	20 N	10 N	300	10 L	2000 G	20	100	10 N	20 L
9WR022SN	10	20 N	10 N	70	10 L	2000 G	10 N	300	10 N	50
9WR023SN	15	20 N	10 N	70	10 L	2000 G	10 N	200	10	30
9WR024SN	150	20 N	10 N	50	15	2000 G	10 N	300	10 N	50
9WR025SN	70	20 N	10 N	20	10 L	2000 G	10 N	500	10 N	50
9WR026SN	50	20 N	10 N	100	10	2000 G	10	300	10 N	50
9WR027SN	10	20 N	50	100	10	1500	10 N	500	30	20
9WR028SN	50	20 N	10 N	70	30	2000 G	10 N	200	10	200
9WR029SN	10	20 N	10 N	70	20	2000 G	15	300	10 N	50
9WR032SN	10	20 N	10 N	50	10 L	2000 G	10 N	300	10 N	70
9WR033SN	7	20 N	10 N	150	20	2000 G	10 N	300	10 N	50
9WR034SN	50	20 N	10 N	50	10 L	2000 G	30	500	50	1000
9WR035SN	50	20 N	10 N	100	10 L	2000 G	10 N	300	10 N	50
9WR037SN	50	20 N	10 N	50	10 L	2000 G	10 N	700	10 N	200
9WR038SN	50	20 N	10 N	100	10 L	2000 G	10 N	500	10 N	100
9WR039SN	20	20 N	10 N	50	150	2000 G	10 N	500	10 N	300
9WR040SN	30	20 N	10 N	100	10 L	2000 G	10 N	500	10 N	100
9WR041SN	30	20 N	10 N	300	15	2000 G	10 N	200	20	100
9WR042SN	2	20 N	10 N	300	10 L	2000 G	10 N	200	15	20
9WR043SN	5	20 N	10 N	150	10 L	2000 G	10 N	300	15	100
9WR044SN	2	20 N	10 N	100	10 L	2000 G	10 N	200	10 N	20
9WR045SN	2 N	20 N	10 N	700	30	200	10 N	50	15	300
9WR046SN	20	20 N	10 N	70	10 L	2000 G	10 N	300	10 N	100
9WR047SN	30	20 N	10 N	70	10 L	2000 G	10 N	500	10 N	100
9WR048SN	20	20 N	30	70	10 L	2000 G	15	300	10 N	100

BLUE JOINT NONMAG FRACTION-continued

SAMPLE	Sn(ppm)	Sr(ppm)	V(ppm)	W(ppm)	Y(ppm)	Zn(ppm)	Zr(ppm)	Th(ppm)
9ME030SN	20 N	300	200	150	100	500 N	2000	200 N
9RB001SN	700	200 N	100	100 N	1000	500 N	2000 G	3000
9RB002SN	300	200 N	300	100 N	500	500 N	2000 G	700
9RB003SN	70	200 N	50	100 N	500	500 N	2000 G	1000
9RB004SN	70	200 N	70	100 N	300	500 N	2000 G	700
9RB005SN	500	200 N	150	100 N	1500	500 N	2000 G	2000
9RB009SN	500	200 N	70	100 N	1500	500 N	2000 G	2000
9RB016SN	30	200 N	150	100 N	500	500 N	2000 G	700
9RB017SN	20	200 N	150	100 N	300	500 N	2000 G	200 L
9SA001SN	20 N	200 N	200	100 N	200	500 N	2000 G	500
9SA002SN	20 N	200 N	70	100 N	70	500 N	2000 G	200 N
9WR002SN	150	200 N	300	100 N	700	500 N	2000 G	2000
9WR005SN	700	200 N	100	100 N	3000	500 N	2000 G	5000
9WR006SN	500	200 N	150	100 N	2000	500 N	2000 G	3000
9WR008SN	100	500	300	100 N	200	500 N	1500	200
9WR009SN	20 N	300	500	100 N	150	500 N	1500	200
9WR016SN	150	200 N	200	100 N	1000	500 N	1500	2000
9WR017SN	500	200 N	150	100 N	1000	500 N	2000	1500
9WR019SN	2000	200 N	70	100 N	2000	500 N	2000 G	2000
9WR020SN	200	200 N	200	100 N	1000	500 N	2000 G	1000
9WR021SN	100	200 N	500	100 N	700	500 N	2000 G	200 N
9WR022SN	200	200 N	200	100 N	70	500 N	2000	1500
9WR023SN	150	200 N	100	100 N	1500	500 N	2000	1000
9WR024SN	3000	200 N	100	100 N	2000	500 N	2000 G	2000
9WR025SH	2000	200 N	70	1000	3000	500 N	2000 G	2000
9WR026SN	500	200 N	200	100 N	1000	500 N	2000	1500
9WR027SN	700	200 N	200	100 N	300	500 N	1000	500
9WR028SN	2000	200 N	150	100 N	500	500 N	2000 G	1500
9WR029SN	1500	200 N	200	100	700	500 N	2000 G	1500
9WR032SN	1000	200 N	100	100 N	2000	500 N	2000 G	5000
9WR033SN	150	200 N	200	100 N	1000	500 N	2000 G	3000
9WR034SN	5000 G	200 N	100	100	5000	700	2000 G	5000
9WR035SN	150	200 N	150	100 N	2000	500 N	2000 G	5000
9WR037SN	300	200 N	150	100 N	5000	500 N	2000 G	5000 G
9WR038SN	300	200 N	200	100 N	3000	500 N	2000 G	5000 G
9WR039SN	1500	200 N	150	150	5000	500 N	2000 G	5000 G
9WR040SN	200	200 N	200	100	3000	500 N	2000 G	5000 G
9WR041SN	300	200 N	200	100 N	1500	500 N	2000 G	3000
9WR042SN	100	200 N	300	100 N	500	500 N	2000	300
9WR043SN	200	200 N	200	100 N	2000	500 N	2000	1500
9WR044SN	150	200 N	200	100 N	700	500 N	2000	1000
9WR045SN	20 N	200 N	700	100 N	150	500 N	2000 G	200 N
9WR046SN	300	200 N	100	100 N	3000	500 N	2000 G	5000
9WR047SN	200	200 N	200	100 N	5000	500 N	2000 G	5000
9WR048SN	300	200 N	200	100 N	2000	500 N	2000 G	5000 G

BLUE JOINT NONMAG FRACTION-continued

SAMPLE	Lat.	Long.	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn(ppm)	Ag(ppm)	B(ppm)	Ba(ppm)
9WR049SN	45 31 55N	114 28 12W	20.0	0.20	0.5	2.0G	7000	1.0N	20 L	50
9WR050SN	45 31 44N	114 28 48W	10.0	0.30	1.0	2.0G	5000	1.0N	20 L	200
9WR052SN	45 31 01N	114 29 17W	15.0	0.30	1.0	2.0G	7000	1.0N	20 L	100
9WR053SN	45 30 14N	114 29 02W	20.0	0.15	0.5	2.0G	5000	1.0N	20 L	50
9WR054SN	45 30 07N	114 29 10W	15.0	0.20	1.0	2.0G	5000	1.0N	20 L	50
9WR229SN	45 38 02N	114 29 06W	10.0	0.50	1.0	1.5	2000	1.0N	20 L	300
9WR249SN	45 31 23N	114 32 06W	15.0	0.20	0.5	2.0G	5000	1.0N	20 L	70
9WR254SN	45 30 54N	114 32 31W	20.0	0.20	0.7	2.0G	7000	1.0N	20 L	100
9WR256SN	45 38 49N	114 31 52W	20.0	0.50	0.5	2.0G	7000	1.0N	20	100
9WR260SN	45 33 04N	114 26 28W	15.0	0.20	0.2	2.0G	10000	1.0N	20 L	70
9WR261SN	45 33 00N	114 26 28W	20.0	0.20	0.2	2.0G	10000	1.0N	20 L	100
9WR262SN	45 32 49N	114 25 55W	10.0	0.20	0.3	1.5	5000	1.0N	20 L	150
9WR269SN	45 37 41N	114 24 25W	20.0	0.20	0.2	2.0	3000	1.0N	20 L	100

BLUE JOINT NONMAG FRACTION-continued

SAMPLE	Be (ppm)	Bi (ppm)	Co (ppm)	Cr (ppm)	Cu (ppm)	La (ppm)	Mo (ppm)	Nb (ppm)	Ni (ppm)	Pb (ppm)
9WR049SN	30	20 N	30	100	10 L	2000 G	10 N	500	10 N	70
9WR050SN	20	20 N	15	70	10 L	2000 G	10 N	500	10 N	50
9WR052SN	20	20 N	20	70	10 L	2000 G	10	300	10 N	50
9WR053SN	7	20 N	20	70	5 L	2000 G	10	300	10 N	50
9WR054SN	7	20 N	30	70	5 L	2000 G	10	300	10 N	70
9WR229SN	20	20 N	10	20 N	50	2000 G	10 L	300	10 N	70
9WR249SN	70	20 N	30	300	30	2000 G	30	3000	10 N	200
9WR254SN	10	70	50	30	20	2000 G	15	2000	10 N	50
9WR256SN	2 N	20 N	70	100	20	1000	10 N	100	10 N	50
9WR260SN	5	200	20	20	10	2000 G	10	700	10 N	100
9WR261SN	15	20 N	30	50	10	2000 G	10	1000	10 N	100
9WR262SN	15	20 N	15	20	15	2000	10 N	300	10 N	70
9WR269SN	10	20 N	10	20	70	2000 G	15	1000	10 N	500

BLUE JOINT NONMAG FRACTION-continued

SAMPLE	Sn(ppm)	Sr(ppm)	Y(ppm)	W(ppm)	Y(ppm)	Zn(ppm)	Zr(ppm)	Th(ppm)
9WR049SN	500	200 N	150	100 L	2000	500 N	2000	3000
9WR050SN	200	200 N	100	100 N	1500	500 N	2000	2000
9WR052SN	200	200 N	200	100 L	1000	500 N	2000	2000
9WR053SN	200	200 N	200	100 N	1000	500 N	2000 G	5000
9WR054SN	300	200 N	150	100 N	1000	500 N	2000	5000 G
9WR229SN	100	200 N	70	100	500	500 N	2000 G	1000
9WR249SN	2000 G	200 N	70	500	5000	500 N	2000 G	5000 G
9WR254SN	1000	200 N	100	100	2000	500 N	2000 G	3000
9WR256SN	20	200 N	150	100 N	700	500 N	2000 G	200
9WR260SN	200	200 N	100	100 N	2000	500 N	2000 G	3000
9WR261SN	500	200 N	100	100	1500	500 N	2000 G	5000
9WR262SN	1500	200 N	100	100 N	1000	500 N	2000 G	2000
9WR269SN	2000 G	200 N	70	200	2000	500 N	2000 G	3000

Blue Nonmag Fraction

Table 6.---Statistical summary for nonmagnetic heavy-mineral-concentrate fraction

THE FREQUENCY DISTRIBUTIONS AND HISTOGRAMS ON THE FOLLOWING PAGES ARE ON LOGARITHMIC SCALES, AND EMPLOY THE SAME CLASS INTERVALS AS USED IN REPORTING 6-STEP SEMIQUANTITATIVE SPECTROGRAPHIC ANALYSES. IMPORTANT NOTE- THE STATISTICS GIVEN BELOW THE HISTOGRAMS ARE DERIVED ONLY FROM DATA VALUES WITHIN THE RANGES OF ANALYTICAL DETERMINATION, AND ARE, THEREFORE, BIASED IF DATA VALUES QUALIFIED WITH N, L, G, T, OR H CODES ARE PRESENT. SEE LATER SECTION OF OUTPUT FOR STATISTICAL ESTIMATES THAT ARE UNBIASED IN THIS REGARD. THE GEOMETRIC MEAN IS AN ESTIMATE OF "CENTRAL TENDENCY," OR OF A CHARACTERISTIC VALUE, OF A FREQUENCY DISTRIBUTION THAT IS APPROXIMATELY SYMMETRICAL ON A LOG SCALE, AND IS THEREFORE USEFUL FOR CHARACTERIZING MANY GEOCHEMICAL DISTRIBUTIONS. THE GEOMETRIC MEAN IS NOT AN ESTIMATE OF GEOCHEMICAL ABUNDANCE AND IS OF NO VALUE IN ESTIMATING RESERVES OR TOTAL AMOUNTS OF ELEMENTS PRESENT. SEE USGS PROFESSIONAL PAPER 574-B FOR FURTHER DISCUSSION. SEE USGS BULLETIN 1147E, PAGE 23, FOR EXPLANATION OF GEOMETRIC DEVIATION.

THE CUMULATIVE FREQUENCY PERCENTS GIVEN BELOW SHOULD BE PLOTTED AGAINST THE "LOWER" LIMITS TO GIVE THE LEPELTIER-  
CUMULATIVE CURVE.

TYPE

TITLE  
Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 3 ( sfex)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E-02	1.2E-01	0	0	0.00	100.00
1.2E-01	1.8E-01	0	0	0.00	100.00
1.8E-01	2.6E-01	0	0	0.00	100.00
2.6E-01	3.8E-01	0	0	0.00	100.00
3.8E-01	5.6E-01	0	0	0.00	100.00
5.6E-01	8.3E-01	0	0	0.00	100.00
8.3E-01	1.2E+00	0	0	0.00	100.00
1.2E+00	1.8E+00	0	0	0.00	100.00
1.8E+00	2.6E+00	0	0	0.00	100.00
2.6E+00	3.8E+00	0	0	0.00	100.00
3.8E+00	5.6E+00	6	6	4.03	100.00
5.6E+00	8.3E+00	4	10	2.68	95.97
8.3E+00	1.2E+01	25	35	16.78	93.29
1.2E+01	1.8E+01	33	68	22.15	76.51
1.8E+01	2.6E+01	62	130	41.61	54.36
2.6E+01	3.8E+01	16	146	10.74	12.75
3.8E+01	5.6E+01	3	149	2.01	2.01

## HISTOGRAM FOR COLUMN 3 ( sfex)

5.0E+00 XXXX  
 7.0E+00 XXX  
 1.0E+01 XXXXXXXXXXXXXXXXXX  
 1.5E+01 XXXXXXXXXXXXXXXXXXXX  
 2.0E+01 XXXXXXXXXXXXXXXXXXXX  
 3.0E+01 XXXXXXXXXXXXXXXXXX  
 5.0E+01 XX

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	149
0.00	0.00			0.00	0.00	

MAXIMUM = 5.00000E+01  
 MINIMUM = 5.00000E+00  
 GEOMETRIC MEAN = 1.63414E+01  
 GEOMETRIC DEVIATION = 1.56571E+00

TITLE  
Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 4 ( smg%)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
3.8E-02	5.6E-02	0	0	0.00	100.00
5.6E-02	8.3E-02	0	0	0.00	100.00
8.3E-02	1.2E-01	5	5	3.36	100.00
1.2E-01	1.8E-01	15	20	10.07	96.64
1.8E-01	2.6E-01	47	67	31.54	86.58
2.6E-01	3.8E-01	24	91	16.11	55.03
3.8E-01	5.6E-01	27	118	18.12	38.93
5.6E-01	8.3E-01	8	126	5.37	20.81
8.3E-01	1.2E+00	9	135	6.04	15.44
1.2E+00	1.8E+00	8	143	5.37	9.40
1.8E+00	2.6E+00	5	148	3.36	4.03
2.6E+00	3.8E+00	1	149	0.67	0.67

## HISTOGRAM FOR COLUMN 4 ( smg%)

```

1.0E-01 XXX
1.5E-01 XXXXXXXXXXXXX
2.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3.0E-01 XXXXXXXXXXXXXXXX
5.0E-01 XXXXXXXXXXXXXXXXXXXXXXXX
7.0E-01 XXXXX
1.0E+00 XXXXXX
1.5E+00 XXXXX
2.0E+00 XXXX
3.0E+00 X

```

## ANALYTICAL

## VALUES

N	L	H	B	T	G
0	0	0	0	0	0
0.00,	0.00			0.00	0.00

MAXIMUM = 3.00000E+00  
 MINIMUM = 1.00000E-01  
 GEOMETRIC MEAN = 3.45692E-01  
 GEOMETRIC DEVIATION = 2.16052E+00



TITLE  
Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 5 ( scaz)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E-02	1.2E-01	2	2	1.34	100.00
1.2E-01	1.8E-01	3	5	2.01	98.66
1.8E-01	2.6E-01	21	26	14.09	96.64
2.6E-01	3.8E-01	11	37	7.38	82.55
3.8E-01	5.6E-01	32	69	21.48	75.17
5.6E-01	8.3E-01	19	88	12.75	53.69
8.3E-01	1.2E+00	40	128	26.85	40.94
1.2E+00	1.8E+00	8	136	5.37	14.09
1.8E+00	2.6E+00	10	146	6.71	8.72
2.6E+00	3.8E+00	3	149	2.01	2.01

## HISTOGRAM FOR COLUMN 5 ( scaz)

```

1.0E-01 X
1.5E-01 XX
2.0E-01 XXXXXXXXXXXXXXXX
3.0E-01 XXXXXX
5.0E-01 XXXXXXXXXXXXXXXX
7.0E-01 XXXXXXXXXXXXXXXX
1.0E+00 XXXXXXXXXXXXXXXX
1.5E+00 XXXXX
2.0E+00 XXXXXX
3.0E+00 XX

```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	149
0.00	0.00	0	0	0.00	0.00	

MAXIMUM = 3.00000E+00  
MINIMUM = 1.00000E-01  
GEOMETRIC MEAN = 6.1338E-01  
GEOMETRIC DEVIATION = 2.12110E+00

TITLE  
Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 6 ( stiz)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-03 - 5.6E-03	0	0	0.00	100.00
5.6E-03 - 8.3E-03	0	0	0.00	100.00
8.3E-03 - 1.2E-02	0	0	0.00	100.00
1.2E-02 - 1.8E-02	0	0	0.00	100.00
1.8E-02 - 2.6E-02	0	0	0.00	100.00
2.6E-02 - 3.8E-02	0	0	0.00	100.00
3.8E-02 - 5.6E-02	0	0	0.00	100.00
5.6E-02 - 8.3E-02	0	0	0.00	100.00
8.3E-02 - 1.2E-01	0	0	0.00	100.00
1.2E-01 - 1.8E-01	0	0	0.00	100.00
1.8E-01 - 2.6E-01	1	1	0.67	100.00
2.6E-01 - 3.8E-01	1	2	0.67	99.33
3.8E-01 - 5.6E-01	0	2	0.00	98.66
5.6E-01 - 8.3E-01	1	3	0.67	98.66
8.3E-01 - 1.2E+00	9	12	6.04	97.99
1.2E+00 - 1.8E+00	12	24	8.05	91.95
1.8E+00 - 2.6E+00	15	39	10.07	83.89

## HISTOGRAM FOR COLUMN 6 ( stiz)

2.0E-01 X  
3.0E-01 X  
5.0E-01  
7.0E-01 X  
1.0E+00 XXXXX  
1.5E+00 XXXXXXXX  
2.0E+00 XXXXXXXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
0.00	0	0	0	0	110	39
				0.00	73.83	

MAXIMUM = 2.00000E+00  
MINIMUM = 2.00000E-01  
GEOMETRIC MEAN = 1.36352E+00  
GEOMETRIC DEVIATION = 1.65293E+00

## TITLE

Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 7 ( smn)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT CUM
LOWER	UPPER				
1.8E+01	2.6E+01	0	0	0.00	100.00
2.6E+01	3.8E+01	0	0	0.00	100.00
3.8E+01	5.6E+01	0	0	0.00	100.00
5.6E+01	8.3E+01	0	0	0.00	100.00
8.3E+01	1.2E+02	0	0	0.00	100.00
1.2E+02	1.8E+02	0	0	0.00	100.00
1.8E+02	2.6E+02	0	0	0.00	100.00
2.6E+02	3.8E+02	0	0	0.00	100.00
3.8E+02	5.6E+02	9	9	6.04	100.00
5.6E+02	8.3E+02	2	11	1.34	93.96
8.3E+02	1.2E+03	8	19	5.37	92.62
1.2E+03	1.8E+03	6	25	4.03	87.25
1.8E+03	2.6E+03	29	54	19.46	83.22
2.6E+03	3.8E+03	14	68	9.40	63.76
3.8E+03	5.6E+03	44	112	29.53	54.36
5.6E+03	8.3E+03	27	139	18.12	24.83
8.3E+03	1.2E+04	8	147	5.37	6.71

## HISTOGRAM FOR COLUMN 7 ( smn)

```

5.0E+02 XXXXXX
7.0E+02 X
1.0E+03 XXXXX
1.5E+03 XXXX
2.0E+03 XXXXXXXXXX
3.0E+03 XXXXXXXXX
5.0E+03 XXXXXXXXXXXXXXXXXXXXXXXX
7.0E+03 XXXXXXXXXXXXXXXXXXXXXXXX
1.0E+04 XXXXX

```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	2	147
0.00	0.00			0.00	1.34	

MAXIMUM = 1.00000E+04  
 MINIMUM = 5.00000E+02  
 GEOMETRIC MEAN = 3.23844E+03  
 GEOMETRIC DEVIATION = 2.21217E+00

TITLE  
Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 8 ( sag)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E-01	1.2E+00	2	2	1.34	4.03
1.2E+00	1.8E+00	0	2	0.00	2.68
1.8E+00	2.6E+00	1	3	0.67	2.68
2.6E+00	3.8E+00	1	4	0.67	2.01
3.8E+00	5.6E+00	0	4	0.00	1.34
5.6E+00	8.3E+00	1	5	0.67	1.34
8.3E+00	1.2E+01	1	6	0.67	0.67

## HISTOGRAM FOR COLUMN 8 ( sag)

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

ANALYTICAL VALUES		G	
N	L	H	B
143	0	0	0
95.97	0.00	0	0.00

MAXIMUM = 1.00000E+01  
MINIMUM = 1.00000E+00  
GEOMETRIC MEAN = 2.73658E+00  
GEOMETRIC DEVIATION = 2.63538E+00

TITLE  
Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 11 ( sb)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER - UPPER					
1.8E+01 -	2.6E+01	28	28	18.79	25.50
2.6E+01 -	3.8E+01	5	33	3.36	6.71
3.8E+01 -	5.6E+01	4	37	2.68	3.36
5.6E+01 -	8.3E+01	0	37	0.00	0.67
8.3E+01 -	1.2E+02	1	38	0.67	0.67

## HISTOGRAM FOR COLUMN 11 ( sb)

2.0E+01 XXXXXXXXXXXXXXXXXXXX  
 3.0E+01 XXX  
 5.0E+01 XXX  
 7.0E+01  
 1.0E+02 X

ANALYTICAL VALUES		G	T
N	L	B	
13	98	0	0
8.72	65.77	0	0.00
			0.00

MAXIMUM = 1.00000E+02  
 MINIMUM = 2.00000E+01  
 GEOMETRIC MEAN = 2.42372E+01  
 GEOMETRIC DEVIATION = 1.46357E+00

## TITLE

Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 12 ( sba)

LIMITS		FREQ	FREQ CUM	PERCENT		PERCENT FREQ CUM
LOWER	UPPER			FREQ		
3.8E+01	5.6E+01	14	14	9.40		83.89
5.6E+01	8.3E+01	13	27	8.72		74.50
8.3E+01	1.2E+02	22	49	14.77		65.77
1.2E+02	1.8E+02	25	74	16.78		51.01
1.8E+02	2.6E+02	20	94	13.42		34.23
2.6E+02	3.8E+02	13	107	8.72		20.81
3.8E+02	5.6E+02	7	114	4.70		12.08
5.6E+02	8.3E+02	5	119	3.36		7.38
8.3E+02	1.2E+03	2	121	1.34		4.03
1.2E+03	1.8E+03	1	122	0.67		2.68
1.8E+03	2.6E+03	1	123	0.67		2.01
2.6E+03	3.8E+03	0	123	0.00		1.34
3.8E+03	5.6E+03	1	124	0.67		1.34

## HISTOGRAM FOR COLUMN 12 ( sba)

```

5.0E+01 XXXXXXXXX
7.0E+01 XXXXXXXXX
1.0E+02 XXXXXXXXX
1.5E+02 XXXXXXXXX
2.0E+02 XXXXXXXXX
3.0E+02 XXXXXXXXX
5.0E+02 XXXXX
7.0E+02 XXXX
1.0E+03 X
1.5E+03 X
2.0E+03 X
3.0E+03
5.0E+03 X

```

N	L	H	B	T	ANALYTICAL	
					VALUES	G
24	0	0	0	0	124	1
16.11	0.00			0.00		0.67

MAXIMUM = 5.00000E+03  
 MINIMUM = 5.00000E+01  
 GEOMETRIC MEAN = 1.61135E+02  
 GEOMETRIC DEVIATION = 2.33942E+00

TITLE  
Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 13 ( sbc)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E+00	2.6E+00	8	8	5.37	82.55
2.6E+00	3.8E+00	3	11	2.01	77.18
3.8E+00	5.6E+00	18	29	12.08	75.17
5.6E+00	8.3E+00	18	47	12.08	63.09
8.3E+00	1.2E+01	15	62	10.07	51.01
1.2E+01	1.8E+01	8	70	5.37	40.94
1.8E+01	2.6E+01	17	87	11.41	35.57
2.6E+01	3.8E+01	17	104	11.41	24.16
3.8E+01	5.6E+01	10	114	6.71	12.75
5.6E+01	8.3E+01	4	118	2.68	6.04
8.3E+01	1.2E+02	2	120	1.34	3.36
1.2E+02	1.8E+02	2	122	1.34	2.01
1.8E+02	2.6E+02	1	123	0.67	0.67

## HISTOGRAM FOR COLUMN 13 ( sbc)

```

2.0E+00 XXXXX
3.0E+00 XX
5.0E+00 XXXXXXXXXXXXX
7.0E+00 XXXXXXXXXXXXX
1.0E+01 XXXXXXXXXXXXX
1.5E+01 XXXXX
2.0E+01 XXXXXXXXXXXXX
3.0E+01 XXXXXXXXXXXXX
5.0E+01 XXXXXXXX
7.0E+01 XXX
1.0E+02 X
1.5E+02 X
2.0E+02 X

```

N	L	H	B	T	G	ANALYTICAL VALUES
26	0	0	0	0	0	123
17.45	0.00			0.00	0.00	

MAXIMUM = 2.00000E+02  
 MINIMUM = 2.00000E+00  
 GEOMETRIC MEAN = 1.33149E+01  
 GEOMETRIC DEVIATION = 2.82105E+00

TITLE  
Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 14 ( sbt)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E+01	2.6E+01	1	1	0.67	4.03
2.6E+01	3.8E+01	0	1	0.00	3.36
3.8E+01	5.6E+01	1	2	0.67	3.36
5.6E+01	8.3E+01	1	3	0.67	2.68
8.3E+01	1.2E+02	0	3	0.00	2.01
1.2E+02	1.8E+02	0	3	0.00	2.01
1.8E+02	2.6E+02	2	5	1.34	2.01
2.6E+02	3.8E+02	0	5	0.00	0.67
3.8E+02	5.6E+02	1	6	0.67	0.67

## HISTOGRAM FOR COLUMN 14 ( sbt)

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

ANALYTICAL VALUES			
N	L	H	B
141	2	0	0
94.63	1.34		
		T	G
		0.00	0
			0.00

MAXIMUM = 5.00000E+02  
MINIMUM = 2.00000E+01  
GEOMETRIC MEAN = 1.05768E+02  
GEOMETRIC DEVIATION = 3.19056E+00



TITLE  
Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 16 ( sco)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E+00	1.2E+01	10	10	6.71	69.13
1.2E+01	1.8E+01	16	26	10.74	62.42
1.8E+01	2.6E+01	36	62	24.16	51.68
2.6E+01	3.8E+01	18	80	12.08	27.52
3.8E+01	5.6E+01	18	98	12.08	15.44
5.6E+01	8.3E+01	2	100	1.34	3.36
8.3E+01	1.2E+02	2	102	1.34	2.01
1.2E+02	1.8E+02	0	102	0.00	0.67
1.8E+02	2.6E+02	1	103	0.67	0.67

## HISTOGRAM FOR COLUMN 16 ( sco)

```

1.0E+01 XXXXXXXX
1.5E+01 XXXXXXXXXX
2.0E+01 XXXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXXXXXXXX
5.0E+01 XXXXXXXXXXXXXXXX
7.0E+01 X
1.0E+02 X
1.5E+02
2.0E+02 X

```

N	L	H	B	T	G	ANALYTICAL VALUES
46	0	0	0	0	0	103
30.87	0.00	0	0	0.00	0.00	

MAXIMUM = 2.00000E+02  
 MINIMUM = 1.00000E+01  
 GEOMETRIC MEAN = 2.43533E+01  
 GEOMETRIC DEVIATION = 1.77870E+00

TITLE  
Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 17 ( scr)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E+01	2.6E+01	10	10	6.71	99.33
2.6E+01	3.8E+01	9	19	6.04	92.62
3.8E+01	5.6E+01	23	42	15.44	86.58
5.6E+01	8.3E+01	33	75	22.15	71.14
8.3E+01	1.2E+02	25	100	16.78	48.99
1.2E+02	1.8E+02	18	118	12.08	32.21
1.8E+02	2.6E+02	7	125	4.70	20.13
2.6E+02	3.8E+02	12	137	8.05	15.44
3.8E+02	5.6E+02	3	140	2.01	7.38
5.6E+02	8.3E+02	5	145	3.36	5.37
8.3E+02	1.2E+03	0	145	0.00	2.01
1.2E+03	1.8E+03	1	146	0.67	2.01
1.8E+03	2.6E+03	1	147	0.67	1.34
2.6E+03	3.8E+03	1	148	0.67	0.67

## HISTOGRAM FOR COLUMN 17 ( scr)

```

2.0E+01 XXXXXX
3.0E+01 XXXXXX
5.0E+01 XXXXXXXXXXXXXXXX
7.0E+01 XXXXXXXXXXXXXXXX
1.0E+02 XXXXXXXXXXXXXXXX
1.5E+02 XXXXXXXXXXXXXXXX
2.0E+02 XXXXX
3.0E+02 XXXXXXXX
5.0E+02 XX
7.0E+02 XXX
1.0E+03
1.5E+03 X
2.0E+03 X
3.0E+03 X

```

N	L	H	B	T	G	ANALYTICAL VALUES
1	0	0	0	0	0	148
0.67	0.00			0.00	0.00	

MAXIMUM = 3.00000E+03  
 MINIMUM = 2.00000E+01  
 GEOMETRIC MEAN = 9.62569E+01  
 GEOMETRIC DEVIATION = 2.55515E+00

## TITLE

Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 18 ( scu)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E+00	1.2E+01	28	28	18.79	46.98
1.2E+01	1.8E+01	10	38	6.71	28.19
1.8E+01	2.6E+01	13	51	8.72	21.48
2.6E+01	3.8E+01	6	57	4.03	12.75
3.8E+01	5.6E+01	5	62	3.36	8.72
5.6E+01	8.3E+01	4	66	2.68	5.37
8.3E+01	1.2E+02	1	67	0.67	2.68
1.2E+02	1.8E+02	2	69	1.34	2.01
1.8E+02	2.6E+02	0	69	0.00	0.67
2.6E+02	3.8E+02	1	70	0.67	0.67

## HISTOGRAM FOR COLUMN 18 ( scu)

```

1.0E+01 XXXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXX
2.0E+01 XXXXXXXXXXXX
3.0E+01 XXXX
5.0E+01 XXX
7.0E+01 XXX
1.0E+02 X
1.5E+02 X
2.0E+02
3.0E+02 X

```

N	L	H	B	T	G	ANALYTICAL VALUES
1	78	0	0	0	0	70
0.67	52.35			0.00	0.00	

MAXIMUM = 3.00000E+02  
 MINIMUM = 1.00000E+01  
 GEOMETRIC MEAN = 1.94610E+01  
 GEOMETRIC DEVIATION = 2.21694E+00

## TITLE

Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 19 ( sla)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
3.8E+01	5.6E+01	0	0	0.00	99.33
5.6E+01	8.3E+01	0	0	0.00	99.33
8.3E+01	1.2E+02	1	1	0.67	99.33
1.2E+02	1.8E+02	0	1	0.00	98.66
1.8E+02	2.6E+02	1	2	0.67	98.66
2.6E+02	3.8E+02	0	2	0.00	97.99
3.8E+02	5.6E+02	2	4	1.34	97.99
5.6E+02	8.3E+02	8	12	5.37	96.64
8.3E+02	1.2E+03	5	17	3.36	91.28
1.2E+03	1.8E+03	6	23	4.03	87.92
1.8E+03	2.6E+03	18	41	12.08	83.89

## HISTOGRAM FOR COLUMN 19 ( sla)

```

1.0E+02 X
1.5E+02
2.0E+02 X
3.0E+02
5.0E+02 X
7.0E+02 XXXX
1.0E+03 XXX
1.5E+03 XXXX
2.0E+03 XXXXXXXXXX

```

N	L	H	B	T	G	ANALYTICAL VALUES
1	0	0	0	0	107	41
0.67	0.00			0.00	71.81	

MAXIMUM = 2.00000E+03  
 MINIMUM = 1.00000E+02  
 GEOMETRIC MEAN = 1.17918E+03  
 GEOMETRIC DEVIATION = 1.97008E+00

TITLE  
Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 20 ( smo)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E+00	1.2E+01	22	22	14.77	38.93
1.2E+01	1.8E+01	20	42	13.42	24.16
1.8E+01	2.6E+01	9	51	6.04	10.74
2.6E+01	3.8E+01	4	55	2.68	4.70
3.8E+01	5.6E+01	1	56	0.67	2.01
5.6E+01	8.3E+01	1	57	0.67	1.34
8.3E+01	1.2E+02	1	58	0.67	0.67

## HISTOGRAM FOR COLUMN 20 ( smo)

1.0E+01 XXXXXXXXXXXXXXXX  
 1.5E+01 XXXXXXXXXXXXXXXX  
 2.0E+01 XXXXXXXX  
 3.0E+01 XXX  
 5.0E+01 X  
 7.0E+01 X  
 1.0E+02 X

N	L	H	B	T	G	ANALYTICAL VALUES
90	1	0	0	0	0	58
60.40	0.67			0.00	0.00	

MAXIMUM = 1.00000E+02  
 MINIMUM = 1.00000E+01  
 GEOMETRIC MEAN = 1.52827E+01  
 GEOMETRIC DEVIATION = 1.63229E+00

TITLE  
Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 21 ( snb)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
3.8E+01	5.6E+01	7	7	4.70	97.99
5.6E+01	8.3E+01	4	11	2.68	93.29
8.3E+01	1.2E+02	17	28	11.41	90.60
1.2E+02	1.8E+02	9	37	6.04	79.19
1.8E+02	2.6E+02	33	70	22.15	73.15
2.6E+02	3.8E+02	31	101	20.81	51.01
3.8E+02	5.6E+02	31	132	20.81	30.20
5.6E+02	8.3E+02	9	141	6.04	9.40
8.3E+02	1.2E+03	3	144	2.01	3.36
1.2E+03	1.8E+03	0	144	0.00	1.34
1.8E+03	2.6E+03	1	145	0.67	1.34
2.6E+03	3.8E+03	1	146	0.67	0.67

## HISTOGRAM FOR COLUMN 21 ( snb)

```

5.0E+01 XXXXX
7.0E+01 XXX
1.0E+02 XXXXXXXXXX
1.5E+02 XXXXXX
2.0E+02 XXXXXXXXXXXXXXXXXX
3.0E+02 XXXXXXXXXXXXXXXXXX
5.0E+02 XXXXXXXXXXXXXXXXXX
7.0E+02 XXXXXX
1.0E+03 XX
1.5E+03
2.0E+03 X
3.0E+03 X

```

N	L	H	B	T	G	ANALYTICAL VALUES
2	1	0	0	0	0	146
1.34	0.67			0.00	0.00	

MAXIMUM = 3.00000E+03  
 MINIMUM = 5.00000E+01  
 GEOMETRIC MEAN = 2.52121E+02  
 GEOMETRIC DEVIATION = 2.14648E+00

TITLE  
Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 22 ( sni)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E+00	1.2E+01	7	7	4.70	25.50
1.2E+01	1.8E+01	9	16	6.04	20.81
1.8E+01	2.6E+01	5	21	3.36	14.77
2.6E+01	3.8E+01	11	32	7.38	11.41
3.8E+01	5.6E+01	4	36	2.68	4.03
5.6E+01	8.3E+01	1	37	0.67	1.34
8.3E+01	1.2E+02	0	37	0.00	0.67
1.2E+02	1.8E+02	0	37	0.00	0.67
1.8E+02	2.6E+02	0	37	0.00	0.67
2.6E+02	3.8E+02	0	37	0.00	0.67
3.8E+02	5.6E+02	0	37	0.00	0.67
5.6E+02	8.3E+02	1	38	0.67	0.67

## HISTOGRAM FOR COLUMN 22 ( sni)

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

N	L	H	B	T	G	ANALYTICAL VALUES
111	0	0	0	0	0	38
74.50	0.00			0.00	0.00	

MAXIMUM = 7.00000E+02  
 MINIMUM = 1.00000E+01  
 GEOMETRIC MEAN = 2.31100E+01  
 GEOMETRIC DEVIATION = 2.18828E+00

## TITLE

Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 23 ( spb)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E+01	2.6E+01	13	13	8.72	89.93
2.6E+01	3.8E+01	12	25	8.05	81.21
3.8E+01	5.6E+01	40	65	26.85	73.15
5.6E+01	8.3E+01	31	96	20.81	46.31
8.3E+01	1.2E+02	24	120	16.11	25.50
1.2E+02	1.8E+02	3	123	2.01	9.40
1.8E+02	2.6E+02	4	127	2.68	7.38
2.6E+02	3.8E+02	3	130	2.01	4.70
3.8E+02	5.6E+02	1	131	0.67	2.68
5.6E+02	8.3E+02	0	131	0.00	2.01
8.3E+02	1.2E+03	1	132	0.67	2.01
1.2E+03	1.8E+03	1	133	0.67	1.34
1.8E+03	2.6E+03	1	134	0.67	0.67

## HISTOGRAM FOR COLUMN 23 ( spb)

```

2.0E+01 XXXXXXXX
3.0E+01 XXXXXXXX
5.0E+01 XXXXXXXXXXXXXXXXXXXXXXXX
7.0E+01 XXXXXXXXXXXXXXXXXXXXXXXX
1.0E+02 XXXXXXXXXXXXXXXXXXXXXXXX
1.5E+02 XX
2.0E+02 XXX
3.0E+02 XX
5.0E+02 X
7.0E+02
1.0E+03 X
1.5E+03 X
2.0E+03 X

```

N	L	H	B	T	G	ANALYTICAL VALUES
7	8	0	0	0	0	134
4.70	5.37			0.00	0.00	

MAXIMUM = 2.00000E+03  
 MINIMUM = 2.00000E+01  
 GEOMETRIC MEAN = 6.52296E+01  
 GEOMETRIC DEVIATION = 2.17187E+00



## TITLE

Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 25 ( ssn)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E+01	2.6E+01	4	4	2.68	85.91
2.6E+01	3.8E+01	7	11	4.70	83.22
3.8E+01	5.6E+01	6	17	4.03	78.52
5.6E+01	8.3E+01	4	21	2.68	74.50
8.3E+01	1.2E+02	13	34	8.72	71.81
1.2E+02	1.8E+02	15	49	10.07	63.09
1.8E+02	2.6E+02	25	74	16.78	53.02
2.6E+02	3.8E+02	12	86	8.05	36.24
3.8E+02	5.6E+02	13	99	8.72	28.19
5.6E+02	8.3E+02	6	105	4.03	19.46
8.3E+02	1.2E+03	4	109	2.68	15.44
1.2E+03	1.8E+03	6	115	4.03	12.75
1.8E+03	2.6E+03	6	121	4.03	8.72
2.6E+03	3.8E+03	2	123	1.34	4.70
3.8E+03	5.6E+03	1	124	0.67	3.36

## HISTOGRAM FOR COLUMN 25 ( ssn)

```

2.0E+01 XXX
3.0E+01 XXXXX
5.0E+01 XXXX
7.0E+01 XXX
1.0E+02 XXXXXXXXX
1.5E+02 XXXXXXXXXX
2.0E+02 XXXXXXXXXXXXXXXX
3.0E+02 XXXXXXXXX
5.0E+02 XXXXXXXXXX
7.0E+02 XXXX
1.0E+03 XXX
1.5E+03 XXXX
2.0E+03 XXXX
3.0E+03 X
5.0E+03 X

```

N	L	H	B	T	G	ANALYTICAL VALUES
21	0	0	0	0	4	124
14.09	0.00			0.00		2.68

MAXIMUM = 5.00000E+03  
 MINIMUM = 2.00000E+01  
 GEOMETRIC MEAN = 2.29274E+02  
 GEOMETRIC DEVIATION = 3.36806E+00

## TITLE

Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 26 ( s s r )

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E+02	2.6E+02	0	0	0.00	2.01
2.6E+02	3.8E+02	2	2	1.34	2.01
3.8E+02	5.6E+02	1	3	0.67	0.67

## HISTOGRAM FOR COLUMN 26 ( s s r )

3.0E+02 X  
5.0E+02 X

N	L	H	B	T	G	ANALYTICAL VALUES
145	1	0	0	0	0	3
97.32	0.67			0.00		0.00

MAXIMUM = 5.00000E+02  
MINIMUM = 3.00000E+02  
GEOMETRIC MEAN = 3.55689E+02  
GEOMETRIC DEVIATION = 1.34302E+00

TITLE  
Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 27 ( sv)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E+01	2.6E+01	0	0	0.00	100.00
2.6E+01	3.8E+01	0	0	0.00	100.00
3.8E+01	5.6E+01	2	2	1.34	100.00
5.6E+01	8.3E+01	20	22	13.42	98.66
8.3E+01	1.2E+02	37	59	24.83	85.23
1.2E+02	1.8E+02	22	81	14.77	60.40
1.8E+02	2.6E+02	48	129	32.21	45.64
2.6E+02	3.8E+02	10	139	6.71	13.42
3.8E+02	5.6E+02	7	146	4.70	6.71
5.6E+02	8.3E+02	3	149	2.01	2.01

## HISTOGRAM FOR COLUMN 27 ( sv)

```

5.0E+01 X
7.0E+01 XXXXXXXXXXXXX
1.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.5E+02 XXXXXXXXXXXXXXXX
2.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
3.0E+02 XXXXXXXX
5.0E+02 XXXXX
7.0E+02 XX

```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	149
0.00	0.00			0.00	0.00	

MAXIMUM = 7.00000E+02  
 MINIMUM = 5.00000E+01  
 GEOMETRIC MEAN = 1.51362E+02  
 GEOMETRIC DEVIATION = 1.74784E+00

## TITLE

Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 28 ( SW)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
8.3E+01	1.2E+02	8	8	5.37	9.40
1.2E+02	1.8E+02	2	10	1.34	4.03
1.8E+02	2.6E+02	1	11	0.67	2.68
2.6E+02	3.8E+02	0	11	0.00	2.01
3.8E+02	5.6E+02	1	12	0.67	2.01
5.6E+02	8.3E+02	0	12	0.00	1.34
8.3E+02	1.2E+03	2	14	1.34	1.34

## HISTOGRAM FOR COLUMN 28 ( SW)

```

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

```

N	L	H	B	T	G	ANALYTICAL VALUES
129	6	0	0	0	0	14
86.58	4.03			0.00	0.00	

MAXIMUM = 1.00000E+03  
 MINIMUM = 1.00000E+02  
 GEOMETRIC MEAN = 1.73557E+02  
 GEOMETRIC DEVIATION = 2.37721E+00

TITLE  
Blue Nonmag Fraction

FREQUENCY TABLE FOR COLUMN 29 ( sy)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
1.8E+01	2.6E+01	0	0	0.00	100.00
2.6E+01	3.8E+01	1	1	0.67	100.00
3.8E+01	5.6E+01	0	1	0.00	99.33
5.6E+01	8.3E+01	2	3	1.34	99.33
8.3E+01	1.2E+02	2	5	1.34	97.99
1.2E+02	1.8E+02	5	10	3.36	96.64
1.8E+02	2.6E+02	10	20	6.71	93.29
2.6E+02	3.8E+02	4	24	2.68	86.58
3.8E+02	5.6E+02	21	45	14.09	83.89
5.6E+02	8.3E+02	15	60	10.07	69.80
8.3E+02	1.2E+03	33	93	22.15	59.73
1.2E+03	1.8E+03	19	112	12.75	37.58
1.8E+03	2.6E+03	23	135	15.44	24.83
2.6E+03	3.8E+03	8	143	5.37	9.40
3.8E+03	5.6E+03	6	149	4.03	4.03

HISTOGRAM FOR COLUMN 29 ( sy)

```

3.0E+01 X
5.0E+01
7.0E+01 X
1.0E+02 X
1.5E+02 XXX
2.0E+02 XXXXXX
3.0E+02 XXX
5.0E+02 XXXXXXXXXXXXXXXX
7.0E+02 XXXXXXXXXXXXXXXX
1.0E+03 XXXXXXXXXXXXXXXXXXXX
1.5E+03 XXXXXXXXXXXXXXXX
2.0E+03 XXXXXXXXXXXXXXXXXXXX
3.0E+03 XXXXX
5.0E+03 XXXX

```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	149
0.00	0.00			0.00	0.00	

MAXIMUM = 5.00000E+03  
 MINIMUM = 3.00000E+01  
 GEOMETRIC MEAN = 8.64815E+02  
 GEOMETRIC DEVIATION = 2.59855E+00

## TITLE

Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 30 ( szn)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
3.8E+02	5.6E+02	2	2	1.34	4.03
5.6E+02	8.3E+02	3	5	2.01	2.68
8.3E+02	1.2E+03	0	5	0.00	0.67
1.2E+03	1.8E+03	1	6	0.67	0.67

## HISTOGRAM FOR COLUMN 30 ( szn)

5.0E+02 X  
7.0E+02 XX  
1.0E+03  
1.5E+03 X

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER	UPPER				
3.8E+02	5.6E+02	2	2	1.34	4.03
5.6E+02	8.3E+02	3	5	2.01	2.68
8.3E+02	1.2E+03	0	5	0.00	0.67
1.2E+03	1.8E+03	1	6	0.67	0.67

N 142  
95.30 0.67

H 0  
B 0

T 0  
0.00

G 0  
0.00

ANALYTICAL  
VALUES  
6

MAXIMUM = 1.50000E+03  
MINIMUM = 5.00000E+02  
GEOMETRIC MEAN = 7.10484E+02  
GEOMETRIC DEVIATION = 1.49405E+00

## TITLE

Blue Nonmag Fraction

## FREQUENCY TABLE FOR COLUMN 31 ( szr )

LIMITS		FREQ	FREQ	PERCENT	PERCENT
LOWER	UPPER	CUM	CUM	FREQ	FREQ CUM
1.8E+01	2.6E+01	0	0	0.00	100.00
2.6E+01	3.8E+01	0	0	0.00	100.00
3.8E+01	5.6E+01	0	0	0.00	100.00
5.6E+01	8.3E+01	0	0	0.00	100.00
8.3E+01	1.2E+02	0	0	0.00	100.00
1.2E+02	1.8E+02	0	0	0.00	100.00
1.8E+02	2.6E+02	1	1	0.67	100.00
2.6E+02	3.8E+02	1	2	0.67	99.33
3.8E+02	5.6E+02	0	2	0.00	98.66
5.6E+02	8.3E+02	0	2	0.00	98.66
8.3E+02	1.2E+03	3	5	2.01	98.66
1.2E+03	1.8E+03	7	12	4.70	96.64
1.8E+03	2.6E+03	26	38	17.45	91.95

## HISTOGRAM FOR COLUMN 31 ( szr )

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

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	111	38
0.00	0.00			0.00	74.50	

MAXIMUM = 2.00000E+03  
 MINIMUM = 2.00000E+02  
 GEOMETRIC MEAN = 1.60787E+03  
 GEOMETRIC DEVIATION = 1.64255E+00

## TITLE

Blue Nonmag Fraction

FREQUENCY TABLE FOR COLUMN 32 ( sth)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT CUM
LOWER	UPPER				
1.8E+02	2.6E+02	9	9	6.04	87.25
2.6E+02	3.8E+02	4	13	2.68	81.21
3.8E+02	5.6E+02	11	24	7.38	78.52
5.6E+02	8.3E+02	11	35	7.38	71.14
8.3E+02	1.2E+03	15	50	10.07	63.76
1.2E+03	1.8E+03	11	61	7.38	53.69
1.8E+03	2.6E+03	29	90	19.46	46.31
2.6E+03	3.8E+03	14	104	9.40	26.85
3.8E+03	5.6E+03	16	120	10.74	17.45

HISTOGRAM FOR COLUMN 32 ( sth)

```

2.0E+02 XXXXX
3.0E+02 XXX
5.0E+02 XXXXXX
7.0E+02 XXXXXX
1.0E+03 XXXXXX
1.5E+03 XXXXXX
2.0E+03 XXXXXXXXXXXXXXXX
3.0E+03 XXXXXXXX
5.0E+03 XXXXXXXXXXXXX

```

N	L	H	B	T	G	ANALYTICAL VALUES
14	5	0	0	0	10	120
9.40	3.36			0.00	6.71	

MAXIMUM = 5.00000E+03  
 MINIMUM = 2.00000E+02  
 GEOMETRIC MEAN = 1.33692E+03  
 GEOMETRIC DEVIATION = 2.49829E+00



TITLE  
Blue Nonmag Fraction

IN THE COMPUTATIONS PERFORMED TO PRODUCE THE FOLLOWING TABLE OF GEOMETRIC MEANS AND DEVIATIONS, ALL ELEMENTS ARE IGNORED WHERE ONE OR MORE OF THE UNQUALIFIED DATA VALUES IS LESS THAN THE ANALYTICAL LIMIT OF DETECTION SPECIFIED ON INPUT OR WHERE ANY DATA VALUES ARE QUALIFIED WITH THE G (GREATER THAN) CODE. DATA VALUES QUALIFIED WITH B OR H ARE NOT USED IN THE COMPUTATIONS. WHERE NONE OF THE DATA VALUES FOR AN ELEMENT ARE QUALIFIED THE MEAN AND DEVIATION SHOULD BE THE SAME AS THOSE GIVEN IN THE PRECEDING SECTION. WHERE DATA ARE QUALIFIED WITH THE CODES N, L, OR T, THE ESTIMATES OF GEOMETRIC MEAN AND DEVIATION ARE BASED ON A METHOD BY A. J. COHEN FOR TREATING CENSORED DISTRIBUTIONS. THE APPLICATION OF THIS METHOD TO GEOCHEMICAL PROBLEMS IS DESCRIBED IN USGS PROFESSIONAL PAPER 574-B. THE ESTIMATES ARE UNBIASED IN A STRICT SENSE ONLY WHERE THE DATA ARE DERIVED FROM A LOGNORMAL PARENT POPULATION, BUT EXPERIMENTS HAVE SHOWN THAT LARGE DEPARTURES FROM THIS REQUIREMENT MAY NOT GREATLY INVALIDATE THE RESULTS ACCEPTANCE AND USE OF THE ESTIMATES, HOWEVER, IS THE RESPONSIBILITY OF THE INDIVIDUAL.

ELEMENT	N	L	H	B	T	G	ANALYTICAL VALUES
sfe%	0	0	0	0	0	0	149
smg%	0	0	0	0	0	0	149
sca%	0	0	0	0	0	0	149
stix%	0	0	0	0	0	110	39
smn	0	0	0	0	0	2	147
sag	143	0	0	0	0	0	6
sb	13	98	0	0	0	0	38
sba	24	0	0	0	0	1	124
sbe	26	0	0	0	0	0	123
sbi	141	2	0	0	0	0	6
sco	46	0	0	0	0	0	103
scr	1	0	0	0	0	0	148
scu	1	78	0	0	0	0	70
sla	1	0	0	0	0	107	41
sno	90	1	0	0	0	0	58
snb	2	1	0	0	0	0	146
snj	111	0	0	0	0	0	38
spb	7	8	0	0	0	0	134
ssn	21	0	0	0	0	4	124
ssr	145	1	0	0	0	0	3
sv	0	0	0	0	0	0	149
sw	129	6	0	0	0	0	14
sy	0	0	0	0	0	0	149
szn	142	1	0	0	0	0	6
szr	0	0	0	0	0	111	38
sth	14	5	0	0	0	10	120

## TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
sfez	16.341358	1.57	149 SAMPLES AND 149 ANALYTICAL VALUES.
smgz	0.345692	2.16	149 SAMPLES AND 149 ANALYTICAL VALUES.
scaz	0.613388	2.12	149 SAMPLES AND 149 ANALYTICAL VALUES.
stiz	*****	*****	110 GREATER THAN VALUES. NO COMPUTATIONS.
smn	*****	*****	2 GREATER THAN VALUES. NO COMPUTATIONS.
sag	0.005136	18.34	143 NOT DETECTED, LESS THAN, OR TRACE VALUES.
sb	11.607636	1.84	111 NOT DETECTED, LESS THAN, OR TRACE VALUES.
sba	*****	*****	1 GREATER THAN VALUES. NO COMPUTATIONS.
sbe	8.250983	6.17	26 NOT DETECTED, LESS THAN, OR TRACE VALUES.
sbi	0.011993	65.93	143 NOT DETECTED, LESS THAN, OR TRACE VALUES.
sco	14.589530	2.56	46 NOT DETECTED, LESS THAN, OR TRACE VALUES.
scr	94.928263	2.59	1 NOT DETECTED, LESS THAN, OR TRACE VALUES.
scu	7.161620	3.39	79 NOT DETECTED, LESS THAN, OR TRACE VALUES.
sla	*****	*****	107 GREATER THAN VALUES. NO COMPUTATIONS.
sno	6.436763	2.41	91 NOT DETECTED, LESS THAN, OR TRACE VALUES.
snb	241.369993	2.26	3 NOT DETECTED, LESS THAN, OR TRACE VALUES.
snf	2.772848	5.32	111 NOT DETECTED, LESS THAN, OR TRACE VALUES.
spb	54.758723	2.49	15 NOT DETECTED, LESS THAN, OR TRACE VALUES.
ssn	*****	*****	4 GREATER THAN VALUES. NO COMPUTATIONS.
ssr	5.016599	5.72	146 NOT DETECTED, LESS THAN, OR TRACE VALUES.
sv	151.362288	1.75	149 SAMPLES AND 149 ANALYTICAL VALUES.
sw	173.598429	2.38	135 NOT DETECTED, LESS THAN, OR TRACE VALUES.
sy	864.815399	2.60	149 SAMPLES AND 149 ANALYTICAL VALUES.
szn	30.554368	4.27	143 NOT DETECTED, LESS THAN, OR TRACE VALUES.
szr	*****	*****	111 GREATER THAN VALUES. NO COMPUTATIONS.
sth	*****	*****	10 GREATER THAN VALUES. NO COMPUTATIONS.
			6 REPORTED VALUES.
			38 REPORTED VALUES.
			123 REPORTED VALUES.
			6 REPORTED VALUES.
			103 REPORTED VALUES.
			148 REPORTED VALUES.
			70 REPORTED VALUES.
			58 REPORTED VALUES.
			146 REPORTED VALUES.
			38 REPORTED VALUES.
			134 REPORTED VALUES.
			3 REPORTED VALUES.
			14 REPORTED VALUES.
			6 REPORTED VALUES.

# Explanation of Formation Symbols Used in Table 7

THS	Hot springs deposits (Tertiary)
TVN	Quartz veins (Tertiary)
TPR	Rhyolite porphyry dikes and stocks (Eocene)
TA	Mafic dikes (Eocene)
TMGP	Medium- to coarse-grained pink syenogranite (Eocene)
TMG	Medium-grained gray monzogranite (Eocene)
TPMG	Porphyritic, fine- to medium-grained gray monzogranite (Eocene)
TGP	Fine-grained granophyre (Eocene)
TW	White quartz porphyry (Eocene)
TC	Volcaniclastic conglomerate to shale (Eocene)
TV	Rhyolitic volcanic rocks (Eocene)
TF	Rhyolite lava flows and domes (Eocene)
KG	Granite to granodiorite (Cretaceous)
YGN	Granodiorite gneiss (Precambrian Y)
YAM	Amphibolite (Precambrian Y)
YAGN	Granite augen gneiss (Precambrian Y)
YQ	Quartzite (Precambrian Y)
YQS	Quartz schist (Precambrian Y)
YF	Iron formation (Precambrian Y)
FRDK	Unknown

Table 7.--Analytical data for Blue Joint rocks

## ANALYTICAL DATA FOR BLUE JOINT ROCKS

date 6/ 9/81

SAMPLE	FORMATION	LAT	LONG	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn	B	Be	Co
98B005A	YQ	45 36 28N	114 21 14W	0.50	0.20	0.05L	0.050	30	15	200	5 N
98B006A	YQ	45 35 59N	114 20 38W	1.00	0.20	0.05	0.100	50	10	500	5
98B018A	TMG	45 41 52N	114 25 58W	2.00	0.10	0.10	0.100	150	10 L	200	5 N
98B024A	YQ	45 36 21N	114 23 9W	0.30	0.20	0.05L	0.020	15	10 L	100	5 N
98B031A	TPR	45 41 24N	114 29 27W	3.00	0.50	0.10	0.200	300	15	1000	7
98B047A	TGP	45 40 15N	114 25 8W	1.50	0.07	0.10	0.070	150	10 L	200	5 N
98B048A	TGP	45 40 47N	114 24 28W	1.50	0.07	0.10	0.070	200	10 L	200	5 N
98B050A	TPR	45 41 20N	114 25 8W	1.50	0.07	0.15	0.070	150	10 L	150	5 N
98B051A	TMG	45 40 47N	114 25 51W	1.50	0.07	0.15	0.070	200	10 L	150	5 N
98B052A1	TMG	45 41 16N	114 26 27W	1.50	0.10	0.15	0.100	150	10 L	500	5 N
98B052A2	TMG	45 41 16N	114 26 27W	1.50	0.07	0.10	0.100	100	10 L	300	5 N
98B052A2	TMG	45 41 16N	114 26 27W	1.00	0.05	0.10	0.070	100	10 L	150	5 N
98B053A1	TMG	45 41 16N	114 26 23W	1.50	0.07	0.10	0.070	100	10 L	150	5 N
98B054A	YAM	45 37 33N	114 31 40W	7.00	2.00	2.00	0.500	700	10	500	30
98B055A	YAM	45 37 44N	114 31 33W	7.00	3.00	3.00	0.700	1000	10 L	500	50
98B056A	YQ	45 37 51N	114 31 12W	3.00	0.50	0.10	0.200	100	10	500	5
98B057A	YQ	45 37 55N	114 31 8W	0.30	0.10	0.05L	0.100	50	50	1500	5 N
98B058A	YQ	45 38 2N	114 31 4W	0.50	0.15	0.05	0.050	50	10 L	700	5 N
98B059A	TPMG	45 37 4N	114 27 50W	3.00	0.70	0.50	0.200	500	10 L	1000	5
98B060A	TPMG	45 36 32N	114 28 40W	2.00	0.30	0.70	0.300	300	10 L	700	5
98B061A	TPR	45 36 18N	114 29 13W	1.50	0.10	0.20	0.100	300	10 L	700	5 N
98B061B	TA	45 36 18N	114 29 13W	5.00	1.00	1.00	0.700	300	10 L	700	20
98B062A	TPMG	45 36 3N	114 29 34W	2.00	0.20	0.30	0.200	300	10 L	700	5 N
98B063A	TPR	45 35 45N	114 29 45W	2.00	0.10	0.15	0.100	150	10 L	500	5 N
98B064A	TPMG	45 35 24N	114 30 10W	2.00	0.50	1.00	0.200	500	10 L	1500	5 N
98B065A	TMG	45 34 26N	114 27 14W	1.50	0.20	0.50	0.100	200	10 L	500	5 N
98B066A	TPMG	45 34 37N	114 27 3W	1.00	0.10	0.30	0.070	200	10 L	150	5 N
98B067A	TPMG	45 34 51N	114 26 45W	1.50	0.15	0.30	0.100	200	10 L	70	5 N
98B069A	YQ	45 35 31N	114 25 44W	1.50	0.20	0.10	0.100	150	10 L	700	5
98B070A	YQ	45 35 56N	114 25 1W	1.00	0.20	1.00	0.100	300	15	300	5 N
98B071A	YAGN	45 35 6N	114 20 52W	3.00	0.70	0.70	0.300	500	10 L	500	5 N
98B072A	YQ	45 35 45N	114 21 7W	3.00	0.50	0.07	0.300	300	20	1500	10
98B001A	TMGP	45 44 13N	114 25 58W	2.00	0.10	0.10	0.150	200	10 L	500	5 N
98B008A	TMGP	45 45 25N	114 25 15W	1.50	0.10	0.20	0.100	100	10 L	700	5 N
98B008B	TPR	45 45 25N	114 25 15W	3.00	0.10	0.50	0.150	200	10 L	2000	5 N
98B015A	YQ	45 44 13N	114 18 50W	5.00	0.70	0.10	0.300	200	20	500	15
98B016A	TMGP	45 44 9N	114 18 28W	3.00	0.50	0.15	0.200	200	10 L	1500	10
98B021A	TMGP	45 45 14N	114 17 45W	1.50	0.05	0.15	0.100	100	10 L	150	5 N
98B006A	TMGP	45 44 34N	114 26 31W	2.00	0.15	0.15	0.150	200	10 L	700	5 N
98B006B	TGP	45 44 34N	114 26 31W	3.00	0.20	0.10	0.150	300	10 L	700	5 N
98B013A	TV	45 42 17N	114 20 2W	1.50	0.30	0.07	0.150	200	10 L	1500	5 N
98B013B	TVN	45 42 17N	114 20 2W	10.00	0.10	0.20	0.150	500	10	2000	5 N
98B014A	TV	45 42 28N	114 20 2W	2.00	0.70	0.70	0.200	150	10 L	1500	7
98B017A	TV	45 43 26N	114 20 56W	3.00	1.00	0.15	0.200	300	10 L	2000	20
98B020A1	TV	45 42 43N	114 29 23W	2.00	0.30	0.50	0.200	200	15	1000	5
98B021A	TV	45 42 46N	114 29 20W	2.00	0.30	0.50	0.200	300	10	1500	5
98B022A	TV	45 42 57N	114 28 33W	1.50	0.10	0.10	0.100	200	10 L	300	5 N
98B025A	YQ	45 42 57N	114 25 44W	0.50	0.30	0.05L	0.050	150	10	700	5
98B029A	TMGP	45 45 14N	114 31 15W	1.50	0.15	0.07	0.100	150	10 L	700	5 N
98B032A	TMGP	45 45 25N	114 29 49W	1.50	0.20	0.20	0.100	150	10 L	1000	5 N

## ANALYTICAL DATA FOR BLUE JOINT ROCKS

date 6/ 9/81

SAMPLE	Cr	Cu	La	Mo	Nb	Ni	Pb	Sc	Sn	Sr	V	Y	Zr
98B005A	10	7	20 N	5 N	20 N	7	10 N	5 N	10 N	100 N	10	10 N	70
98B006A	15	5	20 N	5 N	20 N	7	10 N	5 N	10 N	100 N	20	10 L	150
98B018A	10 N	5	70	5 N	30	5 N	30	5 N	10	100 N	10 N	50	150
98B024A	10 L	5 L	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	50
98B031A	30	5	50	7	20 N	7	30	5	10 L	200	50	15	150
98B047A	10 N	5 L	150	5 N	30	5 N	20	5 N	10 L	100 N	10 N	50	150
98B048A	10 N	5 L	30	5 N	50	5 N	20	5 N	10 L	100 N	10 N	50	150
98B050A	10 N	5 N	50	5	50	5 N	30	5 N	15	100 N	10 N	50	100
98B051A	10 N	5 N	30	5 N	30	5 N	20	5 N	10 L	100 N	10 N	30	150
98B052A1	10 N	5 L	100	5 N	20	5 N	20	5 N	10 L	100 L	10 N	30	100
98B052A2	10 N	7	100	5 N	30	5 N	20	5 N	15	100 L	10 N	50	150
98B052A2	10 N	5	50	5 N	20	5 N	20	5 N	10	100 N	10 N	30	150
98B053A1	10 N	5 L	50	5 N	30	5 N	15	5 N	10 N	100 N	10 N	20	150
98B054A	150	10	50	5 N	20	5 N	10	20	10 N	500	200	70	200
98B055A	500	30	20 N	5 N	20 N	50	10 L	50	10 N	200	300	50	100
98B056A	30	5	30	30	20 N	7	10 L	7	10	100 N	50	20	100
98B057A	20	5	20 N	5 N	20 N	7	10 L	5 N	10 N	100 N	10 N	10	70
98B058A	10	5 L	20	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	70
98B059A	10 L	5 N	100	5	20 N	5 N	20	5 L	10 N	200	20	15	100
98B060A	10	5 L	20 N	5 N	20 L	5 N	20	5	10 N	200	30	15	200
98B061A	10 N	5 L	70	5 N	20 L	5 N	15	5 N	10 L	100 L	10 N	30	150
98B061B	100	5	70	5 N	20 L	20	10	15	10 N	300	100	30	150
98B062A	10 N	5 L	100	7	50	5 N	20	5 L	10	150	15	70	200
98B063A	10 N	5 L	150	5 N	20 L	5 N	30	5 N	10 L	100 L	10	50	100
98B064A	15	5 L	100	5 N	20 L	5 N	20	5 L	10 N	200	30	30	500
98B065A	10 L	5	20	10	20 N	5 N	30	5 L	10	150	15	20	100
98B066A	10 N	5 L	50	5 N	20 L	5 N	30	5 N	10 N	100 N	10 N	20	50
98B067A	10 N	5 L	20 N	5 N	20	5 N	30	5 N	10	100 N	10 N	30	150
98B069A	30	5 L	20	5 N	20 N	5	10	5 N	10 N	100	30	10	100
98B070A	15	5 L	20	5 N	20 N	5	10	5 N	10 L	100 N	10	10	70
98B071A	20	7	30	5	20 N	10	15	10	10 N	100	50	50	500
98B072A	50	5 L	20 N	5 L	20 L	15	10 N	15	10 N	100 L	50	50	200
98C001A	10	5	50	5 N	20 L	5 N	30	5 N	10	100 L	15	20	100
98C008A	10 L	5 L	100	5 N	20 L	5 N	20	5 N	10 N	100 L	15	20	150
98C008B	10 N	5	150	5 N	30	5 N	30	5 N	10	100 L	10 N	50	200
98C015A	100	20	50	5 N	20 N	20	15	20	10 L	100 N	150	15	150
98C016A	20	5 L	70	5 N	20 L	10	30	5	10	300	50	15	150
98C021A	10 N	5 L	50	5 N	30	5 N	30	5 N	10	100 N	50	50	150
98C006A	10	5 L	100	5 N	20	5 N	20	5 N	10 L	100	15	20	200
98C006B	10	5 N	100	5 N	20	5 N	30	5 N	10	100	20	30	150
98C013A	15	15	30	5 N	20 N	5 L	70	5 L	10	200	30	10	100
98C013B	10 N	10	20 N	5 N	20 N	5 N	10	15	10 N	100	15	20	100
98C014A	30	15	70	5 N	20 N	10	30	5	15	500	70	10 L	100
98C017A	100	10000	50	20	20 N	30	20000 G	10	10 N	300	100	20	100
98C020A1	20	5	50	5 N	20 N	5	30	5 L	10	200	30	10	100
98C021A	30	7	50	5	20 N	7	30	5 L	10	200	50	15	100
98C022A	10 N	5 L	50	5 N	20	5 N	20	5 N	10	100 N	10 N	30	100
98C025A	10	5 L	20 N	5 N	20 N	5	10 N	5 N	10 N	100 N	15	10 N	70
98C029A	10 L	5 N	30	5 N	20 L	5 N	30	5 N	10 N	100	10	20	100
98C032A	10 L	5 N	50	5 N	20 L	5 N	30	5 N	10 N	150	15	20	100

## ANALYTICAL DATA FOR BLUE JOINT ROCKS

date 6/ 9/81

SAMPLE	FORMATION	LAT	LONG	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn	B	Ba	Be	Co
9CH033A	TMGP	45 45 28N	114 28 58W	2.00	0.30	0.15	0.150	500	10 L	700	1.5	5 L
9CH034A	TMGP	45 45 21N	114 28 1W	5.00	1.50	1.50	0.500	1000	10	500	1.5	20
9CH035B	TPR	45 43 37N	114 25 19W	2.00	0.50	0.50	0.200	200	10 L	1500	1.5	7
9CH035C	TMGP	45 43 37N	114 25 19W	2.00	0.70	0.20	0.200	200	10 L	1500	1.5	10
9CH035D	YQ	45 43 37N	114 25 19W	1.50	0.50	0.20	0.150	150	10 L	1000	1.5	7
9CH036A	TMGP	45 44 2N	114 25 44W	1.50	0.20	0.10	0.050	100	10 L	200	2.0	5 N
9CH036B	YQ	45 44 2N	114 25 44W	1.00	0.30	0.05	0.070	50	10 L	300	1.0L	5
9CH036C	TMGP	45 44 2N	114 25 44W	2.00	0.15	0.20	0.100	200	10 L	500	2.0	5 N
9CH049A	TPR	45 43 4N	114 27 57W	1.50	0.10	0.20	0.100	150	10 L	300	3.0	5 N
9CH051A	TV	45 42 39N	114 28 19W	2.00	0.15	0.10	0.150	300	10 L	500	3.0	5 N
9CH052A	THS	45 42 28N	114 28 15W	0.70	0.10	0.50	0.050	200	10	100	10.0	5 N
9CH053A	TV	45 42 17N	114 28 12W	1.00	0.02	0.15	0.050	100	10	30	7.0	5 N
9CH054A	TV	45 41 56N	114 28 8W	1.50	0.30	0.50	0.200	300	10	1500	2.0	5 L
9CH054B	TPR	45 41 56N	114 28 8W	1.50	0.30	0.50	0.200	200	10	1000	1.5	5 L
9CH055A	TV	45 41 31N	114 27 57W	1.50	0.20	0.50	0.070	150	10	500	5.0	5 N
9CH057A	TW	45 39 39N	114 30 21W	1.50	0.20	0.05	0.150	200	10 L	2000	1.0	5 N
9CH058A	TW	45 39 46N	114 30 14W	1.00	0.07	0.05L	0.100	150	10 L	300	1.0	5 N
9CH059A	TW	45 39 57N	114 30 3W	1.00	0.07	0.05L	0.200	100	10 L	1500	1.0	5 L
9CH060A	THS	45 40 12N	114 30 0W	1.00	0.02	0.10	0.100	300	10 L	700	2.0	5 N
9CH061A	TV	45 40 15N	114 30 3W	0.50	0.02	0.10	0.100	50	10 L	500	2.0	5 N
9CH062A	TW	45 40 26N	114 30 3W	1.00	0.07	0.10	0.100	70	10 L	200	5.0	5 N
9CH063A	TF	45 40 40N	114 30 3W	2.00	0.30	0.50	0.200	200	10 L	1500	3.0	5 N
9CH064A	TF	45 41 59N	114 29 49W	3.00	0.20	0.30	0.200	500	10	1000	2.0	5 L
9CH065A	TV	45 42 10N	114 29 38W	2.00	0.30	0.10	0.200	300	10	700	2.0	5 L
9CH066A1	TF	45 41 56N	114 29 34W	3.00	0.50	0.70	0.200	500	10 L	1000	2.0	5 L
9CH067A	TF	45 41 34N	114 29 34W	3.00	0.30	0.50	0.200	300	10	2000	2.0	5 N
9CH068A	TV	45 41 45N	114 29 5W	1.00	0.05	0.50	0.150	150	10 L	1500	1.5	5 N
9CH068B	TF	45 41 45N	114 29 5W	2.00	0.05	0.30	0.300	200	10 L	1500	2.0	5 L
9CH070A	TV	45 41 34N	114 28 55W	1.50	0.30	0.70	0.150	150	10 L	700	2.0	5
9CH071A	TV	45 41 24N	114 28 55W	0.70	0.07	0.20	0.100	70	10	500	5.0	5 N
9CH072A	TV	45 41 34N	114 28 47W	2.00	0.07	0.30	0.200	50	10 L	1000	2.0	5 N
9CH073A	THS	45 41 24N	114 28 44W	0.70	0.10	0.30	0.050	200	50	500	5.0	5 N
9CH073A	TV	45 41 16N	114 27 57W	1.50	0.10	0.30	0.150	200	10 L	200	10.0	5 N
9CH073D	TVN	45 41 16N	114 27 57W	2.00	0.70	0.70	0.070	5000 G	10 L	2000	3.0	20
9CH076A	TF	45 40 44N	114 29 45W	2.00	0.20	0.50	0.150	300	10 L	700	2.0	5 L
9CH077A	TF	45 40 44N	114 29 20W	1.00	0.30	0.50	0.150	1000	10	700	2.0	5
9CH078A	TF	45 40 51N	114 29 5W	2.00	0.10	0.05	0.150	500	10 L	1500	2.0	5 L
9CH079A	TF	45 40 51N	114 28 58W	2.00	0.15	0.15	0.200	1000	10 L	3000	2.0	5
9CH080A	TF	45 41 52N	114 28 1W	2.00	0.30	0.20	0.200	300	10 L	1500	1.5	5 L
9CH082A	TV	45 41 45N	114 27 3W	1.00	0.02	0.10	0.050	200	15	30	7.0	5 N
9CH083A	TV	45 41 38N	114 26 52W	1.00	0.02	0.10	0.050	100	10	20	5.0	5 N
9CH084A	TV	45 41 34N	114 26 34W	0.70	0.02L	0.07	0.050	200	10 L	100	3.0	5 N
9CH085A	TMGP	45 41 42N	114 26 20W	1.50	0.05	0.10	0.050	150	10 L	100	5.0	5 N
9CH085B	TVN	45 41 42N	114 26 20W	0.50	0.02	0.05L	0.020	100	10 L	20	1.0	5 N
9CH086A	TW	45 40 22N	114 29 38W	2.00	0.20	0.07	0.150	300	10 L	500	5.0	5 N
9CH087A	TV	45 40 26N	114 29 9W	2.00	0.15	0.20	0.150	500	10 L	3000	2.0	7
9CH089A	TF	45 40 22N	114 28 33W	1.50	0.20	0.30	0.100	200	10	300	3.0	5 N
9CH090A	TF	45 40 19N	114 28 30W	1.00	0.20	0.30	0.070	500	10 L	1000	5.0	5 N
9CH091A	YQ	45 40 19N	114 28 12W	0.30	0.10	0.05L	0.030	15	10 L	100	1.0N	5 N
9CH092A	TF	45 40 40N	114 28 30W	2.00	0.30	0.10	0.150	200	10 L	700	2.0	5 N

## ANALYTICAL DATA FOR BLUE JOINT ROCKS

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SAMPLE	Cr	Cu	La	Mo	Nb	Ni	Pb	Sc	Sn	Sr	V	Y	Zr
9CH033A	10 N	10	70	5 N	20	5 N	20	5	10 L	150	15	30	500
9CH034A	30	30	50	5 N	20	15	10	10	10 N	500	130	50	1000
9CH035B	30	7	50	5 N	20 N	7	50	5	10	300	70	15	100
9CH035C	50	7	20	7	20 N	10	30	5	15	200	70	10	150
9CH035D	50	5	20	5 N	20 N	15	20	5	10	150	50	10	100
9CH036A	10	5 L	20	5 N	20 N	5 N	10	5 N	10 N	100 N	10 N	20	70
9CH036B	20	5 L	20 N	5 N	20 N	7	10 N	5 N	10 N	100 N	15	10	100
9CH036C	10 N	5 L	50	5 N	20	5 N	30	5 N	10	200	10	20	100
9CH049A	10 N	100	70	5 N	20	5 N	300	5 N	10	100 L	10 N	30	100
9CH051A	10 N	5 L	50	5 N	30	5 N	20	5 N	20	100 N	15	50	100
9CH052A	10 N	5 L	50	5 N	50	5 N	30	5 N	15	100 N	10 N	100	100
9CH053A	10 N	5	50	5 N	50	5 N	50	5 N	15	100 N	10 N	70	150
9CH054A	10 N	5 L	100	5 N	20 L	5 N	20	5 L	10 N	200	20	30	200
9CH054B	10 N	5 L	70	5 N	20 L	5 N	20	5 N	10 L	150	30	20	200
9CH055A	10 N	5 L	50	5 N	20 L	5 N	20	5 N	10	100	10 N	50	100
9CH057A	10	5 L	70	20	20 L	5 N	10	5 L	10 N	100 L	20	20	200
9CH058A	10 N	5 N	100	15	20 L	5 N	30	5 N	10 L	100 N	10 N	30	100
9CH059A	10 N	5 N	50	10	20 L	5 N	10 L	5 L	10 N	100 N	20	20	200
9CH060A	10 N	5 L	100	15	20	5 N	20	5 N	10 L	100 N	10 N	30	200
9CH061A	10 N	5 L	100	10	20	5 N	20	5 N	10 L	100 N	10 N	30	200
9CH062A	10 N	5 L	70	10	30	5 N	20	5 N	10 L	100 N	10 N	30	150
9CH063A	10	5 L	100	7	20	5 N	50	5 L	10	200	30	30	200
9CH064A	10 N	5	30	5 N	20 N	5	20	5	10 L	500	10 N	20	300
9CH065A	15	5 L	30	5 N	20 N	5	20	5 N	10 L	150	20	15	200
9CH066A1	10 N	5	20	5 L	20 N	5 N	20	5	10 L	500	10 N	20	200
9CH067A	10	5	50	5 N	20 N	5 N	30	5	10	500	15	20	200
9CH068A	10 N	5 L	100	5 N	20 L	5 N	20	5 L	10 L	200	10 L	30	300
9CH068B	10 N	5 L	70	5 N	20 L	5 N	20	5	10	200	10	20	300
9CH070A	15	5 L	50	5 L	20 L	5 N	20	5 L	10 N	500	30	20	150
9CH071A	10 N	5 L	100	5 N	30	5 N	20	5 N	10	100 N	10 N	30	200
9CH072A	10 N	5 L	70	5 N	20	7	20	5	10 L	150	10 N	30	300
9CH073A	10 N	5 L	50	5 N	50	5 N	20	5 N	10	100 N	10 N	50	150
9CH075A	10 L	7	70	5 N	30	5 N	15	5 L	10 N	100 L	30	70	150
9CH075D	10	20	200	30	20 L	10	50	5 N	10	100 L	15	100	150
9CH076A	10 N	5 L	70	5 N	20	5 N	50	5 N	10 L	200	20	30	200
9CH077A	10 L	5 L	50	5 N	20 L	5	30	5 L	10 L	300	20	20	100
9CH078A	10 L	5 L	50	7	20 L	5 N	10	5 L	15	100 L	20	20	150
9CH079A	10	5 L	70	5 N	20 L	5 N	20	5	10 L	200	30	50	200
9CH080A	10 L	5 L	100	5 N	20 L	5 N	30	5 N	10 L	150	30	20	150
9CH082A	10 N	5 L	30	5 N	50	5 N	30	5 N	15	100 N	10 N	50	150
9CH083A	10 N	5 N	20	5 N	50	5 N	30	5 N	10	100 N	10 N	30	150
9CH084A	10 N	5 L	30	7	50	5 N	30	5 N	10	100 N	10 N	50	100
9CH085A	10 N	5 N	70	5 N	30	5 N	30	5 N	10	100 N	10 N	50	150
9CH085B	10	5 N	20 N	5 N	20 L	7	10 N	5 N	10	100 N	10 N	10 N	70
9CH086A	10 L	5 L	70	5 N	30	5 N	10	5 N	10	100 N	10	50	200
9CH087A	10 L	5 L	50	7	20 N	7	15	5	15	200	30	30	200
9CH089A	10 N	5 L	50	5 N	20 L	5 N	20	5 N	10 L	100 L	15	30	100
9CH090A	10 L	5 L	50	5 N	50	5 N	20	5 N	15	300	10 N	50	200
9CH091A	10	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	50
9CH092A	10 L	5 L	150	5 N	20	5 N	30	5 N	10	100 N	30	50	150

## ANALYTICAL DATA FOR BLUE JOINT ROCKS

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SAMPLE	FORMATION	LAT	LONG	Fe(Z)	Mg(Z)	Ca(Z)	Ti(Z)	Mn	B	Ba	Be	Co
9CH094A	TV	45 42 17N	114 28 51W	3.00	0.50	0.15	0.200	300	10	1000	3.0	7
9CH095A	TV	45 41 42N	114 28 26W	1.00	0.02	0.15	0.050	150	15	20	5.0	5 N
9CH096A	TF	45 41 24N	114 28 4W	2.00	0.50	0.50	0.100	200	10 L	1000	1.5	5
9CH097A	TPR	45 42 17N	114 17 2W	1.50	0.20	0.10	0.070	100	10 L	300	3.0	5 N
9CH100A	TV	45 42 21N	114 19 29W	1.00	0.20	0.20	0.150	150	10 L	1500	5.0	5
9CH101A	TV	45 43 4N	114 27 57W	1.50	0.15	0.15	0.200	100	10 L	1000	5.0	5 N
9CH101B	TPR	45 43 4N	114 27 57W	1.50	0.10	0.20	0.150	200	10 L	500	5.0	5 N
9CH102A	TF	45 42 39N	114 26 56W	2.00	0.30	0.50	0.200	500	10 L	1000	2.0	5
9CH103A	TF	45 42 25N	114 26 38W	1.50	0.30	0.50	0.200	300	15	1000	1.5	5 N
9CH104A	TV	45 42 25N	114 26 20W	0.20	0.10	0.10	0.070	1000	10 L	1000	1.0	5 N
9CH105A	YQ	45 42 14N	114 25 58W	0.20	0.20	0.05L	0.010	30	10 L	50	1.0N	5 N
9CH106A	TGP	45 42 3N	114 25 30W	1.50	0.10	0.10	0.100	500	10 L	300	2.0	5 N
9CH108A	TV	45 43 4N	114 27 54W	1.00	0.20	0.10	0.150	150	10 L	300	3.0	5 N
9CH109A	TF	45 43 19N	114 27 50W	2.00	0.30	1.00	0.300	200	10	1500	1.5	7
9CH110A	KG	45 43 40N	114 27 39W	3.00	0.70	1.00	0.300	300	10 L	2000	2.0	10
9CH111A	TMGP	45 43 55N	114 27 36W	1.50	0.50	0.50	0.150	300	10 L	1000	3.0	5
9CH112A	TMGP	45 44 2N	114 27 32W	1.00	0.10	0.10	0.100	300	10 L	500	3.0	5 N
9CH114A	YQ	45 43 11N	114 24 43W	0.50	0.20	0.05L	0.050	20	10 L	150	1.0N	5 N
9CH115A	YQ	45 43 19N	114 24 43W	0.20	0.20	0.05L	0.020	10	10 L	70	1.0N	5 N
9CH116A	YQ	45 43 26N	114 24 43W	0.30	0.20	0.05L	0.020	50	10	150	1.0L	5 N
9CH116B	YQ	45 43 26N	114 24 43W	1.50	0.70	0.30	0.200	300	10	1000	3.0	5
9CH116C	TPR	45 43 26N	114 24 43W	1.50	0.70	0.20	0.100	200	10 L	700	1.5	5
9CH117A	YQ	45 43 33N	114 24 43W	0.70	0.20	0.05	0.070	50	10 L	700	1.0N	5 N
9CH118A	TPR	45 43 51N	114 24 50W	1.50	0.50	0.10	0.200	300	10 L	1000	1.5	5
9CH119A	TPR	45 43 58N	114 25 8W	1.50	0.50	10.00	0.200	200	10 L	1000	2.0	5
9CH120A	TMGP	45 44 6N	114 25 8W	1.00	0.05	0.10	0.030	70	10 L	20	5.0	5 N
9CH122A	TPR	45 43 1N	114 24 17W	2.00	0.50	0.15	0.200	500	15	700	3.0	5
9CH123A	TPR	45 43 4N	114 23 27W	2.00	0.50	0.20	0.200	300	15	1000	2.0	5
9CH124A	YQ	45 43 26N	114 23 27W	0.50	0.07	0.05	0.050	150	10 L	300	1.0L	5 N
9CH126A	TPR	45 44 2N	114 23 20W	2.00	0.20	0.10	0.150	200	10 L	700	3.0	5 N
9CH127A	TMGP	45 44 6N	114 23 24W	1.50	0.20	0.10	0.100	700	10 L	500	2.0	5 N
9CH128A	TMGP	45 44 34N	114 23 27W	2.00	0.10	0.07	0.100	150	10 L	700	2.0	5 N
9CH129A	TMGP	45 44 52N	114 23 31W	2.00	0.20	0.10	0.150	300	10 L	700	3.0	5 N
9CH130A1	TV	45 42 43N	114 29 23W	2.00	0.20	0.50	0.200	300	10	1500	3.0	5
9CH130A2	TV	45 42 43N	114 29 23W	3.00	0.30	0.50	0.200	300	10	1000	2.0	7
9CH130A2	TV	45 42 43N	114 29 23W	3.00	0.50	0.30	0.200	300	10 L	1000	2.0	7
9CH131A1	TF	45 41 56N	114 29 34W	5.00	0.50	0.70	0.200	500	10 L	1000	2.0	5 L
9CH131A2	TF	45 41 56N	114 29 34W	3.00	0.50	0.70	0.200	300	10 L	1000	2.0	5 L
9CH131A2	TF	45 41 56N	114 29 34W	3.00	0.50	0.70	0.200	300	10 L	1000	2.0	5 L
9CH132A1	TPR	45 43 4N	114 27 57W	1.50	0.10	0.20	0.100	200	10 L	300	5.0	5
9CH132A2	TPR	45 43 4N	114 27 57W	1.50	0.15	0.15	0.100	300	10 L	300	3.0	5 N
9CH132A2	TPR	45 43 4N	114 27 57W	1.50	0.10	0.15	0.100	200	10 L	300	5.0	5 N
9CH133A1	TPR	45 43 4N	114 24 7W	2.00	0.50	0.20	0.200	300	10	1000	3.0	5
9CH133A2	TPR	45 43 4N	114 24 7W	2.00	0.50	0.20	0.200	300	10	700	3.0	5
9CH133A2	TPR	45 43 4N	114 24 7W	2.00	0.50	0.20	0.200	300	10	1000	2.0	5
9CH134A1	TV	45 41 38N	114 27 3W	1.00	0.02	0.10	0.050	200	15	20	7.0	5 N
9CH134A2	TV	45 41 38N	114 27 3W	1.00	0.02	0.10	0.070	200	15	50	7.0	5 N
9CH134A2	TV	45 41 38N	114 27 3W	1.00	0.02	0.10	0.050	150	15	20	10.0	5 N
9CH135A1	TMGP	45 43 40N	114 27 39W	2.00	0.50	0.50	0.300	200	10 L	1500	2.0	7
9CH135A2	TMGP	45 43 40N	114 27 39W	2.00	0.70	0.70	0.200	200	10 L	2000	2.0	10



## ANALYTICAL DATA FOR BLUE JOINT ROCKS

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SAMPLE	Cr	Cu	La	Mo	Nb	Ni	Pb	Sc	Sn	Sr	V	Y	Zr
9CH094A	50	7	50	5 N	20 N	10	30	5	15	150	50	15	200
9CH095A	10 N	5 L	50	5 N	50	5 N	50	5 N	15	100 N	10 N	70	100
9CH096A	10 L	7	150	5 N	20 N	5 N	30	5 L	10 N	200	30	20	100
9CH097A	10 L	5 N	150	5 N	20	5 N	30	5 N	10	100 L	10 N	50	150
9CH100A	15	5	70	5 N	30	5 N	30	5 L	10	300	20	50	200
9CH101A	20	5	150	15	50	5 N	30	5	20	100 L	20	50	300
9CH101B	10 L	5 L	70	5	30	5	20	5 N	10	100 L	10	30	200
9CH102A	10 N	5 L	100	5 N	20 L	5 N	30	5 L	10 N	200	30	20	200
9CH103A	10 N	5 L	70	7	20 L	5 N	30	5 L	10	200	30	20	150
9CH104A	10 N	5 N	20 N	5 N	20 L	5 N	10	5 N	10 N	150	10 N	10	100
9CH105A	10 N	5 L	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	30
9CH106A	10 N	5 N	50	5 N	20	5 N	15	5 N	10 L	100 L	10 N	30	150
9CH108A	10	5 L	30	5 N	20 L	5 N	10	5 N	10	100 N	15	30	200
9CH109A	20	5 L	50	5 N	20 N	5	20	5 L	10 L	300	50	10	200
9CH110A	70	5 L	20 N	5 N	20 N	30	30	7	10 N	700	100	15	150
9CH111A	30	5 L	30	5 N	20 N	7	20	5 L	10 N	300	30	10	100
9CH112A	10 N	5 N	20	5 N	20	5 N	15	5 N	10 L	100 N	10	20	100
9CH114A	10 L	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	70
9CH115A	10 N	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	50
9CH116A	10 N	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	70
9CH116B	30	5 L	30	5 N	20 N	10	20	5 L	10 L	200	50	10	100
9CH116C	20	5 L	30	5 N	20 N	10	20	5 L	10 N	200	50	10 N	100
9CH117A	10 L	5 N	20	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10	10	100
9CH118A	20	5 L	30	5 N	20 N	7	20	5 L	10 N	200	30	10	150
9CH119A	20	5 L	70	5 N	20 N	5	15	5 L	10 L	300	50	30	150
9CH120A	10 N	5 N	20 N	5 N	20	5 N	50	5 N	10 N	100 N	10 N	50	100
9CH122A	15	5 L	20	5 N	20 N	5	15	5 N	10 L	150	30	10	100
9CH123A	15	5 L	50	5 N	20 N	5	20	5 L	10 L	200	30	15	200
9CH124A	10	5 L	20	5 N	20 N	5 N	10 N	5 L	10 N	100 L	10	10	100
9CH126A	10 N	5 L	20	5 N	30	5 N	20	5 L	10	100	15	20	200
9CH127A	10	5 L	70	5	20	5	20	5 N	10	100 L	10	50	100
9CH128A	10 N	5 L	70	5 N	20	5 N	20	5 L	10 L	100 L	10	20	150
9CH129A	10 L	5 L	30	5 N	20	5 N	30	5 N	10	100	15	20	100
9CH130A1	30	5	50	5 N	20	5	30	5	15	200	50	20	100
9CH130A2	30	5	50	5 N	20 N	7	30	5	15	200	50	15	150
9CH130A2	20	5	50	5 N	20 N	7	30	5	15	200	50	10	100
9CH131A1	10 N	5	50	5 N	20 N	5 N	20	5	10 L	500	10 N	20	300
9CH131A2	10 N	5	50	5 N	20 N	5 N	20	5	10 L	500	10 N	20	200
9CH131A2	10 N	5	30	5 N	20 N	5 N	20	5	10 L	500	10 N	20	200
9CH132A1	10 L	5 L	70	5 L	20	5	30	5 N	10	100 N	10	30	100
9CH132A2	15	5 L	70	5 L	20	5	20	5 N	10	100 N	10	50	200
9CH132A2	10	5 L	70	5 N	30	5	30	5 N	10	100 N	10 N	30	150
9CH133A1	15	5 L	50	5 N	20 N	5	20	5 L	10	200	30	15	150
9CH133A2	15	5 L	30	5 N	20 N	5	30	5 L	10 L	200	30	10	200
9CH134A1	10 N	5 L	30	5 N	50	5 N	30	5 N	20	100 N	10 N	50	150
9CH134A2	10 N	5 L	30	5	50	5 N	30	5 N	15	100 N	10 N	50	150
9CH134A2	10 N	5 L	20	5 N	50	5 N	20	5 N	15	100 N	10 N	50	150
9CH135A1	50	5 L	30	5 N	20 N	20	50	5	10 L	500	50	10	100
9CH135A2	70	5 L	20	5 N	20 N	20	30	5	10	500	70	10	100

## ANALYTICAL DATA FOR BLUE JOINT ROCKS

date 6/ 9/81

SAMPLE	FORMATION	LAT	LONG	Fe(X)	Mg(X)	Ca(X)	Ti(X)	Mn	B	Ba	Be	Co
9CH135A2	TMGP	45 43 40N	114 27 39W	2.00	0.70	0.70	0.200	200	10 L	1500	2.0	10
9CH139A	TV	45 42 50N	114 26 13W	0.70	0.02L	0.20	0.100	100	10 L	200	3.0	S N
9CH140A	TV	45 42 54N	114 26 27W	1.50	0.02L	0.30	0.100	150	10 L	1500	2.0	S N
9CH142A	TV	45 43 26N	114 26 27W	1.50	0.50	0.07	0.150	200	10 L	700	1.5	S
9CH143A	TV	45 43 40N	114 26 20W	2.00	0.50	0.50	0.200	300	10 L	1500	1.5	S N
9CH144A	TMGP	45 43 37N	114 26 16W	0.50	0.03	0.07	0.030	20	10 L	23 N	3.0	S N
9CH145A	TV	45 43 48N	114 26 16W	2.00	0.50	0.10	0.150	700	10	1000	2.0	S
9CH146A	TMGP	45 43 51N	114 26 9W	0.50	0.05	0.10	0.050	20	10 L	50	5.0	S N
9CH147A	TMGP	45 43 51N	114 26 34W	1.50	0.10	0.15	0.100	100	10 L	300	2.0	S N
9CH149A	TMGP	45 44 2N	114 26 9W	0.50	0.05	0.10	0.070	20	10 L	100	2.0	S N
9CH150A	FRDK	45 43 58N	114 26 16W	1.50	0.03	0.20	0.100	500	10 L	1500	2.0	S N
9CH151A	TC	45 43 4N	114 27 25W	2.00	0.02	0.20	0.150	200	10 L	1000	3.0	S N
9CH152A1	TC	45 43 4N	114 27 25W	1.50	0.02	0.30	0.100	100	10 L	1000	3.0	S N
9CH152A2	TC	45 43 4N	114 27 25W	2.00	0.02	0.30	0.100	100	10 L	1000	3.0	S N
9CH152A2	TC	45 43 4N	114 27 25W	2.00	0.02	0.30	0.100	100	10 L	1000	3.0	S N
9CH153A	TC	45 43 1N	114 27 10W	2.00	0.15	0.50	0.150	100	10 L	500	5.0	S N
9CH155A	TV	45 43 22N	114 27 10W	1.00	0.02	0.05	0.050	100	10 L	200	2.0	S N
9CH156A	TMGP	45 43 37N	114 26 56W	2.00	0.15	0.10	0.150	200	10 L	300	3.0	S N
9CH156B	TPR	45 43 37N	114 26 56W	1.50	0.15	0.10	0.100	200	10 L	500	3.0	S N
9CH158A	TV	45 43 44N	114 27 7W	2.00	0.50	0.50	0.200	300	10	1500	2.0	S
9CH159A	TMGP	45 43 58N	114 27 7W	2.00	0.10	0.15	0.150	300	10 L	500	1.5	S N
9CH163A	TGP	45 42 39N	114 29 41W	2.00	0.70	0.30	0.150	300	10 L	1000	1.5	10
9CH164A1	TV	45 43 1N	114 28 58W	1.00	0.15	0.50	0.100	150	10 L	700	2.0	S N
9CH165A1	TV	45 43 1N	114 28 58W	1.50	0.20	0.30	0.150	300	10	700	1.5	S
9CH165A2	TV	45 43 1N	114 28 58W	1.50	0.20	0.50	0.150	300	10	1000	2.0	S L
9CH165A2	TV	45 43 1N	114 28 58W	1.50	0.20	0.50	0.150	300	10 L	1000	2.0	S N
9CH166A	YQ	45 43 11N	114 29 20W	1.50	0.50	0.05	0.100	300	20	700	1.0	10
9CH167A	TMGP	45 43 33N	114 29 41W	2.00	0.15	0.10	0.150	200	10 L	500	2.0	S N
9CH168A	TV	45 39 32N	114 30 14W	1.50	0.10	0.05L	0.100	100	10 L	700	3.0	S N
9CH169A	TV	45 39 32N	114 30 3W	1.00	0.10	0.05L	0.050	50	10 L	200	5.0	S N
9CH170A	TV	45 39 35N	114 29 56W	1.50	0.15	0.05	0.200	70	10	2000	2.0	S N
9CH172A	TV	45 40 1N	114 29 16W	0.50	0.03	0.05L	0.050	100	10 L	200	2.0	S N
9CH175A	TF	45 40 15N	114 28 40W	1.50	0.10	0.30	0.070	500	10 L	200	2.0	S L
9CH176B	TPR	45 43 4N	114 28 12W	1.00	0.10	0.20	0.070	150	10 L	200	0.3	S N
9CH177A	TA	45 39 39N	114 29 9W	5.00	2.00	2.00	0.500	500	10 L	1500	1.0	20
9CH178A	YQ	45 39 50N	114 28 51W	0.70	0.20	0.05L	0.030	70	10 L	70	1.0N	S N
9CH179A	TPR	45 46 33N	114 24 46W	1.50	0.20	0.10	0.100	200	10 L	1500	1.5	S N
9CH180A1	TPR	45 46 33N	114 24 46W	1.50	0.20	0.10	0.100	150	10 L	1500	1.5	S N
9CH180A2	TPR	45 46 33N	114 24 46W	1.00	0.20	0.10	0.100	200	10 L	1000	1.5	S N
9CH180A2	TPR	45 46 33N	114 24 46W	2.00	0.20	0.10	0.150	300	10 L	1000	1.5	S N
9CH181A	TPR	45 46 26N	114 25 8W	2.00	0.50	0.10	0.150	200	10 L	1000	1.0	S
9CH182A	YQ	45 46 8N	114 24 35W	3.00	1.00	0.10	0.200	200	10 L	300	1.5	S
9CH182B	TVN	45 46 8N	114 24 35W	0.70	0.20	0.07	0.050	100	10 L	100	1.0L	S N
9CH182C	TPR	45 46 8N	114 24 35W	1.00	0.50	0.15	0.150	200	10	1000	2.0	S N
9CH184A	TPR	45 45 28N	114 25 1W	2.00	0.07	0.10	0.100	300	10 L	1500	2.0	S N
9CH185A	TMGP	45 45 18N	114 24 57W	2.00	0.20	0.20	0.150	300	10 L	500	5.0	S N
9CH187A	TPR	45 46 4N	114 27 54W	2.00	0.10	0.10	0.100	200	10 L	700	2.0	S N
9CH188A	TPR	45 45 46N	114 28 4W	2.00	0.20	0.10	0.150	200	10 L	1000	1.5	S N
9CH189A	TPR	45 45 39N	114 28 12W	1.50	0.10	0.10	0.100	100	10 L	500	1.5	S N
9CH190A	TPR	45 45 43N	114 27 25W	1.50	0.10	0.10	0.100	200	10 L	700	1.5	S N

## ANALYTICAL DATA FOR BLUE JOINT ROCKS

date 6/ 9/81

SAMPLE	Cr	Cu	La	Mo	Nb	Ni	Pb	Sc	Sn	Sr	V	Y	Zr
9CH135A2	70	5 L	30	S N	20 N	20	30	S	10 L	500	70	10	100
9CH139A	10 N	5 L	150	S N	30	S N	20	S N	10 N	100 N	10 N	30	200
9CH140A	10 N	5 L	100	S N	20	S N	30	S N	10 N	100	10 N	50	200
9CH142A	20	5 L	20 N	S N	20 N	S	30	S L	10 N	150	30	10 N	100
9CH143A	10 L	5 L	100	S N	20 L	S N	20	S N	10 N	150	30	20	200
9CH144A	10 N	5 N	20 N	S N	30	S N	50	S N	10 L	100 N	10 N	50	150
9CH145A	15	5 L	50	S N	20 N	S	30	S N	10 N	100	20	10 L	100
9CH146A	10 N	5 N	20 N	S N	30	S N	50	S N	10 L	100 N	10 N	30	100
9CH147A	10 N	5	70	S N	20 L	S N	50	S N	10 L	100 N	10 L	30	200
9CH149A	10 N	5 L	30	S N	20 L	S N	20	S N	10 N	100 N	10 N	15	100
9CH150A	10 N	5 L	100	S N	30	S N	30	S N	10 L	100	10 N	30	200
9CH151A	10 N	5 L	100	S N	30	S N	20	S N	10 N	100 L	10 N	30	200
9CH152A1	10 N	5 L	100	S N	30	S N	20	S N	10 N	100 L	10 N	30	200
9CH152A2	10 N	5 L	100	S N	30	S N	30	S N	10 N	100	10 N	50	200
9CH152A2	10 N	5 L	100	S N	20	S N	20	S N	10 N	100	10 N	30	150
9CH153A	10 L	5	50	S N	20	S N	30	S L	10 L	100 L	10	30	150
9CH155A	10 N	5	70	S N	20 L	S N	30	S N	10 L	100 N	10 N	30	200
9CH156A	10 N	7	30	S N	20	S N	20	S N	10	100 L	10 L	20	100
9CH156B	10 N	5 L	50	S N	20	S N	30	S N	10 L	100 L	10 L	30	100
9CH158A	20	5	50	S N	20 N	7	30	S L	10 N	200	50	10	150
9CH159A	10 N	5	150	S N	20	S N	30	S L	10 N	100 L	10 L	15	200
9CH163A	50	5 L	100	S N	20 N	7	15	7	10 N	200	50	10 L	70
9CH164A1	10	5	30	S N	20 N	S N	10	S N	10 N	200	20	10 L	100
9CH165A1	15	5	30	S	20 N	S L	10	S L	10 N	200	30	10 N	100
9CH165A2	10	5	50	S N	20 N	S N	15	S L	10 N	200	30	10 L	150
9CH165A2	10	5	30	S N	20 N	S N	10	S N	10 N	200	30	10 L	100
9CH166A	15	5 L	20 N	S N	20 N	10	10 N	S N	10 N	100 N	30	10	100
9CH167A	10 N	5 L	30	S N	20 L	S N	20	S L	10 L	100	10 L	20	200
9CH168A	15	10	70	30	20	S N	15	S L	10	100 N	50	30	150
9CH169A	10 N	5 L	20	7	20 L	S N	10 L	S N	10 L	100 N	10 N	20	200
9CH170A	10 L	5 L	30	10	20 L	S N	10 N	S L	10 L	100	30	15	300
9CH172A	10 N	5 L	50	S	20	S N	15	S N	10 L	100 N	10 N	30	150
9CH175A	10 N	5 L	100	S N	20 L	S N	30	S N	10 L	100 L	10 L	30	100
9CH176B	10 N	5 L	50	S N	20 L	S N	20	S N	10 N	100 L	10 N	30	100
9CH177A	200	15	20	S N	20 N	10	10	20	10 N	500	150	30	150
9CH178A	10 L	5 L	20 N	S N	20 N	5 N	10 N	S N	10 N	100 N	10 L	10 N	100
9CH179A	10	5	20 N	S N	20 N	S N	20	S N	10 N	200	15	10 L	150
9CH180A1	10	10	20 N	S N	20 N	S N	20	S N	10 N	200	15	10 L	200
9CH180A2	10 L	10	20 N	S N	20 N	S N	15	S N	10 N	200	10	10 L	100
9CH180A2	15	7	20 N	S	20 N	S N	15	S N	10 N	200	20	10 L	150
9CH181A	20	5	30	S N	20 N	7	50	S L	10 N	200	30	10	100
9CH182A	50	100	20 N	S N	20 N	10	15	S	10	100 N	50	20	500
9CH182B	10 L	10	20 N	S N	20 N	5 N	10 N	S N	10 N	100 N	10 L	10 L	150
9CH182C	10	5 L	30	S N	20 N	S N	20	S N	10 L	200	20	10 N	100
9CH184A	10 N	7	100	S N	30	S N	20	S N	15	100 L	10 N	50	200
9CH185A	10 N	5 L	20	S N	20 L	S N	20	S N	10 N	100 L	10	15	50
9CH187A	10 N	15	20	S N	30	S N	70	S N	10	100 N	10 N	20	200
9CH188A	10 N	5 L	70	S N	20 L	S N	20	S L	10 N	100 L	15	30	150
9CH189A	10 N	10	70	S N	20	S L	15	S N	10 N	100 L	10	20	150
9CH190A	10 N	5 L	50	S N	20	S N	15	S N	10 L	100	10 L	30	150

## ANALYTICAL DATA FOR BLUE JOINT ROCKS

date 6/ 9/81

SAMPLE	FORMATION	LAT	LONG	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn	B	9a	8e	Co
9CH191A	TMGP	45 45 36N	114 27 25W	1.50	0.15	0.10	0.100	500	10 L	700	1.5	5 N
9CH192A	TPR	45 45 25N	114 26 59W	1.50	0.10	0.10	0.100	200	10 L	700	2.0	5 N
9CH192B	TPR	45 45 25N	114 26 59W	1.00	0.07	0.07	0.070	70	10 L	203	1.5	5 N
9CH193A	KG	45 48 25N	114 26 49W	3.00	1.00	2.00	0.200	500	10 L	1503	1.0	7
9CH194A	KG	45 47 45N	114 26 41W	2.00	0.70	0.15	0.200	200	10 L	503	1.0N	7
9CH195A	KG	45 47 20N	114 26 34W	3.00	1.00	0.20	0.300	200	10 L	1000	1.0N	10
9CH196A1	KG	45 47 20N	114 26 34W	3.00	0.70	0.50	0.300	200	10 L	1000	1.0N	10
9CH196A2	KG	45 47 20N	114 26 34W	5.00	1.00	0.50	0.300	300	10 L	1003	1.0N	10
9CH196A2	KG	45 47 20N	114 26 34W	3.00	0.70	0.50	0.300	200	10 L	1003	1.0N	10
9CH197A	YGN	45 46 33N	114 26 27W	3.00	1.00	1.50	0.200	200	10 L	1003	1.0	10
9CH198A	YGN	45 46 1N	114 26 9W	3.00	2.00	2.00	0.300	500	10 L	700	1.5	20
9CH200A	YQ	45 43 22N	114 30 0W	1.00	0.50	0.05	0.070	300	10	1033	1.0	5 N
9CH200B	TPR	45 43 22N	114 30 0W	2.00	0.20	0.05	0.150	200	10 L	503	2.0	5 N
9CH201A	TMGP	45 43 40N	114 30 3W	1.00	0.02	0.10	0.070	200	10 L	50	2.0	5 N
9CH203A	TGP	45 43 58N	114 29 5W	1.50	0.05	0.15	0.100	200	10 L	500	2.0	5 N
9CH204A	TMGP	45 44 9N	114 28 37W	1.00	0.15	0.70	0.100	150	10 L	303	2.0	5 N
9CH204B	TMGP	45 44 9N	114 28 37W	1.00	0.10	0.10	0.100	200	10 L	303	2.0	5 N
9CH204C	TGP	45 44 9N	114 28 37W	2.00	0.50	0.30	0.150	200	10 L	1033	1.5	5 L
9CH207A	TGP	45 47 13N	114 32 16W	3.00	0.20	0.70	0.200	500	10 L	703	1.5	5 N
9CH207B	TGP	45 47 13N	114 32 16W	5.00	0.50	1.00	0.200	500	10 L	2033	1.5	7
9CH207C	KG	45 47 13N	114 32 16W	7.00	1.50	2.00	1.000	1000	10 L	700	2.0	20
9CH208A	TGP	45 47 9N	114 31 33W	1.50	0.20	0.20	0.100	150	10 L	500	2.0	5 N
9CH209A1	TGP	45 47 9N	114 31 33W	2.00	0.20	0.20	0.100	200	10 L	503	2.0	5 N
9CH209A2	TGP	45 47 9N	114 31 33W	2.00	0.20	0.20	0.150	200	10 L	503	2.0	5 L
9CH211A	KG	45 46 37N	114 31 19W	5.00	1.00	1.50	0.200	500	10 L	700	1.5	15
9CH214A	TMGP	45 45 18N	114 30 32W	1.50	0.15	0.10	0.100	200	10 L	700	2.0	5 N
9CH216A	TMGP	45 43 58N	114 30 14W	3.00	0.50	1.00	0.300	700	10 L	5000	1.0	5 N
9CH217A	TGP	45 44 45N	114 29 38W	1.50	0.10	0.30	0.100	200	10 L	703	2.0	5 N
9CH218A	TMGP	45 44 45N	114 29 23W	2.00	0.20	0.30	0.150	200	10 L	1003	2.0	5 N
9CH221A	TMGP	45 45 0N	114 34 19W	1.50	0.10	0.05	0.070	150	10 L	203	2.0	5 N
9CH222A	TMGP	45 44 56N	114 33 21W	1.50	0.10	0.10	0.100	100	10 L	303	1.5	5 N
9CH230A	TMGP	45 44 56N	114 32 45W	3.00	0.15	0.70	0.150	500	10 L	1503	1.5	5 N
9CH231A	TGP	45 47 13N	114 33 18W	5.00	0.30	1.00	0.150	500	10 L	1000	1.0	5 N
9CH233B	TGP	45 47 13N	114 31 40W	2.00	1.00	1.50	0.200	300	10 L	1003	2.0	15
9CH235A	TC	45 42 39N	114 29 49W	2.00	0.70	0.20	0.150	500	10	703	1.5	10
9CH235B	TC	45 42 39N	114 29 49W	5.00	2.00	2.00	0.300	500	10 L	1033	1.0	20
9CH236A	TC	45 42 39N	114 29 34W	5.00	1.50	1.00	0.500	700	10 L	1503	2.0	30
9CH236B	TV	45 42 39N	114 29 34W	2.00	0.10	0.70	0.300	200	10 L	2003	2.0	15
9CH237A	TV	45 42 50N	114 29 16W	2.00	0.50	0.30	0.150	500	10 L	1033	2.0	7
9CH245A	TGP	45 47 13N	114 33 7W	2.00	0.10	0.15	0.100	200	10 L	703	1.5	5 N
9CH246A	TGP	45 46 37N	114 33 43W	2.00	0.30	0.50	0.150	200	10 L	703	2.0	5
9CH247A	TMGP	45 46 11N	114 32 42W	2.00	0.20	0.30	0.150	300	10 L	703	2.0	5 N
9CH248A	TMGP	45 45 50N	114 33 14W	2.00	0.20	0.30	0.150	300	10 L	703	2.0	5 N
9CH250A	TMGP	45 45 28N	114 32 34W	2.00	0.15	0.50	0.100	200	10 L	703	2.0	5 N
9CH258A	TC	45 42 39N	114 27 10W	2.00	0.15	0.07	0.100	100	10	303	2.0	5 N
9CH259A1	TC	45 42 39N	114 27 10W	1.50	0.10	0.10	0.100	100	10	303	2.0	5 N
9CH259A2	TC	45 42 39N	114 27 10W	2.00	0.15	0.10	0.100	100	15	303	2.0	5 N
9CH259A2	TC	45 42 39N	114 27 10W	1.50	0.10	0.07	0.100	100	15	303	2.0	5 N
9CH260A	TF	45 42 10N	114 27 7W	2.00	0.30	0.70	0.150	200	10 L	1503	1.0	5 N

## ANALYTICAL DATA FOR BLUE JOINT ROCKS

date 6/ 9/81

SAMPLE	Cr	Cu	La	Mo	Nb	Ni	Pb	Sc	Sn	Sr	V	Y	Zr
9CH191A	10 L	5	30	5 N	20 L	5 N	20	5 N	10 N	100 L	10	20	200
9CH192A	10 N	5 N	50	5 N	20 L	5 N	15	5 N	10 L	100	10 L	20	150
9CH192B	10 N	5 N	20 N	5 N	20 L	5 N	15	5 N	10 N	100 N	10 N	20	100
9CH193A	10 L	5 N	20	5 N	20 N	5 N	15	5	10 N	700	70	10	150
9CH194A	20	5 N	20 N	5 N	20 N	7	10 N	5	10 N	100	30	10 N	200
9CH195A	50	5 L	100	5 N	20 N	15	10 N	7	10 N	150	50	20	300
9CH196A1	50	5 L	20 N	5 N	20 N	10	10 N	7	10 N	200	50	10 N	500
9CH196A2	50	5 L	20	5 N	20 N	20	10 N	7	10 N	200	50	10 L	500
9CH196A2	50	5 L	50	5 N	20 N	15	10 N	7	10 N	200	50	10	500
9CH197A	10	5 L	150	5 N	20 N	5 L	10	5 L	10 N	700	50	15	150
9CH198A	150	20	20 N	5 N	20 N	70	15	10	10 N	500	100	15	150
9CH200A	15	5 N	20 N	5 N	20 N	5	10 N	5 N	10 N	100 N	30	10 L	70
9CH200B	10 N	5 N	50	5 N	30	5 N	20	5 N	10 N	100 N	15	30	200
9CH201A	10 N	5 L	100	5 N	20 L	5 N	20	5 N	10 N	100 N	10 N	30	150
9CH203A	10 N	5 L	150	5 N	20 L	5 N	20	5 N	10 L	100 N	10 N	30	150
9CH204A	10 N	5 N	50	5 N	20 L	5 N	20	5 N	10 L	100 L	10	30	150
9CH204B	10 N	5 N	70	5 N	20 L	5 N	20	5 N	10 L	100 L	10 L	30	100
9CH204C	10 L	5 L	100	5 N	20 L	5 N	15	5 L	10 N	200	30	20	150
9CH207A	10 N	10	500	5 N	20	5 N	20	5 L	10 N	100 L	10	50	500
9CH207B	10 N	7	100	5 N	20	5 N	15	7	10 N	200	20	50	500
9CH207C	30	10	50	5 N	30	15	15	10	10 N	500	200	30	150
9CH208A	10 N	5 L	100	5 N	20 L	5 N	20	5 N	10 N	100	10	20	150
9CH209A1	10 N	5	70	5 N	20 L	5 N	20	5 L	10 N	100	10	30	200
9CH209A2	10 N	5 L	70	5 N	20	5 N	20	5 L	10 N	100	15	30	200
9CH209A2	10 N	5 L	50	5 N	20	5 N	20	5 L	10 N	100	15	30	200
9CH211A	15	20	20	5 N	20 N	5 L	10	7	10 N	300	70	15	100
9CH214A	10 N	5 N	30	5 N	20 L	5 N	20	5 N	10 N	100	10	20	100
9CH216A	10 N	5	70	5 N	20 N	5 N	15	20	10 N	300	10	20	300
9CH217A	10 N	5 L	100	5 N	20 L	5 N	15	5 L	10 N	100 L	10 L	30	150
9CH218A	10 N	5 L	50	5 N	20 L	5 N	20	5 N	10 N	100 L	10 L	30	200
9CH221A	10 N	5 L	150	5 N	20 L	5 N	20	5 N	10 L	100 N	10 N	50	100
9CH222A	10 N	5 N	20	5 N	20	5 N	20	5 N	10 N	100 N	10 L	20	100
9CH230A	10 N	5 L	20 N	5 N	20 L	5 N	15	15	10 N	100	10 N	15	500
9CH231A	10 N	5	200	5 N	20 L	5 N	20	10	10 N	100	70	30	200
9CH233B	70	7	70	5 N	20 N	20	20	5	10 N	500	70	10 L	200
9CH235A	50	5	70	5 N	20 N	7	20	7	10 N	200	70	10 L	100
9CH235B	70	10	20	5 N	20 N	5 N	15	20	10 N	500	150	30	100
9CH236A	300	20	30	5 N	20 N	20	20	15	10 N	300	100	20	150
9CH236B	10 L	7	70	5	20 L	5	20	5	10 N	200	50	30	300
9CH237A	15	5	20	5 N	20 N	5	30	5	10 N	150	30	10 L	100
9CH245A	10 N	5 N	70	5 N	30	5 N	20	5 L	10 N	100	10 N	30	300
9CH246A	10 L	5 L	150	5 N	20	5 N	20	5	10 N	150	20	30	200
9CH247A	10 L	5 L	50	5 N	20	5 N	30	5 L	10 N	150	20	30	300
9CH248A	10 N	5 N	100	5 N	20	5 N	30	5	10 L	100	30	30	300
9CH250A	10 N	5 L	70	5 N	20	5 N	20	5 N	10 N	100	10 L	30	100
9CH258A	10	5 L	30	5 N	20 L	5 N	15	5 L	10	100 N	15	30	100
9CH259A1	10 L	5	30	5 N	20 L	5 N	20	5 L	15	100 N	20	30	100
9CH259A2	10 L	5 L	50	5 N	20 L	5 N	10	5 L	10	100 N	20	30	150
9CH259A2	10 L	5 L	30	5 L	20 L	5 N	15	5 L	10	100 N	20	30	100
9CH260A	10 N	10	100	5 N	20 N	5 N	30	5 L	10 L	200	20	30	100

## ANALYTICAL DATA FOR BLUE JOINT ROCKS

date 6/ 9/81

SAMPLE	FORMATION	LAT	LONG	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn	B	Ba	Be	Co
9CH261A	TF	45 42 3N	114 27 10W	2.00	0.30	0.70	0.150	200	10 L	1000	2.0	5 N
9CH262A	TV	45 42 17N	114 27 36W	2.00	0.10	1.00	0.500	300	10 L	1500	2.0	15
9CH268A	TV	45 39 25N	114 30 25W	5.00	2.00	0.30	0.500	500	10 L	1000	1.0	20
9CH269A	TW	45 39 14N	114 30 21W	1.00	0.10	0.05	0.200	50	10 L	500	1.5	5 N
9CH271A	TV	45 39 28N	114 30 21W	5.00	2.00	0.20	0.500	300	10 L	1500	1.0	20
9CH271B	TV	45 39 28N	114 30 21W	5.00	2.00	0.30	0.500	500	10 L	1000	2.0	30
9CH272A1	TV	45 39 28N	114 30 21W	5.00	1.50	0.20	0.500	300	10 L	1500	1.5	20
9CH272A2	TV	45 39 28N	114 30 21W	3.00	1.50	0.20	0.500	300	10 L	1500	1.5	20
9CH272A2	TV	45 39 28N	114 30 21W	3.00	1.50	0.20	0.500	500	10 L	1500	1.5	20
9FM642A	TPR	45 45 57N	114 20 45W	1.50	0.10	0.20	0.100	150	10 L	500	3.0	5 N
9FM643A	TPR	45 45 46N	114 21 32W	1.50	0.20	0.10	0.100	200	10 L	500	2.0	5 N
9FM694A1	TMGP	45 47 27N	114 16 12W	5.00	0.20	0.70	0.300	1000	10 L	1000	1.0N	5 N
9FM695A1	TMGP	45 47 27N	114 16 12W	5.00	0.20	0.70	0.300	1000	10 L	1000	1.0N	5 N
9FM695A2	TMGP	45 47 27N	114 16 12W	3.00	0.20	0.70	0.200	500	10 L	1000	1.0N	5 N
9FM695A2	TMGP	45 47 27N	114 16 12W	3.00	0.20	1.00	0.300	700	10 L	1000	1.0N	5 N
9FM696A1	TMGP	45 47 27N	114 16 12W	2.00	0.70	1.00	0.150	200	10 L	1500	1.5	5
9FM696A2	TMGP	45 47 27N	114 16 12W	2.00	0.70	1.00	0.200	200	10 L	1000	1.0	5
9FM697A1	TMGP	45 47 27N	114 16 12W	2.00	0.50	1.00	0.200	200	10 L	1000	2.0	5
9FM712A	TMGP	45 43 8N	114 16 40W	1.00	0.03	0.20	0.030	100	10 L	70	5.0	5 L
9FM713A	TPR	45 43 4N	114 16 44W	2.00	1.00	1.00	0.200	300	10 L	1000	3.0	5 N
9FM714A	TPR	45 42 46N	114 16 44W	2.00	0.70	1.00	0.200	200	10 L	1500	2.0	7
9FM714B	TPR	45 42 46N	114 16 44W	1.50	0.30	0.50	0.150	200	10 L	1000	3.0	5 N
9FM774A1	TPR	45 47 27N	114 16 12W	2.00	0.10	0.30	0.100	500	10 L	300	3.0	5 N
9FM775A1	TPR	45 47 27N	114 16 12W	2.00	0.10	0.30	0.100	300	10 L	500	2.0	5 N
9FM775A2	TPR	45 47 27N	114 16 12W	2.00	0.10	0.30	0.100	300	10 L	500	2.0	5 N
9FM775A2	TPR	45 47 27N	114 16 12W	2.00	0.07	0.30	0.100	300	10 L	500	2.0	5 N
9KL003A	YQS	45 35 13N	114 20 56W	1.00	0.50	0.05	0.150	100	10	300	1.0	5 N
9KL004A	YQ	45 35 27N	114 20 24W	0.05	0.02	0.07	0.070	10	10	50	2.0	5 N
9KL010A	TMG	45 30 32N	114 32 45W	1.50	0.30	0.10	0.150	200	10 L	1000	1.5	5 N
9KL010B	TPR	45 30 32N	114 32 45W	7.00	1.50	0.30	0.700	500	10 L	700	2.0	30
9KL020A	YAM	45 38 16N	114 32 16W	7.00	3.00	5.00	0.300	1000	10 L	200	1.0N	50
9KL020B	YAM	45 38 16N	114 32 16W	7.00	3.00	5.00	0.500	700	10 L	100	1.0N	50
9KL043A	YQ	45 37 26N	114 26 38W	3.00	0.10	0.50	0.200	500	10 L	3000	1.0	7
9KL043B	TVN	45 37 26N	114 26 38W	1.00	0.03	0.05	0.150	70	10 L	200	1.0N	5 N
9KL045A1	TPMG	45 36 46N	114 27 28W	2.00	0.30	0.50	0.150	200	10 L	1000	2.0	5
9KL045A2	TPMG	45 36 46N	114 27 28W	2.00	0.30	0.70	0.200	300	10 L	1000	3.0	5 L
9KL045A2	TPMG	45 36 46N	114 27 28W	2.00	0.50	0.70	0.300	500	10 L	1000	3.0	5
9KL046A	TPMG	45 36 46N	114 27 28W	2.00	0.30	0.50	0.200	300	10 L	700	3.0	5
9KL047A	TGP	45 36 14N	114 28 40W	1.50	0.15	0.10	0.100	200	10 L	300	3.0	5 L
9KL048A	TPR	45 32 16N	114 35 13W	3.00	0.20	0.30	0.200	200	10 L	300	5.0	5 N
9KL049A	TMG	45 32 13N	114 35 2W	2.00	0.10	0.20	0.100	200	10 L	500	3.0	5 N
9KL049B	TPR	45 32 13N	114 35 2W	3.00	0.10	0.05L	0.100	200	10 L	150	7.0	5 N
9KL050A1	TMG	45 32 13N	114 35 2W	2.00	0.10	0.20	0.100	300	10 N	500	3.0	5 N
9KL050A2	TMG	45 32 13N	114 35 2W	2.00	0.10	0.20	0.100	200	10 N	500	3.0	5 N
9KL050A2	TMG	45 32 13N	114 35 2W	2.00	0.10	0.30	0.100	300	10 N	500	2.0	5 N
9KL051A	TMG	45 31 44N	114 34 8W	1.50	0.10	0.20	0.070	150	10 N	150	2.0	5 N
9KL052A1	TMG	45 31 44N	114 34 8W	1.50	0.07	0.30	0.070	100	10 N	150	3.0	5 N
9KL052A2	TMG	45 31 44N	114 34 8W	1.00	0.05	0.20	0.050	100	10 N	100	3.0	5 N
9KL052A2	TMG	45 31 44N	114 34 8W	1.00	0.07	0.30	0.070	100	10 L	100	3.0	5 N

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SAMPLE	Cr	Cu	La	Mo	Nb	Ni	Pb	Sc	Sn	Sr	V	Y	Zr
9CH261A	10 N	5	50	5 N	20 L	5 N	20	5 L	10 N	200	20	20	150
9CH262A	10	7	70	7	20	7	20	7	10 N	200	50	50	300
9CH268A	200	20	20 N	5 N	20 N	15	20	15	10 N	150	150	20	100
9CH269A	10 N	5 L	100	5 N	30	5 N	20	5 N	10 N	100 L	10	30	150
9CH271A	200	15	20	5 N	20 N	10	20	15	10 N	150	130	20	100
9CH271B	200	15	20	5	20 N	15	15	15	10 N	200	150	20	150
9CH272A1	200	30	20	5 N	20 N	15	15	15	10 N	200	100	30	100
9CH272A2	200	15	20	5 L	20 N	15	15	15	10 N	200	130	30	100
9CH272A2	150	10	20	5	20 N	15	10	15	10 N	200	100	20	150
9FM642A	10 N	5 L	70	5	20	5 N	15	5 N	10 N	100 L	10 N	30	200
9FM643A	10 N	5 N	100	5 N	20 L	5 N	20	5 N	10 N	100 L	10 L	30	100
9FM694A1	10 N	5 L	50	5 N	20 N	5 N	15	30	10 N	100 L	10 N	15	300
9FM695A1	10 N	5	30	5 N	20 N	5 N	15	30	10 N	100 L	10 N	15	200
9FM695A2	10 N	5 L	20	5 N	20 N	5 N	10	30	10 N	100 L	10 N	15	500
9FM695A2	10 L	5 L	20	5 N	20 N	5 N	15	50	10 N	100	10 N	20	1000
9FM696A1	10 L	5 N	70	5 N	20 N	5 N	20	5 L	10 N	300	30	15	150
9FM696A2	10	5 N	50	5 N	20 N	5 N	30	5 N	10 N	200	50	10	200
9FM696A2	10 L	5 N	100	5 N	20 N	5 N	20	5 L	10 N	200	30	15	150
9FM697A1	10 L	5 N	50	5 N	20 N	5 N	20	5 L	10 N	300	30	10	70
9FM712A	10 N	5 L	20 N	5 N	30	5 N	50	5 N	10 L	100 N	10 N	50	50
9FM713A	30	5 L	50	5 N	20 N	15	20	5	10 N	300	50	10	150
9FM714A	20	7	20	5 N	20 N	10	20	5 L	10 N	300	50	10	150
9FM714B	10 N	5 N	70	5 N	20 L	5 N	20	5 N	10 N	150	20	20	200
9FM774A1	10 N	5	200	5 L	50	5 N	50	5 N	10 N	100 L	10 N	50	300
9FM775A1	10 N	5 L	150	5 N	30	5 N	30	5 N	10 N	100 L	10 N	50	200
9FM775A2	10 N	5	200	5 N	20	5 N	50	5 N	10 N	100 N	10 N	50	200
9FM775A2	10 N	5 L	200	5 N	30	5 N	30	5 N	10 N	100 N	10 N	50	200
9KL003A	15	5 N	20	5 N	20 N	5	10 N	5 N	10 N	100 N	20	10	70
9KL004A	10	5 L	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	150
9KL010A	10 L	5 L	30	5 N	20 L	5 N	30	5 N	10 N	300	20	20	100
9KL010B	200	20	50	5 N	20	50	15	15	10 N	200	100	70	200
9KL020A	700	50	20 N	5 N	20 N	100	10 L	30	10 N	200	200	50	50
9KL020B	700	70	20 N	5 N	20 N	100	10 N	50	10 N	100	300	30	70
9KL043A	30	150	20 N	5 N	20 N	7	15	5	10 N	100	50	20	100
9KL043B	10 L	5 N	70	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	10 N
9KL010A	10 L	5 L	30	5 N	20 L	5 N	30	5 N	10 N	300	20	20	200
9KL010B	200	20	50	5 N	20	50	15	15	10 N	200	100	70	200
9KL020A	700	50	20 N	5 N	20 N	100	10 L	30	10 N	200	200	50	50
9KL020B	700	70	20 N	5 N	20 N	100	10 N	50	10 N	100	300	30	70
9KL043A	30	150	20 N	5 N	20 N	7	15	5	10 N	100	50	20	100
9KL043B	10 L	5 N	70	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	10 N
9KL045A1	10 L	5 N	150	5 N	20 N	5 N	20	5 L	10 N	200	30	20	200
9KL045A2	10 N	5 N	20	5 N	20 N	5 N	20	5 L	10 N	200	20	15	100
9KL045A2	10	5 N	100	5 N	20 L	5 N	20	5 L	10 N	200	30	30	500
9KL046A	10	5 N	100	5 N	20 L	5 N	15	5 N	10 L	100	30	30	150
9KL047A	10 N	5 N	100	5 N	30	5 N	15	5 N	10 N	100 L	10 N	50	200
9KL048A	10 N	50	50	5 N	30	5 N	10	5 N	10 N	100 L	10	50	300
9KL049A	10 N	10	70	5 N	30	5 N	30	5 N	10 L	100 L	10 L	50	150
9KL049B	10 N	70	70	5 N	30	5 N	10 N	5 L	150	100 N	10 N	30	200
9KL050A1	10 N	5 L	100	5 N	30	5 N	20	5 N	10 N	100 L	10 N	50	150
9KL050A2	10 N	5 L	100	5 N	30	5 N	20	5 N	10 N	100 L	10 N	50	150
9KL050A2	10 N	5 L	150	5 N	100	5 N	30	5 N	10 N	100 L	10 N	100	150
9KL051A	10 N	5 L	70	5 N	30	5 N	20	5 N	10	100 N	10 N	50	100
9KL052A1	10 N	5	50	5 N	50	5 N	30	5 N	10 L	100 N	10 N	70	150
9KL052A2	10 L	7	100	5	50	5 N	20	5 N	10 L	100 N	10 N	50	100
9KL052A2	10 N	10	30	5 N	70	5 N	30	5 N	10 L	100 N	10 N	70	150

## ANALYTICAL DATA FOR BLUE JOINT ROCKS

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SAMPLE	FORMATION	LAT	LONG	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn	B	Ba	Be	Co
9KL054A	YQ	45 43 4N	114 30 0W	2.00	1.00	0.10	0.200	100	10	700	2.0	10
9KL055A	TPR	45 43 44N	114 29 45W	1.00	0.50	1.00	0.200	200	10 L	1030	2.0	5
9KL056A	TPR	45 43 58N	114 28 58W	2.00	0.15	0.30	0.100	200	10 L	300	3.0	5 N
9KL057A	TPR	45 43 55N	114 28 55W	1.50	0.07	0.20	0.100	200	10 L	500	2.0	5 N
9KL058A	TPR	45 44 6N	114 28 15W	1.50	0.10	0.15	0.050	300	10 N	200	2.0	5 N
9KL059A	TPR	45 44 41N	114 27 7W	0.20	0.05	0.05	0.020	150	10 L	150	1.0	5 N
9KL060A1	TMGP	45 44 45N	114 26 9W	1.00	0.10	0.15	0.100	100	10 L	700	2.0	5 N
9KL060A2	TMGP	45 44 45N	114 26 9W	0.70	0.15	0.20	0.100	200	10 L	500	2.0	5 N
9KL060A2	TMGP	45 44 45N	114 26 9W	1.50	0.10	0.20	0.100	150	10 L	700	1.5	5 N
9KL061A1	TMGP	45 44 45N	114 26 9W	2.00	0.15	0.10	0.150	200	10 L	300	3.0	5 N
9KL062A	TPR	45 45 7N	114 22 26W	2.00	0.20	0.20	0.150	200	10 L	300	2.0	5 N
9KL063A	TMG	45 31 58N	114 25 58W	1.50	0.30	0.15	0.200	300	10 L	1000	2.0	5 N
9KL064A	YAM	45 32 31N	114 24 35W	5.00	3.00	2.00	0.500	1000	10 L	500	1.0N	30
9KL065A	YAM	45 32 56N	114 23 38W	7.00	0.50	0.20	0.500	500	10	2000	2.0	15
9KL066A	YAM	45 33 28N	114 21 28W	10.00	2.00	5.00	0.500	1000	10 L	200	1.0N	50
9KL067A	YQS	45 33 50N	114 19 29W	5.00	0.70	0.50	0.300	500	20	500	3.0	7
9KL068A	YQ	45 35 16N	114 19 8W	1.50	0.70	0.05	0.100	30	15	200	1.0N	5 N
9KL069A	YQ	45 36 32N	114 18 10W	2.00	0.70	0.05	0.200	50	10 L	500	1.5	7
9KL070A	YQ	45 38 9N	114 17 34W	0.50	0.30	0.05	0.050	30	10 L	200	1.0L	5 N
9KL071A	TV	45 39 57N	114 18 7W	0.50	0.05	0.15	0.070	50	10 L	50	3.0	5 N
9KL072A	YQ	45 41 38N	114 17 38W	0.30	0.50	0.05L	0.020	20	10	200	1.0N	5 N
9KL073A	TV	45 42 36N	114 16 51W	2.00	2.00	0.20	0.200	300	10 L	1000	2.0	5 N
9KL074A	TMGP	45 44 9N	114 16 47W	2.00	0.05	0.20	0.100	150	10 L	150	3.0	5 N
9KL077A	TPR	45 33 25N	114 33 7W	1.00	0.02	0.10	0.050	50	10 L	100	5.0	5 N
9KL081A	TPMG	45 34 19N	114 31 33W	1.50	0.20	0.30	0.100	200	10 L	700	3.0	5 N
9KL083A	YAM	45 36 43N	114 32 27W	5.00	1.50	3.00	0.500	500	10 L	5000 G	1.0	30
9KL100A	TGP	45 32 23N	114 33 25W	1.50	0.05	0.20	0.070	200	10 L	100	5.0	5 N
9KL101A	TMG	45 31 33N	114 32 38W	1.00	0.03	0.20	0.070	150	10 L	70	2.0	5 N
9KL103A	TMG	45 31 15N	114 33 25W	1.50	0.10	0.50	0.100	200	10 L	500	5.0	5 N
9KL103B	TMG	45 31 15N	114 33 25W	1.50	0.10	0.20	0.100	200	10 L	500	5.0	5 N
9KL104A	TPR	45 30 46N	114 33 7W	2.00	0.70	1.00	0.200	500	10 L	1000	2.0	7
9KL104B	TA	45 30 46N	114 33 7W	5.00	2.00	2.00	0.700	1000	10 L	1000	1.0L	30
9KL105A	TA	45 30 36N	114 32 52W	5.00	2.00	2.00	1.000	1000	10 L	1000	1.5	30
9KL107A	TPR2	45 31 40N	114 34 29W	1.00	0.10	0.30	0.100	150	10 L	200	1.5	5 N
9KL108A1	TPMG	45 30 28N	114 34 4W	2.00	0.30	1.00	0.200	200	10 L	3000	1.5	7
9KL109A1	TPMG	45 30 32N	114 34 4W	2.00	0.50	1.00	0.300	200	10 L	2000	1.0	7
9KL109A2	TPMG	45 30 32N	114 34 4W	2.00	0.50	0.70	0.300	300	10 L	3000	1.0	7
9KL109A2	TPMG	45 30 32N	114 34 4W	2.00	0.50	1.00	0.200	200	10 L	2000	1.0	7
9KL110A	TA	45 30 18N	114 33 14W	5.00	2.00	1.00	1.000	700	10 L	1500	1.0	30
9KL111A	TGP	45 33 10N	114 31 55W	1.00	0.30	0.70	0.150	150	10 L	1500	5.0	5 L
9KL112A	TGP	45 33 3N	114 32 13W	1.00	0.03	0.15	0.030	100	10 L	20	5.0	5 N
9KL113A	TPR	45 32 20N	114 31 47W	3.00	0.50	1.00	0.300	200	10 L	1500	2.0	7
9KL114A	TMG	45 31 40N	114 31 55W	1.00	0.10	0.20	0.150	100	10 L	500	1.5	5 N
9KL115A	TMG	45 31 37N	114 31 55W	1.00	0.07	0.30	0.100	300	10 L	500	1.5	5 N
9KL116A1	TMG	45 30 57N	114 32 31W	1.00	0.07	0.15	0.050	70	10 L	150	3.0	5 N
9KL116A2	TMG	45 30 57N	114 32 31W	1.00	0.10	0.10	0.050	70	10 L	200	3.0	5 N
9KL116A2	TMG	45 30 57N	114 32 31W	1.00	0.07	0.15	0.030	50	10 L	150	2.0	5 N
9KL117A1	TMG	45 30 53N	114 32 27W	0.50	0.03	0.15	0.030	70	10 L	100	5.0	5 N
9KL118A	TMG	45 30 21N	114 32 56W	2.00	0.50	0.50	0.300	300	10 L	1000	2.0	5 L
9KL119A	TMG	45 36 57N	114 31 37W	1.50	0.07	0.10	0.070	200	10 L	150	3.0	5 N



## ANALYTICAL DATA FOR BLUE JOINT ROCKS

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SAMPLE	Cr	Cu	La	Mo	Nb	Ni	Pb	Sc	Sn	Sr	V	Y	Zr
9KL054A	50	5 N	50	5 N	20 N	10	10 N	10	10 N	100 N	70	50	300
9KL055A	15	5 N	70	5 N	20 N	5 N	20	5 N	10 N	300	30	15	300
9KL056A	10 N	5 L	50	5 N	20	5 N	30	5 N	10 L	100 L	10 N	30	150
9KL057A	10 N	5 L	100	5 N	20 L	5 N	30	5 N	10	100 N	10 N	50	200
9KL058A	10 N	5 N	30	5 N	20 L	5 N	20	5 N	15	100 N	10 N	50	70
9KL059A	10 N	5 N	20 N	5 N	20 L	5 N	15	5 N	10 L	100 N	10 N	10	20
9KL060A1	10 N	5 N	50	5 N	20 L	5 N	20	5 N	10 N	100	10	20	150
9KL060A2	10 N	5 N	70	5 N	20 N	5 N	20	5 N	10 L	100 L	10 N	20	200
9KL060A2	10 L	5 N	100	5 N	20 L	5 N	30	5 N	10 L	100	10	30	150
9KL061A1	10 N	5 N	50	5 N	20 L	5 N	15	5 N	10 L	100 L	10	20	200
9KL062A	10 N	5 N	70	5 N	20 L	5 N	20	5 N	15	100 N	10	50	150
9KL063A	10 L	5 N	30	5 N	20 L	5 N	20	5 N	10 N	150	15	15	150
9KL064A	100	70	20 N	5 N	20 N	50	15	30	10 N	150	300	30	30
9KL065A	10 L	30	70	7	30	5 N	30	20	10 N	100	100	100	1000
9KL066A	150	50	20 N	5 N	20 N	70	10	50	10 N	200	300	30	300
9KL067A	50	5	50	5 N	20 N	15	10 N	15	10 N	100 N	130	50	150
9KL068A	10	5 N	20	5 N	20 N	5	10 N	5 N	10 N	100 N	15	10	200
9KL069A	30	5 N	20	5 N	20 N	10	10 N	5	10 N	100 N	50	10	150
9KL070A	10	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 L	10 N	70
9KL071A	10 N	5 L	50	5 N	20 L	5 N	30	5 N	10 N	100 N	10 N	30	200
9KL072A	10 L	5 N	20	5 N	20 L	5 N	10 N	5 N	10 N	100 N	10 N	10	70
9KL073A	10 N	7	30	5	20 L	5 N	20	5	15	100 L	15	30	200
9KL074A	10 N	5 N	70	5 N	30	5 N	20	5 N	10	100 N	10 N	50	150
9KL077A	10 N	5 L	20 N	5 N	70	5 N	30	5 N	10	100 N	10 N	50	150
9KL081A	10 N	5 L	20	5 N	20 N	5 N	30	5 L	10 N	150	15	15	100
9KL083A	70	50	50	5 N	20 N	20	10 N	20	10 N	300	200	30	200
9KL100A	30	5 L	70	7	50	5 N	30	5 N	15	100 N	10 N	70	200
9KL101A	10 N	5 L	150	5 N	50	5 N	20	5 N	10 L	100 N	10 N	50	100
9KL103A	10 N	5 L	100	5 N	20	5 N	20	5 N	10 N	100	10 N	30	200
9KL103B	10 N	5 L	20	5 N	30	5 N	20	5 N	10	100 L	10 N	50	200
9KL104A	20	5	50	5 N	20 L	7	20	5	10 N	300	50	15	150
9KL104B	150	20	50	5 N	20 L	50	10	15	10 N	500	150	30	200
9KL105A	150	20	50	5 N	20 L	50	15	20	10 N	500	150	30	200
9KL107A	10 N	5 N	150	5 N	20	5 N	20	5 N	10 N	100 N	10 N	30	150
9KL108A1	15	50	150	5 N	20 L	5 N	20	5	10 L	300	30	30	300
9KL109A1	15	5 L	100	5 N	20 L	5 L	15	5	10 L	500	50	30	500
9KL109A2	20	5 L	100	7	20 N	10	20	5	10 L	500	50	20	300
9KL109A2	15	5 L	150	5 N	20 L	5 L	15	5	10 N	300	50	20	200
9KL110A	100	30	70	5 N	20	20	15	15	10 N	700	200	50	500
9KL111A	10	5 L	50	5 N	20 N	5 N	30	5 N	15	300	20	15	150
9KL112A	10 N	5 N	30	5 N	30	5 N	20	5 N	10 N	100 N	10 N	20	100
9KL113A	15	7	100	5 N	20	7	20	5	10	300	50	50	200
9KL114A	10 N	5 L	30	7	20 N	5 N	20	5 N	10 N	150	15	15	100
9KL115A	10 N	5 N	20	5 N	20 L	5 N	20	5 N	10 N	150	15	20	150
9KL116A1	10 N	10	20 N	5 N	20 L	5 N	30	5 N	10	100 N	10 N	20	30
9KL116A2	10 L	10	20 N	5 N	70	5 N	30	5 N	10	100 N	10 N	50	70
9KL116A2	10	15	20 N	5 N	20 N	5 N	30	5 N	10	100 N	10 N	20	50
9KL117A1	10 H	5 L	30	7	20	5 N	30	5 N	10	100 N	10 N	30	200
9KL118A	10 L	5	100	5 N	20 L	5 N	20	7	10 N	200	30	30	150
9KL119A	10 N	5 L	50	5 N	30	5 N	50	5 N	10	100 N	10 N	30	70

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SAMPLE	FORMATION	LAT	LONG	Fe(X)	Mg(X)	Ca(X)	Ti(X)	Mn	B	Ba	Be	Co
9KL120A	TPR	45 37 30N	114 30 50W	2.00	0.10	0.20	0.100	200	10 L	500	3.0	5 N
9KL121A1	YAM	45 37 44N	114 33 25W	2.00	1.00	1.50	0.500	300	10 L	1000	1.5	10
9KL122A1	YAM	45 37 40N	114 33 25W	2.00	1.00	2.00	0.500	500	10 L	3000	2.0	10
9KL122A2	YAM	45 37 40N	114 33 25W	5.00	0.70	1.50	0.500	500	10 L	5000 G	2.0	15
9KL122A2	YAM	45 37 40N	114 33 25W	5.00	0.70	1.50	0.300	500	10 L	5000 G	2.0	10
9KL122B	TV	45 37 40N	114 33 25W	1.50	0.70	0.20	0.200	150	10 L	1500	2.0	5
9KL123A	YAM	45 37 51N	114 32 52W	7.00	5.00	5.00	0.500	1000	10 L	300	1.0N	50
9KL126A	YQ	45 38 38N	114 32 42W	3.00	0.70	0.50	0.300	700	15	500	2.0	10
9KL127A	YAM	45 38 34N	114 31 55W	2.00	0.70	0.30	0.300	200	10 L	1500	1.0	7
9KL128A	TPR	45 39 3N	114 32 5W	10.00	0.02L	0.05L	0.015	70	10 L	300	7.0	5 N
9KL129A	TVN	45 39 3N	114 31 33W	2.00	0.15	0.05L	0.010	300	10 L	20 N	1.0N	10
9KL129B	TV	45 39 3N	114 31 33W	7.00	2.00	0.70	0.500	1000	10 L	1000	1.5	50
9KL130A	TW	45 39 0N	114 31 22W	1.00	0.02	0.05	0.050	100	10 L	70	3.0	5 N
9KL130B	TW	45 39 0N	114 31 22W	0.50	0.02L	0.05	0.020	50	10 L	30	3.0	5 N
9KL131A	TV	45 39 10N	114 30 57W	1.00	0.02L	0.05	0.050	70	10 L	70	3.0	5 N
9KL132A	TV	45 39 39N	114 30 21W	1.00	0.10	0.05L	0.150	70	10 L	1000	1.5	5 N
9KL134A1	YQ	45 38 38N	114 30 10W	0.50	0.10	0.05	0.020	20	10 L	200	1.0N	5 N
9KL135A1	YQ	45 38 38N	114 30 14W	1.00	0.15	0.05	0.100	50	10 L	200	1.0N	5 N
9KL135A2	YQ	45 38 38N	114 30 14W	0.70	0.15	0.05L	0.070	30	10 L	300	1.0N	5 N
9KL135A2	YQ	45 38 38N	114 30 14W	0.70	0.15	0.05L	0.070	30	10 L	300	1.0N	5 N
9KL136A	TMG	45 30 0N	114 31 55W	1.00	0.15	0.50	0.200	200	10 L	700	1.5	5 N
9KL137A	TMG	45 29 27N	114 32 20W	1.00	0.10	0.50	0.100	100	10 L	1000	1.5	5 N
9KL139A	TPMG	45 29 2N	114 33 10W	1.50	0.20	0.50	0.200	200	10 L	1500	1.5	5 L
9KL140A	TPMG	45 34 15N	114 30 18W	0.70	0.05	0.30	0.050	150	10 L	50	2.0	5 N
9KL141A	TPMG	45 33 43N	114 28 15W	0.70	0.07	0.30	0.050	100	10 L	70	2.0	5 N
9KL142A	TPMG	45 32 52N	114 28 1W	1.00	0.20	0.50	0.100	300	10 L	300	5.0	5 N
9KL143A	TPR	45 32 13N	114 25 51W	1.00	0.10	0.15	0.070	300	10 L	300	2.0	5 N
9KL144A	YQS	45 32 42N	114 25 4W	2.00	0.50	0.15	0.200	300	10 L	700	1.5	15
9KL149A	TMG	45 40 15N	114 26 45W	1.50	0.10	0.30	0.100	200	10 L	150	5.0	5 N
9KL150A1	TPR	45 40 33N	114 27 3W	1.00	0.10	0.20	0.050	300	10 L	150	3.0	5 N
9KL151A1	TPR	45 40 30N	114 27 3W	1.00	0.05	0.15	0.070	100	10 L	200	5.0	5 N
9KL151A2	TPR	45 40 30N	114 27 3W	1.50	0.50	0.15	0.070	200	10 L	200	3.0	5 N
9KL151A2	TPR	45 40 30N	114 27 3W	1.50	0.50	0.15	0.070	200	10 L	200	2.0	5 N
9KL152A	TPR	45 40 12N	114 25 4W	1.50	0.50	0.50	0.100	700	10 L	300	3.0	5 N
9KL153A	TPR	45 41 20N	114 23 45W	1.50	0.05	0.15	0.100	200	10 L	300	3.0	5 N
9KL164A	TMG	45 37 11N	114 29 13W	1.00	0.03	0.15	0.050	200	10 L	30	5.0	5 N
9KL165A	TGP	45 37 48N	114 29 9W	2.00	0.05	0.20	0.100	200	10 L	200	3.0	5 N
9KL166A	YQ	45 37 51N	114 30 50W	2.00	0.30	0.50	0.200	1000	10 L	5000 G	1.5	5 L
9KL167A	YQ	45 39 14N	114 30 46W	1.00	0.20	0.20	0.070	150	10 L	100	1.0	5
9KL168A	TV	45 39 10N	114 30 50W	5.00	2.00	2.00	0.500	700	10 L	1500	1.5	30
9KL176A1	TPR	45 36 7N	114 30 14W	2.00	0.15	0.15	0.100	500	10 L	700	3.0	5 L
9KL177A1	TPR	45 36 7N	114 30 14W	2.00	0.20	0.30	0.150	500	10 L	700	2.0	5 N
9KL177A2	TPR	45 36 7N	114 30 14W	2.00	0.20	0.30	0.150	500	10 L	700	2.0	5 N
9KL177A2	TPR	45 36 7N	114 30 14W	2.00	0.15	0.20	0.100	300	10 L	1000	3.0	5 N
9KL180A	TMGP	45 41 42N	114 25 40W	2.00	0.07	0.20	0.100	200	10 L	1500	2.0	5 N
9KL181A	TGP	45 41 27N	114 24 43W	1.50	0.05	0.15	0.070	150	10 L	200	3.0	5 N
9KL182A	TMGP	45 43 37N	114 23 20W	3.00	0.15	0.50	0.200	500	10 L	2000	1.0	5 N
9KL183A	TPR	45 43 40N	114 23 27W	1.50	0.15	0.30	0.100	200	10 L	700	3.0	5 N
9KL184A	TPR	45 43 44N	114 23 31W	1.00	0.15	0.20	0.100	500	10 L	700	3.0	5 N
9KL194A	TPR	45 43 11N	114 22 40W	1.00	0.10	0.05	0.070	200	10 L	500	3.0	5 N

## ANALYTICAL DATA FOR BLUE JOINT ROCKS

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SAMPLE	Cr	Cu	La	Mo	Nb	Ni	Pb	Sc	Sn	Sr	V	Y	Zr
9KL120A	10 N	5 L	150	7	30	5 N	20	5 N	20	100	10 N	70	300
9KL121A1	100	7	50	5 N	20	20	10 L	20	10 N	500	200	20	1000
9KL122A1	100	10	100	5 N	70	20	10 L	20	10 N	1000	200	15	300
9KL122A2	100	7	100	5 N	70	20	10 N	70	10 L	1000	300	15	500
9KL122A2	70	5	100	5 N	70	20	10 L	50	10 L	1000	300	15	300
9KL122B	20	7	50	5 N	20 N	10	20	5 N	10 N	200	50	10 N	150
9KL123A	700	100	20 N	7	20 N	100	10 N	50	10 N	200	300	30	50
9KL126A	50	20	30	5 N	20 L	20	10 N	10	10 N	150	70	30	200
9KL127A	20	5 L	50	5 N	20 N	10	10 N	7	10 N	200	70	30	300
9KL128A	10	20	50	5 N	20 L	5 N	50	5 N	10 N	100 N	15	500	50
9KL129A	15	5 L	20 N	1000	20 N	5 N	10 N	5	10 N	100 N	15	10 N	10
9KL129B	500	20	20 N	5 N	20 N	20	10	20	10 N	300	150	30	150
9KL130A	10 N	5 L	20	5 N	30	5 N	20	5 N	10 N	100 N	10 N	30	200
9KL130B	10 N	5 L	20	5 L	20	5 N	10	5 N	10 N	100 N	10 N	20	100
9KL131A	10 N	5 L	50	5	30	5 N	20	5 N	10 L	100 L	10 N	50	100
9KL132A	10 N	5 L	70	15	20 L	5 N	20	5	10 L	100 L	20	30	200
9KL134A1	10 N	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	100
9KL135A1	10	5 L	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	15	10	100
9KL135A2	10	5 L	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10	20	70
9KL135A2	10	5 L	20	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10	10	100
9KL136A	10 N	5 N	30	5	20 L	5 N	15	5 N	10 N	200	15	10	100
9KL137A	10 N	5 N	50	5 N	20 N	5 N	30	5 N	10 N	200	10	10	50
9KL139A	10 N	5 L	100	5 N	20 N	5 N	15	5 L	10 N	300	20	15	300
9KL140A	10 N	50	20 N	10	20 N	5 N	30	5 N	10 N	100 N	10 L	20	20
9KL141A	10 N	5 N	20 N	5 L	20 N	5 N	20	5 N	10 N	100 N	10 N	30	200
9KL142A	10 N	5 L	50	5 N	20 N	5 N	20	5 N	10 N	100	10	30	100
9KL143A	10 N	5 L	50	7	20 L	5 N	20	5 N	10 N	100 N	10 N	15	200
9KL144A	30	10	20 N	7	20 N	10	30	7	10 N	100 L	50	20	200
9KL149A	10 N	5 L	70	5 N	30	5 N	20	5 N	10 N	100 N	10 N	50	150
9KL150A1	10 N	5 N	30	5 N	20	5 N	20	5 N	10	100 N	10 N	50	150
9KL151A1	10 N	5 N	50	7	20	5 N	20	5 N	10 N	100 N	10 N	20	100
9KL151A2	10 N	5 L	70	5 N	20	5 N	20	5 N	10 L	100 N	10 N	20	200
9KL151A2	10 N	5 L	30	10	20	5 N	20	5 N	10 N	100 N	10 N	30	200
9KL152A	10 N	5 N	70	5 N	20	5 N	20	5 N	10 N	100	10	50	150
9KL153A	10 N	10	70	5 N	20	5 N	15	5 N	10 N	100 N	10 N	30	300
9KL164A	10 N	5 N	70	5 N	20	5 N	20	5 N	10 N	100 N	10 N	30	100
9KL165A	10 N	10	100	5 N	20	5 N	30	5 N	10	100 N	10 N	30	150
9KL166A	30	15	50	5 N	20 N	5	30	7	10 N	700	50	30	150
9KL167A	300	5	50	5 N	20 L	20	10 N	5 N	10 L	100 N	15	10	100
9KL168A	30	15	20	5 N	20 N	10	15	20	10 L	200	200	30	100
9KL176A1	10 N	5 L	100	5 N	20	5 N	20	5 L	10 L	100 L	10	30	300
9KL177A1	10 N	5	70	5 N	30	5 N	20	5	10 N	100	10	50	200
9KL177A2	10 N	5	150	5 N	20	5 N	20	5 L	10 N	100	10 L	50	200
9KL177A2	10 N	5	100	5 N	20	5 N	20	5 L	10 N	100	10 L	30	200
9KL180A	10 N	7	70	5 N	20	5 N	20	5 N	10 L	150	10 N	30	200
9KL181A	10 N	5 L	150	5 N	30	5 N	20	5 N	10 L	100 N	10 N	50	200
9KL182A	10 N	5	20 N	5 N	20 L	5 N	15	15	10 N	100	10 N	20	300
9KL183A	10 N	5 L	70	5 N	20 L	5 N	20	5 N	10 N	100	10 N	20	100
9KL184A	10 N	5 N	70	5 N	20 L	5 N	20	5 N	10 N	100	10	20	150
9KL194A	10 N	5	20	5 N	20	5 N	20	5 N	10 N	100 N	10 N	20	150

## ANALYTICAL DATA FOR BLUE JOINT ROCKS

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SAMPLE	FORMATION	LAT	LONG	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn	B	Ba	Be	Co
9KL196A	YAM	45 33 28N	114 23 52W	2.00	0.30	10.00	0.015	1000	10 N	5000 G	1.0N	5 N
9KL197A	TPR	45 45 36N	114 23 52W	1.50	0.70	1.00	0.150	200	10 L	2000	3.0	7
9KL199A	TPR	45 43 40N	114 16 47W	1.50	0.50	10.00	0.100	1000	10 L	500	3.0	5
9KL200A	TPR	45 44 2N	114 16 40W	2.00	1.00	1.00	0.300	300	10 L	1000	7.0	10
9KL200B	TMGP	45 44 2N	114 16 40W	2.00	0.70	0.70	0.200	200	10 L	700	2.0	7
9KL201A	TMGP	45 44 9N	114 16 55W	1.00	0.02	0.20	0.030	70	10 L	70	20.0	5 N
9ME008A	TV	45 39 39N	114 20 9W	3.00	0.50	0.30	0.200	500	10 L	1000	1.5	5 N
9ME009A	TV	45 39 39N	114 20 20W	2.00	0.70	0.20	0.200	500	10 L	1000	2.0	5
9ME011A	TV	45 39 39N	114 20 6W	5.00	0.20	1.00	0.200	300	10 L	1000	2.0	5
9ME014A	TMGP	45 45 18N	114 28 4W	7.00	2.00	2.00	0.700	700	10 L	1000	1.5	30
9ME014B	TMGP	45 45 18N	114 28 4W	7.00	1.00	1.00	0.700	500	10 L	3000	1.0	20
9ME015A	TMGP	45 44 56N	114 27 21W	2.00	0.30	0.50	0.200	200	10 L	1000	1.5	5 L
9ME016A	TMGP	45 45 21N	114 27 57W	10.00	2.00	2.00	1.000	500	10 L	700	1.0	50
9ME016B	TMGP	45 45 21N	114 27 57W	2.00	0.50	0.70	0.200	200	10 L	1000	1.5	5
9ME017A	YQ	45 37 51N	114 18 36W	1.00	0.50	0.05L	0.100	50	10 L	500	1.0L	5
9ME022A	TMG	45 40 12N	114 23 38W	1.50	0.07	0.20	0.070	150	10 L	100	3.0	5 N
9ME023A	TMG	45 40 47N	114 22 58W	1.50	0.10	0.20	0.070	150	10 L	300	3.0	5 N
9PB337A	TPR	45 44 31N	114 28 15W	1.50	0.10	0.20	0.100	100	10 L	300	1.5	5 N
9PB338A1	TMGP	45 44 45N	114 27 21W	1.50	0.20	0.30	0.100	150	10 L	300	1.5	5 N
9PB338A2	TMGP	45 44 45N	114 27 21W	1.00	0.15	0.30	0.070	150	10 L	300	1.5	5 N
9PB338A2	TMGP	45 44 45N	114 27 21W	1.00	0.15	0.50	0.070	150	10 L	500	1.5	5 N
9PB339A1	TMGP	45 44 45N	114 27 21W	1.00	0.15	0.50	0.100	100	10 L	500	2.0	5 N
9RB008A	TA	45 43 33N	114 23 27W	2.00	0.70	0.70	0.200	300	10 L	1500	1.5	7
9RB008B	TA	45 43 33N	114 23 27W	2.00	0.70	1.00	0.300	300	10 L	1000	1.5	5
9RB008C	TA	45 43 33N	114 23 27W	3.00	2.00	1.00	0.300	500	10 L	700	2.0	20
9RB010A	TMGP	45 44 9N	114 23 59W	1.50	0.10	0.07	0.150	150	10 L	200	5.0	5 N
9RB011A	TMGP	45 44 27N	114 23 38W	2.00	0.50	0.30	0.150	200	10 L	1500	2.0	5
9RB012A	TV	45 42 28N	114 28 12W	2.00	0.15	0.20	0.150	150	10 L	500	3.0	5 N
9RB014A	TV	45 41 49N	114 27 25W	1.00	0.05	0.10	0.150	200	10 L	700	5.0	5 N
9RB015A	YQ	45 42 7N	114 25 55W	0.50	0.30	0.10	0.050	70	10 L	100	1.0L	5
9RB018A	YQ	45 37 51N	114 21 46W	0.30	0.15	0.05L	0.050	30	10 L	100	1.0N	5 N
9RB019A	YQ	45 37 15N	114 22 4W	2.00	0.30	0.05	0.150	100	10 L	500	1.0	5
9RB019B	YQ	45 37 15N	114 22 4W	5.00	0.05	0.05L	0.200	50	10 L	500	1.0	5 L
9RB020A	YQ	45 37 37N	114 20 2W	1.00	0.30	0.05L	0.050	50	10 L	100	1.0N	5 N
9WR001A	TPR	45 45 39N	114 21 43W	2.00	0.03	0.10	0.100	200	10 L	300	2.0	5 N
9WR003A	TPR	45 32 38N	114 25 40W	1.50	0.07	0.07	0.070	100	10 N	200	2.0	5 N
9WR004A	TMG	45 32 42N	114 25 44W	1.50	0.20	0.30	0.100	200	10 L	300	2.0	5 N
9WR010A1	TPMG	45 32 56N	114 31 4W	2.00	0.50	0.70	0.200	300	10 L	700	2.0	5
9WR010A2	TPMG	45 32 56N	114 31 4W	3.00	0.30	0.50	0.200	300	10 L	1000	2.0	5
9WR010A2	TPMG	45 32 56N	114 31 4W	2.00	0.30	0.50	0.150	200	10 L	700	3.0	5 L
9WR011A	TPMG	45 32 56N	114 31 8W	2.00	0.30	0.50	0.150	200	10 L	1500	2.0	5 L
9WR011B	TGP	45 32 56N	114 31 8W	1.00	0.02	0.10	0.030	200	10 L	20 N	10.0	5 N
9WR012A	YQS	45 33 57N	114 20 2W	3.00	0.50	0.20	0.300	500	20	1000	2.0	50
9WR013A	TPMG	45 32 38N	114 31 8W	1.50	0.15	0.30	0.100	300	10 L	200	5.0	5 N
9WR014A	TGP	45 32 42N	114 31 12W	1.00	0.05	0.50	0.050	200	10 L	20 N	3.0	5 N
9WR015A	TPR	45 32 31N	114 31 12W	3.00	0.50	0.50	0.300	200	10 L	1500	2.0	7
9WR030A	TPR	45 37 4N	114 26 31W	2.00	0.50	0.70	0.200	300	10 L	1000	1.5	5
9WR031A	YQ	45 37 1N	114 26 27W	5.00	0.70	1.00	0.300	500	30	1500	2.0	10
9WR032A	TMG	45 37 4N	114 25 48W	2.00	0.20	0.70	0.150	200	10 L	500	3.0	5 N
9WR036A	TMG	45 34 1N	114 26 41W	1.50	0.20	0.30	0.150	200	10 N	1000	3.0	5 N

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SAMPLE	Cr	Cu	La	Mo	Nb	Ni	Pb	Sc	Sn	Sr	V	Y	Zr
9KL196A	10 L	20	700	50	20 N	7	70	15	10 N	5000 G	30	100	10 N
9KL197A	20	5 L	20	5 N	20 N	7	20	5 N	10 N	500	30	10 N	100
9KL199A	2C	5	20 N	5 N	20 N	5 L	10 L	7	10 N	300	50	20	50
9KL200A	30	20	70	5 N	20 N	15	15	7	10	500	100	15	100
9KL200B	30	5	20 N	5 N	20 N	10	15	5	10 L	300	50	10 L	100
9KL201A	10 N	5 L	20 N	5 N	30	5 N	50	5 N	15	100 N	10 N	50	70
9ME008A	10 N	5	50	5 N	20 N	5 N	30	5	10	500	10 N	20	200
9ME009A	20	5 L	50	5 N	20 N	5	30	5 L	10	150	50	10	100
9ME011A	10 N	7	20	10	20 N	5 N	20	5 L	10 L	500	10 L	20	200
9ME014A	100	20	50	5 N	30	30	10	20	10 N	700	150	50	200
9ME014B	15	30	100	5 N	20 L	5 N	20	15	10 N	500	100	50	200
9ME015A	10 L	5 L	100	5 N	20 L	5 N	30	5 L	10 L	200	50	30	150
9ME016A	100	15	100	5 N	20	20	15	20	50	700	150	50	500
9ME016B	20	7	50	7	20 L	5	20	5 L	10 L	300	50	20	150
9ME017A	20	5 L	20	5 N	20 N	10	10 N	5 N	10 N	100	30	10	100
9ME022A	10 N	5 N	20	5 N	20	5 N	30	5 N	10 N	100	10 N	70	100
9ME023A	10	5 L	200	5	20	5 N	30	5 N	10 L	100	10 N	30	150
9PB337A	10 N	5 L	70	5	20	5 N	30	5 N	10 N	100 L	10	50	150
9PB338A1	10 N	5 N	70	5 N	20	5 N	20	5 L	10 N	100 L	10	50	150
9PB338A2	10 N	5 N	100	5 N	20 L	5 N	15	5 N	10 N	100 L	10	30	100
9PB338A2	10 N	5 N	70	5 N	20 L	5 N	15	5 N	10 N	100 L	10	30	150
9PB339A1	10 N	5 N	30	5 N	20 L	5 N	15	5 N	10 N	100 L	10	30	150
9RB008A	30	5 L	70	5 N	20 N	15	20	5	10 L	500	70	10	150
9RB008B	20	5 N	50	5 N	20 N	10	15	5 L	10 N	500	50	10 L	200
9RB008C	200	7	30	5 N	20 N	70	15	10	10 N	500	100	20	70
9RB010A	10 N	5 L	50	5 N	20	5 N	30	5 N	10	100	10 L	30	100
9RB011A	15	5 L	50	5 N	20 N	5 N	20	5	10 L	300	50	30	100
9RB012A	10 N	5 L	100	5 L	30	5 N	30	5 N	10	100 L	10 L	50	150
9RB014A	10 N	5 L	70	5 N	50	5 N	30	5 N	10	100 N	10 L	50	200
9RB015A	10	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	50
9RB018A	10	5 L	20	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 L	70
9RB019A	30	5	20	5 N	20 N	10	10 N	5	10 L	100 N	30	15	100
9RB019B	50	30	20 N	5 N	20 N	5	200	5	10 N	100	30	15	100
9RB020A	10	5 L	20	5 N	20 N	5	10 N	5 N	10 N	100 N	15	10 L	70
9WR001A	10 N	5 L	150	5 N	30	5 N	20	5 N	15	100 N	10 N	30	150
9WR003A	10 N	50	20	5 N	30	5 N	20	5 N	10 L	100 N	10 N	50	150
9WR004A	10 N	5 L	30	5 N	30	5 N	30	5 N	10	100 L	10	30	100
9WR010A1	10	10	30	7	20 L	5	30	5 L	10	150	30	30	150
9WR010A2	15	5	70	5 N	20 L	7	30	5	15	200	30	20	200
9WR010A2	10 L	5	100	5 N	20 N	5	30	5	10	200	30	50	100
9WR011A	10	7	70	5 N	20 N	5 N	50	5 N	15	200	30	20	150
9WR011B	10 N	15	20 N	5 N	50	5 N	70	5 N	20	100 N	10 N	70	100
9WR012A	70	10000	20 N	5 N	20 L	20	30	10	15	100 N	100	50	200
9WR013A	10 N	5 N	20	5 N	20 L	5 N	30	5 N	10	100 N	10 N	30	70
9WR014A	10 N	5 L	20	5 N	20 N	5 N	50	5 N	10	100 N	10 N	20	20
9WR015A	15	5	100	5 N	20	5	30	5	10 N	300	50	30	200
9WR030A	15	5 L	70	5 N	20 L	5 N	20	5 L	10 L	200	50	30	150
9WR031A	100	5 L	50	5 N	20 L	20	10	15	10 N	150	100	50	300
9WR032A	10 N	7	100	5 N	20 L	5 N	20	5 N	10 L	150	20	30	70
9WR036A	10 L	5	30	5 N	20 L	5 N	20	5 N	10 L	150	20	20	70

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SAMPLE	FORMATION	LAT	LONG	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn	B	3a	Be	Co
9WR036B	TGP	45 34 1N	114 26 41W	0.50	0.10	0.20	0.050	100	10 L	150	5.0	5 N
9WR051A	TGP	45 31 1N	114 29 16W	0.70	0.10	0.50	0.050	100	10 N	70	5.0	5 N
9WR055A1	TV	45 39 25N	114 30 21W	5.00	1.50	0.20	0.500	500	10 L	1000	1.5	20
9WR055A2	TV	45 39 25N	114 30 21W	5.00	1.50	0.20	0.500	300	10 L	1500	2.0	20
9WR055A2	TV	45 39 25N	114 30 21W	5.00	1.50	0.20	0.500	300	10 L	1000	1.5	20
9WR056A	TV	45 39 25N	114 30 21W	7.00	2.00	0.15	0.500	500	10 L	700	2.0	30
9WR057A	TV	45 39 28N	114 30 21W	5.00	2.00	0.15	0.300	200	10 L	700	2.0	20
9WR057B	TV	45 39 28N	114 30 21W	5.00	2.00	0.20	0.500	300	10 L	2000	1.5	20
9WR057D	TVN	45 39 28N	114 30 21W	5.00	2.00	0.15	0.300	300	10 L	300	2.0	30
9WR058A	TV	45 39 32N	114 30 21W	10.00	0.07	0.05L	0.050	300	10 L	700	10.0	5 N
9WR058B	TV	45 39 32N	114 30 21W	1.50	0.10	0.05	0.200	50	10 L	1500	2.0	5 N
9WR059A	TW	45 39 32N	114 30 21W	0.50	0.02L	0.05L	0.050	20	10 N	100	3.0	5 N
9WR060A	TC	45 39 32N	114 30 18W	3.00	0.10	0.07	0.150	500	10 L	1000	5.0	5
9WR060B	TC	45 39 32N	114 30 18W	2.00	0.03	0.05L	0.100	100	10 N	1500	2.0	5 N
9WR061A	TPR	45 39 32N	114 30 10W	2.00	0.50	0.20	0.150	300	15	1500	3.0	5 N
9WR062A	TPR	45 39 32N	114 30 3W	1.00	0.10	0.05	0.050	70	10	200	3.0	5 N
9WR063A	TV	45 39 32N	114 30 3W	1.50	0.10	0.05	0.050	100	10	100	3.0	5 N
9WR063B	TV	45 39 32N	114 30 3W	7.00	0.05	0.05L	0.050	100	10	50	5.0	5 N
9WR064A	TPR	45 39 28N	114 30 3W	1.50	0.07	0.05L	0.150	70	10 N	1500	2.0	5 N
9WR065A	TPR	45 39 21N	114 29 56W	1.50	0.15	0.05	0.070	100	10	200	3.0	5 N
9WR066A	TPR	45 39 25N	114 29 49W	5.00	0.10	0.05L	0.050	100	10 L	50	3.0	5 N
9WR066B	TPR	45 39 25N	114 29 49W	1.00	0.15	0.05	0.070	100	10	300	2.0	5 N
9WR067A	YQ	45 37 58N	114 26 34W	2.00	0.30	0.15	0.150	200	10 N	700	2.0	5 N
9WR068A	TMG	45 38 2N	114 26 34W	1.50	0.10	0.20	0.070	150	10 N	200	3.0	5 N
9WR068B	TMG	45 38 2N	114 26 34W	2.00	0.15	0.15	0.100	150	10 N	300	2.0	5 N
9WR069A	TMG	45 38 13N	114 26 31W	1.50	0.03	0.07	0.030	200	10 N	20	10.0	5 N
9WR070A	TMG	45 38 41N	114 26 2W	2.00	0.15	0.30	0.100	200	10 L	700	5.0	5 N
9WR070B	TPR	45 38 41N	114 26 2W	1.50	0.05	0.15	0.050	150	10 N	50	7.0	5 N
9WR071A1	TMG	45 38 13N	114 26 52W	2.00	0.07	0.10	0.070	300	10 L	100	5.0	5 N
9WR071A2	TMG	45 38 13N	114 26 52W	1.50	0.07	0.10	0.070	200	10 L	100	7.0	5 N
9WR071A2	TMG	45 38 13N	114 26 52W	1.50	0.07	0.15	0.070	200	10 L	100	7.0	5 N
9WR072A1	TMG	45 38 16N	114 26 56W	1.50	0.07	0.15	0.070	200	10 L	150	7.0	5 N
9WR073A	TMG	45 38 20N	114 26 52W	10.00	0.05	0.05L	0.050	500	10 L	50	5.0	5 N
9WR074A	TMG	45 38 31N	114 26 56W	2.00	0.10	0.15	0.070	200	10 N	150	3.0	5 N
9WR075A	TMG	45 38 45N	114 27 14W	2.00	0.05	0.05	0.050	200	10 N	300	2.0	5 N
9WR076A	TPR	45 38 45N	114 27 36W	1.50	0.10	0.10	0.070	200	10 L	200	3.0	5 N
9WR077A1	TMG	45 39 3N	114 27 36W	2.00	0.20	0.20	0.150	70	10 N	500	5.0	5 N
9WR077A2	TMG	45 39 3N	114 27 36W	2.00	0.20	0.30	0.150	70	10 N	500	5.0	5 N
9WR077A2	TMG	45 39 3N	114 27 36W	2.00	0.20	0.20	0.150	100	10 N	500	7.0	5 N
9WR078A	TGP	45 39 3N	114 27 36W	2.00	0.20	0.20	0.150	100	10 N	500	5.0	5 N
9WR079A	TMG	45 39 18N	114 28 19W	1.50	0.05	0.10	0.070	150	10 L	100	5.0	5 N
9WR080A	TPMG	45 37 40N	114 27 25W	2.00	0.30	0.50	0.150	200	10 N	1000	2.0	5
9WR080B	TGP	45 37 40N	114 27 25W	1.00	0.07	0.20	0.050	100	10 N	100	3.0	5 N
9WR080C	TPMG	45 37 40N	114 27 25W	2.00	0.30	0.20	0.200	200	10 N	1000	2.0	5 N
9WR081A	TPR	45 37 44N	114 27 25W	1.50	0.07	0.20	0.070	100	10 N	150	7.0	5 N
9WR082A	TPMG	45 37 37N	114 27 25W	1.50	0.20	0.30	0.100	200	10 L	1500	3.0	5 N
9WR083A	TMG	45 38 13N	114 28 26W	2.00	0.10	0.20	0.150	200	10 L	700	3.0	5 N
9WR084A	TMG	45 38 38N	114 28 55W	1.00	0.05	0.15	0.070	300	10 L	150	3.0	5 N
9WR085A	YAM	45 37 1N	114 32 31W	7.00	3.00	5.00	0.700	500	10 L	200	1.0N	50
9WR085B	TVN	45 37 1N	114 32 31W	3.00	0.02	0.05L	0.020	30	10 L	20	1.0N	5

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SAMPLE	Cr	Cu	La	Mo	Nb	Ni	Pb	Sc	Sn	Sr	V	Y	Zr
9WR036B	10 N	15	20 N	5 N	50	5 N	50	5 N	15	100 N	10 N	50	100
9WR051A	10 N	5 N	20 N	5 N	20 N	5 N	30	5 N	10 N	100 N	10 L	20	30
9WR055A1	200	7	20 N	5 N	20 N	10	10	15	10 N	150	150	20	150
9WR055A2	300	10	20 N	5 N	20 N	10	10	15	10 N	300	120	20	150
9WR055A2	200	10	20 N	7	20 N	10	15	20	10 N	300	150	30	150
9WR056A	700	20	20 N	5 N	20 N	30	10	30	10 N	150	200	30	150
9WR057A	200	5	50	5 N	20 N	15	10 N	20	10 N	100 L	120	20	100
9WR057B	300	10	20	5 N	20 N	15	15	20	10 N	150	150	30	150
9WR057D	300	5	20 N	5 N	20 N	20	10	15	10 N	100	100	20	100
9WR058A	10	20	20 N	50	20 N	5 N	10	5 N	10 N	100 N	10	10	100
9WR058B	10	5	70	5 N	20 L	5 N	15	5 L	10 N	100	15	30	150
9WR059A	10 N	5 L	30	5 N	30	5 N	20	5 N	10 L	100 L	10 N	50	200
9WR060A	20	5	20	5	20	5	10	5	10 N	100 N	30	30	100
9WR060B	20	7	30	20	20 L	5 N	10	5 N	10 N	100 L	15	20	100
9WR061A	10	5 L	50	5 N	20 L	5 N	20	5 L	10 L	150	20	15	150
9WR062A	10 N	5 L	20	20	20 L	5 N	10	5 N	10 L	100 N	15	20	150
9WR063A	10 N	5 L	20	7	20	5 N	10	5 N	10 L	100 N	10 N	20	200
9WR063B	10 N	30	30	150	20	5 N	70	5 N	10	100 N	10 L	30	150
9WR064A	10 N	5 L	30	20	30	5 N	15	5 N	10 L	200	10	30	150
9WR065A	10 N	5	20	15	20	5 N	10 L	5 L	10	100	10 L	20	150
9WR066A	10 N	10	20	20	20 L	5 N	10	5 N	10 L	100 N	10 N	20	150
9WR066B	10 N	10	20	5	20	5 N	10 L	5 N	10	100 N	10 N	30	200
9WR067A	30	10	20	5 N	20 N	5	20	5 L	10 L	100	50	20	100
9WR068A	10 N	5	50	5 N	30	5 N	20	5 N	10 N	100 N	10 N	50	150
9WR068B	10 N	10	100	5 N	30	5 N	30	5 N	15	100 N	10 N	50	150
9WR069A	10 N	30	20 N	5 N	30	5 N	30	5 N	15	100 N	10 N	50	70
9WR070A	10 N	5 N	70	5 N	30	5 N	30	5 N	10	100	15	30	100
9WR070B	10 N	5 L	20	5 N	50	5 N	50	5 N	20	100 N	10 N	50	100
9WR071A1	10 N	5 N	30	10	30	5 N	30	5 N	10 L	100 N	10 N	50	150
9WR071A2	10 N	5 N	20 N	7	30	5 L	30	5 N	10	100 N	10 N	20	100
9WR071A2	10 N	5 N	30	5 N	50	5 N	30	5 N	10 L	100 N	10 N	30	150
9WR072A1	10 N	5 L	30	5 N	70	5 N	30	5 N	10	100 N	10 N	100	150
9WR073A	10 N	150	20 N	5 N	50	5 N	70	5 N	70	100 N	10 N	50	100
9WR074A	10 N	5	20	5 N	50	5 N	30	5 N	10 L	100 N	10 N	50	100
9WR075A	10 N	20	20 N	5 N	30	5 N	30	5 N	150	100 N	10 N	50	100
9WR076A	10 N	5 L	30	5 N	30	5 N	30	5 N	10	100 N	10 N	30	150
9WR077A1	10 N	10	100	5 N	30	5 N	20	5 N	15	100	20	50	150
9WR077A2	10 N	7	150	5 N	20 L	5 N	20	5 N	10	100	20	50	70
9WR077A2	10 N	7	100	7	30	5 N	20	5 N	10	100	20	50	150
9WR078A	10 N	7	100	5	20	5 N	30	5 N	15	100	10	50	100
9WR079A	10 N	5 N	30	5 N	70	5 N	20	5 N	10 L	100 N	10 N	50	150
9WR080A	10 L	5 L	100	5 N	20 L	5 N	15	5 N	10 L	200	30	30	150
9WR080B	10 N	5 L	30	5 N	30	5 N	30	5 N	10 N	100 N	10 N	70	100
9WR080C	10	5	100	5 N	20 L	5 N	20	5 N	10	200	30	30	150
9WR081A	10 L	50	50	5 N	50	5 N	30	5 N	10	100 N	10 N	50	100
9WR082A	10 N	5 N	70	5 N	20 L	5 N	30	5 N	10	200	20	20	100
9WR083A	10 N	5 L	100	5 N	30	5 N	20	5 N	10	100 L	10 N	50	150
9WR084A	10 N	5 N	50	5 N	20 L	5 N	20	5 N	100	100 N	10 N	20	150
9WR085A	300	50	20 N	5 N	20 N	100	10 N	50	10 N	150	500	50	50
9WR085B	7	70	20 N	5 N	20 N	15	10 N	5 N	10 N	100 N	30	10	10 N

## ANALYTICAL DATA FOR BLUE JOINT ROCKS

date 6/ 9/81

SAMPLE	FORMATION	LAT	LONG	Fe(X)	Mg(X)	Ca(X)	Ti(X)	Mn	B	Ba	Be	Co
9WR087A	YAM	45 37 33N	114 31 44W	7.00	3.00	7.00	0.500	700	10 L	500	1.0N	50
9WR088A	TGP	45 33 43N	114 34 4W	0.50	0.05	0.20	0.030	70	10 L	150	3.0	5 N
9WR088B	TGP	45 33 43N	114 34 4W	2.00	0.05	0.15	0.020	70	10 L	150	3.0	5 N
9WR089A	TMG	45 34 22N	114 33 21W	2.00	0.10	0.20	0.150	150	10 L	500	3.0	5 N
9WR090A1	TMG	45 34 26N	114 33 18W	1.00	0.07	0.30	0.100	150	10 L	300	2.0	5 N
9WR090A2	TMG	45 34 26N	114 33 18W	1.50	0.10	0.20	0.100	200	10 L	300	5.0	5 N
9WR090A2	TMG	45 34 26N	114 33 18W	2.00	0.07	0.30	0.100	100	10 L	300	5.0	5 N
9WR091A	TGP	45 34 37N	114 33 3W	2.00	0.15	0.20	0.150	150	10 L	500	5.0	5 N
9WR092A	TMG	45 34 55N	114 32 23W	1.50	0.20	0.30	0.150	200	10 L	500	3.0	5 N
9WR093A	TPR	45 34 55N	114 32 9W	2.00	0.30	0.15	0.200	500	10 L	700	2.0	5
9WR093B	TPMG	45 34 55N	114 32 9W	2.00	0.30	1.50	0.200	500	10 L	1500	3.0	5
9WR093C	TPMG	45 34 55N	114 32 9W	1.50	0.30	1.00	0.150	200	10 L	1000	3.0	5
9WR094A	TPMG	45 34 55N	114 31 58W	1.50	0.50	1.00	0.200	300	10 L	1500	20.0	5 N
9WR095A1	TMG	45 36 50N	114 26 6W	3.00	0.50	0.30	0.300	300	10 L	1000	3.0	7
9WR095A2	TMG	45 36 50N	114 26 6W	3.00	0.50	0.30	0.300	200	10 L	1500	2.0	7
9WR095A2	TMG	45 36 50N	114 26 6W	2.00	0.30	0.30	0.200	200	10 L	1000	2.0	5
9WR096A1	TMG	45 36 50N	114 26 6W	2.00	0.30	0.30	0.200	200	10 L	1000	3.0	5
9WR097A	YQS	45 36 46N	114 26 2W	7.00	3.00	5.00	0.500	1000	10 L	1500	1.0	30
9WR097B	YQS	45 36 46N	114 26 2W	1.50	0.50	0.10	0.100	100	10 L	700	1.0	7
9WR098A1	YQS	45 36 32N	114 25 44W	1.00	0.20	0.10	0.100	200	10 L	500	1.0L	5 N
9WR098A2	YQS	45 36 32N	114 25 44W	1.50	0.30	0.20	0.150	200	10 L	700	1.0L	5 N
9WR098A2	YQS	45 36 32N	114 25 44W	1.50	0.20	0.15	0.150	200	10 L	700	1.0N	5 N
9WR099A	YQS	45 36 32N	114 25 40W	0.70	0.10	0.15	0.070	200	10 L	500	1.0L	5 N
9WR100A	YQS	45 36 50N	114 25 30W	1.00	0.20	0.05	0.100	200	10 L	20 N	1.5	5 N
9WR100B	TA	45 36 50N	114 25 30W	7.00	3.00	5.00	0.500	1000	10 L	1000	1.0	30
9WR102A	YQ	45 36 21N	114 24 10W	0.20	0.10	0.05	0.020	30	10 L	70	1.0N	5 N
9WR103A	TMG	45 37 33N	114 26 9W	1.00	0.10	0.30	0.070	200	10 L	200	2.0	5 N
9WR104A	TMG	45 37 51N	114 25 58W	1.00	0.10	0.30	0.070	200	10 L	200	3.0	5 N
9WR106A	TMG	45 37 51N	114 25 40W	1.00	0.07	0.50	0.070	150	10 L	150	5.0	5 N
9WR107A	TGP	45 37 48N	114 25 26W	2.00	0.10	0.50	0.100	200	10 L	500	5.0	5 N
9WR108A	TMG	45 37 40N	114 24 43W	1.00	0.07	0.30	0.070	200	10 L	200	5.0	5 N
9WR109A	YQ	45 37 40N	114 23 13W	0.30	0.10	0.05L	0.020	500	10 L	70	1.0N	7
9WR110A	YQ	45 37 33N	114 23 2W	0.50	0.20	0.05L	0.030	50	10 L	100	1.0L	5 N
9WR111A	YQ	45 37 37N	114 23 6W	0.30	0.30	0.05L	0.030	150	10 L	100	1.0N	5 N
9WR112A	YQ	45 37 15N	114 22 11W	1.00	0.30	0.10	0.100	70	10 L	1000	1.0	5 N
9WR113A	TPR	45 38 27N	114 25 15W	2.00	0.10	0.50	0.100	200	10 L	2000	2.0	5 N
9WR115A	TMG	45 38 16N	114 25 19W	1.50	0.05	0.20	0.050	100	10 L	20 N	5.0	5 N
9WR115B	TMG	45 38 16N	114 25 19W	10.00	0.07	0.15	0.020	2000	10 L	20	15.0	5 N
9WR116A	TGP	45 38 6N	114 25 1W	1.50	0.02	0.15	0.030	200	10 L	20 N	5.0	5 N
9WR117A	TGP	45 38 23N	114 24 17W	1.50	0.10	0.20	0.100	200	10 L	200	5.0	5 N
9WR117B1	TGP	45 38 23N	114 24 17W	1.00	0.02	0.20	0.050	200	10 L	20 N	5.0	5 N
9WR117B2	TGP	45 38 23N	114 24 17W	1.50	0.05	0.20	0.050	200	10 L	20 N	5.0	5 N
9WR117B2	TGP	45 38 23N	114 24 17W	1.00	0.02	0.20	0.030	200	10 L	20 N	7.0	5 N
9WR118A	TGP	45 38 23N	114 24 21W	1.00	0.05	0.15	0.050	200	10 L	20 N	3.0	5 N
9WR119A	TMG	45 38 38N	114 24 28W	1.00	0.07	0.20	0.100	300	10 L	150	5.0	5 N
9WR121A	TGP	45 39 14N	114 23 42W	1.00	0.70	0.20	0.070	150	10 L	150	5.0	5 N
9WR123A	TGP	45 39 39N	114 23 9W	1.50	0.20	0.30	0.150	200	10 L	500	5.0	5 N
9WR123B	YQ	45 39 39N	114 23 9W	0.50	0.30	0.10	0.050	200	10 L	500	1.0L	5
9WR124A	YQ	45 40 19N	114 22 15W	0.20	0.15	0.05	0.020	30	10 L	300	1.0N	5 N
9WR125A	YQ	45 38 6N	114 23 38W	0.50	0.50	0.05L	0.030	50	30	70	1.0L	5 L



## ANALYTICAL DATA FOR BLUE JOINT ROCKS

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SAMPLE	Cr	Cu	La	Mo	Nb	Ni	Pb	Sc	Sn	Sr	V	Y	Zr
9WR087A	300	50	20 N	5 N	20 N	70	10	50	10 N	300	500	50	100
9WR088A	10 N	5 L	20	5 N	20 L	5 N	50	5 N	10 N	100 N	10 N	30	70
9WR088B	10 N	30	20 N	20	20 L	5	10	5 L	10	100 N	10	10	30
9WR089A	10 N	20	30	5 N	50	5 N	20	5 N	10 L	100 N	10 N	50	100
9WR090A1	10 N	30	20	5	20	5 N	30	5 N	10 L	100 N	10 N	30	200
9WR090A2	10 N	15	30	7	20	5 N	30	5 N	10 L	100 L	10 N	30	150
9WR090A2	10 N	20	50	5	20	5 N	20	5 N	10 L	100 N	10 N	50	200
9WR091A	10	20	100	5 N	30	5 N	15	5 N	10	100 L	10	50	150
9WR092A	10 N	5 N	70	5 N	20 L	5 N	30	5 N	10 L	200	15	30	150
9WR093A	10 N	5 L	100	5 N	30	5 N	20	5 N	15	100	15	50	700
9WR093B	15	5 L	50	5 N	20 L	5 L	20	5	15	500	30	30	150
9WR093C	20	5 L	50	5 N	20 L	5	30	5	10	300	30	20	70
9WR094A	10 L	5 L	50	5 N	20 L	5 N	30	5 N	10	500	10	10	100
9WR095A1	15	5 L	200	5 N	30	5 N	20	7	10	200	50	50	300
9WR095A2	20	5 L	150	5 N	50	5 N	20	7	10	200	50	70	200
9WR095A2	15	5 L	50	5	20 L	5 N	20	5	10	200	30	30	150
9WR096A1	10	5 L	150	5 N	20 L	5 N	20	5	15	200	30	30	150
9WR097A	700	5 L	20 N	5 N	20 N	15	30	50	10 N	500	200	30	100
9WR097B	20	5 N	20 N	5 N	20 N	5	10	5 L	10 N	100	30	10	100
9WR098A1	20	5	20 N	5 N	20 N	5 N	10	5 N	10 N	100	20	10	100
9WR098A2	20	10	20	5 N	20 N	5 L	10	5 N	10 N	100 L	30	15	200
9WR098A2	20	10	20 N	5 N	20 N	5	10	5 N	10 N	100 N	30	10	100
9WR099A	10	5	20 N	5 N	20 N	5 N	10 L	5 N	10 N	100 N	10	10 N	100
9WR100A	15	100	20 N	5 N	20 N	5	30	5 L	30	100 N	20	15	100
9WR100B	1000	20	20 N	7	20 N	20	10 N	50	10 N	500	200	30	100
9WR102A	10 N	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	150
9WR103A	10 N	5 N	20	7	20	5 N	30	5 N	10 L	100 L	10 N	30	100
9WR104A	10 N	5 N	20	5 N	30	5 N	20	5 N	10 N	100 L	10 N	30	100
9WR106A	10 N	5 N	20	5 N	30	5 N	20	5 N	10	100 N	10 N	50	100
9WR107A	10 N	5 L	70	5 N	30	5 N	20	5 N	10 L	100	10 N	50	200
9WR108A	10 N	5 N	30	5 N	30	5 N	20	5 N	10	100 L	10 N	50	150
9WR109A	10	5 N	20 N	5 N	20 N	10	10 N	5 N	10 N	100 N	10 N	10 N	70
9WR110A	15	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	100
9WR111A	10 L	5 N	20 N	5 N	20 N	5 L	10 N	5 L	10 N	100 N	10 N	15	70
9WR112A	20	5 N	20	5 N	20 N	5 N	10	5 L	10 L	100 L	50	15	70
9WR113A	10 N	7	150	5 N	30	5 N	20	5 L	10	200	10 N	50	150
9WR115A	10 N	5	20 N	5 N	20	5 N	30	5 N	10 N	100 N	10 N	30	100
9WR115B	10 N	50	20 N	5 N	50	5 N	30	7	70	100 N	10 N	100	50
9WR116A	10 N	5 L	20 N	5 N	30	5 N	30	5 N	15	100 N	10 N	30	100
9WR117A	10 N	5 L	20	5 N	50	5 N	30	5 N	10 L	100 N	10 N	50	150
9WR117B1	10 N	5 N	20 N	5 N	50	5 N	30	5 N	15	100 N	10 N	50	100
9WR117B2	10 N	5 L	20	5 N	100	5 N	30	5 N	20	100 N	10 N	50	150
9WR117B2	10 N	5 N	20 N	5 N	70	5 N	50	5 N	15	100 N	10 N	50	150
9WR118A	10 N	5 N	20 N	5 N	50	5 N	30	5 N	15	100 N	10 N	30	100
9WR119A	10 N	5 N	50	5 N	20	5 N	20	5 N	10 L	100 N	10 N	30	150
9WR121A	10 N	5 L	30	5	30	5 N	20	5 N	10 L	100 N	10 N	30	100
9WR123A	10 N	5 L	70	5 N	30	5 N	30	5 N	10 L	100 L	10 L	50	150
9WR123B	10	5	20	5 N	20 N	5	10	5 N	10 N	100	15	10 N	100
9WR124A	10 L	5 N	50	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	70
9WR125A	10 N	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	300

## ANALYTICAL DATA FOR BLUE JOINT ROCKS

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SAMPLE	FORMATION	LAT	LONG	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn	B	Ba	Be	Co
9WR126A	YQ	45 38 31N	114 22 11W	0.50	0.15	0.05	0.020	100	20	100	1.0N	5 N
9WR127A1	YQ	45 38 31N	114 22 15W	0.50	0.20	0.05L	0.030	20	10	100	1.0N	5 N
9WR127A2	YQ	45 38 31N	114 22 15W	0.50	0.15	0.05L	0.030	70	10	100	1.0N	5 N
9WR127A2	YQ	45 38 31N	114 22 15W	0.50	0.20	0.05L	0.030	70	10 L	100	1.0N	5 N
9WR128A	YQ	45 38 34N	114 22 48W	0.30	0.30	0.05L	0.030	30	50	70	1.0N	5
9WR128B	YQ	45 38 34N	114 22 48W	1.00	0.30	0.05L	0.020	20	20	30	1.0N	5
9WR129A1	YQ	45 38 31N	114 22 51W	2.00	0.70	0.10	0.200	100	100	150	1.0	5 L
9WR129A2	YQ	45 38 31N	114 22 51W	1.00	0.70	0.05	0.070	70	150	150	1.0L	5 L
9WR129A2	YQ	45 38 31N	114 22 51W	1.00	0.70	0.05	0.070	70	100	100	1.0L	5 L
9WR130A	YQ	45 38 56N	114 23 45W	1.00	0.30	0.10	0.070	50	10 L	500	1.0N	5
9WR130B	TGP	45 38 56N	114 23 45W	1.50	0.10	0.20	0.100	100	10 L	150	7.0	5 N
9WR130C	TPR	45 38 56N	114 23 45W	2.00	1.00	1.00	0.200	200	10 L	1500	3.0	7
9WR131A	YQ	45 38 49N	114 23 2W	1.50	0.15	0.10	0.150	150	10 L	500	1.0L	5
9WR132A	TA	45 39 28N	114 22 44W	7.00	2.00	5.00	1.000	1000	10 L	1000	1.0L	50
9WR133A	YQ	45 39 21N	114 22 22W	0.70	0.50	0.05	0.050	70	10 L	150	1.0L	5 L
9WR134A	TMG	45 33 46N	114 26 34W	1.50	0.20	0.30	0.100	200	10 L	500	5.0	5 N
9WR135A	TPMG	45 33 17N	114 27 21W	1.00	0.15	0.30	0.150	300	10 L	300	2.0	5 N
9WR136A	YQS	45 34 15N	114 25 51W	3.00	1.00	0.70	0.300	500	10 L	700	2.0	30
9WR137A	YQS	45 34 29N	114 25 30W	1.00	0.10	0.20	0.030	200	15	300	3.0	5 N
9WR138A	YQ	45 34 37N	114 25 22W	3.00	0.15	0.05L	0.050	50	300	100	1.0L	5
9WR138B	TUN	45 34 37N	114 25 22W	0.20	0.03	0.05L	0.010	20	10 L	150	1.0N	5 N
9WR139A	YQ	45 35 6N	114 25 4W	0.50	0.10	0.05	0.050	100	10 L	500	1.0L	5 N
9WR139B	TUN	45 35 6N	114 25 4W	3.00	0.10	0.10	0.200	100	50	500	1.0	5
9WR140A	YQ	45 35 27N	114 24 14W	0.70	0.15	0.05	0.070	150	20	300	1.0N	5 N
9WR140B	TPR	45 35 27N	114 24 14W	2.00	0.50	0.50	0.200	500	10 L	1000	2.0	5
9WR142A	TPMG	45 36 43N	114 26 59W	1.50	0.30	0.70	0.150	200	10 L	1000	2.0	5 L
9WR143A	TGP	45 36 7N	114 28 40W	2.00	0.50	1.00	0.200	200	10 L	1000	3.0	5
9WR144A	TPMG	45 35 56N	114 28 8W	2.00	0.50	0.50	0.200	300	10 L	1000	1.5	5 N
9WR145A	TPMG	45 35 31N	114 28 51W	2.00	0.50	0.70	0.200	300	10 L	1000	2.0	5
9WR145B	TPR	45 35 31N	114 28 51W	1.50	0.07	0.10	0.100	200	10 L	300	5.0	5 N
9WR146A	TPR	45 35 2N	114 29 34W	1.00	0.07	0.10	0.050	100	10 L	150	3.0	5 N
9WR146B	TPR	45 35 2N	114 29 34W	1.50	0.07	0.10	0.100	200	10 L	700	5.0	5 N
9WR147A	TGP	45 38 23N	114 25 19W	2.00	0.70	0.70	0.300	200	10 L	700	5.0	7
9WR148A	TGP	45 32 45N	114 32 56W	1.50	0.15	0.30	0.100	200	10 L	500	5.0	5 N
9WR150A1	TMG	45 38 23N	114 25 22W	1.00	0.07	0.30	0.070	150	10 L	150	5.0	5 N
9WR150A2	TMG	45 38 23N	114 25 22W	1.00	0.10	0.20	0.070	150	10 L	200	5.0	5 N
9WR150A2	TMG	45 38 23N	114 25 22W	1.00	0.10	0.20	0.100	150	10 L	150	5.0	5 N
9WR151A	TMG	45 38 20N	114 25 15W	1.50	0.10	0.30	0.100	200	10 L	200	5.0	5 N
9WR152A	TPR	45 39 32N	114 30 10W	1.00	0.50	0.30	0.150	200	15	1000	3.0	5 N
9WR153A	TGP	45 33 46N	114 34 8W	2.00	0.30	0.70	0.200	200	10 L	1000	5.0	5
9WR154A	YAM	45 32 38N	114 24 25W	7.00	5.00	5.00	0.500	700	10 L	300	1.0N	50
9WR155A	YAM	45 32 38N	114 24 50W	5.00	3.00	5.00	0.300	700	10 L	500	1.0	50
9WR155B	YAM	45 32 38N	114 24 50W	5.00	2.00	5.00	0.500	500	10 L	300	1.0	50
9WR156A	TPMG	45 32 34N	114 26 34W	1.00	0.20	0.70	0.100	150	10 L	300	3.0	5 N
9WR157A	TPMG	45 33 57N	114 29 38W	2.00	0.50	0.70	0.200	500	10 L	1500	3.0	5
9WR158A1	TPMG	45 34 29N	114 28 55W	2.00	0.50	1.00	0.200	300	10 L	2000	2.0	5
9WR158A2	TMG	45 34 29N	114 28 55W	3.00	0.50	1.00	0.200	500	10 L	1500	3.0	5
9WR158A2	TPMG	45 34 29N	114 28 55W	2.00	0.30	1.00	0.150	200	10 L	1000	3.0	5
9WR158B	TGP	45 34 29N	114 28 55W	1.00	0.07	0.30	0.070	200	10 L	70	5.0	5 N
9WR159A	TPMG	45 34 33N	114 28 51W	2.00	0.50	1.00	0.200	300	10 L	1000	2.0	5

## ANALYTICAL DATA FOR BLUE JOINT ROCKS

date 6/ 9/81

SAMPLE	Cr	Cu	La	Mo	Nb	Ni	Pb	Sc	Sn	Sr	V	Y	Zr
9WR126A	10 N	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10	50
9WR127A1	10 N	5 L	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10	70
9WR127A2	10 L	5 L	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10	70
9WR127A2	10 N	5 L	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10	50
9WR128A	10 N	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10	30
9WR128B	10 L	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	20	20
9WR129A1	20	5 N	20 N	5 N	20 N	7	10 N	5	10 N	100 N	30	15	100
9WR129A2	10	5 N	20 N	5 N	20 N	5	10 N	5 N	10 N	100 N	15	10	70
9WR129A2	10	5 L	20 N	5 N	20 N	7	10 N	5 N	10 N	100 N	15	10	100
9WR130A	20	5 L	20 N	5 N	20 N	7	10	5 N	10 N	100	30	10	70
9WR130B	10 N	5	20	5 N	50	5 N	50	5 N	10	100 N	10 N	50	150
9WR130C	30	7	70	5 N	20 N	7	30	5	10	300	50	10	150
9WR131A	15	30	20 N	5 N	20 N	5	15	5 N	50	100 N	30	10	70
9WR132A	300	10	20 N	5 N	20 N	15	10	30	10 N	700	300	50	150
9WR133A	10	5 N	20 N	5 N	20 N	5 L	10 N	5 N	10 N	100 N	10	10	50
9WR134A	10 N	5 L	20 N	5 N	20 N	5 N	20	5 L	10 L	100	15	30	100
9WR135A	10 N	5 N	20	5 N	20	5 N	30	5 N	10 N	100 L	15	20	70
9WR136A	50	15	50	5 N	20 L	20	50	10	10 N	200	50	30	200
9WR137A	10 N	5	20 N	5 N	70	5 N	20	5 N	10 L	100	10 N	30	70
9WR138A	10 N	5 L	20 N	5 N	20 N	15	10 N	5 N	10 N	100 N	30	10	50
9WR138B	10 N	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10	30
9WR139A	10	5	20	5 N	20 N	5 N	10	5 N	10 N	100	10	10	50
9WR139B	20	5 N	50	5 N	20 N	7	10 L	5 N	10 N	100	50	30	70
9WR140A	10	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10	10	100
9WR140B	15	5 L	50	5 N	20 N	5 N	20	5	10 L	300	50	20	150
9WR142A	10 N	5 L	20	5 N	20 N	5 N	20	5 L	10 N	200	20	20	100
9WR143A	10	5 L	50	5 N	20 L	5 N	20	5	10 L	200	30	30	150
9WR144A	10 L	5 L	100	5 N	20 N	5 N	20	5 L	10 N	200	20	15	200
9WR145A	10	5 L	70	5 N	20 L	5 N	20	5	10 N	200	30	20	200
9WR145B	10 N	5 N	50	5 N	30	5 N	30	5 N	10 N	100 N	10 N	50	150
9WR146A	10 N	5 L	50	5 N	30	5 N	30	5 N	10 N	100 N	10 N	50	100
9WR146B	10 N	5	200	5 N	30	5 N	30	5 N	10	100 L	10 N	50	200
9WR147A	30	5 N	70	5 N	20	15	20	5	10	300	50	50	150
9WR148A	10 N	5 N	70	5 N	20	5 N	30	5 N	10 L	100 L	10 L	50	150
9WR150A1	10 N	5 N	50	5 N	30	5 N	20	5 N	10 L	100 N	10 N	50	100
9WR150A2	10 N	5 N	30	5	30	5 N	20	5 N	10	100 N	10 N	50	100
9WR150A2	10 N	5 N	50	5 N	30	5 N	20	5 N	10 L	100 N	10 N	50	100
9WR151A	10 N	5 N	70	5 N	30	5 N	20	5 N	10	100 N	10 N	70	150
9WR152A	10 L	5 N	50	5 N	20 N	5 N	30	5 N	10	100	20	20	100
9WR153A	10 N	5 N	100	5 N	30	5 N	15	5	10 N	300	30	30	200
9WR154A	300	50	20 N	5 N	20 N	100	10 N	50	10 N	150	300	50	70
9WR155A	300	30	20 N	5 N	20 N	50	15	30	10 N	150	200	50	70
9WR155B	100	70	20 N	5 N	20 N	50	10	30	10 N	150	200	50	150
9WR156A	10 N	5 L	20 N	5 N	20	5 N	30	5 N	10 L	150	20	50	150
9WR157A	15	5	50	5 N	20	7	30	5	10 L	200	30	50	300
9WR158A1	10	5 L	100	5 N	20 N	5 N	50	5 L	10 N	200	50	30	200
9WR158A2	10	5 L	50	5 N	20	5 N	30	5	10 L	200	30	30	300
9WR158A2	10 L	5 L	50	5 N	20 L	5 N	30	5 L	10 L	200	20	20	200
9WR158B	10 N	5 L	20	5 N	20 L	5 N	20	5 N	10	100 N	10	100	100
9WR159A	10	5	50	5 N	20 L	5 N	30	5 L	10 L	200	30	30	100

## ANALYTICAL DATA FOR BLUE JOINT ROCKS

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SAMPLE	FORMATION	LAT	LONG	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn	B	Ba	Be	Co
9WR160A	TPMG	45 34 55N	114 28 4W	3.00	0.70	0.70	0.300	500	10 L	700	3.0	10
9WR161A1	TPMG	45 34 58N	114 28 1W	2.00	0.50	0.30	0.300	300	10 L	300	3.0	7
9WR161A2	TPMG	45 34 58N	114 28 1W	3.00	0.50	0.50	0.300	500	10 L	500	5.0	10
9WR161A2	TPMG	45 34 58N	114 28 1W	5.00	1.00	0.70	0.500	500	10 L	700	5.0	10
9WR162A	TPR	45 35 49N	114 27 3W	3.00	0.70	0.70	0.300	500	10 L	1500	2.0	7
9WR163A	TGP	45 35 49N	114 26 52W	0.50	0.03	0.30	0.030	100	10 L	20	5.0	5
9WR164A	TPR	45 36 7N	114 26 31W	2.00	0.10	0.15	0.100	300	10 L	500	5.0	5
9WR164B	YQS	45 36 7N	114 26 31W	1.50	0.10	0.30	0.100	150	50	700	1.0	5
9WR164C	TVN	45 36 7N	114 26 31W	1.00	0.05	0.05	0.100	100	10 L	300	1.0N	5
9WR164D	YQS	45 36 7N	114 26 31W	5.00	1.50	0.30	0.500	700	10 L	1000	2.0	15
9WR165A1	TPMG	45 35 24N	114 26 23W	2.00	0.30	0.70	0.150	300	10 L	300	3.0	5
9WR165A2	TPMG	45 35 24N	114 26 23W	2.00	0.30	1.00	0.200	300	10 L	200	3.0	5
9WR165A2	TPMG	45 35 24N	114 26 23W	2.00	0.30	0.50	0.200	300	10 L	200	3.0	5
9WR166A1	TPMG	45 35 24N	114 26 27W	1.50	0.20	0.50	0.100	200	10 L	1000	2.0	5
9WR167A	YQS	45 33 14N	114 25 40W	3.00	0.70	0.50	0.300	300	10 L	700	2.0	10
9WR167B	TPMG	45 33 14N	114 25 40W	1.00	0.20	1.00	0.070	100	10 L	1500	1.5	5
9WR170A	YQS	45 33 54N	114 25 4W	5.00	1.00	1.50	0.500	1000	20	1500	2.0	20
9WR171A	YQS	45 34 19N	114 25 4W	3.00	1.00	0.10	0.070	100	2000 G	20	1.0N	15
9WR172A	TA	45 34 40N	114 23 49W	5.00	2.00	2.00	0.500	1000	10	1000	1.0	30
9WR173A	YQ	45 34 55N	114 23 38W	0.50	0.30	0.05	0.050	50	10 L	500	1.0	5
9WR174A	YGN	45 35 27N	114 22 51W	5.00	0.50	0.10	0.300	700	10	1000	2.0	7
9WR174B	YQS	45 35 27N	114 22 51W	5.00	1.00	0.20	0.500	500	10 L	1500	2.0	15
9WR175A	TPMG	45 33 25N	114 28 40W	2.00	0.50	1.00	0.200	500	10 L	1500	2.0	5
9WR176A	TGP	45 33 3N	114 29 31W	1.00	0.03	0.30	0.050	100	10 L	20	3.0	5
9WR176B	TGP	45 33 3N	114 29 31W	1.00	0.10	0.30	0.070	200	10 L	20	3.0	5
9WR176C	TMG	45 33 3N	114 29 31W	1.00	0.10	0.30	0.100	200	10 L	100	2.0	5
9WR177A	TMG	45 32 45N	114 29 45W	1.50	0.20	0.30	0.100	200	10 L	700	3.0	5
9WR177B	TMG	45 32 45N	114 29 45W	1.00	0.02	0.20	0.050	100	10 L	20	3.0	5
9WR178A	TMG	45 32 38N	114 29 56W	1.00	0.03	0.10	0.050	50	10 L	30	3.0	5
9WR179A	TMG	45 32 9N	114 30 18W	2.00	0.30	0.50	0.200	500	10 L	500	3.0	5
9WR180A	TMG	45 31 37N	114 31 22W	1.00	0.05	0.30	0.050	100	10 L	50	7.0	5
9WR181A	TGP	45 32 42N	114 29 38W	5.00	1.00	1.00	0.500	1000	10 L	700	5.0	10
9WR181B	TMG	45 32 42N	114 29 38W	2.00	0.30	0.50	0.150	300	10 L	700	7.0	5
9WR182A	TMG	45 31 26N	114 31 47W	1.00	0.10	0.10	0.100	200	10 L	300	1.5	5
9WR183A	TMG	45 32 13N	114 29 20W	2.00	0.30	0.70	0.200	500	10 L	1000	3.0	5
9WR183B	TPR	45 32 13N	114 29 20W	3.00	0.50	0.70	0.500	200	10 L	1500	1.5	10
9WR184A	TPMG	45 31 44N	114 29 45W	0.70	0.30	0.70	0.150	200	10 L	500	3.0	5
9WR185A	TGP	45 31 8N	114 30 28W	2.00	0.10	0.20	0.100	200	10 L	300	3.0	5
9WR186A	TPR	45 30 32N	114 31 4W	2.00	0.10	0.10	0.150	200	10 L	500	5.0	5
9WR187A	TMG	45 32 13N	114 27 14W	1.50	0.20	0.30	0.100	200	10 L	200	3.0	5
9WR187B	TGP	45 32 13N	114 27 14W	2.00	0.10	0.30	0.100	150	50	700	1.5	5
9WR188A	TMG	45 31 48N	114 28 15W	2.00	0.30	0.30	0.200	300	10 L	200	3.0	5
9WR189A	TMG	45 31 15N	114 29 5W	2.00	0.30	0.50	0.150	300	10 L	700	3.0	5
9WR189B	TMG	45 31 15N	114 29 5W	0.70	0.10	0.30	0.100	150	10 L	500	1.5	5
9WR190A	TPR	45 30 39N	114 29 56W	1.50	0.20	0.15	0.150	200	10 L	1000	2.0	5
9WR191A	TPR	45 30 21N	114 30 21W	2.00	0.10	0.05	0.100	200	10 L	500	2.0	5
9WR192A	TPR	45 30 3N	114 30 28W	1.50	0.20	0.10	0.150	300	10 L	1000	2.0	5
9WR193A	TPR	45 29 23N	114 30 46W	2.00	0.20	0.20	0.150	200	10 L	700	3.0	5
9WR194A	TPR	45 32 27N	114 26 56W	1.50	0.50	0.20	0.100	150	10 L	500	3.0	5
9WR195A	TPMG	45 31 40N	114 26 56W	2.00	0.30	0.50	0.150	300	10 L	500	2.0	5

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SAMPLE	Cr	Cu	La	Mo	Nb	Ni	Pb	Sc	Sn	Sr	V	Y	Zr
9WR160A	15	7	70	5 N	20	5 N	20	5 L	10 L	150	50	30	500
9WR161A1	10	5 L	70	5 N	20	5 N	20	5 L	10 L	100 L	50	30	300
9WR161A2	10	5 L	70	5 N	20	5 N	20	5 L	10 N	100	30	30	300
9WR161A2	15	5 L	100	5 N	30	5	20	5	10	100	50	50	500
9WR162A	15	5	150	5 N	20	5	20	5	10 L	200	50	30	300
9WR163A	10 N	5 L	20 N	5 N	20 L	5 N	50	5 N	10 N	100 N	10 N	30	50
9WR164A	10 N	20	70	5 N	30	5 N	70	5 N	20	100 N	10 N	50	200
9WR164B	15	5 L	20	5 N	20 N	5 N	10	5 N	10 N	100	30	15	100
9WR164C	15	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	15	10 N	30
9WR164D	150	5 N	70	5 N	20 N	30	10	20	10 L	100 L	150	30	200
9WR165A1	10 L	5 L	30	5 N	20 L	5 N	20	5 L	10 N	100	20	50	150
9WR165A2	10 L	5 L	20	5 N	20 L	5 N	20	5	10 N	100 L	20	30	200
9WR165A2	10 N	5 L	20 N	5 N	20 L	5 N	20	5 L	10 N	100	20	20	100
9WR166A1	10 L	5 L	70	5	20 N	5 N	30	5 N	10 L	150	15	20	70
9WR167A	50	5 L	50	5 N	20 N	15	10 L	7	10 N	100	70	30	500
9WR167B	10 N	5 L	20 N	5 N	20 N	5 N	20	5 N	10 N	300	15	15	70
9WR170A	70	15	70	5 N	20 N	30	10	15	10 N	200	100	50	300
9WR171A	10 L	5 L	20 N	5 N	20 N	50	10 N	5 N	10 N	100 L	20	10 N	30
9WR172A	100	30	30	5 N	20 N	50	15	15	10 N	500	150	20	100
9WR173A	10 L	5 L	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	100
9WR174A	30	50	50	10	20 N	30	10	15	10 N	100 L	30	50	150
9WR174B	50	15	70	5 N	20 L	20	10	15	10 N	100	100	50	300
9WR175A	10	5 L	70	5 N	20 L	5 N	30	5 L	10	200	30	20	200
9WR176A	10 N	5 L	20 N	5 N	20 N	5 N	30	5 N	10 N	100 N	10 N	15	15
9WR176B	10 N	5	20	5 N	20 L	5 N	30	5 N	10 N	100 N	10 N	30	50
9WR176C	10 N	5 L	30	5	20	5 N	30	5 N	10 L	100 N	10 N	30	50
9WR177A	10 L	5 N	30	5 N	50	5 N	30	5 N	10 L	100	15	50	100
9WR177B	10 N	5 L	20 N	5 N	70	5 N	30	5 N	10 L	100 N	10 N	100	70
9WR178A	10 N	5 L	20 N	5	20 N	5 N	15	5 N	10 N	100 N	10 N	20	200
9WR179A	10 L	5 L	20	5 N	20 L	5 N	30	5 L	10 L	100	20	20	200
9WR180A	10 N	5 N	20 N	5 N	30	5 N	70	5 N	10 L	100 N	10 N	50	70
9WR181A	50	5 L	20 N	5 N	20	10	20	7	15	300	70	50	300
9WR181B	10 L	5 N	50	5 N	20 L	5 N	20	5 L	10 L	150	20	50	100
9WR182A	10 N	10	20	5 N	20 L	5 N	50	5 N	10 L	100 N	10	15	100
9WR183A	10	5 L	70	5 N	20	5 N	20	5	10	150	20	50	300
9WR183B	10	5 L	70	5 N	20 L	5	15	10	10 N	300	70	50	300
9WR184A	10 L	5 L	50	5 N	20 L	5 N	20	5 L	10	200	20	50	200
9WR185A	10 N	5 L	150	5 N	30	5 N	20	5 N	10	100	10 N	50	200
9WR186A	10 N	7	70	5 N	20	5 N	20	5	10	100	10 N	50	200
9WR187A	10 L	5 L	50	5 N	20 L	5 N	15	5 L	10 N	100 L	15	20	70
9WR187B	10 N	5 L	100	5 N	20	5 N	20	5 N	10	100 N	10 N	30	100
9WR188A	10 L	5 L	150	5 N	20 L	5 N	30	5 L	10	100 L	20	20	100
9WR189A	10 L	5 L	30	5 N	20 L	5 N	20	5 L	10	150	20	20	100
9WR189B	10 N	5 L	20	5 N	20 N	5 N	30	5 N	10 N	100	10	20	100
9WR190A	10 L	5 L	70	5 N	20 L	5 N	30	5 N	10 N	200	30	20	150
9WR191A	10 N	5 L	100	5 N	20	5 N	15	5 N	10 N	100 L	10	30	150
9WR192A	10 L	5 L	70	5 N	20 L	5 N	30	5 L	10 N	150	20	20	150
9WR193A	10 L	5 L	70	5 N	20	5 N	20	5 L	10 L	200	20	30	200
9WR194A	10 N	10	70	5 N	20 L	5 N	30	5 N	10 L	100	15	30	100
9WR195A	10 L	5 N	70	5 L	20 L	5 L	20	5 L	10 N	150	30	20	150

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SAMPLE	FORMATION	LAT	LONG	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn	B	Ba	Be	Co
9WR196A	TPR	45 31 15N	114 27 39W	1.50	0.20	0.10	0.150	500	10 L	700	1.5	5 L
9WR197A	TMG	45 30 46N	114 28 1W	0.70	0.02L	0.20	0.030	100	10 L	20 N	3.0	5 N
9WR198A1	TMG	45 30 39N	114 28 15W	0.50	0.02	0.15	0.030	200	10 L	20 N	3.0	5 N
9WR198A2	TMG	45 30 39N	114 28 15W	0.70	0.03	0.20	0.050	200	10 L	20 N	3.0	5 N
9WR198A2	TMG	45 30 39N	114 28 15W	0.70	0.03	0.20	0.030	200	10 L	20 N	3.0	5 N
9WR199A	TMG	45 30 39N	114 28 15W	1.00	0.03	0.20	0.030	200	10 L	20 N	3.0	5 N
9WR200A	TPMG	45 30 3N	114 29 5W	1.50	0.20	0.50	0.100	200	10 L	1000	2.0	5 N
9WR201A	YQS	45 33 50N	114 20 24W	3.00	1.00	0.30	0.200	300	30	1000	2.0	50
9WR202A	YQS	45 34 1N	114 19 29W	20.00G	0.10	0.05L	0.020	70	10 L	200	1.0N	15
9WR203A	YQS	45 34 1N	114 19 37W	5.00	0.30	0.10	0.200	500	50	300	2.0	20
9WR203B	YQS	45 34 1N	114 19 37W	2.00	0.70	0.70	0.500	500	50	700	2.0	50
9WR204A	YQS	45 34 12N	114 20 6W	20.00	1.00	0.07	0.150	100	2000 G	100	1.0	20
9WR204B	YQS	45 34 12N	114 20 6W	10.00	1.50	0.20	0.200	100	2000 G	500	2.0	30
9WR205A	YQS	45 34 8N	114 20 45W	3.00	0.50	0.05	0.150	70	150	1500	1.0N	20
9WR205B	YQS	45 34 8N	114 20 45W	3.00	1.00	0.10	0.200	70	2000 G	500	1.0N	50
9WR206A	YAGN	45 34 12N	114 20 49W	5.00	1.00	0.70	0.500	500	10 L	700	1.0	20
9WR209A	YGN	45 35 45N	114 21 21W	3.00	0.70	0.20	0.150	200	10 L	1500	1.5	20
9WR210A	YGN	45 35 45N	114 21 21W	3.00	1.00	0.70	0.300	150	10 L	700	2.0	50
9WR211A	YQS	45 35 38N	114 21 21W	5.00	1.00	0.20	0.300	200	10	1000	2.0	30
9WR212A	YGN	45 35 45N	114 21 43W	5.00	1.00	0.50	0.300	300	10 L	700	2.0	50
9WR213A	YGN	45 35 20N	114 22 15W	2.00	1.00	0.50	0.200	500	10 L	1000	1.5	10
9WR214A	YQ	45 36 21N	114 21 39W	1.50	0.50	0.10	0.150	50	10	700	1.5	7
9WR216A1	YQ	45 36 39N	114 19 58W	1.00	0.50	0.05L	0.100	70	10 L	100	1.0L	5 N
9WR216A2	YQ	45 36 39N	114 19 58W	0.70	0.20	0.05L	0.050	50	10 L	70	1.0L	5 N
9WR216A2	YQ	45 36 39N	114 19 58W	1.00	0.20	0.05L	0.050	70	10 L	70	1.0L	5 N
9WR217A	YQ	45 36 43N	114 20 2W	0.20	0.10	0.05L	0.020	70	10 L	50	1.0L	5 N
9WR218A	YQ	45 37 4N	114 19 15W	0.70	0.50	0.05L	0.020	100	10 L	200	1.0N	7
9WR218B	YQ	45 37 4N	114 19 15W	1.00	0.70	0.07	0.070	200	10	200	1.0N	10
9WR219A	YQS	45 37 33N	114 18 32W	0.30	0.20	0.05L	0.030	20	10 L	100	1.0N	5 N
9WR220A	TV	45 39 21N	114 30 14W	5.00	1.50	0.20	0.500	500	20	2000	1.5	150
9WR220B	TV	45 39 21N	114 30 14W	5.00	1.50	0.15	0.300	700	10	1000	1.5	150
9WR221A	TW	45 39 18N	114 30 14W	1.50	0.10	0.05L	0.150	100	10 L	700	1.0	5 N
9WR222A	TW	45 39 18N	114 30 10W	1.00	0.05	0.05	0.100	50	10 L	500	1.0	5 N
9WR223A	TMG	45 38 20N	114 29 20W	1.00	0.05	0.10	0.050	200	10 L	50	3.0	5 N
9WR223B	TMG	45 38 20N	114 29 20W	1.00	0.05	0.10	0.050	500	10 L	70	10.0	5 N
9WR224A	TMG	45 38 16N	114 29 16W	1.00	0.05	0.10	0.050	150	10 L	70	10.0	5 N
9WR224B	TPR	45 38 16N	114 29 16W	1.00	0.05	0.15	0.050	100	10 L	20 N	5.0	5 N
9WR224C	TMG	45 38 16N	114 29 16W	1.00	0.05	0.10	0.050	300	10 L	70	5.0	5 N
9WR225A	TMG	45 38 13N	114 29 9W	1.50	0.50	0.70	0.100	500	10 L	500	3.0	5 N
9WR226A	TGP	45 38 2N	114 28 55W	5.00	0.07	0.05	0.070	1000	10 L	100	5.0	5 N
9WR227A	TGP	45 37 58N	114 28 55W	1.50	0.10	0.30	0.100	200	10 L	500	2.0	5 N
9WR228A	TGP	45 37 51N	114 28 55W	1.50	0.10	0.15	0.070	200	10 L	70	3.0	5 N
9WR230A	TMG	45 38 2N	114 29 13W	2.00	0.05	0.10	0.070	500	50	200	3.0	5 N
9WR231A	YF	45 34 8N	114 20 6W	20.00G	0.10	0.05L	0.150	50	10 L	150	1.0N	5
9WR232A	YAGN	45 34 15N	114 20 56W	3.00	0.70	1.00	0.200	300	10	700	1.5	10
9WR232B	YAGN	45 34 15N	114 20 56W	1.00	0.20	0.20	0.070	100	500	700	1.0L	5 N
9WR234A	YQS	45 33 17N	114 24 32W	3.00	0.70	0.30	0.300	300	10 L	1000	1.0	7
9WR234B	YQS	45 33 17N	114 24 32W	5.00	0.50	5.00	0.200	1000	10 L	300	1.5	50
9WR235A	YQS	45 32 56N	114 23 59W	0.20	0.05	2.00	0.100	70	10 L	150	5.0	5 N
9WR236A1	TW	45 39 32N	114 30 25W	1.00	0.10	0.05	0.100	70	10 L	300	3.0	5 N

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SAMPLE	Cr	Cu	La	Mo	Nb	Ni	Pb	Sc	Sn	Sr	V	Y	Zr
9WR196A	10 N	5 L	70	5 N	20 L	5 N	20	5 L	10 N	150	20	20	200
9WR197A	10 N	200	20 N	5 N	20	5 N	50	5 N	10 L	100 N	10 N	100	100
9WR198A1	10 N	5 N	20 N	5 N	20 N	5 N	50	5 N	10 L	100 N	10 N	15	30
9WR198A2	10 N	5 N	20 N	7	20 L	5 N	50	5 N	10	100 N	10 N	20	150
9WR198A2	10 N	5 N	20 N	5 N	20 L	5 N	30	5 N	10 L	100 N	10 N	20	50
9WR199A	10 N	5 N	20 N	10	20 L	5 N	50	5 N	10	100 N	10 N	20	50
9WR200A	10 L	5 L	70	5 N	20 L	5 N	20	5 L	10 N	200	20	20	70
9WR201A	50	7	30	5 N	20 N	20	10 L	7	10 N	100	50	30	150
9WR202A	10	5	20 N	5	20 N	20	10 N	5	30	100 N	150	10 N	15
9WR203A	30	20000 G	50	5 N	20 N	15	10	10	10	100 N	50	50	200
9WR203B	50	50	20 N	5 N	20 L	20	10 N	15	10 L	100	100	30	200
9WR204A	20	30	20 N	5 N	20 N	30	10 N	10	10 N	100	100	15	150
9WR204B	30	1500	50	5 N	20 N	30	10 L	10	10 N	100	70	50	150
9WR205A	20	5 L	50	5 N	20 N	10	10 L	5	10 N	100 L	50	50	200
9WR205B	50	5	50	5 N	20 N	20	10 N	20	10 N	100 N	70	100	200
9WR206A	20	10	50	5 N	20 L	15	15	10	10 N	100	70	150	200
9WR209A	20	5 N	20 N	5 N	20 N	10	10 N	5	10 N	150	30	20	150
9WR210A	50	5 N	30	5 N	20 N	15	10 N	10	10 N	200	70	30	200
9WR211A	30	10	30	5 N	20 L	20	10 N	10	10 N	100	70	30	150
9WR212A	50	10	70	5 N	20 N	20	10 L	10	10 N	150	70	20	150
9WR213A	30	7	20	5	20 N	15	20	10	10 N	200	50	10	100
9WR214A	20	5 N	20	5 N	20 N	7	10	5	10 N	150	50	15	100
9WR216A1	10	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	15	10 N	150
9WR216A2	10 L	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10	10 N	100
9WR216A2	10 L	5 L	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10	10 N	70
9WR217A	10 N	5 N	20	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	30
9WR218A	10 N	5 N	20 N	5 N	20 N	5	10 N	5 N	10 N	100 N	10	10 N	30
9WR218B	10	10	20 N	5 N	20 N	10	10 N	5 N	10 N	100 N	10	10 N	50
9WR219A	10 N	5 N	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10 N	10 N	50
9WR220A	150	10	20 N	5 N	20 N	7	10	15	10 N	200	100	20	150
9WR220B	150	20	20	5	20 N	7	10	15	10 N	150	100	20	100
9WR221A	10 N	10	70	20	20	5 N	20	5 N	10 L	100	15	30	200
9WR222A	10 N	5	100	5 N	20	5 N	20	5 N	10 L	100	10	30	150
9WR223A	10 N	5 L	30	5 N	50	5 N	30	5 N	20	100 N	10	30	150
9WR223B	10 N	10	20	5 N	30	5 N	20	5 N	10 L	100 N	10 N	30	150
9WR224A	10 N	5 L	50	5 N	20	5 N	30	5 N	10 L	100 N	10 N	30	150
9WR224B	10 N	5 L	300	5 N	50	5 N	30	5 N	10 N	100 N	10 N	50	150
9WR224C	10 N	5 N	20	5 N	30	5 N	20	5 N	10 N	100 N	10 N	50	150
9WR225A	10 N	5 L	100	5 N	20	5 N	20	5 N	10 N	100	15	50	200
9WR226A	10 N	200	50	5 N	20	5 N	50	5 N	70	100 L	10	20	200
9WR227A	10 N	5 L	50	5	20	5 N	20	5 N	15	100	10 N	30	200
9WR228A	10 N	10	50	5 N	30	5 N	30	5 N	10	100 N	10 N	30	200
9WR230A	10 N	20	150	5 N	30	5 N	20	5 N	10	100 N	10 N	30	150
9WR231A	10	5 L	100	5 N	20 N	10	10 N	5 L	20	100 N	70	100	100
9WR232A	20	5 L	20 N	5 N	20 N	10	15	10 L	10 N	100	20	10	10 N
9WR232B	10 N	5 L	50	10	20 N	5 N	30	5 L	10 N	100	20	10	300
9WR234A	30	7	50	5 N	20 N	15	15	10	10 N	150	50	30	300
9WR234B	50	200	50	5	20 N	15	10	10	10 N	150	50	50	300
9WR235A	10 N	5 N	20 N	7	20 L	5 N	10 L	5 N	10 N	300	10	30	50
9WR236A1	10 N	15	50	5 N	20 L	5 N	10	5 N	10 N	100 N	10	20	200

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SAMPLE	FORMATION	LAT	LONG	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn	B	Ba	Be	Co
9WR236A2	TW	45 39 32N	114 30 25W	0.70	0.10	0.05	0.070	70	10 L	200	3.0	5 N
9WR236A2	TW	45 39 32N	114 30 25W	0.70	0.10	0.05L	0.100	50	20	300	2.0	5 N
9WR236B	TW	45 39 32N	114 30 25W	1.00	0.07	0.05	0.070	70	10 L	300	3.0	5 N
9WR237A	TW	45 39 28N	114 30 28W	3.00	0.10	0.05	0.070	100	10 L	300	5.0	15
9WR238A	TV	45 39 28N	114 30 21W	5.00	1.50	0.20	0.300	500	10 L	1000	1.5	20
9WR239A1	TV	45 39 25N	114 30 21W	5.00	1.50	0.20	0.300	500	10 L	1000	1.5	15
9WR239A2	TV	45 39 25N	114 30 21W	5.00	1.50	0.20	0.500	300	10 L	1000	1.5	15
9WR239A2	TV	45 39 25N	114 30 21W	3.00	1.50	0.20	0.500	300	10 L	1000	1.0	20
9WR239B	TV	45 39 25N	114 30 21W	5.00	1.50	0.20	0.500	500	10 L	200	3.0	20
9WR240A	YQ	45 39 25N	114 30 14W	0.70	0.20	0.05	0.050	70	10 L	100	1.0N	5 N
9WR241A	TV	45 39 32N	114 30 10W	0.70	0.10	0.05	0.050	100	10 L	150	2.0	5 N
9WR242A	YQ	45 39 21N	114 29 31W	2.00	0.50	0.05L	0.150	30	10 L	200	1.0	5 N
9WR244A	TVN	45 31 4N	114 32 13W	1.00	0.15	2.00	0.070	150	10 L	500	1.5	5 N
9WR244B	TMG	45 31 4N	114 32 13W	1.50	0.20	0.10	0.100	200	10 L	500	1.0	5 N
9WR244C	TMG	45 31 4N	114 32 13W	2.00	0.30	0.10	0.150	200	10 L	700	1.5	5
9WR244D	TMG	45 31 4N	114 32 13W	2.00	0.70	0.30	0.200	200	10 L	500	1.0	10
9WR244E	TA	45 31 4N	114 32 13W	7.00	2.00	1.00	1.000	1000	10 L	1000	1.5	30
9WR244F	TA	45 31 4N	114 32 13W	7.00	2.00	1.50	1.000	700	10 L	1000	2.0	30
9WR244I	TMG	45 31 4N	114 32 13W	1.00	0.30	0.50	0.100	200	10 L	1000	1.0	5 N
9WR245A	TW	45 34 1N	114 20 2W	1.00	0.15	0.05	0.070	100	10 L	500	2.0	5 N
9WR246A	TA	45 31 11N	114 32 9W	5.00	2.00	1.00	0.700	700	10 L	1500	2.0	30
9WR247A	TGP	45 31 11N	114 32 13W	1.50	0.15	0.10	0.100	150	10 L	500	1.5	5 N
9WR247B1	TMG	45 31 11N	114 32 13W	1.00	0.15	0.20	0.070	150	10 L	500	1.5	5 N
9WR247B2	TMG	45 31 11N	114 32 13W	1.00	0.20	0.20	0.100	150	10 L	700	1.5	5 N
9WR247B2	TMG	45 31 11N	114 32 13W	1.50	0.20	0.20	0.100	200	10 L	1000	1.5	5 N
9WR248A	TMG	45 31 11N	114 32 13W	1.00	0.10	0.50	0.150	100	10 L	700	1.5	5 N
9WR250A	TMG	45 31 37N	114 32 2W	1.50	0.15	0.20	0.150	100	10 L	500	1.5	5 N
9WR250B	TGP	45 31 37N	114 32 2W	1.50	0.05	0.15	0.070	200	10 L	500	1.5	5 N
9WR251A	TMG	45 31 40N	114 31 51W	1.50	0.15	0.10	0.150	200	10 L	500	1.5	5 N
9WR252A	TMG	45 31 46N	114 31 51W	2.00	0.15	0.10	0.150	100	10 L	700	2.0	5 N
9WR253A	TMG	45 31 37N	114 31 58W	0.70	0.07	0.15	0.100	50	10 L	50	1.5	5 N
9WR258A	TW	45 38 56N	114 31 44W	1.00	0.05	0.07	0.050	100	10 L	100	2.0	5
9WR259A	TGP	45 33 7N	114 26 16W	0.70	0.10	0.30	0.050	200	10 L	50	3.0	5 N
9WR263A	TMG	45 38 2N	114 25 1W	1.00	0.20	0.30	0.070	200	10 L	200	2.0	5 N
9WR264A1	TMG	45 37 55N	114 24 35W	1.50	0.10	0.20	0.100	200	10 L	150	3.0	5 N
9WR264A2	TMG	45 37 55N	114 24 35W	1.00	0.07	0.20	0.050	200	10 L	150	5.0	5 N
9WR264A2	TMG	45 37 55N	114 24 35W	2.00	1.00	0.15	0.100	200	10 L	150	3.0	5 N
9WR264B	TMG	45 37 55N	114 24 35W	1.50	0.15	0.15	0.070	200	10 L	150	5.0	5 N
9WR265A	TMG	45 37 55N	114 24 39W	1.00	0.07	0.20	0.070	300	10 L	150	7.0	5 N
9WR266A	TPR	45 37 51N	114 24 25W	1.50	0.70	0.50	0.150	200	10 L	1000	5.0	5 L
9WR266B	TPR	45 37 51N	114 24 25W	1.00	0.70	1.00	0.100	200	10 L	1000	3.0	5 N
9WR267A	TMG	45 37 48N	114 24 25W	1.00	0.10	0.10	0.050	70	10 L	150	2.0	5 N
9WR268A	TMG	45 37 44N	114 24 25W	1.50	0.10	0.20	0.070	100	10 L	100	3.0	5 N
9WR269A	TMG	45 37 40N	114 24 25W	1.00	0.20	0.20	0.100	50	10 L	200	3.0	5 N
9WR301A	YQ	45 44 2N	114 24 35W	2.00	0.50	0.05	0.200	100	10 L	200	2.0	7
9WR302A	TPR	45 44 9N	114 24 25W	1.50	0.15	0.07	0.100	700	10 L	500	3.0	5 N
9WR303A	TMG	45 44 13N	114 24 17W	1.00	0.02	0.05	0.030	200	10 L	30	5.0	5 N
9WR304A	TMG	45 44 16N	114 24 17W	0.70	0.10	0.05	0.050	300	10 L	50	5.0	5 N
9WR305A	TMG	45 44 20N	114 24 17W	1.50	0.02	0.05L	0.015	70	10 L	50	3.0	5 N
9WR306A	TMG	45 44 41N	114 24 3W	1.50	0.15	0.05	0.100	200	10 L	500	2.0	5 N



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SAMPLE	Cr	Cu	La	Mo	Nb	Ni	Pb	Sc	Sn	Sr	V	Y	Zr
9WR236A2	10 N	100	50	5 N	20 L	5 N	10 L	5 N	10 N	100 N	10 L	20	150
9WR236A2	10 N	50	30	5 N	20 L	5 N	10 L	5 N	10 N	100 L	10	20	200
9WR236B	10 L	15	50	10	20 L	5 N	10 L	5 N	10 N	100 L	15	20	150
9WR237A	15	10	20 N	7	20 N	5 N	10 N	5 N	10 N	100 N	10	10	70
9WR238A	150	20	20 N	7	20 N	10	10	15	10 N	200	70	20	150
9WR239A1	100	10	20	5	20 N	7	10	10	10 N	100	70	20	150
9WR239A2	100	15	20	7	20 N	7	10	15	10 N	200	100	20	150
9WR239A2	100	15	20 N	5 N	20 N	5	10 L	10	10 N	150	100	20	150
9WR239B	100	10	20 N	5 N	20 N	5	10	10	10 N	100	70	20	150
9WR240A	10	5 L	20 N	5 N	20 N	5 N	10 N	5 N	10 N	100 N	10	10 N	70
9WR241A	10 N	5 L	30	5	20	5 N	15	5 N	10 N	100 L	10 N	15	150
9WR242A	20	5 L	20 N	5 N	20 N	10	10 N	5 L	10 N	100 N	20	20	100
9WR244A	10 N	5 L	20	5 N	20 N	5 N	30	5 N	10 N	150	10	10	50
9WR244B	10 L	7	20 N	5 N	20 N	5 N	20	5 N	10 N	150	15	10	100
9WR244C	10 L	7	50	5 N	20 N	5 N	30	5 N	10 N	200	15	20	150
9WR244D	50	5 L	20	5 N	20 N	15	10	5	10 N	150	30	15	70
9WR244E	150	5	50	5 N	20 L	50	15	20	10 N	200	100	50	200
9WR244F	200	15	70	5 N	20 L	70	15	20	10 N	300	100	50	200
9WR244I	10 L	5	30	5 N	20 N	5 N	20	5 N	10 N	200	20	15	70
9WR245A	10 N	5 L	20 N	5 N	50	5 N	30	5 N	10	100 N	10 N	50	200
9WR246A	200	15	50	5 N	20 L	30	20	15	10 N	500	100	50	200
9WR247A	10 L	5 L	20	5 N	20 N	5 N	10	5 N	10 N	150	10	10	100
9WR247B1	10 L	20	20	5 N	20 N	5 N	10	5 N	10 N	150	10	15	70
9WR247B2	10 N	5 L	20	5 N	20 N	5 N	15	5 N	10 N	150	15	15	70
9WR247B2	10 L	5	50	5 N	20 N	5 N	15	5 N	10 N	200	15	15	70
9WR248A	10 L	30	30	50	20 N	5 N	20	5 N	10 N	150	15	20	100
9WR250A	10 L	5	30	5	20 L	5 N	30	5 N	10 N	150	15	20	100
9WR250B	10 L	5 L	20	7	20 L	5 N	30	5 N	10 L	150	20	15	100
9WR251A	10 L	5 L	30	5 N	20 L	5 N	30	5 N	10 L	100	15	15	100
9WR252A	10 L	5 L	70	10	20 L	5 N	30	5 L	10	150	20	30	150
9WR253A	10 N	5 L	20 N	5 N	20 L	5 N	50	5 N	10 N	100 N	10 N	10	50
9WR258A	10 N	5 L	20 N	5	30	5 N	50	5 N	10 L	100 L	10 N	30	100
9WR259A	10 N	5 N	20 N	5 N	20 L	5 N	50	5 N	10 L	100 L	10 N	30	100
9WR263A	10 N	5 N	30	5 N	20 L	5 N	20	5 N	10 L	100 L	10 N	30	100
9WR264A1	10 N	5 L	30	5 N	50	5 N	30	5 N	10	100 N	10 N	70	150
9WR264A2	10 N	5 N	50	5 N	20	5 N	20	5 N	10 L	100 L	10 N	30	150
9WR264A2	10 N	5 L	150	5 N	30	5 N	30	5 N	15	100 L	10 N	70	200
9WR264B	10 N	5 L	20	5 N	50	5 N	70	5 N	15	100 L	10 N	50	150
9WR265A	10 N	5 N	50	5 N	30	5 N	30	5 N	10 L	100 L	10 N	50	150
9WR266A	10	5 L	70	5 N	20 L	5 N	30	5 L	10 L	200	20	20	150
9WR266B	10 L	5 L	70	5 N	30	5 N	30	5 L	10 L	200	15	15	100
9WR267A	10 N	5 L	20	5 L	30	5 N	15	5 N	10	100 L	10 N	20	200
9WR268A	10 N	5 L	30	5 N	50	5 N	20	5 N	15	100 N	10 N	50	100
9WR269A	10 N	5 L	50	5 N	50	5 N	30	5 N	10	100 L	10 N	50	200
9WR301A	30	5 L	20	5 N	20 N	5	10 N	5 N	10 N	100 N	30	20	500
9WR302A	10 N	5 L	20	5 N	50	5 N	20	5 N	10 N	100	10	20	150
9WR303A	10 N	5 L	20 N	5 L	50	5 N	50	5 N	10	100 N	10 N	30	150
9WR304A	10	15	20 N	70	30	5 N	50	5 N	10	100 N	10 N	30	100
9WR305A	10 N	5	20 N	20	70	5 N	50	5 N	10 L	100 N	10 N	30	70
9WR306A	10 L	5	20	5 N	20 L	5 N	50	5 N	10 L	100	15	15	100

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SAMPLE	FORMATION	LAT	LONG	Fe(%)	Mg(%)	Ca(%)	Ti(%)	Mn	B	Ba	Be	Co
9WR307A	TGP	45 39 21N	114 22 51W	1.50	0.10	0.10	0.070	200	10 L	70	5.0	S N
9WR308A	TGP	45 39 28N	114 23 9W	1.00	0.05	0.10	0.050	150	10 L	70	5.0	S N
9WR308B	TGP	45 39 28N	114 23 9W	1.00	0.10	0.10	0.050	100	10 L	50	5.0	S N
9WR308C	TGP	45 39 28N	114 23 9W	1.00	0.07	0.10	0.050	100	10 L	70	5.0	S N
9WR308D	TGP	45 39 28N	114 23 9W	1.00	0.07	0.10	0.050	100	10 L	70	5.0	S N
9WR310A	YQS	45 34 8N	114 19 47W	3.00	1.00	0.70	0.200	500	50	300	1.5	10
9WR311A	YQS	45 34 8N	114 19 47W	3.00	0.50	1.00	0.200	500	70	300	2.0	7
9WR312A	YQS	45 34 4N	114 19 44W	1.50	0.30	0.50	0.150	300	20	500	2.0	10
9WR313A	YQS	45 34 4N	114 19 40W	2.00	0.30	2.00	0.200	1000	50	300	2.0	20
9WR314A	YQS	45 34 4N	114 19 37W	2.00	0.50	0.50	0.200	500	50	500	3.0	15
9WR316A	YQS	45 33 57N	114 19 33W	3.00	0.70	0.30	0.200	500	10 L	1000	2.0	15
9WR317A	YQS	45 33 57N	114 19 29W	2.00	0.30	0.30	0.150	1000	10 L	300	1.5	S N
9WR318A	YF	45 33 54N	114 19 22W	10.00	0.50	0.05	0.070	200	1000	150	2.0	50
9WR318B	YQS	45 33 54N	114 19 22W	2.00	0.30	0.07	0.150	500	50	300	2.0	30
9WR319A	YQS	45 33 50N	114 19 29W	1.50	0.20	0.10	0.150	500	50	200	2.0	10
9WR322A	TC	45 42 43N	114 29 41W	1.50	0.50	0.30	0.100	300	10	1000	3.0	S
9WR323A	TV	45 43 1N	114 29 9W	1.00	0.20	0.30	0.100	100	10	500	2.0	S N

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SAMPLE	Cr	Cu	La	Mo	Nb	Ni	Pb	Sc	Sn	Sr	V	Y	Zr
9WR307A	10 N	5 L	30	5 N	70	5 N	20	5 N	10 L	100 N	10 N	50	100
9WR308A	10 N	10	30	5 N	50	5 N	30	5 N	10 N	100 N	10 N	30	150
9WR308B	10 N	5	20	5 N	50	5 N	20	5 N	10 N	100 N	10 N	30	100
9WR308C	10 N	10	50	5 N	50	5 N	20	5 N	10 N	100 N	10 N	30	100
9WR308D	10 N	5 L	30	5 N	30	5 N	30	5 N	10 N	100 N	10 N	30	100
9WR310A	50	5 L	20 N	5 N	20 N	20	10 N	10	10 N	100 L	70	20	150
9WR311A	30	20	50	5 N	20 N	15	10 L	10	10 N	100 L	70	30	100
9WR312A	20	20	50	5 N	20 N	10	10 N	5	10 N	100	50	20	150
9WR313A	30	700	20	5 N	20 N	10	10 L	10	10 N	100 L	50	70	150
9WR314A	30	100	20 N	5 N	20 N	15	10 N	10	10 N	100	70	20	150
9WR316A	50	50	50	5 N	20 N	15	10	10	10 N	150	50	30	150
9WR317A	20	50	20	5 N	20 N	5	10 N	5	10 N	100 N	30	20	150
9WR318A	10	100	20 N	50	20 N	30	10 N	5	10 N	100	30	15	100
9WR318B	20	200	50	5 N	20 N	15	50	7	10 N	100 N	50	20	150
9WR319A	20	1000	30	5 N	20 N	15	20	7	10 N	100 N	50	30	200
9WR322A	20	20	100	5 N	20 N	5 L	20	5	10 N	200	30	10 N	100
9WR323A	10	5	50	5 N	20 N	5 N	15	5 N	10 N	150	15	10 N	100

Table 8.--Analytical data for rocks for elements not listed in other tables

Rocks Showing Values for Elements not Listed in Other Tables

Sample	Lat	Long	Ag	As	Au	Bi	Cd	Sb	W	Zn
9BB052A2	45.688	-114.441	0.5N	200N	10N	10N	20N	100N	50N	200
9BC021A	45.754	-114.296	0.5N	200N	10N	15	20N	100N	50N	200N
9CH006B	45.743	-114.442	0.500	200N	10N	10N	20N	100N	50N	200N
9CH017A	45.724	-114.349	50	200N	10N	10N	20N	100N	50N	200L
9CH168A	45.659	-114.504	0.500	200N	10N	10N	20N	100N	50N	200N
9CH169A	45.659	-114.501	0.5L	200N	10N	10N	20N	100N	50N	200N
9CH172A	45.667	-114.488	0.5L	200N	10N	10N	20N	100N	50N	200N
9CH184A	45.758	-114.417	0.5N	200N	10N	10N	20N	100N	50N	200L
9CH268A	45.657	-114.507	0.5N	200N	10N	10N	20N	100N	50	200N
9CH271B	45.658	-114.506	0.5N	200N	10N	10N	20N	100N	50	200N
9KL010B	45.509	-114.546	0.500	200N	10N	10N	20N	100N	50N	200N
9KL043A	45.624	-114.444	0.7	200N	10N	10L	20N	100N	50N	200N
9KL049B	45.537	-114.584	1	200N	10N	15	20N	100N	50	200N
9KL066A	45.558	-114.358	0.500	200N	10N	10N	20N	100N	50N	200N
9KL128A	45.651	-114.535	100	3000	50	10N	20N	150	50N	200N
9KL140A	45.571	-114.505	0.5L	200N	10N	10L	20N	100N	50N	200N
9RB019B	45.621	-114.368	0.5N	200N	10N	10	20N	100N	50N	200N
9WR012A	45.566	-114.334	20	200N	10N	100	20N	100N	50N	200N
9WR036B	45.567	-114.445	0.5N	200N	10N	10N	20N	100N	70	200N
9WR057A	45.658	-114.506	0.5L	200N	10N	10N	20N	100N	50	200N
9WR057B	45.658	-114.506	0.5N	200N	10N	10N	20N	100N	50	200N
9WR057D	45.657	-114.497	0.500	200N	10N	10N	20N	100N	50	200N
9WR066A	45.637	-114.442	0.7	200N	10N	10N	20N	100N	50N	200N
9WR069A	45.639	-114.448	0.500	200N	10N	100	20N	100N	50N	500
9WR073A	45.646	-114.454	0.500	200N	10N	10N	20N	100N	50N	700
9WR075A	45.577	-114.551	0.5N	200N	10N	10L	20N	100N	50N	200N
9WR091A	45.614	-114.425	0.7	200N	10N	10	20N	100N	50N	200N
9WR100A	45.638	-114.422	0.5N	200N	10N	10N	20N	100N	50N	200N
9WR115B	45.649	-114.396	0.5N	200N	10N	10N	20N	100N	50N	300
9WR130B	45.647	-114.384	1	200N	10N	10N	20N	100N	50N	200
9WR131A	45.602	-114.442	0.5N	200N	10N	10N	20N	100N	50N	200
9WR164A	45.511	-114.471	0.5N	200N	10N	10N	20N	100N	50L	200
9WR198A2	45.567	-114.327	50	200N	10N	10	20N	100N	50N	200N
9WR203A	45.570	-114.335	1	200N	10N	10L	20N	100N	50N	200N
9WR204B	45.618	-114.321	1	200N	10N	10N	20N	100N	50N	200N
9WR218B	45.655	-114.504	0.5L	200N	10N	10N	20N	100N	50N	200N
9WR221A	45.634	-114.482	5	200N	10N	15	20N	100N	50N	1000

Rocks Showing Values for Elements not Listed in Other Tables

Sample	Lat	Long	Ag	As	Au	Bi	Cd	Sb	W	Zn
9WR230A	45.634	-114.487	0.5N	200N	10N	10L	20N	100N	50N	200N
9WR234B	45.555	-114.409	0.5N	200N	10N	10	20N	100N	50N	200N
9WR236A1	45.659	-114.507	2	200N	10N	10N	20N	100N	50N	200N
9WR236A2	45.659	-114.507	2	200N	10N	10N	20N	100N	50N	200N
9WR236A2	45.659	-114.507	1.500	200N	10N	10N	20N	100N	50N	200N
9WR236B	45.659	-114.507	2	200N	10N	10N	20N	100N	50N	200N
9WR237A	45.658	-114.508	0.5L	200N	10N	10N	20N	100N	50N	200N
9WR248A	45.520	-114.537	0.500	200N	10N	10N	20N	100N	50N	200N
9WR264B	45.632	-114.410	0.7	200N	10N	10N	20N	100N	50N	200N
9WR304A	45.738	-114.405	1	200N	10N	10N	20N	100N	50N	200N
9WR305A	45.739	-114.405	2	300	10N	10N	20N	100N	50N	200N
9WR313A	45.568	-114.328	0.7	200N	10N	10N	20N	100N	50N	200N
9WR319A	45.564	-114.325	1.500	200N	10N	10N	20N	100N	50N	200N